TABLE OF CONTENTS

PART I INFECTION CONTROL IN THE HOME, 1

Chapter 1 Infection Control Procedures, 3

Applying Principles of Standard Precautions: General Guidelines, 3

Handwashing, 4

Gloves, 4

Impermeable plastic trash bag, 5

Additional personal protective equipment, 5

Sharp objects and needles, 5

Specimen collection, 6

Uniform, 6

Principles of cleaning, disinfecting, and sterilizing in the home, 6

Miscellaneous, 6

Immunizations, 6

Exposure incident, 7

OSHA Regulations, 7

Bag Technique, 8

Disposal of Soiled Dressings, 9

Equipment Cleaning, 10

Stethoscope, 10

Infant scale, 10

Glucose meters, 10

Thermometers, 10

Respiratory therapy equipment, 10

Other, 10

Handwashing, 11

Implementing a Tuberculosis Control and Personal Respiratory Home Health Protection Program, 12

Maintaining Medical Supplies and Equipment in the Car, 14
Management of Blood or Body Substance Spills in the Home, 15
Reporting and Managing an Exposure Incident, 16
Soiled Linen Management, 17
Solutions for Irrigation: Management and Storage Guidelines, 18
Solutions for Irrigation: Sterile Normal Saline, Dakins’, and Acetic Acid, 19
  .9% Normal Saline, 19
  25% Acetic Acid, 19
  25% Dakins’, 19
Patient Education Guidelines: Reducing the Risk of Transmitting a Communicable Disease, 22

PART II ASSESSMENT AND THERAPEUTIC CARE, 25

Chapter 2 Physical and Psychosocial Assessment Procedures, 27
  Adult Head to-Toe-Assessment, 27
    General, 27
    Head, 27
    Eyes, 27
    Ears, 27
    Nose, 28
    Mouth and throat, 28
    Neck, 28
    Skin, 28
    Breasts, 28
    Respiratory, 28
    Cardiac, 28
    Neurologic, 28
    Peripheral vascular, 28
    Gastrointestinal, 28
    Fluid and electrolyte, 28
    Musculoskeletal, 28
Endocrine, 28
Hematologic, 28
Urinary, 28
Genitoreproductive, 28
Psychiatric, 29
Medications, 29
Functional learning limitations, 29
Blood Pressure, 30
Edema, 31
Intake and Output (I/O), 33
Mental Health Assessment, 34
  General appearance, 34
  Current medication, 34
  Concurrent drug/alcohol use, 34
  Emotional status, 34
  Thought processes, 34
  Patterns of interaction, 34
  General lifestyle, 35
Pain Assessment, 36
Pulse, 37
  Apical Pulse, 37
  Apical-Radial Pulse, 37
  Radial Pulse, 37
Respirations, 38
Temperature, 39
  Axillary Temperature, 39
  Oral Temperature, 39
  Rectal Temperature, 40
Weight, 41

Well Baby Assessment, 42

  General, 42
  Vital signs, 42
  Growth, 42
  Feeding patterns, 42
  Mouth, 47
  Cardiovascular, 47
  Respiratory, 47
  Gastrointestinal, 47
  Fluid and electrolytes, 47
  Genitourinary, 48
  Neurologic, 48
  Sleep patterns, 48
  Skin, 48
  Head, 48
  Eyes, 48
  Ears, 48
  Nose, 48

Wound Assessment and Documentation, 49

Chapter 3 Therapeutic Nursing Procedures, 51

  Ambulation, 51
  Back Rub, 53
  Bathing and Grooming, 54
    Shower, 54
    Tub Bath, 54
    Cleansing Bed Bath, 54
    Sitz Bath, 55
Bed Making, 56
  Making an Occupied Bed, 56
  Making an Unoccupied Bed, 56
Feeding the Dependent Elder Patient, 57
Foot Care, 58
Hair and Scalp Care, 59
Moving and Lifting Patients: Body Mechanics, 60
  Assisting the Patient into a Chair when the Patient is Able to Assist, 60
  Assisting the Patient into a Chair when the Patient is Unable to Assist, 60
  Moving the Patient to One Side of the Bed, 60
  Moving the Patient Up in the Bed When the Patient is Able to Assist, 61
  Moving the Patient Up in the Bed When the Patient is Unable to Assist, 61
Nail Care, 62
Oral Care, 63
  Brushing the Teeth, 63
  Care of Patients with Dentures, 63
  Oral Care for the Unconscious or Incapacitated Patient, 63
Positioning and Seating the Immobilized Patient, 65
Shampoo in Bed, 66
Shaving Patients, 67
Transfer or Gait Belt, 68
PART III MEDICAL-SURGICAL CARE, 69
Chapter 4 Cardiopulmonary Procedures, 71
  Administration of Oxygen Therapy, 71
    Oxygen Therapy: Implementation and Home Safety Precautions, 71
    Nasal Cannula, 74
    Oxygen Face Tent or Shield, 75
    Oxygen Mask, 77
Tracheostomy Collar, 78
Aerosol Therapy, 80
Care of the Patient with an Automatic Implantable Cardioverter Defibrillator, 82
BiPAP® Support Ventilator Management, 84
Breathing Exercises, 86
   Diaphragmatic Breathing, 86
   Lateral Base Expansion, 86
   Pursed-Lip Breathing, 87
Chest Physiotherapy, 88
Chest Tube Management, 90
   Pneumothorax Catheter, 90
   Empyema Chest Tube, 91
   Chest Drainage System, 91
Controlled Cough Exercise, 93
Coronary Precautions in the Home, 94
Home Dysrhythmia Monitoring, 95
Home Ventilator Management, 99
Incentive Spirometer, 102
Inhalation (Steam) Therapy, 103
Manual Ventilation with a Hand-Held Resuscitator or Ambu-Bag, 104
Metered Dose Inhaler Use, 106
   Open Mouth Technique, 106
   InspirEase Technique, 106
Pulse Oximetry, 108
Suctioning, 110
   Tracheostomy Button or Plug: Changing, Cleaning, and Care, 111
Tracheostomy Care: Inner Cannula Change and Nondisposable Cannula Care, 112
Tracheostomy Care: Outer Cannula Tube Change for the Ventilator-Dependent Patient, 113
Chapter 5 Dermatologic and Wound Care, 118

Dressing Changes: Biobrane, 119
Dressing Changes: Calcium Alginate, 121
Dressing Changes: Dry to Dry, 122
Dressing Changes: Foam Dressing, 123
Dressing Changes: Hydrocolloid Dressings and Transparent Adhesive Films, 124
Dressing Changes: Hydrogel, 126
Dressing Changes: Sterile Technique, 127
Dressing Changes: Unna Boot, 128
Dressing Changes: Wet-to-Dry, 130
Moist Compress, 131
Montgomery Straps, 132
Pediculosis, 133
Scabies, 135
Skin Care, 136
Skin Suture and Staple Removal, 138
Skin Suture Removal, 138
Skin Staple Removal, 138
Wound Irrigation and Debridement, 139
Wound Care: Scoring of Eschar, 140
Wound Management, 141
Wound Packing, 143
Patient Education Guidelines: Wound Care Management, 147

Chapter 6 Gastroenterologic and Ostomy Care, 148
Bowel Training, 148
Colostomy Irrigation, 150
Fecal Impaction: Manual Removal, 152
Gastrostomy Tube Care: General Guidelines, 153
Gastrostomy Tube Feedings, 155
  Bolus Feeding, 155
  Continuous or Intermittent Feeding, 155
  Feeding Pump, 155
Gastrostomy Tube Replacement, 157
Nasogastric Tube Feeding, 159
Nasogastric Tube Insertion, 161
Ostomy Care, 163
Ostomy Pouch Change, 164
Rectal Tube Insertion, 165
  Patient Education Guidelines: Colostomy Irrigation, 166
  Patient Education Guidelines: Stoma Management in the Home, 167

**Chapter 7 Head, Eyes, Ears, Nose, Throat (HEENT) Care, 171**
  Care of the Patient with an Artificial Eye, 171
  Care of the Patient with Cataract or Retinal Surgery, 173
  Care of the Patient with Contact Lenses, 174
  Care of the Patient with Depressed Corneal Reflex, 176
  Care of the Patient with a Hearing Aid, 177
  Care of the Patient with Visual Impairment, 179

**Chapter 8 Intravenous Therapy Procedures, 180**
  Administration of Intravenous Therapy: General Guidelines, 180
  Central Venous Catheter Management, 183
    Blood Sampling, 183
    Cap Change, 183
Dressing Change, 184

Irrigation and Heparinization, 185

Changing Intravenous Solutions, 186

Changing Intravenous Tubing, 187

Declotting an Implantable Vascular Access Device, 188

Discontinuation and Removal of Peripheral Intravenous Fluids, 189

Groshong Catheter Management, 190

Blood Sampling, 190

Irrigation, 191

Implantable Vascular Access Device Management, 192

Blood Sampling, 192

Bolus Injection, 193

Continuous Infusion, 193

Multiple-Lumen Nontunneled Catheter Management, 194

Blood Sampling, 194

Intermittent Infusion, 194

Peripheral Inserted Central Catheter: Insertion Guidelines, 196

Peripheral Inserted Central Catheter: Removal of the Catheter, 198

Peripheral Intravenous Management, 199

Insertion of a Peripheral IV and Initiation of Hydration Fluids, 199

Inserting a Winged-Tip Needle for Blood Sampling, 200

Managing a Heparin Lock: Initiating a Heparin Lock, 200

Managing a Heparin Lock: Transferring a Continuous Infusion to a Heparin Lock, 200

Managing a Heparin Lock: Stopping/Discontinuing a Continuous Infusion, 201

Patient Education Guidelines: Home IV Therapy, 202

Patient Education Guidelines: Troubleshooting IV Therapy, 204

**Chapter 9 Infusions, 205**

Antibiotic Therapy: Intermittent Infusion, 205
Chemotherapy, 207
Lasix Intravenous Push, 209
Total Parenteral Nutrition and Intralipid Administration, 211

Chapter 10 Medications, 213
Administration of Medications: General Guidelines, 213
Bladder Instillation and Irrigation, 215
Coumadin Administration: Bleeding Precautions, 216
Ear Instillation and Irrigation, 217
Instillation, 217
Irrigation, 217
Enema Administration, 219
Cleansing Enema, 219
Fleet Enema, 219
Oil Retention Enema, 219
Eye Compresses, 221
Cold Compress, 221
Warm Compress, 221
Eye Instillation and Irrigation, 222
Eye Drops, 222
Eye Irrigation, 222
Eye Ointment, 223
Gold Injection, 224
Injections, 225
Intramuscular (IM) Injections, 225
Subcutaneous (SQ) Injections, 226
Z-Track Intramuscular Injections, 226
Nose Drops, 228
Patient/Caregiver Self-Medications Errors at Home, 229
Prefilling Insulin Syringes, 230
Suppositories, 231
  Rectal Suppositories, 231
  Vaginal Suppositories, 231
Topical Medications, 232
Tuberculin (TB) Skin Test, 234

Chapter 11 Rehabilitative Care and Palliative Care Procedures, 236

  Aphasia Care, 236
  Arm Sling, 238
  Cane, 239
  Cast Care, 240
  Elastic Bandage, 241
  Hoyer Lift, 243
  Pain Management, 244
  Range of Motion Exercises: Passive, 248
  Stump Wrapping, 251

  Support Devices: Care of Immobilized Patients, 253
    Bedboard, 253
    Bed Cradle, 253
    Footboard, 253
    Hand Roll, 253
    Heel/Elbow Protector, 254
    Pillows, 254
    Sheepskin, 254
    Trochanter Roll, 254

  Thromboembolic (TED) Hose, 256
  Transcutaneous Electrical Nerve Stimulation (TENS) Unit, 258
  Walker, 259
Wheelchair, 260

Chapter 12 Specimen Collection and Transport, 261

Blood Glucose Monitoring, 261

Blood Sampling, 264
  Arterial Blood Gas Sampling, 264
  Venous Blood Sampling, 265

Culture Collection, 268
  Throat, 268
  Ova and Parasite, 268
  Sputum, 269
  Stool, 269
  Wound, 269

Fecal Occult Blood, 271

Glucose and Ketone Urine Testing: Reagent Strip, 272

Specimen Labeling and Transport, 273

Urine Collection, 274
  Midstream Urine Collection, 274
  Routine Urine Collection, 274
  Sterile Urine Specimen Collection from a Foley Catheter, 274
  Sterile Urine Specimen from a Urostomy, 275

Chapter 13 Urologic and Renal Care, 276

Arteriovenous Fistula and Shunt Care, 276
  Shunt Dressing Change, 276
  Preserving Patency of the Arteriovenous Fistula, 276

Bladder Training, 278
  Bladder Training for Patients with an Indwelling Catheter, 278
  Bladder Training for Patients without an Indwelling Catheter, 279

Closed Urinary Drainage Management, 281
Condom Catheter Care, 283
Coudé Catheter Insertion, 284
Indwelling Foley Catheter Insertion and Care, 286
Intermittent Straight Catheterization: Female, 288
  Sterile Technique, 288
  Clean Technique (For Self-Catheterization), 288
Intermittent Straight Catheterization: Male, 290
  Sterile Technique, 290
  Clean Technique (For Self-Catheterization), 291
Nephrostomy Catheter Care, 292
Pessary: Removal and Insertion, 293
Suprapubic Catheter Care, 294
  Catheter Change, 294
  Dressing Change: Clean Technique (Patient Administered), 294
Urinary Pouch for Females, 296
  Patient Education Guidelines: Caring for the Urinary Catheter at Home, 297

PART IV NUTRITIONAL CARE IN THE HOME, 299

Chapter 14 Nutrition Procedures, 301
  Medical Nutrition Therapy: Assessment of Patient’s Nutrient Requirements, 301
  Medical Nutrition Therapy: Chronic Obstructive Pulmonary Disease, 306
  Medical Nutrition Therapy: Congestive Heart Failure, 310
  Medical Nutrition Therapy: Coronary Heart Disease, 313
  Medical Nutrition Therapy: Diabetes Mellitus, 317
  Medical Nutrition Therapy: Enteral Nutrition Support, 323
  Medical Nutrition Therapy: Failure to Thrive, 326
  Medical Nutrition Therapy: Hypertension, 331
  Medical Nutrition Therapy: Pressure Ulcers, 333
  Medical Nutrition Therapy: Weight Management, 337
PART V EMERGENCY CARE IN THE HOME, 341

Chapter 15 Emergency Procedures, 343

Accidentally Severed Central Venous Catheter, 343
   Repair of Raaf/Quinton/Hickman Catheter, 343
   Replacement of Groshong Catheter Tip, 344

Air Embolism, 346

Airway Obstruction, 347
   Partial Airway Obstruction, 347
   Complete Airway Obstruction, 347

Animal, Insect, Snake, Spider, and Tick Bites, 350
   Animal Bite, 350
   Hymenoptera Bites and Stings, 350
   Snake Bite, 351
   Spider Bites, 352
   Tick Bite, 352

Bleeding and Soft Tissue Injury, 354

Burns, 356

Cardiopulmonary Resuscitation (CPR), 358
   Adult, 358
   Child, 359
   Infant, 359

Falls and Fractures, 361

Heat Related Illness, 363
   Heat Exhaustion, 363
   Heat Stroke, 363

Hyperglycemia, 365

Hypoglycemia, 366

Hypothermia, 368
Poisoning and Substance Abuse and Misuse, 369
  Poisoning, 369
  Substance Abuse and Misuse, 369
Seizure, 373
Shock, 374
Suicidal Thoughts or Harmful Psychotic Ideation, 375
Transfusion or Anaphylactic Reaction, 377

PART VI THE HOME MILIEU, 379

Chapter 16 Case Managing in the Home Environment, 381
  Child or Dependent Elder Abuse or Neglect, 381
Clinical Documentation: Guidelines for Medicare Reimbursement, 383
  Clinical Indicators for a Home Health Aide Referral, 390
  Clinical Indicators for a Hospice Referral, 391
Clinical Indicators for a Psychiatric Home Health Nurse Referral, 392
  Clinical Indicators for a Rehabilitation Referral, 393
    Physical Therapy, 393
    Occupational Therapy, 393
    Speech language Pathologist, 393
Clinical Indicators for a Social Service Referral, 394
Domestic Violence, 395
Do Not Resuscitate (DNR) Status, 398
Fire Safety Assessment, 399
Home Environment (Potential Toxins) Assessment, 400
Home Improvisation of Equipment, 404
On-Call Guidelines, 405
Post Mortem Care, 406
Safety in the Community, 407
  Appearance, 407
Precautions When Traveling, 407
Precautions During Visits, 407

Socioenvironmental Assessment, 408
  Personal Data, 408
  Household Data, 408
  Support Systems, 408
  Home, 408
  Neighborhood, 408
  Food, 408
  Economic Data, 408

Telephone Visit, 409

Patient/Caregiver Education Guidelines to Promote a Toxin-free Home Environment, 410

Patient Education Guidelines: Safety in the Home, 411
Applying Principles of Standard Precautions: General Guidelines

PURPOSE

- To identify work-practice controls that eliminate or minimize employee exposure to bloodborne pathogens and communicable diseases
- To identify work-practice controls that promote safe and competent patient care in the home
- To promote self-care in the home

RELATED PROCEDURE

- Physical Assessment (see Chapter 2)

GENERAL INFORMATION

*Standard Precautions* synthesize the major features from *Universal Precautions* (originally designed to reduce the risk of transmission of bloodborne pathogens) and *Body Substance Isolation* (designed to reduce the risk of transmission of pathogens from moist body substances). The following infection control guidelines reflect current recommendations from the Centers for Disease Control and Prevention (CDC); the Occupational Safety and Health Administration’s (OSHA) bloodborne pathogen standard; the Hospital Infection Control Practices Advisory Committee (HICPAC), a CDC-supported committee; and the Association for Professionals in Infection Control and Epidemiology (APIC).

These guidelines are designed to reduce the transmission of bloodborne and other pathogens and apply to all patients regardless of their diagnosis. These guidelines reinforce the idea that all body substances (oral and body secretions; breast milk; blood; feces; urine; droplet or airborne spray from a cough; tissue, vomitus, wound, or other drainage) can be a source of infection. *These guidelines also emphasize that the environment is a potential source for infection; they contain recommendations to prevent droplet, direct or indirect contact, and true airborne transmission of infectious disease.* Good judgment should be used in all circumstances.

The guidelines provide general policy recommendations regarding infection control practices in the home (henceforth referred to as *Standard Precautions*). The remaining infection control procedures in this chapter provide more detailed steps for implementing such policy. In addition, as government regulations change, it is expected that home health agencies will keep current with and adhere to federal and individual state requirements for infection control. *Although the information in this manual is designed for use by home health nurses, the infection control procedures are applicable to all field staff who provide patient care in the home.*

Use *Standard Precautions* when implementing all clinical procedures (the word {STOP}) indicates that the home health nurse is to review the procedure before proceeding any further with patient care).

EQUIPMENT

1. Personal protective equipment provided to the employee by the home health agency should include the following:
   a. Disposable nonsterile or sterile gloves
   b. Utility gloves
   c. Disinfectants recommended for blood or body substance spills, including the following:
(1) Chemical germicides that are approved for use as agency disinfectants and are tuberculocidal when used at recommended dilutions
(2) Products registered by the Environmental Protection Agency (EPA) with an accepted label that are effective against hepatitis B
(3) A solution of 5.25% sodium hypochlorite (household bleach) diluted to 1:10 parts with tap water; mix a fresh supply of bleach every day for effective disinfection
a. Masks, disposable cardiopulmonary resuscitation (CPR) masks, goggles, National Institute of Occupational Safety and Health (NIOSH)-approved respiratory protection devices, moisture-proof aprons or gowns, shoe covers, caps, and an extra uniform stocked in the car
b. Liquid soap (bacteriocidal), soap towelettes, dry hand disinfectants (bleach and alcohol based), hand lotion
c. Paper towels
d. Plastic bags with a seal and marked with a biohazard sign for use when transporting laboratory specimens
e. Leak-proof and puncture-proof containers marked with a biohazard sign on the outside of the containers for use when transporting laboratory specimens
f. Sharps containers
g. Large plastic container or cardboard box to store nursing bag and supplies in trunk of field staff car
h. Impermeable plastic trash bags for soiled dressings, etc.
i. Sterile bottled water

PROCEDURE

Handwashing

The hands should be washed before and after patient contact. The hands are to be washed during patient care if they become soiled. Wash the hands with liquid soap and water immediately after removing gloves. If soap and water are not available, use antiseptic hand cleanser or towelettes. The hands should then be washed with soap and water as soon as possible. See specific procedure for Handwashing for further recommendations.

Gloves

Wear gloves if the possibility of contact transmission may occur. Change gloves between each patient procedure or when going from dirty to clean (e.g., multiple dressing changes). Wear disposable nonsterile nonlatex gloves when performing any clinical procedure that may expose you to the patient’s blood or other body substances (e.g., during venipuncture or perineal care). Sterile disposable nonlatex gloves are to be worn during certain clinical procedures that require sterile technique (e.g., during certain dressing changes or when inserting a urinary catheter). Sterile and nonsterile nonlatex disposable gloves are to be disposed of after each use in a leak-resistant waste receptacle, such as a plastic trash bag.

Utility gloves are to be used to clean up equipment, the work area, or spills. Utility gloves are to be issued to each household. Utility gloves may be disinfected and reused. Dispose of and replace utility gloves that show signs of cracking, peeling, tearing or puncture, or other signs of deterioration.

Impermeable Plastic Trash Bag

Place all soiled dressings, disposable gloves, etc. in an impermeable plastic trash bag, then secure it. Place the trash bag in the family trash. Follow federal, state, and local ordinances regarding disposal of biohazardous
waste in the community.

**Additional Personal Protective Equipment**

This type of equipment is provided to home health nurses by the home health agency for use in appropriate clinical circumstances and includes the following:

**Blood Spill Kit**

The blood spill kit travels with the nurse and should be kept in the car supply container. The kit should at least contain utility gloves, plastic trash bags, and paper towels. The kit should also contain a 1:10 bleach solution, bleach wipes, or an approved home health agency disinfectant for cleaning up blood or body substance spills in the patient’s home. Make a new batch of bleach solution daily because chlorine deteriorates and loses efficacy over time.

**Gowns, Aprons, Shoe Covers, Caps**

Wear moisture-proof disposable gowns or aprons, shoe covers, and caps when there is a reasonable expectation that contact transmission may occur. After use, remove and dispose of personal protective equipment in an impermeable plastic trash bag in the work area.

**Masks**

Disposable face masks are to be worn whenever there is a reasonable expectation that droplet transmission may occur. Dispose of masks after each use.

When respiratory isolation is required, post a homemade “STOP” sign outside the sick patient’s room. Instruct the family, caregivers, and/or visitors to wear masks when entering the room and/or when caring for the sick patient. The STOP sign should alert everyone, including children, of the necessity to wear a mask when entering the sick patient’s room.

- **DISPOSABLE CPR MASKS** Use disposable CPR masks if artificial mouth-to-mouth or mouth-to-stoma ventilation is required. Most CPR masks are designed to be discarded after one use. Follow individual manufacturer’s recommendations for usage and care.
- **RESPIRATORY PROTECTION DEVICES** Use a NIOSH-approved respiratory protection device when caring for patients and families with tuberculosis; fit-testing is required. Respirators must be cleaned according to the manufacturer’s recommendations and discarded when excessive resistance, physical damage, or any other condition renders the respirator unsuitable for use.
- **GOGGLES OR FACE SHIELDS** Goggles or face shields are to be worn when there is a reasonable expectation that droplet transmission may occur to the eyes. Clean the goggles or shields according to the manufacturer’s recommendations, and discard when physical damage or any other condition renders them unsuitable for use.

**Sharp Objects and Needles**

Place sharp objects and needles in a puncture-proof disposable container that can be sealed with a lid. A needle should not be bent, sheared, replaced in the sheath or guard, or removed from the syringe after use. Do not recap used needles unless using a capping device or one-hand scoop method (nursing staff should be inserviced on a
Sharps Containers

Sharps containers should have the following characteristics:

- Be puncture-proof
- Be red or opaque in color (do not use a clear container where needles can be easily identified)
- Be labeled or marked with a biohazard sign on the outside
- Be leak-proof

Never fill sharps containers so that the contents protrude out of the opening. *Do not fill sharps containers over two thirds full.* Store sharps containers out of reach of children (e.g., on the top shelf in a bedroom closet). Follow state and local ordinances regarding disposal of sharps containers.

Specimen Collection

Wear gloves when handling specimens. Handle all specimens carefully to minimize spillage. Blood or other body substance specimens should be placed in a leak-proof plastic bag and secured in a puncture/leak-proof container during collection, handling, storage, and transport. Label specimens with the patient’s name and identifying data. Place the puncture/leak-proof container on the floor of the car during transport.

In accordance with the home health agency policy, a courier service may be called to pick up laboratory specimens that have been left at the patient’s home.

Uniform

Nursing and field staff are responsible for keeping an extra (clean) uniform secured in a water-resistant bag in their car. The extra uniform shall be stored in the supply container in the trunk of the nurse’s car. If a uniform becomes soiled during patient care, change into the clean uniform as soon as possible. Place the soiled uniform in a leak-proof plastic bag, and launder according to individual home health agency policy. (If the home health agency purchases scrubs for nurses to wear or a uniform *specific* for contact with blood and/or body substances, then the agency is responsible for laundering the uniform. Contact your local OSHA representative with further questions on this subject.)

If nurses choose to launder their uniform or work clothes at home, it is recommended that clothing soiled with blood or body substances be washed separately from household laundry in extremely hot water for about 25 minutes (use a detergent and bleach that will not damage colored clothes). Uniforms or work clothes not soiled with blood or body substances may be routinely cleaned in the regular family wash. Store one dry uniform or set of work clothes in a plastic bag in the field staff car for possible future use.

Principles of Cleaning, Disinfecting, and Sterilizing in the Home

All equipment must be cleaned thoroughly to remove organic material before disinfection or sterilization. Review the procedures in this manual for specific guidelines. Modifications to routine disinfection practices in the home may include the use of the following:

- Bleach
• Hydrogen peroxide
• Boiling water
• Hot, soapy water
• Phenolic resin (e.g., Lysol)
• Isopropyl alcohol (70%)
• Acetic acid (white vinegar)

**Patient/Family Laundry**

Laundry should be handled as little as possible and with minimum agitation to prevent gross microbial contamination of the air and of the persons handling the linen. Place linens soiled with blood or body fluids in a leak-resistant bag at the location where care was given. Instruct the family to wash soiled linens in hot, soapy water with a bleach solution, separate from the family wash.

**Personal**

Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in patient care areas where there is reasonable likelihood of occupational exposure to blood or body substances. Food and drinks are not to be kept in patient care areas where blood or other potentially infectious materials are present.

**Miscellaneous**

All clinical procedures shall be performed in a manner that minimizes splashing, spraying, splattering, or generating droplets of blood or body substances. Mouth pipetting/suctioning of blood or other body substances is prohibited.

**Immunizations**

It is recommended that all staff involved in direct patient care (e.g., touching, working with patients/caregivers) be immunized against hepatitis B. In addition, ACIP strongly recommends that all staff be vaccinated against (or have documented immunity to) influenza, measles, mumps, rubella, and varicella.

Lastly, it is mandatory that all staff involved in direct patient care receive an initial two-step tuberculosis skin test (the Mantoux test with 5 tuberculin units of purified protein derivative [PPD]) at time of employment. Repeat skin testing is to be done annually. Previous bacille Calmette-Guérin (BCG) vaccination is not a contraindication for skin testing.

**Exposure Incident**

In the event of eye or body contact with the patient’s blood or body substances, including deep wound puncture from a needlestick, (1) irrigate the eye with water or wash the exposed body part with soap and water (use bottled sterile water stocked in the nursing bag or car as necessary), and (2) contact the home health agency Infection Control Director for follow-up instructions and care. In addition, report suspect exposure to *Mycobacterium tuberculosis* or any other infectious organism to the Infection Control Director.

**OSHA Regulations**

Infection control standards and policies published by OSHA should be accessible to all home health staff for
reference. A copy of these regulations should be placed in the Infection Control Manual or in the appropriate policy or procedure manual located in an easily accessible place at the home health agency. The home health agency is responsible for having an infection control program, including a staff infection–control exposure plan, that identifies patient risk for infectious organisms on admission to the home health agency and includes guidelines for clinical management.

NURSING CONSIDERATIONS

Review the remaining procedures in this chapter.

The nursing bag is to be handled and transported in as clean a manner as possible.

Instruct the patient/caregiver on infection control precautions. See the Patient Education Guidelines box, Reducing the Risk of Transmitting a Communicable Disease.

Consider placing patients who have active infectious organisms, such as vancomycin-resistant *Staphylococcus aureus*, with an “infection control care team” or specific case manager to reduce the risk of staff exposure and transmission of infectious organisms to other patients. Try to visit these patients last or at the end of the day. When possible, use disposable equipment or keep needed equipment in the home with these patients, and contact the local health department for further surveillance/management guidelines.

Be aware that at the time of this writing, OSHA was proposing new rules for staff protection against exposure to *M. tuberculosis*, including skin retesting every 6 months for all staff who are at risk for exposure to sources of aerosolized *M. tuberculosis* or who come in contact with patients with suspected or active *M. tuberculosis*.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- Any patient/caregiver instructions regarding infection control precautions and response to teaching, including adherence to recommendations
- Implementation of *Standard Precautions*
- Physician notification, if applicable
- Other pertinent findings

Update the plan of care.
Bag Technique

PURPOSE

- To prevent contamination of the nursing bag
- To prevent cross-contamination and spread of infectious organisms

RELATED PROCEDURES

- Handwashing
- Maintaining Medical Supplies and Equipment in the Car

EQUIPMENT

1. Nursing bag with impermeable lining
2. Paper towels
3. Fresh newspapers or other suitable barrier
4. Leak-proof and puncture-proof container for bag storage in the car
5. Liquid soap (bar soap can be a haven for bacteria) *(Note: antiseptic hand cleanser may be used instead of liquid soap)* and an impermeable plastic trash bag (see Infection Control) STOP

PROCEDURE

1. Observe the principles of Standard Precautions at all times. The inside of the nursing bag should be regarded and maintained as a clean area.
2. Transport the nursing bag in the car on top of a supply of fresh newspapers. In addition, the bag should be stored in a clean area of the car, preferably in a plastic or cardboard container designated for such use.
3. Once in the patient’s home, select the cleanest and most convenient work area and spread the newspaper.
4. Place the bag on the newspaper.
5. Prepare a receptacle (impermeable plastic trash bag for disposable items).
6. Open the nursing bag and remove items needed to wash hands (handwashing supplies should be kept at the top of the bag). Close the bag. Use the nursing bag as few times as possible.
7. Wash and dry hands according to the procedure for Handwashing.
8. Return to the nursing bag, open it again, and remove necessary items for the visit. Apply personal protective equipment as needed. Keep the bag closed during the visit. Leave all plastic containers in the bag. If additional equipment or supplies are needed from the bag during the home visit, the handwashing procedure must be repeated.
9. Discard disposable personal protective equipment in an impermeable plastic trash bag. To discard a disposable gown or plastic apron, remove the apron by folding the exposed side inward.
10. After providing care, clean all equipment with soap and water or a home health agency-approved disinfectant before returning it to the bag. Return unused clean supplies to the nursing bag.
11. After care is given, contaminated equipment or equipment that cannot be cleaned in the patient’s home may be transported for disinfection to the home health agency in an impermeable sealed plastic bag placed on the floor of the car. Never place used needles, soiled equipment, or dressings in the nursing bag.
12. Wash hands. Discard any remaining items according to Standard Precautions. Return cleaning supplies (e.g., liquid soap) to the nursing bag.

Original procedures copyright © 2000 by Mosby, Inc.
13. Close the nursing bag and fasten. When leaving the patient’s home, pick up the bag and place the newspaper that was underneath it in the family trash. When traveling, store the nursing bag in a clean place (see procedure for *Maintaining Medical Supplies and Equipment in the Car*).

**NURSING CONSIDERATIONS**

The nursing bag should be cleaned and restocked weekly at the home health agency.

The following should be considered when selecting work areas in the patient’s home:

- **a.** Adequate work space (preferably a clean surface)
- **b.** Protection of the family’s property
- **c.** Protection of the nursing bag (place in a safe place area from children and/or pets)
- **d.** Convenience of water

Be aware that *Bag Technique* is a traditional public health practice that recognizes the impact and presence of the home health nurse in the community.

**DOCUMENTATION GUIDELINES**

Document *Standard Precautions* on the visit report.
Disposal of Soiled Dressings

PURPOSE

- To prevent the spread of infectious disease
- To promote self-care in the home

EQUIPMENT

1. 10% bleach solution
2. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Place all soiled dressings in an impermeable plastic trash bag and secure.
2. Spray or drizzle dressings with a 10% bleach solution if dressings contain heavy drainage.
3. Seal and place dressings in a second plastic bag if they are heavily soiled or if there is a possibility of leakage. Place impermeable plastic trash bag in family trash.

NURSING CONSIDERATIONS

Instruct the patient/caregiver to review local ordinances regarding biohazardous waste disposal. The home health nurse is responsible for educating the patient/caregiver regarding safe disposal procedures.

DOCUMENTATION GUIDELINES

Document Standard Precautions on the visit report.
Equipment Cleaning

PURPOSE

• To prevent the spread of infectious organisms
• To maintain clean equipment when providing patient care

RELATED PROCEDURE

• Applying Principles of Standard Precautions: General Guidelines

EQUIPMENT

1. Home health agency-approved disinfectants
2. Liquid soap and water
3. Antiseptic wipes
4. Utility gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Don utility gloves to protect hands from disinfectants.
2. For initial clean up, wash all equipment with soap and water.
3. After washing equipment with soap and water, disinfect, rinse, and dry.
4. Disinfection methods in the home will vary. The item to be disinfected will primarily determine the disinfectant that is to be used. Bleach corrodes metal but is cited as an all-purpose disinfectant for blood and body substance spills.
5. Seal disposable supplies used to clean equipment in a leak-proof impermeable plastic trash bag separate from the family trash; secure and place in the family trash. Otherwise discard disposable items according to Standard Precautions.

Stethoscope

Routinely clean the bell/diaphragm of the stethoscope with a disinfectant spray, or, using a rotary motion, with an antiseptic wipe each visit.

Infant Scale

Wipe down the scale with a disinfectant between use and place a fresh disposable plastic sheath/pad underneath the infant each visit.

Glucose Meters

Follow specific manufacturer’s recommendations for cleaning.

Thermometers

Use an antiseptic wipe to clean glass thermometers; otherwise follow the manufacturer’s recommendations.
Respiratory Therapy Equipment

Do not use bleach or caustic disinfectants on respiratory therapy equipment. Consult with the respiratory therapist or home medical equipment (HME) vendor regarding specific guidelines.

Soap and water are effective for cleaning equipment such as nasal cannulas, masks, tubing, the cap and mouthpiece of cartridge inhalers, humidifiers, and surfaces of most respiratory therapy equipment.

Home respiratory equipment may also be soaked in a white vinegar/water (1 cup: 3 cups) solution for 20 minutes, thoroughly rinsed with warm running water, and allowed to air dry. Cleaning should be done daily or at least 2 to 3 times per week. Cleaning of respiratory equipment is also recommended after each intermittent positive pressure breathing (IPPB) or aerosol treatment. After being cleaned, humidifiers should be refilled with fresh distilled water to prevent bacterial growth.

Other

Soiled bedpans and commodes should be cleaned with soap and water and then disinfected. Instruments may be boiled on the stove for 15 minutes in a clean pan or metal tray and then stored in the nursing bag.

NURSING CONSIDERATIONS

Always read the label on the disinfectant and follow directions. Remember, disinfectants are designed for inanimate objects and may damage the skin; use with caution and instruct the family to store out of reach of children.

Use disinfectants in a well-ventilated room. If possible, totally submerge contaminated articles in the disinfecting solution for the required time period.

If disinfection of contaminated equipment is not possible in the patient’s home, seal in an impermeable plastic trash bag and transport to the home health agency for disinfection. Never place soiled or contaminated equipment in the nursing bag.

Whenever possible, use disposable equipment/supplies for home care patients.

DOCUMENTATION GUIDELINES

Document Standard Precautions on the visit report.
Handwashing

PURPOSE

- To prevent cross-contamination and spread of infectious organisms
- To maintain cleanliness of hands

EQUIPMENT

1. Paper towels
2. Lotion
3. Liquid soap
4. Antiseptic hand cleanser or wipes, antiseptic hand scrub (optional), and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Take equipment to wash the hands (liquid soap, paper towels, lotion) to the sink area. Use one paper towel on which to place the other items. The second and third towels are used for washing and drying the hands before and after care has been given.
2. Wet hands and forearms. Then lather, using vigorous friction, starting at the fingertips, and working toward the forearm. Do not touch the sink.
3. Wash the hands vigorously under a stream of water for at least 10 seconds. Avoid using cloth towels or bars of soap because these are a haven for bacteria. If running water or clean facilities are not available, the hands should be cleaned with an antiseptic hand cleanser. Follow the manufacturer’s recommendations for use of antiseptic hand cleanser. Wash hands as soon as soap and water or clean facilities are available.
4. If performing an invasive procedure or caring for a patient with a drug-resistant bacteria, use an antiseptic hand scrub.
5. Dry hands from the fingers toward the forearm.
6. Turn off water faucet with a dry paper towel; then discard the towel in a trash bag. Apply lotion as desired.
7. Clean up any spills around the sink area.
8. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Wash the hands before and after care of patients. Wash the hands before entering the nursing bag. Wash the hands between nursing procedures (e.g., tracheostomy care and Foley catheter care).

Avoid wearing rings and bracelets. Keep nails trimmed short to prevent the spread of germs.

If wearing gloves, **always** wash hands after removal of gloves.

DOCUMENTATION GUIDELINES

Document Standard Precautions on the visit report.
Implementing a Tuberculosis Control and Personal Respiratory Home Health Protection Program

PURPOSE

- To provide home health agency guidelines for effective tuberculosis control program
- To reduce the risk of transmission of *M. tuberculosis* (*MTB*)

RELATED PROCEDURES

- Applying Principles of *Standard Precautions*: General Guidelines
- Reporting and Managing an Exposure Incident
- Tuberculin Skin Test (see Chapter 10)

GENERAL INFORMATION

OSHA supports the CDC guidelines for the prevention of MTB in health-care facilities.

- Emphasis is placed on:
  1. administrative and engineering control and personal respiratory protection of health care workers;
  2. health-care facility risk assessment and development of a written MTB control plan;
  3. early detection and management of persons with MTB;
  4. purified protein derivative (PPD) skin testing programs; and
  5. health-care worker education, counseling, screening, and evaluation regarding MTB transmission, symptomology, prevention, and treatment. Be aware that OSHA guidelines regarding protection of health care workers from exposure to MTB were under review for revision at the time of this writing. See the OSHA Regulations in the procedure for *Applying Principles of Standard Precautions: General Guidelines*.

*M. tuberculosis* is carried in airborne particles, known as *droplet nuclei*, that can be generated when persons with pulmonary or laryngeal MTB sneeze, cough, speak, or sing. The particles are estimated to be approximately 1 to 5 microns. Normal air currents keep the particles airborne and can spread them throughout a room or building.

PROCEDURE

1. Institute the elements of the Personal Respiratory Protection and MTB Protection Program to include the following:
   a. Conduct a risk assessment to evaluate the risk of MTB transmission among staff and patients.
   b. Develop a written program based on the risk assessment, and periodically repeat the risk assessment to evaluate program effectiveness.
   c. Develop, enforce, maintain, and evaluate policies and protocols to ensure early detection and treatment of patients/staff who may have infectious MTB.
   d. Educate and train home health nurses and field staff about clinical manifestations of MTB, effective methods for prevention of MTB transmission, treatment modalities, and the benefits of a medical screening program.
   e. Promptly evaluate possible episodes of MTB transmission in the home health agency and coordinate
activities with the local public health department, emphasizing reporting, adequate discharge follow-up, and ensuring continuation and completion of therapy.

f. Perform an annual evaluation of the program. Based on outcomes, both written procedures and program administration should be modified as necessary. Elements of the program that should be evaluated include work practices and use of respirators.

1. Perform two-step PPD testing of home health nurses and field staff at the time of their employment, with retesting done annually and as needed. Consult with the local health department and local OSHA representative each year to keep updated on guidelines.

1. Provide respiratory protection devices. Appropriate respiratory protection must be worn by all staff potentially exposed to MTB in settings where administrative and engineering controls may not provide adequate protection. NIOSH requires the following criteria for respiratory devices used for MTB:

a. Provide a respiratory protection device (respirator) able to filter particles of 1 micron with a filter efficiency of 95%, given flow rates of up to 50 L/minute (check manufacturer guidelines, and purchase certified respirators that meet or exceed NIOSH criteria).

b. Provide a medical evaluation that determines the health care worker is physically able to perform the work and use the respirator.

c. Provide a fit-test protocol whereby respirations are tested in a reliable way to obtain a face-seal leakage of no more than 10%.

1. Ensure that all staff who provide direct patient care in the home are instructed and trained in the proper use of respirators and their limitations (the face-piece seal should be checked by staff each time they put the respirator on).

2. Ensure that respirators are easily available for use and stored in a sanitary location. If used again, clean and disinfect the respirator, according to the manufacturer’s recommendations.

3. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

When visiting a patient with suspected or confirmed infectious MTB, offer the patient a surgical mask, and instruct the caregivers/family to cover their mouth and nose with a tissue when coughing or sneezing. Wear respiratory protection when entering the home or the patient’s room until the patient is no longer actively infectious.

Educate the patient/caregiver about the importance of the taking MTB medications as prescribed by the physician.

Cough-inducing procedures should be performed on patients with actively infectious MTB only if absolutely necessary. If cough-inducing procedures are necessary, perform them in a well-ventilated area of the home away from caregivers/family members.

Respirators should not be worn when conditions prevent a good seal. Such conditions may include the growth of a beard; sideburns; a skull cap that projects under the face piece; dentures; and in some cases, glasses. In addition, home health nurses and field staff who are severely immunosuppressed or pregnant should avoid exposure to MTB.

DOCUMENTATION GUIDELINES

Document Standard Precautions on the visit report. Any home health staff exposure shall be reported on the OSHA 200 form.
Maintaining Medical Supplies and Equipment in the Car

PURPOSE

- To promote cleanliness of medical supplies and equipment in the home health nurse’s and field staff’s car
- To prevent transmission of insects or infectious organisms

RELATED PROCEDURE

- Applying Principles of *Standard Precautions: General Guidelines*

EQUIPMENT

1. Large plastic or cardboard container with impermeable lining

PROCEDURE

1. Home health nurses and field staff who travel by car are to keep a large plastic or cardboard container in a designated clean area of the car, preferably the trunk.
2. The nursing bag, extra staff uniform, and medical supplies and equipment are to be kept in this container.
3. Supplies and equipment are to be stored in the car container in a neat and orderly fashion.

NURSING CONSIDERATIONS

Home health nurses and all field staff have the potential to transmit insects and infectious microorganisms from household to household. Medical supplies and equipment are to be stored, handled, and transported in a way to minimize this risk. Likewise, medical supplies/equipment in the patient’s home are to be stored and handled without compromising integrity.

Do not leave temperature-sensitive equipment in the car overnight or for long periods.

Using nonlatex gloves should be considered because of potential staff and patient allergies to latex.

DOCUMENTATION GUIDELINES

Document *Standard Precautions* on the visit report.
Management of Blood or Body Substance Spills in the Home

PURPOSE

- To prevent the spread of infectious disease
- To promote a clean environment

EQUIPMENT

1. Blood spill kit (utility gloves, paper towels, impermeable plastic trash bag, 1:10 bleach solution or other home health agency-approved disinfectant) (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Don gloves.
3. Cover blood or body substance spill with paper towels.
5. Disinfect spill area with 1:10 bleach solution or an approved home health agency disinfectant for a minimum of 1 minute.
6. Wipe up bleach solution or disinfectant with paper towels and place in an impermeable plastic trash bag and secure.
7. For large amounts of blood or body substances, consider double-bagging plastic trash bag in another plastic trash bag, then secure it.
8. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Make a fresh supply of bleach solution daily because chlorine deteriorates and loses efficacy over time.

DOCUMENTATION GUIDELINES

Document Standard Precautions on the visit report.
Reporting and Managing an Exposure Incident

PURPOSE

- To report an exposure incident
- To prevent infectious disease or staff injury
- To acquire home health agency support services for possible staff exposure to infectious disease

RELATED PROCEDURE

- Implementing a Tuberculosis Control and Personal Respiratory Home Care Protection Program

EQUIPMENT

1. Hydrogen peroxide, alcohol
2. 4- x 4-inch gauze pads
3. Soap and water, paper towels, and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. When an exposure incident occurs in the workplace, the following guidelines will be followed:
   a. *Eyes.* If an exposure to the eye or mucous membrane occurs, immediately flush the area with clean water for at least 5 minutes.
   b. *Cuts.* If an exposure occurs in a cut, open sore or lesion, abrasion, or damaged cuticle, wash the area with soap and water as soon as possible. Apply first aid.
   c. *Puncture wound.* If exposure occurs by sharps, wash the area with soap and water as soon as possible. Apply first aid.
   d. *Clothing.* Immediately clean all contaminated clothing with a 10% bleach solution. Change clothes as soon as possible. Carry an extra uniform in the car.
   e. *Respiratory.* See the procedure for Implementing a Tuberculosis Control and Personal Respiratory Home Health Protection Program.

1. Report the exposure incident to the home health agency’s Infection Control Clinical Director within 1 hour of occurrence.
2. Follow OSHA recommendations for testing, counseling, and seeking appropriate medical assistance. (All efforts should be made to ensure employee confidentiality.)
3. No further patient contact should be made by the exposed home health nurse and field staff until approval is given by the Infection Control Director.
4. Clean and replace any equipment used during the procedure. Discard any disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Consider a tetanus prophylaxis for cuts and deep wound punctures; consult with the Medical Director as needed.

DOCUMENTATION GUIDELINES

Complete an incident report and forward to the home health agency’s Infection Control Director within 24 hours.
of occurrence for follow-up, treatment, surveillance, and evaluation.
Soiled Linen Management

PURPOSE

- To prevent the spread of infectious organisms
- To promote a clean environment
- To promote self-care in the home

EQUIPMENT

1. Pillow case or laundry bag
2. Detergent and warm water
3. Household bleach
4. Utility gloves and an impermeable plastic bag (see Infection Control) [STOP]

PROCEDURE

1. Don utility gloves when handling soiled linens. Disinfect utility gloves after each use.
2. Handle soiled linens as little as possible.
3. Bag soiled linens at the location where they were used. Do not put laundry on the floor.
4. Store soiled linens in a leak-proof plastic bag separate from family linens. Keep the bag tied shut.
5. Wash soiled linens as soon as possible to prevent the growth and spread of germs.
6. Wash soiled linens separately from household laundry in extremely hot water for 25 minutes. In addition to detergent, 1 cup of household bleach should be added to each load of laundry. The wash cycle should be run through twice, and then the laundry should be dried.
7. Clean a soiled or contaminated washing machine by running an empty cycle using a commercial disinfectant or 1 cup of full-strength bleach.
8. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Instruct the patient/caregiver on the procedure.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- Any patient/caregiver instructions and response to teaching, including adherence to recommendations
- Standard Precautions

Update the plan of care.
Solutions for Irrigation: Management and Storage Guidelines

PURPOSE

• To prevent contamination of irrigation solutions
• To prevent infection
• To promote self-care in the home

RELATED PROCEDURE

• Solutions for Irrigation: Sterile Normal Saline, Dakins’, and Acetic Acid

EQUIPMENT

1. Irrigation solutions, as prescribed by the physician (see *Infection Control*). {STOP}

PROCEDURE

1. Discard irrigation solutions within 1 week after they are opened.
2. Discard any irrigation solution that is discolored, has particulate matter in it, or has a foul odor.
3. Store solutions in a cool place away from direct sunlight, thereby retarding the growth of many infectious germs.

DOCUMENTATION GUIDELINES

Document *Standard Precautions* on the visit report.
Solutions for Irrigation: Sterile Normal Saline, Dakins’, and Acetic Acid

PURPOSE

- To make sterile normal saline, Dakins’, and acetic acid solutions in the patient’s home
- To provide a cost-effective and convenient method to supply the patient/caregiver with normal saline, Dakins’, and acetic acid solutions for health-care needs
- To promote self-care in the home

RELATED PROCEDURES

- Solutions for Irrigation: Management and Storage Guidelines
- Wound Care: Irrigation and Debridement (see Chapter 5)

EQUIPMENT

1. Glass jars with screw-on lids (canning or mayonnaise jars)
2. Tap water
3. Saucepan with lid
4. Measuring spoons and cup
5. Salt for preparation of .9% normal saline
6. White vinegar for preparation of 25% acetic acid
7. White bleach and baking soda for preparation of 25% Dakins’ solution
8. Liquid soap (see Infection Control) {STOP}

.9% Normal Saline

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment in the kitchen.
3. Wash jars, pan, and all utensils in hot, soapy water. Rinse with warm water and dry.
4. Add 1 teaspoon of table salt to 2 cups of tap water in a clean glass jar with a screw-on lid.
5. Loosely place the lid on the jar.
6. Place the jar in a saucepan of water (the water level in the saucepan should be three-fourths of the height of the jar).
7. Cover the top of the saucepan.
8. Put the saucepan on the stove, and boil the water for about 25 minutes.
9. Remove the saucepan from the stove and cool the solution. When the solution is cool, remove the jar and tighten the lid.
10. Write the type of solution and the date the solution was made on the outside of the jar.
11. Store the solution in a clean place away from direct sunlight.
12. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

25% Acetic Acid

PROCEDURE
1. Follow steps 1 to 3 in the procedure for .9% Normal Saline.
2. Put 2 cups of tap water in a clean glass jar with a screw-on lid.
3. Loosely place the lid on the jar.
4. Place the jar in a saucepan of water (the water level in the saucepan should be three fourths of the height of the jar).
5. Cover the top of the saucepan.
6. Put the saucepan on the stove and boil the water for about 25 minutes.
7. Add 1½ tablespoons of white vinegar to the jar.
8. Remove the saucepan from the stove and cool the solution. When the solution is cool, add 3 tablespoons of white vinegar.
9. Cap the jar.
10. Store the solution in a clean place away from direct sunlight.
11. Follow steps 10 to 12 in the procedure for .9% Normal Saline.

25% Dakins’

PROCEDURE

1. Follow steps 1 to 6 in the procedure for 25% Acetic Acid.
2. Add 3 tablespoons of liquid bleach (such as Clorox); add ¼ teaspoon of baking soda.
3. Follow steps 9 to 11 in the procedure for 25% Acetic Acid.

NURSING CONSIDERATIONS

Make a fresh solution each day. Discard any solution that becomes discolored or cloudy.

Use the same procedure as for .9% Normal Saline but delete salt to make sterile water.

When using the solutions, handle only the outside of the jar and lid. Do not leave the lid off the jar for long periods.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure
- Any patient/caregiver instructions and response to teaching, including adherence to recommendations
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Patient Education Guidelines

Reducing the Risk of Transmitting a Communicable Disease

1. If possible, have your own room.

2. Clean your room daily. Items such as toys, books, and games may be cleaned with soap and water or wiped down with alcohol solution. Wash trash containers with soap and water; then spray the containers with a commercial disinfectant. Wash the floors and the furniture with a commercial disinfectant. Follow the manufacturer’s guidelines for cleaning medical equipment; usually soap and water are fine. When it is possible, open the windows and air out your room.

3. Clean up spills of blood or urine with a 10% bleach solution. Mix 1 part of bleach to 10 parts of water daily. Throw away unused bleach solution at the end of the day.

4. The family should wear disposable gloves if contact with the patient’s blood, wound drainage, feces, urine, open areas of the skin, or other bodily fluids is a possibility. The family members should wear utility gloves if they are handling soiled linens; cleaning the patient’s living area; or cleaning up spills of blood, urine, or feces.

5. Clean utility gloves with hot soap and water, then disinfect the gloves with a 10% bleach solution. Throw away and replace cracked or torn utility gloves.

6. Bag your trash separately (from that of the family) in a plastic leak-proof bag. Double-bag as needed to prevent leakage of soiled bandages or disposable items. Keep animals and pets out of your trash. Dispose of home medical waste according to local ordinances; contact the local health department.

7. Place needles, syringes, lancets, and other sharp objects in a hard-plastic or metal container with a screw-on lid or with a lid that fits securely. Do not use a glass container. If you use a coffee can, be sure to reinforce the plastic lid with a heavy-duty tape. Keep containers with sharp objects out of children’s reach.

8. Family members should maintain personal cleanliness by washing their hands before and after using the bathroom and before handling food. Family members should wash their hands before and after giving patient care. (Keep patient as clean as possible.)

9. Use a liquid soap in the bathroom. Cover the faucet and the handles with tissue paper before touching them. Bathroom surfaces should be washed and disinfected with a nontoxic disinfectant such as a 10% bleach solution at least once a day or when soiled. Each family member should use his or her own toothbrush and drinking glass. If you have an outdoor toilet, place 3 to 4 cups of lime in the toilet weekly.

10. Cover your mouth and nose when coughing or sneezing to prevent the spread of germs. Turn your head to avoid droplets from coughs or sneezes.

11. Refrigerate milk and other perishable foods. Have well water tested by the local EPA before drinking it. The household may use the same cooking pots and utensils; however, commonly used or unclean eating utensils should be avoided. Do not share food from the same plate. Wash your dishes last, or use disposable dishes.

12. Maintain health at a high level by eating a balanced diet and getting adequate amounts of sleep, rest, sunshine, fresh air, and exercise.

13. Obtain and maintain protection against the diseases for which there are no known immunizing agents. Talk to your physician about a family immunization schedule.

14. Call your physician and home health nurse when you have complaints of frequent cough; sudden weight
loss; diarrhea; vomiting; increased drainage, increased size, or increased redness of any wounds; elevated temperature; areas of skin breakdown; lethargy; night sweats; aching; rashes; sore throat; headache; burning during urination; painful urination; or stiff neck.

15. Keep in mind the following points regarding infection control in the home: (1) good common sense usually provides the best solutions to many situations and (2) the liberal use of soap and water is still one of the best ways to prevent the spread of infection.

A limited number of copies of this guideline may be made for free distribution to patients and families. All other rights are reserved.
**Adult Head-to-Toe Assessment**

**PURPOSE**

- To obtain a data base to establish the plan of care
- To identify patient problems or needs on the patient care plan
- To establish a baseline physiologic status

**RELATED PROCEDURES**

- Clinical Documentation Guidelines for Medicare Reimbursement (see Chapter 16)
- Clinical Indicators for a Home Health Aide Referral (see Chapter 16)
- Clinical Indicators for a Hospice Referral (see Chapter 16)
- Clinical Indicators for a Psychiatric Home Health Nurse Referral (see Chapter 16)
- Clinical Indicators for a Rehabilitation Referral (see Chapter 16)
- Clinical Indicators for a Social Service Referral (see Chapter 16)
- Mental Health Assessment
- Socioenvironmental Assessment (see Chapter 16)

**GENERAL INFORMATION**

In conjunction with a health history, a review of all the patient’s body systems is necessary at the time of admission to the home health agency. A baseline physiologic data base is established to evaluate deviations from normal findings.

Data from the health history and the physical assessment are both objective and subjective and are usually obtained from the patient. However, information may be supplemented from a secondary source, such as a caregiver, multidisciplinary team, or records from the referring institution.

**PROCEDURE**

1. Explain the interview and techniques of examination to the patient/caregiver.
2. Assess the following:

**General**

Usual weight, any recent weight change, weakness, fatigue, fever, appearance, and patient’s/caregiver’s major concerns; identify and list all known allergies; ask the patient whether he or she can maintain normal daily activities

**Head**

Headache, head injury, dizziness, hair color and distribution, facial movement, symmetry, and surgeries

**Eyes**

Vision, glasses or contact lenses, most recent eye examination, pain, redness, excessive tearing, double vision,
glaucoma, cataracts, pupil or conjunctive discoloration, abnormal eye movement, and surgeries

**Ears**

Hearing, tinnitus, vertigo, earaches, infections, discharge, and surgeries

**Nose**

Frequent colds, nasal stuffiness, hay fever, nosebleeds, sinus trouble, patency of nasal passages, discharge, and surgeries

**Mouth and Throat**

Condition of teeth, gums, and buccal mucosa; bleeding gums; last dental examination; sores or lesions; frequent sore throat; hoarseness; gag reflex; swallowing difficulties; and surgeries

**Neck**

Masses, swollen lymph nodes, goiter, pain, stiffness, and surgeries

**Skin**

Rashes, masses, lesions, itching, dryness, color change, changes in nails, pustules, papules, turgor, dermal wounds (bedsores or ulcerations), and surgeries

**Breasts**

Masses, pain, nipple discharge, self-examination, mammogram, and surgeries

**Respiratory**

Wheezes or crackles, cough, dyspnea, orthopnea, paroxysmal nocturnal dyspnea, sputum (color and quantity), hemoptysis, wheezing, asthma, allergies, chronic obstructive pulmonary disease (COPD), pneumonia, tuberculosis, pleurisy, tuberculin test, last chest x-ray examination (dates and results), flu vaccination, tobacco use, and surgeries

**Cardiac**

Heart sounds, hypertension, rheumatic fever, murmurs, bruits, thrills, edema, jugular venous distention, chest pain, palpitations, irregular heart rate, shortness of breath (SOB) or poor activity tolerance, capillary refill, last electrocardiogram, cardiac procedures, and surgeries

**Neurologic**

Level of consciousness, orientation, reflexes, strength, coordination, balance, sensation, fainting, blackouts, seizures, paralysis, local weakness, numbness, tingling, tremors, memory, speech, perceptual disturbances, sleep, and surgeries
Peripheral Vascular

Clubbing, capillary refill, intermittent claudication, color, temperature, pulses, cramps, varicose veins, thrombophlebitis, and surgeries

Gastrointestinal

Diet, height, difficulty in swallowing, heartburn, appetite, nausea, indigestion, excessive belching or passing of gas, food intolerance, caffeine and alcohol use, vomiting of blood, frequency of bowel movements, change in bowel habits, diarrhea, laxative use, bowel sounds, abdominal pain, hemorrhoids, jaundice, liver or gall bladder disease, hepatitis, ostomy, gastrointestinal or drainage tubes, ulcers, cirrhosis, masses, tenderness, rectal bleeding, and surgeries

Fluid and Electrolyte

Dehydration, central/peripheral edema, fluid and diet restrictions, intravenous therapy, serum electrolyte panel (SMA-7), blood urea nitrogen (BUN), input and output, and surgeries

Musculoskeletal

Range of motion (ROM), strength, tenderness, crepitus, pain, swelling, redness, heat, arthritis, osteoporosis, deformities (kyphosis, scoliosis, and barrel chest), amputation, gait, paralysis, and surgeries

Endocrine

Endurance; thyroid disease; diabetes mellitus; steroids; insulin management; excessive thirst, hunger, or sweating or frequency of urination; and surgeries

Hematologic

Easy bruising or bleeding, anemia, HIV infection, AIDS, past transfusions and any reactions, complete blood cell (CBC) count, blood cultures, and surgeries

Urinary

Urgency, hesitancy, dribbling, incontinence, urinary tract infection, frequency of urination, polyuria, nocturia, dysuria, hematuria, kidney stones, urinary catheterization, ileostomy, dialysis, kidney disease, urinalysis, and surgeries

Genitoreproductive

Male

Discharge from or sores on penis, history of sexually transmitted disease and treatment, hernias, testicular pain or masses, frequency of intercourse, libido, sexuality, last prostate examination, and surgeries

Female
Age at menarche; regularity, frequency, and duration of menstrual periods; amount of bleeding; bleeding between menstrual periods after intercourse; last menstrual period; dysmenorrhea; age of menopause; menopausal symptoms; postmenopausal bleeding; discharge; itching; sexually transmitted disease and treatment; last Papanicolaou smear; number of pregnancies; number of deliveries; number of abortions (spontaneous and induced); complications of pregnancy; birth control methods; frequency of intercourse; libido; sexuality; and surgeries

**Psychiatric**

Depression, mood changes, memory loss, obsessive compulsions, hypochondriasis, dementia, schizophrenia, grief, suicide attempts, anxiety, drug abuse, agitation, nervousness, eye contact, unusual affect or communication patterns, sleep and eating disturbances, unusual dress and behavior, impaired socialization, and any previous hospitalizations

**Medications**

Identify medications currently prescribed, and elicit information about compliance; include over-the-counter medications

**Functional Learning Limitations**

Ambulation, transfers, reading, attention span, dressing, toileting, personal hygiene, housekeeping, and cooking

**NURSING CONSIDERATIONS**

Pay particular attention to the specific disease pathology and to any abnormal findings noted on the physical examination.

A brief inquiry into the family history of diseases, such as cancer, tuberculosis, cardiac complaint, or diabetes, is appropriate.

Deviations from normal findings should be reported to the physician (as appropriate) and should be reflected in the patient care plan.

A referral to social services, rehabilitation services, or specialty nursing services may be required.

**DOCUMENTATION GUIDELINES**

Use the data base to implement the plan of care and to develop the patient care plan.

Identified problems on the patient care plan should then be a focus of the visit report.

Document *Standard Precautions* on the visit report. Update the plan of care to reflect the current patient status (see Chapter 16).
Blood Pressure

PURPOSE

• To assess systolic and diastolic arterial blood pressure

EQUIPMENT

1. Sphygmomanometer with cuff
2. Stethoscope
3. Antiseptic wipes and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Expose the patient’s arm above the elbow. Instruct the patient to relax his or her arm. Support the patient’s forearm at his or her side during the procedure.
4. Determine the proper cuff size to obtain an accurate reading. (The width of the cuff should be 40% of the circumference at the midpoint of the limb on which the cuff is to be used: 20% wider than the diameter. The length of the bladder should be approximately twice the recommended width.)
5. Adjust the cuff by placing a compression bag over the inner aspect of the arm, approximately 1 inch above the elbow. Center the arrows marked on the cuff along the brachial artery. (Before the cuff is applied, squeeze out the excess air.)
6. Strap the Velcro sleeve band, and firmly secure it. Position the manometer at eye level.
7. Palpate the brachial artery at the bend of the elbow (antecubital area).
8. Tighten the pressure valve or screw that is located on the bulb.
9. Squeeze the bulb to inflate the pressure cuff until the brachial artery can no longer be palpated. Then inflate the cuff to a mercury reading of 20 to 30 mm Hg above the point where the pulse disappeared.
10. Place the bell (or diaphragm) of the stethoscope over the patient’s brachial artery where the pulse was palpated. (The bell of the stethoscope transmits low-pitched arterial blood sounds more effectively than the diaphragm.)
11. Insert the tips of the stethoscope in your ears, with the tips pointing down and forward.
12. Slowly release the pressure valve on the inflation bulb, allowing the mercury to fall at a rate of 2 to 3 mm Hg a second. Listen for pulse sounds.
13. Take the reading when the first sound is heard; this is the systolic pressure. Continue to release the pressure slowly, until the last pulsation is heard; this is the diastolic pressure.
14. Allow the pressure to fall rapidly to zero, and remove the cuff.
15. If you repeat the procedure, wait 30 seconds.
17. Clean the bell of the stethoscope with an antiseptic wipe to prevent cross-contamination. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

At the initial assessment, take the patient’s blood pressure while the patient is sitting and again while he or she is standing to evaluate for orthostatic hypotension.
During the first visit, take blood pressure readings on both arms. Thereafter, take blood pressure readings on the patient’s arm that shows the highest reading while the patient is in a sitting position to ensure accurate measurements. If the patient is unable to sit, always take the blood pressure reading in the same position/arm for consistency in readings.

Avoid taking blood pressure readings on an injured arm, an arm with a shunt, an arm that is being infused with an intravenous solution, or on the arm on the affected side of the mastectomy patient because blood flow may be compromised.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- Vital signs, including systolic and diastolic blood pressure readings
- Correlate the blood pressure readings with medications, and notify the physician about abnormal findings or deviations from the baseline status
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Update the plan of care.
Edema

PURPOSE

- To assess cardiopulmonary status
- To provide a uniform and objective approach to measuring the central, peripheral, and abdominal edema for baseline evaluation
- To evaluate the effect of diuretic administration
- To evaluate the patient’s adherence to prescribed medications, diet, and activity regimen

RELATED PROCEDURE

- Weight

EQUIPMENT

1. Scale
2. Tape measure

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a sitting or comfortable position.
4. Assess the cardiopulmonary status.
5. Notify the physician about signs of central circulatory overload, such as crackles or wheezes on auscultation, dyspnea, mental status changes, or deviations from the patient’s baseline status.
6. Assess the patient’s adherence to prescribed medications, diet, or activity regimen.
7. Weigh the patient at each visit.
   a. Notify the physician if a 3- to 4-pound weight gain occurs in 1 week because such a weight gain may indicate progressive heart failure or noncompliance with prescribed medication, diet, or activity regimen.
   b. Instruct the patient to weigh himself or herself each morning before breakfast and after the first voiding and to record the weight. Instruct the patient to notify the physician of a 2-pound weight gain in 1 day.
8. Assess and evaluate edema. (Dependent edema may be located in the feet, legs, or hands. Edema at the sacral area may be found in bedridden patients. Abdominal edema may be found in bedridden and ambulatory patients, particularly patients with congestive heart failure and with liver or renal disease.)
9. Measure the edematous area each visit. If edema is present, the area should be measured for an objective comparison with the patient’s normal body measurements. Measurements should be taken in the following manner:
   a. Pedal edema measurement. Measure above bony prominences, such as over the dorsum of the foot, above the ankle, and at midcalf. On the visit report, note the number of inches from the knee the edema is located for uniform calf measurements.
   b. Hand edema measurement. Measure between the phalangeal joints, over the dorsum of the hand, and at the wrist.
   c. Abdominal edema measurement. Measure abdominal girth, and then record the measurement above, across, or under the navel.
10. Palpate the edematous area to assess whether pitting is present. Palpate the area over the bony surface at the
ankle, the tibia, the foot, the sacrum, and the hand (or bones of the wrist). Use one of the following to describe the pitting edema:

a. Pitting is 1+ if the area can be depressed 1 cm; it is 2+ if a 2 cm depression can be made. This procedure continues until 4+ is reached. Identify the area where the pitting edema is assessed. For example: pitting 3+, left foot.

b. Depress the edematous area, and note the time that is required for the area to return to normal. If the time is greater than 15 seconds, record: > 15 seconds. Identify the areas where pitting edema is assessed. For example: pitting edema is 10 seconds, ankle to midcalf.

1. Provide patient comfort measures.

NURSING CONSIDERATIONS

Instruct the patient about the signs of fluid retention, such as sudden shortness of breath at night, shoes or clothes that suddenly do not fit, wheezing, and chest pain.

Instruct the patient about when to call the physician and when to go to the emergency room.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Cardiopulmonary status, including auscultatory findings
- Weight
- Measurements of edematous areas, assessed in centimeters
- Description of pitting edema, as appropriate
- Any patient/caregiver instructions, including response to teaching
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Intake and Output (I/O)

PURPOSE

- To measure the patient’s liquid and solid intake and output
- To maintain an accurate record of the patient’s fluid status

RELATED PROCEDURE

- Edema

EQUIPMENT

1. Home health agency intake and output record sheet
2. Bedpan, urinal, or drainage bag
3. The following individualized measuring utensils:
   a. Graduated measuring cylinder
   b. Commode urine collection hat
   c. Reference charts
      (1) 1 cup = 120 ml
      (2) 1 large glass = 240 ml
      (3) 1 ounce = 30 ml
      (4) 1 tablespoon = 15 ml
      (5) 1 teaspoon = 5 ml
      (6) 1 soup bowl = 180 ml
1. Disposable nonsterile gloves (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment to measure the patient’s I/O.
3. Keep a record of the patient’s I/O in the following manner:
   a. Use graduated cylinders or other measuring utensils to measure the I/O.
   b. Total liquid and solid intake on an I/O record sheet for an 8-hour period.
   c. Record the totals of three 8-hour periods to equal one 24-hour period.
1. Estimate and measure the following other forms of I/O:
   a. Vomitus
   b. Blood
   c. Wound drainage
   d. Ostomy drainage
   e. Nasogastric (NG) or gastrostomy tube output
   f. Excessive perspiration
   g. The number of formed stools
   h. The number of times and the estimated amount that the patient was incontinent with urine or diarrhea
1. Assess I/O records, and evaluate the patient’s fluid status in relation to the disease process, medication regimen, diet, and activity orders on subsequent visits.
2. Provide patient comfort measures.
3. Clean and replace the equipment. Discard disposable items according to *Standard Precautions*.

**NURSING CONSIDERATIONS**

Instruct the patient/caregiver in the procedure.

Explain, establish, and demonstrate measurements to the patient/caregiver that are to be used for both intake and output.

Ice cubes, gelatin, and ice cream are considered liquid intake.

Instruct the patient/caregiver in record keeping. If the patient has difficulty in understanding or reading standard units of measure, make him or her an I/O sheet that is easy to use (use recognized drinking glasses or bowls as units of measurement for the patient to check off, and instruct the patient to measure output by number of times he or she voids).

Elicit feedback and a return demonstration from the patient/caregiver.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Patient I/O
- Any patient/caregiver instructions and response to teaching, including the ability to measure and record I/O
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Complete the home health agency I/O record sheet, with 8- and 24-hour totals.

Update the plan of care.
Mental Health Assessment

PURPOSE

- To obtain a data base to establish the plan of care
- To identify the patient’s mental health needs
- To lessen or diminish symptoms of patient distress or anxiety
- To promote self-care in the home

RELATED PROCEDURES

- Adult Head-to-Toe Assessment
- Clinical Documentation Guidelines for Medicare Reimbursement (see Chapter 16)
- Clinical Indicators for a Psychiatric Home Health Nurse Referral (see Chapter 16)
- Socioenvironmental Assessment (see Chapter 16)
- Suicidal Thoughts or Harmful Psychotic Ideation (see Chapter 15)

GENERAL INFORMATION

The mental status assessment should be completed when the patient has a psychiatric diagnosis, or when during physical assessment or care, the nurse discovers that an in-depth mental status examination is warranted. If such is the case, the psychiatric home health nurse would be best qualified to implement the assessment.

Collect both subjective and objective information from the patient. Supplementary information, however, may be contributed by secondary sources, such as the spouse, other family members, caregiver, other members of the health care team, and/or records obtained from the referring institution.

PROCEDURE

1. Explain the interview and techniques to the patient/caregiver.
2. Gather information during the course of establishing the nurse-patient relationship.
3. Attain a brief summary of past psychiatric admissions or a history of psychiatric treatment. Assessment of the patient should include the following:

General Appearance

Grooming and manner of dress, general behavior, affect, facial expression, communication, posture, and gait; note any distinctive feature that would identify the individual immediately, would suggest a deviation from the expected norms for the patient’s age, or would compromise relationships with others.

Current Medication

Identify medications that are currently prescribed, and elicit information about the patient’s compliance; include over-the-counter medications.

Concurrent Drug/Alcohol Use
Assess smoking and illicit drug and alcohol use.

**Emotional Status**

**Range:** Limited, narrow, wide, or expansive; stable or labile (fluctuating)

**Intensity:** High- to low-energy investment in verbalizations/expression

**Type:** Emotional category congruent or incongruent to context

**Thought Processes**

**Reality Testing:** Realistic goals, perceptions, and ideas or illusions, hallucinations, and delusions

**Orientation:** Knows self, place, and time or is disoriented

**Memory:** Good to poor recall, short- and long-term memory

**Attention and Concentration:** Focused, easily distracted, or noninvolved

**Thinking:** Good to poor performance on cognitive tasks such as categorization, serial sevens, or interpretation of proverbs

**Integration:** Expresses appropriate or inappropriate content, needs, desires, and wants in context; volunteers information and cooperates or is guarded and suspicious

** Judgment:** Satisfactory to unsafe expressions of actions in real or hypothetical situations and reflection versus impulsiveness

**Insight:** Recognizes or fails to recognize own role and responsibilities toward illness and identifies or does not identify behaviors that may be beneficial

**Patterns of Interaction**

**Goal Direction Content:** Logical, sensible, focused, realistic to themes

**Volume:** Loudness or softness of voice

**Rate:** Speed of speech; pauses, blocks, pressured rates, or complaints of racing thoughts

**Tone:** Full range, monotone, booming, tedious, or monotonous

**Productivity:** None to minimal and brief answers; detailed or elaborate answers, neologisms, clang associations of echolalia (persecution, nihilism, and grandeur), ideations, repetitions; or incomprehensible language

**General Lifestyle**
**Methods of Coping**

a. When the problem began and when the symptoms that the patient is experiencing began  
b. The effects of the symptoms on daily living and social functioning  
c. How the patient has attempted to cope with the current situation  
d. The presence of defense mechanisms and their effectiveness in reducing anxiety; the degree to which the defense mechanisms are dysfunctional  
e. Community resources and support systems that are available to the patient, including the assistance of a competent caregiver

**Manner of Relating:** Note the social and relational manner of behaving toward others and toward the nurse in the home setting

**Activity:** Usual patterns or changes in activities, basic need patterns, and high to low levels of energy and motivation

**Satisfaction:** High to low levels of involvement and expression of life satisfaction and self-worth

**Level of Autonomy:** Appropriate interdependency as opposed to dysfunctional levels of dependency; independence, passivity, or aggressiveness

**NURSING CONSIDERATIONS**

Sudden changes in behavior, affect, or patterns of thinking may represent an acute health-threatening situation and should result in appropriate referral to emergency services or facilitated admission into the hospital.

Indications of new-onset depression, self-threat, threat to others, or behaviors that threaten health status, as well as evidence of delirium, requires *immediate* physician evaluation.

Use the data base to develop and implement the plan of care.

**DOCUMENTATION GUIDELINES**

Problems identified in the patient care plan should be a focus of the visit and visit report.

Update the plan of care to reflect the current patient status.

<ftp://AUTHOR: Patricia E. Freed, R.N., Ed.D.>

Original procedures copyright © 2000 by Mosby, Inc.
Pain Assessment

PURPOSE

- To assess the patient’s level of pain
- To identify factors that exacerbate the patient’s pain
- To identify factors that relieve the patient’s pain
- To promote comfort and well-being

RELATED PROCEDURES

- Administration of Medications: General Guidelines (see Chapter 10)
- Pain Management (see Chapter 11)

GENERAL INFORMATION

A thorough pain assessment that includes physical and psychosocial considerations should precede any intervention for pain management. See the procedure for Pain Management in Chapter 11.

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assess the following when the patient has complaints of pain:
   a. Location (identify location of the patient’s pain)
   b. Pain increases with (identify action or circumstance)
   c. Pain decreases with (identify action or circumstance)
   d. Quality of the patient’s pain (circle as appropriate)—dull, intermittent, constant, stabbing, other
   e. Symptoms caused by the pain (circle as appropriate)—nausea, vomiting, diaphoresis, tachycardia, dyspnea, other
   f. On a scale of 1 to 10, the patient rates pain at________
   g. How the pain affect’s the patient’s physical and social functioning
   h. Any history of prior pain medication and its effectiveness in controlling the pain
      (1). Any history of possible drug abuse/misuse
   i. The following psychosocial implications for chronic pain:
      (1) The meaning of the pain to the patient/caregiver
      (2) The patient’s typical coping responses to the pain
      (3) Changes in the patient’s mood as a result of the pain
1. Discuss pain management options and therapies with the patient/caregiver. Assess the patient’s preferences for and expectations about pain management (accommodate and recognize cultural considerations as well as individual health beliefs).
2. Identify the treatment or medication currently used to control the patient’s pain.
3. Evaluate the effectiveness of treatment or medication currently used to control the patient’s pain.
4. Continue to assess pain:
   a. At regular intervals after starting the treatment plan
   b. With each new report of pain
   c. At a suitable interval after each nonpharmacologic or pharmacologic intervention (for example 15 to 30
minutes after parenteral drug therapy and/or 1 hour after oral administration)
1. Instruct the patient to report changes in his or her pain or any new pain so that appropriate reassessment and changes in the treatment plan can be initiated.

NURSING CONSIDERATIONS

Be aware that many older patients in home care more often experience chronic pain as related to long-term disease processes, co-morbidities, and/or functional disability.

Perceptions of pain in the elderly may be diminished. Disorders such as dementia or stroke may interfere with the patient’s ability to report the chronology and character of the pain. Use questions that are very specific and related to activities, such as “what happens to the pain when you lean forward or stand up?”

Patients who have diabetes may have decreased sensations/reports of pain as related to disease process. It is especially important for patients in this group to visually check their legs and feet for signs of ulceration or tissue necrosis, because they may not feel pain in their lower extremities. Patients who have diabetes can also experience a painless myocardial infarction and should be regularly assessed for signs of heart failure.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- Patient vital signs and overall health status
- Location of the patient’s pain
- Factors that increase and decrease the patient’s pain
- Quality of the patient’s pain
- Patient self-rating of pain
- Any treatment used to control the patient’s pain
- Patient expectations of and response to pain therapy
- Physician notification, if applicable
- Other pertinent findings.

Document medications on the medication record.

Update the plan of care.
Pulse

PURPOSE

- To assess pulse rate, rhythm, and volume
- To detect an irregular heart rate
- To assess a pulse deficit

EQUIPMENT

1. Stethoscope
2. Wrist watch, with second hand or digital display
3. Antiseptic wipes or home health agency disinfectant and an impermeable plastic trash bag (see Infection Control)

Apical Pulse

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a supine or sitting position.
4. Before and after patient use, clean the diaphragm of the stethoscope with antiseptic wipes or an approved home health agency disinfectant.
5. Expose the patient’s chest area.
6. Palpate the point of maximal impulse (PMI) (also called Erb’s point), which is located midchest and toward the patient’s left side (over the apex of the heart, located in left fourth to fifth intercostal spaces).
7. Place the diaphragm over the PMI and auscultate for normal S₁ and S₂ (lub, dub) heart sounds.
8. Use a watch, and count the apical pulse for 1 minute.
9. Reclothe the patient.
11. Clean and replace equipment. Discard disposable items according to Standard Precautions.

Apical-Radial Pulse

PROCEDURE

1. Follow steps 1 through 8 of the procedure for Apical Pulse.
2. With the other hand, palpate and assess the patient’s radial pulse.
3. When the radial pulse can be felt, use a watch and count the apical and radial pulses simultaneously for 1 minute.
4. Assess any differences between the radial and apical pulses—the pulse deficit. Note the pattern or frequency of any irregularity.
5. Reclothe the patient.
6. Follow steps 10 and 11 of the procedure for Apical Pulse.

Radial Pulse
PROCEDURE

1. Follow steps 1 through 4 of the procedure for Apical Pulse.
2. Gently bend the patient’s elbow to a 90-degree angle, with the patient’s wrist extended and palm up. Support the patient’s lower arm with your arm as needed.
3. Palpate the radial pulse in the following manner:
   a. Exert slight pressure with the tips of your first two fingers on the patient’s inner wrist and over the radial artery. Do not use your thumb.
   b. Apply pressure to the pulse initially, and then relax the pressure so that the pulse becomes easily palpable.
   1. When the pulse can be felt, use a watch and count for a full minute.
   2. Assess the rhythm, strength, and thrust of the radial pulse against your fingertips.
   3. Follow steps 10 and 11 in the procedure for Apical Pulse.

NURSING CONSIDERATIONS

The radial pulse is commonly used during routine measurement of vital signs.

If the radial pulse is irregular or inaccessible because of dressings, follow the procedure for Apical Pulse.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- Characteristics of apical-radial pulse and heart sounds
- If a pulse deficit is detected, record the actual apical and radial pulses
- Correlate the apical-radial pulse characteristics with the prescribed medications, and notify the physician about any abnormal findings or deviations from the baseline status
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Respirations

PURPOSE

• To assess the rate, depth, and quality of respirations

EQUIPMENT

1. A wrist watch with a second hand or digital display

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assist the patient to a position of comfort, preferably sitting.
3. Count respirations by watching the rise and fall of the chest, by placing your hand on the patient’s chest to feel its rise and fall, or by listening to the patient’s breathing (if it is audible).
4. Use a watch and count respirations for a full minute. One breath is made up of both one inspiration and one expiration.
5. While respirations are being counted, assess the depth and rhythm of the ventilatory movements.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

• Respiratory rate
• Depth
• Rhythm
• Physician notification, if applicable
• Other pertinent findings

Update the plan of care.
Temperature

PURPOSE

- To assess body temperature

RELATED PROCEDURES

- Radial Pulse
- Respirations

GENERAL INFORMATION

Most home health patients are issued an oral mercury thermometer by the home health agency. This thermometer is often kept in the patient’s home record folder or with the patient’s medical supplies. Because this is such a common practice, this procedure addresses usage of the standard mercury thermometer. The reader is referred to manufacturer guidelines for use of alternative thermometers.

EQUIPMENT

1. Oral or rectal mercury thermometer
2. Wrist watch
3. Water-soluble lubricant for rectal thermometer
4. Tissue
5. Disposable thermometer and plastic sleeves or protective coverings
6. Antiseptic wipes
7. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

Axillary Temperature

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at the bedside or a convenient work area.
3. Assist the patient to a sitting or a supine position.
4. Remove the thermometer from its container and wipe it with an antiseptic wipe from bulb end toward the fingers in a rotating manner. Rinse the thermometer with cold water. Place a protective cover on the thermometer if the patient does not have his or her own thermometer.
5. Shake the thermometer’s mercury down to below 96° F.
6. Dry the area under the arm; place the bulb end of the thermometer into the center of the patient’s axillae.
7. Draw the patient’s arm across his or her chest.
8. Hold the thermometer in place for 5 minutes. Take the pulse and respiration measurements during this time.
9. Remove the thermometer from the axillae, and discard its protective covering.
10. Wipe any secretions off the thermometer with a tissue, cleaning in a rotating fashion from tip to bulb.
11. Read the thermometer at eye level to the nearest one-tenth degree.
12. Assist the patient to a comfortable position.
13. Clean the thermometer with lukewarm soapy water. Rinse it with cool water, and dry it.
14. Return the thermometer to its protective container.
15. Provide patient comfort measures.

**NURSING CONSIDERATIONS**

Perform the axillary procedure on adult patients who are not alert or who are combative.

**Oral Temperature**

**PROCEDURE**

1. Follow steps 1 through 5 of the procedure for Axillary Temperature.
2. Place the thermometer in the patient’s mouth, well back under the tongue. (Instruct the patient to keep his or her lips closed.)
3. Allow the thermometer to remain in the mouth at least 3 minutes.
4. Count the pulse and respirations while the temperature registers.
5. Remove the thermometer from the mouth and discard the protective cover.
6. Read the thermometer at eye level to the nearest one-tenth degree.
7. Wipe any secretions off the thermometer with a tissue, cleaning in a rotating fashion from tip to bulb.
8. Clean the thermometer in warm soapy water. Rinse it in cool water, and dry it.
9. Shake down the mercury again.
10. Return the thermometer to its protective container.
11. Provide patient comfort measures.
12. Clean and replace equipment. Discard disposable items according to Standard Precautions.

**NURSING CONSIDERATIONS**

Consider issuing the patient his or her own thermometer when possible. (In this case, using a protective sleeve is not necessary.)

Do not take an oral temperature on patients who are disoriented, unconscious, on oxygen therapy, or on those who have had recent surgery of the mouth.

**Rectal Temperature**

**PROCEDURE**

1. Follow steps 1 through 5 of the procedure for Axillary Temperature.
2. Apply a small amount of lubricant on the bulb of the thermometer.
3. Assist the patient onto his or her side, and drape the patient to expose the anal area only.
4. Separate the buttocks, and insert the thermometer gently into the anus, about 1½ inches for an adult. Leave the thermometer in place for 3 minutes. Stay with the patient.
5. Count the pulse and respiration while the thermometer is registering.
6. Remove the thermometer, and discard the protective cover.
7. Wipe any secretions off the thermometer with a tissue, cleaning in a rotating fashion from tip to bulb.
8. Read the thermometer at eye level to the nearest one-tenth degree.
9. Clean the patient’s anal area to remove lubricant or feces.
11. Clean the thermometer with lukewarm, soapy water. Rinse it with cool water, and dry it.
12. Return the thermometer to its protective container.
13. Discard disposable items according to *Standard Precautions*.

**NURSING CONSIDERATIONS**

Do not take rectal temperatures on patients with diarrhea, fecal impaction, or acute coronary artery disease; on those who have had surgery or disease of the rectum; or on any immunosuppressed patient.

Always hold the rectal thermometer while it is in place.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- Temperature (indicate whether the patient’s temperature was taken by oral, axillary, or rectal method)
- *Standard Precautions*
- Physician notification, if applicable
- Other pertinent findings

Update the plan of care.
Weight

PURPOSE

• To measure weight gain or loss
• To assess fluid status or edema
• To evaluate compliance with diet and medication regimen

RELATED PROCEDURES

• Edema
• Intake and Output (I/O)

EQUIPMENT

1. Scale (preferably patient’s scale)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Use the same scale on the same flooring or rug each time the patient is weighed.
3. Weigh the patient as follows:
   a. Have the patient center his or her feet on the scale and stand erect.
   b. If it is possible, weigh the patient with the same amount of clothing on and at the same time of day each visit.
1. Read the patient’s weight indicated on the scale.
2. Provide patient comfort measures.

NURSING CONSIDERATIONS

Notify the patient’s physician of a 3- to 4-pound weight gain in 1 week.

DOCUMENTATION GUIDELINES

Document the patient’s weight, and evaluate his or her fluid status on the visit report in relation to the disease process, diet, medication regimen, and intake and output. Document physician notification of inappropriate weight gain or signs of respiratory distress, as appropriate.

Update the plan of care.
Well Baby Assessment

PURPOSE

- To obtain a data base to establish the plan of care
- To identify patient or family problems or needs on the patient care plan
- To establish baseline physiologic and developmental data for a child newborn to age 1 year
- To promote self-care in the home

RELATED PROCEDURES

- Child or Dependent Elder Abuse or Neglect (see Chapter 16)
- Domestic Violence (see Chapter 16)
- Socioenvironmental Assessment (see Chapter 16)

GENERAL INFORMATION

In conjunction with a health history, a review of all the patient’s body systems, as well as growth and developmental parameters, is necessary at the time of admission to the home health agency. The infant ideally will be cared for by a pediatric nurse specialist. However, this procedure provides general guidelines for the nurse who usually visits adults. Any problems with family-infant interaction or any abnormal physical findings should be reported to the pediatrician or referring hospital.

PROCEDURE

1. Explain the interview and techniques of examination to the caregiver or mother. Reassure the mother as appropriate.
2. Conduct the assessment to include the following:

   General

   - Was this a planned pregnancy?
   - Did the mother have prenatal care? How many visits did she have? At what point in the pregnancy did the mother initiate prenatal care?
   - Was the baby born at term, or was the infant born prematurely?
   - What is the baby’s date of birth?
   - What was the baby’s length and weight at birth?
   - Has the infant had any health problems since birth?
   - Is the baby taking any medications?
   - Is there any family history of serious illness?
   - How many hours does the baby sleep in a 24-hour period?
   - Does the baby appear healthy?
   - Is the baby alert and responsive?
   - Does the caregiver talk to and maintain eye contact with the baby?

Vital Signs

Original procedures copyright © 2000 by Mosby, Inc.
While the child is sleeping or resting, assess the apical heart rate for 1 full minute. The heart beat should be strong and regular. Assess the respiratory rate for 1 full minute. Young infants may have an irregular respiratory pattern. Axillary temperatures are preferred on young infants because of the danger of anal perforation.

**Growth**

Measure the infant’s height in the following manner. Lay the baby on a flat surface. Extend the baby’s knee, and flex his or her heel. Using the head and foot as a guide, make a mark on the surface, being careful to mark the level of the heel first. Measure the distance between the two marks while the mother is holding the baby. Weigh the baby while he or she is wearing only a diaper. It is preferable to weigh the baby on the same scale and at the same time of day on each visit. Compare the baby’s height and weight with the standard growth grid. If the baby was born prematurely, subtract the number of weeks the baby was early from the expected normal ranges.

**Feeding Patterns**

Babies should be held in a semi-upright position and face the caregiver during feedings. Do not prop the bottle. Babies should be fed on demand. Breast-fed babies generally eat every 2 to 3 hours, and formula-fed babies generally eat every 3 to 4 hours. The amount the baby eats at each feeding is based on the baby’s weight. Most formulas contain 20 calories for each ounce. Babies should be burped after they ingest 1 or 2 ounces. Check to see that the caregiver is preparing the formula according to the directions. If the baby is not gaining weight, be observant for a caregiver who may be diluting the formula too much. The most commonly fed commercial cow’s milk formulas are: Similac, with and without iron; Enfamil, with and without iron; SMA, with low or high iron; and Carnation Good Start, with and without iron. The most commonly fed soy formulas are Nursoy, Prosobee, and Isomil, with or without iron.

Observe the infant’s and caregiver’s interactions during feeding. Does the caregiver assess and appropriately respond to the infant’s cues for hunger, dissatisfaction, or need?

**Mouth**

Observe the inside of the mouth for white patches, which could indicate thrush. Using your finger, check the palate for any cleft. At this time the gums may be felt for any emerging dentition. First teeth usually appear at about 5 to 6 months.

**Cardiovascular**

Infants have a thin chest wall, and their hearts are proportionally larger and easily heard. A heart murmur may be heard in young infants. Some heart murmurs are innocent; however, all heart murmurs should be evaluated by the child’s primary care provider. The infant’s chest is normally round. Capillary refill and pulses should be checked.

**Respiratory**

Assess lung sounds both anteriorly and posteriorly. An infant’s lungs are more easily assessed in the left lower lobe. Note any abnormalities. Infants are at increased risk for respiratory infections because the airways are smaller and the alveoli are continuing to develop. Nasal flaring and retractions indicate respiratory distress.

**Gastrointestinal**
Observe the abdomen for contour, abdominal masses, or umbilical hernia. Check the umbilical cord stump in newborns; note any signs of infection. The umbilical cord stump should be cleaned with alcohol each time the diaper is changed until it falls off and heals. The esophageal spherincter is immature in young infants, allowing them to spit up small amounts of formula when burping; this regurgitation should be differentiated from vomiting. Bowel sounds should be heard in all four quadrants. Breast-fed infants will have mushy, seedy, yellow stools. Formula-fed infants will have soft, pasty, dark green to brown stools. Stooling patterns are individually set; however, they may vary from one stool every other day to several stools every day. It is not abnormal for babies to strain and grunt as they are passing a stool—a circumstance caused by immature musculature.

**Fluid and Electrolytes**

See *Feeding Patterns*. Signs of dehydration in infants include weight loss, sunken anterior fontanel, decreased urination, poor skin turgor, and absence of tears when crying.

**Genitourinary**

Assess genitalia for any abnormalities. Babies should produce 1 to 2 ml/kg/hr of urine over a 24-hour period. Frequent diaper changes can help prevent diaper rash. Diaper rash may be treated by eliminating diaper wipes and using a mild soap and water for cleansing, followed by an application of a thin layer of a zinc-based ointment. Children with persistent diaper rash should be referred to their primary care provider. For uncircumcised infants, check to see that the caregiver knows how to retract the foreskin and cleanse the baby’s penis properly.

**Neurologic**

Normal newborns have the following reflexes:

*Cornea*—The baby should blink and the pupils should constrict when a bright light appears.

*Rooting*—When the cheek is stroked, the baby should turn his or her head toward that side and begin to suck; this reflex disappears between 4 and 12 months.

*Sucking*—The baby should begin sucking with stimulation of the circumoral area.

*Startle (Moro)*—The baby should startle with loud noises or sudden change of position; this reflex disappears after 4 months.

*Grasp*—When the insides of the palms are stroked, the baby should grasp the examiner’s fingers.

Babies should move all of their extremities equally. They should be able to hold their heads up by 2 to 4 months, roll from back to front by 4 to 6 months, sit unsupported by 6 to 8 months, crawl by 6 to 8 months, and walk by 9 to 15 months. Babies should be able to hold objects by 3 to 4 months and should be able to transfer objects from hand-to-hand by 4 to 6 months. Babies develop the pincer grasp by 7 to 9 months.

**Sleep Patterns**

Sleep patterns vary with each child. Newborns generally sleep 16 to 17 hours in each 24-hour period. Healthy
infants should be positioned on their back for sleeping. Infants generally begin to sleep through the night when they are between the ages of 2 and 6 months.

**Skin**

The baby’s skin should be warm and show no signs of bruising. Mucosal membranes should be pink. Note any birthmarks. Skin turgor should be supple. Poor skin turgor may indicate dehydration. Skin rashes may warrant further treatment.

**Head**

Palpate the anterior fontanel. It should be soft and flat. The anterior fontanel normally closes when the child is 12 to 18 months old. A sunken fontanel may indicate dehydration. A bulging fontanel may indicate increased intracranial pressure. Measure the head circumference. The head should be measured with the tape measure placed just above the ears and over the occiput. Compare the measurement with the standard growth grid.

**Eyes**

From birth, babies are able to fix and gaze. The eyes should be symmetrical. There should be no drainage. Ask the mother whether the baby cries tears from both eyes. Strabismus may be considered a normal finding in young infants up to 6 months; however, after this time it is considered abnormal, and the child should be referred to the primary care provider.

**Ears**

Observe the baby’s response to sound. Check for ear symmetry. The tops of the ears should be even with the eyes. A young infant’s ears should be pulled down and back for proper otoscope insertion. A red, bulging tympanic membrane or any ear drainage may indicate otitis media.

**Nose**

Air movement should be felt through the nares. Babies are normally nose breathers. If the baby is congested, the nose should be cleared with a bulb syringe, especially before feedings.

**NURSING CONSIDERATIONS**

Pay particular attention to the specific pathology and to any abnormal findings noted on the physical examination, as well as to the mother-infant interaction during feeding. The caregiver’s support is critical to the growth and development of the infant. In providing care to the infant, the family is the focus of care.

**DOCUMENTATION GUIDELINES**

As appropriate, complete standard growth grids. Use the data base to implement the plan of care and to develop the patient care plan.

Identified problems on the patient care plan are the focus of the visit report.

Update the plan of care to reflect current patient status.
AUTHORS: Karen Balakas, R.N., M.S.N., and Anne Schappe, R.N., Ph.D.
Wound Assessment and Documentation

PURPOSE

- To identify parameters of wound assessment
- To provide wound assessment documentation guidelines for Medicare reimbursement

RELATED PROCEDURES

- Wound Irrigation and Debridement (see Chapter 5)
- Wound Management (see Chapter 5)
- Wound Packing (see Chapter 5)

EQUIPMENT

1. Ruler or plastic measuring guide (all measurements should be given in centimeters)
2. Cotton-tip applicators or swabs
3. Disposable nonsterile and sterile gloves, protective apron, and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Be aware that Medicare views the following nursing skills as needed for wound care in the home health setting:
   a. Direct hands-on wound care treatment (procedural care)
   b. Skilled observation and assessment of the wound
   c. Patient and caregiver education regarding treatment and home management
1. Inspect and evaluate the condition of the wound in the following manner:
   a. Assess the wound location and its size; measure the length, width, and depth (use a sterile, cotton-tip applicator to measure the depth of the wound by inserting the applicator in the wound bed; compare the distance between the tip of the applicator and the surface of the wound to a tape measure; probe the wound for evidence of undermining or tunneling. Measure the greatest length and the greatest width of the wound. Measure the length perpendicular to the width. Describe the location of the undermining; picturing the face of a clock with the patient’s head being at 12:00, measure the depth at the deepest point in the wound.
   b. Assess the color of the wound bed; a red or pink wound bed indicates healing, whereas a green, yellow, or black wound bed suggests infection or necrosis. Wounds tend to fill in and heal from the edges; the tissue is usually pink or red.
   c. Assess wound drainage; clear or serosanguineous drainage is not unusual in a healing wound; green or yellow drainage is often referred to as purulent and suggests infection. Record the amount of drainage as none, slight, moderate, or heavy, and inspect the color and amount of drainage on old dressings when they are removed.
   d. Assess wound odor; a sweet smell may indicate decay; a foul smell may indicate fecal contamination or a fistula. Occlusive and transparent adhesive dressings will cause a wound odor. When removing the dressing, always clean the wound before assessing it for odor. Document odor as “absent” or “present.”
   e. Stage the wound using the following descriptions:
(1). **Stage 1**: Nonblanchable erythema of intact skin; can be reversible with proper treatment.

(2). **Stage 2**: Partial-thickness skin loss, involving epidermis and/or dermis; this may present clinically as an abrasion, blister, or shallow crater.

(3). **Stage 3**: Full-thickness skin loss, involving damage or necrosis of subcutaneous tissue that may extend down to, but not through, underlying fascia; undermining may or may not be present.

(4). **Stage 4**: Full-thickness skin loss with extensive destruction and tissue necrosis or damage to muscle, bone, or supporting structures (e.g., a tendon or joint capsule); undermining and sinus tracts may be present.

1. Assess the surrounding skin for redness, inflammation, or signs of breakdown.

2. Evaluate the response to treatment, as well as factors that may impede healing, such as inadequate diet, proximity of the wound to the perineum of incontinent patients, immobility, noncompliance with home dressing changes or skin care regimen, lack of patient’s/caregiver’s knowledge regarding home management of the wound, and lack of the patient’s environmental resources.

3. Consult with the physician, and revise the plan of care as needed if the wound is not healing satisfactorily.

**NURSING CONSIDERATIONS**

Assessment of stage 1 pressure ulcers may be difficult in patients with darkly pigmented skin.

Irrigate the wound before measuring and staging. For consistent evaluation, it is advisable for the case manager to measure/stage the wound the first visit each week or PRN.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The treatment and condition of the wound (each visit)
- Appearance of the wound bed (black, yellow, green, tan, red, or pink)
- Wound measurements (at least weekly), including the length, depth, and width of the wound in centimeters
- Depth and location of undermining in centimeters
- Inflammation or erythema of the skin around the wound
- Color, odor, and estimated amount of drainage
- Stage the wound weekly, and compare the progress with the goals of therapy
- Any patient/caregiver instructions on wound care and response to teaching, including ability to change dressings and manage the wound at home
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Describe the infected wound or the complex procedural requirements of signs of infection that require the services of a skilled nurse. Wound care is covered by Medicare as long as the need for skilled care and treatment is clearly and precisely documented on the visit report.

Update the plan of care.
Ambulation

PURPOSE

- To increase circulation
- To promote mobility
- To promote self-care in the home

RELATED PROCEDURES

- Moving and Lifting Patients: Body Mechanics
- Walker (see Chapter 11)
- Wheelchair (see Chapter 11)

EQUIPMENT

1. Assistive device (walker, cane, crutches)
2. Walking shoes
3. Robe
4. Transfer belt

PROCEDURE

1. Instruct the patient/caregiver in the procedure.
2. Assess the patient’s strength and ability to bear his or her own weight or to use a cane or walker, as needed. Request that the caregiver help, as required.
3. Bring the walker or cane to the patient, as needed.
4. Assist the patient to sit up in the bed. Swing the patient’s legs over the side of the bed so that the legs can dangle. Observe closely for signs and symptoms of orthostatic hypotension, such as dizziness. Assist the patient in standing when he or she feels ready to do so.
5. Put on the patient’s robe and shoes. Apply a transfer belt around the patient’s waist.
6. Set up the walk-aid equipment, as needed.
7. Assist the patient to stand by gripping the transfer belt at the back and placing your other hand on the patient’s shoulder. Encourage the patient to push off the bed or chair using both hands.
8. Allow the patient to stand 15 to 20 seconds; hold the transfer belt until the patient feels balanced and ready to ambulate.
9. Assist the patient to ambulate, using the following procedures:
   a. Provide minimum assistance for patients who have only a slight balance problem.
   b. Stand to the side and behind the patient during ambulation.
   c. Assist the patient who does not use a walker by placing your left hand on the patient’s left upper arm and your right arm around the patient’s waist, gripping the transfer belt at the patient’s back.
   d. Hold the patient firmly if he or she is inclined to fall; if the patient should lose strength or start to fall, pull the patient toward you, and hold on firmly; gently lower the patient to the floor, letting the patient slide down against your leg for support; call for assistance.
1. After the ambulation period, return the patient to a comfortable and secure position in a chair or bed, using proper body mechanics.
2. Remove the transfer belt.
3. Provide patient comfort measures.

NURSING CONSIDERATIONS

Assess for home safety before initiating patient ambulation: is a bathroom available on the same floor, is the lighting adequate, are the halls uncluttered? Arrange chairs for convenient rest stops.

Obtain physician orders for physical therapy referral for problems with poor endurance, lack of strength, or activity intolerance or for need for assistive devices, such as a cane or walker.

Obtain physician orders for a home health aide referral for assistance with activities of daily living (ADLs).

Instruct the patient/caregiver in the procedure. See the Patient Education Guidelines box, Safety in the Home, in Chapter 16.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- Distance that the patient can tolerate when walking
- Any difficulties with home ambulation: visual difficulties, shortness of breath, unsteady gait, difficulties with stairs or uneven surfaces, holding onto furniture
- Any patient/caregiver instructions and adherence to recommendations, including home safety and fall prevention
- Physician notification, if applicable
- Other pertinent findings

Update the plan of care.
Back Rub

PURPOSE

- To promote patient comfort
- To stimulate circulation
- To prevent skin breakdown

EQUIPMENT

1. Lotion
2. Hand towel
3. Bath blanket
4. Disposable nonsterile gloves (optional) and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble equipment at the bedside.
3. Place the patient on his or her side or abdomen, whichever the patient finds most comfortable. Drape the patient with a bath blanket for privacy.
4. Fan-fold the bed covers below the patient’s buttocks.
5. Expose the patient’s back area.
6. To warm lotion, pour it in the palm of your hand.
7. Starting at the lower portion of the patient’s buttocks and with your hands conforming to the patient’s body contours, move your hands up the patient’s back on each side of the spine, toward his or her neck.
8. Fan your hands out over the shoulders and return to the patient’s buttocks, with your hands in the fan-shaped position.
9. After the massage has been completed, remove any excess lotion from the patient’s skin with a hand towel.
10. Reclothe the patient.
11. Provide patient comfort measures.
12. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Assess bony prominences for pressure areas, and revise the patient care plan as needed.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- The condition of the patient’s skin
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings
Update the plan of care.
Bathing and Grooming

PURPOSE

- To promote personal hygiene
- To provide a sense of well-being

RELATED PROCEDURES

- Back Rub
- Bed Making
- Foot Care
- Hair and Scalp Care
- Nail Care
- Oral Care
- Shampoo in Bed
- Skin Care (see Chapter 5)

EQUIPMENT FOR SHOWER OR TUB BATH

1. Bath towel and washcloth
2. Soap, powder, deodorant, comb, and toilete items
3. Bath mats (rubber mat, terry cloth mat) and shower chair, if available
4. Patient’s clothing (robe, shoes or slippers)
5. Bath thermometer, if available
6. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

Shower

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment in the bathroom area; make sure the bathroom is warm.
3. Place the rubber mat on the floor of the shower; place the terry cloth mat on the floor outside the shower.
4. Turn on the shower at the desired temperature (95° to 105° F), and leave the water running.
5. Escort the patient to the shower. Double check the temperature of the water before assisting the patient into the shower. Ensure the patient’s privacy.
6. Encourage the patient to wash; assist the patient if necessary. If the patient is left alone, stay within hearing distance.
7. Turn off the water, and help the patient out of the shower.
8. Assist in drying the patient, applying powder, and dressing the patient.
9. Assist the patient with oral care, hair care, and foot and nail care as needed.
11. Cleanse the equipment and work area, leaving the floor dry. Replace toilete articles. Bag soiled linen, and secure. Discard disposable items according to Standard Precautions.

Tub Bath
PROCEDURE

1. Follow steps 1 and 2 of the procedure for Shower.
2. Place the rubber mat in the tub and the terry cloth mat on the bathroom floor for the patient to stand on after the bath.
3. Draw the water. Steam from the water will help warm the bathroom. The temperature of the bath water should not exceed 105° F or PRN patient comfort.
4. Assist the patient into the tub, and help bathe the patient, as needed. Ensure the patient’s privacy.
5. If the patient is left alone, stay within hearing distance. (If the patient feels faint, let the water run out. Lower the patient’s head, cover the patient, and summon help.)
6. Assist the patient to wash and dry.
7. Assist the patient to dress and with oral care, hair care, and foot and nail care as needed.
8. Provide patient comfort measures.
9. Cleanse the equipment and work area, leaving the floor dry. Replace toilette articles. Bag the soiled linen, and secure. Discard disposable items according to Standard Precautions.

Cleansing Bed Bath

EQUIPMENT

1. Basin and water that is approximately 105° F
2. Soap, powder, deodorant, comb, and toilette items
3. Towels and washcloth
4. Patient’s gown
5. Linen
6. Bath blanket
7. Bath thermometer, if available
8. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble equipment at the bedside.
3. Ensure that the room is warm and private.
4. Offer the bedpan and/or urinal before beginning the bath.
5. Loosen the upper bedding, and drape the patient with a sheet or bath blanket, being careful not to expose the patient unnecessarily.
6. Obtain water, and check the temperature. The temperature should not exceed 105° F or PRN patient comfort level.
7. Encourage the patient to do as much of the procedure as possible.
8. Wash the patient’s face and ears; carefully rinse and dry the patient.
9. Remove the patient’s clothing.
10. Wash the patient’s neck, arms, hands, chest, and abdomen. Give special attention and care to the umbilicus and folds of skin.
11. Wash the patient’s thighs, legs, and feet; dry well between the patient’s fingers and toes.
12. Wash the patient’s back, buttocks, and perineal area. Change the water at least once during the procedure.
13. Offer to give the patient a back rub; apply lotion to the patient’s legs, feet, and back and to areas of dry skin.

Original procedures copyright © 2000 by Mosby, Inc.
Lightly powder the axillae and beneath the patient’s breasts, as needed.

14. Assist the patient to dress.

15. Assist the patient with oral care. Perform hair care and foot and nail care as needed. If the patient wears glasses, clean them.

16. Discard the bath water, and make the bed.

17. Provide patient comfort measures.

18. Clean the equipment and work area. Replace the toilette articles. Bag the soiled linen at the bedside, and secure. Discard disposable items according to Standard Precautions.

Sitz Bath

GENERAL INFORMATION

A sitz bath can be given to reduce perineal inflammation and discomfort by having the patient sit on an inflatable rubber ring in the bathtub. Follow the manufacturer’s instructions for a portable sitz bath.

EQUIPMENT

1. Same items as for a Shower
2. Inflatable rubber ring or portable sitz bath

PROCEDURE

1. Follow the same basic procedure as for a Tub Bath. Also, instruct the patient not to touch any open wound to prevent contamination.
2. Fill the bathtub with approximately 5 inches of warm water, not to exceed 105° F or PRN patient comfort level.
3. Soak the patient’s rectal-genital area in the tub for about 20 minutes.
4. Keep the water warm. Place a bath towel around the patient to prevent chilling.
5. When the patient has finished the sitz bath, apply a dressing as ordered.
6. Clean the bathtub with a cleanser and disinfectant.
7. Follow steps 7 through 9 of the procedure for Tub Bath.

NURSING CONSIDERATIONS

Obtain physician orders for home health aide assistance with ADLs.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

• The procedure and patient toleration
• Patient’s ability to participate in care
• Need for any adaptive equipment
• Any evidence of skin breakdown
• Standard Precautions
• Other pertinent findings
Update the plan of care.
Bed Making

PURPOSE

- To prepare the bed for the patient
- To refresh and comfort the patient

EQUIPMENT

1. Clean linens
2. Waterproof sheet, as needed
3. Impermeable plastic trash bag (or laundry bag) (see Infection Control) [STOP]

Making an Occupied Bed

PROCEDURE

1. Follow steps 1 and 2 of the procedure for Making an Unoccupied Bed. Explain the procedure to the patient/caregiver.
2. Loosen the top bedding at the foot of the bed. Remove the blanket and bedspread; fold and place them on a chair.
3. Raise the side rail if the patient has a hospital bed; then turn the patient on his or her side with his or her back toward you. Protect the patient from falling.
4. Pull the draw-sheet and bottom sheet out from under the mattress, and fold them toward the patient.
5. Place a folded, clean sheet on the bed; roll it toward the patient, with the center fold in middle of the bed and the bottom edges even with the edge of the mattress.
6. Tuck the top sheet under the mattress at the head of the bed. Miter the corners, and tuck the sheet under the side of the mattress.
7. Place the folded draw-sheet toward the middle of the bed. Tightly tuck the side of the draw-sheet under the mattress.
8. Face the patient toward you, and roll him or her over the linen gathered in the center of the bed. Raise the side rail if available.
9. Go to the other side of the bed, and take soiled linen off the bed. Place the soiled linen in the plastic bag (or laundry bag) at the patient’s bedside.
10. Pull clean sheets under the mattress at the head of the bed, and miter the corners. Pull the sheets tightly, and tuck them under the side of the mattress.
11. Spread the clean top sheet over the used top sheet, and, holding the hem of the clean sheet, draw the used sheet toward the foot of the bed. Do not expose the patient.
12. Provide patient comfort measures.
13. Follow steps 9 through 16 of the procedure for Making an Unoccupied Bed.

Making an Unoccupied Bed

PROCEDURE

1. Take the linen to the bedside, and place it on a chair in the order that it will be used.
2. Adjust the height of the bed if possible.
3. Remove the pillow case and place the pillow on a chair.
4. Loosen the linen, and remove it from the bed.
   a. If the linen will be discarded, roll it to the head of the bed and place it in the plastic bag (or laundry bag) at the patient’s bedside.
   b. If the linen will be saved, remove and fold it neatly over the back of a chair.
1. Align the mattress on the box springs. The open holes of a foam rubber mattress are placed next to the box springs.
2. Place the bottom sheet evenly at the foot of the mattress, with the center fold in the middle of the bed. Open the sheet.
3. Tuck the bottom sheet under the head of the mattress, miter the corners, and tuck the sides under the mattress.
4. Tightly tuck the sides of the draw-sheet under the mattress.
5. Place the top sheet so that the hem is even with the head of the mattress, cover the sheet with the blanket.
6. Place the top edge of the bedspread even with the blanket.
7. Make a pleat in the linen to allow room for the patient’s feet.
8. Tuck in the bedding at the foot of the bed, and miter the corners.
9. Fan-fold the top bedding if the bed will be occupied immediately.
10. Pull the pillow case over the pillow, and place it on the bed, with the open end away from the door.
11. Adjust the height of the bed and bedside furniture for the patient’s convenience.
12. Secure the plastic bag (or laundry bag), and place it in the laundry room.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Problems with incontinence or diaphoresis
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Update the plan of care.
Feeding the Dependent Elderly Patient

PURPOSE

• To provide patient nutrition
• To serve attractive, well-balanced meals
• To instruct the caregiver how to feed and care for the patient
• To promote self-care in the home

RELATED PROCEDURE

• Oral Care

EQUIPMENT

1. Tray and silverware
2. Napkin
3. Food items
4. Seasonings, according to the prescribed diet

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Instruct the caregiver in the following:
   a. Offer a washcloth for the patient to wash the face and hands.
   b. Assemble the equipment at the patient’s bedside.
   c. Assist the patient to a comfortable sitting position.
   d. Tuck the napkin under the patient’s chin.
   e. Season the food according to the patient’s desires and prescribed diet.
   f. Evaluate the patient’s ability to swallow, by first offering small sips of water.
   g. Feed the patient slowly, with a fork or spoon that is only half full (never rush the patient through his or her meals). Never give a patient more food than he or she can swallow.
   h. Ask the patient which food he or she wants next. Encourage the patient to self-feed as much as possible.
   i. If the patient resists eating, arrange to keep the food warm, and try again later. (Do not use force.)
   j. Notify the physician if the patient refuses to eat.
   k. If the patient cannot see the food, describe the food and indicate where it is located on the tray. (Identify each food selection by comparing its position with the position of hands on a clock.)
   l. Supplement the diets of poor eaters by adding milk, liquid supplements, or other nutritional items as approved by the physician.
   m. Remove the food tray as soon as the patient has completed the meal.
   n. Assist the patient to wipe his or her mouth and hands. Offer oral care.
3. Provide patient comfort measures.
4. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Instruct the caregiver that if oral medication is given with the food to include the pill with a small bite of food.
Instruct the caregiver that it may be necessary to inspect the patient’s mouth to verify that the medicine has been swallowed.

Obtain physician orders for home health aide assistance with ADLs.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient tolerance
- The patient’s ability to swallow or eat
- The amount of food that has been eaten or liquid supplements that have been ingested
- Any caregiver instructions and response to teaching, including the ability of the caregiver to feed the dependent elderly patient
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Update the plan of care.
Foot Care

PURPOSE

• To promote personal hygiene
• To prevent infection of the feet
• To promote self-care in the home

RELATED PROCEDURE

• Nail Care

EQUIPMENT

1. Large basin
2. Bath thermometer if available
3. Soap, lotion, nail clipper, emery board, and toilete items
4. Bath towel and washcloth
5. Plastic sheeting or towel
6. White cotton socks, shoes, or slippers
7. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Fill a basin half full of soapy water, leaving sufficient space for rinse water. Make sure the temperature does not exceed 105° F or PRN patient comfort level.
4. Place plastic sheeting under the basin to prevent the floor from getting wet.
5. Assist the patient in placing his or her feet in the basin of soapy water.
6. Rinse the soapy solution from the patient’s feet with clear water.
7. Assist the patient in removing his or her feet from the basin, taking care not to get the floor wet.
8. Dry the patient’s feet thoroughly, especially between the toes. Examine the patient’s feet carefully for evidence of slight discoloration or lesions.
9. Encourage foot care and inspection as part of the morning routine after bathing.
10. Apply lotion to the patient’s feet.
11. Perform nail care for the patient, as needed. Use lamb’s wool, as needed, when there is overlapping of the toes or when maceration between the toes is evident.
12. Put white cotton socks on the patient to minimize dryness and infections. Discourage the patient from wearing garters or nylon hose that may constrict circulation.
13. Make sure the patient’s shoes fit properly to avoid rubbing or blisters. (Three quarters of an inch of space between the great toe and the widest part of the shoe should exist when the patient is standing.)
15. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS
Assess the type of shoe worn as appropriate for level of ambulation and safety.

Patients with diabetes may have peripheral neuropathies, causing decreased sensation. Therefore, instruct patients with diabetes to examine their feet for blisters, cracks, or sores each day and immediately report any problems to the physician.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- The condition of the patient’s feet and toenails
- Any patient/caregiver instructions regarding foot care and response to teaching, including the ability to care for feet
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Update the plan of care.
Hair and Scalp Care

PURPOSE

- To provide comfort and to increase circulation
- To promote personal hygiene

RELATED PROCEDURE

- Pediculosis (see Chapter 5)

EQUIPMENT

1. Comb, brush, or pick
2. Hair conditioner or light oil
3. Towel
4. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at the bedside or at a convenient work area.
3. Assist the patient to a comfortable sitting position. (Place a towel under the patient’s head if the patient is supine.)
4. Remove hairpins or clasps, and part the patient’s hair.
5. Assess the condition of the patient’s hair and scalp. Inspect the hair and scalp for nits and lice. A special shampoo may be needed. (See the procedure for Pediculosis.)
6. Apply conditioner or light hair oil if the hair is dry.
7. Begin combing at the ends of the hair and work upward toward the head.
8. If the hair is dry, consider using a conditioner after each shampoo.
9. Comb the patient’s hair to a desired style.
10. Do not braid the hair tightly.
11. Avoid the use of hot combs to straighten the hair. Use end papers with hair curlers. Avoid any substance such as alcohol, which may dry the scalp.
12. Provide patient comfort measures.
13. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Obtain physician orders for home health aide assistance with ADLs.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient tolerance
- The condition of the patient’s scalp and hair
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Update the plan of care.
Moving and Lifting Patients: Body Mechanics

PURPOSE

- To move the patient or home equipment safely without causing injury
- To instruct the patient/caregiver in safe body mechanics when making transfers or moving or lifting objects

RELATED PROCEDURES

- Clinical Indicators for a Rehabilitation Referral (see Chapter 16)
- Skin Care (see Chapter 5)

GENERAL INFORMATION

Posture is important when moving or lifting an object or a patient. During all moving and lifting procedures, keep your back straight, and bend forward from the hips so that you use the stronger muscles of the back and abdomen. The patient's bed should be elevated to a comfortable working height.

Check your footing. The feet should be parted to give a broad base of support. Get close to the person or object that is being lifted. Line up your body, straighten your back, and bend at the knees and hips. Straighten the knees to lift. Lift smoothly to avoid strain. Work with the person helping you by coordinating movement. Shift the position of your feet to turn; don’t twist your body. Push or pull an object instead of lifting it whenever you can.

EQUIPMENT

1. Bed or stretcher
2. Chair
3. Sheet
4. Pillows
5. Blanket
6. Transfer belt

Assisting the Patient into a Chair When the Patient is Able to Assist

PROCEDURE

1. Explain the procedure to the patient.
2. Assemble the equipment near a chair or a convenient work area.
3. Assist the patient to put on his or her shoes or slippers.
4. Put a transfer belt on the patient.
5. Place the bed in the lowest position possible.
6. Place a chair or wheelchair parallel to the bed. Lock the brakes on the wheelchair.
7. Assist the patient to the side of the bed, and have the patient dangle his or her legs over the edge of the bed.
8. Stand directly in front of the patient.
9. Instruct the patient to push up from the bed, using his or her arms. Grasp the patient by the transfer belt from
behind with both hands, and assist the patient to stand. If a transfer belt is not available, instruct the patient to grasp your shoulders, and support the patient under the axillae while assisting him or her to stand.

10. Slowly pivot and sidestep until the back of the patient’s legs rest against the chair. Gently assist the patient to sit down. Remove the transfer belt.
11. Cover the patient with a blanket as needed.
12. Provide patient comfort measures.

**Assisting the Patient into a Chair When the Patient is Unable to Assist**

**PROCEDURE**

1. Explain the procedure to the patient.
2. Assemble the equipment near a chair or convenient work area.
3. Place a chair or wheelchair parallel to the bed. Lock the brakes on the wheelchair.
5. Assist the patient to a sitting position on the edge of the bed, with his or her feet flat on the floor. Put a transfer belt on the patient.
6. Stand directly in front of the patient. Lock his or her knees by bracing your knees against his or her knees.
7. Grasp the patient by the transfer belt from behind and assist him or her to stand. If a transfer belt is not available, support the patient under the axillae, and assist him or her to stand.
8. Pivot the patient one quarter turn, and gently lower him or her into the chair.
9. Secure the patient to the chair as necessary. Cover the patient with a blanket as needed.
Provide patient comfort measures.

**Moving the Patient to One Side of the Bed**

**PROCEDURE**

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at the bedside or a convenient work area.
3. Standing on the opposite side of the bed from which the patient faces when turned on his or her side, advance one foot to give a broad base of support.
4. Keeping your body straight, bend forward from the hips.
5. Place one hand over patient’s shoulders, the other under the hips.
6. Draw the patient toward you by flexing your arms.

**Moving the Patient Up in the Bed When the Patient is Able to Assist**

**PROCEDURE**

1. Follow steps 1 through 5 of the procedure for Moving the Patient to One Side of the Bed.
2. Instruct the patient to bend his or her knees and on the count of three to push his or her heels against the mattress.
3. Tighten your hip and thigh muscles; on the count of three, bring your body toward head of bed as the patient pushes his body upward in bed at the same time.
4. Have the patient assist if a trapeze set or rope tied to side rail of bed is available.

Original procedures copyright © 2000 by Mosby, Inc.
Moving the Patient Up in the Bed When the Patient is Unable to Assist

PROCEDURE

1. Follow steps 1 through 5 of the procedure for *Moving the Patient to One Side of the Bed*.
2. With your feet pointing toward the head of the bed, move the patient up, using the momentum from a rocking motion.
3. Place a sheet that is folded lengthwise under the patient, positioning it to extend above the patient’s head and below his or her hips. Stand at the head of the bed in the correct position, and pull the sheet toward you.

NURSING CONSIDERATIONS

Estimate the load to be moved or lifted.

Do not attempt to lift or move a patient or an object by yourself if doubt exists regarding your ability to do so.

Do not drag the patient up in bed; this action can cause shearing and can damage the skin.

Obtain a physician’s order for rehabilitation services for limited mobility; inability to perform ADLs; or the need for assistive devices, such as a cane, walker, wheelchair, or Hoyer lift.

Obtain physician’s orders for home health aide assistance with ADLs.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Patient/caregiver abilities and/or limitations with lifting and moving
- Any patient/caregiver instructions regarding home safety or fall prevention and response to teaching
- Physician notification, if applicable
- Other pertinent findings

Update the plan of care.
Nail Care

PURPOSE

• To clean the nails for personal hygiene
• To prevent infection
• To promote self-care in the home

RELATED PROCEDURE

• Foot Care

EQUIPMENT

1. Manicure set (nail clippers, orange stick, emery board or nail file)
2. Plastic sheeting or bath mat
3. Lotion
4. Bath thermometer
5. Warm water, basin or bowl, washcloth, and towels
6. Disposable nonsterile gloves and an impermeable plastic trash bag or laundry bag (see Infection Control)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at the bedside or a convenient work area.
3. Set the basin(s) on plastic sheeting.
4. Place the patient’s hands and/or feet in a basin(s) half-filled with warm water. (Water temperature should feel warm and not exceed 105° F or PRN patient comfort.)
5. Soak the patient’s fingernails and/or toenails for 10 to 20 minutes. Rewarm the water after 10 minutes.
6. Remove the hand or foot from basin and place it on a towel (soak the opposite hand/foot while manicuring). Dry the hand/foot.
7. Gently clean under the nails with an orange stick.
8. Trim the nails straight across the tops of the fingers to form a smooth edge. Do not file the corners of toenails.
9. Gently push the cuticle back with an orange stick.
10. Apply lotion to nail area.
11. Provide patient comfort measures.
12. Clean and replace equipment. Bag up towels in a plastic (or laundry) bag, and secure. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Instruct patients not to use razor blades or sharp objects to cut toenails.

Trim nails weekly to prevent them from becoming thick and curved under. Nails that are thick and curved under should be cut by a podiatrist.
Patients with diabetes may have neuropathies, causing decreased sensation. Avoid cutting the nails of a patient with diabetes or severe peripheral vascular disease (these patients have poor wound healing and should obtain podiatrist services for nail care).

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Condition of the patient’s nails
- Any patient/caregiver instructions regarding nail care and response to teaching
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Update the plan of care.
Oral Care

PURPOSE

• To cleanse the mouth for personal hygiene
• To prevent mouth infections and gum disease
• To promote self-care in the home

RELATED PROCEDURE

• Suctioning (see Chapter 4)

EQUIPMENT

1. Toothbrush
2. Applicators (sponge tips or tongue blades wrapped in a single layer of gauze)
3. Toothpaste or tooth
4. Mouthwash or antiseptic solution and water
5. Cup and drinking straws
6. Denture cup
7. Petrolatum
8. Gauze pad
9. Suction catheter attached to suction, as needed
10. Emesis basin, towel, and tissue
11. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

Brushing the Teeth

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at the bedside or a convenient work area.
3. Assist the patient to a sitting position if possible. If the patient is unable to sit, place him or her in a side-lying position near you with the patient’s face extending over the edge of the pillow.
4. Place a face towel under the patient’s chin. If he or she is able, permit the patient to perform his or her own personal oral care.
5. Put a small amount of toothpaste on the toothbrush (use tepid water).
6. If the patient needs assistance, brush the teeth. Brush downward on the upper teeth and upward on the lower teeth, from the gum line to the crown.
7. Hold the emesis basin, and help the patient rinse the mouth frequently (use a straw if the patient is in a side-lying position).
8. Dry the patient’s face with a towel. Position the patient to prevent skin breakdown.
10. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

Care of Patients with Dentures
PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at the bedside or a convenient work area.
3. Request that the patient remove the dentures and place them on a gauze sponge. If assistance is required, cover your fingers with gauze to prevent the dentures from slipping, and gently remove them.
4. Rinse out the denture cup. Place the dentures in the cup.
5. Brush the dentures under cool running water, using toothpaste or tooth powder. Hot water can harm dentures. Check for rough or broken places. Dentures are fragile and expensive—handle them with care.
6. Encourage the patient to perform his or her personal oral care as he or she is able. As appropriate, clean the patient’s natural teeth, using a downward motion on the upper teeth and an upward motion on the lower teeth, from the gum line to the crown.
7. Clean the inside of the mouth thoroughly with mouthwash, and rinse with cold water.
8. Keep the dentures in a denture container until the patient is ready to replace them in his or her mouth. A bedside table drawer is a good place to store the denture container.
9. When the patient is ready, hand over the dentures by holding them with a piece of gauze. If the patient is unable to replace the dentures, the home health nurse should replace them, using gauze to cover the fingers.
10. Dry the patient’s face with a towel.
11. Provide patient comfort measures.
12. Clean and replace equipment. Discard disposable items according to Standard Precautions.

Oral Care for the Unconscious or Incapacitated Patient

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at the bedside or a convenient work area.
3. Place the patient in a side-lying position facing you, with the patient’s face extending over the edge of the pillow.
4. Place a towel under the patient’s face and emesis basin.
5. Hold the patient’s mouth open, depressing the tongue with a tongue depressor.
6. Moisten the applicator with mouthwash solution, and clean the inside of the mouth, teeth, tongue, and palate.
7. Change the applicators frequently, and discard them. Suction as needed during the cleansing process.
8. Moisten a clean applicator with water, and swab the mouth to rinse (use tepid water). Squeeze excess solution out of the applicator before using. Always protect the patient’s airway.
9. Repeat the procedure as frequently as necessary to keep the mouth clean and moist.
10. Dry the patient’s face with a towel.
11. Apply petroleum jelly to the patient’s lips.
12. Reposition the patient to prevent skin breakdown.
13. Provide patient comfort measures.
14. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Consider using a tongue blade to inspect the patient’s mouth for lesions, sores, or other signs of oral cavity infections.

Original procedures copyright © 2000 by Mosby, Inc.
Obtain physician orders for home health aide assistance with ADLs.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Condition of patient’s mouth, teeth, and gums
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Positioning and Seating the Immobilized Patient

PURPOSE

• To prevent skin breakdown
• To reduce contracture formation and skeletal deformities
• To enhance internal organ functioning
• To maximize patient comfort
• To promote self-care in the home

RELATED PROCEDURE

• Skin Care (see Chapter 5)

GENERAL INFORMATION

Home care patients probably spend a majority of their waking hours sitting up in some kind of chair: a wheelchair, a recliner, or a couch or sofa.

Be aware that standard living room furniture typically is made for generic comfort and is not structured enough to provide positioning support for patients experiencing weakness, paralysis, or contractures. For example, it is easier to support patients in a more upright chair, such as a wheelchair. Many patients have a tendency to sit in a slouched position with their hips placed forward on the seat, back curved, knees lower than the hips, and feet unsupported. Therefore, in assisting patients to maintain an upright, neutral body position, the home health nurse must address patient seat, back, foot, and leg supports.

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. To promote a correct sitting position for the patient, do the following:
   a. Assess the patient from the side (the keystone in proper positioning is pelvic control).
      (1) Position the patient so that his or her hips are back on the seat as close to the backrest as his or her
          body structure will allow. (Securing the pelvis in this position will help the patient sit upright. This
          prevents a slouched position, which is damaging to the patient’s skin and uncomfortable over time.)
      (2) Use a seat cushion that promotes pelvic control by cradling the ischials and blocking them from
          sliding forward on the seat.
   1. To promote correct positioning of the patient’s back, do the following:
      a. Instruct the patient not to slouch his or her back (if the back is allowed to slouch, the hips will tend to
         push forward away from the backrest and the pelvic control gained by the seat cushion will be lost).
      b. Position the patient so that the patient’s back and lumbar (lower back) curves are as upright as his or her
         body allows (again, this keeps the patient’s pelvis in a neutral position).
   1. To promote correct positioning of the patient’s feet, do the following:
      a. Position the patient’s feet so that the weight of the legs does not drag the patient forward out of position.
      b. Provide enough foot support so that the knees and hips are on the same level (i.e., the thigh is parallel to
         the floor). (This can be accomplished in a wheelchair by raising the footrests or in a piece of living room
         furniture by providing a stool of the proper height.)
1. To promote correct positioning of the patient’s legs, do the following:
a. Assess the patient from the front.
   (1) Align the thighs so that they are pointing straight ahead rather than rolling together or falling away from each other (it may be necessary to use support between or along the side of the thighs as needed).
   (2) Prevent leaning of the trunk by using a trunk brace or support.

a. Assess the patient from the side and front.
   (1) Keep the pelvis as close to the backrest as possible by providing a seat cushion that keeps the ischials from sliding forward.
   (2) Prevent a slouched back posture and a pelvis that rolls backward by providing back support to maintain the natural lumbar curve.
   (3) Bring the patient’s knees to the same level as the hips by providing foot support.

NURSING CONSIDERATIONS

Be aware that wheelchairs typically have a sling-type upholstery that encourages a slouched back position. There is a wide variety of back cushions on the market, from small lumbar pillows to larger pieces that extend from the seat to the shoulders. Consult with the home medical supplier regarding cushion selection for the wheelchair. The goal is to use the most economical piece that helps the patient maintain the most upright position that his or her body structure will allow.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- The condition of the patient’s skin
- Any patient/caregiver instructions and response to teaching, including the patient’s adherence to seating recommendations
- Other pertinent findings

Update the plan of care.
Shampoo in Bed

PURPOSE

- To promote personal hygiene
- To promote a sense of well-being
- To promote self-care in the home

RELATED PROCEDURE

- Hair and Scalp Care

EQUIPMENT

1. Shampoo tray
2. Shampoo and comb
3. A bucket, pot, or bowl that will hold about 1 gallon of water
4. Pitcher
5. Hair dryer
6. Plastic sheet
7. Warm water (temperature per patient comfort level), washcloths, and towels
8. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at the bedside or a convenient work area.
3. Place a pillow under the patient’s shoulders. Place a towel over a plastic sheet. Put both the towel and plastic protector under the patient’s head.
4. Place a shampoo tray under the patient’s head.
5. Put a bucket on a chair at the bedside to collect water. Place a towel underneath the bucket to absorb water spills.
6. Fill the pitcher with warm water and pour over the hair.
7. Apply shampoo and lather. Rinse with warm water and shampoo again. Rinse thoroughly with warm water.
8. Dry the hair and neck with a towel.
9. If available, dry the hair with a hair dryer. Otherwise, towel dry the hair so that the patient is not left with wet hair.
10. Comb the hair to the desired style.
11. Provide patient comfort measures.
12. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Obtain physician orders for home health aide assistance with ADLs.

DOCUMENTATION GUIDELINES
Document the following on the visit report:

- The procedure and patient toleration
- The condition of the patient’s hair and scalp
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Update the plan of care.
Shaving Patients

PURPOSE

- To remove facial hair
- To promote personal cleanliness
- To maximize a sense of well-being
- To promote self-care in the home

EQUIPMENT

1. Safety or electric razor
2. Tissues
3. After-shave lotion
4. Soap or shaving cream, warm water, basin, washcloth, and towels
5. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at the bedside or a convenient work area.
3. Assist the patient to a comfortable position, preferably sitting up.
4. Place towels over the patient’s chest and under his head.
5. Check the razor. Insert a new blade as needed.
6. Fill a basin full of warm water (temperature PRN patient comfort level).
7. Apply a warm washcloth to the patient’s face to help soften the beard.
8. Apply shaving cream.
9. Pull the skin tight in the opposite direction to razor, and shave, using firm strokes.
10. Rinse the razor’s blade frequently, and remove excess hair with a tissue. Change the water as needed.
11. Rinse the patient’s face, pat dry, and apply after-shave lotion.
12. Provide patient comfort measures.
13. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

If shaving an African-American male, do not shave too close or against the grain of the skin because the hair follicles of African-American men are curved and the sharp ends may damage the patient’s skin.

Shaving cream and a warm washcloth soak are not needed when using an electric razor.

Clean whiskers out of the razor after use.

Review your home health agency policy regarding shaving patients on anticoagulant therapy because some patients may be restricted to usage of electric razors only.

Obtain physician orders for home health aide assistance with ADLs.
DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Update the plan of care.
Transfer or Gait Belt

PURPOSE

- To promote patient safety when walking or making a transfer
- To promote employee safety when moving or lifting the patient

RELATED PROCEDURES

- Cane (see Chapter 11)
- Moving and Lifting Patients: Body Mechanics
- Walker (see Chapter 11)
- Wheelchair (see Chapter 11)

EQUIPMENT

1. Transfer or gait belt

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble equipment in a convenient work area.
3. To apply a transfer belt around the patient’s waist, do the following:
   a. Put the end of the transfer belt into the toothed side of the buckle.
   b. Fasten the transfer belt securely around the patient so that the belt does not slide up the patient’s body.
4. Stand in front of the patient. Place the hands under the patient’s body and gently slide him or her to the edge of the bed or chair.
5. Reach around the patient and grasp the transfer belt at the back with the thumbs and fingers pointing up.
6. Assist the patient to a standing position according to the procedure for Moving and Lifting Patients: Body Mechanics.
7. While holding the transfer belt, allow the patient to stand for 20 or 30 seconds, until he or she feels balanced.
8. Using the transfer belt, pivot the patient to the bed or chair.
9. Using proper body mechanics, gently lower the patient into the bed or chair.
10. Remove the transfer belt from the patient.
11. Provide patient comfort measures.
12. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The use of the transfer belt and the patient toleration during the procedure
- Any patient/caregiver instructions and response to teaching, including the patient’s ability to assist with transfers/ambulate
- Standard Precautions
- Other pertinent findings
Update the plan of care.
Administration of Oxygen Therapy

PURPOSE

- To review fundamental management of oxygen therapy in the home, including the following:
  a. Implementation and home safety guidelines
  b. Nasal cannula
  c. Oxygen face tent or shield
  d. Oxygen mask with a reservoir bag
  e. Simple face mask
  f. Venturi mask
  g. Tracheostomy collar
- To promote self-care in the home

RELATED PROCEDURES

- Administration of Medications: General Guidelines (see Chapter 10)
- Arterial Blood Gas Sampling (see Chapter 12)
- Equipment Cleaning (see Chapter 1)
- Home Ventilator Management
- Pulse Oximetry
- Suctioning

GENERAL INFORMATION

The respiratory therapist from the Home Medical Equipment (HME) vendor is usually responsible for the delivery, set up, patient education, and maintenance of home oxygen delivery systems (e.g., cylinders, concentrators, liquid oxygen).

The home health nurse is responsible for ensuring that oxygen is administered as prescribed and evaluating response to therapy. As advised by the respiratory therapist, follow manufacturer recommendations on the use of oxygen delivery systems at home.

EQUIPMENT

1. Source of oxygen supply (cylinder/liquid oxygen reservoirs/concentrator)
2. Regulator-flow meter (regulates gas flow in liters per minute [LPM])
3. Small-bore oxygen supply tubing for nasal cannula, simple mask, venturi mask, and rebreather mask; wide-bore corrugated supply tubing for tracheostomy collar and face tent
4. Humidifier
5. Sterile or distilled water, or tap water that has been boiled for 15 minutes
6. Disposable nonsterile and sterile gloves, disinfectant and/or manufacturer-recommended solutions to clean respiratory equipment, and an impermeable plastic trash bag (see Infection Control) {STOP}

Oxygen Therapy: Implementation and Home Safety Precautions

PROCEDURE

Original procedures copyright © 2000 by Mosby, Inc.
1. Review the physician’s prescription for type of therapy, source of oxygen supply, use of cannula or mask or tracheostomy collar, and desired liter flow.
2. Explain the procedure to the patient/caregiver.
3. Assess cognitive and cardiopulmonary status for signs/symptoms of hypoxemia.
4. Notify the physician when the patient’s health changes or deviates from baseline status.
5. Evaluate patient/caregiver ability to administer oxygen. Assess the following:
   a. Correct liter flow
   b. Whether the patient knows when to use his or her oxygen
   c. Correct operation of the equipment (see manufacturer’s recommendations, and review the procedure with the HME respiratory therapist)
   d. Whether the patient/caregiver knows what to do in case of power failure or equipment malfunction
   e. Home ventilator management, as applicable
   f. Suctioning, as applicable
   g. Cleaning and disinfection of reusable equipment
1. Implement home oxygen safety precautions with the following guidelines (oxygen is not flammable or explosive, but it does support combustion; anything that burns in an oxygen-rich environment burns faster and hotter):
   a. No open flames or smoking are allowed within 10 feet of the oxygen source.
   b. Do not use electrical equipment that may cause sparks from an electrical short, such as a space heater, near oxygen administration equipment.
   c. Care should be taken during use of gas/electric appliances with patients using oxygen.
   d. Oxygen is a drug and must be administered as ordered; use oxygen only at prescribed amounts because too little or too much is harmful and can cause death.
   e. Make sure that the oxygen tank is in an approved stand to prevent rolling or accidental fall. The oxygen in these tanks is under high pressure. If the tank falls over and the valve stem breaks, the pressure is released, causing the tank to be propelled like a projectile.
   f. Store oxygen tanks away from direct sunlight or heat.
   g. Keep oxygen concentrators away from walls to allow for adequate air return.
   h. Oxygen concentrators should be plugged into a grounded electrical outlet.
1. Ensure that the patient/caregiver knows how to reach the HME vendor respiratory therapist 24 hours a day for supplies or problems with equipment.
2. Ensure that the patient/caregiver knows when to call the physician and when to go to the emergency room.
3. Evaluate caregiver ability to assist the patient and to comply with oxygen therapy recommendations.

Nasal Cannula

GENERAL INFORMATION

This equipment is easily tolerated by most patients. It is simpler than a mask but provides less humidification. The FIO₂ (fraction of inspired oxygen) level will vary depending on the liter flow and the rate/depth of patient breathing. The following provides a guideline regarding nasal cannula FIO₂ levels and corresponding oxygen liter flow for a patient breathing 12 breaths per minutes at a depth of 500 cc per breath:

a. FIO₂ 24%-28%  Flow: 1 to 2 LPM
b. FIO₂ 30%-35%  Flow: 3 to 4 LPM
c. FIO₂ 38%-44%  Flow: 5 to 6 LPM
PROCEDURE

2. Connect the nasal cannula to the oxygen tubing and to the humidified oxygen source.
3. Adjust the oxygen flow meter to the prescribed liter flow.
4. Place the tips of the cannula no more than 1.25 cm into the patient’s nares. Adjust the elastic headband or plastic slide guard for a snug and comfortable fit.
5. Secure the oxygen tubing to the clothing to prevent unnecessary pulling.
6. Clean and change equipment (tubing, cannula, humidifier) each visit or PRN.
7. Promote patient comfort by doing the following:
   a. Instruct the patient to place cotton balls over the ears or wrap moleskin around the tubing to prevent skin irritation. Foam curlers that have been split lengthwise and placed around the tubing may be used over the ears to reduce pressure from the tubing.
   b. Use a water-based lubricant on the nares to reduce irritation of the nose.
   c. If the oxygen delivery system does not have a humidifier jar, consider a room humidifier to prevent drying of mucosal membranes. Clean the humidifier daily to prevent nebulizing mold or bacteria.
   d. The patient may use 50-foot extension tubing to maximize independence and ambulation in the living area.
   e. Instruct the patient to wear his or her nasal cannula while eating, taking a shower, using the bathroom, during sexual activities, and as needed for shortness of breath.
1. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

Oxygen Face Tent or Shield

GENERAL INFORMATION

This device is rarely used in home care but may be seen in the treatment of a patient recovering from oromaxillofacial surgery. It is a shieldlike mask that fits under the patient’s chin and sweeps around the patient’s face. An FIO₂ level of 21% to approximately 70% can be achieved in the home-care setting by having a high-output air compressor (50 psi) power the nebulizer jar and by having oxygen bled-in from either an “H” cylinder, liquid reservoir, or an oxygen concentrator. The HME respiratory therapist adjusts the oxygen liter flow and analyzes the resulting FIO₂ level until that level matches the patient’s prescription. The oxygen bleed-in liter flow should be clearly noted in the documentation.

PROCEDURE

2. Fill the nebulizer jar with either sterile, distilled, or boiled tap water.
3. Connect the face tent to the large-bore tubing of the high-humidity aerosol circuit. Mist should always be visible.
4. Adjust the oxygen bleed-in flow rate to the liter flow established by the HME respiratory therapist as previously described.
5. Adjust the sides of the face tent to ensure a snug-yet-comfortable fit.
6. Water will condense in the circuit and must be drained into the drainage bag periodically. The condensate must be considered contaminated waste. Care must be taken to avoid contaminating the patient’s airway or the water in the nebulizer jar with the condensate.
7. Keep tubing free of kinks.
8. If the patient is combative or confused, consider short-term use of restraints to keep the oxygen delivery
device on. Combative behaviors or confusion often clear up once the patient is well-oxygenated. Arterial blood gas determinations may be indicated with combative behaviors.

9. Sit the patient up in bed. Support the patient with pillows, as needed.
10. Change face tent/tubing PRN. If the patient uses a face tent, obtain a physician’s order for a nasal cannula for use during meals.
11. Provide patient comfort measures.
12. Clean and replace equipment. Discard of disposable items according to Standard Precautions.

**Oxygen Mask**

**GENERAL INFORMATION**

Patients who require oxygen masks usually need more intensive management than home care permits. However, as sicker and sicker patients are being sent home, the use of oxygen masks are becoming more common. Limitations of oxygen masks include discomfort and frequent removal of the mask in order for the patient to eat, expectorate, or cough. If the patient uses a mask for oxygen delivery, obtain an order from the physician for a nasal cannula for use during meals.

**Reservoir Bag Masks**

Reservoir bag masks provide a high FIO₂ level, ranging from 40% to 90+. *Liter flow must be high enough to keep the reservoir bag inflated during inspiration; this prevents the risk of rebreathing carbon dioxide.* Care must be taken to ensure that the oxygen-connecting tubing remains connected to the oxygen source at all times to prevent suffocation. Two types of masks are available.

*Non-Rebreather Mask*

Oxygen from the oxygen source flows into the reservoir bag. When the patient inhales, a one-way valve between the bag and the mask opens to allow the patient to inhale oxygen. The one-way valve closes during expiration, and the exhaled air is forced out through one-way valves over the expiratory ports on the mask. This design allows for inhalation of oxygen yet prevents accumulation of expired CO₂. Because the one-way valves over the expiratory ports will not allow gas to flow into the mask from the room, it is extremely important to ensure that the reservoir remains inflated during inhalation. The reservoir bag is this patient’s only source of oxygen. The FIO₂ level varies with the patient’s ventilatory pattern.

*Partial Rebreather Mask*

Open ports are present on both sides of the partial rebreather mask. This mask provides a higher FIO₂ level than a simple mask by allowing patients to rebreathe some of their oxygen-enriched exhaled air from the attached reservoir bag. A minimum liter flow of 10 LPM is required to prevent deflation of the reservoir bag. Higher flows may be used if the reservoir bag deflates during inspiration. The FIO₂ level varies with the patient’s ventilatory pattern.

*Simple Mask*

This equipment requires a liter flow greater than 5 LPM to prevent rebreathing of carbon dioxide. The recommended liter flow is usually between 6 to 10 LPM. An accurate FIO₂ level is difficult to estimate, and
adequacy of oxygenation may be assessed by pulse oximetry or arterial blood gases.

**Venturi Mask**

This equipment allows the delivery of an accurate FIO$_2$ level. The venturi mask kits come with a set of interchangeable or adjustable adapters. Each adaptor is calibrated by the manufacturer to provide a precise FIO$_2$ level when used with the recommended liter flow. The FIO$_2$ level and corresponding liter flow are determined by each manufacturer and will vary. Refer to the package insert for the flow rate settings and resulting FIO$_2$ level. Bubble humidifiers are **not** recommended for use with venturi masks. Venturi masks can provide a patient with chronic obstructive pulmonary disease (COPD) with a precise FIO$_2$ level that does not change with ventilatory pattern. These masks are especially efficacious for patients who are chronically hypercapnic and rely on their hypoxic drive to breathe. The venturi mask is used for patients when an accurate FIO$_2$ level is necessary for proper treatment.

**PROCEDURE**

1. Follow the procedure for *Oxygen Therapy: Implementation and Home Safety Precautions*.
2. Assist the patient to a comfortable position to wear the mask.
3. Attach the oxygen-supply tubing to the oxygen source.
4. Turn on the oxygen flow as prescribed by the physician.
5. Adjust the equipment specific to the type of mask being worn.
   a. Adjust the oxygen flow rate setting on the venturi mask
   b. As applicable, allow the reservoir bag to fill with oxygen before placing the venturi mask on the patient
1. Adjust the elastic strap behind the patient’s head so that the mask fits snugly.
2. Gently pinch the metal strip located near the top of the mask to help ensure a tight mask fit across the bridge of the nose.
3. Observe the patient breathe with the mask in place. The patient should not show signs of respiratory distress or discomfort. If a mask with a reservoir bag is being used, the nurse should make sure that the bag remains inflated during the patient’s inhalation. If the reservoir bag collapses, turn up the oxygen liter flow until the bag stays inflated during inhalation, and notify the physician and HME respiratory therapist of any changes in liter flow or problems with the equipment.
4. Provide patient comfort measures.
5. Clean and replace equipment. Discard disposable items according to *Standard Precautions*.

**Tracheostomy Collar**

**GENERAL INFORMATION**

A tracheostomy collar is a curved device with an adjustable strap that fits around the patient’s neck. The tracheostomy collar is designed to deliver high humidity and oxygen to patients with a tracheostomy. The tracheostomy collar has an exhalation port that must remain patent at all times and another port that connects to large-bore tubing.

An FIO$_2$ level of 21% to approximately 70% can be achieved in the home-care setting with the use of a high-output air compressor (50 psi) powering the nebulizer jar and by having oxygen bled-in from either an “H” cylinder, liquid reservoir, or oxygen concentrator. The HME respiratory therapist adjusts the oxygen liter flow and analyzes the resulting FIO$_2$ level until that level matches the patient’s prescription. The oxygen bleed-in liter
flow should be clearly noted in the documentation.

PROCEDURE

2. Fill the nebulizer jar with sterile, distilled, or boiled tap water.
3. Connect the tracheostomy collar to the large-bore tubing of the high-humidity aerosol circuit. Mist should always be visible.
4. Adjust the oxygen bleed-in flow rate to the liter flow established by the HME respiratory therapist as previously described.
5. Apply the tracheostomy collar so that it loosely covers the patient’s tracheostomy.
6. Water will condense in the circuit and must be drained into the drainage bag periodically. The condensate must be considered contaminated waste. Care must be taken to prevent contaminating the patient’s airway or the water in the nebulizer jar with the condensate.
7. Clean the collar with soap and water every day or more frequently, if needed, to remove secretions.
8. Instruct the patient/caregiver on suctioning.
10. Clean and replace the equipment according to Standard Precautions.

NURSING CONSIDERATIONS

Consider obtaining physician’s orders for pulse oximetry or arterial blood gas evaluation to measure adequacy of oxygenation and ventilation.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Cardiopulmonary status
- Method of oxygen delivery
- Oxygen saturation via pulse oximetry or arterial blood gas analysis, as applicable
- Any patient/caregiver instructions and response to teaching, including the ability to operate oxygen equipment
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Oxygen is a medication. Oxygen liter flow and/or the FIO₂ level should be recorded on the medication record

Update the plan of care.

AUTHOR: Joan Vernitte-Kohorst, B.H.S., R.R.T.
Aerosol Therapy

PURPOSE

• To administer nebulizer medications
• To increase alveolar ventilation and improve cardiopulmonary status
• To promote self-care in the home

RELATED PROCEDURE

• Administration of Medications: General Guidelines (see Chapter 10)

GENERAL INFORMATION

The respiratory therapist from the HME vendor commonly delivers, assembles, and maintains the respiratory therapy equipment. The respiratory therapist usually initiates patient/caregiver training regarding the administration of prescribed respiratory treatments. The home health nurse is responsible for ensuring that the treatment is administered as prescribed and for evaluating the patient’s response to therapy.

EQUIPMENT

1. Compressed air and/or oxygen source
2. Connective small-bore tubing
3. Nebulizer cup
4. Mouthpiece or flex tube and swivel adapter if the patient is tracheotomized
5. Sterile normal saline solution
6. Prescribed medication (bronchodilators, mucolytics, diluents)
7. Face mask and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assist the patient to a sitting or semi-reclining position.
3. Assess the patient’s cardiopulmonary status before and after the treatment. Notify the physician if the findings are abnormal or if the patient’s baseline status deviates.
4. Offer mouthwash to the patient or assist him or her with oral care as needed.
5. As appropriate, don a face mask.
6. Assemble the following equipment at a convenient work area:
   a. Fill the nebulizer with the prescribed medication
   b. Turn on the compressed air; a visible mist should flow out of the mouthpiece
   c. Occasionally, aerosol therapy may be given with oxygen; adjust the liter flow between 5 and 7 LPM per physician’s orders to obtain a visible mist from the mouthpiece
1. Administer the following treatment:
   a. Instruct the patient to insert the mouthpiece and inspire slowly through his or her mouth to facilitate maximal ventilation of the lungs
   b. After each deep inhalation, instruct the patient to hold his or her breath for a few seconds to provide maximal absorption of the medication
c. Stay with the patient; continue to provide reassurance and encourage slow, deep respirations

1. Turn the compressor off if the patient should have a coughing episode or if the treatment is interrupted for any reason.
2. Evaluate the patient’s response to the treatment. Has the breathing improved? Does the patient feel relief? Note any signs of dyspnea, wheezing, agitation, tremors, tachycardia, or palpitations. If any adverse effects occur, stop the treatment and notify the physician for further orders.
3. Turn off the air compressor or oxygen and empty the nebulizer cup after treatment.
4. Rinse the nebulizer cup with hot running water, and allow it to air dry on a paper towel. Store the dry nebulizer cup in a sealed plastic bag at the patient’s bedside.
5. Encourage the patient to cough once the treatment is completed. Provide a specimen cup for sputum, if needed. Instruct the patient in safe disposal of used tissues.
6. Perform postural drainage after aerosol therapy if ordered by the physician.
7. Provide patient comfort measures.
8. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Make sure the nebulizer is kept in an upright position. (If the nebulizer is not level, the medication does not nebulize properly and may spill into the patient’s mouth.)

If the patient is receiving supplemental oxygen by nasal cannula, leave the nasal cannula on and administer the treatment with compressed air.

Consult with the HME vendor’s respiratory therapist regarding recommendations for applications and a model of the appropriate face mask.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Cardiopulmonary status
- Any patient/caregiver instructions and response to teaching, including ability to administer treatment
- Standard Precautions
- Physician notification, if applicable

Document the length of the treatment and medications used on the medication record.

Update the plan of care.
Care of the Patient with an Automatic Implantable Cardioverter Defibrillator

PURPOSE

- To provide guidelines for the home management of patients with an automatic implantable cardioverter defibrillator (AICD)
- To promote self-care in the home

RELATED PROCEDURE

- Cardiopulmonary Resuscitation (CPR) (see Chapter 15)

GENERAL INFORMATION

The AICD is an implanted electrical device attached to the myocardium by sensing leads and two defibrillation patches. It is used to treat sudden onset ventricular tachycardia (VT) or ventricular fibrillation (VF). Patients who receive the AICD experience these lethal dysrhythmias despite medical management to control ventricular fibrillation and/or ventricular tachycardia.

The device is programmed to sense tachycardia and the width of QRS complexes to detect lethal dysrhythmias. Once an abnormal rhythm has been sensed, the AICD checks for rhythm verification and discharges 20 to 30 joules of energy in an attempt to convert the lethal dysrhythmias into a stable or normal sinus rhythm. A 5- to 10-second pause will occur. If the abnormal rhythm continues, the AICD will administer a series of shocks and pauses for a total of four shocks. The AICD is then programmed to reset, recharge, and be prepared to deliver a series of four more shocks after 35 seconds of a normal rhythm has been sensed. A magnet will activate and deactivate the AICD.

EQUIPMENT

1. Surgical wound care supplies
2. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assess the patient’s cardiopulmonary status and his or her compliance with the prescribed medications, diet, and activity restrictions.
3. Review the AICD manufacturer’s instructional booklet with the patient/caregiver.
4. Provide the patient with reassurance that the AICD may deliver an occasional shock; however, the patient should be assured that the shock doesn’t necessarily mean that he or she will have to go to the emergency room.
5. Instruct the patient that ordinary contact with another person will not activate the AICD. If someone is touching the patient when the AICD fires, that person may feel a slight-but-harmless shock.
6. Perform wound care; change the dressing as ordered. Observe for signs of redness, drainage, and/or swelling around the surgical incision site and report to the physician as appropriate.
7. Instruct the patient/caregiver in home management of AICD to include the following:
   a. Activities: no lifting for 4 to 6 weeks after surgery; avoid rough contact over the area of the power pack

Original procedures copyright © 2000 by Mosby, Inc.
and the incision line; it is permissible to resume normal sexual relations; daily activities will not increase the risk of the AICD misfiring; driving is permitted unless the patient has neurologic problems or problems with syncope after AICD insertion.

b. Clothing: wear loose-fitting clothes; avoid girdles or belts that may be constricting.

1. Instruct the patient/caregiver on the following safety precautions:
   a. Wear a Medic Alert bracelet at all times.
   b. Keep an information card about the AICD in the wallet.
   c. Avoid contact with magnetic fields (e.g., radio or television towers) because this contact may activate or deactivate the AICD; household appliances, such as a television, microwave, and mixer, will not interfere with the AICD. Beeping from the AICD indicates exposure to electromagnetic interference—quickly move away from this area.
   d. Post the local emergency room number or 911, the physician’s number, and the home health agency number by your phone.

1. Instruct the patient/caregiver on the following actions to take if the AICD delivers a shock:
   a. If a countershock occurs, the patient must stay calm, lie down, take the pulse, and wait. Shocks are not painful; however, they can be frightening. If the patient’s pulse is regular and if he or she feels well, the day can be continued as normal.
   b. If a second shock is consecutively delivered, the patient must take his or her pulse and notify the physician.
   c. If a third shock is consecutively delivered, the patient must go to the emergency room or call emergency medical services.
   d. The patient must keep a log of shocks (how many, time, and pulse aftershocks).
   e. The patient should call the physician to report dizziness, chest pain, more than two shocks in the course of the day, or discomfort with shocks.

1. Instruct the patient on the importance of regular follow-up magnet testing to evaluate AICD function and predict the end of generator life.
2. Instruct the patient in the use of the transtelephonic phone system, if available.
3. Be prepared to follow cardiopulmonary resuscitation (CPR) protocols.
4. Provide patient comfort measures.
5. Clean and replace equipment. Discard disposable items according to Standard Precautions.

**NURSING CONSIDERATIONS**

Instruct the caregiver on CPR.

CPR should not be administered until the AICD fires unsuccessfully four times or fails to fire.

The AICD will not interfere with basic life support.

Provide emotional support to the patient/caregiver.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Cardiopulmonary status
- Condition of the surgical wound
• Record of shocks and the patient’s pulse afterwards
• Any patient/caregiver instructions and response to teaching, including knowledge of actions to take if the AICD should fire or if the patient should require CPR
• Physician notification, if applicable
• Standard Precautions

Update the plan of care.
BiPAP Support Ventilator Management

PURPOSE

- To prevent nocturnal hypoxemia caused by sleep hypoventilation in patients with neuromuscular disorders
- To prevent respiratory fatigue in patients with COPD
- To improve ventilation and oxygen saturation in patients with obstructive apnea
- To promote self-care in the home

RELATED PROCEDURES

- Home Ventilator Management
- Equipment Cleaning (see Chapter 1)

GENERAL INFORMATION

The bi-positive airway pressure (BiPAP) ventilatory support system is a form of continuous positive airway pressure (CPAP) management. It is designed for mask-applied ventilation in the home. The BiPAP ventilatory support system delivers two different levels of positive airway pressure. The system cycles spontaneously between a preset level of inspiratory positive airway pressure (IPAP) and expiratory positive airway pressure (EPAP). This system is used to control apnea (EPAP) and nonapneic events (IPAP) in hemodynamically stable patients. It may be used to offer ventilatory support without committing patients to the lifestyle associated with a tracheostomy. This ventilator is noncontinuous and is intended to augment the patient’s breathing. It must not be used as a life-support ventilator; it is not intended to provide the total ventilatory requirements of the patient.

Under the direction of the physician, the respiratory therapist from the HME vendor is usually responsible for setting up the BiPAP ventilatory support system, readjusting settings, and instructing the patient/caregiver in the operation of equipment and in procedural care. Home health nurses should reinforce instructions, assess the patient’s physiologic status, and evaluate the patient’s compliance with the plan of care. It is important to refer to the manufacturer’s recommendations to ensure safe and effective use of all equipment.

EQUIPMENT

1. BiPAP pressure support ventilator and patient circuit
2. Nasal mask and headstrap
3. Manufacturer-recommended disinfectant/equipment cleanser and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assist the patient to a position of comfort.
3. Assess cardiopulmonary status, including vital signs, skin color, use of accessory muscles of ventilation, paradoxical movement of the chest wall (which may reflect impending muscle fatigue), auscultation of the lungs, oxygen saturation, and pertinent laboratory data.
4. Assemble the equipment at a convenient area. Place the BiPAP pressure support ventilator on a level surface close to where the patient will be resting or sleeping. Plug the machine into a standard three-prong home...
5. Connect one end of the tubing to the airflow outlet port of the front of the BiPAP pressure support ventilator. Connect the other end of the tubing to the swivel end of the mask.

6. Place the mask over the patient’s nose. The mask should extend from the end of the nasal bone to just below the nares. Ensure that the mask rests above the patient’s upper lip to prevent air leaks or patient discomfort.

7. Turn on the BiPAP pressure support ventilator. The ON/OFF switch will light up.

8. Attach the headstrap to the mask. Adjust the straps until all significant air leaks are eliminated. Avoid making the headstrap too tight because this will cause patient discomfort and may cause air leaks because of distortion of the mask cushion. If possible, have the patient vary head positions to confirm mask seal during normal range of motion.

9. Check that all connections are secure.

10. Assess the prescribed BiPAP pressure support ventilator settings:
   a. IPAP control—sets prescribed pressure support level; range 4 to 20 cm H₂O; active in all modes except CPAP.
   b. EPAP control—sets prescribed positive end-expiratory pressure (PEEP) level; range 4 to 20 cm H₂O; active in all modes.
   c. Breaths per minute (BPM) control—sets the number of BPM; range 4 to 30 BPM; active in the S/T and T modes.
   d. BiPAP pressure support ventilator mode as clinically indicated:
      (1) Spontaneous (S) mode—the unit cycles between IPAP and EPAP in response to the patient rate
      (2) Spontaneous/timed (S/T) mode—the unit cycles as in the S mode; in addition, if the patient fails to initiate an inspiration, the unit will cycle based on the BPM control setting
      (3) Timed (T) mode—the unit cycles between IPAP and EPAP levels based solely on the set BPM and setting of IPAP time controls
      (4) CPAP mode—allows the system to be used for CPAP delivery
   a. FiO₂—match current administration

1. Ensure that the settings on the BiPAP pressure support ventilator match those on the plan of care. Obtain a physician’s order for the current settings.

2. Assess the patient’s comfort level. Observe the patient for development of ear discomfort or conjunctivitis. Notify the physician as needed. Consult with the respiratory therapist and physician to add humidification if the patient complains of nasal dryness.

3. Clean and replace the equipment. Wipe off all surfaces of the ventilator with a clean, damp cloth. When the mask is not being used, store it in a plastic bag to keep it free from dust. Discard disposable items according to Standard Precautions.

**NURSING CONSIDERATIONS**

To make the mask and headgear fit more simply the next time, mark the straps with a permanent marker or safety pins.

To prevent abrasion from the mask, place a patch of hydrocolloid wound care dressing on the bridge of the patient’s nose.

Instruct the patient to notify the physician of any unusual chest discomfort, shortness of breath, or severe headache on awakening or when using the BiPAP pressure support ventilator.

**DOCUMENTATION GUIDELINES**
Document the following on the visit report:

- The procedure and patient toleration
- Cardiopulmonary status
- BiPAP pressure support ventilator settings (BiPAP mode, FIO₂, IPAP/EPAP control, BPM control)
- Any patient/caregiver instructions and response to teaching, including the ability to operate the equipment
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.

SOURCE: Respironics Inc. Inclusion of this procedure does not imply endorsement of these products by either the author or Mosby, Inc.
Breathing Exercises

PURPOSE

- To instruct the patient on how to strengthen respiratory muscles, clear mucus from the lungs, and improve ventilation
- To foster activity tolerance
- To promote self-care in the home

GENERAL INFORMATION

Diaphragmatic breathing and lateral-base expansion exercises strengthen respiratory muscles, promote mucous clearance, and improve ventilation. Pursed-lip breathing is used to control exhalation, help open the airways, and improve oxygenation. These exercises are typically prescribed for patients with lung disease and for postsurgical patients.

Diaphragmatic Breathing

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Offer mouthwash or assist with oral care as needed.
3. Instruct the patient to sit up as straight as possible with his or her head and shoulders relaxed to provide for maximal descent of the diaphragm. (Diaphragmatic breathing can be taught with the patient lying down and using books or hands over the abdomen to reinforce the proper technique.)
4. Instruct the patient to breathe out gently, feeling the lower ribs sink down and in toward the midline.
5. Instruct the patient to breathe in while relaxing the upper abdominal muscles. The patient should feel air filling the lower part of the chest as the diaphragm descends.
6. Instruct the patient to place one hand over the abdomen just below the breast bone. When the patient performs correct diaphragmatic breathing, the hand will move out as he or she inhales and will move in on exhalation.
7. Instruct the patient to use diaphragmatic breathing combined with forced expirations on the third or fourth breath to help cough up secretions.
8. Provide patient comfort measures.

Lateral Base Expansion

PROCEDURE

1. Follow steps 1 through 3 of the procedure for Diaphragmatic Breathing.
2. Place your hands on the patient’s lower ribs at the midaxillary line, and apply slight pressure to the ribs. (The pressure is used to fix the patient’s attention on the part of the lung that is to be expanded and to note the direction in which expansion is required.)
3. Instruct the patient to breathe in through his or her nose and expand his or her ribs against the pressure of your hands as far as possible.
4. At the peak of inspiration, instruct the patient to relax and exhale while the ribs return to their original resting position.
5. Apply slight pressure at the end of expiration to make sure that the patient has fully exhaled.
6. Perform the exercise unilaterally or bilaterally as needed. (After a thoracotomy, emphasis must be given to the side of the incision, except when a pneumonectomy has been performed. The patient is usually instructed to take six breaths at a time and then to rest.)
7. Provide patient comfort measures.

Pursed-Lip Breathing

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Offer oral care.
3. Have the patient sit in a comfortable position.
4. Instruct the patient to relax and breathe in slowly.
5. Instruct the patient to purse his or her lips in a whistling position and exhale slowly and evenly as long as he or she can tolerate it.
6. Exhalation is 2 to 3 times longer than inhalation. Count 1-2-3 for inhalation and 4-5-6-7-8-9 for exhalation.
7. Instruct the patient to use pursed-lip breathing when he or she is short of breath or performing strenuous activities, such as climbing stairs.
8. Provide patient comfort measures.

NURSING CONSIDERATIONS

Giving the patient a demonstration of energy-conservation techniques may enhance learning, reveal misunderstandings, and promote a utilization of breathing techniques by the patient.

See the Patient Education Guidelines box, Tips for Energy Conservation in the Home.

Obtain physician’s orders for rehabilitation services for a home exercise program to build the patient’s strength and endurance.

Additionally, the services of a respiratory therapist from the HME vendor or pulmonary clinical nurse specialist may be useful when planning pulmonary rehabilitation and keeping staff up to date with available equipment.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Cardiopulmonary status
- Any patient/caregiver instructions and response to teaching, including the ability to perform the breathing exercises
- Physician notification, if applicable
- Other pertinent findings

Update the plan of care.
Chest Physiotherapy

PURPOSE

- To assist in the removal of bronchial secretions
- To improve breathing
- To promote self-care in the home

RELATED PROCEDURE

- Breathing Exercises

GENERAL INFORMATION

Chest physiotherapy consists of procedures such as postural drainage, cupping, and vibration.

Postural drainage uses specific positions to let the force of gravity assist in removing lung secretions. Six basic positions are commonly used in home care. Each is specific for major areas of the bronchopulmonary segments. Drainage positions should be maintained for 10 to 15 minutes each, as tolerated by the patient. During this time, alternate 2 to 5 minutes of percussion followed with 10 to 12 vibrations. These exercises should be performed before breakfast, before other meals, and at bedtime. Administer the inhaler or aerosol therapy before beginning.

EQUIPMENT

1. Foam wedge or pillows
2. Cup, tissues, a towel, and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Position the patient to facilitate postural drainage. Elevate the hips and torso approximately 18 inches with pillows or a foam wedge to achieve best results.
3. Perform the following exercise to drain the lower bases first; then proceed to the apex of the lungs:
   a. To drain the base of the left lung (left lower lobe), place the patient in a right side-lying position; percuss and vibrate over the lower rib area
   b. To drain the base of the right lung (right lower lobe), place the patient in a left side-lying position; percuss and vibrate over the lower rib area
   c. To drain the right middle lobe, place the patient in a left side-lying position, with the right side of body supported; percuss and vibrate over the midchest and nipple area
   d. To drain the left upper lobe, place the patient as in step c but in the right side-lying position; percuss and vibrate over the midchest and nipple area
   e. To drain the anterior upper lobes, instruct the patient to sit up and lean back; percuss and vibrate over the collarbone and shoulder area
   f. To drain the posterior upper lobes, instruct the patient to sit up and then to lean forward over a pillow; percuss and vibrate over the shoulder area
1. When performing chest physiotherapy, have a cup or basin and paper tissue or towel available for draining mucus.
2. Offer mouthwash to the patient, and assist with oral care, as needed.
3. Encourage the patient to rest after the procedure.
4. Provide patient comfort measures.
5. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Vibrate as the patient exhales.

Observe for potential contraindications of the procedure, such as abdominal distention, an irregular heart rate, or a diagnosis of lung cancer. If any of these conditions exist, check with the physician before performing chest physiotherapy.

Use a manual resuscitation bag for patients who have a tracheostomy and are on a ventilator during the procedure. Bag breathing is carried out during percussion and vibration.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Cardiopulmonary status (including lung sounds before and after the procedure and amount, color, and quantity of secretions)
- Any patient/caregiver instructions and response to teaching
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Chest Tube Management

PURPOSE

- To evacuate air or fluid from the pleural space
- To allow full expansion of the lungs

GENERAL INFORMATION

Chest tubes are rarely seen in the home-care setting, with a few exceptions. Two situations that may require sending a patient home with a chest tube are spontaneous pneumothorax and empyema. Less often, a patient with a malignant pleural effusion is sent home with a standard chest tube and drainage system.

A spontaneous pneumothorax may occur in thin, healthy young males. If the patient has minimal symptoms, the physician may elect to insert a small pneumothorax catheter, which is connected to a Heimlich valve for air evacuation. Standard water-seal or drainage bottles are not used. The pneumothorax catheter is usually about the diameter of a large intravenous catheter; however, it may be larger. The catheter is placed percutaneously, with the patient under local anesthesia. A chest radiograph confirms placement. The home health nurse must maintain a secure connection between the pneumothorax catheter and the Heimlich valve, as well as maintain an airtight dressing.

An empyema is an infection in the pleural space. A chronic empyema requires long-term antibiotic therapy and an empyema chest tube for drainage of pus. The empyema chest tube usually has a large diameter—approximately 36 French. The chest tube is slowly pulled out—approximately 1 cm each week. This type of chest tube is not connected to a water-seal bottle or drainage system, since the area is not in contact with the lung parenchyma. An empyema is walled off from the lung, and there is minimal or no risk of pneumothorax. The home health nurse must provide routine dressing changes, which sometimes include pleural space irrigations. The home health nurse may also be involved in the outward advancement of the chest tube.

A patient with cancer, involving the lung or breast, may develop a malignant pleural effusion, which compresses the lungs and impairs gas exchange. In this case the patient would require a standard chest tube and drainage system. The home health nurse is actively involved in both maintaining an airtight dressing and in maintaining a water-seal drainage system.

Pneumothorax Catheter

EQUIPMENT

1. Sterile gauze
2. Petrolatum-impregnated gauze dressing
3. Tape (waterproof, adhesive, silk, or transparent—not paper)
4. Antiseptic wipes
5. Safety pin
6. Sterile bandage scissors
7. Chest tube catheter clamps
8. Disposable nonsterile and sterile gloves and an impermeable plastic trash bag (see Infection Control)
PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assess the cardiopulmonary status and patient tolerance of the chest tube.
4. Notify the physician regarding abnormal findings or deviations from the patient’s baseline status and concerns or problems with patient tolerance of the chest tube.
5. Place the patient in a supine position, and uncover the chest to expose the catheter.
6. Assess the chest tube site for redness or signs of inflammation.
7. Aseptically open one or two packages of sterile gauze with a slit and one package (3 x 6 inches, or similar) of petrolatum-impregnated gauze.
8. Cut three or four (6 inches long x 2 inches wide) pieces of tape.
9. Don nonsterile gloves. Remove the old tape and the soiled dressing from the chest tube site; then discard everything, including the nonsterile gloves in a plastic trash bag.
10. Don sterile gloves.
11. Cleanse the chest tube site with an antiseptic wipe, moving from the center outward in a circular motion. Allow the area to dry; do not fan to dry. Some home health agencies remove iodine with alcohol.
12. Apply a new petrolatum-gauze dressing firmly around the chest tube insertion site to prevent air from entering the chest.
13. Cover with a dry gauze dressing.
14. Apply tape, overlapping the edges slightly to form an occlusive dressing. Completely encase the chest tube dressing and the chest tube with tape. Make sure there is no tunneling where the chest tube exits the dressing. A separate piece of tape may be needed to seal the tunnel from below.
15. Secure the connection between the chest tube and the Heimlich valve securely, using reverse spiral taping or a plastic band.
16. Tape the Heimlich valve to the patient’s upper chest or wrap a piece of tape around the Heimlich valve, and use a safety pin to secure it to the patient’s clothing. The distal tip of the valve must not be occluded by clothing or skin.
17. Provide patient comfort measures.
18. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

Empyema Chest Tube

EQUIPMENT

1. Sterile gauze dressings
2. Tape (waterproof, adhesive, silk, or transparent—not paper)
3. Liquid skin barrier or transparent adhesive dressing
4. Ostomy bag if required
5. Iodine swabs
6. Safety pin
7. Prescribed irrigation solution
8. Sterile cup
9. Emesis basin or bowl
10. Sterile catheter-tip syringe
11. Sterile bandage scissors
12. Chest tube catheter clamps
13. Disposable nonsterile and sterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}
1. Follow steps 1 through 5 of the procedure for Pneumothorax Catheter.
2. Aseptically open one or two packages of sterile split gauze.
3. Cut three or four (6 inches long x 2 inches wide) pieces of tape.
4. Don nonsterile gloves. Remove the old tape and dressing from the chest tube site, and discard everything, including the nonsterile gloves, in a plastic trash bag.
5. Don sterile gloves.
6. Cleanse the site with an antiseptic wipe, moving it from the center outward in a circular fashion. Allow the area to dry; do not fan the area. Some home health agencies remove iodine with alcohol (refer to agency policy).
7. Apply a liquid skin barrier or hydrocolloid adhesive dressing to prevent skin breakdown and to secure the dressing when frequent dressing changes are required.
8. Apply new petrolatum gauze firmly around the chest tube insertion site to prevent air from entering the chest.
9. Apply a dry gauze dressing over the tube site.
10. Apply tape, overlapping the edges slightly, to form an occlusive dressing. Be sure to completely encase the chest tube dressing and the chest tube with tape. Make sure there is no tunneling where the chest tube exits the dressing. A separate piece of tape may be needed to seal the tunnel from below.
11. Firmly secure the connection between the chest tube and connecting tubing to the drainage system, using reverse spiral taping or a plastic band. You should be able to assess the 5-in-1 connector for clots.
12. Tape the chest tube to the patient’s chest or abdomen to prevent pulling when the patient moves in the bed or gets up in a chair. (Pinch the tape together under the chest tube before taping it to the patient; this prevents the chest tube from slipping through the tape.)
13. Assess the drainage system for air leaks from the patient or from the system by systematically clamping the tubing below every connection. The leak or bubbling stops when the problematic connection is clamped. Use the following guidelines to assess for an air leak:
   a. If the leak stops when the chest tube itself is clamped, the leak is coming from the patient or from the chest tube insertion site.
   b. If changing the dressing or applying pressure on the dressing site does not change the bubbling, the leak is from the pleural space.
1. Evaluate the need to change the drainage bottle as it nears capacity. (This varies among systems. For a glass bottle, a volume of as little as 700 cc may indicate the need to change the bottle. For most commercial systems, a volume of about 2000 cc indicates the need for a new system.)
2. Use aseptic technique to change the drainage bottle when it is near capacity, as follows:
   a. Don sterile gloves to prevent self-contamination and contamination of the chest tube
   b. Open the new system and fill the water-seal chamber to the necessary height
   c. Remove the tape from the 5-in-1 connector
   d. Clamp the chest tube close to the patient and just proximal to the 5-in-1 connector
   e. Disconnect the chest tube from the 5-in-1 connector, and connect the new chest tube drainage system tubing
   f. Tighten the connection, and secure it with spiral wrapped tape
   g. Remove the clamps
1. Follow steps 17 and 18 of the procedure for Pneumothorax Catheter.

**NURSING CONSIDERATIONS**

It is imperative that the chest tube dressing remain occlusive to prevent the possible introduction of air or microorganisms into the pleural space.

Original procedures copyright © 2000 by Mosby, Inc.
The occlusive dressing is used in patients with empyema to contain contaminated material from aerosolization.

The only time a chest tube should be clamped is when the bottle or drainage system is changed.

If the tube accidentally becomes disconnected, quickly insert it in the bottle of sterile normal saline or water used to maintain a water seal.

Instruct the patient/caregiver to clamp an accidentally disconnected chest tube and immediately notify the home health agency.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Patency of the chest tube (not empyema tube) or absence of bubbling in the water-seal chamber or air evacuation from the Heimlich valve (sounds like flatus or a duck quack)
- Volume and characteristics of fluid drainage in the chest tube system or on the dressing
- Cardiopulmonary assessment, including the rate, depth, and pattern of breathing; percussion notes; and auscultation findings
- Safety measures, such as clamps or saline at the bedside; intactness of dressing and taped or banded connections; and any adverse events, such as accidental disconnection
- Any patient/caregiver instructions and response to teaching
- Physician notification, if applicable
  - *Standard Precautions*
- Other pertinent findings

Update the plan of care.
Controlled Cough Exercise

PURPOSE

- To instruct the patient how to clear his or her lungs of secretions and improve ventilation
- To foster activity tolerance
- To promote self-care in the home

RELATED PROCEDURE

- Breathing Exercises

GENERAL INFORMATION

Breathing techniques such as the controlled cough exercise strengthen respiratory muscles, promote mucus clearance, and improve patient ventilation. The controlled cough technique is typically prescribed for patients with chronic lung disease.

EQUIPMENT

1. Tissues
2. Impermeable plastic bag for disposal of tissues (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Review the principles of diaphragmatic and pursed-lip breathing with the patient/caregiver (see the procedure for Breathing Exercises).
3. Instruct the patient to sit forward in a leaning position with his or her feet on the floor and tissues in hand.
4. To promote a controlled cough, instruct the patient to do the following:
   a. Slowly inhale and take a deep breath
   b. Hold the deep breath for 4 seconds
   c. Cough twice with the mouth open; use tissues to dispose of mucus
   d. Pause
   e. Inhale by sniffing gently
   f. Rest and repeat
1. Provide patient comfort measures.

NURSING CONSIDERATIONS

Instruct the patient/caregiver to place used tissues in a waste basket with a plastic lining for disposal (i.e., family should avoid directly handling tissues).

Consider a referral to rehabilitation services for a home exercise program to build the patient’s strength and endurance.

DOCUMENTATION GUIDELINES
Document the following on the visit report:

- The procedure and patient toleration
- The color, amount, odor, and viscosity of sputum
- Any patient/caregiver instructions and response to teaching, including patient’s ability to perform the controlled cough technique
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Update the plan of care.
Coronary Precautions in the Home

PURPOSE

• To decrease the cardiac workload by reducing stress from physical activity
• To return the patient to an optimum level of health with regard to limitations
• To instruct the patient/caregiver in home coronary precautions
• To promote self-care in the home

RELATED PROCEDURES

• Cardiopulmonary Resuscitation (see Chapter 15)
• Temperature (see Chapter 2)
• Weight (see Chapter 2)

EQUIPMENT

1. Bedside commode
2. Oral thermometer
3. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assess cardiopulmonary status, focusing on the symptomology of chest pain or heart failure. Ask the patient whether he or she has any problems with chest pain, indigestion, palpitations, dizziness, or shortness of breath.
3. Report abnormal findings or deviations from baseline status to the physician.
4. Evaluate adherence with prescribed medications, diet, and activity regimen each visit. Weigh the patient weekly.
5. Review the physician’s orders for progressive increases in the patient’s physical activities, and instruct the patient/caregiver regarding the following:
   a. Bed rest with commode privileges, provided that no postural hypotension or dysrhythmia exists
   b. May feed self
   c. Rest after meals; delay all activities, such as bathing or sitting up in a chair, for at least 30 minutes
   d. Change position by self (encourage active rather than passive movement and assist the patient as needed)
   e. May have back rubs but not a vigorous massage
   f. Bed bath with assistance
   g. Temperature taken orally
   h. May sit up in chair with assistance three times a day provided no postural hypotension or dysrhythmia exists
   i. No smoking
   j. Sexual activity may be resumed when determined by the physician
1. Instruct the patient/caregiver in the following prescribed nutritional and fluid recommendations:
   a. Eat small, frequent meals
   b. Drink cool or warm liquids; avoid extreme cold or hot temperatures
   c. Coffee and tea must be decaffeinated
d. Follow prescribed diet and nutritional modifications
1. Instruct the patient/caregiver about the following elimination needs:
   a. Take stool softeners as prescribed
   b. Avoid straining or bearing down
1. Instruct the patient/caregiver about the following chest pain management:
   a. Symptom identification (often occurs with activity); sit quietly for a few minutes
   b. Take up to 3 nitroglycerin tablets as prescribed by the physician 5 minutes apart for continued pain
   c. If chest pain is not resolved after third nitroglycerin tablet, go to the emergency room for evaluation
   d. Contact the physician if nausea, vomiting, or dizziness exists and with other concerns

NURSING CONSIDERATIONS

Teach the patient/caregiver how to measure pulse, respirations, and weight and to contact the physician with abnormal findings.

Instruct the caregiver/family on CPR.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Cardiopulmonary status, including complaints of chest pain, indigestion, or syncope
- Any patient/caregiver instructions and response to teaching
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Home Dysrhythmia Monitoring

PURPOSE

- To record an electrocardiogram (ECG) tracing
- To assess cardiopulmonary status

GENERAL INFORMATION

Home dysrhythmia monitoring provides the tools necessary to document cardiac events that are not captured by alternative monitoring methods. It is a tool to document symptomatic cardiac dysrhythmias. Home dysrhythmia monitoring can be used to document the absence or the presence of an irregular cardiac dysrhythmia. The telephone ECG is used with patients who complain of a pounding heart or dizziness.

There are a number of home dysrhythmia monitors available on the market. The author has chosen to describe a basic procedure for home dysrhythmia monitoring.

Carefully review and follow the manufacturer’s recommendations regarding operation of home dysrhythmia monitors and ECG transmitter systems. Follow the manufacturer’s recommendations regarding maintenance and battery replacement of the monitor. Most home dysrhythmia monitors have either a skin, chest plate, or wrist electrode(s). The physician will prescribe the electrode type.

EQUIPMENT

1. Home dysrhythmia monitor
2. Telephone

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assist the patient to a sitting or a semi-reclining position near the telephone.
3. Assess the patient’s cardiopulmonary status.
4. Evaluate the patient for signs and symptoms of cardiac failure, such as dizziness, fainting spells, shortness of breath, blurred vision, changes in heart rate from baseline status, chest pain, and sudden weight gain or edema.
5. Assemble the equipment at a convenient work area. Open the dysrhythmia monitoring kit. The monitor has two buttons. The ON/OFF switch turns the monitor on and off. The RECORD/PLAY button is used to record and transmit the ECG.
6. To turn on the dysrhythmia monitor and to record the ECG, do the following:
   a. Move the ON/OFF switch to the ON position; you will hear two distinct tones that last about 4 seconds; this indicates that the monitor is ready to record the ECG; if you do not hear two distinct tones when the ON/OFF switch is in the ON position, turn the monitor off and then on again; if you still do not hear the tones, install a new battery; contact the physician and manufacturer if the equipment does not work properly.
   b. Press and release the RECORD/PLAY button; you will hear a high-pitched tone that will last 45 to 60 seconds; instruct the patient not to move during this recording period; unnecessary movement will distort the recording of the ECG; the recording of the ECG is completed when the high-pitched tone stops; the memory of the monitor is capable of storing only one recording; therefore, do not attempt to...
make a second recording until you have transmitted the first recording; do not unplug the lead(s) while recording the patient’s ECG.

c. Leave the ON/OFF switch in the ON position until the stored ECG has been transmitted; if the monitor is turned off, the ECG will be lost.

1. To record the ECG use one of the following methods:
   a. **Recording with wrist electrodes**
      (1) Insert the wrist electrode plug into the holes labeled Channel 1 (+) (-); insert the plug with the (+) side on top
      (2) Turn on the dysrhythmia monitor
      (3) Slide the wrist electrode marked LEFT onto the left wrist and move it up the patient’s forearm for a snug fit (3 to 4 inches below the elbow); the marked areas of the electrodes should be on the hairless portion of the inside arm
      (4) In a similar manner, apply the RIGHT wrist electrode to the right forearm
      (5) Press and release the RECORD/PLAY button; record the ECG
      (6) Remove the wrist electrodes
   a. **Recording with the chest electrode**
      (1) Using the chest electrode, insert the electrode plug into the monitor and turn on the monitor, as described previously
      (2) Place the hand-held chest electrode in the center of the bare chest at the level of the armpit; make sure all four of the metal buttons on the chest electrode touch the skin
      (3) Press and release the RECORD/PLAY button; record the ECG
      (4) Remove the chest electrode
   a. **Recording with skin electrodes**
      (1) Remove or shave body hair from the electrode placement areas, if necessary; scrub the area with alcohol; allow the skin to dry
      (2) Remove the electrode from the package, and gently peel the skin electrode off the protective cover; place the electrode securely onto the prepared skin area or as instructed by the physician; attach the appropriate color-coded clip to the snap of the skin electrode by gently squeezing the clip
      (3) Insert the white plug into the Channel 1 hole, with the (+) side on top; insert the black plug into the Channel 2 hole with the (+) side on top
      (4) Turn on the dysrhythmia monitor
      (5) Press and release the RECORD/PLAY button; record the ECG
      (6) Replace the skin electrodes every 3 to 4 days or when they become loose

1. To transmit the ECG tracing use the following steps:
   a. Place the dysrhythmia monitor on a flat surface
   b. Call the telephone number to send the ECG
   c. When instructed, place the mouthpiece of the telephone on the dysrhythmia monitor’s speaker hole; follow the markings on the dysrhythmia monitor for correct telephone placement
   d. Press and release the RECORD/PLAY button
   e. Wait for the tone to stop
   f. Pick up the telephone and follow any additional instructions given to you
   g. When instructed to do so, slide the ON/OFF switch to the OFF position; this will erase the ECG recording
   h. Turn the dysrhythmia monitor off only after you are instructed to do so

1. Assist the patient to a position of comfort.
2. Clean and replace the equipment. Clean the exterior of the home dysrhythmia monitor with a damp cloth moistened with water, mild detergent, or alcohol. Discard disposable items according to *Standard Precautions*. 

Original procedures copyright © 2000 by Mosby, Inc.
NURSING CONSIDERATIONS

Instruct the patient/caregiver how and when to transmit the home telephone ECG.

The ECG may be transmitted by the home health nurse during planned home visits and by the patient or caregiver whenever the patient experiences dizziness, palpitations, or signs of cardiac failure.

Do not place the home dysrhythmia monitor in water.

Instruct the patient/caregiver not to wear the monitor while bathing, showering, or swimming.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- The time and to whom the ECG tracing was sent
- Signs and reported symptoms of cardiac failure
- Any patient/caregiver instructions, including ability to operate equipment and response to teaching
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Home Ventilator Management

PURPOSE

• To define the responsibilities of the home health nurse caring for the ventilator-dependent patient
• To provide guidelines for home ventilator management
• To maximize high-tech, quality patient care in the home setting
• To promote self-care in the home

RELATED PROCEDURES

• Administration of Oxygen Therapy
• Arterial Blood Gas Sampling (see Chapter 12)
• Chest Physiotherapy
• Equipment Cleaning (see Chapter 1)
• Manual Ventilation with a Hand-Held Resuscitator or Ambu-Bag
• Pulse Oximetry
• Suctioning
• Tracheostomy Care

GENERAL INFORMATION

Defining the roles of the HME vendor respiratory therapist and the home health nurse regarding care of the ventilator patient in the home is the responsibility of the discharge planning team. Weeks before the patient’s discharge, the patient’s home care team, including the caregiver, should be given instructions about actual and potential patient care needs. Caregivers who are willing and able to assist with the patient’s needs are necessary for home discharge.

The home health nurse is advised to review the HME vendor’s patient care manual, which should outline ventilator management in the home and also serves as an additional instructional guide for the patient/caregiver. It is important to refer to individual manufacturer’s recommendations to ensure safe and effective use of all equipment.

Although the respiratory therapists from the HME vendor are responsible for instructing the patient/caregiver in the procedural aspects of care, home health nurses should reinforce instructions and evaluate compliance with the plan of care during visits. The patient and caregiver should be familiar with ventilator alarms, know what they mean, and know how to take appropriate action. An important role of the home health nurse in patient/caregiver education regarding home ventilator management is to provide a basis for sound decision making and to foster a sense of competency and good judgment.

EQUIPMENT

1. Ventilator
   a. Ventilator circuits and filters
   b. Heated humidifier or cascade
      (1) Sterile or distilled water, or tap water if boiled 15 minutes
      (2) Condensation drainage bags
(3) Heat and moisture exchanger (optional)
   a. External 12-volt battery with power cord
   b. Volume bag (optional)
   c. Manual self-inflating resuscitation bag
   d. Disinfectant (see Infection Control) [STOP]

1. Oxygen and related supplies
   a. Oxygen source (optional): oxygen concentrator with backup compressed-gas cylinder (tank)
   b. Oxygen-connecting tubing: pressure-compensated flow meters are recommended with the use of 50 feet of connecting tubing
   c. Air compressor and tubing for aerosol treatments (optional) (see the procedure for Aerosol Therapy)

2. Durable medical equipment
   a. Hospital bed (optional)
   b. Patient communication aids
   c. As needed: equipment to assist with patient bowel and bladder management and personal care
   d. As needed: cane, walker, and wheelchair

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Maintain a copy of the most recent plan of care to ensure that all orders are being implemented correctly.
   a. When faced with questions that fall outside of the established care plan, contact the HME respiratory therapist and the physician for answers; if available, consult with the pulmonary clinical nurse specialist or discharge planning coordinator from the referring hospital

1. Perform a physical assessment to include the following:
   a. Subjective assessment based on, but not limited to, patient/caregiver comments on shortness of breath, color change, mucus production, fever, and machine or equipment concerns
   b. Objective assessment of physiologic data, such as blood pressure, pulse, respiratory rate, breath sounds, and oxygen saturation
      (1) Assess for complications of ventilator dependence, such as skin breakdown, infection, fluid and electrolyte imbalance, malnutrition, and depression

1. Assess patient/caregiver ability to manage ventilator dependence at home; assess his or her concerns regarding equipment, resources, psychosocial, spiritual, and teaching needs, etc.
2. Perform a safety check of all equipment to include the following:
   a. Patient circuit
      (1) Drain all tubing of water; excess water should be considered contaminated and disposed of accordingly
      (2) Inspect the circuit for wear and cracks
      (3) Check all connections for tightness
      (4) Make sure tubing is routed to prevent excess water from draining into the patient’s airway or back into the humidifier or ventilator
   a. Inspect all equipment for proper function and wear, including battery level and operational hours of the ventilator
   b. Confirm that the equipment is being cleaned and changed as ordered or per manufacturer’s recommendations
1. Assess the mode of delivery:
   a. Control mode—delivers a preset tidal volume at a fixed rate; the patient cannot initiate breaths or change the ventilatory pattern
   b. Assist control volume or rate (ACV)—allows patients to initiate breaths so that they can breathe at a
faster rate than the preset number of breaths per minute generated by the ventilator; each breath is delivered at the same preset tidal volume

c. Intermittent mandatory ventilation (IMV)—delivers a preset number of mechanical breaths at a preset tidal volume, but it also allows the patient to breathe with no assistance (positive pressure) from the ventilator at his or her own tidal volume
d. Synchronized intermittent mandatory ventilation (SIMV)—the ventilator senses the patient’s spontaneous breath and synchronizes the timed breath with the patient’s breather; this syncopation reduces competition between machine-delivered breaths and patient-spontaneous breaths

1. Assess the breath rate (ventilator plus patient); approximate normal range up to 38 breaths each minute.  
2. Assess the tidal volume (VT) that the ventilator is giving the patient. Normal VT is 10 to 15 ml/kg. The dial setting of the tidal volume may be compared with results obtained from the use of a volume bag.
   a. The HME vendor provides a clear, plastic sleeve called a volume bag that is used to measure the VT. Attach the volume bag to the exhalation valve or gas collection head on the tubing. Count the number of breaths it takes to completely fill the bag. On the back of the volume bag, a diagram shows total number of breaths taken to fill the volume bag with the corresponding tidal volume.
   b. Dial settings from the tidal volume should be similar to those obtained from the volume bag measurement. If discrepancies are noted, inform the HME vendor’s respiratory therapist for follow-up

1. Assess the low-pressure alarm setting. When the pressure falls below the set rate, the alarm will sound. For example, if the patient becomes disconnected from the ventilator, the low-pressure alarm with be triggered; approximate normal range is 2 to 32 cm H₂O.
2. Assess the high-pressure alarm limit setting. When the pressure rises above the set rate, the alarm will sound. For example, mucous plugs, excessive secretions, coughing, and lying on the ventilator circuit tubing will increase pressure, inhibiting the ventilator effort to deliver oxygen, and will trigger the high-pressure alarm. Approximate normal range is 15 to 90 cm H₂O.
3. Assess patient pressures by observing low and high limits as the patient breathes.
4. Assess the FIO₂ level (room air is 21%) or the amount of prescribed oxygen being delivered. Approximate normal range 24% to 40%. An FIO₂ level greater than 40% is rarely used in home care.
5. Assess PEEP, if used. High levels of PEEP (more than 5 cm H₂O) may use barotrauma. PEEP is rarely used in home care.
6. Instruct the patient/caregiver to post the following phone numbers by the telephone: the HME vendor, the physician, the home health agency, local power/electricity service, and local emergency service for emergencies or problems with equipment. Assist the patient/caregiver to identify circumstances when emergency numbers should be called.
7. Notify the local power and emergency services of the patient’s home address, and arrange for priority service.
8. Provide patient comfort measures.
9. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Instruct the patient/caregiver in the use of alternative ventilatory support systems.

Have the patient/caregiver demonstrate the use of the manual self-inflating resuscitation bag.

The ventilator-dependent patient is at risk for respiratory failure, and care should be planned accordingly. Make the initial visits with the respiratory therapist from the HME vendor to review equipment and to mutually assess the needs of the patient/caregiver.
For the first week, daily visits are advised. The frequency of visits after this period depends on the progress of the patient/caregiver with procedural aspects of care. During the first week, 24-hour private duty care may be required because this is an anxious time for the patient and caregiver, who are developing independence from the hospital setting.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration of ventilator dependence
- Cardiopulmonary status
- Teaching, intervention, or procedures implemented (e.g., suctioning) and response to teaching
- Ventilator settings or any changes or pertinent findings, such as mode, breath rate, high- and low-pressure alarm limit settings, the patient’s high- and low-pressure reading, VT, FIO₂ level, and PEEP (if used)
- Multidisciplinary services and care coordination (physical therapy, occupational therapy, speech therapy, social worker, or home health aide may be involved)
- Any patient/caregiver concerns regarding the home environment, equipment, resources, or psychosocial needs
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Incentive Spirometer

PURPOSE

• To increase tidal volume
• To maximize inspiration to prevent postoperative atelectasis
• To improve cough effectiveness
• To promote self-care in the home

EQUIPMENT

1. Incentive spirometer
2. Tissue
3. Basin
4. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Review physician’s orders for volume and frequency of treatments.
2. Explain the procedure to the patient/caregiver.
3. Assemble the equipment at a convenient work area.
4. Assist the patient to an upright sitting or semi-reclining position.
5. Offer mouthwash, or assist with oral care as needed.
6. Instruct the patient to exhale to a resting exhalation level and then to seal his or her mouth around the flow tube or mouthpiece.
7. Instruct the patient to inspire slowly and hold the inspired breath for 5 to 10 seconds, as tolerated.
8. Instruct the patient to exhale normally.
9. Assess the volume achieved. Encourage the patient to reach a higher volume each day, until the volume ordered by the physician is reached or exceeded.
10. Encourage the patient to cough (abdominal splinting with a pillow may be necessary to control pain from a surgery). Offer the patient a basin and tissue.
11. Instruct the patient to repeat the procedure 5 to 10 times each hour or according to physician orders.
12. Provide patient comfort measures.
13. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Hyperventilation may occur with associated symptoms of lightheadedness and paresthesia. Instruct the patient to breathe slower to avoid such symptoms.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

• The procedure and patient toleration
• Volume achieved
• Frequency
• Cardiopulmonary status
• Description of cough and color, amount, and consistency of mucus
• Any patient/caregiver instructions and response to teaching, including the ability to use the spirometer
• Physician notification, if applicable
• *Standard Precautions*
• Other pertinent findings

Update the plan of care.
Incentive Spirometer

PURPOSE

- To increase tidal volume
- To maximize inspiration to prevent postoperative atelectasis
- To improve cough effectiveness
- To promote self-care in the home

EQUIPMENT

1. Incentive spirometer
2. Tissue
3. Basin
4. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Review physician’s orders for volume and frequency of treatments.
2. Explain the procedure to the patient/caregiver.
3. Assemble the equipment at a convenient work area.
4. Assist the patient to an upright sitting or semi-reclining position.
5. Offer mouthwash, or assist with oral care as needed.
6. Instruct the patient to exhale to a resting exhalation level and then to seal his or her mouth around the flow tube or mouthpiece.
7. Instruct the patient to inspire slowly and hold the inspired breath for 5 to 10 seconds, as tolerated.
8. Instruct the patient to exhale normally.
9. Assess the volume achieved. Encourage the patient to reach a higher volume each day, until the volume ordered by the physician is reached or exceeded.
10. Encourage the patient to cough (abdominal splinting with a pillow may be necessary to control pain from a surgery). Offer the patient a basin and tissue.
11. Instruct the patient to repeat the procedure 5 to 10 times each hour or according to physician orders.
12. Provide patient comfort measures.
13. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Hyperventilation may occur with associated symptoms of lightheadedness and paresthesia. Instruct the patient to breathe slower to avoid such symptoms.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Volume achieved
- Frequency
• Cardiopulmonary status
• Description of cough and color, amount, and consistency of mucus
• Any patient/caregiver instructions and response to teaching, including the ability to use the spirometer
• Physician notification, if applicable
• Standard Precautions
• Other pertinent findings

Update the plan of care.
Manual Ventilation with a Hand-Held Resuscitator or Ambu-Bag

PURPOSE

- To manually ventilate the patient when the patient is unable independently to ventilate himself or herself
- To promote the patient’s oxygenation status

RELATED PROCEDURES

- Administration of Oxygen Therapy
- Cardiopulmonary Resuscitation (see Chapter 15)
- Home Ventilator Management
- Suctioning
- Tracheostomy Care

GENERAL INFORMATION

Manual ventilation can be used during a respiratory emergency, during temporary disconnection from a mechanical ventilator, during failure of the mechanical ventilator, or before suctioning to prevent patient hypoxia. If used independently of oxygen, the resuscitator will supply room air (21% oxygen)

EQUIPMENT

1. Hand-held resuscitator or Ambu-bag
2. Cuffed face mask
3. Oxygen source if appropriate
4. Oxygen tubing
5. Nipple adaptor attached to oxygen flow meter
6. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment in a convenient work area.
3. Position patient for comfort (if conscious, many patients prefer to sit upright during this procedure).
4. If the patient experiences an emergency situation, call 911. If the patient should lose consciousness, check his or her pulse. If the patient becomes pulseless, initiate CPR. Stay with the patient until emergency medical services (EMS) arrives.
5. If the resuscitator is to be used with oxygen, connect the resuscitation bag to the oxygen by attaching one end of the oxygen tubing to the bottom of the bag and the other end of the tubing to the nipple adaptor on the flow meter of the oxygen tank.
6. Check the patient’s airway for obstruction. Remove any foreign matter that could impair resuscitation. If the patient has a tracheostomy tube in place, suction the tube to remove any secretions that may block the airway.
7. Use the nondominant hand to tightly seal the mask against the patient’s face (the mask should be applied under the chin and up and over the patient’s mouth and nose—if the patient has a tracheostomy tube, attach
the resuscitation bag directly to the tube).

8. Use the dominant hand to ventilate the patient by compressing the bag (allow time between inspirations for the patient’s passive exhalation and bag re-expansion).

9. Slowly compress the bag every 5 seconds to deliver about 1 L of air.

10. Observe the patient’s chest rise and fall to ensure that air is inspired and exhaled with each compression.

11. Observe the patient’s comfort level and color; to assess ventilation, ask the patient to nod his or her head if he or she feels like he or she is getting enough air.

12. Provide patient comfort measures.

13. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

If the patient is experiencing respiratory distress, stay with him or her until he or she is stable or EMS arrives.

Notify the respiratory therapist and HME company with any problems regarding the operation or function of any respiratory therapy equipment, including the home mechanical ventilator.

When using a hand-held resuscitator, observe for vomiting because gastric distention may be caused by forcing air into the patient’s stomach. If the patient vomits, remove the face mask and turn the patient on his or her side to assist in clearing the airway. As soon as possible, reapply the face mask and manually resuscitate until the patient is stable or EMS arrives.

Keep the resuscitator at the patient’s side, visible at all times, and ready to use for those patients whose disease state or condition may require the use of a hand-held resuscitator.

Instruct the caregiver/family how to use the hand-held resuscitator (for home mechanical ventilator patients, this teaching should be done before patient discharge from the hospital and reinforced during the home health admission visit).

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Any patient/caregiver instructions and response to teaching, including the caregiver’s ability to use the hand-held resuscitator
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Metered Dose Inhaler Use

PURPOSE

- To deliver aerosolized medication
- To improve oxygenation
- To instruct the patient how to administer the metered dose inhaler
- To promote self-care in the home

RELATED PROCEDURE

- Administration of Medications (see Chapter 10)

GENERAL INFORMATION

Metered dose inhalers are hand-held, pocket-sized nebulizers. Each inhaler contains approximately 200 puffs. An empty cartridge will float, whereas one that is half-full will partially submerge in water.

EQUIPMENT

1. Inhaler
2. Prescribed medication (bronchodilator)

Open Mouth Technique

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a sitting or semi-reclining position.
4. Instruct the patient/caregiver in the following procedure:
   a. Shake the inhaler canister 15 to 20 times
   b. Take a slow, deep breath in, and exhale completely
   c. Open your mouth wide
   d. Hold the inhaler canister 1 to 1½ inches from your lips
   e. Press down the canister while deeply inhaling a puff of medication
   f. Hold your breath as long as comfortable
   g. Exhale slowly through pursed lips
   h. Wait 1 minute between puffs, and then repeat steps a through g; recommended dosage is one or two puffs every 3 to 4 hours
1. Provide patient comfort measures.

InspirEase Technique

PROCEDURE
1. Follow steps 1 through 3 of the procedure for *Open Mouth Technique*.

2. Instruct the patient/caregiver in the following procedure:
   a. Insert the inhaler canister in the mouthpiece
   b. Make sure the bag is connected to the mouthpiece
   c. Shake the inhaler canister 15 to 20 times
   d. Take a slow breath in, and then exhale completely
   e. Insert the mouthpiece between the teeth, and close the lips
   f. Gently compress the inhaler canister
   g. Take 3 to 4 deep, slow breaths from the bag: **do not** make the InspirEase whistle; hold your breath as long as it is comfortable between breaths to allow the medicine to deposit in the lungs; recommended dosage is one or two breaths every 3 to 4 hours

1. Provide patient comfort measures.

**NURSING CONSIDERATIONS**

If the patient experiences palpitations or muscle tremors, discontinue using the medication and immediately notify the physician.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Cardiopulmonary status (e.g., improved respiratory status with the use of inhaler)
- Any patient/caregiver instructions and response to teaching, including the ability to correctly administer the inhaler and response to teaching
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Document medications on the medication record.

Update the plan of care.
Pulse Oximetry

PURPOSE

• To provide a noninvasive measurement of the arterial oxygen saturation (\(\text{SO}_2\))

RELATED PROCEDURE

• Arterial Blood Gas Sampling (see Chapter 12)

GENERAL INFORMATION

Pulse oximetry is used in the home-care setting to spot and trend arterial oxygen saturation.

Pulse oximetry measures the amount of saturation for hemoglobin bound with oxygen as a percentage of the hemoglobin available to combine with oxygen. It is important to know the patient’s actual hemoglobin level because the oxygen saturation alone may be misleading and the patient may not be adequately oxygenated. Pulse oximetry does not measure carbon dioxide. An arterial blood gas measurement is recommended if the patient retains or is suspected of retaining carbon dioxide.

The pulse oximeter works by sending lights through the vascular bed of the digit (finger or toe) and measuring the amount of hemoglobin that is bound with oxygen. The sensor has both an infrared light and red light–emitting diodes (LEDs). When the sensor is placed around the digit, the LEDs shine through the area and are received by the photodetector on the other side. Oxyhemoglobin (oxygenated hemoglobin) absorbs more infrared light than the reduced hemoglobin (unoxygenated hemoglobin), which absorbs more red light. The information is registered by the photodetector and transmitted to the microprocessor in the oximeter, where it is converted into a meaningful number.

EQUIPMENT

1. Portable pulse oximeter
2. Oximeter probe

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment and prepare the oximeter in the following manner:
   a. Ensure that the batteries work
   b. Check the paper supply
   c. Complete the calibration of the oximeter
   d. Select the appropriate sensor
1. Assess the patient’s digits to select the one with the best blood flow.
2. Attach the sensor to the patient’s digit. Be careful not to attach the sensor too tightly.
3. Connect the sensor to the pulse oximeter.
4. Turn on the pulse oximeter (Nellcor N-10), then do the following:
   a. Press the button once for a single reading
   b. Press and hold the button for a continuous reading; the pulse oximeter will take a reading every 30 seconds for 20 minutes and record the data on the printout

Original procedures copyright © 2000 by Mosby, Inc.
1. Obtain a saturation reading.
2. Check patient pulse and compare with the measured heart rate on the oximeter.
3. Record the results.
4. Remove the probe, and turn off the oximeter.
5. Provide patient comfort measures.
6. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

If the patient’s blood pressure is less than 90 mm Hg systolic, question the reliability of the arterial blood saturation. Inadequate blood flow will result in an erroneous reading.

Be aware that the saturation reported by the pulse oximeter is usually 2% to 4% higher than the actual measured arterial oxygen saturation.

Do not use cold digits because the reading will be inaccurate.

If oxygen saturation levels with exercise are ordered be sure to have the patient ambulate in the home—having the patient sit quietly for the pulse oximeter reading will not give a true picture of the patient’s oxygen requirements.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Cardiopulmonary status, including the patient’s heart rate
- Arterial oxygen saturation by pulse oximeter (SO_{2})
- FIO_{2} level
- The oxygen delivery system (e.g., nasal cannula, face mask)
- The digit used to obtain the reading
- The patient’s activity at the time the reading was obtained
- Any patient/caregiver instructions and response to teaching
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.

Suctioning

PURPOSE

- To relieve airway obstruction
- To prevent respiratory infection
- To improve breathing
- To promote self-care in the home

EQUIPMENT

1. Number 14 or 16 French catheter
2. Suction machine
3. Specimen container, as required
4. Distilled water or tap water
5. Disposable nonsterile and sterile gloves and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area. A portable suction machine should be at the bedside.
3. Place the conscious patient in a semi-reclining position and the unconscious patient in a supine position, unless contraindicated. Turn the patient’s head to face you.
4. Check and regulate the suction machine. Set the gauge between 5 and 10 inches of mercury.
5. Open the sterile catheter and follow sterile technique if the patient is on a ventilator, requires deep suctioning, or is immunosuppressed. Otherwise, clean catheter technique is acceptable in the home.
6. Prepare the irrigation solution. Tap water may be placed in a clean cup. Afterwards, rinse out the cup, and air dry. Instruct the caregiver to use a clean cup each day.
7. Don disposable gloves.
8. Attach the catheter to the suction machine.
9. Open the finger adapter, and insert the catheter:
   a. For a patient with a nasopharynx or oronasopharynx: measure the length of the suction catheter from the top of the patient’s nose to his or her earlobe, and gently insert the catheter
   b. For a patient with a tracheostomy: insert the catheter until resistance is felt (4 to 6 inches) or until patient tolerance level is met
10. Begin suctioning when the catheter is at the required depth. Apply suction as the catheter is pulled out. Suction 10 to 12 seconds only.
11. Close the finger adaptor to withdraw the catheter, using a gentle rotation motion while withdrawing.
12. If the catheter gets clogged, apply suction and rinse.
13. Stop suction a few seconds between respirations. The patient’s color should return to normal before you suction again.
14. Obtain a sputum specimen if ordered.
15. Provide patient comfort measures, and assist with oral care.
16. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Original procedures copyright © 2000 by Mosby, Inc.
Instruct caregivers to irrigate suction catheters with distilled or tap water and store them in a paper towel after use.

Suction catheters must be discarded after 24 hours, or they must be cleaned with a 50% hydrogen peroxide solution and then boiled in water for 10 minutes, air dried, and stored in a new plastic bag for reuse.

The suction collection bottle should be emptied and cleaned with soap and hot water every 24 hours.

Suction tubing also may be routinely cleaned with soap and hot water and air dried. Hang tubing in the bathroom shower to dry.

A Yankauer catheter is useful for suctioning excessive oral secretions. This catheter is plastic, rod-shaped, and has holes at the end. Suction pressure is constant because there may be no finger adaptor for regulation. Clean a Yankauer catheter with soap and water daily, rinse, and air dry.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Amount and color of mucus suctioned (normal mucus is white, thin, and watery)
- Cardiopulmonary status, including auscultatory findings
- Any patient/caregiver instructions and response to teaching, including ability to suction
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Update the plan of care.
Tracheostomy Button or Plug: Changing, Cleaning, and Care

PURPOSE

- To prevent infection
- To maintain patent airway
- To instruct the patient/caregiver on how to manage a tracheostomy button or plug in the home
- To promote self-care in the home

EQUIPMENT

1. Tracheostomy button or plug
2. Water-soluble lubricant
3. Hydrogen peroxide
4. 4- x 4-inch gauze pad
5. Pipe cleaners or small brush
6. Sterile disposable gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble equipment in a convenient work area.
3. Place the patient in a sitting or a semi-reclining position, with the neck slightly hyperextended. Instruct the patient/caregiver on the following:
   a. Clean the stoma per physician’s orders. Soap and warm water work well. If possible, avoid hydrogen peroxide or povidone iodine (Betadine) because these solutions can irritate the skin.
   b. Remove the tracheostomy button or plug by using an outward and downward movement.
   c. Inspect the stoma for redness or signs of infection; report to the physician as necessary.
   d. Apply a thin layer of water-soluble lubricant to the cannula portion of the tracheostomy button or plug.
   e. Using an upward and slightly downward motion, gently insert the tracheostomy button or plug until it rests snugly against the patient’s neck.
1. Ask the patient to nod his or her head if the tracheostomy button or plug is a comfortable fit; reinsert as necessary.
2. Provide patient comfort measures.
3. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Do not use bleach to clean and disinfect the tracheostomy button or plug. Consider the following practices:
   a. Discard old or worn-looking tracheostomy buttons or plugs and reinsert a new one.
   b. Consult with the HME vendor respiratory therapist regarding preferences for cleaning the tracheostomy button or plug.
   c. Clean the tracheostomy button or plug with soap and water, rinse with tap water, and reinsert; a hydrogen peroxide solution followed by a tap water rinse may help remove crusted material; pipe cleaners or small brushes can be used to clean the inside of the tracheostomy button or plug; do not use hydrogen peroxide with metal tracheostomy buttons or plugs or tubes because it will corrode metal.

Original procedures copyright © 2000 by Mosby, Inc.
Instruct the patient/caregiver on how to manage a tracheostomy button in the home; provide time for return demonstrations of the technique.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Cardiopulmonary status before and after the procedure
- Condition of the patient’s stoma
- Any patient/caregiver instructions and response to teaching, including the ability to change, clean, and care for the tracheostomy button or plug
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Update the plan of care.
Tracheostomy Care: Inner Cannula Change and Nondisposable Cannula Care

PURPOSE

- To prevent infection
- To instruct the patient/caregiver how to manage a tracheostomy in the home
- To promote self-care in the home

RELATED PROCEDURES

- Equipment Cleaning (see Chapter 1)
- Tracheostomy Care: Outer Cannula Tube Change for the Ventilator-Dependent Patient
- Suctioning
- Administration of Medications (see Chapter 10)

GENERAL INFORMATION

Inner cannula changes should be routinely performed by the patient or caregiver daily. Implement clean technique unless the patient is immunosuppressed or has an infected stoma. Inner cannulas may be disposable or nondisposable.

EQUIPMENT

1. 25% hydrogen peroxide solution
2. Tap water
3. Pipe cleaners
4. Sterile or clean tracheostomy sponge
5. Clean bowls
6. Inner and outer cannulas (may be clean or sterile, as necessary)
7. Antibiotic ointment, if prescribed by the physician
8. Disposable nonsterile and sterile gloves and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Place the patient in a sitting or a semi-reclining position, with the neck slightly hyperextended.
4. Remove the soiled tracheostomy sponge.
5. Inspect the stoma for redness and drainage, and report to the physician as necessary.
6. Clean the stoma per physician’s orders. Soap and water work well. Avoid hydrogen peroxide or Betadine because these solutions can cause skin breakdown. Apply antibacterial ointment if ordered.
7. Remove the inner cannula from the tracheostomy tube. (Some inner cannulas are directly pulled out of the tracheostomy tube, whereas others must be rotated and unlocked for removal. Review specific manufacturer recommendations for cannula removal.)
8. Suction as needed.
9. Insert a new inner cannula, using the manufacturer’s recommendations. Many slide into the outer cannula.
10. Apply clean tracheostomy tape before removing the soiled tape to prevent the outer cannula from coming out. Tie securely with two knots at the lateral aspect of the neck, rotating the sides. Allow room for one finger between the patient’s neck and the tape.

11. Apply a clean tracheostomy sponge.

12. Provide patient comfort measures.

13. Do not use bleach to clean and disinfect disposable cannulas. Consider the following practices:
   a. Discard disposable inner cannulas
   b. Consult with the HME vendor respiratory therapist regarding preferences for cleaning inner and outer cannulas; not all tracheostomy tubes have inner cannulas
   c. Clean nondisposable cannulas daily; clean cannulas with soap and water, rinse with tap water, air dry, and store in plastic bags for future use; a 25% hydrogen peroxide solution followed by a tap water rinse may help remove crusted material; pipe cleaners or small brushes can be used to clean the inside of the cannulas
   d. Clean reusable metal tracheostomy tubes with soap and water, boil for 5 minutes, and then air dry for storage; store dry metal tracheostomy tubes in a plastic bag for future use; do not use hydrogen peroxide with metal tracheostomy tubes because it will corrode metal

1. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

**NURSING CONSIDERATIONS**

Instruct the patient/caregiver in the procedure; provide time for return demonstrations.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report.

- The procedure and patient toleration
- Cardiopulmonary status
- Condition of the stoma
- Any patient/caregiver instructions and response to teaching, including the ability to manage the tracheostomy at home
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Document medications on the medication record.

Update the plan of care.
Tracheostomy Care: Outer Cannula Tube Change for the Ventilator-Dependent Patient

PURPOSE

- To provide guidelines for outer cannula tracheostomy tube change in the home
- To prevent infection
- To prevent tissue adhesions to the tracheostomy tube
- To promote self-care in the home

RELATED PROCEDURES

- Suctioning
- Tracheostomy Care: Inner Cannula Change and Non-Disposable Cannula Care

GENERAL INFORMATION

This is a sterile procedure because patients on ventilators are at high risk for pulmonary infections. For these patients, reuse of cleaned outer cannulas is not routinely recommended.

A clean technique is permissible for most patients not on a ventilator. Follow the manufacturer’s recommendations for cleaning and reusing outer cannulas. Many can be boiled, air-dried, and stored in a plastic bag.

Outer cannula tube changes are usually done on a monthly basis according to the physician’s order regarding the frequency of change and the type and size of tracheostomy tube. It is recommended that two persons assist with the outer cannula changes.

Never force insertion of the tracheostomy tube. If insertion of the tube cannot be achieved, attempt to place a tube that is one-size smaller. If a smaller tube is not available, seal the patient’s stoma, and assist the patient’s ventilation with a self-inflating resuscitation bag until assistance arrives. Some patients may require that this procedure be performed in the doctor’s office or in the emergency room.

Cuffed Tracheostomy Tube Change

EQUIPMENT

1. Tracheostomy tube
2. Tracheostomy set (ordered by the patient/caregiver in accordance with the HME vendor’s recommendations; it is recommended that extra tracheostomy tubes be kept on hand [styles vary according to patient need])
   a. Tracheostomy tube
   b. Obturator
   c. Inner cannula
   d. Tracheostomy ties or tape
1. Sterile tracheostomy sponge and pad
2. Sterile 4- x 4-inch gauze pads
3. Water-soluble lubricant
4. 10-ml syringe

Original procedures copyright © 2000 by Mosby, Inc.
5. Goggles and/or mask, as needed
6. Sterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver. Trained caregivers may serve as assistants in this procedure.
2. Assemble the equipment at a convenient work area.
3. Perform cardiopulmonary assessment to include the following: vital signs, lung sounds, and heart sounds; check for edema.
4. Perform home ventilator assessment.
5. Suction the patient’s airway before the procedure. Then, suction above the tracheostomy cuff before deflating it.
6. Position the patient for the procedure in a sitting position or with the head of the bed raised. (Assess the position that is more comfortable for the patient. The patient may be placed in a supine position, with a towel between his or her shoulder blades; however, many patients tolerate this particular procedure best when they are sitting in an upright position. Consult with the physician regarding positioning of the patient.)
7. Prepare the tracheostomy tube, using an assistant’s help and in as sterile manner as possible. Avoid touching the cannula. Hold the cannula at the connector by the neck plate.
   a. Test the cuff for leaks; always test the cuff and inflation system for leakage before inserting the tube by inflating the cuff and observing it for leaks; the cuff of the tube may also be submerged in a sterile cup of sterile water to check for bubbles.
   b. Remove the inner cannula, and insert the obturator into the outer cannula.
   c. Put ties and tape onto the neck plate of the new tracheostomy tube.
   d. Apply a thin film of water-soluble lubricant to the outer cannula and cuff and to the protruding portion of the obturator to facilitate insertion.
   e. Place the prepared tracheostomy tube in the original sterile container tray, keeping the tube’s ties away from the cannula until it is needed for insertion.
1. Inspect the stoma site for redness and swelling or for signs of bleeding.
2. Clean the stoma according to the physician’s orders. Soap and water work well. Avoid using hydrogen peroxide or Betadine because they may enhance skin breakdown.
3. Instruct an assistant to remove the ties and tape from the old tracheostomy tube neck plate; then turn down or turn off the ventilator alarms.
4. Hyperoxygenate the patient for a minimum of 30 seconds before extubation with an FIO₂ level of 100%.
5. Deflate the old cuff by evacuating air from the Luer valve of the inflation line, using a 5- to 10-ml syringe.
6. Instruct an assistant to disconnect the patient from the ventilator. Place the end of the ventilator tubing on sterile 4- x 4-inch gauze pads; protect the tubing from contamination.
7. Quickly remove the old tracheostomy tube (grasp the neck plate and remove the tube in a downward and outward motion). Suction the airway if necessary.
8. Immediately insert the lubricated tube into the patient’s tracheostomy using an upward and then downward curved motion that follows the anatomic position of the patient’s neck. Consider asking the patient to look up at the ceiling and to swallow to ease insertion of the tracheostomy tube.
9. Remove the obturator.
10. Insert the inner cannula, and secure.
11. Instruct an assistant to immediately reconnect the patient to the ventilator. Turn the ventilator alarms back on.
12. Inflate the cuff at 1 ml/mm tube size. Usually 4 to 7 cc of air is used to inflate the cuff.
13. Follow the manufacturer’s recommendations to assess cuff pressure. Cuff pressure should not exceed 18 mm/Hg or 22 cm H₂O pressure. Evaluate the patient’s comfort level.
14. Apply a new sponge and pad to the stoma. Suction the airway as needed.
15. Assess cardiopulmonary status. Ask the patient to nod head if he or she is getting enough air and feels all right. Administer a few breaths of 100% oxygen from the ventilator if needed. Return the FIO$_2$ level to the prescribed setting.
16. Instruct the caregiver that if the tracheostomy tube accidentally comes out and the caregiver cannot reinsert it, he or she must make a tight seal over the patient’s stoma and ventilate the patient with a self-inflating resuscitation bag via a face mask until assistance arrives.
17. Provide patient comfort measures.
18. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

This procedure may need to be individualized according to specific patient needs; use essentially the same procedure for uncuffed tracheostomy tube changes.

Clean technique is permissible for most patients who are not on a ventilator. In this case it is permissible to reuse a clean outer cannula.

Many patients tolerate this procedure best sitting up in a chair with side arms for support. Instruct the patient to look up at the ceiling and to swallow while the tracheostomy tube is being inserted. This accomplishes the following:

1. It positions the neck to facilitate tracheostomy tube insertion
2. It gives the patient a “job” to do during the procedure, which therefore may be distracting and lessen patient anxiety

See the procedures for Inner Cannula Change and Nondisposable Cannula Care.

DOCUMENTATION GUIDELINES

Document the following on the visit report.

- The procedure and patient toleration
- Size and lot number of tracheostomy tube inserted
- Volume and pressure millimeters of air used to inflate the cuff
- Cardiopulmonary status before and after the procedure
- Ventilator settings (make sure to include high- and low-pressure patient readings before and after the procedure)
- Any patient/caregiver instructions and response to teaching
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.

FOME-Cuf Tracheostomy Tube Change*
EQUIPMENT

1. FOME-Cuf tracheostomy tube kit and spare
2. Sterile tracheostomy sponge and pad dressing
3. Water-soluble lubricant
4. Sterile Cuff Maintenance Device (CMD); 60-ml syringe attached to three-way stopcock
5. AutoControl connector (sideport adaptor) included in the FOME-Cuf tracheostomy kit
6. Sterile gloves and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Follow steps 1 through 6 of the procedure for Cuffed Tracheostomy Tube Change. Hyperoxygenate the patient before and after the procedure; suction as needed, and return the FIO₂ level to the prescribed setting.
2. Prepare the tube using an assistant’s help in as sterile a manner as possible. Avoid touching the cannula. Hold the cannula by the connector at the neck plate, and do the following:
   a. Insert the CMD with the three-way stopcock into a red-wing pilot port and evacuate all the air from the FOME-Cuf
   b. Firmly pinch the red-wing pilot port with your fingers, and remove the pilot port from the syringe while maintaining the collapsed state of the cuff; never clamp or place excessive traction on the pilot port tubing
   c. Plug the red-wing pilot port with the attached red stopper; this procedure ensures the smallest possible cuff diameter for ease of tube insertion and for maximum patient comfort
   d. Insert the obturator
   e. Put ties and tape onto the neck plate of a new tracheostomy tube
   f. Apply a thin film of water-soluble lubricant to the outer surface of the tracheostomy tube, cuff, and protruding portion of the obturator to facilitate insertion
   g. Place the tube in the original sterile container tray, keeping ties away from the cannula until it ready for use
1. Instruct an assistant to remove the ties and tape from the old tracheostomy tube neck plate.
2. Inspect the stoma site for redness and swelling or for signs of bleeding.
3. Clean the stoma according to the physician’s orders. Soap and water work well. Avoid using hydrogen peroxide or Betadine because they may enhance skin breakdown.
4. Instruct the assistant to use the CMD to evacuate all the air from the old cuff. Repeat steps 2a through 2c to evacuate all the air from the old cuff. Collapse of the red-wing pilot port indicates complete evacuation of the cuff volume.
5. Instruct the assistant to disconnect the patient from the ventilator. Place the end of the ventilator tubing on sterile 4- x 4-inch gauze pads; protect the tubing from contamination.
6. Quickly remove the old tracheostomy tube (grasp the neck plate and remove the tube in a downward and outward motion).
7. Immediately insert the lubricated FOME-Cuf tracheostomy tube into the patient’s tracheostomy in an upward and then downward curved motion that follows the anatomic position of the patient’s throat. Consider asking the patient to look up at the ceiling and to swallow to ease insertion of the tracheostomy tube.
8. Remove the obturator.
9. Instruct the assistant to reconnect the patient to the ventilator. Turn the ventilator alarms back on.
10. Disconnect the red stopper from the red pilot port to allow the cuff to passively inflate, gently and naturally sealing the patient’s trachea.
11. Ensure the integrity and fit of the newly intubated FOME-Cuf by evacuating all the air from the cuff with
the CMD in the following manner:

a. Pull the syringe plunger to evacuate all the air from the cuff (note the dimple on the red pilot port that indicates complete and proper evacuation of the cuff)

b. While maintaining a forceful pull on the plunger, turn the stopcock selector to isolate the syringe (the dimple created on the red-wing pilot port tells you that the integrity of the cuff has been maintained)

c. Measure the residual cuff volume to ensure proper tracheostomy tube size (when at least 6-ml residual volume can be evacuated from the cuff, you are assured of a safe resting-cuff-to-tracheal-wall pressure and that the tube size is appropriate for the patient)

d. Remove the CDM from the red pilot port, and allow the cuff to passively inflate

1. Attach the Sideport AutoControl connector to the self-inflating resuscitation bag for maintaining a positive seal during manual resuscitation.

2. Instruct the caregiver to totally evacuate the cuff at least every 8 hours as described in steps 2a through 2c.

3. Follow steps 24 and 25 of the procedure for Cuffed Tracheostomy Tube Change.

**NURSING CONSIDERATIONS**

Never plug the pilot port or add air to the FOME-Cuf while it is in the patient.

Many patients tolerate this procedure best sitting up in a chair with side arms for support. Instruct the patient to look up at the ceiling and to swallow while the tracheostomy tube is being inserted. Then, do the following:

1. Position the neck to facilitate tracheostomy tube insertion

2. During this procedure, give the patient a “job” to do, which therefore may be distracting and lessen patient anxiety

Review the manufacturer’s guidelines for FOME-Cuf insertion and maintenance.

**DOCUMENTATION GUIDELINES**

See the procedure for Cuffed Tracheostomy Tube Change.

* Inclusion of the FOME-Cuf procedure does not indicate an endorsement by the author or Mosby, Inc.

Source: Bivona, Inc., Gary, IN.
PATIENT EDUCATION GUIDELINES

Tips for Energy Conservation in the Home

If you have COPD, save your energy for daily activities. Avoid rushing. A slow, steady rate of work with frequent rest periods is best. Stop work before you feel very weak, tired, or short of breath. Avoid doing high-energy tasks back-to-back. Use pursed-lip or diaphragmatic breathing as you do your work so that your energy will not be wasted. Take your inhaler, or use your oxygen as prescribed and needed. One of the best ways to conserve your energy is to assign priorities and preplan your day.

Ways to Conserve Energy

1. Plan rest periods of at least 5 to 15 minutes between activities.
2. Make sure your room has good ventilation and a comfortable temperature.
3. Avoid places with dirty air such as dusty or smoke-filled rooms. Excessive heat, cold, or humidity may cause shortness of breath.
4. Avoid animal hair, scented soaps, colognes, powders, cleaners, aerosol sprays, glues, or paints if they cause problems with your breathing.
5. When possible, sit while performing activities such as bathing, brushing teeth, or washing dishes. Avoid unnecessary walking or standing. Try to push or slide objects rather than lifting them (use a portable cart).
6. Ask family or friends to help with heavy work as needed. Have family or friends do particularly strenuous chores such as mowing the lawn or vacuuming the carpet.
7. Let dishes air dry instead of toweling them dry.
8. Space your personal activities, such as shaving, bathing, and washing hair over several hours or days.
9. Take a quick shower if the moisture in the air makes it difficult to breathe. Turn on tepid water and wet yourself. Turn off the water and soap yourself all over; then turn the water on again to rinse. Immediately towel dry to prevent shivering.
10. Wear loose-fitting clothes, with elastic waistbands or Velcro fasteners and front closures. Wear shoes that are easy to slip on, such as loafers or sandals.
11. To stand, first take several slow, deep breaths, then, while you are breathing out through pursed lips, stand up.
12. To climb stairs, first breathe in deeply through your nose while standing. Next exhale through pursed lips as you climb a couple of stairs. Stop, rest, and breathe deeply and slowly. Continue climbing two or three steps while you exhale. Stand still when inhaling. Hold onto the stair rails whenever possible for extra support.
13. Always remember to exhale when lifting or pushing heavy objects or when performing the action part of any activity.

A limited number of copies of this guideline may be made for free distribution to patients and families. All other rights are reserved.
Butterfly or Steri-Strips

PURPOSE

• To close a small wound
• To reinforce a staple or suture line

GENERAL INFORMATION

Butterfly or steri-strips may be used on a small wound where the tissue is closed and there is not a great deal of movement in the surrounding area. For primary skin closure to occur, allow the butterfly strips to remain on for 5 to 7 days.

RELATED PROCEDURES

• Wound Assessment and Documentation (see Chapter 2)
• Wound Management

EQUIPMENT

1. Butterfly or steri-strips (available commercially or can be made from tape)
2. Hypoallergenic tape
3. Scissors
4. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a comfortable position and expose the wound. Drape the patient for privacy.
4. Inspect the wound, and evaluate it for signs of healing versus infection.
5. Apply butterfly or steri-strips by the following method:
   a. To make a butterfly strip: Fold a 3- to 4-inch long strip of ½-inch wide tape back on itself and cut off the corners at the folded ends to make nicks; butterfly and steri-strips are also commercially available
   b. Apply the strips across the wound, being careful to approximate wound edges. Space the strips evenly along the wound.
1. Provide patient comfort measures.
2. Cleanse and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Patient may report itching.

Report signs and symptoms of wound infection to the physician.

Allow the strips to remain in place as ordered by physician. Replace as necessary.
DOCUMENTATION GUIDELINES

Review documentation guidelines of the procedures for *Wound Assessment and Documentation* and *Wound Management*.

Update the plan of care.
Dressing Changes: Biobrane

PURPOSE

- To promote wound healing
- To control fluid loss
- To minimize infection and discomfort

RELATED PROCEDURES

- Dressing Changes: Sterile Technique
- Wound Assessment and Documentation (see Chapter 2)
- Wound Irrigation and Debridement
- Wound Management

GENERAL INFORMATION

Biobrane is an adherent, flexible, biosynthetic wound dressing. It is a nontoxic, hypoallergenic mixture of purified porcine peptide bonded to an elastic silicone membrane. The impermeable membrane functions to (1) control water-vapor loss at rates comparable to normal skin, (2) provide a flexible covering for the wound surface, and (3) allow joint movement and early ambulation.

Biobrane dressings are commonly applied over partial-thickness wounds or burns. It may be necessary to immobilize the affected burned area of joint for 48 hours after application; review the manufacturer’s recommendations.

EQUIPMENT

1. 1 Biobrane dressing(s) as prescribed by the physician
2. Cleansing or irrigation solution as prescribed by the physician
3. Sterile gauze roll dressing
4. Cotton-tip applicators
5. Hypoallergenic tape, bandage scissors
6. Plastic sheet or towels
7. Disposable nonsterile and sterile gloves, protective apron, and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a comfortable position, and expose the wound. Place a plastic sheet or towel under the patient to prevent soiling of linen. Drape the patient for privacy.
4. Cleanse and irrigate the wound as ordered by the physician. Clean from the least contaminated area to the most contaminated area.
5. Evaluate the wound for signs of healing versus infection.
6. Apply the Biobrane dressing in the following manner:
a. Cover more area than necessary; apply the Biobrane wrinkle-free with a slight stretch
b. Wrap and cover the Biobrane with a snug, bulky, or absorbent dressing; then secure the dressing with tape (do not get the dressing wet, and do not remove the dressing for the first 24 hours)

1. Remove the gauze dressing 24 to 36 hours after applying the Biobrane. Inspect the condition of the dressing site and take the following actions:
   a. If the Biobrane is adherent and no fluid has accumulated, rewrap the area with gauze, then secure it with tape.
   b. If the Biobrane is loose but the underlying tissue is pink, remove any nonpurulent fluid with a sterile cotton-tip swab, rewrap the area with a gauze dressing, and secure it with tape. Inspect the dressing 24 and 48 hours after application for adherence and for condition of the wound.
   c. If the Biobrane is loose and there is purulent drainage underneath, notify the patient’s physician for further orders; assess for other signs of infection; instruct the patient/caregiver to observe the wound area daily for drainage, edema, inflammation, blistering, or separation—notify the physician if any of these occur.

2. Continue to inspect the Biobrane dressing for bubbles, drainage, or purulence; treat as previously advised.
3. Remove the Biobrane dressing when the wound has healed or adherence to the surgical suture line is achieved.
4. Provide patient comfort measures.
5. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Perform burn wound care using sterile technique.

There may be some drainage on the gauze because Biobrane is porous and small amounts of fluid may escape.

Secure Biobrane with a clean gauze dressing.

After 7 to 14 days the Biobrane may appear dry and loose in spots. Patients may report itching.

Patient reports of fever within the first 48 hours after application of the dressing may indicate an allergic reaction; notify the physician.

DOCUMENTATION GUIDELINES

Review documentation guidelines of the procedures for Wound Assessment and Documentation and Wound Management.

Update the plan of care.
Dressing Changes: Calcium Alginate

PURPOSE

• To promote wound healing
• To control drainage
• To minimize discomfort and infection

RELATED PROCEDURES

• Dressing Changes: Sterile Technique
• Wound Assessment and Documentation (see Chapter 2)
• Wound Irrigation and Debridement
• Wound Management

GENERAL INFORMATION

Calcium alginate dressings are commonly used on full-thickness wounds. They are commonly used to control wound drainage. Secondary dressings should be nonocclusive because oxygen interacts with the calcium alginate dressing to promote wound healing.

EQUIPMENT

1. Calcium alginate dressing, as prescribed by the physician
2. Sterile normal saline solution, as prescribed by the physician
3. Sterile 4- x 4-inch gauze dressings and pads
4. Hypoallergenic tape, bandage scissors
5. Plastic sheet or towel
6. Disposable nonsterile and sterile gloves, protective apron, and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a comfortable position to expose the wound. Place a plastic sheet or towel under the patient to prevent soiling the linen. Drape the patient for privacy.
4. Gently remove the old tape and dressing. Assess the drainage on the old dressing, then discard it in a plastic trash bag.
5. Clean and irrigate the wound with sterile normal saline solution. Clean the wound from the least contaminated area to the most contaminated area; then blot the surrounding area dry with 4- x 4-inch gauze pads.
6. Inspect the wound, and evaluate it for healing versus signs of infection.
7. Apply a calcium alginate dressing to the moist wound bed, and gently pat the dressing to conform to the wound bed. (If packing is required, gently layer the calcium alginate dressings by folding them back on the previous layer.)
8. Cover the wound with a secondary porous or gas-permeable dressing, such as gauze; then secure it with
tape.
9. Change the calcium alginate dressing daily (more frequently if the secondary gauze dressing becomes moist), using the following methods:
   a. Gently lift the secondary gauze dressing from the wound
   b. Remove and discard any nongelled calcium alginate dressing from the wound bed
   c. Flush away any remaining gelled calcium alginate dressing with normal saline solution irrigation
   d. Dry the surrounding tissue surface with 4- x 4-inch gauze pads
   e. Reapply new calcium alginate dressings to the moist wound bed; secure with a secondary gauze dressing and tape
1. Provide patient comfort measures.
2. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Perform wound care using sterile technique, unless ordered otherwise by the physician.

Instruct the patient/caregiver in clean technique as approved by the physician.

Calcium alginate dressings may appear to crystallize and not gel in wounds that have minimal drainage. If this should occur, it may be necessary to dampen the dressing with normal saline solution before dressing removal. Use calcium alginate dressings only on moderate to copious draining wounds.

DOCUMENTATION GUIDELINES

Review documentation guidelines of the procedures for Wound Assessment and Documentation and Wound Management.

Update the plan of care.
Dressing Changes: Dry to Dry

PURPOSE

- To protect the wound from injury or trauma
- To minimize pain and infection
- To promote wound healing

RELATED PROCEDURES

- Administration of Medications: General Guidelines (see Chapter 10)
- Dressing Changes: Sterile Technique
- Montgomery Straps
- Wound Assessment and Documentation (see Chapter 2)
- Wound Irrigation and Debridement
- Wound Management
- Wound Packing

GENERAL INFORMATION

Dry dressings are commonly used for abrasions and nondraining postoperative incisions. A dry dressing does not debride the wound and should not be used for wounds requiring debridement.

EQUIPMENT

1. Sterile gauze dressing (as required for the wound) as prescribed by the physician
2. Sterile normal saline or irrigant/topical medication as prescribed by the physician
3. Hypoallergenic tape, bandage scissors
4. Plastic sheet or towel
5. Disposable nonsterile and sterile gloves, protective apron, and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a comfortable position to expose the wound. Place a plastic sheet or towel under the patient to prevent soiling the linen. Drape the patient for privacy.
4. Gently remove the old tape and dressing. Assess the drainage on the old dressing, then discard it in a plastic trash bag.
5. Irrigate the wound with sterile normal saline (or other irrigant solution) as ordered by the physician.
6. Inspect the wound; evaluate it for signs of healing versus signs of infection.
7. Apply topical medication if ordered by the physician.
8. Apply dry dressing over the wound, then secure with tape (for frequent dressing changes, it is advised to use Montgomery straps).
10. Clean and replace equipment. Discard disposable items according to Standard Precautions.
NURSING CONSIDERATIONS

Perform wound care using sterile technique, unless ordered otherwise by the physician. Be aware that sterile technique is recommended for deep or infected wounds.

Generally, a chronic wound can be managed with a clean glove.

Instruct the patient/caregiver in clean technique as approved by the physician.

The dressing may be reinforced with an abdominal dressing (ABD) or absorbent cotton pad for wounds with large amounts of drainage.

Tape located over body hair should be removed in the direction of the hair growth to reduce irritation and discomfort.

If a catheter or drain is present, remove dressings one layer at a time to avoid accidental removal of the drain/catheter.

Report signs and symptoms of wound infection to the physician.

DOCUMENTATION GUIDELINES

Review documentation guidelines of the procedures for Wound Assessment and Documentation and Wound Management.

Update the plan of care.
Dressing Changes: Foam Dressing

PURPOSE

• To promote wound healing
• To debride the wound
• To minimize pain and infection

RELATED PROCEDURES

• Dressing Changes: Sterile Technique
• Wound Assessment and Documentation (see Chapter 2)
• Wound Irrigation and Debridement
• Wound Management

GENERAL INFORMATION

Foam dressings are nonadhesive, hydrophilic dressings used to treat partial- and full-thickness wounds with minimal to moderate drainage. Be aware that a secondary dressing may be required to secure the foam in place.

EQUIPMENT

1. Foam dressing (e.g., Epi-Lock, Lyofoam, Allevyn) as prescribed by the physician
2. Sterile normal saline (or other irrigant) as prescribed by the physician
3. Sterile 4- x 4-inch gauze dressings
4. Plastic sheet or towel
5. Disposable nonsterile and sterile gloves, protective apron, and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble equipment in a convenient work area.
3. Position the patient to expose the wound. Place a plastic sheet or towel under the patient to prevent soiling the linen. Drape the patient for privacy.
4. Gently remove the old dressing.
5. Irrigate and cleanse the wound as ordered by the physician.
6. Inspect the wound, and evaluate for signs and symptoms of infection versus signs of healing.
7. Using gauze dressings, blot excess moisture from the wound surface, and dry intact skin around the wound.
8. Apply foam dressing according to the manufacturer’s instructions.
10. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Perform wound care using sterile technique, unless ordered otherwise by the physician. Be aware that sterile technique is recommended for deep or infected wounds.

Original procedures copyright © 2000 by Mosby, Inc.
Generally, a chronic wound can be managed with a clean glove.

Instruct the patient/caregiver in clean technique as approved by the physician.

Foam dressings may be left in place 5 to 7 days; if adherent, they may be allowed to fall off on their own.

Foam dressing may be secured with roll gauze, tape, adhesive dressings, or a dressing sheet (e.g., Mefix or Hypafix).

Report signs and symptoms of wound infection to the physician.

**DOCUMENTATION GUIDELINES**

Review documentation guidelines of the procedures for *Wound Assessment and Documentation* and *Wound Management*. 
Dressing Changes: Hydrocolloid Dressings and Transparent Adhesive Films

PURPOSE

• To promote wound healing
• To minimize pain and infection
• To protect the skin

RELATED PROCEDURES

• Dressing Changes: Sterile Technique
• Wound Assessment and Documentation (see Chapter 2)
• Wound Irrigation and Debridement
• Wound Management

GENERAL INFORMATION

Hydrocolloid dressings and transparent adhesive films are useful to protect excoriated, reddened, or blistered areas of skin. They are used on partial-thickness wounds. Transparent adhesive films are semipermeable dressings that are also commonly used to protect skin against friction.

EQUIPMENT

1. Hydrocolloid dressing and transparent adhesive film as prescribed by the physician
2. Hypoallergenic tape, bandage scissors
3. Plastic sheet or towel
4. Disposable nonsterile and sterile gloves, protective apron, and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a comfortable position to expose the wound. Place a plastic sheet or towel under the patient to prevent soiling the linen. Drape the patient for privacy.
4. Gently remove the old tape and dressing. Assess the drainage on the old dressing, then discard the dressing in a plastic trash bag and secure.
5. Clean and irrigate the wound as prescribed by the physician. Clean from the least contaminated area of the wound to the most contaminated area.
6. Inspect the wound, and evaluate it for signs of healing versus signs of infection.
7. Pat the wound edges dry with a gauze pad, making sure that the surrounding skin is free of oily or greasy substances. Consider using a skin preparation to anchor the dressing.
8. Prepare the dressing (hydrocolloid dressings and adhesive films are sterile and should be handled appropriately) in the following manner:
   a. Cut and prepare the dressing so that it covers a 1.5-inch margin of healthy skin
   b. Carefully remove the paper backing from the dressing to prevent contamination of the sterile adhesive side
1. Apply the hydrocolloid dressing and adhesive film in the following manner:
   a. Gently roll the dressing over the wound (avoid stretching)
   b. Shape and mold the dressing into place, securing it around the wound edges; shape, mold, cut, and taper the dressing for hard-to-fit areas
1. Secure the hydrocolloid dressing and adhesive film with hypoallergenic tape, as needed.
2. Change the hydrocolloid dressing and transparent adhesive film about every 3 to 7 days or as required for leakage. (The hydrocolloid dressing may leave a gel residue in the wound bed; irrigate the wound bed with a normal saline solution, then apply a new dressing.)
3. Provide patient comfort measures.
4. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Perform wound care using sterile technique, unless ordered otherwise by the physician.

Instruct the patient/caregiver in clean technique as approved by the physician.

DOCUMENTATION GUIDELINES

Review documentation guidelines of the procedures for Wound Assessment and Documentation and Wound Management.

Update the plan of care.
Dressing Changes: Hydrogel

PURPOSE

- To promote wound healing
- To debride the wound
- To minimize pain and infection

RELATED PROCEDURES

- Dressing Changes: Sterile Technique
- Wound Assessment and Documentation (see Chapter 2)
- Wound Irrigation and Debridement
- Wound Management

GENERAL INFORMATION

Hydrogel dressings expand in water but do not dissolve in it. The gel is available in a sheet form or as a viscous fluid.

Hydrogels debride the wound by rehydration; they absorb exudate and encourage healing by maintaining a moist wound environment conducive to healing. The gel dressings are nonadherent and must be covered by a secondary dressing.

Hydrogels are best suited for the treatment of leg ulcers, pressure ulcers, and minor burns. Hydrogels are not recommended for infected wounds with large amounts of drainage.

EQUIPMENT

1. Hydrogel (e.g., Carrington Gel, Intrasite Gel) as prescribed by the physician
2. Sterile normal saline solution or other irrigant as prescribed by the physician
3. Sterile 4- x 4-inch gauze dressings
4. Cotton-tip applicators
5. Hypoallergenic tape, bandage scissors
6. Plastic sheet or towel
7. Disposable nonsterile and sterile gloves, protective apron, and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble equipment in a convenient work area.
3. Assist the patient to a comfortable position to expose the wound. Place a plastic sheet or towel under the patient to prevent soiling the linen. Drape the patient for privacy.
4. Gently remove the old dressing.
5. Assess the drainage on the old dressing, then discard in a plastic trash bag.
6. Irrigate and clean the wound as ordered by the physician.
7. Inspect the wound, and evaluate it for signs and symptoms of infection versus signs of healing.
8. Using a cotton-tip applicator, apply the gel approximately ¼- to ½-inch thick across the wound surface.
9. Cover the wound with a secondary dressing: gauze, hydrocolloid, or foam. As needed, secure the dressing with tape.
11. Clean and replace equipment. Discard disposable items according to Standard Precautions.

**NURSING CONSIDERATIONS**

Perform wound care using sterile technique, unless ordered otherwise by the physician. Be aware that sterile technique is recommended for deep or infected wounds.

Generally, a chronic wound can be managed with a clean glove.

Instruct the patient/caregiver in clean technique as approved by the physician.

Hydrogel dressings should be changed daily.

Report signs and symptoms of wound infection to the physician.

**DOCUMENTATION GUIDELINES**

Review documentation guidelines of the procedures for *Wound Assessment and Documentation* and *Wound Management*. 
Dressing Changes: Sterile Technique

PURPOSE

- To minimize infection
- To enhance wound healing

RELATED PROCEDURES

- Wound Assessment and Documentation (see Chapter 2)
- Wound Irrigation and Debridement
- Wound Management

GENERAL INFORMATION

It is recommended that the nurse use sterile technique whenever possible when performing wound care, unless otherwise ordered by the physician. Patients, however, are unlikely to infect themselves in their own environment and may be taught clean technique as approved by the physician.

EQUIPMENT

1. Sterile dressing as prescribed by the physician
2. Wound irrigation solution as prescribed by the physician
3. Plastic sheet or towel
4. Disposable nonsterile and sterile gloves, protective apron, and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a comfortable position to expose the wound. Place a plastic sheet under the patient to prevent soiling the linen. Drape the patient for privacy.
4. Place a clean towel underneath the working area to minimize contamination.
5. Open the sterile dressings, the irrigation and cleaning solution, and the instrument set to provide a sterile field.
7. Gently remove and discard the old tape and soiled dressings in a plastic trash bag. If the dressing sticks to the wound, moisten the dressing with a sterile normal saline solution, and then remove.
8. Remove and discard the nonsterile gloves. Don sterile gloves.
9. Cleanse and irrigate the wound as prescribed by the physician. Clean from the least contaminated area to the most contaminated area.
10. Inspect the wound, and evaluate it for signs of healing versus signs of infection.
11. Apply a dressing, and secure it with hypoallergenic tape.
12. Provide patient comfort measures.
13. Clean and replace the equipment. Discard disposable items according to Standard Precautions.
DOCUMENTATION GUIDELINES

Review documentation guidelines of the procedures for *Wound Assessment and Documentation* and *Wound Management*.

Update the plan of care.
Dressing Changes: Unna Boot

PURPOSE

- To promote healing of venous stasis ulcers and to minimize cellulitis
- To minimize pain and infection

RELATED PROCEDURES

- Dressing Changes: Sterile Technique
- Wound Assessment and Documentation (see Chapter 2)
- Wound Irrigation and Debridement
- Wound Management

GENERAL INFORMATION

An Unna boot wrap or medicated dressing is used to control edema and to promote healing of poorly vascularized areas of the leg and foot. The Unna boot is often used to treat venous stasis ulcers.

EQUIPMENT

1. Unna boot or medicated compression dressing as prescribed by the physician
2. Irrigation or cleansing solution as prescribed by the physician
3. Gauze or elastic bandage
4. Hypoallergenic tape, bandage scissors
5. Plastic sheet or towel
6. Disposable nonsterile and sterile gloves, protective apron, and an impermeable plastic trash bag (see *Infection Control*)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a comfortable position to expose the lower leg. Place a plastic sheet or towel underneath the leg to prevent soiling the linen or the floor. Drape the patient for privacy.
4. Gently remove the old tape and dressing. Assess the drainage on the old dressing, then discard the dressing in a plastic trash bag.
5. Clean and irrigate the wound as ordered by the physician. Clean from the least contaminated area to the most contaminated area.
6. Inspect the wound, and evaluate it for signs of healing versus signs of infection.
7. Apply the Unna boot by wrapping the dressing from above the toes to below the knee to control edema.
8. Cover the heel with oblique turns.
9. Make circular, figure-of-eight turns around the leg, overlapping each turn by half the width of the medicated dressing.
10. Cover the entire area 2 to 3 times. Do not make reverse turns, because such turns cause unnecessary creases and pressure.
11. Cut and smooth the dressing to avoid creases or pleats.
12. Apply a clean gauze or elastic bandage over the medicated dressing for support and to absorb copious drainage, then secure the gauze or elastic bandage with hypoallergenic tape.

13. Change the dressing 1 or 2 times a week. Remove the Unna boot in the following manner:
   a. Remove the elastic bandage or gauze wrap
   b. Carefully cut and remove the dressing from the leg (soaking the dressing loose decreases the debriding effect)

1. Provide patient comfort measures.
2. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Perform wound care using sterile technique, unless ordered otherwise by the physician.

Clean technique is often used with leg ulcers.

DOCUMENTATION GUIDELINES

Review documentation guidelines of the procedures for Wound Assessment and Documentation and Wound Management.

Update the plan of care.
Dressing Changes: Wet-to-Dry

PURPOSE

- To promote wound healing
- To debride the wound
- To prevent infection

RELATED PROCEDURES

- Dressing Changes: Sterile Technique
- Wound Assessment and Documentation (see Chapter 2)
- Wound Irrigation and Debridement
- Wound Management

GENERAL INFORMATION

A wet-to-dry dressing change is helpful for wounds that require debridement. The wet portion of the dressing absorbs exudate from the wound bed and cleans the infected wound. The dry-wound covering pulls moisture and wound drainage into the dressing by capillary action.

EQUIPMENT

1. Sterile normal saline solution as prescribed by the physician
2. Sterile 4- x 4-inch gauze dressings
3. Hypoallergenic tape, bandage scissors
4. Plastic sheet or towel
5. Disposable nonsterile and sterile gloves, protective apron, and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a comfortable position to expose the wound. Place a plastic sheet or towel under the patient to prevent soiling the linen. Drape the patient for privacy.
4. Gently remove the tape and older dressing. Assess the drainage on the old dressing, then discard it in a plastic trash bag, and secure.
5. Clean and irrigate the wound as ordered by the physician. Clean from the least contaminated area to the most contaminated area.
6. Inspect the wound, and evaluate it for signs of healing versus signs of infection.
7. Apply moist gauze directly on the surface of the wound. (Gently feed moist gauze into the wound with forceps or cotton-tip applicators if packing is required; do not stuff packing into the wound.)
8. Place dry gauze over wet gauze. Then cover with a gauze dressing, surgi-pad, or ABD pad. Secure the dressing with tape, Montgomery ties, or a binder.
10. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

Original procedures copyright © 2000 by Mosby, Inc.
NURSING CONSIDERATIONS

Perform wound care using sterile technique, unless ordered otherwise by the physician.

Instruct patient/caregiver to use clean technique as approved by the physician.

DOCUMENTATION GUIDELINES

Review documentation guidelines of the procedures for Wound Assessment and Documentation and Wound Management.

Update the plan of care.
Moist Compress

PURPOSE

- To reduce inflammation of the skin

RELATED PROCEDURE

- Skin Care

GENERAL INFORMATION

A moist compress is effective in the treatment of cellulitis, furunculitis, and oozing dermatitis. The cooling effect of the compress may relieve itching and burning of the skin.

EQUIPMENT

1. Gauze dressings for compress
2. Wetting solution (room temperature: tap water, normal saline, aluminum acetate solution [e.g., Burrow’s solution]) as prescribed by the physician
3. Clean bowl
4. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a comfortable position to expose the affected area. As necessary, drape the patient for privacy.
4. Place gauze dressings in a bowl and moisten with the wetting solution to the point of slightly dripping.
5. Apply a moist compress to the affected area and leave in place for 20 to 30 minutes.
6. Remove and discard gauze dressings.
7. Provide patient comfort measures.
8. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Instruct the patient/caregiver in skin care (see the procedure for Skin Care).

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient tolerance
- Condition of the patient’s skin
- Physician notification, if applicable
- Standard Precautions
• Any other pertinent findings

Update the plan of care.
Montgomery Straps

PURPOSE

- To prevent skin irritation from tape during repeated dressing changes

RELATED PROCEDURES

- Dressing Changes: Hydrocolloid Dressings and Transparent Adhesive Films
- Dressing Changes: Sterile Technique
- Wound Assessment and Documentation (see Chapter 2)
- Wound Management

GENERAL INFORMATION

Montgomery straps should be used for patients who receive frequent dressing changes. The straps with ties essentially hold the dressing in place and prevent skin irritation caused by repeated use of tape. Montgomery straps are commercially available.

EQUIPMENT

1. Montgomery straps
2. Adhesive dressing
3. Cotton-twill tape for ties
4. Skin-protectant wipes
5. Soap and water, washcloth
6. Disposable nonsterile and sterile gloves, protective apron, and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a comfortable position to expose the wound. Place a plastic sheet or towel under the patient to prevent soiling the linen. Drape the patient for privacy.
4. Gently remove the old dressing.
5. Inspect the wound, and evaluate it for signs of healing versus signs of infection.
6. Perform wound care as ordered by the physician.
7. Wash the patient’s skin surrounding the wound with soap and water to prevent irritation.
8. Apply the skin protectant to the area around the wound where the Montgomery straps with adhesive dressing will adhere. Allow the skin protectant to air dry.
9. Apply the adhesive dressing for the Montgomery ties to the skin along the side of the wound.
10. To apply the Montgomery ties, do the following:
   a. Apply the Montgomery ties with the hole ends placed on opposite sides of the dressing (the tie edges have an adhesive backing and should stick to the adhesive dressing).
   b. Thread the holes with cotton tape. Draw the opposing straps together and tie.
11. Provide patient comfort measures.
2. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Instead of cotton-twill tape, safety pins can be placed through the holes on each side of the straps. Rubber bands are then hooked into the safety pins to hold the dressing in place. The dressing is changed by unsnapping the safety pins on one side.

Replace Montgomery straps whenever they become soiled (usually every 4 to 7 days).

Use a hydrocolloid adhesive dressing under the straps if the skin becomes irritated.

Report signs and symptoms of wound infection to the physician.

DOCUMENTATION GUIDELINES

Review documentation guidelines of the procedures for Wound Assessment and Documentation and Wound Management.

Update the plan of care.
Pediculosis

PURPOSE

- To eliminate head lice (pediculosis)
- To prevent spread of the infestation

RELATED PROCEDURE

- Administration of Medications: General Guidelines (see Chapter 10)

GENERAL INFORMATION

The louse is a small (about 1/16th of an inch), blood-sucking insect. It is spread through direct contact with an infected person or, less commonly, through contact with an infected person’s belongings (e.g., combs, hats, clothing, bedding). Head lice attach themselves to the hair shaft so they have ready availability to their food source—the blood of the human scalp. Itching is the main symptom of head lice. The female louse lays eggs (nits) that firmly attach to the hair and, unlike dandruff, cannot be shaken off.

Be aware that some preparations are not recommended for infants, young children, and pregnant or lactating women; follow manufacturer’s recommendations regarding usage.

EQUIPMENT

1. Delousing shampoo or crème rinse (prescription or over-the-counter because regular shampoos will not work)
2. Fine-tooth comb
3. Towels
4. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment in a convenient work area.
3. Apply delousing shampoo or crème rinse. Follow manufacturer’s instructions for the shampoo, exactly. Do not allow the shampoo to get into the patient’s eyes.
4. Remove nits with a fine-tooth comb. A solution of 50% vinegar and 50% water, used as a rinse, will help loosen the nits. Although most treatments kill both the adult lice and the nits, many schools will not allow children back in school until the nits are removed.
5. Instruct the household in environmental management of head lice to include the following:
   a. Wash articles that have come into contact with the patient’s head in the last 48 hours in hot (at least 130° F) water. Dry in a hot dryer.
   b. Vacuum all carpeting, furniture, and mattresses. Car seats and headrests should also be vacuumed.
   c. Put articles that cannot be washed or vacuumed (such as stuffed animals) in a plastic bag and seal for 10 days.
   d. Disinfect combs and brushes by washing them in hot water or soaking them in a louse shampoo. Rinse and air dry.
1. Provide patient comfort measures.
2. Clean and replace equipment. Discard disposable items, including the vacuum cleaner bag, according to Standard Precautions.

**NURSING CONSIDERATIONS**

Instruct the patient/caregiver in shampoo application and nit removal. In addition to the patient, all members of the household and close contacts should be checked for head lice.

As appropriate, treat everyone in the household infected with head lice at the same time.

Body lice and pubic lice (crabs) are slightly different but are treated in the same basic manner. Lice or nits in the eyelashes can be treated by applying petroleum jelly twice a day for 1 week.

Spraying the house with insecticide or fumigation is not necessary.

Inspect the patient’s and, as appropriate, each household member’s hair for 1 week to ensure that all lice and nits are gone. If eggs survive after 7 to 10 days, retreatment may be necessary.

There is no prophylactic treatment for head lice; do not treat people without seeing the lice or nits.

Be aware that there have been reported cases of head lice resistant to commonly used treatments. When resistance is reported, consult with the physician or local public health department and consider the following alternatives: (1) apply a heavy layer of petroleum jelly, regular mayonnaise (not non- or low-fat), or olive oil to the scalp; cover with a shower cap overnight or for several hours; wash out, using first a dishwashing liquid and then regular shampoo (combing with a fine-tooth comb is essential) or (2) daily combing of wet hair with a fine-tooth metal comb (this needs to be done on a continuous basis for 1 to 2 weeks).

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient/caregiver toleration
- The response to treatment
- Any patient/caregiver instructions and response to teaching, including adherence with recommendations
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Document medications on the medication record.

Update the plan of care.

*Author: Anne Schappe, R.N., Ph.D.*
Scabies

PURPOSE

- To eliminate scabies
- To prevent spread of the infestation

RELATED PROCEDURE

- Administration of Medications: General Guidelines (see Chapter 10)

GENERAL INFORMATION

Scabies is a parasitic disease of the skin caused by a mite (*Sarcoptes scabiei*). The mite burrows into the cracked and folded regions of the skin and forms tunnels in the stratum corneum. Eggs are laid and hatched in the burrows. Resulting larvae form their own burrows and grow into adulthood within 2 months. Scabies is usually contracted after close personal contact with an infested individual.

EQUIPMENT

1. Medication to treat scabies (e.g., Kwell or Eurax) as prescribed by the physician; use with caution with infants and pregnant women as recommended by the physician
2. Soap and water
3. Towel and washcloth
4. Disposable nonsterile gloves, protective apron, and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Explain the procedure to the patient/caregiver and family household members.
2. Assemble the equipment at a convenient work area.
3. Apply Kwell or Eurax from neck to toes. Follow the manufacturer’s recommendations for the product exactly. One application is usually sufficient.
4. Wash, rinse, and dry the entire body according to manufacturer’s instructions.
5. Provide patient comfort measures.
6. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Instruct the patient/caregiver that itching may persist for 1 to 2 weeks after the treatment.

Treat prophylactically those who have had skin-to-skin contact (this includes family members, caregivers, and home-care staff).

Overtreatment is common and should be avoided because of neurotoxicities associated with the medication.

Wash all items that come into contact with the patient’s skin.
Store any item that cannot be washed in a sealed plastic bag for 10 days. Items may then be removed and reused.

It is not necessary to treat furniture, etc.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient/caregiver toleration
- Any caregiver instructions, including adherence with recommendations
- Physician notification, if applicable
- *Standard Precautions*
- Any other pertinent findings

Document medications on the medication record.

Update the plan of care.
Skin Care

PURPOSE

- To prevent skin breakdown
- To instruct the patient/caregiver in skin-care precautions
- To promote self-care in the home

RELATED PROCEDURES

- Dressing Changes: Hydrocolloid Dressings and Transparent Adhesive Films
- Wound Assessment and Documentation (see Chapter 2)
- Wound Management

GENERAL INFORMATION

When patients who are at risk for skin breakdown and decubitus ulcer formation are admitted to the home health agency, they should be placed on a regimen of skin care that controls exposure to forces of friction, shearing, and pressure. Risk factors for skin breakdown and decubitus ulcer formation include being bed- and chair-bound, immobile, and incontinent; consuming an inadequate dietary intake; and having an altered level of consciousness. A skin-care program should be instituted by the home health agency and implemented by staff, patients, and caregivers.

EQUIPMENT

1. Lanolin-based moisturizer
2. Elbow and heel protectors or socks and sheepskin
3. Pressure-reduction devices (e.g., water mattresses, gel pads, and foam mattresses or pads)
4. Pressure-relief devices (consider air-fluidized therapy)
5. Hydrocolloid dressing and transparent adhesive film as prescribed by the physician
6. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Explain to the patient/caregiver that bedsores are likely to occur over weight-bearing areas; bony prominences; or where the body is exposed to a firm, unyielding surface.
4. Implement the following skin-care precautions with the patient/caregiver:
   a. Inspect the skin for redness; protect reddened areas from further damage. All patients at risk for skin breakdown should inspect the skin daily, paying particular attention to bony prominences.
   b. Wash the skin with a mild soap and soft washcloth; avoid hot water. During the cleansing process, be careful to minimize the force and friction applied to skin. Skin should be cleansed at the time of soiling and at routine intervals.
   c. Rinse thoroughly with clear water, and blot dry with a towel.
   d. Apply lotion; massage and stroke lightly around the bony prominence; avoid massaging over a bony prominence.
   e. Change the bed linen daily and whenever it is soiled by urine or feces; minimize skin exposure to moisture caused by incontinence, perspiration, or wound drainage; topical agents that act as barriers to moisture may also be used.
   f. Keep sheets and linens wrinkle free.
   g. Place the bed-bound patient in a 30-degree oblique position when he or she is at rest to prevent pressure over bony prominences (this can be accomplished by using pillows).
   h. Plan a simple schedule of turning the immobile patient every 2 hours from side, to back, to side to reduce the effects of prolonged pressure; minimize skin injury caused by friction and shear forces.
through proper positioning, transferring, and turning techniques.
i. Instruct patients who are able to do so to shift their weight every 15 minutes.
j. Use elbow and heel protectors, socks, or a sheepskin to relieve friction and excessive pressure on areas that are vulnerable to skin breakdown.
k. Consider using pressure-reduction and relief devices with the immobile or chair-bound patient. Follow the manufacturer’s recommendations for use; do not use “doughnut-type” devices.
l. Use lifting devices, such as a trapeze or bed linen, to move (rather than drag) individuals who are in bed and who cannot assist with transfers or position changes.

1. Apply transparent adhesive film or hydrocolloid dressing over areas at risk for skin breakdown. Use lubricants (e.g., cornstarch or creams), pads, and protective dressings to prevent friction.
2. Encourage adequate hydration and a diet high in protein and vitamin C to prevent skin breakdown and to enhance wound healing.
3. Obtain a physician’s order for protein supplements if the patient’s intake is not adequate. If dietary intake remains poor, more aggressive nutritional interventions, such as enteral or parenteral feedings, should be considered.
4. Provide patient comfort measures.
5. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

A written schedule for systematically turning and repositioning the patient should be used.

A systematic risk assessment can be accomplished by using a validated risk assessment tool, such as the Braden Scale or Norton Scale. Update the risk assessment periodically.

Consider a physical therapy referral if the potential exists for improving the patient’s mobility and activity status; obtain physician’s orders.

Consider a home health aide referral for assistance with activities of daily living (ADLs); obtain physician’s orders.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Condition of the patient’s skin
- Any patient/caregiver instructions and response to teaching, including adherence to recommendations
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Skin Suture and Staple Removal

PURPOSE

- To remove cutaneous sutures or staples, using principles of asepsis

RELATED PROCEDURES

- Dressing Changes: Sterile Technique
- Wound Assessment and Documentation (see Chapter 2)

EQUIPMENT

1. Basic suture or staple removal set
2. Sterile dressing supplies if needed
3. Steri-strips
4. Towels
5. Antiseptic wipes
6. Disposable sterile gloves and an impermeable plastic trash bag (see Infection Control) [STOP]

Skin Suture Removal

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Position the patient to expose the suture. Drape the patient for privacy.
4. Place a clean towel underneath the suture kit and dressing supplies to minimize contamination.
5. Open the suture kit and supplies.
6. Cleanse the suture or staple line with antiseptic wipes.
7. Hold the thumb forceps in one hand and the scissors in the other hand. Gently grasp the suture with thumb forceps.
8. Gently pull on the suture to permit the insertion of the scissor’s blade between the suture and the skin.
9. Cut the exposed portion of the suture, and remove it with a smooth, pulling motion of the thumb forceps.
10. Repeat steps 7 through 9, until all the sutures are removed.
11. Gently wipe the incision line with antiseptic wipes.
12. Apply a gauze dressing or steri-strips as necessary.
13. Provide patient comfort measures.
14. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

Skin Staple Removal

PROCEDURE

1. Repeat steps 1 through 6 of the procedure for Skin Suture Removal.
2. Place the staple remover’s lower jaws beneath the span of the first staple.
3. Squeeze the handles until they are completely closed; lift the staple away from the skin, and discard the
4. Repeat steps 2 and 3 until all the staples are removed.
5. Repeat steps 11 through 14 of the procedure for Skin Suture Removal.

**NURSING CONSIDERATIONS**

Assess the wound for signs of healing. Do not remove suture or staples if the wound edges may separate.

It may be necessary to soak the scabs off with a warm washcloth before suture or staple removal on wounds that have a heavy or moderate scab formation.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Appearance of the incision
- Amount and description of the drainage if present
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Review documentation guidelines of the procedure for *Wound Assessment and Documentation*.

Update the plan of care.
Wound Irrigation and Debridement

PURPOSE

- To cleanse and debride the wound
- To promote healing

RELATED PROCEDURES

- Dressing Changes: Sterile Technique
- Wound Assessment and Documentation (see Chapter 2)
- Wound Care: Scoring of Eschar

EQUIPMENT

1. Dressing as prescribed by the physician
2. Irrigation solution as prescribed by the physician
3. Hypoallergenic tape, bandage scissors
4. Sterile dressing tray, container, and syringe; or sterile 60-ml syringe attached to an 18-gauge needle, spray bottle, dental water pick, or home whirlpool
5. Emesis basin or clean bowel
6. Plastic sheet or towel
7. Disposable nonsterile and sterile gloves, protective apron, and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area. Open the sterile supplies and irrigation solution. Place a clean towel underneath the work area to minimize contamination.
3. Position the patient so that the irrigation solution will drain from the upper part of the wound into the basin or bowl held below the wound. Place a plastic sheet under the patient to avoid soiling the linens. Drape the patient for privacy.
4. Gently remove the old tape and dressing, and discard them in a plastic trash bag.
5. Irrigate and debride the wound in the following manner:
   a. Use sterile technique when irrigating and cleansing the wounds of patients who are immunocompromised, who have diabetes, or who have active infections.
      (1) Pour the irrigation solution into a sterile container
      (2) Place a bowl or emesis basin under area of wound to be irrigated
      (3) Fill a sterile syringe with irrigation solution
      (4) Irrigate all areas of the wound; irrigate the pockets or sinus tracts in the wound. Do not touch the wound or surrounding tissue with the tip of the irrigation syringe; irrigate from the center of the wound outward
      (5) Continue irrigating until the solution drains clear from the wound or until the solution is used up
         a. Use a home whirlpool, wet-to-dry normal saline dressing changes, or enzymatic topical debriders to cleanse and debride yellow, green, or black wound beds (carefully follow the product’s instructions when applying enzymatic topical debriders to prevent damaging healthy tissue).
b. Irrigate pink, healthy tissue with a physiologic solution, such as normal saline solution, via a spray bottle, a dental water pick, or a syringe attached to an 18-gauge needle when clean technique is acceptable.

c. Wash the wound with soap and water to remove necrotic tissue when clean technique is not acceptable.

1. Inspect and evaluate the wound for healing versus signs of infection.
2. Dry the skin around the wound. Apply the dressing and secure it with hypoallergenic tape.
3. Consult with the physician for surgical debridement.
4. Provide patient comfort measures.
5. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Perform wound care using sterile technique, unless ordered otherwise by the physician.

Instruct the patient/caregiver in wound irrigation, using a clean technique as approved by the physician.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Irrigation solution used and amount
- Any patient/caregiver instructions on wound irrigation, including response to teaching and ability to irrigate and manage the wound
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Review documentation guidelines of the procedures for Wound Assessment and Documentation and Wound Management.

Update the plan of care.
Wound Care: Scoring of Eschar

PURPOSE

- To break down and remove hard, black eschar on pressure ulcers to allow chemical agents to debride the wound
- To minimize pain and infection
- To promote wound healing

RELATED PROCEDURES

- Dressing Changes: Sterile Technique
- Dressing Changes: Wet-to-Dry
- Wound Assessment and Documentation (see Chapter 2)
- Wound Management

GENERAL INFORMATION

Hard, black tissue in the wound is called eschar. Until wound eschar is removed, healing will not take place. Scoring of eschar should be done by a certified enterostomal therapist or registered nurse who has had formal training in the procedure.

EQUIPMENT

1. Sterile normal saline or irrigation solution as prescribed by the physician
2. Enzymatic debriding agent (e.g., Elase, Santyl, Travase) as prescribed by the physician
3. Gauze sponges
4. Cotton-tip applicators
5. Hypoallergenic tape, bandage scissors
6. Antiseptic wipes
7. Sterile scalpel
8. Plastic sheet or towel
9. Disposable nonsterile and sterile gloves, protective apron, and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a comfortable position to expose the wound. Place a plastic sheet or towel under the patient to prevent soiling the linen. Drape the patient for privacy.
4. Gently remove the old dressing.
5. Cleanse the eschar with antiseptic wipes, working in a circular motion from inside out to remove necrotic material from the wound. Use a new wipe for each circular stroke.
6. Irrigate the wound with normal saline to remove all traces of antiseptic wipe so that there is no interaction with the chemical agent.
7. Inspect the wound, and evaluate it for signs and symptoms of infection versus signs of healing.
8. Make parallel, vertical, or horizontal incisions about every one-fourth inch (0.5 cm) into the black eschar. Make a criss-cross pattern. Make the incision into the eschar until a pink color is observed in the cut. It may be necessary to go over the incisions more than once to achieve an effective depth.

9. Using a cotton-tip applicator, apply a thin layer of enzymatic debriding agent only on the eschar.

10. Cover with a wet-to-dry dressing, as ordered by the physician.

11. Provide patient comfort measures.

12. Clean and replace equipment. Discard disposable items according to Standard Precautions.

**NURSING CONSIDERATIONS**

Perform wound care using sterile technique, unless ordered otherwise by the physician. Be aware that sterile technique is recommended for deep or infected wounds.

Generally, a chronic wound can be managed with a clean glove.

Consider surrounding or covering the wound edges with an adhesive dressing to protect healthy tissues from the enzymatic debriding agent.

Do not score wounds larger than 2 to 5 cm.

Do not score wounds that are in close proximity to the bone, where the danger of debriding to the bone exists.

Report signs and symptoms of wound infection to the physician.

**DOCUMENTATION GUIDELINES**

Review documentation guidelines of the procedures for Wound Assessment and Documentation and Wound Management.

Update the plan of care.
Wound Management

PURPOSE

- To provide guidelines for wound management in the home based on the degree of tissue destruction
- To apply current trends and products useful in wound management
- To promote self-care in the home

RELATED PROCEDURES

- Skin Care
- Wound Assessment and Documentation (see Chapter 2)
- Wound Irrigation and Debridement

GENERAL INFORMATION

Current trends in wound management and treatment suggest that wound repair is enhanced by (1) a moist environment; (2) a wound bed free of necrotic tissue, eschar, and environmental contamination or infection; (3) an adequate blood supply to meet metabolic demands for tissue generation; and (4) sufficient oxygen and nutrition for cellular metabolism and tissue generation.

EQUIPMENT

1. Disposable nonsterile or sterile gloves as needed and an impermeable trash bag (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Apply current principles of wound management in the following manner:
   Stage 1: Erythema (redness, swelling, warmth over affected area) and pain are present but no damage is found to the dermis or epidermis; the condition is reversible with prompt interventions.
     Interventions: Prevention—use pressure-reduction techniques along with the application of hydrocolloid and transparent adhesive dressings to protect reddened areas of skin that are at risk for breakdown.
   Stage 2: Loss of epidermal, and possibly dermal, tissue may present as excoriation or blistering; shallow, superficial wound with pink wound bed, painful (referred to as partial-thickness wounds).
     Interventions: Cleanse and Protect—gently cleanse and irrigate the pink wound bed with physiologic solution, such as normal saline solution. Application of a hydrocolloid dressing, transparent adhesive film, foam, topical moisturizer, or impregnated gauze dressing will maintain a moist environment for healing and will protect the wound from environmental contamination.
   Stage 3: Loss of dermal and possibly subcutaneous tissue; undermining, eschar, copious drainage and exudates, and infection may be present; painless; referred to as a shallow, full-thickness wound.
     Interventions: Disinfect, Debride, Absorb, and Protect—use an antiseptic solution to cleanse and irrigate; consult with the physician because antibiotic therapy, either systemic or topical (silver sulfadiazine cream), may be useful; eliminate dead space; fill the wound with an absorber (foam, granules, or gel) and cover with a protective dressing; calcium alginate dressings are helpful to control drainage.
**Stage 4:** Loss of subcutaneous tissue may expose the muscle, bone, or joint; these are typically deep wounds, with eschar, copious drainage, undermining, and sinus tract formation; usually painless; referred to as deep, full-thickness wounds.

*Interventions:* Essentially the same as for stage 3; avoid solitary use of transparent adhesive films or hydrocolloid dressings because these will not fill dead space.

3. Institute a skin-care regimen for stages 1 through 4.
4. Evaluate for short-term urinary catheterization or evaluate the fecal incontinence pouch for bladder or bowel contamination of the wound.
5. Instruct the patient/caregiver on home wound management. See the Patient Education Guidelines, *Wound Care Management.* Evaluate for patient/caregiver compliance.
6. Evaluate the response to treatment. Consult with the physician, and revise the plan of care accordingly.

**NURSING CONSIDERATIONS**

Obtain the physician’s orders for wound care supplies.

Review the fiscal intermediary guidelines for reimbursement of wound care supplies.

A number of wound care products are available. Become familiar with what products work well with which type of wound.

Three to four weeks may be needed before improvement is evident.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- The wound’s response to treatment (signs of healing versus infection)
- Any patient/caregiver instructions and response to teaching, including the ability to perform dressing changes and manage the wound at home
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Review documentation guidelines of the procedure for *Wound Assessment and Documentation.*

Update the plan of care.
Wound Packing

PURPOSE

• To keep a wound open and allow it to heal from the inside out
• To minimize pain and infection

RELATED PROCEDURES

• Administration of Medications (see Chapter 10)
• Dressing Changes: Sterile Technique
• Montgomery Straps
• Wound Assessment and Documentation (see Chapter 2)
• Wound Management

GENERAL INFORMATION

Moist-wound packing eliminates dead space and promotes wound healing. It is particularly useful for wounds with large tissue loss.

EQUIPMENT

1. Dressing (as required for the wound) prescribed by the physician
2. Sterile normal saline or irrigation solution and topical medication as prescribed by the physician
3. Sterile forceps and scissors
4. Hypoallergenic tape, bandage scissors
5. Plastic sheet or towel
6. Disposable nonsterile and sterile gloves, protective apron, and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a comfortable position to expose the wound. Place a plastic sheet or towel under the patient to prevent soiling the linen. Drape the patient for privacy.
4. Gently remove the old dressing. Assess the drainage on the old dressing, then discard in a plastic trash bag.
5. Irrigate the wound with sterile normal saline (or other irrigant solution) as ordered by the physician.
6. Inspect the wound, and evaluate it for signs and symptoms of infection versus signs of healing.
7. Apply topical medication if ordered by the physician.
8. Using sterile forceps gently pack the wound with loose layers of gauze dressings; make sure to cover all areas of the wound with dressings. Place enough dressings over the wound to absorb drainage until the next scheduled change (it may be necessary to use an ABD pad or absorbent cotton pad over the outer layer of the dressing for wounds with large amounts of drainage). Do not stuff dressing into the wound because overpacking will slow healing.
11. Clean and replace equipment. Discard disposable items according to Standard Precautions.

**NURSING CONSIDERATIONS**

Perform wound care using sterile technique, unless ordered otherwise by the physician. Be aware that sterile technique is recommended for deep or infected wounds.

Generally, a chronic wound can be managed with a clean glove.

Do not pack the wound too tightly because this will impair healing.
PATIENT EDUCATION GUIDELINES

Wound Care Management

1. Always wash your hands before and after changing the dressing because good handwashing will help keep your wound clean and prevent the spread of germs.

2. Keep all your medical supplies in a clean area; boxes of dressings, gloves, and other medical supplies may be stored in a clean plastic trash bag. Place jars or bottles of solutions used to irrigate or clean your wound in a plastic bag, and secure it with a plastic twist tie. Store your irrigation solutions in a clean place away from direct sunlight (this cuts down on the growth of germs).

   Discard irrigation solutions 1 week after the container has been opened or sooner if the solution changes color, becomes cloudy, or has a foul smell. If you are running out of medical supplies, notify your nurse or home health agency clinical supervisor.

3. Gather up your supplies. Prepare a plastic bag for disposal of dirty dressings and supplies.

4. Prepare your new dressing as your nurse has shown you. All caregivers should wear disposable gloves when they assist with your dressing changes. It is not necessary for you to wear gloves when you care for your own wound.

5. Gently remove your old dressing, and inspect your wound. Any noticeable differences in size, color, or drainage should be reported to the nurse or aide at the next visit.

6. Clean your wound and apply your new dressing as the nurse has shown you. Your dressing should be changed on schedule or if it should come off or become soggy. Place your dirty dressings and disposable supplies in a plastic trash bag. Seal and dispose of the bag in your regular trash.

7. Call your nurse or the home health agency clinical supervisor if you have an elevated temperature, if you have problems with pus or excessive wound drainage, or if swelling and pain occur with your wound.

A limited number of copies of this guideline may be made for free distribution to patients and families. All other rights are reserved.
Bowel Training

PURPOSE

• To promote control of bowel evacuation on a regular basis
• To prevent decubiti and skin breakdown
• To improve the patient’s self-esteem and body image
• To promote self-care in the home

RELATED PROCEDURES

• Administration of Medications: General Guidelines (see Chapter 10)
• Bladder Training
• Enema Administration (see Chapter 10)
• Fecal Impaction: Manual Removal
• Skin Care (see Chapter 5)

GENERAL INFORMATION

Nursing measures to restore or promote normal bowel function include (1) dietary modification, (2) increasing fluid intake, and (3) increasing the patient’s activity level.

EQUIPMENT

1. Suppositories, tap-water enema, stool softeners as prescribed by the physician
2. Water-soluble lubricant
3. Bedpan, bedside commode, and toilet
4. Soap and warm water, basin, tissues, washcloth, and towels
5. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Obtain the history of the patient’s previous bowel habits, and establish regular evacuation times to correspond to the preillness pattern.
4. Assess the patient’s bowel function to include the following:
   a. Type and frequency of stool
   b. Date of the last bowel movement
   c. Auscultate for presence of bowel sounds
   d. Palpate abdomen for tenderness, firmness, and presence of mass
   e. Evaluate the medication profile for medicine-induced constipation
1. Perform perineal care as needed.
2. Consult with the physician regarding the use of stool softeners, enemas, stimulants, and bulk producers.
3. Evaluate for and remove fecal impaction.
4. Consult with the physician for activity orders. Encourage maximum mobility and physical activity within limits of the patient’s ability.
5. Consult with the physician regarding recommendations for the patient’s fluid intake. Encourage an adequate fluid intake. (Approximately 2000 to 3000 ml each day unless the patient is ordered on fluid restriction.)

6. Consult with the physician regarding diet orders. Instruct the patient to eat a well-balanced diet, with increases in fiber and bulk to promote regular bowel movement. (Approximately 4 to 6 g of fiber is needed each day to facilitate normal bowel function.)

7. Provide patient comfort measures.

8. Clean and replace the equipment. Discard disposable items according to *Standard Precautions*.

**NURSING CONSIDERATIONS**

Evaluate the program for 4 to 6 weeks; if it is not successful, consult with the physician for readjustment of prescribed activity, diet, and medications.

Institute a skin-care regimen for problems with incontinence.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Condition of the patient’s skin
- Patient’s ability to establish control of the bowels
- Color, amount, and consistency of stool
- Any patient/caregiver instructions and response to teaching
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Document medications on the medication record.

Update the plan of care.
Colostomy Irrigation

PURPOSE

- To empty the colon of feces, gas, mucus
- To establish a regular pattern of evacuation
- To prevent constipation
- To promote self-care in the home

RELATED PROCEDURES

- Ostomy Care
- Pouch Change

EQUIPMENT

1. Irrigating bag with tubing
2. Irrigating sleeve with belt
3. Water-soluble lubricant
4. Plastic garbage bag or Chux
5. Ostomy appliance (pouch)
6. Bedpan or large bowl if the patient is bedbound
7. Soap and warm water, basin, washcloths, and towels
8. Disposable nonsterile gloves, disposable protective apron, and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to sit on the toilet or in a chair facing the toilet.
4. Fill the irrigation bag with 500 to 1000 ml of water.
5. Flush the tubing with water to empty it of air.
6. Hang up the irrigation bag on the bathroom door hook, or raise the bag 18 inches above the stoma before irrigation.
7. Take off the pouch and the soiled colostomy bag.
8. Remove any stool or drainage from the stoma with toilet paper. Gently clean with soap and warm water as needed.
9. Inspect the skin and stoma for changes in appearance; notify the physician as appropriate.
10. Place the ring and irrigation sleeve over the stoma, and adjust the belt for a snug fit (a mild soapy solution may be squirted into the sleeve for easier cleaning).
11. Put the bottom of the sleeve into the toilet.
12. Attach the cone tip to the irrigation tubing and lubricate.
13. Gently insert the cone into the stoma for a snug fit. If there is resistance, perform a lubricated digital examination to remove feces. Never use force because this could perforate the bowel.
14. Open the clamp and let the water flow in for 15 minutes. Press on the cone just firmly enough to keep water from running back out. If cramps occur, turn off the water with the clamp, and wait until the cramps subside.
before proceeding. If the water backs up into the tubing, shut off the water with the clamp. Wait a few minutes, then open the clamp and continue the irrigation (lower the bag to decrease the flow of water, or raise the bag to increase the flow).

15. Close the bottom of the sleeve with the clamp when most of the water has come back out (about 10 to 20 minutes).

16. Instruct the patient to walk around if able for about 30 minutes to complete the emptying of the bowel. Instruct patients who are not ambulatory to lean forward or massage their abdomen to complete emptying of the bowel.

17. Take off sleeve. Wash around the stoma or have the patient shower to remove fecal drainage. Rinse and dry area thoroughly. Put on a new pouch.

18. Clean the irrigation sleeve, cone tip, and irrigation bag with soap and water. Allow them to air dry, and store them in the patient’s bathroom.

19. Provide patient comfort measures.

20. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

**NURSING CONSIDERATIONS**

See the Patient Education Guidelines boxes, *Colostomy Irrigation* and *Stoma Management in the Home*.

Encourage the patient/caregiver to perform the procedure with minimal assistance from you on the next visit.

Consider referral to social services for assistance with ostomy supplies or relaxation therapy techniques.

If the patient is confined to the bed, turn the patient to uncover the colostomy and to elevate the head. Protect the bed with a plastic garbage bag or Chux, and drain the irrigation solution into a bedpan or a large clean bowl. Perform peristomal care, and apply the pouch.

Report signs of skin irritation or a dark/purplish or pale colored stoma to the physician as appropriate (the stoma should be red or bright pink).

Consult with the physician if the stoma structure prohibits cone insertion; consider irrigating the stoma with a soft silicone catheter gently inserted into the bowel no more than 5 cm (2 to 3 inches); never force the catheter into the bowel because this could perforate it.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient tolerance
- Results, including the amount and color of stool
- Condition of the stoma and the surrounding skin
- Any psychosocial concerns regarding the stoma
- Any patient/caregiver instructions and response to teaching, including the ability to perform the colostomy irrigation
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings
Update the plan of care.
Fecal Impaction: Manual Removal

PURPOSE

• To remove hardened feces and promote bowel function
• To relieve abdominal discomfort

RELATED PROCEDURES

• Bowel Training
• Enema Administration (see Chapter 10)

GENERAL INFORMATION

Fecal impaction is common in the elderly when diet and limited activity may alter normal patterns of defecation. Signs and symptoms of fecal impaction include absence of stools, complaints of abdominal or rectal pain, fecal oozing, and a persistent urge to defecate with no results.

EQUIPMENT

1. Bedpan
2. Water-soluble lubricant
3. Plastic trash bag or Chux pad
4. Soap and warm water, basin, tissues, washcloths, and towels
5. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Assess for signs or symptoms of fecal impaction. Ask when the patient’s last bowel movement occurred.
2. Explain the procedure to the patient/caregiver.
3. Assemble the equipment at a convenient work area.
4. Place a plastic trash bag or Chux under the patient’s buttocks.
5. Assist patient to a left lateral Sims’ position; flex the patient’s knees. Drape the patient so that the anus is exposed.
6. Perform perineal care as needed.
7. Lubricate the index finger of your dominant hand.
8. Gently insert index finger past the anus into the rectum.
9. Palpate for the fecal mass.
10. Push the index finger into the feces, remove the feces, and place in bedpan. If possible, instruct patient to bear down while extracting feces to facilitate removal.
11. Clean the perineal and anal area; replace the patient’s clothes.
12. Provide patient comfort measures.
13. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Consult with the physician when fecal impaction is suspected. Report concerns about diet, immobility, or
patient neglect.

It is advisable to obtain an enema order when requesting a fecal disimpaction order. Perform disimpaction first.

Removal of fecal impaction may be contraindicated in patients with severe cardiac disease, in those who have undergone colorectal or gynecologic surgery, or in those with bleeding tendencies. If bleeding occurs during the procedure or if the patient complains of severe pain, stop and notify the physician.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Results obtained
- When the patient had his or her last bowel movement
- Any patient/caregiver instructions and response to teaching
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Update the plan of care.
Gastrostomy Tube Care: General Guidelines

PURPOSE

- To provide guidelines for gastrostomy management in the home
- To promote self-care in the home

RELATED PROCEDURES

- Administration of Medications: General Guidelines (see Chapter 10)
- Dressing Changes: Hydrocolloid Dressings and Transparent Adhesive Films (see Chapter 5)
- Gastrostomy Tube Feedings
- Gastrostomy Tube Replacement

EQUIPMENT

1. Soft-bulb syringe
2. Water in a small container
3. 4- x 4-inch gauze sponge and dressing supplies, if necessary
4. Hypoallergenic tape, if necessary
5. pH strips
6. Cotton-tip applicators, soap and warm water, basin, washcloth, and towels
7. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Position the patient to expose the gastrostomy tube.
4. Inspect the skin at the gastrostomy site for redness, tenderness, swelling, irritation, or for presence of drainage or gastric leakage; notify the physician as appropriate.
5. Gently cleanse the peristomal area with soap and water daily. Use a spiral pattern beginning at the stoma site and work outward. Use a cotton-tip applicator to clean hard-to-reach areas around the stoma site. Rise and pat dry.
6. Apply a dry dressing with hypoallergenic tape if leakage is a problem. Instruct the patient/caregiver to change the dressing if it becomes wet. (A transparent adhesive film may be used around the gastrostomy site to protect the skin from gastric leakage; change the film daily if there is a possibility of leakage underneath it.) Avoid using a dressing in most cases because this promotes skin maceration.
7. Assist the patient to a sitting position with his or her head elevated at least 45 degrees during feeding and for 1 hour after feeding to prevent aspiration. Pillows may be used to support the patient.
8. Auscultate the abdomen for the presence of bowel sounds; assess for abdominal distention or discomfort. Delay the feeding or instillation of medication, and notify the physician if no bowel sounds are present or if the patient complains of abdominal discomfort.
9. Assess tension of the gastrostomy tube and make adjustments in the following manner:
   a. Check the balloon volume every 7 to 10 days to prevent accidental tube removal because of balloon leakage. (It is normal for small amounts to leak from balloon over time.) Replace fluid to the original amount or to a maximum of 20 ml to prevent accidental tube removal.
b. Decrease the balloon size in increments of 2 ml to avoid excessive tension, which could result in erosion of gastric mucosa. (The tube should be able to rotate 360 degrees and move slightly in and out of the stoma; if there is no movement, the balloon is too tight against the stomach wall.)

c. Discourage the patient from pulling on the tube. (Consider using hand mittens or soft restraints if the patient is confused.)

d. Avoid taping the gastrostomy tube to the patient’s abdomen; if the tube must be taped to prevent tugging, use hypoallergenic tape

1. Verify tube placement before feeding:
   a. Listen with a stethoscope over the left upper quadrant while injecting 10 to 15 cc of air into the tube. A bubbling or “whooshing” sound should be present.
   b. Assess the amount of gastric residual before feeding. Reinstall the gastric aspirate. Hold the tube feeding and notify the physician of continued gastric residual greater than 100 ml or twice the hourly feeding rate, absence of bowel sounds, or complaints of abdominal discomfort.

1. Do not give medication with feedings. Crush medicines into a fine powder, and mix with 5 ml of water. Administer the medicine with a syringe. Multiple medications should be given one at a time.

2. Flush the tube with 50 ml of warm water before and after feeding, after medication administration, or when checking residuals.

3. Close the feeding port caps. If the caps are not present, plug or clamp the end of the gastrostomy tube.

4. If the gastrostomy tube is accidentally dislodged, replace it as soon as possible to prevent tract closure.

5. Evaluate for tube feeding complications, such as tube blockage, aspiration, nausea, vomiting, diarrhea, fluids and electrolyte imbalances, as well as gastrostomy site infection or complications with placement. Notify the home health agency clinical supervisor and physician as necessary.

6. Provide patient comfort measures, including nose and mouth care.

7. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Do not feed patient if tube position is in doubt.

Consider gently irrigating the tube with cola or cranberry juice to clear it. Reinforce with the family that regular flushing with water is the best way to prevent tube clogging.

Consult with the physician regarding changing the gastrostomy tube, because some tubes require periodic replacement to prevent tissue adhesions.

Consider replacing the gastrostomy tube when chronic leakage around the stoma site occurs.

It is imperative that the patient/caregiver understand the importance of sitting the patient up during feedings and also 1 hour after feedings to prevent aspiration, as well as during operation of equipment and management of the gastrostomy tube.

Instruct the patient/caregiver to measure the gastric pH daily (expected range for gastric fluid is 1 to 4).

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
• The patient’s general physical status, including abdominal assessment
• Condition of the gastrostomy site and patency of the tube
• Any patient/caregiver instructions and response to teaching
• Physician notification, if applicable
• *Standard Precautions*
• Other pertinent findings

Document the amount, type, and frequency of tube feedings and medications administered on the medication record.

Update the plan of care.
Gastrostomy Tube Feedings

PURPOSE

- To provide long-term nutritional support
- To regulate the flow of liquid nourishment by bolus, by continuous and intermittent feeding, or by the feeding-pump method
- To promote self-care in the home

RELATED PROCEDURES

- Gastrostomy Care
- Administration of Medications: General Guidelines (see Chapter 10)

EQUIPMENT

1. Tube feeding (warmed to room temperature) as prescribed by the physician
2. Soft-bulb syringe or feeding bag
3. Feeding pump
4. Water in a small container
5. 4- x 4-inch gauze dressing and dressing supplies if necessary
6. pH strips
7. Cotton-tip applicators, soap and warm water, basin, washcloth, and towels
8. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

Bolus Feeding

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to sit up with his or her head elevated at least 45 degrees. Pillows may be used to support the patient.
4. Expose the gastrostomy tube. Place the basin under the tube, and uncap the tube or remove the plug.
5. Aspirate for stomach contents to verify placement. Reinstill the gastric aspirate. If gastric residual is greater than 100 ml, delay the feeding for 30 minutes to 1 hour, and check again. Auscultate the abdomen for the presence of bowel sounds. Notify the physician of high gastric residuals, absence of bowel sounds, or patient complaints of abdominal discomfort before administering tube feedings.
6. Pour warm water into a cup. Draw 50 ml of warm water into the soft-bulb syringe.
7. Gently irrigate the tube with the water. If the patient coughs or appears to be choking, do not administer feeding and notify the physician. (Flush the gastrostomy tube with 50 ml of water every 8 hours to prevent clogging.)
8. Draw up the gastrostomy feeding into the syringe and administer 200 to 300 ml over 10 to 15 minutes. Follow the feeding with 50 ml of warm water.
9. Clamp the tube before it empties, and remove the syringe.
10. Close the feeding port caps. If the caps are not present, clamp or plug the end of the gastrostomy tube.
11. Clean the peristomal area with soap and water. Use a spiral pattern beginning at the stoma site and work
outward. Use cotton-tip applicators to clean hard-to-reach creases around the stoma site. Rinse and pat dry. (Avoid placing a dressing on the site if possible. Change the dressing as soon as it becomes moist to prevent skin irritation or infection.)

12. Provide patient comfort measures.
13. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

**Continuous or Intermittent Feeding**

**PROCEDURE**

1. Follow steps 1 through 7 of the procedure for Bolus Feeding.
2. Administer feeding by gravity in the following manner:
   a. Hang a container of feeding solution on an IV pole about 18 inches above the patient’s shoulders.
   b. Adjust the delivery rate with the flow regulator
1. Refill the feeding bag before the container is empty for continuous infusion.
2. Add 50 ml of warm water to the bag when the last of the formula has reached the feeding tube to clear the tube.
3. Close the feeding port caps or clamp the feeding tube to prevent a return flow of feeding when changing the bag or when the feeding is near completion.
4. Clean the feeding bag with liquid soap and water. Rinse well, and air dry. The feeding bag may be cleaned and reused 3 or 4 times.
5. Follow steps 11 through 13 of the procedure for Bolus Feeding.

**Feeding Pump**

**PROCEDURE**

1. Follow steps 1 through 7 of the procedure for Bolus Feeding.
2. Suspend the container from the feeding pump, and thread the tubing through the pump.
3. Make sure the pump is turned off, and put the feeding into the container.
4. Turn the pump on at the prescribed flow rate, and allow the feeding to flow through the tubing. Turn off the feeding pump.
5. Connect the free end of the feeding bag tubing to the gastrostomy tube; unclamp the tube and turn on the pump.
6. Intermittently, observe the flow to make sure that the tubing is not blocked or kinked, in which case the pump alarm should sound.
7. Refill the feeding bag before the container is empty.
8. Add 50 ml of warm water to the bag to clear the tube when the last of the formula has reached the feeding tube.
9. Close the feeding port caps or clamp the tube to prevent a return flow of formula when you are changing the bag or when the feeding is near completion.
10. Clean the feeding bag with liquid soap and water. Rinse well, and air dry. The feeding bag may be cleaned and reused 3 or 4 times.
11. Follow steps 11 through 13 of the procedure for Bolus Feeding.

**NURSING CONSIDERATIONS**

Do not give feeding if tube position is in doubt.
Check the expiration date of the gastrostomy feedings.

Discard the feeding solution 24 hours after the container has been opened.

Discard the old, continuous feedings after 8 hours and administer a fresh feeding. Do not mix old and new feedings.

Administer feedings at room temperature.

Store the tube feedings in the refrigerator.

The patient may need antidiarrheal medication (Kaopectate) for diarrhea or liquid stools; consult with the physician as needed.

It is imperative that the patient/caregiver understand the importance of sitting the patient up during feedings and 1 hour after feedings to prevent aspiration, as well as for management of the gastrostomy tube. Instruct the caregiver to check the gastrostomy tube position every 4 hours when continuous feeding, before every intermittent feeding, and before administering medication. Reinforce the idea that regular water flushing has been shown to be the best way to prevent tube clogging.

Instruct the patient/caregiver to keep a log of the amount, time, frequency, and patient toleration to feedings. The patient/caregiver should know to delay feedings and notify the home health agency clinical supervisor and physician if the gastrostomy tube should come out or if the patient has choking or discomfort with the feeding.

Instruct the patient/caregiver to measure gastric pH daily (the expected range for gastric fluid is from 1 to 4).

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- The patient’s general physical status, including abdominal assessment
- Condition of the gastrostomy site and patency of the tube
- Amount and character of any gastric return
- Tube patency
- Gastrostomy site care
- Any patient/caregiver instructions and response to teaching, including the ability to administer gastrostomy tube feedings
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Document the type, amount, and frequency of tube feedings and medications administered on the medication record.

Update the plan of care.
Gastrostomy Tube Replacement

PURPOSE

- To access the gastrointestinal tract
- To prevent skin adhesions and strictures
- To prevent infection

GENERAL INFORMATION

It is recommended that the first gastrostomy tube insertion be performed by the physician. Thereafter, the home health nurse may replace certain types of gastrostomy tubes as needed.

EQUIPMENT

1. Prescribed gastrostomy tube and water-soluble lubricant
2. Luer-tip syringe
3. Sterile water or saline solution
4. Hypoallergenic tape
5. Cotton-tip applicators, soap and warm water, basin, washcloth, and towels
6. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Consult with the physician and evaluate the need for gastrostomy tube replacement in the following manner:
   a. Determine how long the old tube has been in place because placement of more than 2 months for certain types of gastrostomy tubes may cause complications with adhesions of tissue to the tube.
   b. Review the manufacturer’s recommendations for gastrostomy tube replacement.
   c. Replace accidentally dislodged tubes as soon as possible to prevent tract closure or strictures.
   d. Inspect the tube for inward or outward migration. When the tube is initially inserted, measure and record the length of the tube in centimeters from the insertion site to the proximal end, or mark the tube at skin entry point with indelible ink; some tubes have graduation markings for reference. If at some point the tube is longer or if the mark is farther out, reconfirm the tube placement at that time.

1. Explain the procedure to the patient/caregiver.

2. Assemble the equipment at a convenient work area. Obtain the correct French size of the replacement tube appropriate to the stoma size before removing the old tube. Fill the balloon of the new tube with 10 to 20 ml of water to check for patency and leakage; then deflate.

3. Assist the patient to lie down in a comfortable position, and expose the tube.

4. Remove the old gastrostomy tube in the following manner:
   a. Deflate the balloon
   b. Rotate the tube 360 degrees between your thumb and index finger to loosen any crustations
   c. Gently pull the gastrostomy tube out of the stoma
   d. Do not force the removal of the gastrostomy tube; if resistance is felt, you are unable to pull it out, or the patient complains of pain, contact the physician because the patient may need medical intervention to remove the old tube

1. Replace the gastrostomy tube in the following manner:
   a. Tube with a balloon—Insert the Luer-tip syringe into the balloon port of the existing tube, and remove
the fluid from the balloon. Gently twist and rotate the old tube to assess if it will come out; with an upward twisting motion, gently remove the existing tube. Cleanse the stoma site with soap and water; use a spiral pattern to cleanse the area, beginning at the stoma site and working outward. Use cotton-tip applicators to clean the hard-to-reach areas around the stoma site; rinse, and pat dry thoroughly. Apply a small amount of water-soluble lubricant to the tip of the new tube and stoma; do not use petroleum-based lubricant. Gently insert the tip of the tube into the stoma and guide it through the tract into the stomach with a slight twisting motion. Fill the balloon with 10 to 20 ml of water (use the amount necessary to keep the tube securely in the stomach; the maximum amount is 20 ml). Never use air to fill the balloon. Gently tug the tube to make sure that there is a snug fit that allows for some in-and-out play (some in-and-out play of the tube is needed to minimize pressure-related complications, such as necrosis).

b. Percutaneous endoscopic gastrostomy (PEG) tube—This type of tube is usually removed by the physician endoscopically; the physician may replace this type of tube with a balloon type.

c. Mushroom or button type—This type of tube is usually removed by the physician; it may be replaced with the balloon type if desired.

d. Flexi-Flo gastrostomy tube—Follow the guidelines in step 6a to remove and replace the tube. Gently snug the balloon up against the gastric mucosa and slide the skin disc down against the skin to provide secure placement. Slide the disc back up to the nearest cm marking to allow for a slight in-and-out play.

1. Aspirate gastric contents with a syringe to assess placement. Reinstill gastric aspirate, and rinse with 50 ml of water.

2. Close the feeding ports. If caps are not present, clamp or plug the end of the tube.

3. If possible, avoid using tape to secure the tube to the patient’s abdomen. If the tube must be taped to prevent tugging, use hypoallergenic tape.

4. Provide patient comfort measures.

5. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Do not force the gastrostomy tube to come out.

If resistance is met after deflating the balloon, notify the home health agency supervisor and physician because the patient will require medical evaluation.

If possible, avoid applying a dressing to the stoma. If a dressing is used, it should not be placed under a skin disc, and it must be changed promptly if it is moist to prevent skin irritation or infection.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Type of gastrostomy tube inserted and ml capacity of balloon
- French size of tube inserted and ml capacity of balloon
- Amount of normal saline solution used to fill the balloon
- Marking of tube or cm marking of skin disc
- Condition of the gastrostomy site and patency of the tube
- Physician notification, if applicable
• *Standard Precautions*
• Other pertinent findings

Update the plan of care.
Nasogastric Tube Feeding

PURPOSE

- To provide short-term nutrition support through a tube into the alimentary tract
- To administer medicine
- To promote self-care in the home

RELATED PROCEDURES

- Administration of Medications: General Guidelines (see Chapter 10)
- Nasogastric Tube Insertion

EQUIPMENT

1. Nasogastric tube feeding (warmed to room temperature) as prescribed by the physician
2. Soft-bulb syringe or tube feeding bag
3. Water in a small container
4. Stethoscope
5. Rubber bands
6. Safety pin
7. IV pole
8. 4- x 4-inch gauze dressing
9. pH strips
10. Mouthwash, tissues, and towel
11. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Offer mouthwash, and administer oral care.
4. Assist the patient to a sitting position with the head elevated at least 45 degrees to prevent aspiration. Drape a towel over the patient’s chest.
5. Auscultate for bowel sounds; hold the feeding, and notify the physician if no bowel sounds are present or if the patient complains of nausea, abdominal distention, or pain.
6. Assess the nasogastric tube placement, using one of the following methods:
   a. Attach the barrel of a syringe to the end of the nasogastric tubing; open the clamp and aspirate gastric contents; reinstill gastric aspirate
   b. Submerge the distal end of the tube in the water, and observe for air bubbles (air bubbles indicate that the tube is not in the stomach); hold the feeding until the nasogastric tube can be reinserted into the stomach
   c. Place the stethoscope on the patient’s abdomen, and inject 20 cc of air into the nasogastric tube; a whooshing sound indicates that the air bolus has entered the stomach and that placement is correct
1. Check the amount of gastric residual before each intermittent feeding or approximately every 2 hours during continuous feeding. If the gastric residual is greater than 100 ml, delay the feeding for 30 minutes to 1 hour, and then check it again. Reinstill the gastric aspirate. Notify the physician of a high residual.

Original procedures copyright © 2000 by Mosby, Inc.
2. Administer the feeding in the following manner:
   a. Bolus method—draw up the prescribed feeding into the syringe, and administer the amount to be given; administer the feeding slowly because this helps prevent nausea, vomiting, and diarrhea.
   b. Continuous and intermittent method—administer the tube feeding in a nasogastric bag attached to the nasogastric tube; hang the feeding bag on an IV pole approximately 18 inches above the patient’s shoulders; regulate the flow of the tube feeding by adjusting the flow regulator on the tube feeding bag.

1. Allow 20 to 30 minutes for a 200 to 300 ml feeding.
2. Do not give medications with feedings. Crush medicines into a fine powder, and mix them with 5 ml of water. Administer the medications with a syringe. Multiple medications should be given one at a time.
3. Follow the feeding or medications with 50 ml of water. (Flush the nasogastric tube with 50 ml of water every 8 hours to prevent clogging.)
4. Clamp the tube before it empties, and remove the syringe or feeding bag; this procedure prevents air from entering the stomach.
5. Clamp or plug the end of the nasogastric tube.
6. Loop a rubber band around the nasogastric tube, and secure it to the patient’s shirt or gown with a safety pin to prevent tugging.
7. Position the patient in an upright position with the head elevated at least 45 degrees for 1 hour after feeding to prevent aspiration.
8. Notify the home health agency clinical supervisor, and consult with the physician if the patient experiences diarrhea, constipation, or tube blockage. Observe for pressure necrosis at the nares and signs of gastrointestinal bleeding.
10. Clean and replace the equipment. Discard disposable items according to Standard Precautions.
   a. Wash nasogastric feeding bag or syringe with soap and water daily; rinse well and air dry

**NURSING CONSIDERATIONS**

Check the expiration date on formulas.

Discard the formula 24 hours after the container has been opened.

Discard old continuous feedings after 8 hours, and administer a fresh feeding.

Do not mix old and new feedings.

Administer the feedings at room temperature.

Store tube feedings in the refrigerator.

It is imperative that the patient/caregiver understand the importance of sitting the patient up during feedings and for 1 hour after feedings or medication administration to prevent aspiration, as well as for management of the nasogastric tube.

Instruct the patient/caregiver to keep a log of the amount, time, and frequency of tube feedings and patient toleration of feedings.

The patient/caregiver should know to delay the feedings and notify the home health agency clinical supervisor and physician if the nasogastric tube should come out if the patient has choking or discomfort with the feeding.
Instruct the patient/caregiver to measure the gastric pH daily (the expected range of gastric fluid is 1 to 4).

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Abdominal assessment
- Intake and output
- Any patient/caregiver instructions and response to teaching, including the ability to administer nasogastric tube feedings
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Document the type, amount, and frequency of the tube feeding as well as any medications administered on the medication record.

Update the plan of care.
Nasogastric Tube Insertion

PURPOSE

- To provide guidelines for nasogastric tube insertion
- To access the gastrointestinal tract to provide nutritional support and to administer medication when normal swallowing is impaired
- To decompress the stomach

RELATED PROCEDURE

- Nasogastric Tube Feeding

GENERAL INFORMATION

Nasogastric tubes commonly used in the home include the Levin tube and the double-lumen Salem sump tube. These tubes are used to remove fluid and gas from the stomach (decompression) and to administer tube feedings on a short-term basis.

Use intermittent or low pressure with the Levin tube because the single lumen may adhere to the stomach wall and cause trauma. The larger lumen of the Salem sump tube drains the stomach, whereas the smaller lumen provides a continuous flow of air at atmospheric pressure, preventing adherence to the stomach wall. For this reason the air vent of the Salem sump tube should not be clamped off or connected to suction.

EQUIPMENT

1. Nasogastric tube
2. Soft-bulb syringe
3. Water in a small container
4. Stethoscope
5. Water-soluble lubricant
6. Rubber bands
7. Safety pin
8. 4 x 4-inch gauze dressing
9. Hypoallergenic tape
10. Paper towels
11. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a sitting position with the head elevated at least 45 degrees. Place a towel under the chin for protection.
4. Offer mouthwash, and assist with oral care as needed.
5. Assess the patency of the nares. Instruct the patient to close each nostril alternately and then breathe. Identify the nostril for nasogastric insertion.
6. Cut 2- to 3-inch lengths of tape, and set aside.
7. Put a small amount of lubricant on the paper towel.
8. Measure the correct length of tubing for placement by measuring the tube from the patient’s tip of nose, to the ear lobe, and then to the xiphoid process (approximately 18 inches).
9. Instruct the patient to tilt his or her head back, and insert the tube in the following manner:
   a. Apply ice to the gastric tube to stiffen it for insertion, if needed
   b. Dip the end of the tubing in lubricant
   c. Insert the tubing slowly through the nostril with a 180-degree rotation motion
   d. Raise the tube slightly; if it meets resistance, aim it back and toward the ear; do not force the tube
   e. Instruct the patient to swallow if possible because this will facilitate insertion; if swallowing is not possible, the patient may be given ice chips to suck on during the procedure; advance the tube each time the patient swallows
1. Tape the tubing to the nose. Instruct the patient/caregiver to make sure that the tape adheres to the patient’s nose to prevent dislodgment of the tube.
2. Assess placement in the following manner:
   a. Assess for signs and symptoms of respiratory distress; ask the patient to talk
   b. Place the tube in a glass of water, and observe for air bubbles; if no air bubbles are apparent, the tube is placed correctly
   c. Inject 20 cc of air with a soft-bulb syringe through the tubing while listening with the stethoscope; if the tubing is placed correctly, you will hear a whooshing sound of air bolus injected into the stomach
   d. Aspirate the gastric contents with a soft-bulb syringe while it is connected to the tube; if it is placed correctly, you should obtain gastric contents; advance the tube 1 or 2 inches if you are unable to aspirate the gastric contents; reinstill the gastric aspirate
1. Clamp or plug the end of the tube.
2. Loop a rubber band around the nasogastric tube, and secure it to the patient’s shirt or gown with a safety pin.
3. Provide patient comfort measures.
4. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Size of the inserted tube
- Placement verification of the tube
- Any patient/caregiver instruction and compliance with the procedure, including the ability to manage nasogastric tube feedings at home
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Ostomy Care

PURPOSE

- To maintain cleanliness and good skin care
- To permit examination of the skin around the stoma
- To provide education for patient self-care
- To assist in controlling odors
- To prevent leakage
- To promote self-care in the home

RELATED PROCEDURES

- Colostomy Irrigation
- Pouch Change

EQUIPMENT

1. Ostomy appliance pouch
2. Protective cover
3. Plastic bag or Chux
4. Soap and warm water, basin, washcloth, and towels
5. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Place the patient in a comfortable position with the abdominal area exposed.
4. Place a plastic bag or Chux under the patient if he or she is bedbound.
5. Remove the appliance and discard it.
6. Cleanse the peristomal area with soap and water. Use a spiral pattern at the stoma site, and work outward. Rinse, and pat dry.
7. Examine the stoma for integrity versus any signs of necrosis or infection. Report any abnormal findings to the physician.
8. Position the appliance to fit well around the stoma. (The appliance will depend on the type of stoma.)
10. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Consider referral to the enterostomal therapist to establish a stoma and peristomal care regimen.

See the Patient Education Guidelines boxes, Colostomy Irrigation and Stoma Management in the Home.

Reassure the patient, and be supportive.
Encourage the patient to talk about his or her feelings of the altered body image, sexuality, or self-esteem.

Help the patient to adjust to life with a stoma, and encourage her or him to return to normal patterns of socialization.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Color, shape, and size of stoma
- Type of stoma
- Condition of the surrounding skin
- Function, character, and amount of drainage
- Any patient/caregiver instructions and response to teaching, including the patient’s reaction and ability to perform ostomy care
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Update the plan of care.
Ostomy Pouch Change

PURPOSE

• To contain odor and effluence
• To protect the skin
• To promote self-care in the home

RELATED PROCEDURES

• Colostomy Irrigation
• Ostomy Care

EQUIPMENT

1. Flange skin barrier
2. Convex insert, if needed
3. Ostomy appliance (pouch)
4. Stomadhesive paste
5. Soap and warm water, basin, washcloth, and towels
6. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Place the patient in a comfortable sitting or semi-reclining position, and uncover the stoma. Assess the integrity of the stoma.
4. Cut a 1-inch dice opening in the skin barrier (e.g., Hollister, Premium Wafer). Cut a skin barrier to fit one-eighth of an inch around the stoma.
5. Place the convex insert inside the flange skin barrier, and press down under the flange until the insert is seated under the flange.
6. Attach the ostomy pouch to the flange. Make sure that the flange and pouch are secure.
7. Remove the backing paper from the back of the skin barrier.
8. Squeeze a thin ribbon of stomadhesive paste around the cut edge of the skin barrier or onto the skin around the stoma.
9. Remove the old flange skin barrier from around the stoma.
10. Wash the skin and stoma with soap and water. Rinse well, and pat dry.
11. Center the ostomy pouch over the stoma. Press down firmly on all sides. Instruct the patient to be still for about 5 minutes to improve adherence of the flange. Consider use of an ostomy belt to further secure the flange and pouch.
12. Clamp the bottom of the pouch.
13. Provide patient comfort measures.
14. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS
To empty the pouch, instruct the patient/caregiver to tilt the bottom of the pouch upward and remove the pouch clamp. Hold up a portion of the lower end of the pouch and allow the contents to drain into the toilet or bedpan. Wipe off the bottom of the pouch and reclamp. Release flatus through the gas-release valve if the pouch has one. Otherwise, tilt the pouch bottom upward and unclamp to release flatus.

Reassure the patient and encourage increasing involvement in self-care of the ostomy.

**DOCUMENTATION GUIDELINES**

- The procedure and patient toleration
- Condition of the stoma site and surrounding skin
- Any patient/caregiver instructions and response to teaching, including the ability to change the pouch and manage the ostomy at home
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Update the plan of care.
Rectal Tube Insertion

PURPOSE

- To relieve abdominal distention
- To assist the patient to pass flatus

EQUIPMENT

1. No. 22 or 24 rectal tube
2. Water-soluble lubricant
3. Bedpan or container with approximately 30 ml of water
4. Soap and warm water, basin, tissues, washcloth, and towels
5. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at the bedside or a convenient work area.
3. Assist the patient to lie on the left side and expose the anal area. Drape the patient for privacy.
4. Place the outflow tip of the rectal tube into the bedpan or container so that it is covered with water.
5. Lubricate the tip of the rectal tube.
6. Gently insert the rectal tube into the rectum (approximately 3 to 5 inches; do not force the tube).
7. Leave the rectal tube in place for approximately 20 minutes.
8. Observe/listen for expulsion of flatus.
9. Gently remove the rectal tube.
11. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Results obtained
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
PATIENT EDUCATION GUIDELINES

Colostomy Irrigation

Colostomy irrigation is done to prevent constipation, to establish a regular pattern of bowel evacuation, and to cleanse the bowel before x-ray procedures. When irrigating your colostomy remember the following:

1. Irrigate every day or every other day at about the same time.
2. Try to relax. Tension and hurrying may cause the irrigation to be stressful.
3. Drinking hot liquids, such as coffee or tea, before irrigation may help the bowel to move out the stool.
4. Gently rub your belly during irrigation to expel irrigation fluid and stool.
5. If no water comes back out of the stoma after irrigation, do not irrigate again that day. Try again the next day. If no water comes out the second day, notify your physician.
6. Do not irrigate your colostomy if you have loose, watery stool or diarrhea. Call your physician for medicine. Wear an open-ended, drainable pouch until the diarrhea stops. Resume irrigation when the stool is formed and solid looking.
7. Do not rub the stoma in a rough way. Make sure that the cone tip is well-lubricated with a water-soluble lubricant.
8. If water does not go in easily, gently move the cone tip around inside the stoma until water begins to flow.
9. Do not irrigate your colostomy, and notify your physician if the following occurs:
   a. Your stoma becomes too small to fit in the cone tip
   b. Your stoma becomes enlarged and lies on the stomach
   c. There is an abnormal bulge under the skin around the stoma
   d. Your stoma looks discolored or purplish (a healthy stoma is red or bright pink)

Original procedures copyright © 2000 by Mosby, Inc.
PATIENT EDUCATION GUIDELINES

Stoma Management in the Home

Stoma is a Greek word that means mouth. A stoma is an opening in the abdominal area that is surgically made to change the usual pathway for stool or urine elimination. The stoma is normally red, moist, and produces mucus.

Your stoma is part of your intestinal tract. It has the same type of mucous membrane as the inside of your mouth. Your stoma may slightly enlarge or become smaller with digestion and movement of stool through the intestine. Your stoma may bleed slightly when rubbed because of the rich blood supply to the area. This is no cause for alarm.

Emptying and Changing the Pouch

1. Change the pouch as soon as it leaks. Do not tape a leaking pouch to the skin because this may cause skin irritation where moisture and stool are trapped under the pouch.
2. Burning or itching around the stoma may mean the skin is irritated. In this case the pouch needs to be changed immediately.
3. Empty the pouch when it is one-third full to prevent the weight from breaking the seal and causing leakage.

Washing

1. Wash the skin around the stoma (peristomal skin) with a mild soap to cleanse the area. The peristomal skin should then be rinsed well to avoid any soap residue that could also cause irritation.
2. Ivory and Dial are mild soaps. Do not use soaps that contain lotion, creams, or oils.
3. Pat the skin dry because moisture will keep the pouch from sticking. Gently wipe, do not rub the stoma.
4. A bath or shower may be taken with or without the pouch.

Hair

Remove hair on the peristomal skin as needed with blunt-type scissors or an electric razor. Never use a straight or safety razor or razor blades because they could cut delicate tissue and cause bleeding.

Clothing

1. Avoid a tight belt because this may cause skin irritation. Pad the belt tabs for a comfortable fit.
2. Wear belts above or below the ostomy pouch to prevent rubbing.

Gas

1. Gas and stool cannot be controlled when you have a stoma because a muscle sphincter is not part of the stoma. The sound of passing gas may possibly be muffled by pressing a hand against the stoma.
2. Release gas in your pouch either by opening the end of the pouch or through the pouch gas-relief valve.
3. Excessive gas can be caused by swallowing air, eating too rapidly, talking while eating, chewing gum, drinking through a straw, drinking carbonated beverages, eating gas-forming foods, and smoking.

Foods
1. Add foods to your diet gradually, adding one different food at a time to determine how the food affects you.
2. If a food causes problems, stop eating it, and try it again later. If it still causes problems, avoid eating that food. You will usually be able to eat the same kinds of food that you ate before your surgery.
3. During the summer and with vigorous exercise, you sweat more, so you may need more liquids and salt. Be sure to ask your physician about recommended liquid intake. Gatorade and chicken bouillon are helpful to replace liquid and salt losses.

**Odor Control**

1. A liquid deodorizer can be dropped on a piece of tissue and placed into your pouch. Deodorizers are available in pill form.
2. Check with your physician before taking any medications by mouth for odor control.

**Measuring for Pouch Fit and Supplies**

1. Remeasure your stoma before ordering a new supply of pouches in case the stoma has become smaller after surgery.
2. The pouch opening should be one-eighth of an inch larger than the stoma.
3. Skin barriers, if used, should be one-eighth of an inch larger than the stoma.
4. Always take ostomy supplies with you when you travel. Carry supplies with you and do not check them through with luggage. Carry an emergency pouch at all times.

**Irrigation**

Ostomy irrigation may vary because of individual differences and types of surgery. Ask your physician and home health nurse for information about ostomy irrigation.

**Care for Sore Skin**

When the skin is red and weepy, do the following:

1. Wash the skin and pat dry. Do not use alcohol or hydrogen peroxide to clean around the stoma because this can damage the tissue.
2. Paint sore skin very thinly with liquid antacid, such as Maalox. Allow the liquid antacid to dry until it is chalky. You can use a hair dryer on a low setting to dry the skin. Do not use antacid on healthy skin to prevent skin problems.
3. Dust with Karaya or Stomadhesive powder; rub in the powder, and brush off the excess.
4. Use a skin-barrier paste, such as Stomadhesive or Hollihesive.
5. Put on the pouch as usual.
6. Consider more frequent pouch changes if the skin is red and irritated.
7. If the skin is red from an improper fit of the pouch, you may need to add convexity (see Convexity.)
8. Do not use benzoin or skin preparations around your stoma. Skin preparations should not be used under wafer type barriers because they can cause redness and itching and interfere with the integrity of the barrier.
9. Itching and redness surrounding the stoma may be signs of a yeast infection. Talk to your physician because you may need to use an antifungal powder. Brush off the excess powder before applying the pouch.

**Convexity**

Original procedures copyright © 2000 by Mosby, Inc.
1. Convexity pouches are used when the stoma is retracted or is flush with the abdomen and has leakage problems. Convexity helps improve the seal.
2. Some pouching systems have built-in convexity; others use a separate, disposable plastic convex insert ring. These rings are pressed into the skin-barrier flange until they are sealed under the flange.

When to Call Your Physician

Notify your physician if the following occur:

1. Your stoma becomes swollen or bleeds constantly (a small amount of blood is normal)
2. Your stoma looks discolored or becomes dark purple or black
3. You do not have a bowel movement for 48 hours
4. You experience forceful vomiting

Ostomy Club

You may wish to join your local ostomy club. Meetings usually are held once a month. For information about your local club contact the following organization:

United Ostomy Association
1111 Wilshire Blvd
Los Angeles, CA 90017

Special Tips for Ileostomies

1. Expect frequent drainage from ileostomies, especially 30 minutes to 1 hour after a meal. The consistency of the drainage may be somewhat like oatmeal.
2. It is best to change the appliance when the stoma is not draining, such as in early morning before breakfast, or 3 to 4 hours after eating.
3. If the stool is thinner and more watery than usual for 48 hours, notify your physician for an antidiarrheal medicine. Eat bland foods, such as applesauce, rice, bananas, and cereals to thicken the stool.
4. Laxatives should never be taken. If you are taking medicines, check the pouch for pills that have not been digested. Time-release capsules do not work with an ileostomy. Ask your physician to prescribe a liquid form of the medicine.
5. Undigested foods may cause your ileostomy to stop draining. Limit food high in cellulose fiber such as corn, popcorn, nuts, mushrooms, fruit skins and pulp, celery, olives, and Chinese vegetables. If these types of food are eaten, drink extra amounts of liquids.
6. Signs of food blockage include swelling of the stoma, cramping, vomiting, and drainage changes from semisolid to liquid or to no drainage. If you have these symptoms and have eaten fibrous foods in the last 24 hours, suspect food blockage. Drink 2 to 3 cups of hot tea or 8 ounces of grape juice. Lie down and relax for 30 minutes. Check your pouch for stool drainage. If there is no drainage, notify your physician or go to the emergency room. Do not irrigate the stoma or take a laxative.

Special Tips for Urostomies

1. The normal color of urine is yellow. The amount of liquids that you drink can often change the lightness or darkness of the urine. A dark urine means that you should drink more liquids.
2. Medicines may also change the color of urine. 
3. Mucus may cause the urine to look cloudy. If there is a lot of mucus, the urinary pouch can become clogged. Drinking increased amounts of water will help thin the mucus.
4. The stoma will continuously drain urine. When changing the pouch, a *wick* may be placed on the stoma to soak up urine. Make the *wick* out of a rolled piece of gauze, paper towel, or tampon.
5. A reusable pouch may be washed and reused approximately 3 or 4 times. Clean the reusable pouches with a mild soap and tepid water, followed by a vinegar rinse. Air dry the pouch, using a folded paper towel stuffed inside the pouch to keep the sides from sticking together. Permanent face plates may be scrubbed with a brush and soaked in 1:1 vinegar and tap water solution.
6. During the night, connect the pouch to a drainage container. Clean this container as you would the pouch. When hooking the pouch to the night drainage tubing, leave a little urine in the pouch to start drainage and to keep a vacuum from forming. Place night drainage bags toward the foot of your bed.
7. Urine should be normally acidic. Alkaline urine that constantly bathes the skin and stoma can cause white, gritty skin deposits or a gray, warty look to your skin and stoma. If your physician agrees, taking vitamin C, 500 mg 4 times a day; drinking at least 2 quarts of liquid a day; and applying a vinegar solution soak to the stoma will maintain urine acidity and help prevent urinary infection and skin irritation.
8. Vinegar solution is made with white, distilled vinegar and is mixed with equal parts of tap water. A vinegar soak to the stoma is done by placing a small washcloth, wet with the vinegar solution, on the stoma for 20 to 30 minutes during a pouch change.
9. Report signs of a skin rash, a foul odor of urine, elevated temperature, bloody urine, and side or back pain to your physician.

A limited number of copies of this guideline may be made for free distribution to patients and families. All other rights are reserved.
Care of the Patient with an Artificial Eye

PURPOSE

- To provide eye prothesis cleaning
- To cleanse the eye and irrigate the socket
- To prevent infection
- To promote self-care in the home

RELATED PROCEDURE

- Eye Instillation and Irrigation (see Chapter 10)

EQUIPMENT

1. Eye prosthesis cup
2. Soap and warm water, basin, washcloth, towel, and/or a prescribed irrigation solution for cleaning the eye socket
3. Disposable nonsterile gloves (optional) and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a sitting or side-lying position.
4. Remove the eye prosthesis by pulling down the lower lid and by applying slight pressure along the lower lid with the thumb. Then raise the upper lid slightly with the index finger to break the suction. The eye prosthesis should pop out. (Some patients may have a small suction device to remove the eye prosthesis. Clean the suction device, and apply it to the eye prosthesis. Gently rock the prosthesis back and forth to break the suction.)
5. Place the eye prosthesis into a cup. Gently clean it with mild soap and water, unless another cleaning solution is ordered by the physician.
6. Inspect the eye prosthesis for signs of chips or cracks. Assess the condition of the eye socket, and evaluate it for drainage or signs of infection.
7. Assess the condition and appearance of the other eye.
8. Irrigate and clean the eye socket as ordered by the physician.
9. Replace the eye prosthesis by pulling down the lower lid and slipping the lower edge of the prosthesis gently into the socket. Draw the upper lid over the upper edge of the eye prosthesis.
10. Evaluate the patient’s comfort level once the eye prosthesis is reinserted.
11. Provide patient comfort measures.
12. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Encourage the patient to perform the procedure of removing and cleansing the prosthesis and irrigating the eye socket daily.
The eye is not a sterile area, but good handwashing and hygiene are to be emphasized.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Condition of the eye prosthesis and eye socket
- Any patient/caregiver instructions and response to teaching, including the ability to care for the artificial eye
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Update the plan of care.
Care of the Patient with Cataract or Retinal Surgery

PURPOSE

- To provide eye care for postsurgical patients
- To treat, cleanse, and remove exudate from the eyes of patients who have recently undergone cataract or retinal surgery
- To relieve discomfort

RELATED PROCEDURES

- Eye Instillation and Irrigation (see Chapter 10)
- Administration of Medications: General Guidelines (see Chapter 10)

GENERAL INFORMATION

Eyelids should be kept dry and clean. Moisture on the lid predisposes the eye to inflammation and infection. Avoid shining light into the patient’s eyes.

EQUIPMENT

1. Prescribed eye medication
2. Disposable nonsterile gloves (optional) and impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Strictly adhere to prescribed activity restrictions and physical limitations when providing care, such as turning, combing hair, brushing teeth, and shaving.
3. Instruct the patient not to bend over or lift anything until activity restrictions are discontinued by the physician.
4. Instruct the patient to remain on his or her back unless otherwise ordered by the physician.
5. Protect the operated eye(s) at all times. If the physician orders, the patient may wear either an eye shield or glasses during the day. At night the patient should wear an eye shield over the operated eye(s).
6. Notify the physician immediately if the patient coughs frequently; is nauseated; or complains of a sudden, sharp pain in the operated eye.
7. Instill eye drops or ointment as ordered.
8. Provide patient comfort measures.
9. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Prescribed eye medication for adults can be kept at the patient’s bedside unless the medication requires refrigeration or children are in the home.

If the patient is receiving both eye drops and ointment, apply the eye drops first.
Always announce yourself when entering and leaving the room of a patient with impaired vision.

Explain all procedures before beginning.

Patients who have both eyes covered **must** have the bed siderails up or have the bedside protected in some way.

Evaluate the patient for constipation or straining, and take corrective action.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Condition of the eye
- Any incidence of pain or problems with instillation of medication
- Any patient/caregiver instructions and compliance with the procedure
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Document medications on the medication record.

Update the plan of care.
Care of the Patient with Contact Lenses

PURPOSE

- To maintain the integrity of the prescribed artificial lens
- To prevent infection

EQUIPMENT

1. Hard or soft contact lenses as prescribed by the optometrist
2. Storage container for contact lenses
3. Saline solutions and prescribed drops
4. Thermal disinfecting kit (optional)
5. Contact lens disinfectant and/or enzyme solution, surfactant cleaner, disposable nonsterile gloves (optional), and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Review the physician’s orders or the manufacturer’s recommendations for storing, rinsing, cleaning, wetting, and lubricating lenses.
2. Explain the procedure to the patient/caregiver.
3. Assemble the equipment at a convenient work area where the patient is comfortable.
4. Place the patient in a sitting or supine position.
5. If the patient is able, instruct him or her to look upward.
6. Inserting a clean, hard lens—Wet it with the appropriate solution immediately before insertion. Place the hard lens with the concave side up on the tip of your right index finger. Then separate the patient’s eyelids with your left thumb and index finger. Place the hard lens directly over the cornea of the patient’s eye.
   a. Evaluate the patient’s comfort level and vision after the lens is inserted
1. Removing a hard lens—Separate the patient’s eyelids to expose the lens. Apply a slight pressure toward the bony orbit above and below the patient’s eye. (Use both thumbs. Do not touch the eye.) Move the lower and upper lids toward the lens, applying slight pressure to the lower lid to tilt the lens. Continue to bring the lids together until the lens slips from the patient’s eye. Grasp the lens as it slips from the eye.
   a. Clean and disinfect the lenses according to the physician’s orders or the manufacturer’s recommendations
   b. Center the lenses in a storage container, with the convex side down. Make sure that the lenses are placed in proper storage containers: “R” for right lens and “L” for left lens
1. Inserting a clean, soft lens—Wet it with the appropriate solution immediately before insertion. Hold the lens with your right thumb and index finger. Then separate the patient’s eyelids with your left thumb and index finger. Place the soft lens directly over the cornea of the patient’s eye.
   a. Evaluate the patient’s comfort level and vision after the lens is inserted
   b. If the lens is not centered over the cornea, instruct the patient to close the eye, roll it toward the lens, and then blink a few times
1. Removing a soft lens—Retract the patient’s lower lid. Put a few drops of sterile saline solution into the patient’s eye. With the tip of your index finger on the lower part of the lens, slide the lens off the cornea and onto the lower part of the eye. Slightly squeeze the lens with your thumb and index finger to create suction. Gently pinch the lens and lift out.
   a. Discard the disposable lens. Clean and disinfect the lenses according to the physician’s orders or the manufacturer’s recommendations. Be careful not to scratch the lenses with your fingernail.
b. Place the lenses in a storage container, and fill the container with storage solution ordered by the physician or recommended by the manufacturer.
1. Provide patient comfort measures.
2. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Instruct the patient on how to insert and remove contact lenses without assistance.

To prevent eye infections, emphasize the importance of handwashing and the regular cleaning of lenses, as well as checking the expiration date of cleaning solutions.

Instruct the patient not to wear hard lenses longer than 12 hours without interruption.

The time for wearing soft lenses vary. (Follow the manufacturer’s recommendations.)

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Any patient/caregiver instructions and response to teaching, including the ability to manage contact lenses
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Care of the Patient with Depressed Corneal Reflex

PURPOSE

• To protect the eye and the surrounding tissue and structures in the presence of decreased lacrimation and/or decreased corneal sensation and muscle movement

RELATED PROCEDURES

• Administration of Medications: General Guidelines (see Chapter 10)
• Eye Instillation and Irrigation (see Chapter 10)

GENERAL INFORMATION

The corneal reflex can be tested by stroking the patient’s eyelashes with a cotton ball. The stimulus to the cornea should result in a blink.

EQUIPMENT

1. Irrigation solution as prescribed by the physician
2. Prescribed eye drops with eyedropper
3. Ophthalmologic or paper tape
4. Warm water, basin, washcloth, and towels
5. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assess the patient’s eyes each visit for redness and mucopurulent or purulent discharge.
4. Gently clean crust or drainage along the eyelid with a damp washcloth.
5. Irrigate the eye with a prescribed irrigation solution every 2 to 4 hours or as ordered by the physician.
6. Instill prescribed eye drops.
7. If the patient’s eyes are to be taped shut, use a strip of ophthalmologic or paper tape. Turn the tape back at the top and bottom edges to protect the patient’s eyebrows and to facilitate removal.
8. Provide patient comfort measures.
9. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

The corneas must be kept moist to maintain the integrity of the eye.

Encourage caregivers to tape the eyelids of unconscious patients with no corneal reflexes and/or conscious patients who are unable to close their eyelids—especially at night.

Instruct the patient/caregiver to avoid eye patches or shields because they can become dislodged and abrade the cornea.
DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Condition of the eyes and corneas
- Any patient/caregiver instructions and response to teaching
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Document medications on the medication record.

Update the plan of care.
Care of the Patient with a Hearing Aid

PURPOSE

- To maintain the integrity and correct the working order of the patient’s hearing aid
- To optimize the hearing-impaired patient’s ability to communicate
- To promote self-care in the home

GENERAL INFORMATION

There are three types of hearing aids commonly seen in the home setting. The in-the-canal (ITC) aid is the newest, smallest, and least visible aid on the market. It fits entirely in the ear canal. The ITC has cosmetic appeal and does not interfere with most activities of daily living. However, it requires manual dexterity to operate, to insert and remove, and to change batteries. Also, cerumen tends to plug up this model more than the others. The ITC aid is OT recommended for persons with moisture or skin problems in the ear canal. An in-the-ear (ITE), or intraaural, aid fits into the external auditory ear and allows more fine-tuning. It is more powerful and is more useful for a wider range of hearing loss than the ITC aid. The ITE is the most common type of aid worn today. A behind-the-ear (BTE), or postaural, aid hooks around and behind the ear and is connected by a short, clear, hollow plastic tube to an ear mold inserted into the external auditory canal. It is useful for patients with manual dexterity difficulties and rapidly progressive hearing loss.

EQUIPMENT

1. Hearing aid
2. Batteries
3. Brush or wax loop
4. Storage container
5. Soft towel and washcloth
6. Disposable nonsterile gloves (optional) and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assess the patient’s knowledge of operating the hearing aid. Explain the mechanism of the instrument and the adjustment of the controls for best results.
4. Store the hearing aid in an appropriate container when not in use and in a safe place, such as the patient’s bedside table drawer. Instruct the patient to always keep spare batteries available.
5. Check the batteries if the hearing aid is not functioning:
   a. Turn the volume up to high
   b. Cup your hand over the ear mold
   c. If no sound is heard, replace the batteries, matching the plus (+) and minus (-) signs. Batteries usually need replacing after 1 week of daily wear
1. Examine the cord of the BTE aid for breaks, and replace it as necessary.
2. Disconnect the ear mold from the hearing aid to clean it.
3. Wash the ear mold with soap and water. (Do not wash any other part of the hearing aid.) Use a wax loop or

Original procedures copyright © 2000 by Mosby, Inc.
brush (supplied with the aid) to clean the holes in the aid. Do not jam the wax deeper into the holes; this action could cause damage to the aid. Dry the aid thoroughly.

4. Snap the dry mold back into the hearing aid.

5. Assist the patient to insert the hearing aid in the following manner:
   a. Turn the hearing aid off and the volume down
   b. Hold the aid so that the bore (i.e., the long portion with the hold[s]) is at the bottom; guiding it along the patient’s cheek, bring the aid to the ear
   c. Insert the bore into the canal first; use the other hand to pull up and back on the outer ear; gently twist and push the aid into the ear until it is in place and fits snugly
   d. Gently bring the cannula of the BTE aid up and over the ear and toward the back to prevent kinking

1. Turn on the hearing aid. Adjust the volume gradually to a comfortable level for talking to the patient in a regular voice at a distance of 3 to 4 feet. Volume controls are commonly adjusted by rotating the control. Rotate the volume control toward the nose to increase the volume and away from the nose to decrease the volume.

2. Evaluate the patient’s comfort level and the patient’s ability to hear once the hearing aid is functioning.

3. Provide patient comfort measures.

4. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

**NURSING CONSIDERATIONS**

Evaluate the need for written safety precautions: Is the patient unable to hear fire alarms or the telephone?

Instruct the patient to avoid the use of hair sprays while wearing a hearing aid because this can cause malfunction.

Do not leave the aid in the storage container near a stove, heater, or sunny window.

Store batteries in a cool, dry place.

Instruct the patient to avoid extremes of hot or cold temperatures or exposure to rain or bath water while wearing the hearing aid.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Patient’s ability to hear with the hearing aid on
- Any patient/caregiver instructions and response to teaching, including ability to manage the hearing aid
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Care of the Patient with Visual Impairment

PURPOSE

- To maximize visual function
- To encourage the optimal level of independence
- To promote self-care in the home

GENERAL INFORMATION

Provide dim lighting for patients after cataract removal. Provide average lighting for patients with glaucoma. Provide bright lighting for patients with peripheral cataracts.

EQUIPMENT

1. Eye glasses
2. Appropriate lighting
3. Soap, water, soft cloth, and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Keep the patient’s area equipped with proper lighting to provide increased illumination of the entire area.
4. Keep the glasses clean, using soap, warm water, and a soft cloth. Do not use hot water because it may damage the glasses.
5. To avoid breakage or damage, store the glasses in a case when they are not being used. Have the patient’s name imprinted on both the frames and the case to prevent loss.
6. Check for irritation on the patient’s nose and behind the ears. (Report to the optometrist for adjustment, if necessary.)
7. Encourage activities and interaction with friends and family within the patient’s limitations. Offer encouragement and praise to support home independence.
8. Use other sensory stimulation, such as the following, for patients with complete loss of vision, sound, or touch:
   a. Always allow the blind patient to take your arm and follow.
   b. Acquaint the patient with his or her surroundings as to the location of the telephone, furniture, doors, and household rooms.
   c. Instruct the patient on how to use the telephone and call the physician or home health agency clinical supervisor, as well as how to access emergency assistance if needed.
   d. Always indicate your presence by speaking to the patient when entering or leaving the room.
   e. Keep the doors closed or wide open, flush with the wall, to prevent accidents. Do not rearrange furniture or the patient’s belongings without letting the patient know of the changes.
   f. When serving food to the patient, explain the contents of the tray, and place the contents in a clockwise position.
1. Evaluate the patient’s progress and adjustment to visual impairment at each visit.
2. Provide patient comfort measures.
3. Clean and replace the equipment. Discard disposable items according to Standard Precautions.
NURSING CONSIDERATIONS

Evaluate the patient for social service needs, regarding adjustment to vision loss, and refer the patient to community services for the visually impaired.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- Procedure and patient toleration
- Degree of diminished visual perception
- Lighting requirements
- Condition of the eyes
- Level of independence
- Use of visual aids
- Home safety precautions
- Any patient/caregiver instructions regarding the procedure and response to teaching
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Administration of Intravenous Therapy: General Guidelines

PURPOSE

- To provide guidelines for home management of intravenous (IV) therapy

RELATED PROCEDURES

- Accidentally Severed Central Venous Catheter (see Chapter 15)
- Administration of Medications: General Guidelines (see Chapter 10)
- Air Embolus (see Chapter 15)
- Discontinuation and Removal of a Nontunneled/Nonimplanted Central Catheter
- Discontinuation and Removal of Peripheral Intravenous Fluids
- Infusions (see Chapter 9)
- Peripheral Intravenous Management
- Shock (see Chapter 15)
- Transfusion Reaction (see Chapter 15)

PROCEDURE

1. Check for any known allergies.
2. Obtain an appropriate home health agency consent form and have the patient sign it before initiating IV therapy.
3. The patient/caregiver must have access to a telephone.
4. The patient/caregiver must be willing and able to administer home IV therapy (see the Patient Education Guidelines box, Home IV Therapy). The nurse, as well as the patient/caregiver, must use aseptic technique.
5. A reliable and capable caregiver must be available during the infusion to maintain and discontinue fluids if the patient is unable to do these.
6. An IV infusion may be initiated by the physician or nurse. The nurse should have advanced training (i.e., IV certification) for job requirements beyond the basic procedures.
7. IV therapy may be initiated with verbal orders. These orders must be validated with written orders signed by the patient’s physician. Written orders must be in the chart within 14 days of service or according to state regulations.
8. The physician’s order for intravenous therapy must include the type of solution, any medication additives with the dose specified, and the total 24-hour volume to be infused and/or the hourly flow rate. IV fluids typically used in home care include normal saline solution, lactated Ringers with or without dextrose, and dextrose and sterile water combinations.
9. The home health admissions department will contact the home infusion company for supplies, medications, fluids, and equipment.
10. Consider the purpose for which the infusion is being administered, and select the most appropriate type of needle or catheter and tubing. A 20- to 22-gauge catheter is commonly used for hydration fluids.
11. Preferred sites for peripheral IV therapy are the veins of the hand and forearm.
12. Examine the catheter insertion site for signs or symptoms of phlebitis or infiltration each visit and before initiating, during, and after discontinuing IV therapy. If redness, swelling, or leakage around the catheter site occurs, discontinue the IV and restart at another site.
13. Change the gauze dressings at the IV catheter site at least 3 times a week. Change transparent or occlusive dressings at the IV catheter site 1 to 2 times a week.
14. Change both the primary and secondary tubing every 48 hours or upon suspected contamination.
15. Change the injection cap(s) weekly or twice a week if frequently accessed.
16. Change peripheral IV catheters every 48 to 72 hours or sooner if the IV is leaking from the catheter exit site or if infiltration or phlebitis occurs.
17. Check all IV solutions for the expiration date, presence of cracks, discoloration, or particulate matter before they are hung.
18. Check all IV labels for the correct patient name, medication, dosage, and expiration date.
19. Discard all IV solutions, including those with medication additives, 24 hours after the seal has been broken.
20. Label all IV solutions with the medication additive (if any).
21. The first dose of antibiotic therapy must be initiated in a controlled setting where emergency medical services are available.
22. The home health agency must provide 24-hour, on-call nurses for patients who are receiving home IV therapy. Consider a plan of action for possible complications (see Chapter 15, Emergency Procedures).
23. Notify the home health agency clinical supervisor and the physician with the following documentation:
   a. Abnormal laboratory values (see Appendix I, Laboratory Values)
   b. Fever, transfusion reaction, complications from IV or unstable cardiopulmonary status
   c. Noncompliant or unsafe patient/caregiver behaviors or unavailable patient/caregiver
   d. Patient/caregiver inability to start an IV after 3 sticks
   e. Occluded central venous access device

NURSING CONSIDERATIONS

Patient/caregiver education is crucial to the safe administration of home IV therapy infusion.

Written guidelines and return demonstrations are needed for all aspects of care (see the Patient Education Guidelines boxes, Home IV Therapy and Troubleshooting IV Therapy).

Storage requirements, infusion preparation administration, discontinuation, equipment management, and disposal of supplies must be completely understood by the patient/caregiver for safe home IV therapy.

The patient/caregiver also needs information on possible adverse side effects of IV therapy, troubleshooting potential problems, and when to call the home health agency clinical supervisor or physician.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Size and length of IV catheter
- IV site selection and the appearance of the catheter exit site
- Use of an IV pump or equipment to regulate the IV flow
- Type of dressing applied
- Any patient/caregiver instructions and response to teaching, including the ability to safely manage home IV therapy
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings
Document the following on the medication or IV record: solution infused, expiration date, the amount and hourly rate for each 24-hour volume, IV medications, and initials of the person who hung the infusion.

Update the plan of care.
Central Venous Catheter Management

PURPOSE

- To administer intravenous fluids
- To sample blood for laboratory analysis
- To maintain the patency of the catheter
- To prevent infection

RELATED PROCEDURES

- Administration of Intravenous Therapy: General Guidelines
- Groshong Catheter Management
- Implantable Vascular Access Device Management
- Multiple-Lumen Nontunneled Catheter Management
- Peripheral Inserted Central Catheter: Insertion Guidelines
- Peripheral Intravenous Management
- Specimen Labeling and Transport (see Chapter 12)

GENERAL INFORMATION

Central venous catheters (CVCs) are required for patients with a variety of medical conditions, including cancer and bowel disease. These catheters are used for long-term venous access and spare the patient repeated venipunctures. Central venous catheters are commonly used in the home to administer all types of IV therapy, including antimicrobial agents, hyperalimentation, chemotherapy, narcotics, and blood components. Central venous catheters are also used for blood sampling.

Common CVCs used in home care are subclavian catheters (e.g., Hohn or Deseret triple lumen catheters); tunneled catheters (e.g., Hickman and Broviac or Groshong catheters); implantable vascular access devices (IVADs) (e.g., PORT-A-Cath); and peripheral venous access systems (e.g., PAS port or a peripheral inserted central catheter line). Use 1-inch needles whenever injections are made through the Luer-Lok injection cap because this reduces the possibility of damaging the catheter. Consult the manufacturer’s recommendations if you are using a needleless system to access the CVC and to initiate IV therapy.

Blood Sampling

EQUIPMENT

1. Blood specimen tubes
2. Occlusion hemostat or Kelly-Bulldog clamp if needed (most CVSs have preattached clamps)
3. 10 cc and 20 cc syringes with 1-inch, 20-gauge needles for blood sampling
4. Laboratory requisition, labels
5. Antisepctic and alcohol wipes
6. Disposable nonsterile gloves, sharps container, and an impermeable plastic trash bag (see Infection Control)

PROCEDURE
1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a comfortable position to access the catheter.
4. Review the orders for laboratory specimens, and obtain the correct blood tubes.
5. Clean the injection cap(s) with an antiseptic wipe, then use an alcohol wipe; air dry.
6. Attach the syringe, then release the clamp. (Most Hickman and Broviac catheters come with preattached clamps and reinforced clamping sleeves. The Groshong catheter does not have a clamp.)
7. Gently aspirate 7 ml of blood from the catheter. Reclamp the catheter. Place the needle syringe with blood in a sharps container.
8. Connect a 20 cc syringe to the injection cap. Unclamp the catheter, and gently withdraw the appropriate amount of blood needed for blood sampling.
9. Follow the procedure for Irrigation to clear the line and to prevent occlusion.
10. Clamp the catheter over the reinforced clamping sleeve.
11. Label and prepare the blood tube(s) for transport.
12. Provide patient comfort measures.
13. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

Cap Change

EQUIPMENT

1. Injection cap(s)
2. Occlusion hemostat or Kelly-Bulldog clamp (many CVCs are preattached clamps)
3. Sterile normal saline solution, heparin flush solution (100 U/ml)
4. 10 cc syringes with 1-inch, 23-gauge needles
5. Antiseptic and alcohol wipes
6. Disposable nonsterile gloves, sharps container, and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Follow steps 1 through 3 of the procedure for Blood Sampling. Using aseptic technique, prime a new injection cap with 0.9% normal saline solution.
2. Make sure that the catheter is clamped with either a preattached clamp or a toothless, smooth-edge clamp. (The Groshong catheter does not have a clamp.)
3. Don gloves. Grasp the end of the catheter between the index finger and the thumb. Clean the connection with an antiseptic wipe and then an alcohol wipe; air dry.
4. Using aseptic technique, remove the old injection cap, and discard it. Pick up the new cap, touching only the outside rubber port. Then remove the protective covering from the end of the new injection cap, and discard it.
5. Attach the new injection cap onto the catheter. Be careful not to touch the tip of the catheter or the injection cap.
6. Attach the syringe of the heparin flush, release the clamp, and flush slowly.
7. Clamp the catheter, maintaining positive pressure on the syringe plunger, and then remove the syringe.
8. Loop the catheter with the cap pointing upward on the dressing. Secure with tape to prevent tugging or accidental dislodgment.
Dressing Change

EQUIPMENT

1. Disposable CVC dressing tray (includes alcohol swab sticks [3], antiseptic swab sticks [3], benzoin swab stick [1], antibiotic ointment [if ordered], tape, and face mask)
2. Two transparent adhesive dressings
3. Disposable nonsterile and sterile gloves, sharps container, and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Follow steps 1 through 3 of the procedure for Blood Sampling.
2. Place the dressing tray on a clean, dry surface. Unwrap the tray, including the sterile gloves, without touching the inner sterile contents.
3. Don nonsterile gloves and the face mask. Remove the old dressing, being careful not to dislodge the catheter. Discard the dressing.
4. Examine the catheter exit site for signs of infection (redness or drainage). Report to the physician as appropriate.
5. Discard the nonsterile gloves. Don the sterile gloves. Use aseptic technique to clean the catheter exit site in the following manner:
   a. Remove an antiseptic swab stick from its package and use it to clean the area, starting at the catheter exit site and moving outward in a spiral motion to cover an area 4 to 6 cm in diameter; discard the swab, and select a new one (never go back to the catheter exit site with a swab stick or a wipe that has touched skin away from the site)
   b. Repeat step 5a two additional times with antiseptic swab sticks; air dry
   c. Clean the area thoroughly with alcohol swab sticks as described in step 5a; air dry
1. Apply the benzoin swab to the perimeters of the dressing as a skin preparation.
2. Apply transparent adhesive dressing. If desired, picture frame the perimeters of dressing with tape.
3. Loop the catheter, with the cap pointing upward, on the dressing. Secure with tape to prevent tugging or accidental dislodgment.
4. Date and time the dressing change on the tape.
5. Perform injection Cap Change and catheter Irrigation as needed (see the following procedures for CVC injection: Cap Change and Irrigation).
6. Instruct the patient to contact the home health agency if the dressing becomes loosened or soiled.
7. Follow steps 12 through 13 of the procedure for Blood Sampling.

Irrigation and Heparinization

EQUIPMENT

1. 100 U/ml heparin solution as prescribed by the physician
2. Sterile normal saline solution as prescribed by the physician
3. 10 cc syringes with 1-inch, 23-gauge needle
4. Antiseptic and alcohol wipes
5. Disposable nonsterile gloves, sharps container, and an impermeable plastic trash bag (see Infection Control) [STOP]
PROCEDURE

1. Follow steps 1 through 3 of the procedure for Blood Sampling.
2. Clean the injection cap(s) with an antiseptic wipe, followed by an alcohol wipe; air dry.
3. Connect the syringe of normal saline and unclamp the catheter. (Most Hickman and Broviac catheters come with preattached clamps and reinforced clamping sleeves. The Groshong catheter does not have a clamp.)
4. Irrigate the lumen with the ordered amount of normal saline solution; clamp the catheter between syringes, then flush with the ordered amount of heparin solution. Inject the heparin into the catheter no faster than ½ ml per second.
5. Clamp the catheter, and, while maintaining positive pressure on the syringe plunger, remove the syringe.
6. Loop the catheter, with the cap pointing upward, on the dressing. Secure with tape to prevent tugging or accidental dislodgment.
7. Follow steps 12 and 13 of the procedure for Blood Sampling.

NURSING CONSIDERATIONS

If the catheter cannot be irrigated, do not force the solution into the catheter. Instruct the patient to change his or her body position, to cough, to deep breathe, or to raise his or her arm above the head. If you are still unable to irrigate and flush the catheter, notify the home health agency clinical supervisor and physician for further orders.

Refer to specific catheter procedures for further irrigation guidelines. Groshong catheters do not require heparinization.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- The condition of the catheter exit site, including any signs of redness, swelling, or drainage
- Irrigation and patency of the catheter lumen(s)
- Blood sampling and designated laboratory for delivery
- Any patient/caregiver instructions and response to teaching, including the ability to safely manage the central venous catheter at home
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Document IV medications/solutions infused on the medication or IV record.

Update the plan of care.
Changing Intravenous Solutions

PURPOSE

- To administer IV fluids
- To prevent infection

RELATED PROCEDURE

- Administration of Intravenous Therapy: General Guidelines

EQUIPMENT

1. Bag of IV solution as prescribed by the physician
2. Time tape
3. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment in a convenient work area.
3. Position patient to access the IV.
4. Prepare a new bag of IV solution for changing by removing the protective cover from the bag’s IV tubing port.
5. Move the roller clamp to stop the flow rate from the old IV bag.
6. Remove the old IV bag from the IV pole.
7. Holding the IV bag upside down, quickly remove the spike from the old IV bag and, without touching it, spike the new IV bag.
8. Hang the new bag of IV solution on the IV pole.
9. Gently squeeze the drip chamber until it is one-third to one-half full. If the drip chamber is too full, pinch off the IV tubing just below the drip chamber. Turn the container upside down and squeeze the drip chamber so that the solution goes back into the IV bag. Then hang up the bag and tubing.
10. Examine the tubing. Small bubbles can usually be removed by closing the roller clamp, stretching the tubing downward, and flicking the tubing with the finger (the bubbles should rise to the drip chamber). For a large amount of air, insert a needle and syringe into a port below the air bubbles and allow the air to enter the syringe.
11. Adjust the flow rate as ordered by the physician.
12. Time tape the new IV bag.
13. Provide patient comfort measures.
14. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Change IV fluids daily.

DOCUMENTATION GUIDELINES

Original procedures copyright © 2000 by Mosby, Inc.
Follow the documentation guidelines for the procedure for *Administration of Intravenous Therapy: General Guidelines*.

Update the plan of care.
Changing Intravenous Tubing

PURPOSE

- To change IV tubing for a peripheral IV
- To prevent infection

RELATED PROCEDURE

- Administration of Intravenous Therapy: General Guidelines

EQUIPMENT

1. Infusion tubing
2. Sterile 2- x 2-inch gauze dressing
3. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment in a convenient work area.
3. Position the patient to access the IV.
4. Using aseptic technique, place a sterile 2- x 2-inch gauze dressing near the patient.
5. If the needle or catheter hub is not visible, remove the old dressing (do not remove tape that is holding the IV needle or catheter in place).
6. For an IV infusion, do the following:
   a. Move the roller clamp to “off” on the new IV tubing
   b. Slow the rate of infusion “to keep open” on the old tubing
   c. With the old tubing in place, compress and completely fill the drip chamber
   d. Remove the old tubing from the IV solution; hang or tape the old tubing on the IV pole
   e. Spike the new tubing into the IV solution
   f. Squeeze the drip chamber on the new tubing until one-third to one-half full
   g. Open the roller clamp; remove the protective cap from the needle adapter (if necessary) and flush the tubing
1. Place the needle adaptor of the new tubing, with the protective cap off, on the sterile 2- x 2-inch gauze pad already placed near the patient.
2. Hold the IV catheter in place and gently disconnect the old IV tubing. Quickly insert the needle adaptor of the new tubing into the hub of the IV catheter and secure with a Luer-Lok.
3. Open the roller clamp of the new tubing. Allow the solution to run rapidly for about 30 seconds. Adjust the IV flow rate as required.
4. Provide patient comfort measures.
5. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Change primary IV tubing every other day. Whenever possible, change the primary IV tubing when changing IV solution bags.
If an infusion pump is used, remove the old tubing from the pump and replace with new tubing.

Follow manufacturer’s guidelines when using a **needleless** IV system.

**DOCUMENTATION GUIDELINES**

Follow the documentation guidelines for the procedure for *Administration of Intravenous Therapy: General Guidelines*.

Update the plan of care.
Declotting an Implantable Vascular Access Device

PURPOSE

• To declot and clear the PORT-A-Cath with thrombolytic agents

RELATED PROCEDURES

• Administration of Intravenous Therapy: General Guidelines
• Administration of Medications: General Guidelines (see Chapter 10)
• Implantable Vascular Access Device Management

GENERAL INFORMATION

Adhere to the manufacturer’s recommendations for administration of thrombolytic agents. According to the Intravenous Nursing Society in the Intravenous Nursing Standards of Practice, the volume of thrombolytic agent instilled should approximate the volume of the catheter, thus ensuring that the agent is retained in the catheter and is not instilled into the bloodstream.

EQUIPMENT

1. Thrombolytic agent (e.g., Urokinase) as prescribed by the physician
2. Sterile normal saline solution as prescribed by the physician
3. 10 cc syringes with 1-inch, 20-gauge needles, straight noncoring needle with integrated extension tubing and clamp for the implantable vascular access device (IVAD)
4. Antiseptic and alcohol wipes
5. Disposable nonsterile gloves, sharps container, and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a comfortable position to access the catheter.
4. Clean the injection cap(s) or the area of skin over the septum of the vascular access device with an antiseptic wipe, followed by an alcohol wipe; air dry.
5. Follow specific catheter protocols to access the catheter.
6. Draw up the ordered amount of Urokinase into a 10 cc syringe (use a smaller syringe to draw up small amounts, then transfer to 10 cc syringe).
7. Connect the syringe to the integrated extension tubing on a noncoring needle. Unclamp the tubing.
8. Slowly inject the Urokinase into the occluded lumen and port of the vascular access device. Wait 10 minutes.
9. Attempt aspiration of the residual clot.
10. Repeat the procedure with a 20-minute dwell time if patency is not achieved.
11. Notify the physician for further orders if you are unable to aspirate from the catheter.
12. Provide patient comfort measures.
13. Clean and replace the equipment. Discard disposable items according to *Standard Precautions*.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Patency of the vascular access device
- Condition of the catheter exit site
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Document the thrombolytic agent on the medication record.

Update the plan of care.
Discontinuation and Removal of Peripheral Intravenous Fluids

PURPOSE

- To discontinue an IV infusion
- To prevent infection

RELATED PROCEDURE

- Administration of Intravenous Therapy: General Guidelines

EQUIPMENT

1. Sterile 2- x 2-inch gauze dressing or adhesive bandage
2. Hypoallergenic tape
3. Antiseptic and alcohol wipes
4. Disposable nonsterile gloves and an impermeable plastic trash bag (see *Infection Control*)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a comfortable position to access the IV.
4. Clamp the IV tubing with the flow regulator.
5. Remove the patient’s dressing, and loosen the tape that is securing the catheter.
6. Place a 2- x 2-inch sterile gauze dressing over the catheter exit site.
7. Exert pressure on the site, and withdraw the catheter at the same time. Continue to apply pressure to the site for 2 to 3 minutes to prevent bleeding.
8. Cleanse the area with an antiseptic wipe, followed by an alcohol wipe; air dry.
9. Place a gauze dressing or an adhesive bandage over the catheter exit site, and secure it with tape.
11. Clean and replace the equipment. Discard disposable items according to *Standard Precautions*.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Other pertinent findings

Record discontinuation of IV medications on the medication record. Record discontinuation of IV fluids on the IV record or visit report.

Update the plan of care.
Groshong Catheter Management

PURPOSE

• To administer IV fluids
• To sample blood for laboratory analysis
• To maintain patency of the catheter
• To prevent infection

RELATED PROCEDURES

• Administration of Intravenous Therapy: General Guidelines
• Central Venous Catheter Management
• Specimen Labeling and Transport (see Chapter 12)

GENERAL INFORMATION

The Groshong catheter is a long-term central venous access device. It can be used to administer total parenteral nutrition (TPN), chemotherapy, IV fluids, blood and blood products, and antibiotic therapy; it also may be used for blood sampling.

The Groshong is a small-diameter, silicone-rubber catheter that has a patented, three-position valve that eliminates the need for heparinization and clamping. The tip of the catheter is placed in the superior vena cava via one of the large central veins (e.g., right subclavian) and tunneled subcutaneously to the exit site (upper abdominal area).

The Groshong catheter has a small Dacron cuff that fibroses to the surrounding tissue. This secures the catheter in place and acts as a physical barrier for bacterial migration. The three-position valve near the closed tip opens outward during infusion and inward during blood withdrawal. The valve automatically closes when it is not in use. As a result of hydrostatic pressure, venous blood pressure is not sufficient to spontaneously open the valve inward; this prevents blood from backing up into the lumen and occluding the catheter with a clot.

EQUIPMENT

1. Sterile normal saline solution as prescribed by the physician
2. 10 cc, 20 cc, or 30 cc syringes with 1-inch, 20-gauge needles
3. Blood specimen tubes
4. Laboratory requisition, labels
5. Antiseptic and alcohol wipes
6. Disposable nonsterile gloves, sharps container, and an impermeable plastic trash bag (see Infection Control)

Blood Sampling

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a comfortable position to access the catheter.
4. Ask the patient/caregiver whether any problems exist with the catheter. Evaluate the dressing and injection cap change.
5. Review the order for the laboratory specimens, and obtain correct blood tubes.
6. Remove the injection cap from the end of the catheter and clean it with an antiseptic wipe, followed by alcohol wipes; air dry.
7. Connect the 10 cc syringe, then aspirate 5 to 10 ml of blood (slowly withdraw the blood). Discard the syringe into a sharps container.
8. Attach a 20 cc syringe directly to the catheter tubing, and withdraw the amount of blood needed for laboratory analysis.
9. Flush the Groshong catheter with 20 ml of normal saline solution, using 1 ml at a time for the first 10 ml. Then, briskly push the remaining 10 ml to remove residual blood.
10. Maintain positive pressure on the syringe plunger as the syringe is removed.
11. Using aseptic technique, attach a new sterile injection cap. (See the procedure for Central Venous Catheter Management.)
12. Label and prepare the blood tube(s) for transport.
13. Provide patient comfort measures.
14. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

Irrigation

PROCEDURE

1. Follow steps 1 through 4 of the procedure for Blood Sampling.
2. Clean the injection cap with an antiseptic wipe, followed by an alcohol wipe; air dry.
3. Draw up the required amount of normal saline solution in the syringe.
4. Connect the syringe to the injection cap; then irrigate the catheter in the following manner:
   a. Briskly irrigate the Groshong catheter with 10 ml of normal saline solution
      (1) Before and after antibiotic therapy
      (2) Weekly, when the catheter is not in use
   a. Briskly irrigate the Groshong catheter with 20 ml of normal saline solution
      (1) After blood sample withdrawal
      (2) After blood transfusions
      (3) After administration of blood products
      (4) If blood is observed in the catheter
   a. Irrigate the Groshong catheter with 30 ml of normal saline solution
      (1) After TPN infusion
1. Maintain positive pressure on the syringe plunger as the needle is removed from the injection cap.
2. Follow steps 11 through 14 of the procedure for Blood Sampling.

NURSING CONSIDERATIONS

Routine clamping of the Groshong catheter is not needed. Heparin is not required to keep the catheter open.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

Original procedures copyright © 2000 by Mosby, Inc.
• The procedure and patient toleration
• Blood sampling and designated laboratory for delivery
• Amount of normal saline solution used for irrigation
• Condition of catheter exit site
• Dressing and cap change (if done)
• Any patient/caregiver instructions and response to teaching, including the ability to safely manage the Groshong catheter at home
• Physician notification, if applicable
• *Standard Precautions*
• Other pertinent findings

Document IV medications/solutions infused on the medication or IV record.

Update the plan of care.
Implantable Vascular Access Device Management

PURPOSE

• To administer IV fluids
• To sample blood for laboratory analysis
• To maintain the patency of the implantable vascular access device
• To prevent infection

RELATED PROCEDURES

• Administration of Intravenous Therapy: General Guidelines
• Central Venous Catheter Management
• Specimen Labeling and Transport (see Chapter 12)

GENERAL INFORMATION

The implantable vascular access device (IVAD) is implanted under the skin with the attached catheter surgically tunneled into the cephalic or external jugular vein. The catheter tip sits in the superior vena cava near the right atrium, much like other central venous catheters. Flush the port of the IVAD with 10 ml of normal saline solution after intravenous infusion or blood sampling. Then heparinize the IVAD with 5 ml of heparin solution. Heparinize the IVAD every 30 days when it is not in use.

EQUIPMENT

1. 100 U/ml heparin solution as prescribed by the physician
2. Sterile normal saline solution as prescribed by the physician
3. One right-angle, noncoring needle with integrated extension tubing with clamp
4. 5 cc syringes, 10 cc syringes, and one 20 cc syringe for blood sampling
5. Blood specimen tubes
6. Laboratory requisition, labels
7. Antiseptic and alcohol wipes
8. Disposable sterile gloves, sharps container, and an impermeable plastic trash bag (see Infection Control)

Blood Sampling

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Review the orders for laboratory specimens, and obtain the correct blood tubes.
3. Assemble the equipment at a convenient work area, using aseptic technique.
4. Assist the patient to a comfortable position to access the IVAD.
5. Don sterile gloves and cleanse the skin over the IVAD septum (injection site) with antiseptic wipes. Start at the site of the needle entrance, and work in a circular motion 4 to 6 cm outward. Discard the wipe.
6. Repeat step 5 two additional times with antiseptic wipes.
7. Clean the area with an alcohol wipe; air dry.
8. Attach the syringe with 10 ml of normal saline solution to the extension tubing; prime the extension tubing and noncoring needle. (Only special noncoring needles can be used when entering the port.)
9. Palpate the location of the IVAD septum to access the portal septum.
10. Firmly push the needle through the skin and portal septum at a 90-degree angle, until it hits the bottom of the portal chamber. You may hear a click as the needle touches the bottom of the portal chamber.
11. Flush the system with 10 ml of normal saline solution to confirm that fluid flows through the system.
12. Aspirate 5 ml of blood, then discard.
13. Clamp the extension tubing, then remove the syringe and discard it in a sharps container.
14. Attach a 20 cc syringe. Unclamp the extension tubing, and withdraw the appropriate amount of blood for a sample.
15. Repeat steps 13 and 14 until the appropriate amount of blood sample is obtained.
16. When the blood sampling is completed, clamp the tubing and remove the syringe. Discard the syringe in a sharps container.
17. Attach the syringe containing 10 ml of normal saline solution. Unclamp the extension tubing, and irrigate the IVAD.
18. Clamp the extension tubing, and remove the syringe. Discard the syringe.
19. Attach the syringe containing the 5 ml of heparin solution. Unclamp the extension tubing, and flush the system.
20. Maintain positive pressure on the syringe plunger as the syringe is removed to prevent backflow of blood into the portal septum and to ensure a heparin lock. Hold the port in place while removing the needle. Discard the needle, tubing, and syringe.
21. Cleanse the injection site with an antiseptic wipe, followed by an alcohol wipe; air dry.
22. Label and prepare the blood tube(s) for transport.
23. Provide patient comfort measures.
24. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

Bolus Injection

PROCEDURE

1. Access the IVAD as described in the procedure for Blood Sampling.
2. Flush the system with 10 ml of normal saline solution to ensure patency. Secure the noncoring needle with tape.
3. Clamp the extension tubing, and remove the syringe. Discard the syringe.
4. Attach the syringe with the drug to be injected into the extension tubing.
5. Inject the medication.
6. When the injection is complete, clamp the extension tubing. Remove the syringe, and discard it.
7. Irrigate the IVAD with 10 ml of normal saline solution, followed by 5 ml of heparin flush. (Be careful to clamp the tubing when exchanging syringes.)
8. Maintain positive pressure on the syringe plunger as you withdraw the noncoring needle to prevent backflow of blood into the portal septum and to ensure a heparin lock.

Continuous Infusion

PROCEDURE

1. Access the IVAD as described in the procedure for Blood Sampling. Use a right-angle, noncoring needle
with an extension tubing.
2. Clamp the extension tubing.
3. Attach the syringe with 10 ml of normal saline solution to the extension tubing. Unclamp the extension tubing, and flush the portal septum.
4. Clamp the extension tubing, and remove the syringe.
5. Connect the IV set or infusion to the extension tubing.
6. Unclamp the extension tubing and begin the infusion.
7. Secure the needle placement with sterile Steri-Strips or with ½-inch tape. Roll a 2- x 2-inch piece of sterile gauze under the needle to stabilize it, if needed. Apply transparent adhesive dressing, and tape all connections.
8. Loop the extension tubing on the dressing, and secure it with tape.

NURSING CONSIDERATIONS

Use a sterile needle and tubing for each bolus access.

Change the sterile needle and tubing for continuous infusion every 7 days or per agency protocol.

Follow the manufacturer’s recommendations for blood sampling for PAS PORT and PICC lines.

A dressing is not required when the port is not accessed.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Blood sampling and designated laboratory for delivery
- Patency of the IVAD
- Condition of the skin over the IVAD
- Any patient/caregiver instructions and response to teaching, including the ability to safely manage the IVAD at home
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Document IV medications/solutions infused on the medication or IV record.

Update the plan of care.
Multiple-Lumen Nontunneled Catheter Management

PURPOSE

- To administer IV fluids
- To sample blood for laboratory analysis

RELATED PROCEDURES

- Administration of Intravenous Therapy: General Guidelines
- Central Venous Catheter Management
- Specimen Labeling and Transport (see Chapter 12)

GENERAL INFORMATION

The multiple- or triple-lumen catheter typically has three ports. The white and blue lumens are of equal diameter. The red-rust colored lumen is slightly larger and should be used for infusion of blood and for obtaining blood specimens. This central venous catheter is for short-term use only.

Irrigate all accessed ports of the multiple-lumen catheter with normal saline solution, followed by heparin flush before or after use and daily to maintain patency of the lumens. Follow the manufacturer’s recommendations for a needleless system.

Blood Sampling

EQUIPMENT

1. Sterile normal saline solution as prescribed by the physician
2. 100 U/ml heparin solution as prescribed by the physician
3. Syringes with 1-inch, 20-gauge needles
4. Blood tubes
5. Laboratory requisitions and labels
6. Antiseptic and alcohol wipes
7. Disposable nonsterile gloves, sharps container, and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a comfortable position to access the IV.
4. Review the physician’s order for laboratory specimens, and obtain the correct blood tubes.
5. Stop infusions through all ports being used for IV infusion.
6. Clean the injection cap of the red-rust–colored lumen with antiseptic wipes, followed by alcohol wipes; air dry.
7. Draw the blood specimen in the following manner:
   a. Attach a 10 cc syringe, unclamp the catheter, and withdraw at least 6 ml of blood, then discard the
syringe and needle into a sharps container
b. Attach a syringe—the size required for obtaining specimens—then withdraw enough blood for the
specimens needed (use this method for drawing antibiotic levels); clamp the lumen
1. Transfer blood into the test tube appropriate for the laboratory collection. Discard the used syringe (and
needle, if used) in a sharps container.
2. Unclamp the catheter lumen.
3. Irrigate the lumen with 10 ml of normal saline solution, then flush with the ordered amount of heparin
solution, remembering to clamp the lumen in between flushing.
4. Maintain positive pressure on the syringe plunger as you withdraw the needle to prevent a backflow of blood
into the catheter tip and to ensure a heparin lock. Then clamp the lumen.
5. Resume infusion(s) to the other lumens if they are stopped.
6. Label and prepare the test tube(s) for transport.
7. Provide patient comfort measures.
8. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

Intermittent Infusion

EQUIPMENT

1. 100 U/ml heparin solution as prescribed by the physician
2. Sterile normal saline solution as prescribed by the physician
3. (3) 5 cc syringes with 1-inch needles
4. Antiseptic and alcohol wipes
5. Disposable nonsterile gloves, sharps container, and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Follow steps 1 through 3 of the procedure for Blood Sampling.
2. Clean the injection cap with an antiseptic wipe, followed by alcohol wipes; air dry.
3. Unclamp the selected lumen for infusion.
4. Flush the lumen with 5 ml of normal saline solution.
5. Begin the infusion, using a small-bore needle to puncture the injection cap.
6. Secure the needle to the injection cap with tape.
7. Tape the connection, making tabs on the ends of the tape by folding them back ½ inch. (The tabs on the end
of the tape will enable you to remove it easily.)
8. Irrigate the catheter lumen with 5 ml of normal saline solution, then flush with 2.5 ml of heparin solution
when the infusion is complete.
9. Maintain a positive pressure on the syringe plunger as you remove the needle to prevent a backflow of blood
into the catheter tip cap and to ensure a heparin lock.
10. Clamp the lumen with the slide guard.
11. Follow steps 14 and 15 of the procedure for Blood Sampling.

NURSING CONSIDERATIONS

Irrigate all accessed ports of the multiple-lumen catheter with normal saline solution, followed by the heparin
flush before and after use and daily to maintain patency of lumens.
It may not be possible to aspirate blood if it is drawn too quickly or if the syringe used is smaller than 20 cc.

It may be necessary to clamp the lumen with the slide guard and to remove the Luer-Lok injection cap to obtain blood.

Do not draw clotting studies (prothrombin time [PT], partial thromboplastin time [PTT]) from the catheter. Draw clotting studies peripherally before the catheter is heparinized because circulating heparin affects the PTT results up to 4 hours after the catheter has been heparinized.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient tolerance
- Catheter exit site and the condition of the catheter, including the patency of all lumens
- Blood sampling and designated laboratory of delivery
- Any patient/caregiver instructions and response to teaching, including the ability to safely manage the multiple-lumen catheter at home
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Document IV medications/solutions infused on the medication or IV record.

Update the plan of care.
Peripheral Inserted Central Catheter: Insertion Guidelines

PURPOSE

- To provide guidelines and a standardization of procedure for the peripheral insertion of a central venous catheter, referred to as a peripheral inserted central catheter (PICC) line.

GENERAL INFORMATION

Insertion of PICC lines should be done by a PICC-certified nurse. Before the PICC line is placed, the patient’s chart should be reviewed for (1) the physician’s order, (2) site restrictions, (3) coagulation status, and (4) medical allergies. A post-insertion chest x-ray is recommended to verify the catheter tip position, if it is being placed in the superior vena cava. A patient permit is required before placement.

PICC lines can be used for administration of blood products, chemotherapy, antibiotics, fluids, and controlled narcotic infusions. Superior vena cava placement is required for the infusion of TPN or any irritating or sclerosis agents. PICC lines should never be used for high-pressure injection (i.e., diagnostic procedure or bolus emergency drugs). Do not use a syringe smaller than 5 cc with PICC lines. The alarm feature of the infusion pumps should not exceed 40 psi for 3 French catheters or larger.

EQUIPMENT

1. PICC tray (single-lumen 3 French or double-lumen 4 French each)
2. Sterile 5 cc or 10 cc syringes with needles (2)
3. Sterile Luer-Lok injection cap or reflux valve
4. Sterile 3-inch Luer-Lok extension set
5. Vial of 100 U/ml heparin solution as prescribed by the physician
6. Vial of 10 ml bacteriostatic 0.9% sodium chloride as prescribed by the physician
7. Transparent occlusive dressing
8. Tourniquets (2)
9. Sterile 2- x 2-inch gauze dressings (2)
10. Sterile 4- x 4-inch gauze dressings (4)
11. Antiseptic and alcohol wipes
12. Two pairs of disposable sterile gloves, mask with an eye shield, gown, sharps container, and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver. Obtain a written consent for the procedure.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a comfortable position to insert the IV.
4. Apply a tourniquet and evaluate the antecubital veins for venipuncture. Remove the tourniquet.
5. Using a tape measure, measure the patient for the desired final catheter tip location. Position the patient’s arm at a 45-degree angle from the body.
   a. Subclavian vein: Measure and record the distance from the insertion site to the sternal notch; if the catheter is to be inserted with no amount of the catheter left out from the site, cut the catheter 1 inch shorter than the distance from the insertion site to the sternal notch; if 1 inch of the catheter is to be left

Original procedures copyright © 2000 by Mosby, Inc.
out from the exit site, cut the full length from the insertion site to the sternal notch

b. **Superior vena cava (SVC):** If 1 inch of the catheter is to be left out at an exit site, measure from 1 inch below the insertion site to the second intercostal space; if the intercostal spaces are not palpable, one-third of the distance from the sternal notch to the xiphoid process may be used as an estimate; a catheter entering from the left arm will be slightly longer because it crosses over the chest and into the SVC, which is along the right border of the sternum; (a post-insertion x-ray examination is required to verify superior vena cava placement; therefore, SVC placement should be done while the patient is in the hospital)

c. **Midaxillary:** Measure from the insertion site to the desired tip location, allowing for the amount of the catheter that is to be left out from the exit site as appropriate

1. Measure the bilateral arm circumference midway between the elbow and the shoulder, and record for future reference.
2. Clean the work area, scrub the hands, and put on a mask and eye protection. Open a sterile PICC tray, and add sterile items to the PICC tray.
3. Prepare the patient for the following procedure:
   a. Head of the bed is as flat as possible
   b. Linen protector is under the arm to be cannulated
   c. Provide adequate work space and lighting
   d. Tourniquet is in place but is **not** tied
1. Don sterile gloves and gown.
2. Place a large sterile drape under the patient’s arm.
3. Prepare the insertion site for 3 minutes with alcohol wipes, and follow in 3 minutes with povidone iodine (Betadine) wipes. Vigorously cleanse the antecubital area from the center outward in a circular motion.
4. If necessary, shorten the catheter in the following manner:
   a. Do not touch the catheter with gloved hands; always use forceps to handle the catheter
   b. Pull the guidewire out of the catheter ¼ to ½ inch short of the desired length; bend the guidewire at the hub to prevent movement
   c. Cut the catheter at a 45-degree angle. Do **not** trim the guidewire or stylet.
1. Draw up 5 ml of normal saline solution and 5 ml of heparin flush. Prime the extension tubing.
2. Place a fenestrated drape over the prepared puncture site, and add sterile 4- x 4-inch gauze around the site as needed to absorb the blood flow.
3. Tighten the tourniquet, placing sterile 4 x 4 gauze on the tails to prevent contamination when releasing the tourniquet. Don a second set of sterile gloves.
4. Perform venipuncture in the following manner:
   a. Venipuncture is verified by a flashback of blood into the hub or the syringe (if used)
   b. Advance the introducer sheath into the vein approximately ¼ inch
   c. Remove the needle; to control the blood flow, apply pressure above the introducer with the fifth finger or with 2- x 2-inch gauze, and occlude the end of the introducer
   d. Release the tourniquet with the 4- x 4-inch gauze
1. The catheter is advanced in the following manner:
   a. Thread the catheter through the introducer with forceps in short, controlled steps
   b. After 5 to 7 inches of the catheter is placed, remove the introducer according to manufacturer’s guidelines, and allow 3 inches of the catheter to remain outside the vein to facilitate removal of the introducer
   c. Advance the remainder of the catheter
1. If the catheter is placed centrally, instruct the patient to touch his or her chin to the shoulder of the arm being cannulated to promote insertion while threading in the catheter.
2. The catheter guidewire is removed in the following manner:
a. Stabilize the catheter with one hand, and gently pull out the guidewire; do not pull vigorously or suddenly
b. After the guidewire is removed, immediately place the thumb over the hub to prevent an ingress of air
c. Place the extension set with the syringe attached on the hub, and secure the connection
d. Flush 3 ml of saline solution into the catheter; withdraw blood into the extension set to confirm that the catheter tip is within the vascular system; flush the remaining saline solution into the catheter
e. Heparinize the catheter with 3 to 5 ml of 100 U/ml heparin solution

1. Apply a sterile occlusive dressing in the following manner:
   a. Cleanse the site with antiseptic wipes
   b. Pull the catheter out 1 inch and L-shaped to prevent kinking and occlusion at the bend of the arm; secure with Steri-Strips
   c. Place 2- x 2-inch gauze pads folded under the length of the hub and extension tubing
   d. Cover with two 10 x 14 cm transparent dressings so that the site is covered from 1 ½ inches a above the exit site

1. Provide patient comfort measures. Dry warmth may be applied to the area of insertion immediately after the line is secured and the dressing is applied. Continue warmth for 24 to 48 hours as tolerated by the patient.
2. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Teach the caregiver/patient to watch for signs/symptoms of mechanical phlebitis, including edema, red streaks from the insertion site and cording, and intense and continuous pain in the arm of insertion. Dry warmth should resolve this common problem.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The patient verification and/or chart review of allergy
- The procedure and patient toleration
- Catheter type, gauge, lot number, total length, and length inserted
- Insertion site
- Catheter tip position
- Application of occlusive dressing
- Complications or problems encountered
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Peripheral Inserted Central Catheter: Removal of the Catheter

PURPOSE

- To provide guidelines for PICC removal

RELATED PROCEDURE

- Peripheral Insertion of a Central Catheter

GENERAL INFORMATION

It is recommended that an IV-certified registered nurse remove the PICC catheter (preferably an IV nurse who has attended a PICC certification course).

EQUIPMENT

1. Sterile normal saline as prescribed by the physician
2. 10 cc syringe with needle
3. Antiseptic ointment if prescribed by the physician
4. A towel or protective barrier
5. Sterile 2- x 2-inch gauze dressing
6. Hypoallergenic tape
7. Sterile disposable gloves, sharps container, and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment in a convenient work area.
3. Assist the patient to a comfortable position to remove the IV.
4. Place the towel or protective barrier under the patient’s arm.
5. Remove the old dressing, and discard.
6. Examine the catheter exit site for signs of redness or infection; report to the physician as needed.
7. If the catheter is patent, flush with 3 cc of normal saline solution before removal.
8. Grasp the catheter near the exit site, and pull the catheter out with a slow, steady motion. Continue to remove the catheter by regrasping the catheter near the exit site until it is completely removed.
9. If the patient complains of severe pain or if abnormal resistance to removal is felt, stop the procedure. Secure the catheter with tape; apply a sterile 2- x 2-inch dressing over the insertion site and notify the physician for further orders.
10. Apply pressure with a 2- x 2-inch gauze dressing until any bleeding stops.
11. When the bleeding has stopped, apply antiseptic ointment (if ordered) to the site and cover with a new sterile 2- x 2-inch gauze dressing; secure with tape. (Vaseline gauze may also be used to cover the insertion site to minimize the possibility of air entering the central venous system through the open insertion site.)
12. Measure the length of catheter removed and compare to note with length inserted.
13. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS
Instruct the patient/caregiver to leave the dressing in place for 24 hours.

Instruct the patient/caregiver to report any fever or unusual pain or discomfort to the physician.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- The condition of the catheter exit site
- Size of the catheter and gauge and length of the catheter removed; if the length of catheter removed is not the same as that inserted, notify the physician and follow any further orders
- The condition of the catheter
- Assess the type of the catheter for any tearing or other damage; notify the physician of any noted damage
- Any patient/caregiver instructions and response to teaching
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Update the plan of care.
Peripheral Intravenous Management

PURPOSE

- To administer IV fluids
- To hydrate the patient
- To sample blood for laboratory analysis
- To heparin lock an IV for intermittent infusion of fluids and/or medications

RELATED PROCEDURES

- Administration of Intravenous Therapy: General Guidelines
- Specimen Labeling and Transport (see Chapter 12)

GENERAL INFORMATION

When choosing a site to start an IV, select the largest convenient vein most distal to an extremity. Choose a site below the patient’s elbow to increase comfort. Avoid cannulation over joints or previous IV sites because this predisposes to infiltration. The wing-tip or scalp needle is useful for accessing small or fragile veins for blood sampling. Heparin lock the IV for intermittent infusion of IV fluids and/or medications.

EQUIPMENT

1. IV fluids as prescribed by the physician
2. IV administration set
3. Tourniquet
4. Arm board (optional)
5. Number 18- to 20-gauge needle, catheter or wing-tip needle with integrated extension tubing
6. Transparent adhesive dressing or sterile 2- x 2-inch gauze dressing
7. Hypoallergenic tape
8. IV pole
9. Blood specimen tubes; 5 cc to 10 cc syringes with 1-inch, 20-gauge needles; laboratory requisition labels for blood sampling
10. Antiseptic and alcohol wipes
11. Disposable nonsterile gloves, sharps container, and an impermeable plastic trash bag (see Infection Control) [STOP]

Insertion of a Peripheral IV and Initiation of Hydration Fluids

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a comfortable position to initiate or access the IV.
4. Use aseptic technique to set up IV fluids in the following manner:
   a. Clamp the tubing with the flow regulator
   b. Spike the container with tubing; hang the container on the IV pole
c. Squeeze the drip chamber until it is one-half full
d. Open the flow regulator, and prime the tubing; reclamp the tubing to prevent fluid flow
e. Time tape the IV bag if the pump is not used

1. Apply a tourniquet, and select the vein.
2. Cleanse the selected site with antiseptic wipes. Start at the point of needle insertion, and clean outward in a circular motion, approximately 3 to 4 cm. Repeat with alcohol wipes; air dry.
3. Stretch the skin tight. Insert the needle with the bevel up at a 30-degree angle and parallel to the skin. Decrease the angle, and move the needle forward until the needle enters the vein.
4. Observe for blood flow to indicate correct needle placement.
5. Pull the needle back slightly; advance the catheter, and release the tourniquet.
6. Attach the IV tubing to the catheter hub. Open the flow regulator.
7. Slowly start the IV infusion. Assess the site for infiltration. If infiltration occurs, discontinue the IV, and restart the IV at an alternative site. Adjust the prescribed flow rate once the correct placement of the catheter has been established.
8. Tape the catheter to prevent accidental dislodgement. Avoid taping directly over the catheter because this may impede blood flow.
9. Apply transparent adhesive or 2- x 2-inch gauze dressing. Picture frame the dressing with tape to secure the site so that early signs of phlebitis or infiltration can be detected.
10. Secure the IV tubing to the patient’s arm with tape to prevent tugging.
11. Instruct the patient/caregiver in the management of home IV therapy. See the Patient Education Guidelines box, Home IV Therapy.
12. Provide patient comfort measures.
13. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

If the venipuncture is unsuccessful, reattempt it with a new catheter. If unsuccessful after 3 attempts, notify the physician for further orders.

Label the catheter insertion site with the catheter gauge, date and time of insertion, and initials of the nurse.

Inserting a Winged-Tip Needle for Blood Sampling

PROCEDURE

1. Follow steps 1 through 5 of the procedure for Insertion of a Peripheral IV and Initiation of Hydration Fluids. Keep the cap on the needle. Attach the 10 cc syringe to the hub of the integrated extension tubing on the wing-tip needle.
2. Remove the cap from the winged-tip needle. Point the needle in the direction of the blood flow, and hold it at a 45-degree angle above the skin, with the bevel facing up.
3. Pinch the wings tightly together. Pierce the patient’s skin at a point slightly to one side of the vein, approximately ½ inch below the spot where you plan to puncture the vein wall.
4. Decrease the needle angle, until the needle is almost level with the skin surface, and direct it toward the selected vein.
5. Puncture the vein. Observe for blood backflow.
6. Lift the bevel of the needle off the vein floor, and advance it, until the needle is inserted into the vein.
7. Remove the tourniquet.
8. Withdraw the blood sample into the syringe.
9. Discontinue the IV once the blood sample has been obtained.
10. Apply a 2- x 2-inch gauze dressing or adhesive bandage to the venipuncture site.
11. Attach a 20-gauge needle onto the syringe with blood sample. Then push the needle through the rubber stopper to fill the blood specimen tube(s). Label blood tubes and transport.
12. Follow steps 16 and 17 of the procedure for Insertion of a Peripheral IV and Initiation of Hydration Fluids.

NURSING CONSIDERATIONS

If the winged-tip needle has an integrated extension set with a two-way needle hub, attach the Vacutainer to the two-way needle hub. Slide the blood specimen tube(s) into the Vacutainer and onto the two-way needle once the vein is accessed to obtain blood samples.

Managing a Heparin Lock: Initiating a Heparin Lock

EQUIPMENT

1. Sterile normal saline solution as prescribed by the physician
2. 100 U/ml heparin solution as prescribed by the physician
3. Sterile Luer-Lok injection cap
4. Number 18- to 20-gauge catheter and venipuncture supplies
5. Sterile 3 cc syringes with 1-inch, 23- to 25-gauge needles
6. Kelly clamp
7. Antiseptic and alcohol wipes
8. Disposable nonsterile gloves, sharps container, and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Follow steps 1 through 3 of the procedure for Insertion of a Peripheral IV and Initiation of Hydration Fluids.
2. Draw up 1 ml of heparin solution and 2 ml of normal saline solution into separate syringes.
3. Cleanse the rubber stopper on the Luer-Lok injection cap with antiseptic wipes, followed by alcohol wipes; air dry.
4. Prime the Luer-Lok injection cap with normal saline solution.
5. Perform venipuncture. See the procedure for Initiation of a Peripheral IV and Initiation of Hydration Fluids.
6. Attach the saline-filled Luer-Lok injection cap into the cannula, then flush with 2 ml of normal saline solution.
7. Observe the catheter exit site for signs of infiltration or leakage. If the catheter is patent, flush the Luer-Lok injection cap with 1 ml of heparin solution.
8. Maintain the positive pressure on the syringe plunger as you withdraw the needle to prevent the backflow of blood into the catheter tip and to ensure a heparin lock.
9. Tape to secure the catheter and to prevent accidental dislodgement.
10. Apply a sterile 2- x 2-inch gauze or transparent adhesive dressing. Picture frame with tape as needed to secure the dressing. Date and time the dressing.
11. Follow steps 16 and 17 of the procedure for Insertion of a Peripheral IV and Initiation of Hydration Fluids.

Managing a Heparin Lock: Transferring a Continuous Infusion to a Heparin Lock
EQUIPMENT

1. 100 U/ml heparin solution as prescribed by the physician
2. Sterile normal saline solution as prescribed by the physician
3. Sterile Luer-Lok injection cap
4. Kelly clamp
5. Sterile 3 cc syringes with 1-inch, 23- to 25-guage needles
6. Antiseptic and alcohol wipes
7. Disposable nonsterile gloves, sharps container, and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Follow steps 1 through 3 of the procedure for Insertion of a Peripheral IV and Initiation of Hydration Fluids.
2. Clamp off the intravenous tubing with a flow regulator.
3. Disconnect the tubing, using a Kelly clamp to stabilize the catheter hub.
4. Remove the protective covering from the Luer-Lok injection cap and aseptically insert it into the hub of the catheter.
5. Slowly flush with 2 ml of normal saline solution, and assess for infiltration to ascertain the catheter position. Flush with 1 ml of heparin solution if no swelling or leakage is noted.
6. Maintain positive pressure on the syringe plunger as you withdraw the needle to prevent backflow into the catheter tip and to ensure a heparin lock.
7. Follow steps 16 and 17 of the procedure for Insertion a Peripheral IV and Initiation of Hydration Fluids.

Managing a Heparin Lock: Stopping/Discontinuing a Continuous Infusion

EQUIPMENT

1. Same as the procedure for Transferring a Continuous Infusion to a Heparin Lock

PROCEDURE

1. Follow steps 1 through 3 of the procedure for Insertion of a Peripheral IV and Initiation of Hydration Fluids.
2. Draw up 2 ml of normal saline solution and 1 ml of heparin solution in separate syringes.
3. Clamp off the IV tubing with the flow regulator.
4. Remove the needle and tubing from the heparin lock by one of the following methods:
   a. Remove the needle from the Luer-Lok injection cap; carefully remove the needle from the end of the tubing and place it in the sharps container; discard the tubing and IV bag
   b. Cut the IV tubing 3 inches above the needle; place the needle and the connecting tubing in a sharps container; discard the remainder of the tubing and IV bag
1. Irrigate the Luer-Lok injection cap and the IV catheter with 2 ml normal saline solution, then flush with 1 ml of heparin solution.
2. Maintain positive pressure on the syringe plunger as you withdraw the needle to prevent backflow of blood into the catheter tip and to ensure a heparin lock.
3. Evaluate for dressing change.
4. Follow steps 16 and 17 of the procedure for Insertion a Peripheral IV and Initiation of Hydration Fluids.
DOCUMENTATION GUIDELINES

Document the following on the visit report.

- The procedure and patient toleration
- Type and number of the catheter that has been inserted
- Condition of the catheter exit site
- Blood specimen drawn and designated laboratory for delivery
- Any patient/caregiver instructions and response to teaching, including the ability to safely manage home IV therapy
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Document IV medications/solutions infused on the medication of IV record.

Update the plan of care.
PATIENT EDUCATION GUIDELINES

Home IV Therapy

1. Wash your hands before and after IV care.
2. Check your IV site. If it is red or painful, do not administer IV fluids, and call the home health agency clinical supervisor. Your home health agency’s number is ________________.
3. Flush your IV catheter with _________ ml of normal saline solution before administering IV fluids or medications, such as antibiotics.
4. When preparing your IV fluids, close the roller clamp on the IV tubing. Then attach the IV tubing to the IV bag without touching the sterile surfaces. *Keep the tubing and connections as germ-free as possible.*
5. Squeeze the drip chamber on the IV tubing until it is about one-half full. Always remember to flush air from the IV tubing.
6. If you have an IV pump, follow your nurse’s instructions to hook up your IV tubing and to operate the pump.
7. Connect the IV fluids to the catheter. Open the roller clamp. You should see fluid flow through the drip chamber.
8. Turn on the IV pump or adjust the roller clamp on the IV tubing to adjust the drops per minute as your physician has ordered. Your drops per minute are ________________.
9. Watch the rate of flow of your IV fluids every hour, and do not let the bag of IV fluids run dry because this can cause the catheter to clog up.
10. Administer your IV fluids and medications at the correct dose and time.
11. Stop the IV infusion when it has been completed. Irrigate and flush your catheter as your nurse has shown you to keep your IV line open. Flush with _________ of normal saline solution and _________ of heparin solution. Check with your nurse because some catheters do not require a heparin flush.
12. If you have a central line, keep your catheter clamped at all times when it is not in use.
13. Change your IV dressing if it becomes loose or soiled.
14. Clean the entry site of your IV with an antiseptic wipe. Start at the center and move outward about 1 to 2 inches in a circular motion. Do this two more times with fresh antiseptic wipes. Never return to the entry site of your IV with the same wipe because this could spread germs into your IV.
15. Cover your IV with a gauze dressing, and secure it with tape. Tape your IV catheter to prevent tugging or to prevent it from accidentally coming out.
16. If your IV catheter accidentally gets torn, clamp it to prevent leakage or air embolism, and notify the home health agency clinical supervisor.
17. If the IV catheter accidentally comes out, cover the site with a gauze dressing to prevent bleeding. Hold pressure to the area for 5 minutes, and then notify the home health agency clinical supervisor.
18. If you should feel short of breath or dizzy, notify the Emergency Medical Services (EMS) for emergency assistance. Your local EMS number is ________________.
19. Carefully place used needles in a sharps container. Always avoid touching the needle. Keep your sharps container out of the reach of children. When your sharps container is full, call your home IV supplier for a
new sharps container or other IV supplies.

20. Record the date and time that you hang a bag of IV fluids.

21. Call the home health agency clinical supervisor if the following circumstances occur:
   • Dressing supplies are needed
   • You have questions or problems regarding your IV
   • You are hospitalized

A limited number of copies of this guideline may be made for free distribution to patients and families. All other rights are reserved.
PATIENT EDUCATION GUIDELINES

Troubleshooting IV Therapy

1. If the infusion slows or stops, look for swelling, pain, or hardness around the needle or catheter site. If you notice any of these symptoms, stop the infusion and immediately notify your home health nurse or physician. If these signs and symptoms are not present, do the following:
   a. Check for twisted tubing or for pressure on tubing
   b. See whether you have moved or bent your arm with the IV in it; if so, return your arm to its original position
   c. If the flow rate remains slow or has stopped, turn off the regulator, and contact your home health nurse

1. If you experience symptoms such as coughing, shortness of breath, increased rate of breathing, headache, facial flushing, rapid pulse rate, or dizziness, this could mean you are experiencing a condition called circulatory overload and have received too much fluid. Stop the infusion, and immediately call your home health nurse or physician. If the situation is an emergency, call an ambulance directly.

2. If you experience symptoms such as extreme shortness of breath, anxiety, lips and nailbeds turning blue, pulse increasing rapidly, or faintness, this could mean that air has entered the bloodstream. This is a medical emergency. You should be placed on your left side, with the head down. Have someone immediately call an ambulance and stay with you until the ambulance arrives.

3. Symptoms such as an abrupt temperature, chills, complaints of backache or headache, nausea and vomiting, a flushed face, or dizziness may be caused by exposure to contaminated equipment or solutions. Discontinue IV therapy and call your home health nurse or physician. (If symptoms are severe, go to a hospital emergency department.) Save the equipment and IV solution so that it can be analyzed in a laboratory.

4. If the catheter breaks, clamp the line and notify your home health nurse or physician.

A limited number of copies of this guideline may be made for free distribution to patients and families. All other rights are reserved.
Antibiotic Therapy: Intermittent Infusion

PURPOSE

• To provide guidelines for intermittent administration of intravenous (IV) antibiotics
• To treat infection

RELATED PROCEDURES

• Administration of Intravenous Therapy: General Guidelines (see Chapter 8)
• Administration of Medications: General Guidelines (see Chapter 10)
• Cardiopulmonary Resuscitation (CPR) (see Chapter 15)
• Central Venous Catheter Management (see Chapter 8)
• Peripheral Intravenous Management (see Chapter 8)
• Specimen Labeling and Transport (see Chapter 12)
• Transfusion Reaction (see Chapter 15)
• Shock (see Chapter 15)

GENERAL INFORMATION

Antibiotics act by inhibiting bacterial-wall synthesis or by altering the intracellular function of bacteria, such as deoxyribonucleic acid (DNA) binding and reproduction. Categories of antibiotics that are used most widely include the cephalosporins, the aminoglycosides, and penicillins.

Antibiotic therapy is usually administered through intermittent drug infusion. The medication is diluted in a small bag of dextrose 5% water (D5W) or normal saline (NS) solution and is administered for approximately 30 minutes. Administration time varies according to the volume of solution to be infused.

Since adverse side effects are possible with the use of any antibiotics, the first dose should be administered in a controlled setting, where emergency medical services are available. Antibiotics may be administered via peripheral or central venous access devices. Administer specific medications according to the manufacturer’s instructions. It is recommended that IV-certified nurses administer antibiotic therapy in the home.

Consult with the physician or the home infusion service’s pharmacist regarding serum level monitoring of antibiotics. Electrolyte, liver panel, blood urea nitrogen (BUN), and serum creatinine levels may be required for therapy lasting at least 5 days. In addition, serum peak and trough levels are usually monitored for aminoglycoside or vancomycin therapy.

Before administering an antibiotic, ascertain the patency of the IV with a normal saline flush. The typical sequence of antibiotic administration is saline flush, antibiotic, saline flush, heparinization, which is known as the SASH method. Change the tubing every day. Use a new needle on the tubing with each antibiotic administration. Review the manufacturer’s recommendations if a needleless system is being used.

EQUIPMENT

1. Antibiotic medication as prescribed by the physician
2. Sterile normal saline solution as prescribed by the physician
3. 100 U/ml heparin solutions as prescribed by the physician
4. Syringes (follow specific catheter procedures for irrigation, heparinization, and blood sampling)
5. Two 1-inch 21- to 23-gauge needles
6. IV pole
7. IV administration set
8. Blood tubes, labels, and laboratory requisition for blood sampling if required
9. Antisepctic and alcohol wipes
10. Disposable nonsterile gloves, sharps container, and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a comfortable position to access the IV. Perform the necessary laboratory work.
4. Close the roller clamp on the IV tubing. Remove the protective cap from the antibiotic bag, and spike the bag with the IV tubing.
5. Hang the antibiotic bag on the IV pole. Squeeze the drip chamber until it is half full. Open the roller clamp to expel air from the tubing.
6. Using aseptic technique, attach the needle to the hub of the tubing; leave the cap on.
7. Cleanse the injection port of the indwelling IV with an antiseptic wipe, followed by an alcohol wipe; air dry.
8. Flush the catheter with normal saline solution to ascertain patency.
9. Uncap and insert the needle into the injection port of the indwelling IV.
10. Secure the needle to the injection port with 1-inch tape. Tape the IV tubing to the patient’s arm to prevent tugging.
11. Open the roller clamp, and begin the infusion at the prescribed rate.
12. Discontinue the IV after infusion. Place the needle in the sharps container; replace with a sterile-capped needle for the next infusion.
13. Clean the catheter injection port of the indwelling IV with an antiseptic wipe, followed by an alcohol wipe; air dry.
14. Flush the catheter with normal saline solution and heparinize according to specific catheter protocols.
15. Provide patient comfort measures.
16. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Antibiotics may be administered simultaneously with compatible IVs; consult with the home infusion pharmacist for a compatibility check.

If the antibiotic is piggybacked into a continuous infusion, hang the medication container above the primary IV, and infuse at the prescribed rate. The secondary set may remain attached to the IV or may be removed until the next dose of antibiotic therapy. If the antibiotic line is removed, cap the end of the line with a new needle.

Instruct the patient/caregiver to store antibiotic medication bags in the refrigerator. Take the antibiotic out of the refrigerator 20 to 30 minutes before administration.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

Original procedures copyright © 2000 by Mosby, Inc.
• The procedure and patient toleration
• Condition of catheter exit site
• Patency of the catheter
• Blood sampling and designated laboratory for delivery
• Any patient/caregiver instructions and response to teaching, including the ability to manage home antibiotic therapy safely
• Physician notification if applicable
• *Standard Precautions*
• Other pertinent findings

Document medications on the medication record.

Update the plan of care.
Chemotherapy

PURPOSE

- To provide guidelines for IV chemotherapy administration
- To treat cancer

RELATED PROCEDURES

- Administration of Intravenous Therapy: General Guidelines (see Chapter 8)
- Administration of Medications: General Guidelines (see Chapter 10)
- Cardiopulmonary Resuscitation (CPR) (see Chapter 15)
- Central Venous Catheter Management (see Chapter 8)
- Shock (see Chapter 15)
- Specimen Labeling and Transport (see Chapter 12)
- Transfusion Reaction (see Chapter 15)

GENERAL INFORMATION

Chemotherapy is used to treat cancer. Chemotherapeutic drugs act primarily by inhibiting the growth of frequently dividing cells. Normal cells affected by chemotherapeutic drugs include red and white blood cells, hair follicles, the mucosal lining of the gastrointestinal tract, skin, and germinal cells (sperm and ova). Chemotherapy is administered according to a schedule to allow recovery of the body’s normal cells. In addition, chemotherapy is commonly given in combination with other drugs to enhance tumor cell destruction.

It is recommended that only chemotherapy-certified nurses administer chemotherapeutic medications. The pharmacy will prepare and deliver all chemotherapeutic medications to the patient’s home. In addition, the patient/caregiver must be provided with spill kits. Volumetric pumps must be used for all infusions. Administer bolus injections through the side arm of a running intravenous infusion. Review the manufacturer’s recommendations if a needleless system is being used.

EQUIPMENT

1. Chemotherapeutic medication(s) and infusion fluids as prescribed by the physician
2. Antiemetic if prescribed by the physician
3. Sterile normal saline solution and 100 U/ml heparin solution or catheter flush solution per specific catheter protocols as prescribed by the physician
4. IV infusion set
5. IV infusion pump
6. Syringes for catheter flush
7. 55 cc syringes with 23-gauge needles and extravasation antidote as required; hot or cold compresses as recommended by the physician for extravasation
8. Blood tubes, labels, and laboratory requisition for blood sampling if required
9. Antiseptic and alcohol wipes to initiate chemotherapy or to access the IV catheter
10. Chemotherapy gloves or double nonsterile gloves, goggles, a resealable plastic bag, spill kit, sharps container, impermeable plastic trash bag, and a puncture- and leak-proof container (see Infection Control)

STOP
PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Verify allergies that the patient may have.
3. Explain the side effects of possible hair loss, nausea and vomiting, anorexia, stomatitis, constipation, diarrhea, and skin and hemopoietic changes.
4. Obtain a signed consent form before administering chemotherapy.
5. Obtain the necessary laboratory work.
6. Plan and intervene for the following possible chemotherapy side effects:
   a. Review home health agency cardiopulmonary resuscitation (CPR), shock, and transfusion reaction procedures for possible anaphylaxis (see Emergency Procedures, Chapter 16)
   b. Consult with the physician, and consider pain medication for aches and pains
   c. Instruct the patient to wear a wig, scarf, or turban for hair loss; (reassure the patient that hair loss is temporary and that the hair will regrow when the drug is stopped)
   d. Instruct the patient to eat small and frequent meals that are high in protein for appetite loss
   e. Instruct the patient to increase fiber in the diet to alleviate constipation; consult with the physician, and consider the use of a stool softener
   f. Consult with the physician, and instruct the patient to increase fluid intake up to 2 to 3 quarts daily for cystitis
   g. Consider psychiatric home health nurse referral for problems with depression or changes in mood or affect
   h. Implement bleeding precautions for thrombocytopenia
   i. Instruct the patient to maintain good personal hygiene
   j. Instruct the patient to use a soft toothbrush or swab toothettes frequently to minimize the risk of oral mucosa breakdown
   k. Premedicate with antiemetics before nausea begins or administer around the clock (for example, before administration of chemotherapeutic medication or meals)
   l. Monitor the complete blood count, including platelets, liver function tests, baseline cardiac studies, urine creatinine clearance, and serum electrolytes, as ordered by the physician; notify the physician of abnormal clinical findings and laboratory values before the administration of the chemotherapeutic drug
1. Assist the patient to a comfortable position to access the IV.
2. Initiate the peripheral IV, or access the central venous catheter. (Vesicant drugs must be delivered via a central venous catheter.)
3. Don gloves; wear goggles.
4. Administer chemotherapeutic medication(s).
5. Evaluate the patient for signs of extravasation during the infusion. Be aware that tissue necrosis may not occur until 1 to 5 weeks after the drug extravasation. If extravasation is suspected or occurs, consult with the physician and consider the following:
   a. Immediately stop the infusion of the chemotherapeutic drug as soon as extravasation of a cytotoxic or irritant agent is suspected or occurs
   b. Leave the needle in place
   c. Aspirate any residual drug from the IV tubing or the catheter and infiltration site
   d. Instill the prescribed antidote specific for the cytotoxic drug
   e. Remove the needle if it is clotted off, and inject the prescribed antidote subcutaneously clockwise into the infiltrated site, using a 25-gauge needle; change the needle with each new injection
   f. Apply sterile occlusive dressing
   g. Elevate the extremity

Original procedures copyright © 2000 by Mosby, Inc.
Apply hot or cold compresses as ordered by the physician

1. Discontinue the IV after the medication(s) is (are) administered.
2. Flush the catheter according to specific protocols.
3. Provide patient comfort measures.
4. Clean and replace the equipment. Immediately clean up any chemotherapy spills. Be careful not to touch the spill. Place disposable items in a resealable bag, and discard. Place used needles and syringes in a puncture-proof, leak-proof container. All chemotherapy materials, including bags and tubing, must be discarded in a leak-proof container.

NURSING CONSIDERATIONS

Prepare chemotherapeutic agents for administration at a bathroom or kitchen counter on a plastic-backed field (e.g., on a plastic trash bag). The area should be washed thoroughly before and after preparation with soap and water or with 70% alcohol, and then allowed to dry.

Instruct the patient and family to wear gloves when handling linen contaminated with chemotherapeutic agents or excreta. Wash the contaminated linen separately from all other linens.

Follow local, state, and Environmental Protection Agency (EPA) recommendations for disposal of hazardous waste and chemotherapeutic medications and supplies.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Side effects and therapeutic actions
- Blood sampling and designated laboratory for delivery
- Extravasation management
- IV catheter site before and after infusion or injection of chemotherapeutic medication(s)
- Catheter size and type
- Drug sequence and administration technique
- Any chemotherapy medications
- Any patient/caregiver instructions and response to teaching, including the ability to safely manage home chemotherapy
- Physician’s notification, if applicable
- Standard Precautions
- Other pertinent findings

Document IV medications on the medication record. Document IV fluids on the IV record.

Consider an incident report for problems with extravasation.

Update the plan of care.
Lasix Intravenous Push

PURPOSE

- To promote diuresis
- To relieve edema

RELATED PROCEDURES

- Administration of Intravenous Therapy: General Guidelines (see Chapter 8)
- Administration of Medications: General Guidelines (see Chapter 10)
- Edema (see Chapter 2)
- Injections (see Chapter 10)
- Intake and Output (see Chapter 2)
- Peripheral Intravenous Management: Inserting a Winged-Tip Needle for Blood Sampling (see Chapter 8)
- Specimen Labeling and Transport (see Chapter 12)

GENERAL INFORMATION

Lasix (furosemide) intravenous push (IVP) is given to patients for whom oral Lasix is no longer effective. Careful monitoring of the patient’s intake and output, serum potassium level, and weight are important in order to evaluate the efficacy of the Lasix.

EQUIPMENT

1. Lasix as prescribed by the physician
2. Sterile normal saline solution as prescribed by the physician
3. Number 21 or 23 winged-tip needle, tourniquet
4. 3 cc syringes with 1-inch needles
5. Antiseptic wipes
6. 2- x 2-inch gauze dressing
7. Hypoallergenic tape
8. Blood tubes, labels, and laboratory requisition for blood sampling if required
9. Disposable nonsterile gloves, sharps container, and impermeable plastic trash bags (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a comfortable sitting or supine position.
4. Assess the patient’s cardiopulmonary status. Obtain the patient’s vital signs (record blood pressure before and after the procedure).
5. Evaluate the fluid and electrolyte status.
   a. Weigh the patient
   b. Assess the patient’s compliance with the low-salt diet or with fluid restrictions if ordered by the physician
1. Verify the medication with the patient’s medication record, and check the patient’s identity.
2. Prepare the medication from an ampule or a vial as described in the procedure for *Injections*. Replace the protective needle cap on the syringe.
3. Select the site for venipuncture. Use a large vein in the hand or forearm.
4. Apply a tourniquet above the venipuncture site.
5. Clean the venipuncture site with an antiseptic wipe. Begin at the venipuncture site, and proceed in an outward circular motion for approximately 4 to 5 cm.
6. Perform venipuncture using a winged-tip needle, with the bevel up at a 45-degree angle.
7. Flush the needle with 2 ml normal saline solution to check for infiltration. (Discontinue the IV, and repeat the procedure for problems with swelling or leaking around the IV site.)
8. Pinch the winged-tip needle tubing to stop the flow of blood.
9. Disconnect the saline syringe, and attach the syringe of Lasix to the tubing hub.
10. Slowly inject Lasix during a 5-minute period.
11. Once the medication has been administered, withdraw the needle and apply pressure over the site with an antiseptic wipe. Apply a dressing as needed.
12. Reassess the blood pressure and the level of consciousness.
13. Provide patient comfort measures.
14. Clean and replace the equipment. Discard disposable items according to *Standard Precautions*.

**NURSING CONSIDERATIONS**

Consider the use of a central venous access device or heparin lock for patients who require frequent Lasix IVP.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Cardiopulmonary status, including blood pressure before and after the procedure
- Patient weight
- Blood sampling and designated laboratory for delivery as appropriate
- Intake and output
- Any patient/caregiver instructions and response to teaching, including the adherence to medications and diet
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Document IV medications on the medication record.

Update the plan of care.
Total Parenteral Nutrition and Intralipid Administration

PURPOSE

- To provide guidelines for total parenteral nutrition (TPN)/intralipids administration
- To provide nutritional support for patients who are unable to eat or swallow appropriately

RELATED PROCEDURES

- Administration of Intravenous Therapy: General Guidelines (see Chapter 8)
- Administration of Medications: General Guidelines (see Chapter 10)
- Central Venous Catheter Management (see Chapter 8)
- Specimen Labeling and Transport (see Chapter 12)

GENERAL INFORMATION

Use a central venous line for TPN infusion. TPN infusions must be delivered by some type of volumetric pump. Review manufacturer’s instructions for IV equipment administration guidelines. (The infusion is usually cycled during the nighttime to allow the patient greater freedom during the day.) Change TPN tubing and the bag at the same time. The physician usually orders tapering at the beginning and the end of the infusion to prevent metabolic complications. A full chemistry panel, including magnesium, is usually monitored when a home TPN infusion is provided. When they are ordered, intralipids are commonly mixed in the TPN solution. Use a 1.2 micron filter for solutions containing lipids. Review the manufacturer’s recommendations if a needleless system is being used.

Remove TPN solutions from the refrigerator 2 hours before infusing them. Multivitamins and other medication additives with short stability may be added before infusion.

EQUIPMENT

1. TPN and intralipid solution as prescribed by the physician
2. Multivitamins if prescribed by the physician
3. Sterile normal saline solution and 100 U/ml heparin solution for irrigation and flush as prescribed by the physician
4. Intravenous tubing with a 1.2 micron filter
5. Occlusion clamp if needed (most central venous catheters have an in-line clamp)
6. Infusion pump
7. Patient refrigerator for storage of bags of TPN
8. 12 cc syringe with at least 1-inch needle
9. Blood tubes, labels, and laboratory requisition for blood sampling if required
10. Antiseptic and alcohol wipes
11. Disposable nonsterile gloves, sharps container, and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a comfortable position to access the IV. Perform necessary laboratory work.
4. Examine the TPN bag for leaks and an expiration date.
5. Cleanse the medication port with antiseptic wipes, followed by alcohol wipes; air dry.
6. Use aseptic technique to draw up multivitamins and additives with a 12 cc syringe, and inject through the medication port. (Be careful not to pierce the TPN bag with the needle.)
7. Turn the TPN bag upside down to mix the multivitamins and medication additives with the TPN solution.
8. Label the TPN bag, indicating the addition of multivitamins and medication additives.
9. Pull the protective cap off the TPN bag, and spike the tubing into the IV bag. Hang the TPN bag on the IV pole.
10. Follow the manufacturer’s recommendations to hook up the tubing and cassette to the IV pump. Fill the intravenous drip chamber half full, and prime the cassette and IV tubing. Set the desired infusion rate.
11. Irrigate with normal saline solution, and access the central line as described in the procedure for Central Venous Catheter Management in Chapter 8. Tape all connections. Begin the infusion.
12. When the infusion is complete, discontinue the fluids. Then irrigate and flush the central line as described in the procedure for Central Venous Catheter Management in Chapter 8.
13. Provide patient comfort measures.
14. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Weigh the patient each visit.

Instruct the patient/caregiver to store TPN bags in the refrigerator and take the bags out to warm them to room temperature 1 hour before administration.

See Appendix I, Laboratory Values.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Blood sampling and designated laboratory for delivery as appropriate
- Weight
- Vital signs
- Condition of catheter exit site
- Any patient/caregiver instructions and response to teaching, including the ability to safely manage home TPN therapy
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Document TPN, intralipids, and any IV medication additives on the medication/IV record.

Update the plan of care.
Administration of Medications: General Guidelines

PURPOSE

- To provide safe and accurate medication administration
- To instruct the patient/caregiver in the therapeutic regimen
- To promote self-care in the home

RELATED PROCEDURES

- Antibiotic Therapy (see Chapter 9)
- Bladder Instillation and Irrigation
- Chemotherapy (see Chapter 9)
- Coumadin Administration: Bleeding Precautions
- Ear Instillation and Irrigation
- Eye Instillation and Irrigation
- Injections
- Lasix IVP (see Chapter 9)
- Metered Dose Inhaler Use (see Chapter 4)
- Instillation of Nose Drops
- Patient/Caregiver Self-Medication Errors at Home
- Prefilling Insulin Syringes
- Suppositories
- Topical Medications
- Total Parenteral Nutrition (TPN) (see Chapter 9)
- Tuberculin (TB) Skin Test

PROCEDURE

1. Obtain a physician’s order for the patient’s medication. It should include the following information:
   a. Name of the patient
   b. Name of the medicine
   c. Medication dose, route, and frequency of administration
1. Check the patient’s known allergies.
2. Inscribe the physician’s order on the medication record with start and stop date and time. Update records as needed.
3. Review The Five Rights to verify the physician’s order for the medication:
   a. Right medication
   b. Right patient
   c. Right time
   d. Right method of administration
   e. Right amount
1. Administer medication according to the home health agency policies and state nurse practice acts. Recheck all calculations. Do not administer medicines or treatments that are not ordered by the physician.
2. Ask to see all medicines that the patient is taking. Check the labels on all medicine containers; compare these with the prescribed medication regimen. Inform the physician of any over-the-counter medicines that are not written on the patient’s medication record and that may have been prescribed by other physicians.
3. Instruct the patient/caregiver on the current medication regimen:
   a. Assess the patient’s/caregiver’s understanding of the medicines, including the following: purpose, actions, side effects, dosage, and time to take medicine
   b. Instruct the patient/caregiver to verbalize information or to give a return demonstration of the administration technique
   c. Perform medication teaching each visit, until the patient/caregiver is knowledgeable about and can safely administer all medications; reinforce information if learning difficulties or problems with comprehension are noted
   d. Instruct the patient/caregiver in any new medication ordered by the physician or in changes in dosage of medications
   e. Provide instructional handouts, teaching guides, and patient education materials as needed

1. Assist the patient/caregiver to adhere with the medication regimen in the following manner:
   a. Set up the patient’s pills in advance
   b. Prefill the insulin syringes
   c. Organize medicines for simple administration; place the medicines in envelopes; use a chart or medication dispenser from the pharmacy; use large print instructions
   d. Instruct the caregiver to administer medicines if the patient is unable to do so

1. Evaluate the therapeutic effects of the medicine; assess it for adverse side effects and for patient compliance with the medication regimen.
2. Provide patient comfort measures.

NURSING CONSIDERATIONS

Administer Food and Drug Administration (FDA) approved drugs within the recommended dosages and amounts found in the Physician’s Desk Reference (PDR) or other acceptable drug references.

Consult with the home health agency medical director for guidelines regarding drugs that are not approved by the FDA.

To prevent patient confusion regarding the medication regimen as well as potential adverse side effects of a multiple medication regimen, consult with the physician to try to limit the patient to 6 medicines at a time.

Encourage the patient to use the same pharmacist for all medications.

Be aware that the physician may give the patient/caregiver changes or updates in medications over the phone or during office visits—therefore it is important to assess what medications that patient is taking each visit.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Patient response to the medication regimen
- Learning difficulties or problems with patient comprehension if reinforcement of medication teaching is necessary
- Any patient/caregiver instructions and response to teaching, including the ability to safely administer medications
- Physician notification, if applicable

Original procedures copyright © 2000 by Mosby, Inc.
• **Standard Precautions**

• Other pertinent findings

Document the medication’s name, dosage, route, frequency of administration, and administration site as appropriate on the medication record.

Keep the medication record current.

Obtain written physician’s orders for changes in the dosages of medications or for new medications.

Sign your full name and professional credentials on the medication record.

Complete an incident report as appropriate for medication errors.

Update the plan of care.
Bladder Instillation and Irrigation

PURPOSE

- To instill medication into the bladder
- To prevent obstruction or to dislodge clots

RELATED PROCEDURES

- Administration of Medications: General Guidelines
- Closed Urinary Drainage Management (see Chapter 13)
- Indwelling Foley Catheter Insertion and Care (see Chapter 13)
- Intermittent Straight Catheterization: Sterile Technique (see Chapter 13)

EQUIPMENT

1. Indwelling Foley catheter or sterile catheter (size ordered by the physician)
2. Irrigation solution or medication as prescribed by the physician
3. Urinary collection bag with drainage tubing as needed
4. 60 cc sterile irrigation syringe
5. Sterile connector cap or 4- x 4-inch gauze dressing and rubber band
6. Disposable sterile catheter plug
7. Basin or bowl
8. Antiseptic wipes
9. Soap and warm water, washcloth, and towels
10. Disposable sterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a supine position, with the knees flexed and separated. Place a towel or waterproof pad underneath the buttocks.
4. Wash the perineal area with soap and water; dry it. Drape the patient for privacy.
5. Insert the catheter if it is not already in place.
6. If the catheter is in place, scrub the outside of the connection with an antiseptic wipe.
7. Disconnect the drainage tubing from the catheter by twisting them in opposite directions and carefully pulling them apart without pulling on the catheter.
8. Apply a sterile catheter plug to the end of the catheter.
9. Apply a sterile cap to the end of the drainage tubing, or cover it with a sterile 4- x 4-inch gauze dressing and secure it with a rubber band to prevent contamination.
10. Fill the irrigation syringe with 30 to 60 ml of irrigation solution.
11. Position a basin to collect the return solution.
12. Unplug the catheter.
13. Insert the irrigation syringe into the end of the catheter. Be careful not to let the catheter end touch anything but the syringe.
14. Gently inject the irrigation solution into the bladder, approximately 30 ml at a time.

Original procedures copyright © 2000 by Mosby, Inc.
15. Remove the syringe from the catheter, and allow the irrigation solution to return to the basin by gravity.
16. Repeat steps 14 and 15 until all of the prescribed irrigation solution is used.
17. Clamp or plug the catheter if the solution is to dwell in the bladder for a specific amount of time.
18. Remove the connector cap from the drainage tubing. Cleanse the end of the tubing and catheter with antiseptic wipes.
19. Reconnect the drainage tubing to the catheter.
20. Provide patient comfort measures.
21. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Instruct the patient/caregiver to notify the home health agency clinical supervisor if urine does not flow within 2 hours after the procedure.

If clots are not a problem, keep the system closed and use a needle and syringe with a clamp on the drainage tubing for instillation of medication.

Do not attempt to force the irrigation solution into the bladder if resistance is felt; notify the physician as appropriate.

Obtain physician’s orders to remove and replace a totally obstructed catheter.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Perineal hygiene
- Color, odor, amount, and characteristics of the patient’s urine
- Amount and type of irrigation solution used and amount of return solution
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Document medications on the medication record.

Update the plan of care.
Coumadin Administration: Bleeding Precautions

PURPOSE

- To prevent complications of thrombosis or pulmonary emboli
- To instruct the patient/caregiver in bleeding precautions
- To promote self-care in the home

RELATED PROCEDURES

- Administration of Medications: General Guidelines
- Bleeding and Soft Tissue Injury (see Chapter 15)

GENERAL INFORMATION

Coumadin (warfarin) is used for long-term anticoagulant therapy. Weekly monitoring of prothrombin time (PT) is recommended. Obtain the baseline liver and renal function studies before administration. See Appendix I, Laboratory Values, at end of the text.

EQUIPMENT

1. Coumadin as prescribed by the physician.

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Verify the medication with the patient’s clinical record, and check the patient’s identity. Confirm that the patient is taking the prescribed amount of Coumadin correctly. (See the patient instruction recommendations in the procedure for Administration of Medications: General Guidelines.)
3. Do not give intramuscular (IM) injections unless absolutely necessary.
4. Apply pressure to all venipuncture sites for 10 minutes or until the bleeding has stopped.
5. Instruct the patient/caregiver in Coumadin administration to include the following bleeding precautions:
   a. No rectal temperatures, enemas, or suppositories
   b. Do not use a straight razor or nail clippers
   c. Use a soft toothbrush
   d. Wear slippers when ambulatory; protect the feet
   e. Do not pick at scabs or wounds
   f. Avoid activities that may cause cuts or bruising
   g. Avoid aspirin-containing drugs; take Coumadin at the same time each day
1. Instruct the patient to wear a MedicAlert bracelet to indicate that an anticoagulant is being taken.
2. Limit the diet according to the following instructions:
   a. Provide a list of foods containing vitamin K that should be avoided during the therapy
   b. Instruct the patient/caregiver not to take/administer over-the-counter multiple vitamins that contain vitamin K unless ordered by the physician
   c. Restrict alcohol intake
1. Instruct the patient/caregiver to report any bleeding; black, tarry stools; or blood in the urine.
2. If bleeding occurs, instruct the patient/caregiver to hold a pressure dressing to the site and to notify the home
health agency and physician.

3. Provide patient comfort measures.

NURSING CONSIDERATIONS

Draw a blood sample early in the morning to evaluate patient PT levels, and have the laboratory fax or phone in the results to the physician as soon as possible.

Instruct the patient not to take the daily dose of Coumadin until the physician has reviewed the laboratory results. Tell the patient that either the home health nurse or physician (decide who) will call the patient to confirm the correct Coumadin dosage.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Signs or reports of inappropriate bleeding
- Laboratory sampling for prothrombin time and designated laboratory for delivery
- Any patient/caregiver instructions and response to teaching, including adherence to recommendations
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Document medications on the medication record.

Update the plan of care.
Ear Instillation and Irrigation

PURPOSE

- To remove impacted cerumen from the auditory canal
- To improve impaired hearing caused by ear wax
- To remove purulent discharge or a foreign body
- To instill medication into the auditory canal

RELATED PROCEDURE

- Administration of Medications: General Guidelines

EQUIPMENT

1. Medication or irrigation solution as prescribed by the physician
2. Soft or small-bulb syringe
3. Sterile basin for solution
4. Emesis basin or bowl
5. Cotton balls and cotton-tipped applicators
6. Plastic sheet or garbage bag
7. Washcloth and towels
8. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

Instillation

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at the bedside or a convenient work area.
3. Assist the patient to a sitting or supine position. Drape a plastic sheet or towel around the patient’s shoulders to prevent discomfort from dampness.
4. Instruct the patient to turn his or her head with the affected ear held upward.
5. Straighten the auditory canal by holding the auricle upward and backward. For infants, pull the auricle down and back. Avoid excessive pressure.
6. Instill medication as ordered by the physician. Insert a small cotton ball in the external auditory canal.
7. Instruct the patient to remain in a position with the affected ear upward for about 10 to 15 minutes.
8. Remove the cotton ball, and assess for drainage. Dry the ear with a washcloth, as needed.
10. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

Irrigation

PROCEDURE

1. Follow steps 1 through 4 of the procedure for Instillation.
2. Warm the prescribed irrigation solution to body temperature.
3. Position the emesis basin under the patient’s ear that is to be irrigated. The patient may hold the emesis basin if he or she is able.

4. Straighten the auditory canal by pulling the auricle upward and backward. For infants pull the auricle down and back. Avoid excessive pressure.

5. Fill the syringe with the prescribed irrigation solution, expel the air, and gently insert the tip of the syringe into the external canal. Then gently irrigate the ear as prescribed by the physician. (Immediately stop the treatment and notify the physician if the patient complains of discomfort.)

6. Dry the external ear canal.

7. Apply a cotton ball to the external ear canal. Then position the patient on the side of his or her affected ear for 5 to 10 minutes to allow the remaining irrigation solution to drain out.

8. Follow steps 8 through 10 of the procedure for Instillation.

**NURSING CONSIDERATIONS**

Instruct the patient/caregiver in the procedure.

Instruct the patient/caregiver never to occlude the external auditory canal with the bulb syringe.

Forceful delivery of irrigation solution or medication into the ear canal can injure the eardrum.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Color, consistency, and amount of any discharge or drainage
- Any patient/caregiver instructions and response to teaching
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Document medications on the medication record.

Update the plan of care.
Enema Administration

PURPOSE

- To remove feces
- To soften feces
- To relieve abdominal distention and discomfort
- To promote normal bowel function

RELATED PROCEDURES

- Administration of Medications: General Guidelines
- Bowel Training (see Chapter 6)
- Fecal Impaction: Manual Removal (see Chapter 6)

EQUIPMENT

1. Cleansing solution, Fleet Enema, and oil retention enema as prescribed by the physician
2. Enema container with tubing and clamp
3. Water-soluble lubricant
4. Plastic trash bag or Chux pad
5. Bedpan
6. Soap and warm water, basin, tissues, washcloth, and towels
7. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

Cleansing Enema

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area. If available, position the bedside commode next to the bed.
3. Place a plastic bag or Chux under the patient’s hips.
4. Assist the patient to the left lateral Sims’ position, with knees flexed. A supine position with the knees flexed and the legs separated may also be used. Drape the patient with a sheet or towel to expose the anus.
5. Prepare the cleansing enema solution in a bag. Keep at room temperature. The volume of the solution should be no greater than 1000 ml.
6. Flush the tubing with cleansing solution, then clamp.
7. Lubricate the tip of the tubing, and gently insert it into the rectum approximately 3 to 4 inches with the tip pointing toward the umbilicus.
8. Hold the enema bag about 12 to 18 inches above the patient’s rectum. Unclamp the tubing, and slowly administer the solution. Instruct the patient to take slow, deep breaths. Clamp the tubing for a few minutes if the patient complains of cramps, then resume the irrigation.
9. Clamp and remove the tubing from the rectum after the solution has been administered or when the patient is unable to retain any more of the solution.
10. Instruct the patient to try to hold the solution for as long as possible (approximately 5 to 10 minutes). It may be helpful to press the patient’s buttocks together for 2 to 3 minutes to prevent evacuation of the solution.
11. Offer the bedpan or assist the patient to the bedside commode or the bathroom.
12. Provide patient comfort measures.
13. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

**Fleet Enema**

**PROCEDURE**

1. Follow steps 1 through 4 of the procedure for Cleansing Enema.
2. Remove the plastic covering from the prelubricated tip of the Fleet Enema bottle.
3. Gently insert the tip into the rectum (approximately 2 to 3 inches).
4. Gently squeeze the bottle until the Fleet solution has been administered.
5. Gently withdraw the tip.
6. Follow steps 10 through 13 of the procedure for Cleansing Enema.

**Oil Retention Enema**

**PROCEDURE**

1. Follow steps 1 through 4 of the procedure for Cleansing Enema.
2. Remove the plastic covering from the tip of the oil retention enema bottle. Lubricate the tip.
3. Gently insert the tip about 2 to 3 inches into the rectum.
4. Squeeze the bottle until the oil retention fluid is administered.
5. Gently withdraw the tip.
6. Follow steps 10 through 13 of the procedure for Cleansing Enema.

**NURSING CONSIDERATIONS**

Consider a bowel training program. Stress the importance of activity, a high-fiber diet, and adequate fluid intake to promote good bowel function.

Caution the patient/caregiver against excessive laxative, stool softener, or enema administration.

It is advisable to request a fecal disimpaction order when obtaining an enema order. Perform fecal disimpaction before administering an enema.

Warm the enema solution to room temperature (no more than 100° C [37.8° F]) to reduce cramping and patient discomfort.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Results, including the amount and color of the stool
- Presence of flatus or abdominal distention
- Any patient/caregiver instructions and response to teaching, including the ability to administer an enema and
maintain adequate bowel function
• Physician notification, if applicable
• Standard Precautions
• Other pertinent findings

Document the type of enema and the amount of solution administered on the medication record.

Update the plan of care.
Eye Compresses

PURPOSE

- To reduce pain and inflammation
- To control intraocular hemorrhage and to prevent tissue damage
- To promote drainage of an infected eye

RELATED PROCEDURE

- Administration of Medications: General Guidelines

EQUIPMENT

1. Eye compress solution or medication as prescribed by the physician
2. Basin of ice water
3. Gauze eye compresses
4. Thumb forceps
5. Sterile container
6. Bath thermometer
7. Lubricant for warm compresses (petroleum jelly)
8. Washcloths and towels
9. Disposable nonsterile gloves and impermeable plastic trash bags (see Infection Control)

Cold Compress

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at the bedside or a convenient work area.
3. Assist the patient to a supine position, with his or her head turned toward the uninvolved side.
4. Chill the prescribed solution in a basin of ice.
5. Place the compresses in a sterile container; then pour the chilled solution over the compresses. Squeeze the compresses as dry as possible with forceps.
6. Apply the compress over the patient’s lids.
7. Change the compress every 30 seconds to keep it cold for about 5 minutes. Use new compresses for each application.
8. Dry the patient’s eyelids with a washcloth when the last compress is removed.
10. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

Warm Compress

PROCEDURE

1. Follow steps 1 through 3 of the procedure for Cold Compresses.
2. Apply lubricant to the area where the compresses will be applied.
3. Soak the compresses in warm water and squeeze as dry as possible with forceps; then apply the compresses over the affected eye. (The solution is not to exceed 115° F.)
4. Use new compresses for each application. Change the compresses to keep the eye warm.
5. Provide patient comfort measures.
6. Clean and replace equipment. Discard disposable items according to Standard Precautions.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure, including the time and duration of the treatment, as well as patient toleration
- Condition of the eyes before and after treatment
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Document medications on the medication record.

Update the plan of care.
Eye Instillation and Irrigation

PURPOSE

- To instill or apply drops or ointment into the eye
- To irrigate and clean the eyeball or eye socket
- To treat infections and relieve inflammation

RELATED PROCEDURE

- Administration of Medications: General Guidelines

EQUIPMENT

1. Medication, ointment, or irrigation solution as prescribed by the physician
2. Tissues
3. Soft-bulb syringe or eye dropper
4. Emesis basin or bowl
5. Sterile cup for irrigation solution
6. 4- x 4-inch gauze pads
7. Cotton balls
8. Plastic sheet and garbage bag
9. Washcloth and towels
10. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

Eye Drops

PROCEDURE

1. Review the physician’s orders designating which eye requires medication:
   - o.d. (oculus dexter)—right eye
   - o.s. (oculus sinister) —left eye
   - o.u. (oculus uterque)—both eyes
2. Explain the procedure to the patient/caregiver.
3. Assemble the equipment at a convenient work area.
4. Assist the patient to a sitting position with his or her head tilted slightly backward or supine and the neck slightly hyperextended.
5. Inspect the eye for drainage or redness, and wipe away any discharge. Gently clean any crust or drainage along the eyelid with a damp washcloth. Always clean the eye from the inner to outer canthus.
6. Inspect the color and appearance of the noninvolved eye.
7. Using the forefinger, gently pull down the patient’s lower lid. Ask the patient to look up at the ceiling.
8. Drop the prescribed number of drops into the middle of the patient’s lower lid. (Do not touch the eye with the dropper; steady your hand by resting it lightly on the patient’s forehead.)
9. Instruct the patient to close his or her eyes, but not to squeeze the eyes shut.
10. Wipe off excess medication with a tissue or gauze.
11. Provide patient comfort measures.
12. Clean and replace the equipment. Discard disposable items according to Standard Precautions.
Eye Irrigation

PROCEDURE

1. Follow steps 1 through 6 of the procedure for *Eye Drops*.
2. Position and drape the patient with a plastic sheet or towel to facilitate the drainage of the fluid away from the eye.
3. Place a towel underneath the patient's face. Place an emesis basin or bowl under the patient's cheek on the side of the affected eye to collect irrigation solution.
4. Pour irrigation fluid into a sterile cup, and draw up the irrigation fluid into the bulb syringe.
5. Separate the patient's eyelids with your thumb and index finger and have the patient look up. Gently direct the fluid flow from the inner to the outer canthus. Do not touch the patient's eye area or lid with the syringe.
6. Continue irrigating as prescribed by the physician or until the secretions are cleaned from the eye.
7. Follow steps 9 through 12 of the procedure for *Eye Drops*.

Eye Ointment

PROCEDURE

1. Follow steps 1 through 6 of the procedure for *Eye Drops*.
2. Squeeze a small amount of ointment from the tube into a 4- x 4-inch gauze pad, and discard.
3. Pull the patient's lower lid gently downward while having the patient look up.
4. Apply a thin line of ointment along the conjunctival surface of the retracted lower lid with the tip of the ointment tube. (Do not touch the patient's eye with the medication tube.)
5. Instruct the patient to close his or her eye and rotate the eyeball. Rub the patient's lid lightly without traumatizing the eye to distribute the medication.
6. Wipe off the tip of the ointment tube with a 4- x 4-inch gauze pad.
7. Follow steps 9 through 12 of the procedure for *Eye Drops*.

NURSING CONSIDERATIONS

Instruct the patient/caregiver to avoid touching the eye with the applicator when administering drops or ointment.

Temporary blurring of vision is common for certain medications, and the patient should be informed of this.

Explain that the medication is to be used only by the patient.

If the patient is receiving both eye drops and eye ointment, the drops are to be instilled before the ointment.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Condition and appearance of the eye, including signs of redness, swelling, or inflammation
• Which eye received medication or irrigation
• Any patient/caregiver instructions and response to teaching, including the ability to administer eye drops
• Physician notification, if applicable
• Standard Precautions
• Other pertinent findings

Document medications on the medication record.

Update the plan of care.
Gold Injection

PURPOSE

- To reduce joint/muscle pain and inflammation
- To retard the progression of bone and articular destruction

RELATED PROCEDURES

- Administration of Medications: General Guidelines
- Injections

GENERAL INFORMATION

Gold injections are usually given to treat active rheumatoid arthritis. The three most commonly used preparations are gold sodium thiomalate, aurothioglucose, and auranofin. The medication is administered by intramuscular injection.

A protein urine test and other baseline laboratory values to include a complete blood count (CBC) and platelet count are recommended before the initial dose; consult with the physician regarding blood work. Monitor laboratory blood values every 2 weeks while therapy is in progress.

Gold therapy decreases the pain, swelling, and inflammation of rheumatoid arthritis and slows the progression of the disease. However, it does not repair damaged tissue. Anticipate improvement within 3 months; otherwise the drug should be discontinued.

EQUIPMENT

1. Medication as ordered by the physician
2. 3 cc syringe
3. 1½- to 2-inch, 19- to 23-gauge needle
4. Antiseptic wipes
5. Disposable nonsterile gloves, sharps container, and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Place the patient in a supine position for the injection.
4. Follow the procedure for Intramuscular (IM) Injections.
5. Discard the needle in a sharps container.
6. Provide patient comfort measures.
7. Observe the patient for at least 15 minutes after the procedure (watch carefully for signs of anaphylaxis).
8. Clean and replace equipment. Discard disposable items in a plastic trash bag according to Standard Precautions and secure.
NURSING CONSIDERATIONS

The color of gold is pale yellow; discard if the color has darkened.

Injectable gold is one of the most toxic second-line antirheumatic drugs; many patients stop therapy because of undesired side effects. Common side effects include dermatitis, skin pigmentation with pruritus, and stomatitis. More serious side effects include renal dysfunction and hematologic reactions (e.g., anemia, leukopenia, and thrombocytopenia).

The injection should **not** be given if the patient has positive urine protein as related to potential renal side effects.

Explain to the patient that gold storage in the skin may lead to chrysiasis (a bronze or grey-blue color).

Instruct the patient/caregiver to report sore throat, fever, or bruising to physician.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration; injection site
- Any patient/caregiver instructions and response to teaching
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Document medications on the medication record.

Update the plan of care.
Injections

PURPOSE

- To inject medications parenterally, either intramuscularly, subcutaneously, or by the Z-track route, depending on the action of the drug and the rate of absorption

RELATED PROCEDURE

- Administration of Medications: General Guidelines

GENERAL INFORMATION

A maximum of 3 ml may be given to adults intramuscularly (IM) in the vastus lateralis and gluteal sites. A maximum of 2 ml may be given to adults IM in the deltoid area. The physician’s order for a medication to be given intramuscularly or subcutaneously implies that the standard injection sites will be used according to the state nurse practice acts.

Intramuscular (IM) Injections

EQUIPMENT

1. Medication (fluid volume not to exceed 3 ml in the single adult injection) as prescribed by the physician
2. 3 cc syringe
3. 1½-inch, 18- to 20-gauge needle
4. Antiseptic wipes
5. Nonsterile disposable gloves, sharps container, and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Verify the medication with the patient’s clinical record, and check the patient’s identity.
4. Position the patient to expose the injection site (deltoid, vastus lateralis, or gluteal). Drape the patient for privacy.
5. Prepare an injectable medication from an ampule or a vial in the following manner:
   a. Score the neck of the ampule and break the stem, using an antiseptic wipe as a protective cover to prevent cuts; hold the ampule either inverted or right side up; insert the needle into the center of the ampule opening, without allowing the needle to touch the tip or rim of the ampule; withdraw the correct medication volume; then remove the needle from the ampule, and expel the air bubbles
   b. Remove the metal cap from the vial, and clean the exposed rubber seal with an antiseptic wipe; insert air into the vial in the amount of medication to be withdrawn; invert the vial and keep the tip of the needle below the fluid level; withdraw the correct medication volume; then remove the needle from the vial and expel the air bubbles
   c. Replace the protective needle cap
   d. Change the needle on the syringe if you are withdrawing medication from a vial (this may dull the
Prepare the injection site by cleaning it with an antiseptic wipe. Begin at the center of the injection site and rotate outward in a circular motion (approximately 4 to 5 cm).
2. Remove the protective needle cap.
3. Inject the needle with a quick thrust at a 90-degree angle through the skin and into the muscle.
4. Aspirate for blood before injecting the medication. (If blood appears, withdraw the needle. Attach a new needle to the syringe, and reposition the needle to administer the injection.)
5. Inject the medication.
6. Apply pressure with an antiseptic wipe, and withdraw the needle.
7. Gently rub the site with an antiseptic wipe to distribute the medication.
8. Dispose of the needle in a sharps container.
10. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

Subcutaneous (SQ) Injections

EQUIPMENT
1. Medication (fluid volume not to exceed 1.5 ml in single adult injection) as prescribed by the physician
2. Syringe
3. ½- to 7/8-inch, 25- to 27-gauge needle
4. Antiseptic wipes
5. Disposable nonsterile gloves, sharps container, and an impermeable plastic trash bag (see Infection Control)

PROCEDURE
1. Follow steps 1 through 7 of the procedure for Intramuscular (IM) Injections.
2. Select the site for administration. SQ heparin is usually given in the stomach. Rotate the injection sites daily within single anatomic regions for repeated daily SQ insulin injections.
3. Pinch the skin between the thumb and forefinger. Firmly and quickly insert the needle at a 45-degree angle.
4. Inject the medicine. Do not rub the injection site after SQ heparin administration because this may cause bruising or bleeding.
5. Follow steps 13 through 15 of the procedure for Intramuscular (IM) Injections.

Z-Track Intramuscular Injections

GENERAL INFORMATION
Staining of the skin can occur with some intramuscular injections if any solution leaks into the subcutaneous tissue. Give Z-track injections in the upper-outer quadrant of the buttocks; never give Z-track injections in the arm or in other exposed areas. Subsequent injections should be made in alternating buttocks. Iron dextran (Imferon) is the major drug administered by the Z-track method.

EQUIPMENT
1. Medication as prescribed by the physician
2. Syringe
3. Two 1½-inch, 20-gauge needles
4. Antiseptic wipes
5. Disposable nonsterile gloves, sharps container, and an impermeable plastic trash bag (see *Infection Control*).

**PROCEDURE**

1. Follow steps 1 through 7 of the procedure for *Intramuscular (IM) Injections*.
2. Instill an extra 0.5 cc of air in the syringe, and replace the needle with a second sterile needle. (Injection of 0.5 cc of air after the medication will clear the needle and prevent leakage along the injection track when the needle is withdrawn; this prevents staining of the skin.)
3. Displace subcutaneous tissue laterally (approximately 1½ to 2 inches) on the upper-outer quadrant of the buttocks. Maintain this position until the needle is withdrawn to prevent the leakage of medication into the subcutaneous tissue.
4. Insert the needle deep into the muscle at a 90-degree angle.
5. Pull back on the plunger to see whether the needle is in a blood vessel. (If it is, withdraw the needle; change the needle and re-position.)
6. *Slowly* inject the medicine. Wait 10 seconds; then apply pressure with an antiseptic wipe, and withdraw the needle while releasing the displaced tissue.
7. Do not massage the injection site. Massaging the area may cause the medication to leak into the subcutaneous tissue.
8. Follow steps 13 through 15 of the procedure for *Intramuscular (IM) Injections*.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration; injection site
- Any patient/caregiver instructions and response to teaching
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Document medications on the medication record.

Update the plan of care.
Nose Drops

PURPOSE

- To administer medications or drops into the nose
- To alleviate inflammation and congestion of mucous membranes
- To promote self-care in the home

RELATED PROCEDURE

- Administration of Medications: General Guidelines

EQUIPMENT

1. Medication or nose drops as prescribed by the physician
2. Tissues
3. Medicine dropper
4. Disposable nonsterile gloves (optional) and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at the bedside or a convenient work area.
3. Place the patient with his or her head well back in a sniffing position.
4. Instill the medication as prescribed by the physician, directing the flow toward the floor of the nasal cavity. Avoid touching the nostril with the dropper.
5. Maintain this position for approximately 5 minutes after instillation of the drops; then have the patient lower his or her head to eye level to allow the medication to flow to the lower part of the nose.
6. Provide patient comfort measures.
7. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Any patient/caregiver instructions and compliance with the procedure, including the patient’s ability to self-administer the nose drops
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Document medications on the medication record.

Update the plan of care.
Patient/Caregiver Self-Medication Errors at Home

PURPOSE

• To provide guidelines for potential home medication errors made by the patient/caregiver
• To safeguard the patient
• The promote self-care in the home

RELATED PROCEDURE

• Administration of Medications: General Information

GENERAL INFORMATION

Medication errors are common among the elderly because of problems with using multiple medications and compliance. Typical problems include taking medicines at the wrong times, taking medicines that are old and out of date, or not taking the medicine that has been prescribed. Follow home health agency policy and complete an incident report as needed for medication incorrectly administered by the home health nurse.

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assess compliance with the medication regimen and identify any prescribed medicine taken incorrectly or omitted. See the patient instruction recommendations in the procedure for Administration of Medications: General Information.
3. Inform the home health agency clinical supervisor and the physician of any home medication error(s).
4. Assess for side effects of medication errors; notify the physician when appropriate.
5. Identify why the medication error happened. Assess the patient/caregiver for the following and take corrective actions:
   a. Does he or she know the purpose of the medicine?
   b. Is he or she correctly following prescribed dosage and scheduling?
   c. Does he or she know the side effects of the medicines and when to call the physician?
   d. Can he or she open the medicine bottles?
   e. Is he or she able to correctly administer the medication?
   f. Can he or she read the medication labels?
   g. Is he or she able to purchase or obtain the medications?
   h. Does he or she correctly store the medications?
   i. Does he or she know the difference between generic and brand name medications?
   j. Is the patient taking any medications not prescribed by the primary physician, including home remedies and over-the-counter medications?
   k. If the patient has difficulty with the medication regimen, is there a competent caregiver willing and able to assist the patient?
1. Remove inappropriate or unsafe medicines from the home as advised by the physician and home health agency.
2. Plan follow-up visits to assess the patient’s status.
3. Identify problems with nonparticipation with the medication regimen, and take corrective action. Consider a learning contract and/or use of adjunct support from the caregiver, family, friends, or homemaker service.
4. Reinforce information if learning difficulties are noted.
5. Provide patient comfort measures.

**NURSING CONSIDERATIONS**

Be aware that mental status changes or abrupt combative behavior may be related to patient self-medication errors.

Report to the physician changes in the patient’s condition or adverse side effects.

Instruct the patient/caregiver to notify the home health agency clinical supervisor and physician about any problems with medications.

Consider a social service referral if the patient cannot afford to buy his or her medications.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Medicine(s) given or taken incorrectly
- Patient’s cardiopulmonary status and level of consciousness
- Why the medication error happened and corrective actions taken
- Learning difficulties or problems with comprehension, if reinforcement of medication teaching is necessary
- Any patient/caregiver instructions and response to teaching, including the ability to safely administer medications
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Complete an incident report as requested.

Update the plan of care.
Prefilling Insulin Syringes

PURPOSE

- To provide the correct amount of insulin for patients who do not have an available caregiver and who are unable to draw up the insulin dose because of functional or visual disabilities
- To instruct the patient/caregiver in storage and handling of prefilled insulin syringes
- To promote self-care in the home

RELATED PROCEDURES

- Administration of Medications: General Guidelines
- Injections

EQUIPMENT

1. Insulin as prescribed by the physician
2. Insulin syringes
3. Antiseptic and alcohol wipes
4. Sharps container and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Verify the medication with the patient's clinical record.
4. Draw up the prescribed amount of insulin into the syringes. See the steps for preparing the medication from a vial in the procedure for Injections.
5. Instruct the patient/caregiver in the following:
   a. Keep all prefilled single or mixed insulin syringes refrigerated, and use them within 21 days
   b. Never store syringes vertically with the needle down; crystals may settle and clog the needle
   c. Re-suspend the preparation before giving the injection by rolling the syringe between the palms of your hands
   d. For consistent effect with mixtures of regular and NPH insulin, only use syringes that have been filled for at least 24 hours before injection; for example, on the day when the nurse visits and fills the syringes, use the syringe that was filled on the previous visit and not the freshly mixed syringe
   e. Administer the prefilled syringe at room temperature for optimal absorption; (take the syringe out of the refrigerator at least 1 hour before administering it)
   f. Place the used needles in a sharps container; keep the container out of the reach of children
1. Evaluate home diabetic management.
2. Clean and replace equipment. Discard disposable items according to Standard Precautions. {STOP}

NURSING CONSIDERATIONS

Review Fiscal Intermediary Guidelines for Medicare reimbursement when prefilling the patient’s insulin syringes.
Put prefilled syringes in the refrigerator crisper or out of sight; consider a locked box if drug abuse is a problem in the family or neighborhood.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Number of syringes that are prefilled
- Number of syringes that the patient has used since the last visit
- Unavailability of a caregiver and visual or functional disabilities that prevent the patient from drawing up his or her own insulin
- Any patient/caregiver instructions and response to teaching, including adherence with home diabetic management and the ability to administer prefilled insulin syringes
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Document medications on the medication record.

Update the plan of care.
Suppositories

PURPOSE

• To administer medications into the rectum
• To administer medications into the vagina
• To alleviate pain or discomfort
• To prevent infection
• To promote self-care in the home

RELATED PROCEDURE

• Administration of Medications: General Guidelines

EQUIPMENT

1. Medication (rectal or vaginal suppository) as prescribed by the physician
2. Water-soluble lubricant
3. Soap and warm water, basin, tissues, washcloth, and towel
4. Disposable nonsterile glove and an impermeable plastic trash bag (see Infection Control) [STOP]

Rectal Suppositories

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Verify the medication with the patient’s clinical record.
3. Assemble the equipment at a convenient work area.
4. Position the patient in a left lateral position.
5. Perform perineal care as needed. Drape the patient for privacy.
6. Remove the wrapper from the suppository, and lubricate it.
7. Separate the buttocks.
8. Gently insert the suppository with the index finger of a gloved hand, until it is beyond the internal sphincter.
9. Gently squeeze the patient’s buttocks together until the urge to expel the suppository has passed.
10. Cleanse the anal area with soap and water, and dry.
11. Provide patient comfort measures.
12. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

Vaginal Suppositories

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Verify the medication with the patient’s clinical record, and check the patient’s identity.
3. Position the patient in a supine position, with the knees flexed and the legs separated.
4. Perform perineal care as needed. Drape the patient for privacy.
5. Gently separate the patient’s labia, and insert the vaginal suppository as far into the vagina as it can be
inserted.
6. Provide patient comfort measures.
7. Discard disposable items according to *Standard Precautions*.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Any signs of rectal or vaginal drainage
- Any patient/caregiver instructions and response to teaching, including the ability to administer the suppository
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Document medications on the medication record.

Update the plan of care.
Topical Medications

PURPOSE

- To apply medication to the skin
- To promote self-care in the home

RELATED PROCEDURE

- Administration of Medications: General Guidelines

GENERAL INFORMATION

A variety of medications, such as lotions, ointments, and powders, may be applied to the skin. Review and follow the manufacturer’s recommendations when applying the medication to ensure maximal penetration and absorption. Avoid excessive application of topical medication; some ingredients can damage sensitive skin.

EQUIPMENT

1. Medication (cream, powder, patch, ointment, and spray) as prescribed by the physician
2. Cotton-tipped applicators or tongue blade
3. Sterile dressing and hypoallergenic tape
4. Soap and warm water, basin, washcloth, and towel
5. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Position and drape the patient to apply topical medication.
3. Remove the old medication, and prepare the skin or tissue for the new medication in the following manner:
   a. Wash the skin with soap and water, soak the affected area, or debride the tissue; pat dry
4. Apply topical medication in the following manner:
   a. Aerosol spray—shake the container; spray the medication for as long as directed, and follow the manufacturer’s directions for recommended distance to hold spray away from the skin (usually 6 to 12 inches); instruct the patient to turn his or her face away from the spray to prevent inhalation of medication; spray the medication evenly over the skin or tissue
   b. Cream, lotion, or ointment—put approximately 2 teaspoons of medication in the palm of your hand, rub it between your hands to soften and warm it, and spread the medication over the skin, using even strokes; follow the direction of hair growth to avoid causing folliculitis; repeat the procedure, until the appropriate area of skin is completely covered; if a suspension-based lotion is being used, shake the container vigorously before applying a small amount of the lotion to a pad or gauze dressing; apply with even strokes to the skin; repeat the procedure until the appropriate area of the skin is completely covered
   c. Nitroglycerin ointment—apply the prescribed inches over a paper measuring guide; evenly spread the ointment over the paper guide to promote maximal absorption; avoid applying the ointment on hairy surfaces or over scar tissue because this inhibits absorption; record date and time of day, and initial the paper; cover the paper with plastic wrap, and secure it with tape as needed
   d. Patch—remove the patch from its protective wrapper; hold the patch by the edge—do not touch the
adhesive edges; immediately apply the patch, pressing it firmly with the palm of one hand for 10 to 15 seconds; as prescribed by the physician, remove the patch, and choose a different site to apply a new patch; record date and the time of day, and initial the patch

e. **Powder**—ensure that the skin surface is completely dry to minimize caking and crusting; completely spread apart the skin folds; lightly dust with a shake dispenser until the area is covered with a fine, thin layer of powder; powders wear off easily

1. Apply dressing as prescribed by the physician. Secure with hypoallergenic tape as needed.
2. Assist the patient to a comfortable position, and help to dress him or her as needed.
3. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

**NURSING CONSIDERATIONS**

To prevent accidental exposure to the medication, wear gloves and use applicators as appropriate.

Do not apply new medication over old medication or over encrusted areas of dead tissue; this prevents absorption and has little therapeutic effect. Always clean the skin with soap and water or debride the tissue of old medication and encrustation before applying new medication.

Instruct the patient/caregiver on how to apply topical medication.

See the patient instruction recommendations in the procedure for Administration of Medications: General Guidelines.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Site used for application of topical medication
- Condition of the skin or tissue before the application
- Any patient/caregiver instructions and response to teaching, including the ability to apply topical medication
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Document medications on the medication record.

Update the plan of care.
Tuberculin (TB) Skin Test

PURPOSE

- To identify patients with a reaction to the Mantoux antigen

RELATED PROCEDURES

- Administration of Medications: General Guidelines
- Implementing a Tuberculosis Control and Personal Respiratory Protection Program (see Chapter 1)
- Injections

EQUIPMENT

1. Intermediate-strength purified protein derivative (PPD); 0.1 ml of 5 tuberculin units (TUs) as ordered by the physician
2. Tuberculin syringe and needle (1/2- to 7/8-inch, 27-gauge needle)
3. Tape measure
4. Antiseptic wipes
5. Disposable nonsterile gloves, sharps container, and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Verify the medication with the clinical record, and check the patient’s identity.
3. Assemble the equipment at a convenient work area.
4. Review the steps to withdraw medication from a vial in the procedure for Injections.
5. Select the injection site for easy interpretation (three to four fingers width below the antecubital space and a handbreadth above the wrist).
6. Remove the cap from the needle.
7. Hold the patient’s skin taut between your thumb and forefinger.
8. Insert the needle at a 15-degree angle, just under the skin.
9. With bevel up, slowly inject tuberculin into the epidermis to form a wheal 6 to 10 mm in diameter. Do not massage the site.
11. Clean and replace the equipment. Discard disposable items according to Standard Precautions.
12. Read the results 48 to 72 hours after the test has been administered.
13. Inspect and palpate the area for induration.
14. Measure the induration transverse to the long axis of the forearm. A significant reaction is an area of induration (not redness) of 5 mm or more.
15. Notify the patient and physician if the results are significant. The Centers for Disease Control and Prevention support the following classification of the tuberculin reaction:
   a. A tuberculin reaction of 5 mm or more is considered positive in the following groups:
      - Persons who have had close, recent contact with a patient with infectious TB
      - Persons who have a chest x-ray with lesions characteristic of an old healed TB lesion
      - Persons who have a known human immunodeficiency virus (HIV) infection or are at risk for HIV
b. A tuberculin reaction of 10 mm or more is considered positive for persons who may not meet the preceding criteria but who have other risk factors for TB, such as the following:
  • Foreign-born persons from countries with a high prevalence of TB
  • Intravenous drug users
  • Residents of long-term care facilities
  • Low-income or homeless persons with poor access to medical care, including high-risk racial and ethnic minorities
  • Persons with multiple medical problems that may increase the risk of TB once infection is present

A tuberculin reaction of 15 mm or more is classified as positive in all other persons.

**NURSING CONSIDERATIONS**

Administer the skin test soon after the syringe has been filled to avoid contamination and leeching of the tuberculoprotein into the syringe.

If the first test was improperly administered, retest, selecting a site several centimeters away from the original site.

Patients with a positive PPD must have a physician verify a negative chest x-ray and sputum culture in the clinical record.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Induration recorded in millimeters
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Document the date and time of the initial test, any retest, and the final results.

Document the following on the medication record:

- Antigen name
- Strength
- Lot number
- Dosage
- Route
- Site of administration

Update the plan of care.
Aphasia Care

PURPOSE

- To assist patients to communicate their needs
- To promote the recovery of language
- To promote self-care in the home

RELATED PROCEDURES

- Clinical Indicators for a Rehabilitation Referral: Occupational Therapy (see Chapter 16)
- Clinical Indicators for a Rehabilitation Referral: Speech Therapy (see Chapter 16)

EQUIPMENT

1. Blackboard, chalk, eraser, paper, pen and pencil
2. Magazines
3. Pictures and paintings
4. Flash cards
5. Games
6. Money

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assess the extent of the communication limitations, the degree of comprehension, and the ability to respond with understandable speech patterns. Evaluate the patient’s ability to swallow.
4. Approach the patient in a calm and unhurried manner.
5. Establish eye contact, and talk to the patient while you perform the nursing procedures.
6. Speak slowly and distinctly in a normal volume. Use simple words or short sentences, depending on the patient’s ability to comprehend.
7. Use gestures and pointing as references of communication.
8. Provide realistic support that is considerate of the individual’s limitations.
9. Encourage the patient in social interaction and involvement.
10. Use the blackboard, pictures, magazines, cards, paper, pencil, and money to stimulate communication and comprehension.
11. Allow the patient/caregiver to ventilate his or her feelings and concerns.
12. Encourage a working and trusting relationship with the patient/caregiver.
13. Provide patient comfort measures.

NURSING CONSIDERATIONS

It may take a long time for the patient to relearn speech and communication.

The patient may feel depressed or frustrated.
Work within the patient’s individual limitations in a caring and humanistic manner.

Consult with the physician for speech and occupational therapy referrals.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The patient’s progress in reading, verbalization, and comprehension
- Any patient/caregiver instructions and response to teaching, including the ability to communicate needs during emergencies, such as fires or chest pain
- Physician notification, if applicable
- *Standard Precautions*

Update the plan of care.
Arm Sling

PURPOSE

- To elevate and support the upper extremities with correct body alignment
- To promote self-care in the home

EQUIPMENT

1. Arm sling (triangle or manufactured)
2. Safety pins

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Place the patient in a sitting position.
4. Position the sling so that the point of the triangle is beyond the patient’s elbow, with the sides of the triangle or strap of the sling over the injured shoulder.
5. Place the patient’s elbow at a right angle, and apply the sling.
6. Bring ends of the sling over the shoulder. The patient’s hand should be raised approximately 5 inches above the elbow when the knot is tied.
7. Tie and knot the two ends of the sling at the side of the patient’s neck. (Many slings have buckles or Velcro straps for a correct fit; follow the manufacturer’s recommendations for adjustment.)
8. Avoid putting pressure of the knot and straps over the spine. Evaluate for comfort, and adjust as necessary.
9. Bring the apex of the sling forward, and secure it with safety pins.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Time of application
- Temperature and color of fingers
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Cane

PURPOSE

- To promote patient balance and support when walking
- To instruct the patient how to ambulate with a cane
- To promote self-care in the home

RELATED PROCEDURE

- Transfer Belt

EQUIPMENT

1. Rubber-tipped cane, quad cane
2. Transfer belt as needed

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Place the transfer belt around the patient’s waist according to the Transfer Belt procedure.
4. To ambulate, instruct the patient to do the following:
   a. Hold the cane on the uninvolved side, close to the body; walk with a steady, even gait using the cane as support
5. To ascend the stairs, instruct the patient to do the following:
   a. Ascend stairs that have a railing by stepping up with the uninvolved leg and then follow with the involved leg
   b. Ascend stairs without a railing by holding the cane on the uninvolved side, close to the body; lead with the cane; step up, using the uninvolved leg and then follow with the involved leg
6. To descend stairs, instruct patient to do the following:
   a. Descend stairs that have a railing by stepping down using the involved leg and then follow with the uninvolved leg
   b. Descend stairs without a railing by holding cane on uninvolved side, close to the body; lead with the cane; step down using the involved leg and then follow with the uninvolved leg
7. To sit down, instruct patient to do the following:
   a. Place the cane near or against a chair for easy reach when standing; stand with the back of the legs against the edge of the seat of the chair; grasp the chair armrests with both hands; slowly lower self into the chair
8. To stand up, instruct patient to do the following:
   a. Grasp the armrests of the chair; place the involved foot/leg slightly forward; using the armrests for support, push up to rise from chair; ambulate with the cane as previously instructed
9. Remove the transfer belt from around the patient’s waist.
11. Clean and replace equipment. Discard disposable items according to Standard Precautions.
DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Any patient/caregiver instructions and response to teaching, including the ability to ambulate with a cane
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Cast Care

PURPOSE

- To maintain the integrity of the cast
- To provide the patient/caregiver with guidelines for cast care at home
- To promote self-care in the home

RELATED PROCEDURE

- Arm Sling

EQUIPMENT

1. Arm sling
2. Silk or adhesive tape
3. Damp cloth, scouring powder or Woolite as needed
4. Lotion
5. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Instruct the patient how to perform isometric exercise. Instruct the patient to move all joints above and below the cast.
3. Instruct the patient not to walk on a leg cast for the first 48 hours.
4. When walking is permitted by the physician, instruct the patient to walk on the walking heel portion of the cast.
5. Position the upper-extremity casts with the fingers raised above the elbow; place a pillow under the elbow.
6. Use an arm sling to support an arm cast.
7. Position the lower-extremity cast with the foot raised above the hip; place a pillow under the ankle.
8. Every 2 hours turn the patient who is in a large spica cast, and give meticulous hygienic care. (Additional help will be required to turn the patient. Move the patient as a unit. Do not grasp the bar of the spica cast to move the patient.)
9. Inspect the patient’s fingers and toes for adequate circulation; assess for swelling, coldness, blanching, and excessive pain. Notify the physician if signs of inadequate circulation are apparent.
10. Observe the cast for areas of pressure and for constriction of circulation. Petal the rough edges of the cast with silk or adhesive tape to prevent skin irritation. (The physician is responsible for trimming the cast.)
11. Do not let a plaster cast get wet because it weakens the cast. Instruct the patient/caregiver to cover the plaster cast with a plastic trash bag during baths to keep the cast dry. Use a towel or a hair dryer to dry the cast if it should become damp.
12. Clean spots off the cast with a damp cloth and scouring powder.
13. Consult with the physician regarding recommendations for skin care when the cast is removed. Consider the following suggestions:
   a. Once the cast is off, soften and remove flakes of skin with a damp cloth and Woolite (Woolite contains enzymes that loosen the dead cells, and they wash off without injuring healthy tissue)
   b. Wash the area with warm water and Woolite
c. Leave the Woolite-soaked washcloth on the skin for 5 minutes; rinse thoroughly, and pat dry
d. Apply moisturizing lotion to the area
e. Wash the area with warm water and Woolite the next day; the skin should look nearly normal

1. Provide patient comfort measures.
2. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Instruct the patient not to insert objects under the cast to avoid damaging the skin or causing an infection.

Use powders and lotions on the skin outside the cast to keep the skin clean, soft, and supple.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

• The procedure and patient toleration
• Condition of the cast
• Patient toleration, color, and temperature of the extremities
• Any swelling or discomfort
• Any patient/caregiver instructions and response to teaching
• Physician notification, if applicable
• Standard Precautions
• Other pertinent findings

Update the plan of care.
Elastic Bandage

PURPOSE

• To limit movement and provide support
• To secure dressings and splints
• To alleviate edema in the lower extremities
• To promote self-care in the home

GENERAL INFORMATION

Apply the elastic bandage or Ace wrap over a clean area with the extremity and the body in good alignment. If applying the bandage over a wound, aseptically dress the wound before applying the bandage. Apply the elastic bandage from the distal to the proximal part of the body to aid in the return of venous blood to the heart. Leave the toes and fingers visible. Elastic bandages should be applied evenly, overlapping one half to two thirds of the width of each bandage. The distal portion of the bandage should be left exposed so that any restriction in circulation can be detected.

The free roller end of the bandage is called the initial portion, the rolled portion is called the body, and the opposing end of the bandage is called the terminal end. The following describes the two common turns used in bandaging:

1. The circular turn is used to bandage a cylindrical part of the body or to secure a bandage at its initial and terminal ends. The bandage should be wrapped about the extremity in such a way that each turn exactly covers the previous one. Two circular turns are usually used to initiate and to terminate a bandage.

2. The figure-of-eight turn is commonly used at a joint, but it may also be used to bandage the entire length of an arm or a leg; it consists of repeated oblique turns that are made alternately above and below a joint in the form of a figure-of-eight.

EQUIPMENT

1. Two to four Ace bandages, 3 inches or 4 inches wide
2. Fasteners or safety pins
3. Supplies to clean/dress around the wound if applicable
4. Disposable sterile and nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Place the patient in a sitting or supine position, and expose the extremity to be wrapped.
4. Make sure that the extremity is clean and aligned with the body. Dress the wound as required.
5. Begin bandaging by holding the initial portion in place with one hand, while the other hand passes the roll around the area being wrapped. If the patient is ambulatory, do not start the initial portion of the bandage on
the sole of the foot.
6. Bandage from the distal to the proximal and from the medial to the lateral, overlapping one half to two thirds of the width of each wrap.
7. Once the bandage is anchored, pass the body of the bandage from hand to hand, being careful to exert equal tension. Secure the terminal end of the bandage with fasteners.
8. Launder bandages with soap and water when they become soiled; air dry. Reapply clean bandages.
10. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Assess for signs or symptoms of impaired circulation, such as pulses, pallor, erythema, cyanosis, or numbness; remove the bandage and report to the physician as needed.

Instruct the patient/caregiver to remove, rewrap, and reapply clean bandages daily.

Ideally, bandages should be put on before getting out of bed in the morning because edema begins as soon as the lower extremities are dependent.

Always check the condition of the skin before reapplying the bandage.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- Area bandaged
- Time of application and size of bandage
- Skin condition
- Color and temperature of skin
- Any patient/caregiver instructions and response to teaching, including the ability to apply bandages
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Hoyer Lift

PURPOSE

- To assist the patient out of the bed using a Hoyer lift
- To instruct the caregiver how to use the Hoyer lift
- To promote self-care in the home

EQUIPMENT

1. Hoyer lift, including sling and chains
2. Wheelchair or chair

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area. Position the Hoyer lift and wheelchair/chair for smooth transfer of the patient.
3. Position the patient in the center of the bed.
4. Roll the patient toward you.
5. Fold the Hoyer lift sling halfway under the patient so that the lower edge of the sling is slightly below the patient’s knees.
6. Go to the opposite side of the bed.
7. Roll the patient over the sling and pull the sling out flat.
8. Position the Hoyer lift with the arms perpendicular to and directly over the patient. The Hoyer lift base legs should be spread wide apart.
9. Connect the Hoyer lift chains to the sling. Connect the other ends of the Hoyer lift chains to side arms of the lift.
10. Instruct the patient to keep his or her arms inside the chains with the arms folded across the chest.
11. Slowly pump the Hoyer lift hydraulic handle to raise the patient from the bed.
12. As soon as the patient is clear of the bed, swing him or her away from the bed.
13. Immediately position the patient over the wheelchair/chair.
14. Press the Hoyer lift hydraulic release valve, and stabilize the patient while slowly lowering him or her into the wheelchair/chair.
15. Remove the Hoyer lift hooks and chains; keep the patient seated on the Hoyer lift sling.
17. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Instruct the caregiver in the procedure. Instruct the caregiver to never leave the patient while the patient is in the Hoyer lift.

Reverse the procedure to return the patient back to the bed.

DOCUMENTATION GUIDELINES
Document the following on the visit report:

- The procedure and patient toleration
- Any patient/caregiver instructions, including the caregiver’s ability to safely use the Hoyer lift
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Pain Management

PURPOSE

- To provide effective pain relief

RELATED PROCEDURES

- Intravenous Therapy (see Chapter 8)
- Medications (see Chapter 10)
- Pain Assessment (see Chapter 2)
- Positioning and Seating the Immobilized Patient (see Chapter 3)
- Range of Motion Exercises: Passive
- Skin Care (see Chapter 5)
- Transcutaneous Electrical Nerve Stimulation (TENS)

GENERAL INFORMATION

Pain is usually a result of anoxia, inflammation, or tearing or stretching of bone or soft tissue. To be successful, pain management must be tailored to the individual patient’s needs, which vary with diagnosis, stage of disease or type of disability, response to pain, and personal preference as well as cultural considerations for control of pain. See the procedure for Pain Assessment in Chapter 2; a thorough pain assessment must precede intervention strategies. Review specific intravenous (IV) therapy procedures in Chapter 8 for administration of parenteral therapies. Review the procedures for other medication administration techniques in Chapter 10.

PROCEDURE

1. Take part in a case conference with the physician and multidisciplinary team. Mutually identify pain intervention strategies and techniques acceptable to the patient/caregiver.
2. Consider the following intervention strategies for nonpharmacologic management of pain:
   a. Provide cutaneous stimulation therapy (e.g., applications of superficial heat and cold, pressure or vibration to relieve muscle pain or tension)
   b. Encourage patients to remain active and participate in self-care when possible
   c. Avoid prolonged immobilization to prevent joint contracture, muscle atrophy, decubitus, etc.; provide range of motion exercises, and reposition the bedbound patient on a scheduled basis
   d. Instruct in relaxation therapy or guided-imagery exercises
   e. Provide counter stimulation therapy (e.g., acupuncture or transcutaneous electrical nerve stimulation [TENS])
   f. Provide good skin care to prevent breakdown and decubitus formation
   g. Correctly position and seat the chairbound patient to promote comfort and to prevent skin breakdown
   h. Provide therapeutic touch
   i. Offer information about community resources that provide spiritual care and support of the patient/caregiver

1. Consider the following guidelines for pharmacologic pain management:
   a. Individualize the pain medication regimen according to the patient’s needs
   b. Plan to use the simplest dosage schedules and least invasive pain management modalities first
   c. The oral route is the preferred route of analgesic administration because it is the most convenient and
cost-effective method of administration; when patients cannot take medications orally, transdermal and rectal routes should be considered because they are also relatively noninvasive; avoid intramuscular administration of pain medication because this route can be painful and inconvenient, and absorption is not reliable; intravenous or subcutaneous routes are effective alternatives; analgesics may be administered intraspinally or by an intraventricular route when pain cannot be controlled by other methods
d. Pharmacologic management of mild to moderate pain should include a nonsteroidal antiinflammatory drug (NSAID) or acetaminophen (unless contraindicated); if pain persists, add an opioid; treatment of persistent or moderate to severe pain should be based on increasing the opioid potency or dose
1. Instruct the patient/caregiver in pain management intervention strategies.

NURSING CONSIDERATIONS

Be aware that respiratory depression and constipation are common side effects of opioid administration.

When administering pain medication, identify whether the patient has any concurrent medical condition(s) that may place him or her at risk for liver or renal failure. Patients with respiratory disease are more vulnerable to the respiratory depressant effect of opioids. Neurologic disorders can influence pain management if they produce weakness of the respiratory muscles or impair alertness so that the sedative effect of opioids are exaggerated. Patients with psychiatric illnesses must be carefully evaluated for drug interactions between any psychotropic drug and pain medication that they may take.

Consult with the physician and treat anticipated procedure-related pain prophylactically. When possible, administer pharmacologic agents by a painless route.

Opioid tolerance and physical dependence are expected with long-term opioid treatment and should not be confused with psychologic dependence (addiction), manifested as a drug-abuse behavior.

Specific drug-abuse behavior in the postoperative patient or his or her caregiver should be recognized and dealt with as quickly as possible. Opioid medications should be prescribed by only one physician, and attempts to circumvent this restriction or to falsify prescriptions should not be tolerated. The claim of needing additional medication to make up for lost or stolen controlled substances should be accompanied by documentation that the patient/caregiver has reported this to the police.

DOCUMENTATION GUIDELINES

See the documentation guidelines for Pain Assessment in Chapter 2.
Range of Motion Exercises: Passive

PURPOSE

- To maximize muscle tone
- To increase or maintain joint flexibility
- To increase peripheral circulation
- To improve functional mobility
- To prevent skin breakdown
- To promote self-care in the home

RELATED PROCEDURES

- Clinical Indicators for a Rehabilitation Referral: Physical Therapy (see Chapter 16)
- Skin Care (see Chapter 5)

PROCEDURE

1. Assess the need for range of motion (ROM) exercises:
   a. Presence of contracture
   b. Unsteady gait
   c. Limited movement
   d. Poor endurance or strength
1. Explain the procedure to the patient/caregiver.
2. Perform ROM using caution:
   a. Keep movements pain-free
   b. Do not use force to go beyond the patient’s point of resistance
   c. Handle the patient gently because osteoporosis may be present
   d. Avoid extremes of internal rotation, flexion, and adduction status after hip repair or when hip prothesis is present
1. Perform ROM in a slow, rhythmic fashion:
   a. Head and neck—flex, extend, and rotate the neck; if passive, support the head and gently move it
   b. Shoulder—stabilize the shoulder girdle, and move the arm; perform flexion, extension, abduction, adduction, internal and external rotation, hyperextension, and circumduction
   c. Elbow—stabilize the upper arm, and move the forearm; perform flexion, extension, supination, and pronation
   d. Wrist—stabilize the forearm, and move the hand; perform flexion, extension, and hyperextension
   e. Joints of fingers—stabilize the hand, and move the fingers; perform flexion, hyperextension, abduction, and adduction
   f. Thumb—stabilize the fingers and wrist; flex, extend, adduct, abduct, and bring the thumb to the finger (opposition)
   g. Hip—with the patient in the prone position stabilize the pelvis, and move the thigh; perform abduction, adduction, internal and external rotation, extension, hyperextension, flexion, and circumduction
   h. Knee—with the patient in the prone position stabilize the thigh, and move the leg; perform flexion and extension
   i. Ankle and foot—stabilize the leg, and move the foot; perform dorsiflexion, plantar flexion, eversion, and inversion
j. **Toes**—stabilize the foot, and move the toes; perform adduction and abduction

1. Evaluate patient response to the ROM exercise regimen; does the patient exhibit increased mobility and flexibility of joints? Is the patient’s activity level improved?

**NURSING CONSIDERATIONS**

If pain or resistance occurs, discontinue the exercise and notify the patient’s physician.

Consult with the physician for a physical therapy or occupational therapy referral for problems with functional limitations.

Institute a skin-care regimen for problems with immobility.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure, including ROM exercises performed, and patient toleration
- Condition of the patient’s skin
- Any patient/caregiver instructions and response to teaching, including the ability to perform range of motion exercises and the ability to perform activities of daily living (ADLs)
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Update the plan of care.
Stump Wrapping

PURPOSE

- To prevent flexion deformities and shrinkage of the stump
- To protect the stump
- To promote self-care in the home

EQUIPMENT

1. 3- or 4-inch elastic bandage or wraps
2. Fasteners or safety pins

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a comfortable sitting or supine position, and examine the stump.
4. Evaluate the stump for signs of healing and intact skin integrity.
5. Wrap the stump with elastic bandages in the following manner:
   a. Start recurrent vertical turns on the anterior surface of the stump; pass the bandage distally to the gluteal crease
   b. Anchor the recurrent turns beginning at lateral side, running posterior to medial
   c. Bring the bandage down and around the stump and then up again, using the oblique or figure-of-eight
   d. Keep the pressure of the bandage always up and out at the distal portion of the stump
   e. Start at the hip spica from the anterior medial aspect and run the bandage laterally across the anterior surface of the inguinal region
   f. Draw the bandage around the patient’s body on a level with the iliac crest
   g. Return the bandage to the stump with a figure-of-eight wrap, and draw it around the pelvis; finish by making oblique turns around the stump
   h. Anchor with safety pins
1. Launder the stump bandages with soap and water when they are soiled; air dry.
2. Reapply clean elastic bandages.
3. Provide patient comfort measures.
4. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Instruct the patient/caregiver to keep the stump hyperextended when the bandage is applied.

Apply moderate tension to the entire stump, being careful to guard against any tourniquet action at the proximal end of the stump.

Do not use circular turns because they tend to be constricting.

DOCUMENTATION GUIDELINES
Document the following on the visit report:

- The procedure and patient toleration
- Condition of the stump and surrounding skin
- Any patient/caregiver instructions and response to teaching, including the ability to wrap the stump
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Update the plan of care.
Support Devices: Care of Immobilized Patients

PURPOSE

• To prevent contractures and skin breakdown
• To promote self-care in the home

RELATED PROCEDURES

• Clinical Indicators for a Rehabilitation Referral: Physical Therapy (see Chapter 16)
• Skin Care (see Chapter 5)

Bedboard

PURPOSE

• To provide back support and body alignment

EQUIPMENT

1. Bedboard

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Position the patient in a chair, maintaining the proper body alignment.
4. Remove the mattress from the bed, and place the bedboard on top of the box springs.
5. Put the mattress back on the bed, and remake the bed.
6. Assist the patient to return to bed as desired.
7. Provide patient comfort measures.
8. Return the bedboard to the equipment company when it is no longer needed.

Bed Cradle

PURPOSE

• To keep linen pressure off affected extremity

EQUIPMENT

1. Bed cradle
2. Sheet

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Position the bed cradle directly over the area that needs the pressure alleviated.
4. Adjust the room temperature as the patient requests if the cradle covers a large area of the body.
5. Provide patient comfort measures.

Footboard

PURPOSE

- To provide correct body alignment and to prevent footdrop

GENERAL INFORMATION

Pad the footboard with a towel, sheet, or bath blanket if it is not padded.

EQUIPMENT

1. Footboard
2. Towel, sheet, or bath blanket for padding as needed

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Secure the footboard to the end of the bed.
4. Position the patient’s heels over the mattress edge when possible.
5. If the patient is in a supine position, position the patient so that the soles of the feet are flat against the footboard to prevent footdrop.
6. Encourage the patient to flex his or her toes against the footboard. (Consider the use of high top tennis shoes to prevent footdrop as an alternative or a supplement to the footboard.)
7. Inspect the patient’s feet every visit for pressure sores and for evidence of skin breakdown.
8. Provide patient comfort measures.

Hand Roll

PURPOSE

- To maintain the hand in the correct anatomic position
- To prevent contractures
- To prevent skin breakdown

EQUIPMENT

1. Hand roll (may improvise with a washcloth)
2. Hypoallergenic tape as needed

PROCEDURE
1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Instruct the patient/caregiver in the importance of daily hand care to prevent skin breakdown and odor.
4. Improvise a hand roll by using a rolled washcloth if the ready-made hand roll is not available.
5. Make sure that the hand roll is large enough to prevent finger flexion and to keep the thumb in a position of opposition.
6. If the hand roll slides out of place, anchor it to the patient’s hand with a gauze wrap. Secure with tape.
7. Replace the homemade hand roll daily.
8. Inspect the hand every visit for evidence of skin breakdown.

**Heel/Elbow Protector**

**PURPOSE**

- To prevent friction and skin breakdown

**EQUIPMENT**

1. Heel or elbow protectors

**PROCEDURE**

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Apply heel and/or elbow protectors. Keep the seams straight, and smooth out any wrinkles.
   a. **Heel protector**—slip on over the foot and ankle; make sure that the padded side is against the heel
   b. **Elbow protector**—slip on over the arm and onto elbow; make sure that the padded side is against the elbow
1. Instruct the patient/caregiver to remove the protectors once every 4 hours to check pressure areas and to correct placement.
2. Wash the protectors with soap and water as needed to keep clean.
3. Provide patient comfort measures.

**Pillows**

**PURPOSE**

- To elevate an extremity
- To support the patient in a constant position
- To prevent pressure sores and skin breakdown
- To prevent aspiration during tube feedings

**EQUIPMENT**

1. Pillows
PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Use pillows with a fabric cover.
4. Place the pillows to support, elevate, and prevent pressure sores as needed. (Placing the patient in a 30-degree oblique position when at rest will prevent pressure over bony prominences.)
5. Change the pillow cases when they are soiled.
6. Provide patient comfort measures.

Sheepskin

PURPOSE

• To reduce pressure to bony prominences
• To prevent skin breakdown

EQUIPMENT

1. Sheepskin

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Place a sheepskin under the area to be protected from skin breakdown. (Do not cover the sheepskin with multiple Chux pads or with a bedpan because this defeats the purpose of the sheepskin.)
4. Remove the sheepskin and launder if it becomes soiled.
5. Place a clean sheepskin under the patient.
6. Provide patient comfort measures.

Trochanter Roll

PURPOSE

• To control external rotation of the hip

EQUIPMENT

1. Trochanter roll
2. Rolled towel, bath blanket, or pillow for improvised trochanter roll as needed

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Ensure that the trochanter roll extends from the patient’s iliac crests to mid thigh.
4. The leg must be in the correct anatomic position: slightly abducted.
5. Provide patient comfort measures.

NURSING CONSIDERATIONS

Consult with the physician for rehabilitation referral for problems with functional limitations.

Instruct the patient/caregiver in the purpose, use, and correct application of all support devices.

Institute a skin-care regimen for problems with immobility.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Condition of the patient’s skin
- Any patient/caregiver instructions and response to teaching, including the ability to use support devices
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Thromboembolitic (TED) Hose

PURPOSE

• To reduce edema and swelling of the extremities
• To promote venous return
• To prevent thrombophlebitis and pulmonary embolism
• To promote self-care in the home

GENERAL INFORMATION

TED hose are usually indicated for patients at risk for deep vein thrombosis (e.g., patients who are elderly or bedridden or who have suffered stroke or undergone surgery).

EQUIPMENT

1. TED hose
2. Tape measure

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a sitting or supine position.
4. Measure the patient for TED hose:
   a. For calf or knee length—measure around the circumference of the patient’s calf at the widest point; measure the length of the patient’s leg from the bottom of the heel to the back of the knee
   b. For thigh length—measure around the circumference of the patient’s calf at the widest point; measure the patient’s leg length from the bottom of the heel to the gluteal fold
   c. For waist length—measure around the circumference of the patient’s calf and thigh at the widest points; measure the length of the patient’s leg from the bottom of the heel to the waist from the side
5. Insert your hand into the stocking as far as the heel pocket. Grasp the center of the heel pocket and turn the stocking inside out to the heel area. Carefully position the stocking over the foot and heel. Be sure that the patient’s heel is centered in the heel pocket. Put the stocking on in the following manner:
   a. For calf or knee length—pull the stocking up, and fit it around the ankle and calf, working to the final position; the top of the stocking is positioned approximately 1 inch below the knee caps; make sure that the heel and toe sections are positioned correctly; as needed, pull the toe section forward (or instep, in case of open toe to eliminate wrinkles and to allow for the patient’s comfort).
   b. For thigh length—begin pulling the body of the stocking up around the ankle and calf; the stitch change (change in fabric sheerness) should fall between 1 and 2 inches below the popliteal fossa; the final position of the gusset should center over the femoral artery; the top band rests in the gluteal folds; smooth out excess material; pull the toe section forward to smooth the ankle and instep areas and to allow for the patient’s comfort
   c. For waist length—follow the previous procedures to pull the stocking up over the thigh, until the top band of the hose fits in the patient’s gluteal folds; adjust the belt that comes with the waist-length stockings for a comfortable fit
6. Launder the TED hose with soap and water. Dry on a flat towel to prevent stretching. Reapply clean
stockings.
2. Provide patient comfort measures.

**NURSING CONSIDERATIONS**

Instruct the patient/caregiver to apply the stockings in the morning before the patient gets out of bed and edema develops.

Instruct the patient/caregiver not to turn down or roll down the top of the stocking because this may impair circulation.

Keep the patient’s legs in a nondependent position.

Check the color and temperature of the patient’s skin when the stockings are removed. Assess for signs of impaired circulation (discoloration, swelling, loss of sensation, or coolness of extremity); report to the physician as appropriate.

Hose should be replaced when they lose their elasticity or if the patient has significant weight fluctuations.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- The time the TED hose are put on and removed
- Type of stocking applied (stocking length and size)
- Condition of the skin and extremities before and after treatment
- Any patient/caregiver instruction and response to teaching
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Update the plan of care.
Transcutaneous Electrical Nerve Stimulation (TENS) Unit

PURPOSE

- To provide pain relief
- To promote self-care in the home

RELATED PROCEDURES

- Pain Assessment (see Chapter 2)
- Pain Management

GENERAL INFORMATION

The TENS unit is a pocket-sized, battery-operated device that provides mild, continuous electric current through the skin, using two to four electrodes. The TENS unit is used for pain control. The electrodes are taped to the skin with lead wires that connect the electrodes to the device. The mild electric current blocks or modifies the pain messages and replaces them with a buzzing sensation. It is also thought that the TENS unit may stimulate the body’s production of endorphin, a natural pain reliever.

EQUIPMENT

1. TENS unit
2. Electrodes
3. Hypoallergenic tape
4. Soap and water, lotion
5. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) 

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assess the quality, duration, and location of the patient’s pain.
4. Apply the TENS unit in the following manner:
   a. Apply a thin coat of gel over the electrodes
   b. Secure the electrodes to the skin (place the electrodes close to the site of the pain)
   c. Tape the electrodes to the skin for a secure fit
   d. Slowly turn on the output knob of the TENS unit, until the patient feels a slight tingling or buzzing on the skin; adjust the intensity of the unit for patient comfort
5. Remove the TENS unit in the following manner:
   a. Turn off the TENS unit before removing it
   b. Replace the electrodes if the adhesive surfaces separate from the backing or if they no longer stay firmly on the skin; otherwise clean the electrodes with an alcohol wipe
   c. Recharge the TENS unit battery pack as needed
1. Clean the skin with soap and water, and apply lotion to the electrode placement sites after each TENS treatment.
2. Assess patient toleration of the TENS unit and the patient’s relief from pain.
3. Provide patient comfort measures.
4. Clean and replace equipment. Discard disposable items according to *Standard Precautions*.

**NURSING CONSIDERATIONS**

Instruct the patient/caregiver to apply electrodes on different sites of the skin with each treatment to prevent redness or irritation.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration, including pain relief
- Any patient/caregiver instructions and response to teaching, including the ability to use TENS unit
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Update the plan of care.
Walker

PURPOSE

• To provide mobility
• To promote self-care activities
• To maximize home independence

RELATED PROCEDURE

• Moving and Lifting Patients (see Chapter 3)

EQUIPMENT

1. Walker
2. Gait belt

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Bring the walker to the bedside.
3. Assist the patient to dress.
4. Assist the patient to a sitting position.
5. Instruct the patient to dangle his or her legs.
6. Evaluate the patient’s strength and ability to bear weight. Consider using a gait belt for patients with poor strength or unsteady gait.
7. Place your hands under the patient’s axilla, and help the patient to stand as straight as possible.
8. Measure the height of the walker, and adjust it accordingly.
9. Instruct the patient to move the walker forward and then to move the right foot followed by the left foot.
10. Caution the patient not to put the entire body weight on the walker.
11. Do not allow the patient to use the walker alone until he or she feels steady and secure.
12. Provide patient comfort measures.

NURSING CONSIDERATIONS

Use walkers with wheels only with patients who have sufficient strength and flexibility to handle them because the risk of falling is greater.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

• The procedure and patient toleration
• Length of walking time
• Frequency of walker use
• Any patient/caregiver instructions regarding home safety when ambulating and response to teaching, including the ability to safely use the walker
• Physician notification, if applicable
• *Standard Precautions*
• Other pertinent findings

Update the plan of care.
Wheelchair

PURPOSE

• To provide safe transportation
• To promote self-care in the home

RELATED PROCEDURES

• Skin Care (see Chapter 5)
• Moving and Lifting Patients (see Chapter 3)

EQUIPMENT

1. Wheelchair
2. Blanket
3. Pad and pillow or cushion

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at the bedside.
3. Adjust the foot pieces. (They can be folded and swung to the side for easy access to the bed, toilet, or tub.)
4. Lock the brakes.
5. As needed, place a pad in the bottom of the wheelchair for patient comfort.
6. Instruct the patient to dangle his or her legs.
7. Evaluate the patient’s strength and ability to bear weight. Consider the use of a gait belt for patients with poor strength or unsteady gait.
8. Place your hands under the patient’s axilla; help the patient to stand facing you.
9. Gently lower the patient into the wheelchair.
10. Cover the patient’s legs with a blanket.
11. Instruct the patient/caregiver to check for discoloration and swelling of the patient’s feet every 2 hours.
12. Return the patient to bed if he or she complains of feeling tired or ill, if swelling occurs in the lower extremities, or if the physician orders it.
13. Store the wheelchair in its designated place when it is not in use.

NURSING CONSIDERATIONS

Instruct the patient/caregiver on the importance of locking the wheelchair brakes before assisting the patient into the wheelchair.

Institute a skin-care regimen for the bedbound or wheelchair-bound patient.

DOCUMENTATION GUIDELINES

Document the following on the visit report:
• The procedure and patient toleration
• Length of time in the wheelchair
• Type of activity
• Any patient/caregiver instructions and response to teaching, including the patient’s ability to safely use the wheelchair
• Condition of the patient’s skin
• Physician notification, if applicable
• Standard Precautions
• Other pertinent findings

Update the plan of care.
Blood Glucose Monitoring

PURPOSE

- To obtain an accurate, objective blood glucose reading
- To assess patterns of glucose control that can be used to evaluate and modify the treatment for diabetic patients
- To instruct the patient/caregiver in home diabetic management, including how to use a glucose meter
- To promote self-care in the home

RELATED PROCEDURES

- Administration of Medications: General Guidelines (see Chapter 10)
- Glucose and Ketone Urine Testing: Reagent Strip
- Hyperglycemia (see Chapter 15)
- Hypoglycemia (see Chapter 15)

GENERAL INFORMATION

When you are purchasing a blood glucose meter, the following should be considered:

1. **Accuracy and precision**—The American Diabetic Association allows a 10% variance between a meter’s reading and a laboratory test.
2. **Range**—The meter must be capable of measuring glucose within a range of 0 to 500 mg/dl.
3. **Infection control**—The meter must meet the Occupational Safety and Health Administration’s (OSHA) standards and the home health agency’s standards to prevent staff and patient contamination when cleaning and operating the meter.
4. **Memory**—The meter must be able to recall the previous test result.
5. **User friendly**—The simplest meters are the best. The size of the readout display is important to consider, especially when you are recommending meters to patients with poor vision. A number of talking meters are available for blind patients.
6. **Manufacturer support**—The supplier should provide an 800 number that is available for 24-hour technical services and assistance.
7. **Cost**—Cost is a serious consideration for the patient. Many insurance companies and Medicare will pay for the meter and the ongoing cost of glucose monitoring if the patient is taking insulin as prescribed by a physician.

A variety of excellent glucose meters are currently on the market; review individual manufacturer recommendations for operation of any glucose meter. The following procedure discusses how to obtain a blood glucose reading using the SureStep (LifeScan) blood glucose meter*.

*Reference to specific products does not imply an endorsement by the author or Mosby, Inc.

EQUIPMENT

1. SureStep meter
2. Penlet II or blood sampler device and lancets

Original procedures copyright © 2000 by Mosby, Inc.
3. SureStep meter test strips
4. SureStep meter control solution
5. Soap and water, washcloth, and towels
6. Disposable nonsterile gloves, sharps container, and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Instruct the patient to wash his or her hands with soap and warm water before the finger stick. Rinse and dry.
4. Press the on/off button on the meter.
5. A code and number will appear on the display. Press the C button until the code number on the meter matches the code number on your current test strip package.
6. Remove the test strip from the vial or foil package. (Be careful not to tear the strip. If you are using a vial, replace the cap immediately.)

7. **Control Solution Test:**
   a. After shaking the control solution vial, apply one drop of control solution to the pink test square on the test strip.
   b. Check to see that the confirmation dot on the back of the test strip has turned completely blue to ensure enough control solution has been applied.
   c. Within 2 minutes after applying the control solution, insert the test strip into the meter, pink side up, and read the results (takes about 30 seconds to appear).
   d. Compare the control solution test result with the control range printed on the SureStep test strip package. When the control solution test result is within the control range, test the blood sample (repeat the procedure and/or contact the manufacturer if test results do not fall within or continue to be out of the control range).
   e. The meter automatically turns off within 2 minutes after control solution testing or 3 minutes after the meter displays a blood glucose reading. To conserve energy, turn off the meter after solution and blood sample testing.

1. **Blood Sample Test:**
   a. Instruct the patient to always wash his or her hands with soap and water before performing this test. If using an alcohol wipe when cleansing the skin, let the area dry before obtaining the blood sample.
   b. Turn on the SureStep glucose meter. Symbols indicating to (1) apply blood to the test strip and (2) to insert the test strip into the meter will alternate on the display. You have 2 minutes to insert the test strip before the meter automatically turns off.
   c. Obtain a blood sample by pressing the lancet loaded Penlet II or a blood sampling device against the side of the finger (the harder you press, the deeper the puncture). Press the release button.
   d. Squeeze the finger to get a large, hanging drop of blood.
   e. Hold the test strip under the finger, and touch the drop of blood to the pink test square.
   f. After a few seconds, look at the confirmation dot on the back of the test strip. If it is completely blue, go on with the test.
   g. Slide the test strip into the test strip holder, pink side up. Insert the test strip within 2 minutes to obtain an accurate result. Turn off the meter after obtaining the reading.

1. Provide patient comfort measures.
2. Notify the physician if blood glucose results are abnormal.
3. Clean the meter according to OSHA guidelines and manufacturer’s recommendations. Discard disposable items according to Standard Precautions.

Original procedures copyright © 2000 by Mosby, Inc.
NURSING CONSIDERATIONS

Test results less than 60 mg/dl mean low blood glucose (hypoglycemia). Test results greater than 240 mg/dl mean high blood glucose (hyperglycemia). Recheck the reading to confirm the value. Contact the physician if the patient is symptomatic or has abnormal blood glucose readings 2 days in a row (consider obtaining physician’s orders to make a next day home visit if glucose readings are abnormal upon admission and always when the patient is symptomatic). Review procedures for Hyperglycemia and Hypoglycemia in Chapter 15.

Monitor the accuracy of the meter whenever a blood sample is drawn for laboratory testing. Evaluate the blood glucose level at the same time the sample is drawn, and compare the meter results with the laboratory readings. There should be no more than 10% to 15% variance with the laboratory readings.

Be aware that extremes in the hematocrit level can affect test results. Very high hematocrit levels (more than 60%) and very low hematocrit levels (less than 25%) can cause false results. Likewise, severe dehydration and excessive water loss may cause false low results. Consult with the physician as appropriate.

Instruct the patient/caregiver in home diabetic management, including self-blood glucose monitoring (SBGM). Ensure that the patient/caregiver operates his or her meter correctly, even if he or she has been using it for some time. If the patient cannot use a meter, instruct him or her how to visually read a reagent strip (be aware that a visual reading only provides a gross estimate of the patient’s blood glucose level). Also, see the procedure for Glucose and Ketone Urine Testing: Reagent Strip.

Home health nursing staff should perform a quality care test at the beginning of each day to verify that their meters are working correctly. Home health nursing staff and patient/caregivers should perform a quality care test whenever they open a new vial of strips, if they should accidentally drop your meter or if they suspect an inaccurate reading.

Be aware that user errors are the most common reason for inaccuracies. The most common mistake is failing to get an appropriate amount of blood on the test strip.

Home health nursing staff should not leave their glucose meters in their cars overnight because extremes in temperature may damage the meters.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Calibration or testing of the meter, as applicable
- Blood glucose results
- Any patient/caregiver instructions regarding home diabetic management, including the ability to perform a blood glucose test
- Physician notification of blood glucose results and any subsequent orders
- Standard Precautions
- Other pertinent findings
Document insulin administration on the medication record, as applicable.

Update the plan of care.
Blood Sampling

Arterial Blood Gas Sampling

PURPOSE

• To obtain arterial blood specimen laboratory analysis

RELATED PROCEDURES

• Central Venous Catheter Care (see Chapter 8)
• Inserting a Winged-Tip Needle (see Chapter 8)
• Specimen Labeling and Transport

GENERAL INFORMATION

Arterial sampling is done to determine arterial blood gas status (pH, PACO₂, PAO₂, CO₂). The home health nurse should be certified to draw an arterial blood gas sample. Draw blood samples only from the radial artery. Notify the physician after three unsuccessful attempts to draw a blood sample.

EQUIPMENT

1. 3 cc syringe with 1-inch, 23- or 25-gauge needle
2. 1000 U/ml heparin solution
3. Syringe cap
4. Bandage
5. 2- x 2-inch gauze pad
6. Laboratory requisition
7. Antiseptic wipes
8. Disposable nonsterile gloves, impermeable specimen transport baggys marked with a biohazard sign, leak-proof and puncture-proof specimen transport container marked with a biohazard sign, sharps container, and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assist the patient to a sitting or a supine position to access the radial artery.
3. Palpate the radial artery; feel the bounding pulse. Perform Allen’s test to verify collateral circulation of the ulnar artery. (The ulnar artery is capable of supplying the blood flow to the hand if the radial artery is damaged or if it becomes damaged or occluded during the procedure.) If Allen’s test is negative and if there is no collateral circulation of the ulnar artery, notify the physician, and do not perform the procedure in that arm. Allen’s test is performed in the following manner:
   a. Instruct the patient to make a tight fist
   b. Apply direct pressure to both radial and ulnar arteries
   c. Instruct the patient to open his or her hand
   d. Release pressure over the ulnar artery, and observe the color of the fingers, thumbs, and hand
4. Clean the needle site with an antiseptic wipe in a circular motion, moving outward 3 or 4 cm from the
needle site.

2. Prepare the syringe and the needle in the following manner:
   a. Flush with 0.5 ml of heparin solution to coat the inside of the syringe
   b. Expel excess heparin

1. Insert the needle into the radial artery at a 45-degree angle with the bevel up.
2. Obtain 2 to 3 ml of blood.
3. Apply a 2- x 2-inch gauze pad to the needle insertion site and withdraw the needle.
4. Apply pressure to the site for 5 to 10 minutes or until it no longer bleeds. Cover with a bandage as needed.
5. Expel air bubbles from the syringe, and remove the needle.
6. Put a cap on the end of the syringe. Clean the syringe with antiseptic wipes as needed.
7. Roll the syringe to distribute the heparin.
8. Label the specimen, and place it in a bag of ice. Double bag the specimen in a specimen baggy to prevent leakage during transport. Place the baggy in a leak-proof, puncture-proof container for transport.
9. Assess the needle site to ensure that there is no bleeding.
11. Clean and replace the equipment. Place the used needles and syringes in a sharps container. Discard disposable items according to Standard Precautions.
12. Fill out the laboratory requisition. Transport (use Standard Precautions) to the laboratory within 30 minutes of sampling.

NURSING CONSIDERATIONS

Clean air bubbles from the syringe after obtaining the sample because not taking this measure could result in falsely elevated PAO \(_2\) and lower CO \(_2\) levels.

Clean the syringe of excess heparin before the procedure because this could falsely decrease the PAO \(_2\) and pH levels.

Copious secretions or suctioning within 10 minutes of the procedure could give a false reading.

The minimum recommended blood sample volume is 1 ml.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Cardiopulmonary status
- Allen’s test results
- Any home mechanical ventilator settings or oxygen liter flow
- Patient’s temperature
- Length of time the pressure dressing is held to the needle site
- The type of laboratory test ordered by the physician; date and time the specimen was collected
- Designated laboratory for delivery
- Physician notification of laboratory test results and any subsequent orders
- Standard Precautions
- Other pertinent findings
Update the plan of care.

**Venous Blood Sampling**

**PURPOSE**

- To obtain venous blood for laboratory testing

**RELATED PROCEDURE**

- Specimen Labeling and Transport

**GENERAL INFORMATION**

Do not draw blood from the patient’s arm that has a shunt or intravenous therapy line. Gray-, blue-, and purple-topped test tubes should be gently inverted a couple of times after they are filled with the blood sample to prevent clotting. Notify the physician after three unsuccessful attempts to enter the vein.

**EQUIPMENT**

1. Vacutainer specimen tubes
2. Vacutainer holder and vacutainer needles or syringe large enough to hold the quantity of blood desired with a 19- to 21-gauge needle
3. Tourniquet
4. Bandage
5. 2- x 2-inch gauze pad
6. Laboratory requisition
7. Antiseptic wipes
8. Disposable nonsterile gloves, impermeable specimen transport baggys marked with a biohazard sign, leak-proof and puncture-proof specimen transport container marked with a biohazard sign, sharps container, and an impermeable plastic trash bag (see Infection Control) {STOP}

**PROCEDURE**

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area. Determine the type of laboratory test requested by the physician, and obtain correct blood tubes for sampling.
3. Assist the patient to either a sitting or supine position for venipuncture.
4. Select the site for venipuncture.
5. Place the arm in a dependent position. Apply a tourniquet 6 to 8 inches above the site of venipuncture.
6. Cleanse the area with antiseptic wipes, moving the wipes in a circular motion 3 to 4 cm outward from the needle insertion site.
7. Fix the chosen vein with the thumb, and draw the skin taut immediately below the site before inserting the needle.
8. At approximately ½-inch below the venipuncture site, insert the needle with the bevel up at a 30-degree angle so that it enters the skin and then the vein.
10. Lower the syringe so that it is almost parallel to the skin.

11. The following is the technique for using a syringe:
   a. Withdraw the desired amount of blood into the syringe.
   b. Release the tourniquet before removing the needle from the vein to reduce the incidence of hematoma formation.
   c. Elevate the arm. Apply pressure to the area with a 2- x 2-inch gauze pad for approximately 2 to 4 minutes or longer if the patient is receiving anticoagulant therapy.
   d. Inject blood from the syringe into the proper vacutainer specimen tubes.
   e. As needed, apply a bandage to the area.

1. The following is the technique for using a vacutainer:
   a. Insert the vacutainer specimen tube into the holder but not onto the 2-way vacutainer needle.
   b. Perform venipuncture as described.
   c. Gently push the vacutainer specimen tube against the end of the holder onto the 2-way needle; make sure that the 2-way needle completely pierces the rubber stopper of the specimen tube; the vacuum in the specimen tube will automatically draw up the blood sample.
   d. If more than one sample is needed, gently withdraw the filled specimen tube from the holder; insert the next tube into the holder so that the needle completely pierces the rubber stopper.
   e. Release the tourniquet before the last tube is completely filled; this reduces the incidence of hematoma formation; allow the last tube to fill.
   f. Elevate the arm; apply pressure to the area for approximately 2 to 5 minutes or longer if the patient is receiving anticoagulant therapy.
   g. Apply a bandage to the area as needed.

1. Clean specimen tubes with antiseptic wipes as needed, and label them.
2. Place the specimen tube(s) in a plastic bag, and seal it. If refrigeration is required, place the specimen tube(s) on ice, and double bag the tube(s) to prevent leakage. Place in a specimen transport container for travel.
3. Provide patient comfort measures.
4. Clean and replace the equipment. Place the needles and syringes in a sharps container. Discard disposable items according to Standard Precautions.
5. Fill out the laboratory requisition, and transport the specimen tubes according to Standard Precautions.

NURSING CONSIDERATIONS

See the procedures for Inserting a Winged-Tip Needle for Blood Sampling in Chapter 8 for pediatric or fragile veins, and see procedures for specific Central Venous Catheter Blood Sampling in Chapter 8.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration, including the condition of the venipuncture site
- The type of laboratory test ordered by the physician; date and time the specimen was collected
- Designated laboratory for delivery
- Physician notification of laboratory test results and any subsequent orders
- Standard Precautions
- Other pertinent findings

Original procedures copyright © 2000 by Mosby, Inc.
Update the plan of care.
Culture Collection

PURPOSE

- To obtain specimens for culture and laboratory analysis

RELATED PROCEDURES

- Specimen Labeling and Transport
- Suctioning (see Chapter 4)

GENERAL INFORMATION

Collect all cultures using aseptic principles. Sterile containers are required for all culture specimens except stool. If the patient is taking an antibiotic, note the drug and dosage on the laboratory requisition. A laboratory requisition must accompany all cultures.

Throat

EQUIPMENT

1. Tongue blade
2. Culturette
3. Penlight or flashlight
4. Laboratory requisition
5. Disposable nonsterile gloves, impermeable specimen transport baggys marked with a biohazard sign, leak-proof and puncture-proof specimen transport containers marked with a biohazard sign, and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a sitting or a lying-down position.
4. Remove the cap from the culture tube. Do not touch the cap stem or the inside of the culture tube. Remove the swab from the culture tube.
5. Instruct the patient to open his or her mouth as wide as possible and to say “Aahh.” Depress the tongue with a tongue blade, and obtain a culture by moving the swab over the inflamed or purulent area.
6. Return the swab to the culture tube. Replace the cap. Holding the cap down, crush the ampule at the bottom of the culture tube to release the culture medium fluid.
7. Label the culture tube, and seal it in a plastic baggy. Place the baggy in the specimen transport container for travel.
8. Offer oral care.
10. Clean and replace the equipment. Discard disposable items according to Standard Precautions.
11. Fill our the laboratory requisition, and transport the specimen according to Standard Precautions.
Ova and Parasite

EQUIPMENT

1. Bedpan
2. Tongue blade
3. Parasite (PVA) and formalin kits or specimen cup
4. Laboratory requisition
5. Disposable nonsterile gloves, impermeable specimen transport baggies marked with a biohazard sign, leak-proof and puncture-proof specimen transport container marked with a biohazard sign, and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assist the patient onto the bedpan or into the bathroom.
3. Collect a specimen by using a tongue blade to obtain a small amount of stool and placing it in the specimen cup or in the PVA and formalin kit.
4. Perform perineal care as needed.
5. Label the specimen, and seal it in a plastic bag. Do not refrigerate for ova and parasite. Place the bag in a specimen transport container for travel.
6. Provide patient comfort measures.
7. Clean and replace the equipment. Discard disposable items according to Standard Precautions.
8. Fill out the laboratory requisition, and transport the specimen according to Standard Precautions.

Sputum

GENERAL INFORMATION

Obtain a sputum specimen in the morning when the patient has more strength to expectorate. Sputum can be collected for culture by expectoration, as well as by naso-oropharyngeal, endotracheal, or tracheal suctioning.

EQUIPMENT

1. Sterile specimen cup (if for culture and sensitivity)
2. Laboratory requisition
3. Antiseptic wipes
4. Disposable nonsterile gloves, impermeable specimen transport baggies marked with a biohazard sign, leak-proof and puncture-proof specimen transport container marked with a biohazard sign, and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Instruct the patient to expectorate. Clarify the difference between sputum and saliva, as well as the time of day to collect the specimen.
4. Instruct the patient to rinse the mouth with water. The patient should breathe deeply and then forcefully
cough to expectorate lower respiratory secretions directly into the container.

5. For tracheostomy, the following is performed:
   a. Attach a sputum trap between the suction catheter and the suction tubing
   b. Suction the patient’s stoma
   c. Remove the sputum trap, and close it according to the manufacturer’s instructions

1. Offer oral hygiene as needed.
2. Label the specimen, and seal it in a plastic baggy. Place the baggy in a specimen transport container for travel.
3. Provide patient comfort measures.
4. Clean and replace the equipment. Discard disposable items according to Standard Precautions.
5. Fill out the laboratory requisition, and transport the specimen according to Standard Precautions.

Stool

GENERAL INFORMATION

Obtain a culture with the first morning stool.

EQUIPMENT

1. Culturette or stool specimen cup
2. Tongue blade
3. Bedpan or container
4. Laboratory requisition
5. Disposable nonsterile gloves, impermeable specimen transport baggys marked with a biohazard sign, leak-proof and puncture-proof specimen transport container marked with a biohazard sign, and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient onto the bedpan or into the bathroom.
4. Collect a stool specimen using a tongue blade to obtain a small amount of stool, to be placed in a specimen cup, or by swabbing stool with a swab culturette.
5. If you are using a specimen cup, replace the container cap.
6. If you are using a culturette, place the swab in the container. Hold the cap down, and crush the ampule at the bottom to disperse culture medium fluid.
7. Perform perineal care as needed.
8. Label the specimen and seal it in a plastic bag. Do not refrigerate stool specimen. Place in a specimen baggy. Place the baggy in the specimen transport container for travel.
10. Clean and replace the equipment. Discard disposable items according to Standard Precautions
11. Fill out the laboratory requisition, and transport the specimen according to Standard Precautions.

Wound

GENERAL INFORMATION
Anaerobic cultures are not done with culturette specimens. Deep wounds should be aspirated by the physician using a syringe and sent to the laboratory in an anaerobic culture tube; otherwise, cleanse the wound with sterile normal saline to remove the debris before obtaining a specimen for culture.

EQUIPMENT

1. Culturette
2. Wound dressing and irrigation/cleansing solution as prescribed by the physician
3. Laboratory requisition
4. Disposable nonsterile gloves, impermeable specimen transport baggys marked with a biohazard sign, leak-proof and puncture-proof specimen transport container marked with a biohazard sign, and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Position the patient to expose the wound. Drape the patient appropriately.
3. Apply nonsterile gloves, and remove the dressing.
4. Remove the cap and swab from the culturette; do not touch the cap end, the swab, or inside the culturette container.
5. Swab across the wound using a zigzag method.
6. Return the swab to the culturette. Hold the cap end down, and crush ampule at the bottom to disperse the culture medium fluid.
7. Discard the nonsterile gloves, and apply sterile gloves.
8. Clean and re-dress the patient’s wound, using sterile technique.
9. Label the specimen, and seal it in a plastic bag.
11. Clean and replace the equipment. Discard disposable items according to Standard Precautions.
12. Fill out the laboratory requisition, and transport the specimen according to Standard Precautions.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient tolerance
- Condition of the specimen site
- Appearance of the culture specimen (color, amount, etc.)
- The type of laboratory test ordered by the physician; date and time the specimen was collected
- Designated laboratory for delivery
- Physician notification of test results and any subsequent orders
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Fecal Occult Blood

PURPOSE

- To detect the presence of blood in the stool

GENERAL INFORMATION

Ingestion of high doses of vitamin C (ascorbic acid) in excess of 250 mg each day has been associated with false negative readings. Be aware that certain oral medications may cause gastrointestinal irritation and bleeding. Ingestion of iron preparations, turnips, fish, rare meat, and poultry are associated with false positive readings.

EQUIPMENT

1. Reagent product and slide card
2. Tongue blade
3. Bedpan or container
4. Soap and warm water, basin, tissues, washcloth, and towels
5. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to the bedpan or to the bathroom.
4. Wash the perineal area with soap and water as needed. Rinse and pat dry.
5. Obtain stool specimen in the bedpan or container.
6. Collect a small sample of the stool on the end of the tongue blade.
7. Follow the manufacturer’s instructions for reagent testing.
8. Compare the results with the manufacturer’s color chart and guidelines (blue is usually positive for occult blood).
9. Notify the physician of abnormal results.
10. Provide patient comfort measures
11. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Color of stool
- Results obtained
- Physician notification of test results and any subsequent orders
- Standard Precautions
- Other pertinent findings

Update the plan of care.

Original procedures copyright © 2000 by Mosby, Inc.
Glucose and Ketone Urine Testing: Reagent Strip

PURPOSE

- To detect the presence of glucose or ketone in the urine

GENERAL INFORMATION

The renal threshold for glucose is 180 mg/ml. Ketones appear when fatty acids are used as energy. Abnormal glucose and ketone level results may occur in patients with diabetes or who are malnourished, fasting, or on low-carbohydrate diets.

EQUIPMENT

1. Glucose and ketone test strips
2. Test strip color chart
3. Specimen container
4. Watch with second hand or digital reading
5. Soap and warm water, basin, washcloth, and towels
6. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient onto the bedpan or to the bathroom.
4. Wash the perineal area with soap and water to obtain a fresh urine specimen (collect a double-voided specimen if possible). Rinse and dry.
5. Immerse the end of the strip that is impregnated with chemical reagent into a fresh urine specimen.
6. Remove the strip from the container, and gently tap it against the side of the container.
7. Follow the manufacturer’s instructions to time the strip for a specified number of seconds, and compare the color strip with the manufacturer’s color chart.
8. Notify the physician of abnormal results. (Ketones are reported as negative or as positive. Urine glucose is normally negligible and is reported as none, trace 1+, 2+, 3+, or 4+.)
10. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Instruct the patient/caregiver to perform glucose and ketone urine testing when the patient has a fever, suspects that he or she may have an infection, or if self-blood glucose monitoring is not an option.

Notify the physician about abnormal results.

DOCUMENTATION GUIDELINES

Document the following on the visit report:
• The procedure and patient toleration
• Glucose and ketone test results
• Any patient/caregiver instructions and response to teaching, including the ability to test urine with reagent strips
• Physician notification of abnormal test results and any subsequent orders
• Standard Precautions
• Other pertinent findings

Update the plan of care.
Specimen Labeling and Transport

PURPOSE

- To identify laboratory specimen(s) with appropriate data
- To provide guidelines for delivering specimens to the laboratory for analysis according to Standard Precautions

EQUIPMENT

1. Tape or specimen label and biohazard labels
2. Plastic bags
3. Laboratory requisition
4. Antiseptic wipes
5. Disposable nonsterile gloves, impermeable specimen transport baggys marked with a biohazard sign, leak-proof and puncture proof cooler or container marked with a biohazard sign, and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Clarify with the physician the designated laboratory for the delivery of specimens.
2. Clarify with the designated laboratory, the color of the test tubes, a specimen collection container, and the patient data that is required to process the specimen.
3. Clean blood and body substances from outside of test tube(s) or specimen container(s) with antiseptic wipes as needed.
4. Label the specimen container in the following manner:
   a. Patient’s name
   b. Test to be performed by the laboratory
   c. Time and date specimen was collected
   d. Initials of the person who collected the specimen
1. Place test tubes or the specimen container in a plastic baggy, and seal it to prevent possible leakage during transport. Place a biohazard label on the outside of the plastic baggy. Consider double bagging the specimen to prevent possible leakage when using ice to refrigerate the specimens or PRN as needed.
2. Place the specimen into a leak-proof, puncture-proof cooler or container.
3. Place the cooler or container on the floorboard of the car during transport.
4. Fill out the laboratory requisition, and transport the specimen.
5. Call the physician with the laboratory results as soon as they are available.
6. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Many specimens must be delivered to the laboratory within 30 minutes to 1 hour after sampling.

Consult with the laboratory concerning the type of container or test tube that should be used to collect the specimen and whether the specimen should be refrigerated by placing it on ice; also inquire about a time frame for deliveries.

Many laboratories provide courier services to pick up specimens at the patient’s home.
DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The type of laboratory test ordered by the physician; date and time the specimen was collected
- Designated laboratory for delivery
- Standard Precautions
- Other pertinent findings

Document physician notification of laboratory test results on the visit report or appropriate home health agency communiqué and any subsequent orders.

Update the plan of care.
Urine Collection

PURPOSE

- To obtain a urine specimen for laboratory analysis

RELATED PROCEDURES

- Ostomy Care (see Chapter 6)
- Specimen Labeling and Transport

Midstream Urine Collection

EQUIPMENT

1. Urine collection kit
2. Bedpan or urinal
3. Laboratory requisition
4. Soap and warm water, basin, washcloth or disposable towelettes, and towels
5. Disposable nonsterile gloves, impermeable plastic transport baggys marked with a biohazard sign, leak-proof and puncture-proof container marked with a biohazard sign, and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient onto the bedpan or to the bathroom.
4. Wash the perineal area with soap and water. Rinse and dry.
5. Remove the contents from the midstream collection set.
6. Cleanse the urinary meatus with presaturated towelettes, using each towelette only once. (Retract the foreskin if applicable.)
7. Remove the lid from the specimen container by using only the tab. Do not touch the rim or underside of the lid.
8. Instruct the patient to release a small amount of urine into the bedpan or urinal and then to finish emptying bladder into the specimen container.
9. Replace the lid, handling only the tab. Secure the lid tightly.
10. Perform perineal care as needed.
11. Label the specimen container, and seal it in a specimen baggy. Place the baggy in the specimen container for transport.
12. Provide patient comfort measures.
13. Clean and replace the equipment. Discard disposable items according to Standard Precautions.
14. Fill out the laboratory requisition, and transport the specimen.

Routine Urine Collection

EQUIPMENT
1. Bedpan or urinal
2. Urine specimen container with lid
3. Laboratory requisition
4. Soap and warm water, basin, washcloth or disposable towelettes, and towels
5. Disposable nonsterile gloves, impermeable specimen transport baggy marked with a biohazard sign, leak-proof and puncture-proof container marked with a biohazard sign, and an impermeable plastic trash bag (see *Infection Control*) {STOP}

**PROCEDURE**

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient onto the bedpan or to the bathroom.
4. Wash the perineal area with soap and water as needed. Rinse and dry.
5. Instruct the patient to urinate into the specimen container, bedpan, or urinal.
6. After the bedpan or urinal has been used, pour approximately 50 ml of urine into the urine specimen container, and seal it with a lid.
7. Follow steps 10 through 14 of the procedure for *Midstream Urine Collection*.

**Sterile Urine Specimen Collection from a Foley Catheter**

**EQUIPMENT**

1. 12 cc syringe
2. 23-gauge needle
3. Clamp or rubber band
4. Sterile specimen container
5. Laboratory requisition
6. Antiseptic wipes
7. Soap and warm water, basin, washcloth or disposable towelettes, and towels
8. Disposable nonsterile gloves, impermeable specimen transport baggy marked with a biohazard sign, leak-proof and puncture-proof specimen transport container marked with a biohazard sign, and an impermeable plastic trash bag (see *Infection Control*) {STOP}

**PROCEDURE**

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a supine position with the knees flexed and legs separated. Uncover the Foley catheter.
4. Wash the perineal area with soap and water as needed. Rinse and dry. Drape the patient for privacy.
5. Clamp or kink off the Foley catheter with a rubber band below the aspiration port. Wait 20 to 30 minutes so that the urine can accumulate in the catheter.
6. Clean the port with an antiseptic wipe.
7. Insert a 23-gauge needle at a 90-degree angle into the port.
8. Aspirate urine into the syringe.
9. Inject the urine into a sterile specimen container.
10. Seal the sterile specimen container.

Original procedures copyright © 2000 by Mosby, Inc.
11. Unclamp or unkink the catheter to allow the urine to flow into the collection bag.
12. Perform perineal care as needed.
13. Label the specimen container, and seal it in a specimen baggy. Place the baggy in a specimen container for transport.
15. Clean and replace the equipment. Discard disposable items according to *Standard Precautions*.
16. Fill out the laboratory requisition, and transport the specimen.

**Sterile Urine Specimen from a Urostomy**

**EQUIPMENT**

1. Sterile straight catheter (size specified by physician)
2. Sterile catheter tray
3. Sterile urine specimen container
4. Laboratory requisition
5. Soap and warm water, basin, washcloth, and towels
6. Disposable nonsterile and sterile gloves, impermeable specimen transport baggy marked with a biohazard sign, leak-proof and puncture-proof specimen transport container marked with a biohazard sign, and an impermeable plastic trash bag (see *Infection Control*)

**PROCEDURE**

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Position the patient in a supine position to expose the urostomy. Drape the patient for privacy.
4. Open the catheter tray, and set up a sterile field. Pour the antiseptic solution over cotton balls.
5. Don nonsterile gloves to remove the urostomy pouch and wash around the stoma with soap and water (leave the water on); use a spiral pattern working outward from the stoma. Pat dry.
6. Discard the nonsterile gloves and don sterile gloves to clean the stoma with cotton balls. Use one ball for each wipe.
7. Apply lubricant to the tip of the Foley catheter. Place the other end of the Foley catheter into the sterile urine specimen container for urine collection.
8. Insert the tip of the Foley catheter approximately 2 to 3 inches into the stoma, and collect urine into the sterile urine specimen container. Do not force the Foley catheter into the stoma.
9. Seal the sterile urine specimen container.
10. Reapply the urostomy pouch.
11. Label the specimen container, and seal it in a specimen baggy. Place the baggy in a specimen container for transport.
12. Provide patient comfort measures.
13. Clean and replace the equipment. Discard disposable items according to *Standard Precautions*.
14. Fill out the laboratory requisition, and transport the specimen.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
• Date, time, and amount of urine collected
• Color and character of urine
• Designated laboratory for delivery
• Physician notification, if applicable
• Standard Precautions
• Other pertinent findings

Update the plan of care.
Arteriovenous Fistula and Shunt Care

PURPOSE

- To prevent infection
- To maintain patency of the arteriovenous fistula or shunt
- To instruct the patient/caregiver in shunt care and precautions
- To promote self-care in the home

EQUIPMENT

1. 4- x 4-inch gauze dressing
2. Antiseptic wipes
3. Antimicrobial ointment
4. Elastic bandage
5. Cannula clamps
6. Hypoallergenic tape
7. Stethoscope
8. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

Shunt Dressing Change

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a comfortable position to perform shunt care.
4. Remove the elastic bandage and dressing. Discard the dressing.
5. Remove the crust and any drainage from around the catheter exit sites with povidone iodine (Betadine) swabs.
6. Cleanse each end of the shunt with separate povidone swabs.
7. Apply a small amount of antimicrobial ointment around the cannula insertion sites—both arterial and venous.
8. Secure the shunt by taping connections with tabs at the ends of the tape to prevent tension on the shunt site when untaping.
9. Cover the shunt with a 4- x 4-inch gauze dressing.
10. Wrap the arm with an elastic bandage. Be sure not to constrict or kink the shunt. Leave the U-shaped portion of the shunt exposed to assess patency of the shunt.
11. Secure the elastic bandage with fasteners.
12. Keep the cannula clamps (to control bleeding from accidental separation of the shunt) fastened on the outside of the elastic bandage at all times. (If the shunt should become accidentally separated, immediately clamp each shunt.)
13. Notify the physician of any signs of infection at the shunt site or of problems with the shunt.
15. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

Preserving Patency of the Arteriovenous Fistula
PROCEDURE

1. Follow steps 1 through 8 of the procedure for Shunt Dressing Change.
2. Assess patency of the arteriovenous (AV) fistula or shunt in the following way:
   a. Place the stethoscope over the suture line, and auscultate for a bruit (if patent, the fistula will sound like a full, bounding pulse)
   b. Gently palpate the shunt or fistula (palpation should elicit a bruit)
   c. Inspect the U-loop of the AV shunt for color and warmth (if patent, the cannula will be warm, and blood flow will be bright red; separation of blood or dark purple (black) blood indicates clotting)
1. Apply the dressing and elastic bandage as described in the procedure for Shunt Dressing Change.
2. Keep the cannula clamps (to control bleeding from accidental separation of the shunt) fastened on the outside of the elastic bandage at all times. (If the shunt should become separated, immediately clamp each shunt.)
3. Notify the physician if no bruit is heard, if the shunt accidentally separates or clots off, or if bleeding occurs.
4. Instruct the patient/caregiver in the following precautions:
   a. Look at the U-loop in the morning and evening to check for patency
   b. Never place restricting clothes or restraints around the fistula extremity
   c. Protect the arm with the shunt when turning or moving
   d. Clean catheter exit sites; reapply dressings and elastic bandages should they become loose or soiled
   e. Clamp off the catheter ends, and apply a pressure dressing to the site if bleeding occurs
1. Instruct the patient/caregiver to notify the physician and home health agency clinical supervisor if the following occur:
   a. U-loop becomes dark and cool
   b. Pain and bleeding or discoloration of the extremity occur(s)
   c. The shunt becomes accidentally separated
1. Follow steps 14 and 15 of the procedure for Shunt Dressing Change.

NURSING CONSIDERATIONS

Do not take blood pressures, perform venipunctures, or give injections on an arm with an AV fistula or shunt.

Consult with your fiscal intermediary regarding guidelines for reimbursement of home health services for patients with end stage renal dialysis (ESRD).

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Condition of catheter exit sites
- Patency of the AV fistula and shunt, including auscultatory findings from assessment of the fistula or shunt
- Any patient/caregiver instructions and response to teaching, including the ability to maintain the integrity of the shunt
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings
Update the plan of care.
Bladder Training

PURPOSE

- To assist the patient to regain control of micturition without a catheter
- To avoid urinary tract infections
- To manage urinary incontinence
- To prevent skin breakdown
- To improve body image and self-esteem
- To promote self-care in the home

RELATED PROCEDURES

- Bowel Training (see Chapter 6)
- Condom Catheter Care
- Indwelling Foley Catheter Insertion and Care
- Intake and Output (see Chapter 2)
- Skin Care (see Chapter 5)
- Intermittent Straight Catheterization

GENERAL INFORMATION

Urinary incontinence is defined as involuntary loss of urine that is sufficient to be considered a problem. The U.S. Department of Health and Human Services Urinary Incontinence Guideline Panel (1992) recommends the following step-wise process of patient management:

1. Question the patient about continence: where, when, and at what time do problems with incontinence occur.
2. Investigate the condition of patients who complain of incontinence.
3. Evaluate the patient by taking a history and by ordering a physical examination and a urinalysis. Patients who complain of urinary incontinence should be evaluated regarding the medication they are currently taking; the duration and characteristics of the incontinence; frequency, timing, and amount of continent and incontinent voids; symptoms of urinary tract infection; altered bowel or sexual function; and the use of pads, briefs, or other protective devices.
4. Identify the type of urinary incontinence: stress incontinence, urge incontinence, overflow incontinence, or mixed incontinence.
5. Identify the need for further evaluation by a specialist.
6. Identify treatment options. The three major categories of treatment are behavioral, pharmacologic, and surgical. For most patients, behavioral techniques coupled with pharmacologic intervention are effective.

Methods to encourage micturition include reflex stimulation: the patient strokes certain trigger points, such as the navel, hips, outer or inner aspect of the thighs, abdomen or buttocks, or the area around the sacrum or coccyx. In addition, the patient may be taught to lean forward while applying light pressure with clasped hands over the bladder area to increase bladder emptying.

EQUIPMENT
1. Bedpan, bedside commode, urinal, and toilet
2. Catheter clamp (if necessary, a spring-type clothespin or rubber bands may be used for the purpose of home improvisation)
3. Soap and warm water, basin, tissues, washcloth, and towels
4. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

**Bladder Training for Patients with an Indwelling Catheter**

**PROCEDURE**

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Perform perineal care as needed.
4. Establish the following schedule for toileting:
   a. Clamp off the urinary catheter for 2 hours at a time to increase bladder tone (the catheter may also be clamped by kinking and securing with rubber bands)
   b. Unclamp the catheter at regular intervals; encourage the patient to push down with the abdominal muscles to completely empty the bladder
   c. Instruct the caregiver to continue to clamp and unclamp the catheter every 2 hours, until the patient is able to hold about 250 ml of urine and feels the urge to void
1. Remove the indwelling catheter once the patient has control of the bladder.
2. Instruct the patient in Kegel exercises to increase bladder tone.
3. Instruct the patient in methods of reflex stimulation as needed.
4. Instruct the patient/caregiver to keep an accurate record of fluid intake and output.
5. Provide patient comfort measures.
6. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

**NURSING CONSIDERATIONS**

Encourage the patient to drink 8 to 10 glasses of water during the day, unless he or she is on a fluid restriction diet. (Hold fluids after 7 PM for problems with night incontinence. Avoid alcoholic beverages or beverages with caffeine, such as coffee, tea, and colas.)

Administer diuretics in the morning to prevent the patient from needing to void frequently at night.

Instruct the patient/caregiver to notify the home health agency’s clinical supervisor or physician about complaints of abdominal discomfort or if the patient does not void at least 250 ml of urine within 8 hours after removal of the indwelling Foley catheter.

Consult with the physician and consider pharmacologic intervention to prevent urinary incontinence.

Long-term use of indwelling catheters can lead to secondary problems, such as infection. Intermittent catheterization may be appropriate for the management of acute or chronic urinary retention.

Institute a skin-care regimen for patients who have problems with incontinence.

**Bladder Training for Patients without an Indwelling Catheter**
PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Perform perineal care as needed.
3. Instruct the patient to lean forward and push down with the abdominal muscles to help empty the bladder completely at each voiding.
4. Instruct the patient in Kegel exercises to increase bladder tone.
5. Instruct the patient/caregiver to record voiding patterns to establish a bladder routine.
6. Plan a voiding schedule at regular intervals every 1½ or 2 hours as needed.
7. As appropriate, instruct the caregiver to assist the patient to the toilet or commode after meals, after naps, before bed, or before activity. Consider having the patient use a walker or cane.
8. If the patient demonstrates restlessness, assess the need to void. More frequent trips to the bathroom may be necessary if the patient’s bladder capacity is small.
9. If night incontinence is a problem, the patient can be awakened once or twice by an alarm. (If the patient continues to have no control at night, consider having the patient use an external urinary collection device, and pad the bed.)
10. Encourage the patient to use the toilet in the bathroom as a part of independent activities of daily living (ADLs) whenever possible. (Use the bedpan or the urinal only when absolutely necessary. Consider use of a bedside commode.)
11. Evaluate the bathroom for patient accessibility and safety:
   a. Consider installing a safety bar
   b. Ensure that the bathroom lighting is adequate at all times, especially at night
   c. Ensure that the distance to the toilet is no more than 40 feet from the living area
   d. Keep walkways to the bathroom clutter-free; remove throw rugs on the bathroom floor
1. Instruct the patient to wear nonrestrictive clothing that is easy to get in and out of quickly. Velcro fasteners may be substituted for difficult buttons or zippers. In some cases stockings or underwear may need to be eliminated for independent toileting. Instruct the patient to wear nonskid shoes when going to the bathroom.
2. Follow steps 7 through 10 of the procedure for Bladder Training for Patients with an Indwelling Catheter.

NURSING CONSIDERATIONS

Consult with the physician and consider pharmacologic intervention to manage urinary incontinence.

Institute a skin-care regimen for problems with incontinence.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- The condition of the patient’s skin
- The patient’s ability to remain continent of urine and void at scheduled intervals
- Any patient/caregiver instructions and response to teaching, including adherence to the bladder training program
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Original procedures copyright © 2000 by Mosby, Inc.
Update the plan of care.
Closed Urinary Drainage Management

PURPOSE

• To provide continuous drainage of the bladder
• To prevent infection
• To promote self-care in the home

RELATED PROCEDURES

• Bladder Instillation and Irrigation (see Chapter 10)
• Coudé Catheter Insertion
• Indwelling Foley Catheter Insertion and Care
• Intake and Output (see Chapter 2)
• Suprapubic Catheter Care

EQUIPMENT

1. Disposable closed urinary collection bag with drainage tubing
2. Hypoallergenic tape
3. Disposable nonsterile and sterile gloves and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a comfortable position.
4. After catheterization or bladder irrigation has been performed, insert the drainage tubing into the urinary catheter. (Take care not to contaminate the ends of the drainage tubing or the urinary catheter before insertion.)
5. Tighten the connections to prevent leakage or contamination of the system.
6. Attach the urinary collection bag to the bed frame to allow urine to drain with gravity and prevent backflow. (Keep the drainage below the level of the patient’s bladder.)
7. Apply tape to the drainage tubing, making tabs on the end of the tape. Tape the catheter to the thigh or lower abdomen, or coil and fasten the drainage tubing to the patient’s gown with a safety pin through the tape tabs.
8. Place the urinary collection bag below the level of the hip when the patient sits in a chair or ambulates to prevent backflow. (Caution the patient not to step on the tubing when ambulating.)
9. Use sterile technique to change the urinary collection bag and drainage tubing at least every 30 days or when it is contaminated or heavily soiled.
10. Empty the collection bag when it is two-thirds full through the bottom outlet into an appropriate container that is used to collect, measure, or discard urine.
11. If the drainage is dark or thick or contains mucus, report to the physician for possible bladder irrigation.
12. Provide patient comfort measures.
13. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS
Instruct the patient/caregiver in home catheter management and precautions.

See the Patient Education Guidelines box, *Caring for the Urinary Catheter at Home*.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Intake and output, if ordered
- Patient’s fluid and hydration status
- Color, odor, amount, and characteristics of the patient’s urine
- Any patient/caregiver instructions and response to teaching
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Update the plan of care.
Condom Catheter Care

PURPOSE

• To provide an external urinary drainage system as an adjunct to continence management
• To prevent skin irritation
• To instruct the patient/caregiver in condom catheter management
• To promote self-care in the home

RELATED PROCEDURE

• Closed Urinary Drainage Management

GENERAL INFORMATION

Condom catheters are also referred to as external or Texas catheters.

EQUIPMENT

1. Rubber condom sheath; condom, size as appropriate (small, medium, large, extra large)
2. Velcro or elastic sheath holder; hypoallergenic tape
3. Urinary collection bag and drainage tubing
4. Soap and warm water, basin, washcloth, and towels
5. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assist the patient to a supine position. Place a towel or waterproof pad underneath the buttocks.
3. Wash the penis with soap and water, and dry it. If the patient is not circumcised, retract the foreskin and cleanse the meatus. Rinse and dry. Drape the patient for privacy.
4. Hold the penis at a 90-degree angle from the patient’s body. Gently roll the condom over the penis.
5. Firmly (but not too tightly) secure the condom catheter with a sheath holder to completely encircle the penis at about 1 to 2 inches from the base.
6. Connect the condom catheter to the urinary catheter drainage system, and tape it to prevent tugging.
7. Instruct the patient/caregiver in the following condom catheter management:
   a. Apply a new condom catheter every day
   b. Wash the penis, including under the foreskin if the patient is not circumcised, with soap and water at least daily
   c. If the patient is not circumcised, the foreskin must be pulled down over the head of the penis after cleaning to prevent swelling
   d. Do not put on the condom catheter if the penis becomes discolored or swollen; notify the home health agency clinical supervisor
1. Assist the patient to dress.
2. Provide patient comfort measures.
3. Clean and replace the equipment. Discard disposable items according to Standard Precautions.
NURSING CONSIDERATIONS

Never use adhesive tape to secure a condom catheter because circulation to the penis can be cut off, even if the urine flow is not impaired.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Size of the condom catheter applied
- Condition of the skin on the penis
- Color, odor, amount, and characteristics of the patient’s urine
- Any patient/caregiver instructions and response to teaching, including hygiene practices
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Coudé Catheter Insertion

PURPOSE

• To relieve bladder distention or to empty bladder contents by bypassing an obstruction

RELATED PROCEDURE

• Closed Urinary Drainage Management

GENERAL INFORMATION

The Coudé catheter is a curved-tip urethral catheter that is generally used to catheterize males who have a urethral obstruction. The catheter’s curved tip conforms more closely to the natural curve of the male urethra, allowing easier passage into the bladder. Coudé catheters are inserted much like any other urethral catheter, with one exception: the curved tip must be facing the direction of the urethral curve. Before inserting a Coudé catheter, be sure you know the anatomy of the male urethra.

Most Coudé catheters are manufactured with a dark line that extends along the top surface of the catheter. This is the same surface that the curved tip faces. The line shows which direction the curved tip is pointing once it has passed into the urethra.

EQUIPMENT

1. Coudé catheter (size ordered by the physician)
2. Sterile catheter tray
3. Soap and warm water, basin, washcloth, and towels
4. Disposable sterile gloves and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a supine position, with the knees flexed and separated. Place a towel or waterproof pad underneath the buttocks.
4. Wash the penis with soap and water. If the patient is not circumcised, retract the foreskin and cleanse the meatus. Rinse and dry. Drape the patient for privacy.
5. Open the catheter tray using sterile technique.
6. Don sterile gloves.
7. Place underpads from the tray beneath the patient’s penis, about the scrotum, and across the thighs (plastic side down).
8. Drape the patient with a fenestrated towel.
9. Attach a sterile syringe to the sideport lumen of the catheter, and inject 5 to 10 ml of normal saline solution to test the integrity of the catheter balloon. Maintain sterility of the catheter. Deflate the balloon before insertion.
10. Open the antiseptic solution, and pour it over cotton balls.
11. Lubricate the tip of the catheter, or place the tip of the syringe that is filled with lubricant directly into the meatus and inject the lubricant into the urethra.

Original procedures copyright © 2000 by Mosby, Inc.
12. With the nondominant hand, hold the patient’s penis upright at approximately a 90-degree angle to the patient’s body.
13. If the patient is not circumcised, retract the foreskin, exposing the meatus.
14. With the dominant hand, use forceps to pick up a cotton ball and cleanse the glans from the meatus outward using antiseptic solution. Use a clean cotton ball for each stroke.
15. Insert the catheter tip into the meatus with the curve facing upward. As the catheter is advanced, the dark line on the catheter should continue to face upward. Make sure the patient’s penis is held upright as the catheter is inserted and advanced.
16. Some resistance may be felt as the catheter tip meets the external sphincter. Slightly twisting the catheter from side to side while advancing it may help the catheter pass beyond this point. It may be necessary to withdraw the catheter a short distance, and attempt to readvance it slowly.
17. Once the urine begins to flow, advance the catheter another 4 to 5 inches to prevent inflating the balloon in the urethra.
18. Place the end of the catheter into the urine tray receptacle.
19. Inflate the balloon with 5 to 10 ml of normal saline solution. Gently pull back on the catheter to make sure that the balloon is inflated and will hold the catheter in place.
20. If the patient is not circumcised, pull the foreskin back over the meatus to prevent swelling.
21. Connect the catheter to the urinary catheter drainage system.
22. Assist the patient to dress.
23. Provide patient comfort measures.
24. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

**NURSING CONSIDERATIONS**

Instruct the patient/caregiver in home catheter management and precautions. See the Patient Education Guidelines box, *Caring for the Urinary Catheter at Home*.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Size of the catheter inserted and ml capacity of catheter balloon
- Amount of saline solution that was injected into the catheter balloon
- Color, odor, amount, and characteristics of the patient’s urine
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Indwelling Foley Catheter Insertion and Care

PURPOSE

- To empty the bladder
- To prevent infection
- To obtain urine specimens for laboratory evaluation
- To promote self-care in the home

RELATED PROCEDURES

- Bladder Instillation and Irrigation (see Chapter 10)
- Closed Urinary Drainage Management
- Intermittent Straight Catheterization: Sterile Technique

EQUIPMENT

1. Sterile Foley catheter (size ordered by the physician)
2. Sterile Foley catheter tray
3. Urinary collection bag and drainage tubing
4. Hypoallergenic tape
5. Soap and warm water, basin, washcloth, and towels
6. Disposable sterile gloves and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Consider positioning the patient sideways on the bed with the legs separated and dangling over the side of the bed to better access the perineal area and the urethral meatus.
4. Prepare the patient, and open the contents of the sterile Foley catheter tray as described in the procedure for Intermittent Straight Catheterization: Female or Male, Sterile Technique.
5. Attach a sterile syringe to the sideport lumen of the catheter, and inject 5 to 10 ml of normal saline solution to test the integrity of the balloon. Maintain the sterility of the catheter. Deflate the balloon before insertion.
6. To insert the catheter, follow the procedures for Intermittent Straight Catheterization: Female or Male, Sterile Technique.
7. Attach a syringe to the sideport lumen of the catheter, and inject 5 to 10 ml of normal saline solution to inflate the balloon.
8. Gently pull the catheter to be sure the balloon is inflated and will hold the catheter in the bladder.
9. Connect the end of the catheter to the drainage tubing and the urinary collection bag. Be careful not to contaminate the end of the catheter or the drainage tubing.
10. Secure the catheter and drainage tubing to prevent tugging.
11. Change the indwelling Foley catheter every 30 days to prevent infection and adhesions.
12. Always remember to deflate the balloon before discontinuing the catheter.
13. Provide patient comfort measures.
14. Clean and replace the equipment. Discard disposable items according to Standard Precautions.
NURSING CONSIDERATIONS

Instruct the patient/caregiver on home indwelling Foley catheter management, including signs and symptoms of urinary tract infection to report to the physician.

See the Patient Education Guidelines box, Caring for the Urinary Catheter at Home.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Size of the catheter that was inserted and ml capacity of balloon
- Amount of saline solution that was injected into the catheter balloon
- Color, odor, amount, and characteristics of the patient’s urine
- Any patient/caregiver instructions and response to teaching
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Intermittent Straight Catheterization: Female

PURPOSE

- To empty the contents of the bladder
- To relieve bladder distention
- To obtain a specimen for laboratory sampling
- To instruct the patient/caregiver in clean technique to empty the bladder contents or to relieve distention at home
- To promote self-care in the home

RELATED PROCEDURES

- Bladder Instillation or Irrigation (see Chapter 10)
- Specimen Labeling and Transport (see Chapter 12)
- Urine Collection (see Chapter 12)

EQUIPMENT

1. Sterile catheter (size ordered by the physician)
2. Sterile catheter tray
3. Basin or appropriate container for urine collection
4. Soap and warm water, basin, washcloth, and towels
5. Disposable sterile gloves and an impermeable plastic trash bag (see Infection Control) [STOP]

Sterile Technique

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a supine position, with knees flexed and separated. Place a towel or waterproof pad underneath the patient’s buttocks.
4. Wash the perineal area with soap and water. Use downward strokes from front to back. Rinse and dry. Drape the patient for privacy.
5. Open the catheter tray, using sterile technique.
6. Open the sterile wrap to provide a sterile field.
7. Don sterile gloves.
8. Drape the patient with fenestrated towels (plastic side down).
9. Open the antiseptic solution, and pour it over the cotton balls.
10. Lubricate the tip of the catheter. Place the other end into the basin or into an appropriate container for urine collection.
11. With your nondominant hand, separate the labia to expose the urethral meatus. Maintain this position throughout the procedure.
12. With your dominant hand, pick up a cotton ball with the forceps, and cleanse the perineal area, starting from the clitoris and progressing downward past the vagina.

Original procedures copyright © 2000 by Mosby, Inc.
13. Use a clean cotton ball for each stroke. Cleanse directly over the urethral meatus with the last cotton ball.
14. With your dominant hand, gently insert the catheter tip into the urethral meatus (approximately 2 to 3 inches) until urine flows. Instruct the patient to breathe deeply to relax the perineal muscles and to overcome resistance to the entry.
15. Release the labia, and collect urine.
16. Pinch the catheter when the flow of urine ceases, and gently and slowly withdraw the catheter. (Do not remove more than 800 ml of urine at one time because this could precipitate shock.)
17. Place the urine specimen in a container for transport if laboratory evaluation is ordered. Otherwise, discard the urine.
18. Assist the patient to dress.
19. Provide patient comfort measures.
20. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

**Clean Technique (For Self-Catheterization)**

**EQUIPMENT**

1. Catheter (size ordered by the physician)
2. Basin or appropriate container for urine collection
3. Mirror and good lighting
4. Water-soluble lubricant
5. Soap and warm water, basin, washcloth, and towels
6. Impermeable plastic trash bag (see Infection Control) \[STOP\]

**PROCEDURE**

1. Instruct the patient/caregiver in the following clean technique:
   a. Wash the hands thoroughly
   b. Assemble the equipment within easy reach
   c. Separate the labia to wash the genitalia with soap and water; use downward strokes from front to back; rinse and dry
   d. Lie or sit down with the knees flexed, or stand with one foot on the edge of the commode; place a towel or a waterproof pad underneath the buttocks if lying or sitting down
   e. Use a mirror to identify the labia, clitoris, urethral meatus, and vagina
   f. Lubricate the tip of the catheter
   g. With your nondominant hand, hold the labia apart with your index and ring fingers
   h. With your dominant hand, insert the tip of the catheter into the urethral meatus (approximately 2 to 3 inches) until urine flows
   i. Release the labia
   j. With your nondominant hand, place the drainage end of the catheter into the toilet or an appropriate container
   k. With your nondominant hand, pinch the catheter when the flow of urine ceases
   l. With your dominant hand, gently and slowly withdraw the catheter, keeping the tip held up to prevent the dribbling of urine
   m. Dispose of the urine
   n. Clean the catheters with soap and water, then boil them for 20 minutes; air dry the catheters on a clean paper towel; store the dry catheters in a plastic bag for future use
   o. Replace torn, hardened, or cracked catheters
Clean and replace your equipment. Discard disposable items according to *Standard Precautions*.

**NURSING CONSIDERATIONS**

Intermittent self-catheterization should be done at least 4 times a day and at bedtime.

Instruct the patient/caregiver that to prevent infections the bladder should not hold more than 1½ cups of urine at a time.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Color, odor, amount, and characteristics of the patient’s urine
- Catheter size
- Urine collected for laboratory analysis and designated laboratory for delivery, as appropriate
- Any patient/caregiver instructions and response to teaching, including the ability to perform straight catheterization using clean techniques
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Update the plan of care.
Intermittent Straight Catheterization: Male

PURPOSE

- To empty the contents of the bladder
- To relieve bladder distention
- To obtain a specimen for laboratory sampling
- To instruct the patient/caregiver in clean technique to empty the bladder contents or to relieve distention at home
- To promote self-care in the home

RELATED PROCEDURES

- Bladder Instillation and Irrigation (see Chapter 10)
- Specimen Labeling and Transport (see Chapter 12)
- Urine Collection (see Chapter 12)

Sterile Technique

EQUIPMENT

1. Sterile catheter (size ordered by the physician)
2. Sterile catheter tray
3. Basin or appropriate container for urine collection
4. Soap and warm water, basin, washcloth, and towels
5. Disposable sterile gloves and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a supine position, with knees flexed and separated. Place a towel or waterproof pad underneath the patient’s buttocks.
4. Wash the penis with soap and water. If the patient is not circumcised, retract the foreskin and cleanse the meatus. Rinse and dry. Drape the patient for privacy.
5. Open the catheter tray using sterile technique.
6. Open the sterile wrap to provide a sterile field.
7. Don sterile gloves.
8. Place towels from the tray beneath the penis, about the scrotum, and across the thighs (plastic side down).
9. Open the antiseptic solution, and pour it over the cotton balls.
10. Lubricate the tip of the catheter. Place the other end into the basin or into an appropriate container for urine collection.
11. With your nondominant hand, hold the penis upright approximately at a 90-degree angle to the patient’s body. Retract the foreskin if the patient is not circumcised, and expose the meatus. Maintain this position throughout the procedure.
12. With your dominant hand, pick up a cotton ball with the forceps, and cleanse the glans with antiseptic solution from the meatus outward. Use a clean cotton ball for each stroke.
13. With your dominant hand, gently insert the catheter about 6 or 7 inches into the urethral meatus, advancing approximately 2 or 3 inches until urine flows.
14. Some resistance may be felt as the catheter tip meets the external sphincter. Instruct the patient to breathe deeply to relax the perineal muscles and overcome resistance to the entry. (Slightly twisting the catheter from side to side while advancing it may help the catheter pass beyond this point; or it may be necessary to withdraw the catheter a short distance and attempt to readvance it slowly.)
15. Collect the urine.
16. If the patient is not circumcised, place the foreskin back to its previous position to prevent swelling.
17. When the flow of urine ceases, pinch the catheter and gently and slowly withdraw it. (Do not remove more than 800 ml of urine at one time because this could precipitate shock.)
18. Place the urine specimen in a container for transport if laboratory evaluation is ordered. Otherwise, discard the urine.
19. Assist the patient to dress.
20. Provide patient comfort measures.
21. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

Clean Technique (For Self-Catheterization)

EQUIPMENT

1. Catheter (size ordered by the physician)
2. Basin or appropriate container for urine collection
3. Good lighting
4. Water-soluble lubricant
5. Soap and warm water, basin, washcloth, and towels
6. Impermeable plastic trash bag (see Infection Control) \{STOP\}

PROCEDURE

1. Instruct the patient/caregiver in the following clean technique:
   a. Wash the hands thoroughly
   b. Assemble the equipment within easy reach
   c. Wash the penis with soap and water; if you are not circumcised, retract the foreskin, and wash the head of the penis with soap and water; rinse and dry
   d. Lie or sit down with the knees flexed, or stand in front of the toilet; place a towel or a waterproof pad underneath the penis if lying or sitting down
   e. Lubricate the tip of the catheter
   f. With your nondominant hand, hold your penis at a 90-degree angle to your body, and retract the foreskin if you are not circumcised
   g. With your dominant hand, slowly insert the lubricated catheter
   h. Once the urine begins to flow, advance the catheter another 2 to 3 inches to make sure that the catheter is in your bladder
   i. Place the drainage end of the catheter into the toilet or an appropriate container
   j. With your nondominant hand, pinch the catheter when the flow of urine ceases
   k. With your dominant hand, gently and slowly withdraw the catheter, keeping the tip held up to prevent the dribbling of urine
   l. If you are not circumcised, return your foreskin back into its previous position
   m. Dispose of the urine

Original procedures copyright © 2000 by Mosby, Inc.
n. Clean the catheters with soap and water, then boil them for 15 minutes; air dry the catheters on a clean paper towel; store the dry catheters in a plastic bag for future use
o. Replace torn, hardened, or cracked catheters
p. Clean and replace your equipment. Discard disposable items according to Standard Precautions

NURSING CONSIDERATIONS

Intermittent self-catheterization should be done at least 4 times a day and at bedtime.

Instruct the patient/caregiver that to prevent infections, the bladder should not hold more than 1½ cups of urine at a time.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Color, odor, amount, and characteristics of the patient’s urine
- Catheter size
- Urine collected for laboratory analysis and designated laboratory for delivery, as appropriate
- Any patient/caregiver instructions and response to teaching, including the ability to perform straight catheterization using clean techniques
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Nephrostomy Catheter Care

PURPOSE

- To promote drainage of the urine from the kidney when it is not possible or desirable that the urine flow through a ureter
- To prevent infection

RELATED PROCEDURES

- Closed Urinary Drainage Management
- Dressing Changes: Dry Dressing (see Chapter 5)
- Dressing Changes: Hydrocolloid Dressings and Transparent Adhesive Films (see Chapter 5)

EQUIPMENT

1. Sterile normal saline as prescribed by the physician
2. Sterile bladder irrigation set (solution container, asepto syringe, 4- x 4-inch gauze pads, drainage basin)
3. Antiseptic wipes
4. Sterile 4- x 4-inch gauze dressings
5. Transparent adhesive dressing (optional)
6. Hypoallergenic tape
7. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Position the patient to access the nephrostomy site. Drape the patient for privacy.
4. Cleanse around the nephrostomy catheter with antiseptic wipes (avoid using hydrogen peroxide and Betadine because these can promote skin irritation).
5. Examine the catheter exit site; report signs of redness or infection to the physician as needed.
6. Place the gauze dressing around the catheter; secure with tape (instead of a gauze dressing, a transparent adhesive film may be applied).
7. To clear a plugged catheter, do the following:
   a. Gently irrigate the catheter with 5 ml of sterile normal saline (obtain physician guidelines); never force the irrigant into the catheter
   b. Gently aspirate the installed irrigant, or allow the irrigant to flow back via gravity into the drainage basin
   c. Discard the irrigation solution in the drainage basin into the toilet
1. Apply a catheter strap and leg bag for daytime drainage.
2. Apply tubing and a urinary collection bag for nighttime drainage.
3. Assist the patient to dress.
4. Provide patient comfort measures.
5. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Original procedures copyright © 2000 by Mosby, Inc.
Sterile technique is required to prevent kidney infection.

Tape the catheter to the patient's skin to prevent it from becoming dislodged (to ensure continuous drainage, do not bend or kink the catheter).

Do not clamp the catheter unless ordered by the physician.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- The condition of the nephrostomy catheter exit site
- Patient’s fluid and hydration status
- Color, odor, amount, and characteristics of the patient’s urine
- Any patient/caregiver instructions and response to teaching
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Update the plan of care.
Pessary: Removal and Insertion

PURPOSE

- To support the uterus
- To reduce symptoms of pelvic relaxation, including urinary incontinence

EQUIPMENT

1. Pessary
2. Water-soluble jelly
3. Paper towels
4. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a supine position, with knees flexed and separated. Drape the patient for privacy.
4. To remove the pessary, do the following:
   a. Gently insert the fingers into the vagina
   b. Hook fingertips under the pessary rim and pull the pessary straight out
   c. Wash the pessary with soap and water, and dry with paper towels (switch to a new pessary every month or prn as needed)
1. To reinsert the pessary, do the following:
   a. Lubricate the rim of the pessary with water-soluble jelly
   b. Gently squeeze the pessary rim together, and reinsert the pessary toward the back of the vagina (the outside rim of the pessary should fit under the symphysis pubis)
   c. Check the placement of the pessary with the fingertips (the rim of the pessary should be smooth and circular, not wrinkled)
1. Provide patient comfort measures.
2. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

If the patient complains of pain or discomfort, re-position the pessary as necessary.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Any vaginal discharge or foul order
- Any patient/caregiver instructions and response to teaching
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Original procedures copyright © 2000 by Mosby, Inc.
Update the plan of care.
Suprapubic Catheter Care

PURPOSE

- To empty the contents of the bladder
- To prevent infection and skin breakdown
- To collect a urine sample for laboratory analysis
- To instruct the patient/caregiver to clean and apply a dressing to the suprapubic catheter using clean technique
- To promote self-care in the home

RELATED PROCEDURES

- Bladder Instillation and Irrigation (see Chapter 10)
- Closed Urinary Drainage Management
- Specimen Collection and Transport (see Chapter 12)
- Urine Collection (see Chapter 12)

GENERAL INFORMATION

The suprapubic catheter is inserted into the bladder through a permanent opening in the abdominal wall that has been surgically created to provide an alternate path for urine flow from the bladder.

Catheter Change

EQUIPMENT

1. Sterile catheter (size ordered by the physician)
2. Sterile catheter tray
3. Urinary collection bag and drainage tubing
4. Sterile 12 cc syringe
5. Sterile syringe with 10 ml normal saline solution
6. Soap and warm water, basin, washcloth, and towels
7. Disposable nonsterile and sterile gloves and an impermeable plastic trash bag (see Infection Control)  
   {STOP}  

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Position the patient in a reclining position. Place a towel under the buttocks.
4. Perform perineal care as needed. Drape the patient for privacy.
5. Don nonsterile gloves.
6. Remove the old dressing to expose the suprapubic catheter.
7. Attach a 12 cc sterile syringe onto the sideport lumen of the catheter. Remove 5 to 10 ml of sterile normal saline solution or water to deflate the balloon.
8. Gently and slowly remove the catheter.
9. Gently wash the peristomal area with soap and water. Use a spiral pattern, beginning at the stoma site and working outward. Rinse and pat dry.
10. Inspect the stoma site for redness or drainage; report to the physician as appropriate.
11. Discard the catheter, syringe, and nonsterile gloves.
12. Open the catheter tray using sterile technique.
13. Open the sterile wrap to provide a sterile field.
15. Open the contents in the catheter tray.
16. Insert a sterile syringe on the sideport of the lumen at the end of the catheter. Inflate 5 to 10 ml of sterile normal saline solution to test the integrity of the balloon. Deflate the balloon before the insertion of the catheter.
17. Pour antiseptic solution over cotton balls.
18. Use the forceps to pick up the cotton balls, and cleanse the stoma and the surrounding area. Use one ball per wipe.
19. With the dominate hand, dip the catheter tip into the lubricant, and gently insert the catheter into the stoma until resistance is felt.
20. Inflate the bulb of the catheter with 5 to 10 ml of sterile normal saline solution or water.
21. Collect a urine specimen if ordered.
22. Connect the catheter to the urinary drainage system.
23. Dress the stoma as described in the procedure for Suprapubic Catheter Care, Dressing Change: Clean Technique (Patient-Administered).
24. Assist the patient to dress.
25. Provide patient comfort measures.
26. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

**Dressing Change: Clean Technique (Patient-Administered)**

**EQUIPMENT**

1. Antiseptic ointment as prescribed the physician
2. 4- x 4-inch gauze dressing or drain sponge
3. Scissors
4. Hypoallergenic tape
5. Soap and warm water, basin, washcloth, and towels

**PROCEDURE**

1. Instruct the patient/caregiver in dressing change, using the following clean technique:
   a. Gather the equipment; wash the hands
   b. Sit or recline to expose the suprapubic catheter
   c. Remove and discard soiled dressing
   d. Gently clean the peristomal area with mild soap and water; use a spiral pattern, beginning at the stoma site and working outward; rinse and pat dry
   e. Inspect the stoma for redness or irritation, green or yellow drainage, foul odor, bleeding, urinary leakage or accidental catheter dislodgement; notify the physician and the home health agency clinical supervisor if you have any questions or concerns
   f. If the catheter accidentally comes out, cover the stoma with a clean 4- x 4-inch gauze dressing and secure it with tape until a new one can be inserted
g. Apply a small amount of antiseptic ointment around the stoma
h. Reapply a clean 4- x 4-inch gauze dressing or drain sponge, cut to the center on one side to fit around the catheter like a collar
i. Tape the edges of the dressing to prevent it from coming loose
j. Change the dressing daily; long-term suprapubic catheter dressing changes may be decreased to 3 to 4 times a week when your physician instructs you to do so
k. Clean and replace your equipment. Discard disposable items according to Standard Precautions.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

• The procedure and patient toleration
• Color, odor, amount, and characteristics of the patient’s urine
• Catheter size
• Condition of the stoma site
• Urine collected for laboratory analysis and designated laboratory for delivery, as appropriate
• Any patient/caregiver instructions and response to teaching, including the ability to care for the suprapubic catheter using clean techniques
• Physician notification, if applicable
• Standard Precautions
• Other pertinent findings

Update the plan of care.
Urinary Pouch for Females

PURPOSE

- To provide drainage of the bladder using an external urine collection system
- To prevent skin irritation and breakdown

GENERAL INFORMATION

The female urinary pouch is designed to be worn externally. The pouch is primarily used for incontinent patients for whom an indwelling catheter is contraindicated. The pouch may also be used to collect a clean urine specimen.

The pouch has foam-backed synthetic skin. The pre-cut opening in the barrier may be enlarged as needed. The pouch also has an outlet that is used to drain urine. The outlet can be connected to tubing and a urine collection bag for nighttime management.

EQUIPMENT

1. Female urinary pouch (e.g., Hollister)
2. Disposable closed urinary collection bag with drainage tubing (optional)
3. Tube paste (e.g., Hollister Premium Paste)
4. Microporous adhesive tape
5. Skin prep wipes
6. Plastic sheet or towel
7. Nonsterile disposable gloves and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Assemble the equipment at a convenient work area.
3. Assist the patient to a supine position, with knees flexed and separated. Place a plastic sheet or towel underneath the buttocks to protect the linens. Drape the patient for privacy.
4. Cleanse the external genitalia with soap and water. Dry. Apply skin prep wipes to the external labia.
5. Separate the labia to examine the urethral meatus and periurethral floor.
6. Assess the size of the vulva opening, then release the labia.
7. As necessary, use scissors to enlarge the pouch opening so that it corresponds to the size of the vulva opening (review manufacturer’s guidelines; do not cut beyond the lines indicated on the backing of the paper).
8. Make sure that the convenience drain cap on the pouch is closed.
9. Remove the protective paper from the skin barrier.
10. Apply a thin coat of paste around the pouch opening.
11. With the labia in a normal position, apply the pouch barrier to the perineum. Gently press the barrier against the perineum until it contacts the skin at all points.
12. To promote a good seal, apply pressure to the barrier for 1 minute.
13. Apply the microporous adhesive tape on the edge of the pouch for extra security.
15. Clean and replace equipment. Discard disposable items according to Standard Precautions.
NURSING CONSIDERATIONS

Remove the cap on the convenience drain to drain urine. Remove the cap on the convenience drain and attach tubing for continuous drainage into a urine collection bag.

Change the pouch about every 5 day or prn (empty the pouch before removing it; ease the skin barrier away from the skin in the direction of pubic hair growth).

Discontinue the use of the pouch with patient symptoms of fever or abnormal vaginal discharge.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Patient’s fluid and hydration status
- Color, odor, amount, and characteristics of the patient’s urine
- Any patient/caregiver instructions and response to teaching
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Caring for the Urinary Catheter at Home

When caring for a urinary catheter at home, remember the following:

1. Unless your physician tells you otherwise, drink 8 to 10 glasses of water a day to keep your urine clear and yellow.
2. Tell your nurse if your urine changes color. Remember that certain medicines and vitamins can change the color of urine.
3. If your catheter accidentally comes out or leaks, place a towel or waterproof pad underneath you to protect the bed or chair. Do not attempt to reinsert the catheter.
4. If urine does not flow into your drainage bag for 6 to 8 hours, check to make sure the drainage tubing isn’t twisted or bent; this will block the flow of urine. If the tubing is not twisted or bent, notify your nurse or home health agency’s clinical supervisor.
5. Keep the drainage bag below the level of your bladder to prevent a backflow of urine and possible infection. Never raise the drainage bag above the stomach.
6. Avoid tugging or pulling on the drainage tubing; this could cause bleeding and trauma. Likewise, be careful not to step on the tubing when ambulating. Walk with the drainage tubing coiled in your hand and the drainage bag held below your bladder.
7. Tape the catheter to your thigh or pin it to the sheet to prevent tugging. A catheter leg strap should be used for permanent catheters. Leave enough slack in the tubing so that it is comfortable.
8. Clean the skin around your catheter with soap and water at least once a day to remove clots, secretions, and drainage. Pat dry. Cleanliness and good personal care are important in preventing infection and skin breakdown. Always wash your hands before and after performing catheter care.
9. Clean your urinary collection bag or leg bag with soap and water at least every week if you plan to reuse it. Soak the bag in a solution of 1 part white vinegar to 3 parts tap water for 30 minutes. Then empty the bag, and air dry. Store the bag in a clean plastic bag until you are ready to use it.
10. Call and notify your nurse or the on-call home health agency clinical supervisor if the following should occur:
   - Your catheter comes out or leaks
   - Your urine is bloody, discolored, or cloudy
   - No urine has drained from the catheter after 6 to 8 hours
   - Abdominal pain, elevated temperature, or a burning sensation when you urinate
   - Catheter supplies are needed
11. Go to the emergency room if you experience acute abdominal pain or discomfort caused by the catheter.

A limited number of copies of this guideline may be made for free distribution to patients and families. All other rights are reserved.
Medical Nutrition Therapy: Assessment of Patient’s Nutrient Requirements

PURPOSE

- To establish parameters for calories, protein, and fluid level requirements
- To provide instruction on obtaining accurate measurements critical to the nutrition assessment of the patient

RELATED PROCEDURE

- Adult Head-to-Toe Assessment (see Chapter 2)

GENERAL INFORMATION

Medical nutrition therapy (MNT) is the process of assessing the patient, identifying treatment goals, developing the nutrition care plan, and applying specific interventions through multidisciplinary team approaches. All aspects of MNT must include input from, agreement with, and participation by the patient/caregiver. In this section, only establishing nutrient requirement parameters is discussed.

EQUIPMENT

1. Cloth measuring tape
2. Scales
3. Calculator
4. Blood pressure cuff, stethoscope, and thermometer (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Obtain the following patient measurements for nutritional care:
   a. Vital signs
   b. Weight and height; never accept a caregiver’s and/or other family member’s statement of height or weight of a patient; recent reports from hospital stays or from other institutions may be used as a guide, but accurate height and weight measurements at the time of assessment are preferable; obtain measurements in the following manner:
      • Weight—the frequency of conducting weight measurements depends on the physician’s orders but should be done at least monthly; follow correct procedures for the type of scale used; always use the same scale to weigh the patient each time; balance the scale before obtaining the patient’s weight; weigh the patient at the same time of the day and have the patient wear the same type clothes, stand without support, and wear no shoes; floor scales should be placed on a solid surface, not carpet; for accurate measurements, obtain an average of two to three weight measurements
      • Height—measure the patient without him or her wearing shoes; for accurate measurements, obtain an average of three measurements; measurements may be taken with a cloth measuring tape with the patient standing, lying flat in the bed, or contracted in the bed. For bilateral amputee patients, the measurement of the arm span is roughly equal (within 10%) to original height; as individuals age, height decreases
(1) The following are alternatives to height and weight measurements:
• A midarm circumference (MAC) measurement may be used only to judge changes in the patient’s condition (MAC does not determine weight status); use a cloth measuring tape to measure the circumference of the arm at the midpoint—between the elbow and shoulder bone; always measure the same arm; record the measurement in centimeters; measure the MAC monthly at the same time of the month
• Knee height—knee height is the measure of length in centimeters between the top of the knee to the bottom of the heel when the knee and heel are both positioned at right angles to the tibia
• Frame size—measure the wrist circumference just distal to the styloid process at the wrist crease on the prominent arm using a cloth measuring tape

c. Desirable (normal or ideal) body weight (DBW)—the National Institutes of Health (NIH) defines desirable weight as the midpoint of the recommended weight range at a specified height for persons of medium build, according to Metropolitan Life Insurance; the following guide may also be used to calculate DBW of medium-frame persons (subtract or add 10% for small or large frame persons, respectively):

• Women—allow 100 pounds for first 5 feet of height, plus 5 pounds for each additional inch
• Men—allow 106 pounds for first 5 feet of height, plus 6 pounds for each additional inch
d. Body mass index (BMI)—BMI is an index of a person’s weight in relation to height; it is determined by dividing the weight in kilograms by the height in meters squared

**Weight Status**

<table>
<thead>
<tr>
<th>BMI</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;20</td>
<td>underweight</td>
</tr>
<tr>
<td>20-25</td>
<td>normal</td>
</tr>
<tr>
<td>26-30</td>
<td>overweight</td>
</tr>
<tr>
<td>&gt;30</td>
<td>obese</td>
</tr>
</tbody>
</table>

e. Adjusted body weight (AjBW)—AjBW is recommended for calculating the energy requirements of persons who are 125% or more of their DBW

\[
AjBW = [(\text{Actual body weight} - \text{desirable body weight}) \times 0.25] + \text{DBW}
\]

The following are methods used to estimate energy (calorie) requirements:

• The Harris-Benedict equation
• The quick method

(1) Determine whether weight loss or gain is desirable; establish a calorie level by adding or subtracting 500 calories from the estimated energy requirements (EER) to produce a 1-pound weight gain or loss per week, respectively; the established calorie level must be discussed with and accepted by the patient for successful diet adherence
(2) Use AjBW to calculate energy requirements of obese individuals who are 125% or more than their DBW
(3) Patients with congestive heart failure (CHF) may have 30% to 50% higher energy requirements than normal
(4) Patients with depleted protein stores (DPS) (e.g., as a result of pressure ulcers, burns, surgery,
cancer, sepsis, and hospitalization) require 150 to 300 calories per gram of nitrogen ratio, depending on the severity of their condition; nitrogen grams are calculated by dividing the required protein grams by 6.25; DPS energy needs are calculated by dividing the required protein grams by 6.25, then multiplying the outcome by 150 to 300 calories.

(5) Patients diagnosed with failure to thrive (FTT) require 30 to 35 calories per kilogram of actual body weight (ABW)

f. Protein requirements—protein requirements are based on grams of protein per kilogram of ABW or DBW and are condition-specific; the following are formulas used to calculate protein requirements for specific patient statuses:

- Normal healthy adults: ABW (kg) x 0.8 g
- Geriatric patients: ABW (kg) x 0.8 to 1 g
- Patients with DPS: ABW (kg) x 1.25 to 1.5 g
- Patients diagnosed with FTT: ABW (kg) x 1 to 1.5 g
- Obese patients: DBW (kg) (used for estimated lean weight) x 1.5 g

g. Fluid requirements—fluid requirements are based on milliliters of free water fluid per kilogram of ABW and are condition-specific; a minimum of 1500 ml is recommended unless contraindicated by patient’s clinical condition; the following are fluid requirements for specific patient statuses:

- Normal health adults: ABW (kg) x 30 to 35 ml
- Geriatric patients: ABW (kg) x 30 ml
- Patients with DPS: ABW (kg) x 30 to 35 mlc
- Patients diagnosed with FTT: ABW (kg) x 30 ml
- Obese patients: ABW (kg) x 25 ml
- Patients with CHF: ABW (kg) x 25 ml

1. Use the following to provide nutritional care:
   a. Food diary—use the food diary form to record a 24-hour recall of the patient’s intake
   b. Feedback questions—Use the following list of questions to determine how well the patient has understood the diet instruction; can patients do the following:

   - Name three foods and portion sizes allowed on their diet?
   - Identify the times of the day they are supposed to eat meals?
   - Identify a 1 cup, 2 cup, 1 tablespoon, and 1 teaspoon measuring utensil from the samples you have shown them or from their own kitchen?
   - Name a snack food they are allowed to eat on their diet?
   - Plan a sample menu for 1 day?
   - Tell you the name of their diet and the reason why it is important to follow the diet?

1. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

The procedures described throughout this chapter require the home health nurse to establish nutrient requirements for the patient. This is the cornerstone to teaching the patient/caregiver the appropriate amount of food and fluid that should be consumed. It is important to compare the amount of food and fluid actually consumed with the recommended amount.
consumed by the patient to this requirement and make meaningful constructive recommendations for modifying the diet.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- Vital signs
- Height—measure at least annually for patients 65 years or older
- Frame size—obtain the wrist measurement of the prominent arm whenever height is measured
- Weight—frequency per physician’s orders or at least monthly
- Nutrient requirements—state method used and show calculations for listing calories, protein, and fluid requirements; these parameters should be re-calculated whenever the patient’s condition changes
- Comparison between food intake nutrient levels and requirement of nutrients
- Modifications suggested to patient/caregiver
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Medical Nutrition Therapy: Chronic Obstructive Pulmonary Disease

PURPOSE

- To instruct the patient/caregiver to maintain adequate intake of calories and protein
- To instruct the patient to maintain a stable, reasonable body weight
- To maintain immunocompetence
- To promote self-care in the home

RELATED PROCEDURES

- Medical Nutrition Therapy: Assessment of Patient’s Nutrient Requirements
- Weight (see Chapter 2)

GENERAL INFORMATION

Chronic obstructive pulmonary disease (COPD) is defined as a variety of respiratory diseases characterized by chronic airflow obstruction, namely, chronic bronchitis and emphysema. Signs and symptoms include chronic cough and productive sputum daily for 3 or more months during at least 2 consecutive years, dyspnea, and general difficulty in breathing. COPD is also characterized by shortness of breath, in part as a result of taking in decreased amounts of oxygen and expelling inadequate amounts of carbon dioxide.

The type of foods eaten affects the amount of oxygen and carbon dioxide in the blood. Oxygen is used to change food into fuel, and during this process carbon dioxide is formed as a waste product. Patients with COPD have a lack of oxygen and an increase of carbon dioxide in the blood. This situation leads to lactic acidosis, which makes the patient feel weak.

Malnutrition is a risk factor of respiratory failure. The progression of COPD can be slowed by providing nutrients in correct proportions that place the least amount of stress on respiratory function. Nutritional status is determined by the following:

- Body weight
- Lean body mass
- Biochemical markers
- Skinfold measurements

The following are the most common symptoms of COPD that affect the patient’s nutritional status:

- Early satiety
- Bloating
- Anorexia
- Dyspnea
- Fatigue
- Constipation
- Dental problems

The following are recommended calorie distributions for patients with COPD and normal healthy adults:
A high-fat diet places low stress on respiratory function. Protein intake should be monitored to prevent overfeeding. The use of long-term steroids can cause protein catabolism. Low-protein intake coupled with high-carbohydrate intake decreases theophylline elimination. Some studies indicate that diets high in vitamins C and E and omega-three fatty acids provide some protection for smokers against developing COPD.

Low body weight is a common problem for patients with COPD because these patients experience the following:

1. Increased calorie expenditure from infection and increased work from breathing, which can be 10 times greater than what a healthy person requires
2. Decreased calorie intake from the following:
   - High doses of theophylline, causing nausea and/or vomiting
   - Chronic sputum, causing poor appetite
   - Full stomach, causing the diaphragm to be restricted after a large meal and resulting in difficulty in breathing
   - Shortness of breath and weakness, causing difficulty in preparing meals
   - Depression
   - Bronchodilators, which are gastric irritants
   - Peptic ulcers or gastrointestinal distress (experienced by up to 25% of patients with COPD)

**EQUIPMENT**

1. Cloth measuring tape
2. Scales or recent weight history of patient
3. Calculator
4. Food labels
5. Blood pressure cuff, stethoscope, and thermometer (see Infection Control) {STOP}

**PROCEDURE**

1. Explain the procedure to the patient/caregiver.
2. Consider implementing the following:
   a. Assessing vital signs on each visit; weigh the patient at least once weekly; report abnormal findings to the physician
   b. Setting nutritional requirements for the patient; see the procedure for Medical Nutrition Therapy: Assessment of Patient’s Nutrient Requirements
   c. Recording a 24-hour recall of the patient’s nutritional intake on the food diary form; analyze the calories,
fat, carbohydrate, and protein content of the diet intake
d. Instructing the patient/caregiver on the COPD diet instruction sheet and menu; use food labels to
demonstrate calorie, fat, carbohydrate, and protein content in various foods
e. Comparing the patient’s 24-hour diet recall to his or her prescribed diet order as instructed; make
appropriate recommendations to the patient/caregiver for modifying any nutrient intake that is found to
be inappropriate on the food intake record
f. Making suggestions to improve calorie intake, keeping in mind the need to increase fat, monitor protein,
and limit carbohydrate intake; use the following feeding strategies:

- Eat high-calorie foods first, especially those high in fat
- Use low-cholesterol fatty food sources instead of high-carbohydrate foods for snacks (e.g., eat peanut
  butter on whole wheat bread rather than a candy bar)
- Eat small multiple meals
- Drink liquid 1 hour before meals
- Do not drink a lot of fluids with meals
- Rest before meals
- Take breathing treatments before meals
- Take oxygen during the meal
- Have the patient take advantage of the times he or she feels good by eating more
- Treat food like a medication—take it seriously, sufficiently, and on time
- Avoid gas-forming foods
- Eat in a relaxed atmosphere and preferably with a companion

1. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Beneficial interventions for COPD include smoking cessation; avoiding irritants such as dust, fumes, and air
pollutants; and avoiding extreme temperature changes. It is important that the patient with COPD receive
influenza and pneumonia vaccines to avoid complications with infection and protect against further digression.

Medications and other therapies such as corticosteroids, antibiotics, bronchodilators, pulmonary rehabilitation,
oxxygen therapy, exercise, and reconditioning can help maintain functional independence, but no therapy can
reverse lung damage. As previously mentioned, many of these therapies have poor nutritional side effects
associated with them.

Since COPD is commonly associated with weight loss, low body weight, and calorie-protein malnutrition,
prognosis is particularly poor—especially for patients who require mechanical ventilation. Because of high rates
of infections and poor lung function, COPD is a common source of morbidity and mortality in older adults.

Because of the aforementioned nursing considerations, it is imperative that the following be done:

- Weigh the patient each visit
- Report to the physician a weight change of 2 pounds in 1 day or 5 or more pounds between visits
- Observe the patient for increased difficulty in breathing or shortness of breath
- Fill out a food intake record once a week and compare it to nutrient requirements

Original procedures copyright © 2000 by Mosby, Inc.
DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Vital signs
- Weight
- Food intake/appetite
- Patient/caregiver instructions and response to teaching, including understanding of the diet and adherence to nutritional recommendations
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Medical Nutrition Therapy: Congestive Heart Failure

PURPOSE

- To provide education to the patient/caregiver about the prevention and treatment of congestive heart failure (CHF)
- To stabilize and improve the patient’s body weight
- To stabilize and improve the patient’s cardiac output through manipulation of sodium and fluid intake
- To promote self-care in the home

RELATED PROCEDURES

- Medical Nutrition Therapy: Assessment of Patient’s Nutrient Requirements
- Edema (see Chapter 2)
- Intake and Output (see Chapter 2)
- Weight (see Chapter 2)

GENERAL INFORMATION

CHF occurs when the heart cannot circulate blood to the body tissues in a sufficient manner. This mechanical inadequacy can result in the following signs and symptoms:

- Congestion from edema, especially in the lungs, liver, legs, and bowel
- Shortness of breath
- Fatigue and poor tolerance to exercise
- Rapid pulse rate
- Abdominal fullness with discomfort and loss of appetite
- Mental confusion

Severe weight loss and malnutrition are documented with advanced CHF and are possibly a result of the following:

- Increased metabolism
- Nausea, vomiting, and/or anorexia resulting from digitalis toxicity or congestive enlargement of the liver and abdominal fullness
- Intestinal malabsorption related to venous congestion and edema of the bowel
- Protein-losing intestinal disease

EQUIPMENT

1. Scales
2. Cloth measuring tape
3. Calculator
4. Food models or packages with food labels of sodium content
5. Measuring cup and pint-size and quart-size containers or examples of common containers of the same sizes
6. Blood pressure cuff, stethoscope, and thermometer (see Infection Control) {STOP}
PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Consider implementing the following:
   a. Assessing vital signs and evaluating for edema each visit; pay close attention to abnormal changes in blood pressure or adventitious lung sounds; report findings to the physician as necessary
   b. Setting nutritional requirements for the patient; see the procedure for Medical Nutrition Therapy: Assessment of Patient’s Nutrient Requirements
   c. Obtaining a measurement of the serum albumin or prealbumin level; it is recommended this be done every 3 months to assess for protein-energy malnutrition; obtain physician’s orders for laboratory evaluation
   d. Obtaining a measurement of the serum sodium level, which is necessary to determine the need for a fluid restriction; obtain physician’s orders for laboratory evaluation
   e. Calculating the fluid requirement for the patient; patients with CHF normally need approximately 25 ml of fluid per kilogram of actual body weight; fluids may be restricted if hyponatremia occurs; in cases of mild CHF, 1500 to 2000 ml of fluid is recommended, in severe cases of CHF, a restriction of 1000 ml or less is common; demonstrate to the patient/caregiver the correct volume of fluid recommended for the patient to consume daily by using a measuring container familiar to the patient
   f. Recording a 24-hour recall of the patient’s nutritional intake on the food diary form; analyze the calories, sodium, and fluid content of the diet intake
   g. Instructing the patient/caregiver on the low-salt diet instruction sheet and menu; use food labels to demonstrate sodium content in various foods (just 1 teaspoon of common table salt contains about 2 g of sodium); use measuring cups familiar to the patient to demonstrate proper fluid amounts to consume
   h. Comparing the patient’s 24-hour diet recall to his or her prescribed diet order as instructed; make appropriate recommendations to the patient/caregiver for modifying any nutrients found to be inappropriate on the food intake record
1. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

If the patient is taking a potassium-depleting diuretic, a potassium supplement may be necessary. If the patient is taking a potassium-sparing diuretic and an angiotensin-converting enzyme (ACE) inhibitor, the patient should be cautioned about the use of salt substitutes and light salts. Salt substitutes generally contain 2500 to 2800 mg of potassium per teaspoon. Light salt contains 1100 mg of sodium and 1500 mg of potassium per teaspoon. If salt substitutes and/or light salts are used, an increased potassium blood level may result. Make the physician aware of any salt substitute product that the patient is using. Furosemide therapy greater than 80 mg per day for more than 3 months can result in a thiamin deficiency, which causes high-output cardiac failure and impaired cardiac performance.

Studies indicate that thiamin supplementation of 200 mg per day orally for 6 weeks improves left ventricular function, diuresis, and sodium excretion in patients with CHF.

Dysrhythmias and/or increased heart rates can be caused by use of caffeine-containing beverages or medications.

Energy requirements for patients with CHF can be 30% to 50% higher than for healthy individuals because of increased metabolic rates from cardiac and pulmonary expenditures.
The following nutrition intervention guidelines should be monitored by the nurse:

- Ensure that the patient's intake of calories and protein is adequate
- Restrict sodium to 3 g daily in cases of mild CHF; if large doses of diuretics are required (greater than 80 mg of furosemide daily), restrict sodium to 2 g daily
- Limit excessive fluid intake; restrict fluids in patients with hyponatremia
- Limit alcohol intake to no more than 1 drink per day of 30 ml of liquor or the equivalent of beer or wine
- Encourage smoking cessation
- Encourage exercise as tolerated by the patient and allowed by the physician
- Recommend thiamin supplementation for patients taking large doses of diuretics
- Weigh the patient on each visit; report to the physician a weight gain of 2 pounds in 1 day or 5 pounds between visits
- Obtain vital signs
- Observe the patient for increased difficulty in breathing or shortness of breath

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient tolerance
- Vital sign measurements
- Weight—a 3- to 5-pound weight gain may suggest fluid retention sufficient to cause heart failure; report any weight change to the physician
- Appetite—analyze the intake of calories, sodium, and fluid
- Laboratory data (serum sodium and albumin levels are of special significance)
- Observance of any changes in breathing (e.g., shortness of breath)
- Tolerance of activities such as limited exercise; level of fatigue
- Any patient/caregiver instructions and response to teaching, including answers to feedback questions
- Physician notification, if applicable
- *Standard precautions*
- Other pertinent findings

Update the plan of care.
Medical Nutrition Therapy: Coronary Heart Disease

PURPOSE

- To instruct the patient/caregiver in the prevention and treatment of coronary heart disease (CHD)
- To improve and stabilize the patient’s blood levels of total cholesterol (TC), low-density lipoprotein (LDL), and high-density lipoprotein (HDL)
- To improve and stabilize the patient's body weight
- To improve and stabilize the patient’s blood pressure
- To improve and stabilize the patient’s blood glucose level
- To promote self-care in the home

RELATED PROCEDURE

- Medical Nutrition Therapy: Assessment of Patient’s Nutritional Requirements

GENERAL INFORMATION

CHD is a disorder resulting from narrowing of the arteries that supply oxygen and nutrients directly to the heart (coronary arteries). CHD is caused by the thickening and hardening of the walls of these arteries by deposits of lipids and other compounds. This process is known as atherosclerosis. Atherosclerosis causes inadequate supply of blood and oxygen to the heart and can lead to heart muscle damage, chest pain, heart attack, and death. The following are risk factors associated with CHD:

- Age—men, 45 or older; women, 55 or older or premature menopausal women who do not receive estrogen replacement therapy
- Family history of premature CHD—father or brother younger than 55 years; mother or sister younger than 65 years
- Smoking—accounts of one-fifth of all CHD deaths
- Estrogen replacement therapy in postmenopausal women
- Obesity—20% or more over desirable body weight
- Hypertension—blood pressure of 140/90 mm Hg or more or medicine for hypertension (HTN)
- Diabetes—80% of patients with diabetes have some degree of heart disease
- Lack of exercise—60% of the U.S. population does not get 30 minutes of exercise per day
- High TC—200 mg/dl or greater
- High LDL—160 mg/dl or greater with two or more risk factors, 130 mg/dl with fewer than two risk factors, or 100 mg/dl with no other risk factor
- Low HDL—less than or equal to 35 mg/dl
- Inadequate consumption of B-complex vitamins (proposed)
- Hyperinsulinemia (proposed)
- Psychosocial factors—poverty, isolation, depression, hostility

The following are dietary guidelines for individuals at risk for CHD:

- Achieve and maintain a reasonable body weight
- Increase physical activity
• Adhere to a diet that is less than or equal to 30% total fat, 10% saturated fat, and 300 mg of cholesterol per day; (for patients with documented CHD, more strict limits are encouraged: 30% total fat, 7% saturated fat, 200 mg cholesterol per day)
• Increase dietary intake of B-complex vitamins (folate, B6, B12) and vitamin E
• Moderate alcohol consumption of about 1 ounce per day
• Smoking cessation
• For patients with diabetes, promote intensive control of blood glucose levels to prevent the requirement of high insulin levels, therefore preventing hyperinsulinemia

EQUIPMENT

1. Scales
2. Cloth measuring tape
3. Calculator
4. Food models or packages with food labels of calories, cholesterol, saturated fat, and sodium content
5. Stethoscope, blood pressure cuff, and thermometer (see Infection Control) [STOP]

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Consider implementing the following:
   a. Setting nutritional requirements for the patient; see the procedure for Medical Nutrition Therapy: Assessment of Patient’s Nutrient Requirements.
   b. Assessing vital signs on each visit; weigh patient at least monthly; report abnormal findings to the physician
   c. Recording a 24-hour recall of the patient’s nutritional intake on the food diary form; analyze the total calories, cholesterol, saturated fat, and sodium content of foods eaten
   d. Instructing the patient/caregiver on the low-cholesterol, high-fiber, no-added–salt diet instruction sheet and menu; use food labels to demonstrate sodium, total fat, and saturated fat content in various foods
   e. Comparing the patient’s 24-hour diet recall to his or her prescribed diet order as instructed; make appropriate recommendations to the patient/caregiver for modifying any nutrients found to be inappropriate on the food intake record
   f. Instructing the patient/caregiver to limit total fat intake to no more than 30% of his or her calorie intake per day (e.g., in a 2000 calorie diet, 30% fat = 600 calories; 600 calories of fat = about 65 g of fat a day; of that 65 g of total fat, only about 20 g should be from a saturated fat source); use food labels to add up grams of fat and milligrams of cholesterol in foods eaten daily
1. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

If the patient is more than 10% over ideal body weight, a weight loss of 10 pounds can make a significant reduction in blood pressure and CHD management.

One of the functions of insulin is to deposit fat. When there is an increase in insulin requirement related to diabetes or insulin resistance, there is also a likelihood that more fat will be deposited, possibly leading to atherosclerosis. The best practice is tight control of blood glucose and use of as little exogenous insulin as possible. A low-glycemic–index diet has shown to be beneficial for this purpose.
If the patient is taking a potassium-depleting diuretic, a potassium supplement may be necessary. Adequate potassium intake of 3500 mg (90 mEq) per day is recommended. If the patient is taking a potassium-sparing diuretic and an ACE inhibitor, he or she should be cautioned about the use of salt substitutes and light salts. Salt substitutes generally contain 2500 to 2800 mg of potassium per teaspoon. Light salt contains 1100 mg of sodium and 1500 mg of potassium per teaspoon. If salt substitutes/and or light salt are used in excess, an increased potassium blood level may result. Make the physician aware of any salt substitute product the patient is using.

The following nutrition intervention guidelines should be monitored by the nurse:

- Total calorie intake to promote weight loss or maintenance
- Intake of cholesterol, total fats, and saturated fats
- Sodium intake—limit to 4 to 5 g daily
- Alcohol intake—limit to no more than 1 drink per day of 30 cc of liquor or the equivalent of beer or wine for women; men may have no more than 2 drinks daily
- Smoking frequency or cessation
- Exercise—regular minimum of 20 to 30 minutes daily; nonvigorous; exercise program should be initiated after blood pressure is under control and with the physician’s approval; encourage chair/bed exercise when appropriate
- Intake of low-fat dairy products—twice daily; if the patient refuses to or cannot drink or eat dairy products, recommend a calcium supplement of 800 to 1200 mg per day and a magnesium supplement of 280 to 350 mg per day to meet recommended daily allowances (RDAs) (higher doses of magnesium have been known to cause diarrhea)
- Intake of foods rich in B-complex vitamins (folate, B6, B12); this includes orange juice, green leafy vegetables, milk, eggs, and lean meats—especially liver and other organ meats

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient tolerance
- Vital signs
- Serum lipid and glucose levels
- Weight—report any weight change to the physician
- Food intake—analyze the intake of calories, sodium, potassium, calcium, and alcohol; document any suggestions for modifications in the diet
- Physical fitness level and amount of routine allowed exercise the patient gets
- Smoking frequency or cessation
- Evaluation of current medications
- Any patient/caregiver instructions and response to teaching, including answers to feedback questions
- *Standard Precautions*
- Physician notification, if applicable
- Other pertinent findings

Update the plan of care.
Medical Nutrition Therapy: Diabetes Mellitus

PURPOSE

- To achieve and maintain normal blood glucose levels
- To achieve and maintain optimal blood lipid levels
- To achieve and maintain healthy body weight
- To prevent, delay, or treat nutrition-related complications
- To promote self-care in the home

RELATED PROCEDURES

- Medical Nutrition Therapy: Assessment of Patient’s Nutrient Requirements
- Blood Glucose Testing (see Chapter 12)

GENERAL INFORMATION

In 1994 the American Diabetes Association (ADA) revised the nutrition principles for diabetes according to the results of the Diabetes Control and Complications Trial (DCCT). In the past, the health care industry held to the belief that sugars, both added and naturally occurring, are rapidly absorbed and lead to hyperglycemia and an increased need for insulin. However, more recent scientific research has indicated that sucrose and other sugars do not create a more harmful effect on blood glucose levels and are not absorbed more rapidly than starches. The ADA’s revision, which was based on this research, sets forth the principle that “a carbohydrate is a carbohydrate is a carbohydrate.”

The ADA’s current position is that sucrose can be used as part of the total amount of carbohydrate in a meal plan, but not as added carbohydrate. An overall healthy diet based on the Food Guide Pyramid should be followed. The total amount of food, as well as the total amount of carbohydrate, eaten will have more of an effect on blood glucose levels than the source of the carbohydrate. Overeating of any food, not just carbohydrates, will affect blood glucose control.

EQUIPMENT

1. Cloth measuring tape
2. Scales
3. Calculator
4. Measuring cups and spoons
5. Food models
6. Blood pressure cuff, stethoscope, thermometer, and glucose meter (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Consider implementing the following:
   a. Assessing vital signs on each visit; weigh the patient at least weekly; obtain the blood glucose value; have the patient perform self-monitoring of blood glucose (SMBG) before eating breakfast; report abnormal findings to the physician
b. Setting nutritional requirements for the patient; see the procedure for Medical Nutrition Therapy: Assessment of Patient’s Nutrient Requirements; establish a reasonable body weight that is agreeable with the patient to set as a goal

c. Recording a 24-hour recall of the patient’s nutritional intake and any available blood glucose data on the daily food and blood glucose record form; analyze the carbohydrate and total calorie content of the diet intake

d. Instructing the patient/caregiver on carbohydrate counting for patients with diabetes

e. Comparing the patient’s 24-hour diet recall to his or her prescribed diet order as instructed; make appropriate recommendations to the patient/caregiver for modifying any nutrients found to be inappropriate on the food intake record

f. Discussing with the patient the importance of accurately measuring the foods as listed on the diet instruction sheet; illustrate correct measurement using standard measuring cups and spoons; in the home setting, identify utensils commonly used to measure foods

g. Discussing with the patient the times of the day he or she usually eats meals; compare those times to the times indicated on the diet instruction sheet; work with the patient to establish a regular eating pattern, due to the importance of food and medication timing in controlling his or her disease process

1. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Carbohydrate counting is not applicable to all patients. The historical ADA exchange lists meal planning system is still available. It is of utmost importance when deciding between these two methods of diet counseling that the patient be treated in a way to incorporate diabetic management into his or her lifestyle, not his or her lifestyle into the diabetic regimen. To assist in this process, it is important to have a team of health care professionals working with the patient. This team should include a registered dietitian, physician, registered nurse, and other health care professionals to bring a continuum of care to the patient.

Carbohydrate counting can be done successfully if the patient is instructed in a very simple manner. Carbohydrate counting will be difficult for patients who have always been told “do not eat sugar.” If the blood glucose level of such patients is under good control, these patients should remain on their current regimen. The carbohydrate counting system can be used by patients in any age group.

The carbohydrate counting diet is not to be attempted without the full cooperation of the multidisciplinary team. All parameters of the patient’s care should be taken into consideration before beginning any new therapy. Mental status, stress—both physical and emotional—exercise or activity level, blood glucose levels, and the medication regimen all are a part of this new diet therapy.

DOCUMENTATION GUIDELINES

To monitor the patient’s adherence to his or her diet, have him or her record the times he or she eats, the foods and beverages consumed, and his or her daily blood glucose level if available on the daily food and blood glucose record forms. Evaluate the data by comparing the information to the patient’s actual meal plan. Counsel the patient on any modifications he or she needs to make.

Document the following in the visit report:

- The procedure and patient toleration
- Vital signs, including blood glucose values and/or SMBG
• Height, frame size, desirable body weight, body weight goal, and established calorie level
• Data from the daily food and blood glucose record forms completed by the patient
• Analysis of the patient’s food intake and the modifications suggested
• Patient/caregiver instructions and response to teaching, including understanding of the diet and adherence to nutritional recommendations
• Physician notification, if applicable
• Standard Precautions
• Other pertinent findings

Update the plan of care.
Medical Nutrition Therapy: Enteral Nutrition Support

PURPOSE

• To provide liquid nourishment to the patient who is unable to maintain sufficient oral intake because of anatomic or mental disease processes
• To provide adequate nutrients for support, maintenance, or restoration of nutritional status
• To instruct the patient/caregiver on tube feeding procedures and schedule
• To promote self-care in the home

RELATED PROCEDURES

• Medical Nutrition Therapy: Assessment of Patient’s Nutrient Requirements
• Gastrostomy Tube Feeding (see Chapter 6)
• Enteral Feedings (see Chapter 6)

GENERAL INFORMATION

Indications for enteral nutrition support include the following:

• Malnutrition risk or presence
• Inadequate intestinal digestion and absorption
• Absence of bowel obstruction
• Accessibility of tube site
• Adequate tolerance to formula

The following are common conditions that warrant enteral nutrition support:

• Dysphagia
• Cerebral vascular accident
• Cancer
• Gastrointestinal disease
• Coma
• Cardiac failure
• Respiratory failure
• Depression

Determine the optimal feeding route by using the following guidelines:

• Parenteral nutrition—if the patient’s gastrointestinal tract is nonfunctional
• Nasogastric tube—if the patient requires tube feeding for less than 6 weeks
• Gastrostomy tube—if the patient requires tube feeding for more than 6 weeks
• Jejunostomy tube—if the patient is at risk for aspiration or has severe esophageal reflux, obstruction, stricture, fistulae, or ileus of the upper gastrointestinal tract

EQUIPMENT
PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Consider implementing the following:
   a. Assessing vital signs on each visit; weigh the patient at least weekly; report abnormal findings to the physician
   b. Obtaining a physician’s order for the patient’s enteral nutrition support
   c. Setting nutritional requirements for the patient; see the procedure for Medical Nutrition Therapy: Assessment of Patient’s Nutrient Requirements.
   d. Calculating the calories, protein, and fluid volume in the patient’s current physician’s order using the calorie, protein, and fluid information on the can of formula or other reference guides
   e. Comparing the patient’s nutrient requirements to the nutrients in the current order; if the patient’s order is inadequate, refer the patient to the registered dietitian for a thorough assessment and/or contact the physician regarding the deficit
   f. Discussing the enteral nutrition procedure and schedule with the patient/caregiver; establish an agreeable schedule that enables the patient/caregiver to have some amount of freedom; when the patient’s enteral nutrition support order is adequate and agreeable with the patient/caregiver, write down the schedule on the form and review it with the patient/caregiver; specify water flushes before and after feedings and medications to ensure adequate volume for the patient
   1. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Administration techniques vary according to location of the feeding tube,tolerance of the formula, and nutrition goals. The three methods of administration are bolus, intermittent, and continuous. Monitoring for complication resulting from any administration method is essential. Bolus feedings are more likely to result in nausea, diarrhea, vomiting, distention, cramps, or aspiration than other methods. Bolus or intermittent feedings can be scheduled for daytime hours so that the patient/caregiver does not have to be disturbed at night. Continuous pump feedings are usually tolerated the best. Position the patient up (at least 45 degrees during and 30 minutes after feedings). See the procedures for Gastrostomy Care and Enteral Feedings in Chapter 6.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and patient toleration
- Vital signs
- Type, rate/quantity, frequency, and administration method of formula feedings
• Total calories, grams, protein, and volume that the patient receives daily
• Who administers the formula
• Infection control measures taken by patient/caregiver
• Positioning of the patient during administration of the formula
• Patient tolerance of the formula; type of intolerance, if any
• Patient/caregiver instructions and response to teaching, including understanding of the diet and adherence to nutritional recommendations
• Physician notification, if applicable
• *Standard Precautions*
• Other pertinent findings

Update the plan of care.
Medical Nutrition Therapy: Failure to Thrive

PURPOSE

- To provide education to the patient/caregiver about the prevention and treatment of failure to thrive (FTT) in the dependent elder adult
- To increase intake of nutrient-dense foods
- To increase, maintain a reasonable, or prevent a decrease in body weight
- To prevent complications resulting from a low body weight
- To promote self-care in the home

RELATED PROCEDURES

- Medical Nutrition Therapy: Assessment of Patient’s Nutrient Requirements
- Dependent Elder Abuse/Neglect (see Chapter 16)
- Skin Care (see Chapter 5)

GENERAL INFORMATION

FTT is defined as a gradual decline in physical and/or cognitive function that occurs in the elderly near the end of life. FTT is characterized by decline in independence, social withdrawal, unexplained weight loss, and otherwise poor nutritional status.

It is important to consider FTT on first contact with an elderly patient. Since most elderly patients have a wide range of overlapping diagnoses, FTT is often overlooked and can remain untreated. The following are nutrition-related factors related to FTT:

- Decreased shopping ability
- Diminished meal preparation ability
- Decreased appetite
- Weight loss
- Chronic anemia
- Dehydration
- Dysphagia
- Skin condition leading to pressure ulcers
- Alcohol use leading to abuse
- Constipation

The following are nutrition guidelines for patients with FTT:

- Maintenance of a reasonable body weight
- Increased food, fluid, and other nutrients intake to meet requirements
- Serum albumin level of 3.5 g/dl or greater
- Serum cholesterol level of 160 to 200 mg/dl
- Moderation or elimination of alcohol use
- Stabilization of other diseases or conditions that contribute to FTT
EQUIPMENT

1. Cloth measuring tape
2. Scales
3. Calculator
4. Measuring cups and spoons
5. Food models
6. Food labels
7. Blood pressure cuff, stethoscope, thermometer, and glucose meter (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Consider implementing the following:
   a. Assessing vital signs on each visit; weigh the patient at least weekly; pay attention to the patient’s skin
      and overall physical appearance; report abnormal findings to the physician
   b. Setting nutritional requirements for the patient; see the procedure for Medical Nutrition Therapy:
      Assessment of Patient’s Nutrient Requirements
      or
      Identifying the calorie, protein, and fluid intake required by the patient, using the following guidelines
      (discuss with the patient/caregiver the importance of the patient meeting the following nutrient
      requirements):
      - Calories: minimum of 30 to 35 kcal/kg body weight
      - Protein: 1 to 1.5 g of protein/kg body weight
      - Fluids: minimum of 1500 ml (unless medically contraindicated) or 30 ml/kg body weight per day
   a. Recording a 24-hour recall of the patient’s nutritional intake on the food diary form; analyze the total
      calories and protein content of the diet intake
   b. Instructing the patient/caregiver on the high-calorie diet for weight gain instruction sheet and menu; use
      food models, measuring utensils, and food labels to demonstrate calorie and protein content of different
      foods
   c. Comparing the patient’s 24-hour diet recall to his or her prescribed diet order as instructed; make
      appropriate recommendations to the patient/caregiver for modifying any nutrients found to be
      inappropriate on the food intake record
   d. Discussing with the patient the importance of accurately measuring the foods as listed on the diet
      instruction sheet; illustrate correct measurements using standard measuring cups and spoons; in the
      home setting, identify utensils that can be used to measure foods
   e. Discussing with the patient the times of the day he or she usually eats meals; compare those times to the
      times indicated on the diet instruction sheet; work with the patient to establish a regular eating pattern,
      due to the importance of food and medication timing in controlling his or her disease process
   f. Discussing the following nutrition risk factors for FTT with the patient/caregiver:
      - Significant weight loss
      - Significantly low weight for height
      - Poor appetite, not meeting nutritional requirements

Original procedures copyright © 2000 by Mosby, Inc.
• Significant change in functional status (activities of daily living)
• Depression or recent loss
• Deficient biochemical markers—albumin, prealbumin, hemoglobin, hematocrit, cholesterol
• Vitamin/mineral deficiency
• Dehydration

1. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

The home health nurse should initiate the following interventions in patients with FTT:

• Maintenance of reasonable body weight
• Maintenance of serum albumin > 3.5 g/dl
• Maintenance of serum cholesterol 160 to 200 mg/dl
• Chewing/swallowing evaluation if necessary
• Access to food or funds if necessary
• Prevention of isolation/potential abuse or neglect
• Improvement of hydration status
• Improvement of oral health
• Improvement of cognitive and functional status

Be aware that nutrition interventions do not have to be expensive or out of the ordinary. Food thickener can be added to pureed foods to add texture and improve the patient’s acceptance of the product. Nonpharmaceutical nutritional supplements are available through the use of common foods found in local stores. Refer to the nourishment list. Just adding extra margarine to foods or serving the patient whole milk can increase calories and protein substantially.

Ask the patient about any signs and symptoms of abuse or neglect. Report to the physician as necessary.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

• The procedure and patient toleration
• Vital signs and functional, cognitive, and emotional status
• Weight—report any weight change to the physician
• Food intake—analyze the intake of calories, protein, and fluid; document any suggestions for modifications in the diet
• Serum albumin and cholesterol levels
• Condition of oral health
• Use of alcohol
• Patient/caregiver instructions and response to teaching, including understanding of the diet and adherence to nutritional recommendations
• Physician notification, if applicable
• Standard Precautions
• Other pertinent findings
Update the plan of care.
Medical Nutrition Therapy: Hypertension

PURPOSE

- To provide education to the patient/caregiver about the prevention and treatment of hypertension (HTN)
- To improve and stabilize blood pressure to less than 140/90 mm Hg
- To improve blood pressure through manipulation of sodium intake
- To improve the diet-related diseases associated with HTN
- To promote self-care in the home

RELATED PROCEDURE

- Medical Nutrition Therapy: Assessment of Patient’s Nutrient Requirements

GENERAL INFORMATION

HTN is diagnosed when there is a sustained blood pressure of 140/90 mm Hg or greater. Essential or primary HTN lacks an identifiable cause. Secondary HTN is diagnosed when a cause can be identified. Unrecognized, untreated, or uncontrolled HTN can lead to damage of target organs and possibly cause the following conditions:

- Congestive heart failure
- Cardiovascular disease
- Renal disease
- Cerebrovascular disease
- Peripheral vascular disease
- Retinal disease

The following are diet-related diseases associated with HTN:

- Overweight/obesity
- Diabetes
- Dyslipidemia

The following are inappropriate dietary intake and lifestyle factors associated with HTN:

- High-calorie intake, especially saturated fats
- High-sodium intake
- High-alcohol intake
- Low-potassium intake
- Low-calcium intake
- Poor fitness level and low physical activity
- Smoking

Nonpharmacologic treatment of HTN includes the following (best results have been documented with multifaceted interventions):
• Weight reduction—a 10-pound weight loss in one study equaled a 5.4/2.4 mm Hg decrease in blood pressure; results were even greater when weight loss was combined with sodium restriction

• Salt restriction—studies show greater decrease in HTN related to sodium restriction in the elderly, African-Americans, and patients with chronic renal disease or familial HTN

• Exercise—regular minimum of 20 to 30 minutes daily; nonvigorous; exercise program should be initiated after blood pressure is under control and with the physician’s approval; encourage chair/bed exercise when appropriate

• Increased potassium and calcium consumption—population groups with diets high in potassium and calcium have been shown to have lower incidence of HTN; high-calcium foods include dairy products, spinach, shrimp, sardines, greens (remember that cheese and buttermilk are high in sodium)

• Reduced saturated fat

• Decreased alcohol consumption—increased alcohol consumption accounts for 5% to 30% of all cases of HTN

EQUIPMENT

1. Scales
2. Cloth measuring tape
3. Calculator
4. Food models or packages with food labels of sodium content
5. Blood pressure cuff, stethoscope, thermometer, and glucose meter (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Consider implementing the following:
   a. Assessing vital signs on each visit; weigh the patient at least weekly; pay close attention to blood pressure; report abnormal findings to the physician
   b. Setting nutritional requirements for the patient; see the procedure for Medical Nutrition Therapy: Assessment of Patient’s Nutrient Requirements
   c. Recording a 24-hour recall of the patient’s nutritional intake on the food diary form; analyze the total calories and sodium content of foods eaten
   d. Instructing the patient/caregiver on the low-salt diet instruction sheet and menu; use food labels to demonstrate sodium content in various foods; just 1 teaspoon of common table salt contains about 2 g of sodium; use measuring cups common to the patient to demonstrate proper fluid amounts to consume
   e. Comparing the patient’s 24-hour diet recall to his or her prescribed diet order as instructed; make appropriate recommendations to the patient/caregiver for modifying any nutrients found to be inappropriate on food intake record
   f. Instructing the patient/caregiver on the dietary approaches to stop hypertension (DASH), which are the following:
      • Increase in fruits
      • Increase in vegetables
      • Increase in low-fat dairy products
      • Reduction in sodium to no more than 2 g daily

   a. Instructing the patient/caregiver to limit total fat intake to no more than 30% of his or her calories per
day (e.g., in a 2000 calorie diet, 30% = 600 calories; 600 calories of fat equals about 65 g of fat a day; of that 65 g of total fat, only about 20 g should be from a saturated fat source); use food labels to add up fat grams of foods eaten daily

1. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

If the patient is more than 10% of ideal body weight, a weight loss of 10 pounds can make a significant reduction in blood pressure.

If the patient is taking a potassium-depleting diuretic, a potassium supplement may be necessary. Adequate potassium intake of 3500 mg (90 mEq) per day is recommended. If the patient is taking a potassium-sparing diuretic and an ACE inhibitor, he or she should be cautioned about the use of salt substitutes and light salts. Salt substitutes generally contain 2500 to 2800 mg of potassium per teaspoon. Light salt contains 1100 mg of sodium and 1500 mg of potassium per teaspoon. If salt substitutes and/or light salt are used in excess, an increased potassium blood level may result. Make the physician aware of any salt substitute product that the patient is using.

The following nutrition intervention guidelines should be assessed by the home health nurse:

• Calorie intake—limit intake of saturated fats
• Sodium intake—limit to 2 g daily
• Alcohol intake—limit to no more than 1 drink per day of 30 ml of liquor or the equivalent of beer or wine
• Smoking cessation
• Exercise as tolerated and allowed by the physician

Encourage low-fat milk or milk products twice daily. If the patient refuses to or cannot drink or eat milk or milk products, recommend a calcium supplement of 800 to 1200 mg per day and a magnesium supplement of 280 to 350 mg per day to meet RDAs. Higher doses of magnesium have been known to cause diarrhea.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

• The procedure and patient toleration
• Vital signs
• Weight—report any weight change to the physician
• Food intake—analyze the intake of calories, sodium, potassium, calcium and alcohol; document any suggestions for modifications in the diet
• Physical fitness level and amount of routine allowed exercise the patient gets
• Smoking frequency or cessation
• Patient/caregiver instruction and response to teaching, including understanding of the diet and adherence to nutritional recommendations
• Physician notification, if applicable
• Standard Precautions
• Other pertinent findings
Update the plan of care.
Medical Nutrition Therapy: Pressure Ulcers

PURPOSE

- To educate individuals who are at risk of developing pressure ulcers (PUs) by identifying nutrition risk factors and biochemical markers
- To provide instruction on appropriate nutritional measures to prevent PUs
- To offer nutritional interventions for treatment of existing PUs
- To promote self-care in the home

RELATED PROCEDURES

- Medical Nutrition Therapy: Assessment of Patient’s Nutrient Requirements
- Blood Glucose Testing (see Chapter 12)
- Skin Care (see Chapter 5)
- Wound Assessment (see Chapter 2)

GENERAL INFORMATION

The following factors are associated with PU development:

- Progressive dependency on others to meet activities of daily living (ADLs)
- Low body weight, low body mass index, or small triceps skinfolds
- Low serum albumin level
- Low serum cholesterol level
- Low hemoglobin and hematocrit levels

Extrinsic variables include shearing forces and friction. Intrinsic variables include malnutrition; anemia; reduced oxygen delivery to tissue, which already may be ischemic; both increased and decreased body weight; elevation of temperature; skin moisture—particularly incontinence and dehydration—either from low fluid intake or high fluid loss from excessive wound drainage; diuretic therapy; diarrhea and vomiting; acute blood loss; or uncontrolled diabetes. The etiology of pressure ulcers appears to be multifactorial and often the result of multiple pathologies. The common thread of treatment of all of these conditions is improvement of the patient’s nutritional status. With the use of the proper MNT, clinical and functional outcomes will be positively affected.

EQUIPMENT

1. Cloth measuring tape
2. Scales or recent weight history
3. Calculator
4. Food labels
5. Food models
6. Measuring cups and spoons commonly used by the patient
7. Blood pressure cuff, stethoscope, thermometer, and glucose meter (see Infection Control) {STOP}

PROCEDURE
1. Explain the procedure to the patient/caregiver.
2. Consider implementing the following:
   a. Assessing vital signs on each visit; weigh the patient at least weekly; report abnormal findings to the physician
   b. Assessing the patient’s skin and wound; report abnormal findings to the physician
   c. Setting nutritional requirements for patient; see the procedure for Medical Nutrition Therapy: Assessment of Patient’s Nutrient Requirements

   or

   Identifying the calorie, protein, and fluids required by the patient, using the following guidelines (discuss with the patient/caregiver the importance of the patient meeting the following nutrient requirements):

   - **Calories**—minimum of 30 to 35 kcal/kg body weight
   - **Protein**—1.2 to 1.5 g protein/kg body weight
   - **Fluids**—minimum of 1500 ml (unless medically contraindicated) or 30 ml/kg body weight per day

   a. Recording a 24-hour recall of the patient’s nutritional intake on the food diary form; analyze the total calories and protein content of the diet intake
   b. Instructing the patient/caregiver on the diet instruction sheet and menu for wound healing; use food models, measuring utensils, and food labels to demonstrate calorie and protein content of different foods
   c. Comparing the patient’s 24-hour diet recall to his or her prescribed diet order as instructed; make appropriate recommendations to the patient/caregiver for modifying any nutrients found to be inappropriate on the food intake record
   d. Discussing with the patient the importance of accurately measuring the foods as listed on the diet instruction sheet; illustrate correct measurement using standard measuring cups and spoons; in the home setting, identify utensils that can be used to measure foods
   e. Discussing with the patient the times of the day he or she usually eats meals; compare those times to the times indicated on the diet instruction sheet; work with the patient to establish a regular eating pattern, due to the importance of food and medication timing in controlling the patient’s disease process
   f. Discussing the following nutrition risk factors for PUs with the patient/caregiver:

      - Significant weight loss
      - Significantly low weight for height
      - Poor appetite, not meeting nutritional requirements
      - Significant change in functional status (ADLs)
      - Deficient biochemical markers—albumin, prealbumin, hemoglobin, hematocrit, cholesterol
      - Vitamin/mineral deficiency
      - Dehydration
      - Presence of disease management processes (e.g., diabetes, Alzheimer’s)
      - Presence of factors that reduce dietary intake (e.g., dysphagia, depression)

   a. Discussing with the patient/caregiver the importance of prevention of PUs; the key in preventing PUs is routine assessment of nutritional status and estimation of the patient’s nutritional intake; food preference and consistency tolerances must be individualized to each patient; instruct the patient/caregiver how to be creative with food preparation methods, seasonings, types of foods to keep the menu selections appetizing and yet sufficient in nutrients; continual reassessment of the patient’s food intake through logging of a food intake diary is helpful
   b. Supplementing vitamins/minerals; the importance of each should be instructed to the patient/caregiver;
because of possible toxicity and nutrient interactions, vitamin/mineral supplementation in high doses is not recommended unless the patient is suspected of being deficient; the physician should order any vitamin/mineral; consider the following:

- **Vitamin C**—helps make collagen, promotes healing, helps build resistance to infection; requirements are increased in acute stress, malnutrition, and with smoking
  - Stage I to II: patients may require 100 to 200 mg vitamin C daily
  - Stage III to IV: patients may require 1000 to 2000 vitamin C daily
- **Vitamin A**—helps body make new skin cells
  - RDA is 800 to 1000 µg RE for adults
- **Zinc**—promotes wound healing, improves immunity; assess the patient’s serum zinc level for deficiency before administering a zinc supplement; 15 to 25 mg of zinc per day may be beneficial in healing PUs; zinc is not recommended in quantities of more than 50 mg per day because of the possibility of causing a copper deficiency, leading to anemia
- **Iron**—helps carry oxygen to nourish cells
  - RDA is 10 to 15 mg for adults

1. Clean and replace equipment. Discard disposable items according to *Standard Precautions*.

**NURSING CONSIDERATIONS**

- Treatment depends on the stage of the pressure ulcer. Pressure ulcers are classified, or staged, according to the degree of tissue damage. (See the procedures for *Skin Care* in Chapter 5 and *Wound Assessment* in Chapter 2.)

The literature on treating pressure ulcers with MNT emphasizes increasing protein intake. Before increasing protein intake, assess total energy intake first. The body’s first priority is adequate energy intake.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The procedure and patient toleration
- Vital signs
- Calorie, protein, and fluid requirements of the patient
- Medical treatment used for PUs
- Nutrition interventions/treatments used for PUs
- Analysis of the patient’s food intake and the modifications suggested
- Patient/caregiver instruction and response to teaching, including understanding of the diet and adherence to nutritional recommendations
- Answers to feedback questions
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

Update the plan of care.
Medical Nutrition Therapy: Weight Management

PURPOSE

- To provide education to the patient/caregiver about the prevention and treatment of weight management for overweight or obese conditions
- To decrease weight, total body fat, and risk factors associated with obesity
- To promote self-care in the home

RELATED PROCEDURES

- Medical Nutrition Therapy: Assessment of Patient’s Nutrient Requirements
- Weight (see Chapter 2)
- Patient Education in the Home (see Chapter 17)

GENERAL INFORMATION

Obesity refers to a condition of excess body fat. Overweight refers to excess body weight, which means increases in body fat or lean body mass. The National Institutes of Health specifies the following definitions:

<table>
<thead>
<tr>
<th>Term of Weight</th>
<th>% Desirable</th>
<th>Body Mass Index (Male/Female)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desirable</td>
<td>100</td>
<td>22/21.5</td>
</tr>
<tr>
<td>Overweight/mild obesity</td>
<td>&gt;120</td>
<td>27.2/26.9</td>
</tr>
<tr>
<td>Severe overweight/moderate obesity</td>
<td>&gt;140</td>
<td>31.1/32.3</td>
</tr>
<tr>
<td>Severe obesity</td>
<td>141-200</td>
<td></td>
</tr>
<tr>
<td>Morbid obesity</td>
<td>&gt;200</td>
<td></td>
</tr>
</tbody>
</table>

A reduction in caloric intake of 3500 kcal is required to produce a weight loss of 1 pound of body fat. For example, subtract 500 a day from the amount of calories required to maintain current weight to produce a weight loss of 1 pound in 1 week: 500 x 7 = 3500 calories.

- There is some evidence that repetitive weight loss followed by weight gain and reloss progressively lowers the resting metabolic rate. A 10% weight loss will significantly improve blood pressure, glucose tolerance, sleep disorders, respiratory function, and lipid profiles. Weight loss decreases production of very low-density lipoprotein (VLDL) and therefore lowers serum triglycerides; one study showed an increase in HDL.

The following are chronic conditions that are exacerbated or have increased severity in the presence of obesity:

- Cancer
- Coronary heart disease
- Degenerative arthritis
- Diabetes
• Dyslipidemia
• Gallbladder disease
• Hypertension
• Lung disease
• Bone and joint disease
• Embolus or thrombus

A reasonable goal is a moderate weight loss of 5% to 10% of body weight to achieve a healthier weight that helps to control signs and symptoms of these chronic diseases. This weight loss can be accomplished by setting individual goals for a gradual, yet sustained weight loss. If attempts are made to reduce weight to “ideal levels” too quickly, nonadherence to the prescribed regimen is usually the result.

EQUIPMENT

1. Cloth measuring tape
2. Scales
3. Calculator
4. Measuring cups and spoons
5. Food models
6. Food labels
7. Blood pressure cuff, stethoscope, thermometer, and glucose meter (see Infection Control) {STOP}

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Consider implementing the following:
   a. Assessing vital signs on each visit; weigh the patient at least weekly; report abnormal findings to the physician
   b. Setting nutritional requirements for the patient; see the procedure for Medical Nutrition Therapy: Assessment of Patient’s Nutrient Requirements; use an appropriate table to determine desirable body weight from height and frame size; establish a reasonable body weight that is agreeable with the patient to set as a goal; assuming that weight loss is necessary, establish a daily caloric level by subtracting 500 calories from the estimated energy requirements to produce a 1-pound weight loss per week; the calorie level set must be discussed with and accepted by the patient for successful diet adherence
   c. Recording a 24-hour recall of the patient’s nutritional intake on the food diary form; analyze the carbohydrate and total calorie content of the diet intake
   d. Instructing the patient/caregiver on the 1500-calorie diet instruction sheet and menu; this 1500-calorie diet is offered in general—a diet with the correct calorie level (formulated using the calculation in step b) should be reviewed with the patient
   e. Comparing the patient’s 24-hour diet recall to his or her prescribed diet order as instructed; make appropriate recommendations to the patient/caregiver for modifying any nutrients found to be inappropriate on the food intake record
   f. Discussing with the patient the importance of accurately measuring the foods as listed on the diet instruction sheet; illustrate correct measurement using standard measuring cups and spoons; in the home setting, identify utensils commonly used to measure foods
   g. Discussing with the patient the times of the day he or she usually eats meals; compare those times to the times indicated on the diet instruction sheet; work with the patient to establish a regular eating pattern,
due to the importance of food and medication timing in controlling his or her disease process.

1. Clean and replace equipment. Discard disposable items according to Standard Precautions.

**NURSING CONSIDERATIONS**

For older patients for whom weight reduction is inappropriate, the goal should be to prevent further weight gain, which can exacerbate more severe problems, and to improve quality of life. If weight loss can alleviate acute symptoms of a co-morbid–related condition, then aggressive weight management may be a viable option.

Several studies have documented shorter life expectancy with physical inactivity. A program of regular, nonvigorous exercise for a minimum of 20 to 30 minutes daily is beneficial. No exercise program should be initiated until after the physician’s approval has been obtained. Encourage chair/bed exercise when appropriate.

Be aware that “diet” and “weight” are very personal issues with patients. Like certain diseases, obesity may “run” in families with patient genetic predisposition toward being overweight. Approach the topic in a sensitive manner. Suggest substitutes instead of telling patients to eliminate favorite foods from their diet. See Chapter 17 for further teaching tips for this group of patients.

**DOCUMENTATION GUIDELINES**

To monitor the patients’ adherence to their diet, have them record the times they eat and all foods and beverages they consume on a daily food diary form. Evaluate this by comparing it to the patient’s calorie meal plan. Counsel patients on any modifications they need to make.

Document the following on the visit report:

- The procedure and patient toleration
- Vital signs
- Height, frame size, ideal body weight, desirable body weight, estimated energy requirement, and established calorie level
- The daily food diary completed by the patient
- Analysis of the patient’s food intake and the modifications suggested
- Patient/caregiver instructions and response to teaching, including understanding of the diet and adherence to nutritional recommendations
- Answers to feedback questions
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Update the plan of care.
Accidentally Severed Central Venous Catheter

PURPOSE

• To restore patency to a damaged central venous catheter (CVC) by replacing a lumen segment or entire external portion of a multilumen catheter
• To prevent bleeding, infection, or air embolism in the home setting
• To promote self-care in the home

RELATED PROCEDURES

• Air Embolism
• Central Venous Catheter Management (see Chapter 8)

GENERAL INFORMATION

Catheter repair is a sterile procedure. When the damaged external catheter segment is cut, 3 cm of the external segment must remain to permit repair and to prevent catheter retraction under the skin.

Infusion pressures should never exceed 25 pounds per square inch (psi). Pressures in excess of 25 psi may cause system damage. Note that small syringes generate more pressure than large syringes.

The catheter may be used for infusion 4 hours after it is repaired. Potential complications include sepsis, exsanguination, air emboli, and thrombosis. Once a catheter lumen has been repaired, further damage may require replacement of the system.

To obtain an appropriate catheter repair kit, identify which segment or lumen needs to be repaired by assessing the following: (1) the type and lumen size or color that needs repair and (2) the location of the damage, referring to the catheter exit site or the juncture (if damage is proximal to the juncture, then the entire external segment must be repaired; if damage is 3 cm or greater and distal to the juncture, then the lumen may be repaired).

Repair of Raaf/Quinton/Hickman Catheters

EQUIPMENT

1. Repair kit with adhesive
2. Forceps clamp
3. Sterile drapes (2)
4. CVC dressing kit
5. Sterile scissors
6. Tongue depressor
7. Tape measure
8. 3 to 5 ml syringes
9. Sterile 4- x 4-inch gauze pad
10. Antiseptic and alcohol wipes
11. Disposable sterile gloves and an impermeable plastic trash bag (see Infection Control) [STOP]
PROCEDURE

1. Assess the catheter for a break, a tear, or damage.
2. Explain the procedure to the patient/caregiver.
3. Assemble the equipment at a convenient work area.
4. Don sterile gloves and a mask. Drape the catheter to create a sterile field.
5. Secure a forceps clamp to the patient’s indwelling catheter lumen, proximal to the exit site.
6. Scrub the severed or torn indwelling catheter with an antiseptic then alcohol wipe. Allow the catheter to air dry completely. Remove the gloves, and discard them.
7. Don sterile gloves.
8. Prepare the catheter repair kit and silicone adhesive syringe according to the manufacturer’s instructions.
9. Cut the lumen of the patient’s indwelling catheter proximal to the damaged end and at a 90-degree angle. Preserve as much of the external segment of the lumen as possible.
10. Review the manufacturer’s instructions if the repair sleeve of the Quinton catheter needs to be trimmed for length.
11. Clamp the replacement lumen. Insert the connectors of the replacement lumen into the corresponding lumen of the patient’s indwelling catheter, until the replacement lumen abuts the patient’s indwelling catheter lumen.
12. Insert the needle of the adhesive syringe under the repair sleeve. Inject the adhesive under the sleeve and onto the tubing at the connection.
13. Slide the repair sleeve over the center of the junction between the replacement lumen and the patient’s indwelling catheter lumen; inject additional adhesive on both ends.
14. Rotate the sleeve between the fingers to distribute the adhesive and to eliminate air bubbles.
15. Remove excess adhesive from the repaired catheter lumen with a dry 4- x 4-inch gauze pad.
16. Secure a tongue blade over the repaired joint; instruct the patient not to take it off for 48 hours.
17. Withdraw blood or fluid from the patient’s indwelling catheter to prime the repaired segment and to prevent air emboli. Flush the repaired catheter according to home health agency protocols.
18. Infusion of intravenous (IV) fluids is permissible 4 hours after the repair has been completed.
19. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

Replacement of Groshong Catheter Tip

EQUIPMENT

1. Sterile drape
2. Sterile scissors
3. Forceps clamp
4. CVC dressing kit
5. Saline solution flush
6. Antiseptic and alcohol wipes
7. Disposable sterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Assess the catheter for a break, a tear, or damage.
2. Explain the procedure to the patient/caregiver.
3. Assemble the equipment at a convenient work area.
4. Don sterile gloves and a mask. Place the drape around the catheter to create a sterile field.
5. Clamp the Groshong catheter lumen proximal to the catheter exit site.
6. Scrub the tip of the patient’s Groshong catheter with an antiseptic then alcohol wipe. Let the catheter air dry completely.
7. Using sterile scissors, cut the lumen of the Groshong catheter.
8. Transfer the clear sleeve onto the Groshong catheter lumen from the replacement connector.
9. Firmly push the Groshong catheter lumen onto the adaptor to the position.
10. Slide the clear sleeve onto the colored hub.
11. Remove and discard the stylet.
12. Replace the injection cap, and flush in accordance with home health agency protocols.
13. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Instruct the patient to avoid shaving with a razor (an electric shaver may be used) and to secure the CVC with tape to the central venous dressing to prevent dangling. If the CVC should become damaged or severed when home health agency services are not immediately available, instruct the patient to clamp the CVC lumen between the damaged area and the catheter exit site. Under such circumstances, instruct the patient to go to the emergency room for medical attention.

Notify the physician of any complications with the patient’s CVC and of any actions that have been taken. It is recommended that only certified IV therapy nurses repair a CVC.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure and actions taken
- Patient disposition
- Patency of the CVC
- Any patient/caregiver instructions and response to teaching
- Physician notification, if applicable
- Standard Precautions
- Other pertinent findings

Complete an incident report as required.
Update the plan of care.
Air Embolism

PURPOSE

• To identify and care for patients who are experiencing air embolisms in the home setting
• To stabilize the patient until emergency medical services (EMS) assumes responsibility

RELATED PROCEDURE

• Cardiopulmonary Resuscitation (CPR)

GENERAL INFORMATION

An air embolism occurs when air gets into the blood stream. This may occur if the patient inhales while a CVC line is unclamped or accidentally severed or if the IV infusion is loosened or compromised.

Signs and symptoms of air embolism include the following: extreme shortness of breath, anxiety, cyanosis, and loss of consciousness. Death will occur unless immediate action is taken.

PROCEDURE

1. Assess the cardiopulmonary status, and evaluate for signs and symptoms of air embolism. Obtain vital signs as soon as possible.
2. Be prepared to administer CPR.
3. Assess for breaks in the IV line because this commonly occurs.
4. Turn off the IV, or clamp the IV tubing.
5. As soon as possible, turn the patient onto the left side with the head down. (Air will flow into the right ventricle and allow blood to perfuse the lungs.)
6. Activate EMS if the patient’s cardiopulmonary status is unstable or level of consciousness is decreased. Stay with the patient until EMS assumes responsibility.
7. Notify the home health agency clinical supervisor and physician for further orders.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

• Date, time, and nature of the onset of symptoms
• Emergency actions taken, and patient response to treatment
• The time EMS responded to the call, and the actions taken
• Physician notification
• Other pertinent findings

Complete an incident report as required.
Update the plan of care.
Airway Obstruction

PURPOSE

- To relieve a partially or completely obstructed airway
- To promote normal respiration
- To attempt to clear the obstructed airway until EMS assumes responsibility for the patient

RELATED PROCEDURE

- Cardiopulmonary Resuscitation (CPR)

GENERAL INFORMATION

This procedure serves as a reminder of the correct steps to take when performing maneuvers to reverse an obstructed airway caused by a foreign body; however, it does not guarantee adequate execution of the procedure. Home health nurses should be certified in CPR by the American Heart Association.

A person who is choking may have either a partial or a complete airway obstruction. Air can still move to and from the lungs when a partial airway obstruction exists. Partial airway obstruction can lead to a complete airway obstruction. A person with a completely blocked airway is unable to breathe and will die if immediate action is not taken.

This procedure varies for adults, children, and infants. Age definitions are as follows: adult, 8 years and older; child, 1 to 8 years of age; and infant, younger than 1 year of age.

EQUIPMENT

1. Disposable nonsterile gloves (if possible when performing a mouth sweep) and face mask (see Infection Control) [STOP]

Partial Airway Obstruction

PROCEDURE

1. Assess for partial airway obstruction or for the cause of the respiratory distress. Obtain vital signs as soon as possible.
2. If a foreign body is not the cause of the obstruction but the patient is experiencing respiratory distress, helping with prescribed medications, such as a metered dose inhaler or oxygen, may be beneficial. Sit the patient up, and make him or her comfortable.
3. If the patient is coughing forcefully or wheezing, do not interfere with the patient’s efforts to cough up the object.
4. If respiratory distress or coughing persists, activate EMS. Stay with the patient until EMS assumes responsibility.
5. Notify the home health agency clinical supervisor and the physician for further orders.

Complete Airway Obstruction

Original procedures copyright © 2000 by Mosby, Inc.
PROCEDURE

Adult

1. Do the following for a conscious adult with a suspected foreign body obstruction:
   a. Evaluate for airway obstruction by assessing whether the patient can breathe; if the patient is unable to speak or cough, assume that the airway is completely obstructed
   b. Stand behind the patient, and bring your arms around the patient’s waist; make a fist with one hand and hold it with the other; place the thumb-side of the fist between the patient’s sternum and umbilicus; press the fist into the abdomen with quick upward thrusts; repeat the thrusts until the foreign body is expelled or until the victim becomes unconscious

1. Do the following for an unconscious adult (cause unknown):
   a. Establish unresponsiveness by shaking the patient
   b. If a bystander is present, instruct him or her to activate EMS; if alone, activate EMS immediately; the patient should be in the supine position with the face up
   c. Open the airway using the head tilt–chin lift method; assess breathing
   d. Attempt two slow ventilations if the patient is not breathing
   e. If ventilation is unsuccessful, reposition the head and reattempt ventilation
   f. If still unable to ventilate the patient, straddle the patient by kneeling astride the his or her thighs
   g. Perform abdominal thrusts by placing the heel of one hand against the patient’s abdomen, in the midline slightly above the navel and well below the end of the sternum; place the second hand directly on top of the first
   h. Press the hands into the abdomen and deliver up to five abdominal thrusts
   i. After each group of abdominal thrusts, check the mouth for debris; if debris is present, remove it with a finger sweep
   j. Repeat steps e through i until the obstruction is removed, until the patient begins to breathe or cough, or until EMS assumes responsibility for the patient

1. Stay with the patient until EMS assumes responsibility.
2. Obtain vital signs as soon as possible.
3. Be prepared to provide full basic life support (CPR) if the patient does not have a pulse once the airway is cleared and ventilation has been provided.
4. Notify the home health agency clinical supervisor and the physician for further orders.

Child

1. Do the following for a conscious child with a suspected foreign body obstruction:
   a. Evaluate for airway obstruction by asking the child to speak or cough
   b. Stand or kneel behind the child, and wrap your arms around the child’s waist
   c. Make a fist with one hand; place the thumb side of your fist against the middle of the child’s abdomen just above the umbilicus and well below the lower tip of the sternum
   d. Grasp your fist with your other hand, and deliver quick upward thrusts into the abdomen
   e. Repeat the thrusts until the obstruction is cleared or until the child becomes unconscious

1. Do the following for an unconscious child (cause unknown):
   a. Establish unresponsiveness; if a bystander is present, instruct him or her to activate EMS system; if alone, begin treatment immediately
   b. Place the child in a supine position
   c. Open the airway using the head tilt–chin lift method; assess breathing
d. Attempt two slow ventilations if the child is not breathing

e. If ventilation is unsuccessful, reposition the child’s head, and reattempt ventilation

f. If still unable to ventilate the patient, straddle the patient by kneeling astride the child’s thighs

g. Perform abdominal thrusts by placing the heel of one hand against the child’s abdomen, in the midline slightly above the navel and well below the end of the sternum; place the second hand directly on top of the first

h. Press the hands into the abdomen and deliver up to five abdominal thrusts

i. After each group of abdominal thrusts, check the mouth for debris; if debris is present, remove it with a finger sweep

j. Repeat steps e through i until the obstruction is removed, until the patient begins to breathe or cough, or until EMS assumes responsibility for the patient

k. If efforts are unsuccessful after 1 minute, activate EMS (if alone)

1. Follow steps 3 through 6 of the Adult procedure.

Infant

1. Do the following for a conscious infant with a suspected foreign body obstruction:
   a. Assess whether the infant can breathe, cough, or cry; if a bystander is present, instruct him or her to activate EMS; if alone, begin treatment immediately
   b. Position the infant on your forearm with the head facing down; support the infant’s head and neck by holding the jaw between your thumb and forefinger
   c. Lower your forearm onto your thigh so that the infant’s head is lower than his or her chest
   d. Deliver up to five back blows between the infant’s shoulder blades with the heel of your hand
   e. Turn the infant over onto his or her back by sandwiching the infant between your forearms; continue to support the head
   f. Lower your arm onto your thigh so that the infant’s head is lower than the chest
   g. Using the tips of two fingers, deliver up to five quick chest thrusts on the lower third of the sternum, one finger breadth below the intermammary line
   h. Deliver alternating sequences of back blows and chest thrusts until the obstruction is cleared, until the infant becomes unconscious, or until EMS assumes care
   i. If efforts are unsuccessful after 1 minute, activate EMS (if alone)

1. Do the following for an unconscious infant (cause unknown):
   a. Establish unresponsiveness; if infant is unresponsive, instruct a bystander to activate the EMS system; if alone, begin treatment immediately
   b. Open the airway and assess breathing
   c. Attempt two slow ventilations if the infant is not breathing
   d. If ventilation is unsuccessful, reposition the infant’s head and reattempt to ventilate
   e. Position the infant on your forearm with the head facing down; support the infant’s head by firmly holding the jaw between your thumb and forefinger
   f. Lower your arm onto your thigh so that the infant’s head is lower than the chest
   g. Give alternating sequences of up to five back blows and up to five chest thrusts, as described in the procedure for the conscious infant
   h. After each sequence of back blows and chest thrusts, perform a tongue-jaw lift and remove any foreign body visualized
   i. Repeat steps d through h until the obstruction is removed; until the infant begins to breathe, cough, or cry; or until EMS assumes responsibility for the infant
   j. If efforts are unsuccessful after 1 minute, activate EMS (if alone)

1. Follow steps 3 through 6 of the Adult procedure.
NURSING CONSIDERATIONS

Any time that abdominal or chest thrusts are used to dislodge an object, the patient should be taken to an emergency department for medical evaluation, even if the patient is breathing without difficulty after the airway is cleared.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- Actions taken
- Patient disposition, including vital signs and levels of consciousness
- The time EMS responded to the call, and the actions taken
- Physician notification
- Standard Precautions
- Other pertinent findings

Complete an incident report as required.
Update the plan of care.
Animal, Insect, Snake, Spider, and Tick Bites

PURPOSE

- To identify and care for patients with animal, insect, snake, spider, or tick bites in the home setting
- To prevent infection or other complications from the injury
- To stabilize the patient until EMS assumes responsibility

RELATED PROCEDURES

- Cardiopulmonary Resuscitation (CPR)
- Seizure
- Shock

Animal Bite

GENERAL INFORMATION

Animal bites can transmit rabies. Be aware that dogs, cats, and squirrels can carry rabies. Bites from pets or farm animals should also receive immediate attention. Consult the sheriff’s office or local ordinances regarding reporting animal bites.

EQUIPMENT

1. Soap and water
2. Antiseptic or antibiotic ointment
3. 4- x 4-inch gauze dressings
4. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Assess the patient’s cardiopulmonary status, and evaluate for an animal bite. Obtain vital signs as soon as possible.
2. If possible, confine the animal. Notify the police or local animal control officer when convenient.
3. Wash the wound with soap and water.
4. Apply antiseptic or antibiotic ointment.
5. Apply a 4- x 4-inch gauze dressing as needed.
6. Notify the home health agency clinical supervisor and the physician for further orders. If directed, arrange for transportation to the hospital or the physician’s office.
7. Provide patient comfort measures.
8. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Assess the tetanus toxoid status of the patient, and report to the physician for consideration of additional immunization.
Hymenoptera Bites and Stings

GENERAL INFORMATION

The sting of a honeybee, yellow jacket, wasp, hornet, and certain ants can result in a severe anaphylactic reaction. Hymenoptera stings produce immediate pain, and lesions that are erythematos and papular develop within seconds. Edema and urticaria (hives) may develop over large areas of the body. Small lesions usually fade over 4 to 6 hours, and more extensive reactions may last for several days.

Local reactions are treated with ice packs, analgesics, and antihistamines (e.g., diphenhydramine or hydroxyzine). Serious allergic reactions and fatalities occur more often from Hymenoptera stings than from any other venomous creature. Anaphylaxis usually appears in less than 20 minutes and requires prompt treatment with epinephrine. Signs and symptoms of anaphylaxis include difficulty in breathing; tightness and swelling in the throat or chest; a severe itching, burning rash, or urticaria; swollen face, tongue, and mouth; nausea; vomiting; dizziness; abdominal cramping; hypotension and loss of consciousness.

Parenteral fluid replacement, in addition to other basic and advanced life support measures, may be necessary for hypotension and other signs of shock. All persons with an anaphylactic history should receive instruction on the administration of injectable epinephrine, which is available in small carry-along cases.

EQUIPMENT

1. Soap and water
2. Ice packs
3. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Assess the patient’s cardiopulmonary status, and evaluate for insect sting or bite. Obtain vital signs as soon as possible.
2. Be prepared to initiate CPR.
3. If a stinger is present, remove it by scraping it away to prevent injection of further toxin. (Removing the stinger in honeybee injuries is only beneficial if done within 2 seconds of injury, and further injection of toxin often occurs because of the barbed-like shape of stinger.)
4. Wipe the area of the sting with alcohol or soap and water.
5. Lower the affected body part below the level of the heart.
6. Apply a cold pack or an ice bag to the affected area.
7. Activate EMS for the patient with an unstable cardiopulmonary status or decreased level of consciousness. Stay with the patient until EMS assumes responsibility.
8. Notify the home health agency clinical supervisor and the physician for further orders.
9. Clean and replace equipment. Discard disposable items according to Standard Precautions.

Snake Bite

GENERAL INFORMATION

The bites of poisonous pit viper snakes (rattlesnakes, water moccasins, and copperheads) are seen as two distinct puncture wounds about 2 inches apart. The victim may experience severe pain and burning at the site...
immediately after the bite. Swelling can occur within 5 minutes and can involve the entire extremity. Discoloration and blood-filled blisters may develop. In severe cases, signs and symptoms of shock may occur; these may include cold and clammy skin, low blood pressure, rapid pulse, nausea and vomiting, and difficulty in breathing.

The coral snake has short fangs, and chews the venom into the victim. This snake has brightly colored bands around its body characterized by a black-yellow-red-yellow pattern, with each color blending into the next. Few, if any, local signs (e.g., swelling, discoloration, or pain) occur. More severe bites may cause dizziness, drooling, blurred or double vision, drowsiness, and nausea and vomiting. The most serious complications from a coral snake bite occur 5 to 10 hours after envenomation when respiratory depression and death may occur.

EQUIPMENT

1. 4- x 4-inch gauze dressing and tape
2. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) {STOP}

PROCEDURE

1. Assess the patient’s cardiopulmonary status, and evaluate for signs and symptoms of snakebite. Obtain vital signs as soon as possible.
2. Be prepared to initiate CPR.
3. Assess history and physical examination for snakebite. (Note the time the bite occurred. To be most effective, antivenom must be given within 2 hours from the time the bite occurred.) If possible, identify the snake species.
4. Minimize the absorption of venom and the effects of shock in the following manner:
   a. Place the patient in a supine position; calm the patient and avoid manipulation of the bitten area
   b. Immobilize the injury site if possible into a horizontal position, avoiding elevation or dependency
   c. Do not do the following:
      • Give stimulants or alcohol
      • Apply ice on the bite (ice will reduce blood flow and enhance necrotoxicity, thus increasing tissue damage)
      • Apply a tourniquet
      • Perform an incision and suction (this has limited use and may cause injury)

1. Cover the wound with a loose dressing.
2. Activate EMS for snakebite. Stay with the patient until EMS assumes responsibility.
3. Notify the home health agency clinical supervisor and the physician for further orders.
4. Clean and replace equipment. Discard disposable items according to Standard Precautions.

Spider Bites

GENERAL INFORMATION

Most spider bites do not cause concern and are managed with ice and analgesics. However, two species of spiders in United States do inject venom and can cause morbidity and rare mortality.
The brown recluse spider (*Loxosceles reclusa*) most often inhabits the Midwest and South Central United States. It has an oval body with eight legs and is light yellow to medium brown. A distinctive fiddle-shaped mark can be seen on the back as well as a very diagnostic eye pattern (six eyes, in three pairs arranged in a curved line). This spider prefers dark, undisturbed places (e.g., old trash piles, attics, storerooms). The nearly painless bite may not be noticed immediately, but a local reaction of erythema or hemorrhagic discoloration soon begins. A tense blister may develop within 8 to 12 hours. Approximately one-third of the bites produce a central ulcerative necrosis at the site, 3% of which require surgical revision (i.e., skin grafting). Some victims may experience rash, nausea, chills, fever, cramps, or joint pain.

The black widow spider (*Latrodectus mactans*) is present in all 48 continental states but is more often found in warmer climates. It is densely covered with short microscopic hairs; the color varies from dark brown to glossy black. Only the female is poisonous and is identified by red or yellow hourglass markings on the underside of the abdomen. This spider can be found in dark corners of the basement, garages, etc. The bite usually causes intense pain immediately, and the venom contains a potent neurotoxin. Local redness and swelling may occur, and two fang marks are usually visible. Serious reactions occur through lymph and vascular distribution of the neurotoxin, generally occurring in 10 minutes to 2 hours. Systemic symptoms evolve through three phases that may begin in minutes and last weeks or months. Muscular spasms that begin near the site eventually include extremity and abdominal muscles. Autonomic stimulation may cause dizziness, headache, sweating, and nausea and vomiting. More serious reaction symptoms include tachypnea, tachycardia, hypertension, and restlessness. Most victims recover without any treatment, but up to 5% of patients succumb to paralysis, convulsions, shock, and eventual death from asphyxiation caused by respiratory paralysis. Death occurs within 24 hours in certain risk groups: young children, the elderly, and those who are pregnant or have hypertension.

**EQUIPMENT AND PROCEDURE**

1. Use the equipment and procedure for insect bites and stings. Spiders do not have stingers.
2. Brown recluse and black widow spider bites require immediate medical attention. Hospitalization may be required.

**Tick Bite**

**GENERAL INFORMATION**

Ticks attach to any warm-blooded animal that brushes by them, including humans. Typically, dogs bring ticks into the home. Although a tick bite does not represent an immediate emergency, ticks should be carefully remove from the skin as soon as possible. Infected ticks can carry and transmit diseases to humans.

**EQUIPMENT**

1. Soap and water
2. Antiseptic or antibiotic ointment
3. Tweezers, disposable nonsterile glove, 4- x 4-inch gauze pads, or plastic wrap to remove the tick and an impermeable plastic trash bag (see *Infection Control*)

**PROCEDURE**

1. Remove the tick by pulling it steadily and firmly in the following manner:
   a. Grasp the tick with tweezers as close to the skin as possible, and pull slowly

Original procedures copyright © 2000 by Mosby, Inc.
b. If tweezers are not available, a glove, a 4- x 4-inch gauze pad, or plastic wrap should be used to protect the fingers

1. Do not attempt to burn a tick off with a hot match or a burning cigarette; nor use other home remedies, such as coating the tick with petroleum jelly or nail polish; nor pricking the tick with a pin.
2. Wash the area with soap and water once the tick has been removed.
3. Apply an antiseptic or antibiotic ointment to the wound.
4. Notify the home health agency clinical supervisor and the physician for further orders.
5. Provide patient comfort measures.
6. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Instruct the patient to observe the wound periodically.

If a rash or flulike symptoms develop, the patient should be instructed to notify the physician. If the tick cannot be removed or if its mouth parts stay in the skin, the patient should obtain medical care.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- Findings
- Actions taken
- Patient disposition, including vital signs and levels of consciousness
- The time EMS responded to the call, and the actions taken
- Physician notification
- Standard Precautions
- Other pertinent findings

Complete an incident report as required.
Update the plan of care.
Bleeding and Soft Tissue Injury

PURPOSE

- To identify and care for patients with bleeding and soft tissue injury in the home setting
- To prevent shock
- To control acute external bleeding until EMS assumes responsibility for the patient

RELATED PROCEDURES

- Cardiopulmonary Resuscitation (CPR)
- Falls and Fractures
- Shock

GENERAL INFORMATION

This procedure addresses abnormal external bleeding. Arterial bleeding is bright red and pulsatile. Venous blood is dark and oozes. Uncontrolled, abnormal external bleeding can cause hypovolemic shock. Be aware of pressure points at which large vessels may be compressed to help control hemorrhage.

EQUIPMENT

1. Soap and water
2. Towels and washcloth
3. Pressure dressings and tape
4. Blood pressure cuff or tourniquet
5. Cold compresses or ice chips
6. Antibiotic ointment if available
7. Marking pen
8. Emesis basin
9. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Assess the patient’s cardiopulmonary status, and evaluate for signs and symptoms of bleeding. Obtain vital signs as soon as possible.
2. Be prepared to initiate CPR and treat the patient for shock.
3. Locate the injury site and control bleeding in the following manner:
   a. **Nosebleeds**
      (1) Place the patient in a sitting position, with the head and shoulders elevated; keep the patient quiet
      (2) Apply **continuous** direct pressure with a 4- x 4-inch gauze dressing on the bleeding nostril for 5 to 10 minutes; apply cold compresses to the forehead and have the patient suck on ice if available
      (3) If bleeding continues, insert a small gauze (not cotton) pad into the bleeding nostril and reapply pressure
   a. **Wounds**
      (1) **Major open wounds**—apply **continuous** direct pressure over the bleeding area or the involved artery with a sterile dressing for 5 to 10 minutes; if nothing sterile is available, use any clean covering, such
as towels or sheets; continue direct pressure by applying a pressure dressing
(2) Minor open wounds—cleanse the wound with soap and water; apply a sterile dressing, and apply direct pressure for a few minutes to control any bleeding; remove the dressing and apply an antibiotic ointment, if available
(3) Impaled object in the wound—do not remove the object unless it interferes with breathing; use a bulky dressing to stabilize the object; any movement of the object can result in further tissue damage; control bleeding by bandaging the dressing in place around the object
   a. Extremities
      (1) Apply direct pressure to the site; elevate it to control venous and capillary bleeding
      (2) Unless contraindicated, place the patient in the supine position and elevate the extremity if arterial bleeding is present
      (3) Immobilize to control blood loss, and use pressure points if direct pressure does not control bleeding
1. Apply a tourniquet to an extremity only when all other means of control are ineffective or during traumatic amputation when direct pressure or a pressure point cannot control bleeding. Apply the tourniquet in the following manner:
   a. Place the tourniquet proximal to the wound, wrapped tightly enough to control bleeding (a blood pressure cuff or nylon hose makes a good tourniquet)
   b. Tag the patient with a “T” and indicate the time of application and location of the tourniquet. If no tagging materials are available, use a skin marking pen or lipstick or mark on dressing tape, and place the tape on the patient’s forehead
1. Cover the patient with a blanket if shivering occurs, and be ready with an emesis basin for possible nausea and vomiting.
2. Reinforce any original dressings. Do not remove the original dressing.
3. Activate EMS for significant blood loss, uncontrolled bleeding, unstable cardiopulmonary status, or if objects are impaled in the wound. Stay with the patient until EMS assumes responsibility.
4. Estimate blood loss, and send any specimens along with EMS.
5. Notify the home health agency clinical supervisor and the patient’s physician for further orders.
6. Provide patient comfort measures.
7. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Call the physician or EMS if there is any oral, vaginal, rectal, nasogastric, or gastrointestinal tube bleeding since bleeding from these sites cannot be effectively treated with direct pressure or pressure points.

If the patient is receiving anticoagulant therapy or has a known bleeding disorder, inform EMS.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- Findings
- Actions taken
- Patient disposition, including vital signs and the level of consciousness
- Time EMS responded to the call, and the actions taken
- Physician notification
• *Standard Precautions*
• Other pertinent findings

Complete an incident report as required.
Update the plan of care.
Burns

PURPOSE

- To identify and care for patients in the home setting who have burns
- To prevent infection and further complications from the burn injury
- To stabilize the patient until EMS assumes responsibility

RELATED PROCEDURES

- Cardiopulmonary Resuscitation (CPR)
- Shock

GENERAL INFORMATION

The primary mechanisms of injury associated with burns include thermal, chemical, electrical, and both solar and ionizing radiation. The severity is based on depth, percent of body surface area involved, and location. Overall morbidity is also affected by the mechanism and the circumstances surrounding the injury, since occult injury is not easily assessed. This includes respiratory involvement and electrical injuries, both of which the total extent of damage cannot be readily identified by looking at the surface of the skin.

1. *First-degree or superficial burn*. This type of burn is caused by flash, flame, or the sun. The injury takes place on the surface of the skin in the epidermis, appears reddened, and is painful. No blistering or swelling occurs.

2. *Second-degree or partial-thickness burn*. This type of burn results from contact with hot liquids, ash, or flames. The skin appears moist and mottled with variations in color, from white to deep red. Blister formation occurs because the epidermis and dermis are involved. Second-degree burns are considered serious when they involve 20% of the adult body surface area (BSA); 10% BSA in ages younger than 10 years or older than 50 years; or if the involvement includes the face, hands, feet, or genital area.

3. *Third-degree or full-thickness burn*. This type of burn results from hot liquids or solid contact, chemicals, electricity, or flame. The skin is dry and leathery, with a white or charred appearance. Subcutaneous tissue and organ damage may be present. Third-degree burns are considered serious when 5% of the BSA is involved. They are considered critical if the face, hands, or genitals are involved.

EQUIPMENT

1. Clean sheets
2. Sterile dressings and tape
3. Cold water
4. Disposable sterile or nonsterile gloves (sterile gloves are preferred if there is an open wound and because of the possibility of infection) and an impermeable plastic trash bag (see *Infection Control*) [STOP]

PROCEDURE

1. Assess the patient’s cardiopulmonary status, and evaluate the degree of injury. Obtain the patient’s vital
1. Signs as soon as possible.
2. Be prepared to initiate CPR. Respiratory distress is possible if the patient was burned in an enclosed space; if he or she breathed products of combustion; if he or she has a blackened mouth or nasal membranes; or if he or she has a face, neck, or chest burn.
3. Prevent further tissue injury in the following manner:
   a. **Thermal burns**
      (1) Put out the fire; extinguish clothing fires by instructing the patient to “drop and roll,” by wrapping the patient in a blanket, or by immersing the burning area in cool water
      (2) Move the patient away from the fire to prevent further injury
      (3) Drench clothing with water; remove clothing that is not stuck to the patient; do not pull stuck clothing because further damage to the skin will result; if possible, remove jewelry from the burned area because it retains heat; remove rings if they are distal to the burn before third spacing occurs
      (4) For large-area burns, cover the area with clean sheets or dressings
      (5) For large-area burns, immerse the burn in cold water for 10 to 20 minutes (NOTE: this method is effective only if immersion occurs within 30 to 45 minutes after the injury)
      (6) Be prepared to initiate CPR and to treat the patient for shock
   a. **Chemical burns**
      (1) Irrigate with large quantities of running water (a shower or garden hose can be used); flush the area with water for 5 minutes
      (2) Remove any clothing and flush the area for another 20 to 30 minutes
      (3) Cover with a loosely applied sterile dressing
      (4) If the eyes are involved, remove contact lenses or glasses and irrigate. Retract the eyelids and place each eye under running water, making sure to rinse well under the lids; allow the water to run from the inside corner to the outside corner of each eye; irrigate and flush for 20 to 30 minutes
   a. **Electrical burns**
      (1) Remove the electrical source with a nonconductive object (broom stick, wooden chair, rope, or ceramic) or unplug the appliance; do not touch the patient until the electrical source is disconnected and neutralized
      (2) Open the airway, and initiate CPR as needed
      (3) Cover both entrance and exit wounds with a sterile dressing

1. Activate EMS for patients with an unstable cardiopulmonary status or if the burns are in the serious or higher category. Stay with the patient until EMS assumes responsibility.
2. Notify the local fire department for uncontrollable fires.
3. Notify the home health agency clinical supervisor and the physician for further orders.
4. Provide patient comfort measures.
5. Clean and replace equipment. Discard disposable items according to *Standard Precautions*.

**NURSING CONSIDERATIONS**

Inform EMS of Advance Directives status.

When treating burns, do not apply ointments or butter; do not break any blisters.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- Findings
• Actions taken
• Patient disposition, including vital signs and level of consciousness
• The time EMS responded to the call, and the actions taken
• Physician notification
• *Standard Precautions*
• Other pertinent findings

Complete an incident report as required.
Update the plan of care.
Cardiopulmonary Resuscitation (CPR)

PURPOSE

- To resuscitate the patient who is experiencing cardiopulmonary arrest
- To stabilize the patient until EMS assumes responsibility

RELATED PROCEDURE

- Airway Obstruction

GENERAL INFORMATION

This procedure serves as a reminder of the correct steps to take when performing CPR; however, it does not guarantee adequate execution of the procedure. Home health nurses should be CPR-certified by the American Heart Association.

The procedure varies for adults, children, and infants. The procedure for adults is used for anyone who is older than 8 years of age. The procedure for children is used for those who are between the ages of 1 and 8 years. The procedure for infants is used for those who are younger than 1 year of age.

EQUIPMENT

1. Face mask (see Infection Control) [STOP]

PROCEDURE

Adult

1. Assess for patient unresponsiveness by shouting and gently shaking him or her.
2. If the patient is unresponsive, shout for help and activate EMS immediately, either personally or by instructing a bystander to do so. Initiate CPR in the following manner:
   a. Open the airway with the head tilt–chin lift method; use the jaw thrust maneuver for suspected neck injuries; check for breathing
   b. Give two slow ventilations with a pocket mask if the patient is not breathing; allow for complete lung deflation between each ventilation; if the pocket mask is not available, pinch off the patient’s nose and breathe in through the patient’s mouth
   c. Assess carotid pulse for 5 to 10 seconds, then do the following:
      (1) If a pulse is present, perform rescue breathing by providing approximately 12 breaths per minute (1 breath every 5 seconds); the patient should be placed in the recovery position (side-lying) if he or she is not at risk for further injury
      (2) If a pulse is not present, begin chest compressions in the following manner:
         (a) The ratio of compressions to ventilations is 15 to 2 for one-person CPR and 5 to 1 for two-person CPR
         (b) Two hands are used for compressions; the heel of one hand is placed on the lower two-thirds of the sternum; the second hand rests on top of the first
         (c) The depth of compressions is 1½ to 2 inches at a rate of 80 to 100 per minute for both one- and
two-person CPR

1. If others are present in the home, have those individuals help if possible. After 1 minute, recheck for spontaneous breathing and check the pulse for 5 seconds.
2. If no pulse is present, resume CPR, beginning with ventilations.
3. Stay with the patient until EMS assumes responsibility. Stop CPR and assess breathing and pulse every few minutes.
4. If the pulse and spontaneous breathing return, maintain the airway and continuously reevaluate both. Maintain normal body temperature. If the patient is not breathing, provide rescue breathing.
5. Continue CPR until one of the following occurs:
   a. EMS arrives and assumes responsibility for the patient
   b. The patient responds
   c. Physical exhaustion occurs and inhibits continued performance
   d. A physician pronounces the patient dead

1. Notify the home health agency clinical supervisor and the physician for further orders.

Child

1. Assess unresponsiveness by shouting and gently shaking the child.
2. If the child is unresponsive, shout for help. If a bystander is present, instruct him or her to activate EMS immediately. Begin CPR in the following manner:
   a. Open the airway with the head tilt–chin lift method; use the jaw thrust method for suspected neck injury; check for breathing
   b. Give two slow breaths with a pocket mask if the child is not breathing; allow for completed lung deflation between each ventilation; if a pocket mask is not available, pinch off the child’s nose and breathe in through the child’s mouth
   c. Assess the carotid pulse for 5 to 10 seconds
   d. Start chest compressions if a pulse is not present, being aware of the following:
      (1) For children the ratio of compressions to ventilations is 5 to 1 for both one- and two- person CPR
      (2) The heel of one hand is used for compressions; place the heel of the hand on the lower two-thirds of the sternum, approximately two-fingers width above where the lower ribs meet the sternum (breastbone)
      (3) The depth of compression is 1 to 1½ inches at the rate of 100 times per minute (about 12 cycles of compressions to ventilation in 1 minute)
   1. If efforts are unsuccessful after 1 minute, activate EMS (if alone)
   2. Follow steps 3 through 8 as described in Adult CPR.
3. Rescue breathing for the child is 1 breath every 3 seconds (20 per minute).

Infant

1. Assess for patient unresponsiveness by shouting and gently shaking the infant.
2. If the infant is unresponsive, shout for help. If a bystander is available, instruct him or her to activate EMS immediately. Initiate CPR in the following manner:
   a. Open the airway with the head tilt–chin lift method, taking care to avoid excessive extension of the head; check for breathing
   b. If the patient is not breathing, give two slow ventilations using the pocket mask; if the pocket mask is not available, cover the infant’s nose and mouth with your mouth to deliver the air
   c. Assess the infant’s pulse for 5 to 10 seconds by palpating the brachial artery
   d. Start chest compressions if a pulse is not present; perform compressions in the following manner:

Original procedures copyright © 2000 by Mosby, Inc.
(1) The ratio of compressions to ventilations for an infant is 5 to 1
(2) Perform compressions by placing two fingers on the sternum, one finger width below the nipple line
(3) The depth of compressions is ½ to 1 inch at a minimum rate of 100 times per minute (about 12 cycles of compressions to ventilation in 1 minute)

1. If efforts are unsuccessful after 1 minute (approximately 20 cycles), activate EMS (if alone).
2. Follow steps 3 through 8 as described in Adult CPR.
3. Rescue breathing for the infant is 1 breath every 3 seconds (20 per minute).

NURSING CONSIDERATIONS

Institute CPR unless indicated otherwise by Advance Directives.

Notify EMS of the patient’s Advance Directives status.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- Findings
- Actions taken
- Patient disposition, including vital signs and level of consciousness
- The time EMS responded to the call, and the actions taken
- Physician notification
- Standard Precautions
- Other pertinent findings

Complete an incident report as required.
Update the plan of care.
Falls and Fractures

PURPOSE

- To care for patients who experienced a fall and subsequent possible trauma in the home setting
- To prevent infection or other complications from the injury
- To stabilize the patient until EMS assumes responsibility

RELATED PROCEDURES

- Bleeding and Soft Tissue Injury
- Cardiopulmonary Resuscitation (CPR)
- Shock

GENERAL INFORMATION

Each year, more than 10 million Americans suffer injuries resulting from falls. Patients who have strong, healthy bone tissue and good muscle mass require a significant amount of force before a fracture occurs. But in the elderly, especially when osteoporosis is present, a relatively minor force can result in fracture. When compared with the young, the elderly also are predisposed to isolated hip fractures from a simple fall. Younger adults, children, and adolescents more commonly suffer multiple injuries resulting from motor vehicle collisions, pedestrian accidents, or falls from significant heights. The older population is also at greater risk for falls and fractures resulting from changes in visual acuity; inadequate nutritional status; inactivity leading to muscle atrophy; bone weakening from calcium loss; altered sense of balance as a result of osteoporotic and vertebral deformities; and medications (e.g., antihypertensives, nitrates) that affect balance, judgment, and response to orthostatic changes.

This procedure is performed (1) when the patient falls while the nurse is in the home, (2) when the patient reports a fall, or (3) when the patient is found on the floor.

EQUIPMENT

1. Bandage scissors
2. Sterile dressing and tape
3. Ice bag and pack (consider using packs of frozen vegetables or ice cubes wrapped in a plastic bag/towel)
4. Disposable sterile or nonsterile glove (a sterile glove is preferred when an open wound is present) and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Assess the patient’s neurologic and cardiopulmonary status in the following manner:
   a. Determine the level of consciousness
   b. Observe the pupillary response
   c. Obtain the patient’s vital signs as soon as possible
1. Perform head-to-toe physical assessment to determine any trauma from the fall. Treat the following:
   a. **Bleeding**
      (1) See the procedure for *Bleeding and Soft Tissue Injury*; significant overt and occult bleeding can

Original procedures copyright © 2000 by Mosby, Inc.
accompany fractures and lead to shock; when bleeding accompanies a fall, do not move the patient; control the bleeding and protect the wound

a. Fracture
(1) Evaluate for signs and symptoms of a fracture: swelling and ecchymosis, tenderness or pain over the site, abrasions or other skin wounds, crepitus or grating, deformity or disability
(2) Remove clothing with bandage scissors if needed; remove jewelry from the suspect fracture; assess neurovascular status (e.g., pulses, light touch sensation, motor ability) before any immobilization is done
(3) Stabilize the fracture if possible; do not move patient if suspected fracture involves the neck, pelvis, back, hip, or long bones; never straighten obviously angulated fractures; splint or support the injured extremity in the position in which it is found; reassess neurovascular status after all interventions
(4) Cover any wounds with a sterile dressing to prevent infection
(5) Apply ice to affected areas and elevate as possible to reduce swelling, pain, and further tissue damage

1. Be prepared to initiate CPR and treat for shock. Cover to keep the patient warm.
2. Determine the cause of the fall, and identify any circumstances associated with or precipitating the fall.
3. Activate EMS for loss of consciousness, suspect fracture, significant bleeding, or unstable cardiopulmonary status. Stay with the patient until EMS assumes responsibility.
4. Notify the home health agency clinical supervisor and the physician of any fall.
5. Provide patient comfort measures.
6. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

Instruct the patient/caregiver in fall prevention and home safety. When dealing with the elderly, important aspects of prevention include using proper walk-assist devices; wearing nonslip, rubber-soled footwear; raising bedrails as appropriate; using seat belts on wheelchairs; removing hazards such as throw rugs and other mats; installing appropriate bathroom and shower handrails; and ensuring optimal vision with proper eyeglasses or contact lenses.

Consider referral to physical therapy for gait training and a home exercise program to increase the patient’s strength and balance.

Consider referral to social services for help in obtaining assistive ambulation devices, such as a cane or walker.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- Findings
- Actions taken
- Patient disposition, including vital signs and level of consciousness
- The time EMS responded to the call, and the actions taken
- Physician notification
- Standard Precautions
- Other pertinent findings
Complete an incident report as required.
Update the plan of care.
Heat-Related Illness

PURPOSE

- To identify and care for patients who experience heat exhaustion and/or heat stroke in the home setting
- To stabilize the patient until EMS assumes responsibility

RELATED PROCEDURES

- Cardiopulmonary Resuscitation (CPR)
- Seizure
- Shock

GENERAL INFORMATION

Heat exhaustion and heat stroke usually occur in the summer during periods of high temperatures and elevated humidity. Key elements of treatment include cooling and hydrating the patient.

Heat Exhaustion

Heat exhaustion is associated with dehydration caused by excessive perspiration or from inadequate replacement of water and electrolytes lost during perspiration. Although heat exhaustion is less critical than heat stroke, heat exhaustion does require immediate attention because it can progress to heat stroke if not treated. Symptoms include heavy sweating, fatigue, weakness, fast pulse, normal to slightly elevated body temperature, headache, dizziness, nausea, vomiting, and irritability. Body temperature is usually less than 39° C (102° F).

Heat stroke

Heat stroke is a true medical emergency in which the body becomes overheated and fails to cool sufficiently. The patient loses the ability to perspire. Brain damage or death can occur without prompt intervention. Symptoms of heat stroke include altered mental status (e.g., confusion, belligerence, or unconsciousness); skin that is typically hot and dry; rapid breathing and rapid pulse; and hypotension. Body temperature usually is elevated to 40.6° C (105° F) or greater. These high temperatures damage almost every organ in the body, including the liver, kidneys, lungs, heart, and muscle tissues. A grand mal seizure may be a lethal complication.

Exertional heat stroke

Exertional heat stroke occurs in healthy young adults involved in intense activities in high temperature and humidity environments.

Classic heat stroke is seen in the elderly and the very young during heat waves. The National Weather Service issues heat wave warnings when there are three or more consecutive days of temperatures at or above 32.2° C (90° F). The heat index also takes into account humidity as an important factor in contributing to heat illness. Heat advisories are issued when the heat index (derived from the temperature and humidity) exceeds 40.6° C (105° F) in the daytime and the minimum nighttime temperature does not drop below 29.7° C (88.5° F) for 48 hours.
Patients at risk for heat-related illnesses include the elderly with chronic diseases or those who are housebound or bedridden; mentally ill patients who take psychotropic medications; infants and children; and athletes who are not properly acclimated to the weather or who are not adequately replacing fluids.

**EQUIPMENT**

1. Fluids for rehydration
2. Ice or cold water
3. Towels, sheet, or washcloth
4. Fan, if available
5. Disposable nonsterile gloves and an impermeable plastic trash bag (see *Infection Control*)

**Heat Exhaustion**

**PROCEDURE**

1. Assess the patient’s cardiopulmonary status and evaluate for signs and symptoms of heat exhaustion. Obtain vital signs as soon as possible.
2. Move the patient to a cool, comfortable place and sponge him or her with cool or cold water.
3. Keep the patient supine, and elevate the legs 8 to 10 inches to improve circulation.
4. Apply moist compresses to the forehead, axillae, and/or groin. Direct a fan toward the patient if possible.
5. If the patient is conscious, start oral rehydration with water or a drink containing glucose and sodium.
6. If no improvement occurs, activate EMS. Stay with the patient until EMS assumes responsibility.
7. Notify the home health agency clinical supervisor and the physician for further orders.
8. Clean and replace the equipment. Discard disposable items according to *Standard Precautions*.

**Heat Stroke**

**PROCEDURE**

1. Assess the patient’s cardiopulmonary status, and evaluate for signs and symptoms of heat stroke. Obtain vital signs as soon as possible.
2. Open the patient’s airway as necessary; keep the patient’s head and shoulders elevated.
3. Cool the patient’s body as quickly as possible in the following manner:
   a. Remove the clothing; spray the entire body with water while air is passed across the body with fans or by other means
   b. If necessary, immerse the patient in cold water or pack him or her in ice; place ice packs in the axillae and groin areas and fan the patient; wet down the body with sheets or towels (keep the clothes wet with cool water)
4. Continue the cooling procedure until the patient’s temperature drops to 102° F. Stop at this point to prevent seizures and hypothermia.
5. Activate EMS if the patient experiences unstable cardiopulmonary status or decreased level of consciousness. Stay with the patient until EMS assumes responsibility.
6. Notify the home health agency clinical supervisor and the physician for further orders.
7. Provide patient comfort measures.
8. Clean and replace the equipment. Discard disposable items according to *Standard Precautions*.

**NURSING CONSIDERATIONS**
Refer the patient to social services for inadequate air conditioning or if the patient is unable to pay utility bills.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- Findings
- Actions taken
- Patient disposition, including vital signs and level of consciousness
- The time EMS responded to the call, and the actions taken
- Physician notification
- *Standard Precautions*
- Other pertinent findings

Complete an incident report as required.
Update the plan of care.
Hyperglycemia

PURPOSE

• To identify and care for the patient with acute hyperglycemia in the home setting
• To promote self-care in the home
• To stabilize the patient until EMS assumes responsibility

RELATED PROCEDURES

• Administration of Medications: General Guidelines (see Chapter 10)
• Cardiopulmonary Resuscitation (CPR)
• Glucose and Ketone Urine Testing (see Chapter 12)
• Blood Glucose Monitoring (see Chapter 12)
• Seizure

GENERAL INFORMATION

Hyperglycemia arises when not enough insulin is available to metabolize blood glucose. Infection, noncompliance with medication, failure to follow prescribed diet, or emotional stress may precipitate hyperglycemia.

Signs and symptoms of hyperglycemia include increased thirst, increased urination, fruity or almond smelling breath, abdominal pains, weakness, deep breathing, loss of appetite, nausea, and vomiting.

Severe hyperglycemia is a true emergency, and the patient requires immediate medical attention. Profound dehydration, rapid and weak pulse, seizures, and coma may occur. The blood glucose level may range between 300 and 3000 mg/dl. If hyperglycemia is not treated, death may result. Hydration and insulin therapy in a monitored setting are key elements of treatment for severe hyperglycemia.

EQUIPMENT

1. Glucose meter, lancet, and test strips
2. Urine Chem 9 test strips
3. Alcohol wipes
4. Disposable nonsterile gloves and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Assess the patient’s cardiopulmonary status, and evaluate for signs and symptoms of hyperglycemia. Obtain vital signs as soon as possible.
2. Be prepared to administer CPR.
3. Assess the blood glucose level in the following manner:
   a. Ensure that the meter has been correctly calibrated according to the manufacturer’s protocols
   b. Measure the blood glucose level (review manufacturer’s operational instructions)
   c. Blood glucose levels greater than 300 mg/dl indicate hyperglycemia; the blood glucose meter may read HHH or HIGH
1. Assess the patient’s urine for ketones and glucose if the blood glucose monitoring device is unavailable. (Ketonuria/glycosuria 3+ to 4+ indicates hyperglycemia.)
2. Administer the prescribed insulin dosage if the daily dosage has been omitted.
3. Give fluids without sugar content (e.g., tap water, ice chips) if the patient is able to swallow.
4. Immediately activate EMS if the patient has an unstable cardiopulmonary status or decreased level of consciousness, is comatose, or exhibits signs of severe hyperglycemia. Stay with the patient until EMS assumes responsibility.
5. Notify the home health agency clinical supervisor and the physician for further orders.
6. Discard needle/syringes and disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

After the patient recovers from a hyperglycemic episode, every effort should be made to prevent recurrence by identifying the cause and revising the plan of care accordingly.

Assess the patient’s/caregiver’s knowledge of the causes, symptoms, and treatment of hyperglycemia, and instruct as needed. Ideally this instruction should be done upon admission as a component of diabetic management in the home.

Periodically observe the patient/caregiver draw insulin into the syringe, and assess for correct dosage or the presence of air bubbles in the syringe.

Report abnormal blood glucose values to the physician.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- Findings
- Actions taken
- Patient status, including blood glucose or urine ketone and glucose values
- Any patient/caregiver instructions and response to teaching
- Physician notification
- Standard Precautions
- The time EMS responded to the call, and the actions taken

Document insulin administration on the medication record.
Complete an incident report as required.
Update the plan of care.
Hypoglycemia

PURPOSE

- To identify and care for the patient with hypoglycemia in the home setting
- To promote self-care in the home
- To stabilize the patient until EMS assumes responsibility

RELATED PROCEDURES

- Administration of Medications: General Guidelines (see Chapter 10)
- Cardiopulmonary Resuscitation (CPR)
- Blood Glucose Monitoring (see Chapter 12)
- Shock

GENERAL INFORMATION

Hypoglycemia may be caused by an excessive rate of removal of glucose from the blood or from decreased secretion of glucose into the blood. The most common cause of hypoglycemia is unintentional insulin reaction. Hypoglycemia may also result from advertent overmedication with sulfonylureas, decreased or delayed food intake, exercise, alcohol intake, or variable absorption of insulin from the injection site.

The signs and symptoms of hypoglycemia may develop rapidly and include cool or moist skin, tremors or seizures, diaphoresis, bounding pulse, personality change, anxiety, hunger, confusion, nausea and vomiting, and stupor or coma. Be aware that the patient may not recognize signs and symptoms of impending hypoglycemia because of the neuropathies associated with diabetes.

Mild hypoglycemia is defined as a blood glucose level ranging between 50 and 70 mg/dl. Moderate to severe hypoglycemia is defined as a blood glucose level less than 50 mg/dl and is often associated with neurologic symptoms and changes in the level of consciousness.

EQUIPMENT

1. Glucagon and a 3 cc syringe with a 3-inch needle
2. Blood glucose meter, lancet, and glucose strips
3. Antiseptic wipes
4. Corn syrup, honey, a tube of cake icing, orange juice, table sugar, candy, jelly
5. Milk, crackers, cheese or peanut butter sandwich
6. Disposable nonsterile gloves, sharps container, and an impermeable plastic trash bag (see Infection Control) [STOP]

PROCEDURE

1. Assess the patient’s cardiopulmonary status, and evaluate for signs and symptoms of hypoglycemia. Obtain vital signs as soon as possible.
2. Be prepared to administer CPR.
3. Assess the blood glucose level in the following manner:

Original procedures copyright © 2000 by Mosby, Inc.
a. Ensure that the blood glucose meter has been calibrated according to the manufacturer’s protocols
b. Measure the blood glucose level (review the manufacturer’s operational instructions)
c. A blood glucose level less than 50 mg/100 dl is indicative of hypoglycemia; the blood glucose meter may read LLL or LOW

1. Treat hypoglycemia based on the severity of the patient’s symptoms and blood glucose ranges in the following manner:
   a. Manage mild hypoglycemia by having the patient drink 10 to 20 g of carbohydrate, such as milk, juice, cola, or syrup (about 4 ounces); after 15 minutes, recheck the blood glucose level; if it is still between 50 and 70 mg/dl, instruct the patient to drink another 4 ounces of carbohydrate; in 30 minutes, recheck the blood glucose level; when the blood glucose level is more than 70 mg/dl, have the patient eat a snack of 15 g of complex carbohydrate (e.g., one-half of a peanut butter or a cheese sandwich, or milk and crackers)
   b. Manage moderate to severe hypoglycemia by having the patient ingest 20 to 30 g of rapid-acting carbohydrates, such as sugar, candy, sweetened fruit juice, corn syrup, honey, cake icing in a tube, and jelly or jam, to provide a “quick” sugar with decreased risk of aspiration (encourage the patient to keep a “quick” sugar on hand to use if difficulty in swallowing, dizziness, or potential for fainting should occur); recheck the blood glucose in 15 to 20 minutes; if the blood glucose is less 50 mg/dl and if the patient has severe symptoms, repeat ingestion of rapid-acting carbohydrates; when the blood glucose level is more than 70 mg/dl, have the patient eat complex carbohydrates as described in the procedure for mild hypoglycemia
   c. Manage severe hypoglycemia in the unconscious or uncooperative patient by administering 1 mg of glucagon intramuscularly into the deltoid or anterior thigh region; a second dose of glucagon may be given if the patient does not regain consciousness 10 minutes after the first dose (obtain standing physician’s orders in the patient’s record for glucagon); do not give fluids if the patient is unconscious; small amounts of syrup or honey may be placed in the buccal pouch of the side-lying unconscious patient; when the patient regains consciousness, give him or her 20 to 30 g of rapid-acting carbohydrates; check the blood glucose level 15 to 20 minutes later; if the blood glucose is less than 70 mg/dl, repeat ingestion of rapid-acting carbohydrates; when the blood glucose is more than 70 mg/dl, instruct the patient to ingest 15 g or more of complex carbohydrates as described in the procedure for mild hypoglycemia.

1. Activate EMS if the patient is not responsive to treatment or if he or she exhibits an unstable cardiopulmonary status. Stay with the patient until EMS assumes responsibility.
2. Notify the home health agency clinical supervisor and the physician for further orders.
3. Discard needles/syringes and disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

After the patient recovers from a hypoglycemic episode, every effort should be made to prevent a recurrence by identifying the cause and by revising the plan of care accordingly.

Assess the patient’s/caregiver’s knowledge of the causes, symptoms, and treatment of hypoglycemia, and instruct as needed. Ideally this instruction should be given during the first home visit as a component of diabetic management.

Periodically observe the patient/caregiver draw insulin into the syringe, and assess for correct dosage.

Report abnormal blood glucose levels to the physician.

Original procedures copyright © 2000 by Mosby, Inc.
DOCUMENTATION GUIDELINES

Document the following on the visit report:

- Findings
- Actions taken and patient status
- Any patient/caregiver instructions and response to teaching
- Physician notification
- Standard Precautions
- The time EMS responded to the call, and the actions taken

Document glucagon administration on the medication record.
Complete an incident report as required.
Update the plan of care.
Hypothermia

PURPOSE

• To identify and care for the patient with hypothermia in the home setting
• To stabilize the patient until EMS assumes responsibility

RELATED PROCEDURES

• Cardiopulmonary Resuscitation (CPR)
• Seizure
• Shock

GENERAL INFORMATION

Hypothermia commonly occurs during the winter. The stages of hypothermia depend on the degree of exposure to the cold. Initially, shivering occurs as the body attempts to conserve heat. The shivering is followed by an attitude indifference, sleepiness, apathy, and listlessness. The patient may be confused. Unconsciousness follows, accompanied by a slow respiratory rate and pulse. Coma is probable when the rectal temperature less than 90° F. Freezing of the extremities and death will eventually result.

EQUIPMENT

1. Blankets
2. Warm water or milk
3. Covered hot water bottle

PROCEDURE

1. Assess the patient's cardiopulmonary status, and evaluate for signs and symptoms of hypothermia. Obtain vital signs, including rectal temperature, as soon as possible.
2. Be prepared to initiate CPR.
3. Get the patient out of the cold environment to a source of heat. Place the patient in a warm bed if possible.
4. Remove wet clothing, dry the patient, and cover the patient with blankets.
5. Fill a bottle with hot water and cover it with a towel. Place the covered hot water bottle on the patient’s chest, neck, axillae, and/or groin but not on the extremities or head. Warming the extremities will cause vasodilation and possible hypotension. Warming the head may reverse the protective effects of brain cooling and increase the oxygen demand.
6. Elevate the patient’s feet, and keep him or her quiet.
7. If the patient is oriented, give him or her warm water or warm milk. Do not give alcoholic beverages, tranquilizers, or coffee.
8. Activate EMS if the rectal temperature is less than 90° F or if the patient’s level of consciousness or vital signs are unstable. Stay with the patient until EMS assumes responsibility.
9. Notify the home health agency clinical supervisor and the physician for further orders.
11. Clean and replace the equipment. Discard disposable items according to Standard Precautions.
NURSING CONSIDERATIONS

Handle the patient gently because hypothermia predisposes the patient to ventricular fibrillation.

Do not put an unconscious patient in a bathtub.

Do not attempt to rewarm frozen extremities before transportation to the hospital.

Consider a referral to social services if the heat has been turned off or if the patient is unable to pay the utility bills.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

• Findings
• Actions taken
• Patient’s disposition, including vital signs and level of consciousness
• The time EMS responded to the call, and the actions taken
• Physician notification
• Standard Precautions
• Other pertinent findings

Complete an incident report as required.
Update the plan of care.
Poisoning and Substance Abuse and Misuse

PURPOSE

- To identify and care for patients who experience poisoning or substance abuse or misuse in the home setting

RELATED PROCEDURES

- Animal, Insect, Snake, Spider, and Tick Bites
- Cardiopulmonary Resuscitation (CPR)
- Patient/Caregiver Medication Errors at Home (see Chapter 10)
- Seizure
- Shock
- Suicidal Thoughts or Harmful Psychotic Ideation
- Transfusion or Anaphylactic Reaction

GENERAL INFORMATION

Poisoning can occur by ingestion, inhalation, absorption, and injection. Substance abuse and misuse are types of poisonings that can occur in any of these ways.

Signs and symptoms of poisoning include nausea, vomiting, difficulty in breathing, sweating, altered level of consciousness, and seizures. Assess the home environment for sources of poisoning. If poisoning is suspected, try to find out the following:

- What type of poison was taken?
- How much was taken?
- When was it taken?

Substance abuse is the deliberate and excessive use of a substance without regard to health concerns or to accepted medical practices. Substance misuse is the use of a substance for unintended purposes or for appropriate purposes but in improper amounts or doses. An overdose occurs if someone takes enough of a substance that it has toxic or fatal effects. Commonly misused and abused substances in the home setting include stimulants, hallucinogens, depressants, and prescribed medications.

Signs and symptoms of substance abuse and misuse include moist or flushed skin, sweating, chills, nausea, vomiting, fever, headache, dizziness, rapid pulse, rapid breathing, elevated blood pressure, chest pain, hallucinations, confusion, mood swings, and altered level of consciousness. Observe for containers, drug paraphernalia, and signs of symptoms of other medical problems.

Poisoning

PROCEDURE

1. Remove the patient from the source of poison.
2. Assess the patient’s cardiopulmonary status, and evaluate for signs and symptoms of poisoning. Obtain vital signs as soon as possible.
3. Be prepared to administer CPR and care for patients who have poisoning in the following manner:

**Absorption**

Flush the affected area continuously with large amounts of water for absorbed poisons; if running water is not available, brush off dry chemicals.

**Ingestion**

Activate EMS for ingested poisons; stay with the patient until EMS assumes responsibility; contact the local poison control center first if the patient is conscious and has stable vital signs; the center will tell you what care to give and whether more advanced medical attention is needed.

Do not induce vomiting when the patient is in the following state:

- Unconscious
- Having a seizure
- Pregnant
- Known to have heart disease
- Known to have ingested a corrosive substance or a petroleum product (e.g., kerosene or gasoline)

**Inhalation**

Open the window and let fresh air into the home for inhaled poisons. Begin rescue breathing if the patient is not breathing. Activate EMS as needed.

**Injection**

See the procedure for *Transfusion or Anaphylactic Reaction* for injected poisoning.

1. Notify the home health agency clinical supervisor and the physician for further orders.

**Substance Abuse and Misuse**

**PROCEDURE**

1. Assess the patient’s cardiopulmonary status, and evaluate for signs and symptoms of substance abuse and misuse. Obtain the patient’s vital signs as soon as possible.
2. Be prepared to administer CPR or to treat for seizures or shock.
3. Try to keep the patient calm. Maintain normal body temperature.
4. Try to determine the substance that has been abused or misused and the amount used.
5. If the patient vomits or has vomited, place the patient on one side and clear any matter out of the mouth.
6. Withdraw from the immediate area if the patient becomes violent or threatening.
7. Activate EMS if the patient has an unstable cardiopulmonary status or is uncontrollable. Police assistance may be required. If possible, stay with the patient until EMS assumes responsibility.
8. Notify the home health agency clinical supervisor and the physician for further orders.
DOCUMENTATION GUIDELINES

Document the following on the visit report:

- Type of poisoning or substance abused or misused
- Actions taken
- Patient disposition
- The time EMS responded to the call, and the actions taken
- Physician notification
- Standard Precautions
- Other pertinent findings

Complete an incident report as required.
Update the plan of care.
Seizure

PURPOSE

• To identify and care for patients who experience a seizure in the home setting
• To protect the patient throughout the seizure
• To stabilize the patient until EMS assumes responsibility

RELATED PROCEDURES

• Cardiopulmonary Resuscitation (CPR)
• Bleeding and Soft Tissue Injury
• Falls and Fractures

GENERAL INFORMATION

Seizure activity may vary in symptomology and levels of consciousness. Petite mal, or partial, seizures are not as severe in clinical presentation as are generalized grand mal seizures. The International Classification of Epileptic Seizures is a tool used to distinguish between the various types of seizures. This tool uses various types of stimuli during seizure activity, and tests patient recall after the seizure.

Signs and symptoms of seizure activity include pupillary changes, changes in the levels of consciousness to a complete loss of consciousness, incontinence of urine and feces, falling to the ground with violent physical thrashing, drooling or foaming from the mouth, paralysis, and inability to speak.

EQUIPMENT

1. Padding (e.g., pillows)

PROCEDURE

1. Assess the patient’s cardiopulmonary status, and evaluate for signs and symptoms of seizure. Obtain vital signs as soon as possible.
2. Remain calm. Stay with the patient throughout the seizure.
3. Do not restrain the patient in any way. Loosen the clothing. Ease the patient to the floor if he or she is in a chair. Remove harmful, hard-pointed objects. Provide padding, if possible.
4. Maintain an adequate airway for the patient in the following manner:
   a. Position the patient in a side-lying position to promote drainage and prevent aspiration
   b. Do not attempt to pry open clenched jaws during a spasm
   c. Do not put anything in the mouth during the seizure
   d. The patient may be cyanotic during the seizure and require assisted ventilation; when respirations normalize after the seizure and relaxation occurs, maintain the patient is a side-lying position to facilitate drainage of mucus and saliva
1. Provide reassurance during the postictal state in the following manner:
   a. Reorient the patient to the environment when he or she awakens (the patient may not be aware of what has happened; this is not unusual after seizure activity)
   b. Make the patient comfortable
1. Perform a comprehensive physical assessment because injury commonly occurs during a seizure.
2. Stay with the patient until he or she is fully conscious or until a caregiver is available. Patients often sleep after a seizure.
3. If the seizure persists and the pulmonary status is compromised, activate EMS. Stay with the patient until EMS assumes responsibility.
4. Interview the caregiver if available. Assess the seizure onset and obtain a history and any precipitating factors associated with the seizure.
5. Notify the home health agency clinical supervisor and the physician for further orders.
6. Provide patient comfort measures.
7. Clean and replace equipment. Discard disposable items according to Standard Precautions.

**NURSING CONSIDERATIONS**

If the patient is taking an anticonvulsant medication, assess the patient/caregiver compliance with the regimen. The physician may order new medication or a change in the current medication dosage.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- Actions taken
- Patient disposition
- Description of any body movement during the seizure
- Duration of the seizure
- Any loss of consciousness, paralysis, or weakness after the seizure
- Incontinence of urine and/or feces during the seizure
- The time EMS responded to the call, and actions taken
- Physician notification
- Standard Precautions
- Other pertinent findings

Complete an incident report as required.
Update the plan of care.
**Shock**

**PURPOSE**

- To identify and care for the patient who experiences shock in the home setting
- To stabilize the patient until EMS assumes responsibility

**RELATED PROCEDURES**

- Animal, Insect, Snake, Spider, and Tick Bites
- Bleeding and Soft Tissue Injury
- Cardiopulmonary Resuscitation (CPR)
- Falls and Fractures
- Heat-Related Illness
- Hypoglycemia
- Hypothermia
- Seizure

**GENERAL INFORMATION**

Shock is a state of inadequate tissue perfusion that affects all body processes. It is divided into the following three main categories, based on the cause.

1. **Hypovolemic shock.** Hypovolemic shock results from volume loss, either blood or fluid. Examples include hemorrhage and severe dehydration.
2. **Cardiogenic shock.** Cardiogenic shock results from failure of the heart to function as an effective pump. This most commonly occurs after a significant amount of left ventricular damage, as in severe myocardial infarction.
3. **Distributive shock.** Distributive shock results from a redistribution of circulatory volume within the body. Pressure changes can occur due to dilation of the blood vessels caused from toxins or circulatory antibodies, as in anaphylactic or septic shock. Dilation also occurs with loss of sympathetic tone due to an injury to the central nervous system, as in neurogenic shock. Redistribution of circulatory volume leading to shock can also occur in sequestration or third spacing pathologies, such as in burns, ascites, or peritonitis.

Common signs of clinical shock include reduced cardiac output, circulatory insufficiency, tachycardia, restlessness, hypotension, cyanosis, confusion and possible unconsciousness, profound thirst, cool and clammy skin, and respiratory distress. Patients in distributive shock may lose sympathetic responses and will have a different clinical appearance. They may have warm skin with a normal or bradycardic heart rate in addition to hypotension.

**EQUIPMENT**

1. Blankets
2. Dressings/tape
3. Face mask, disposable sterile or nonsterile gloves (sterile gloves are preferred when an open wound is present) and an impermeable plastic trash bag (see *Infection Control*)

Original procedures copyright © 2000 by Mosby, Inc.
PROCEDURE

1. Assess the patient’s cardiopulmonary status, and evaluate for signs and symptoms of shock. Obtain the patient’s vital signs as soon as possible.
2. Be prepared to initiate CPR.
3. Control bleeding if present.
4. Place the patient in a supine position with the legs elevated (except in cardiogenic shock).
5. Keep the patient nonthermic—use blankets if needed.
6. Activate EMS if the patient has an unstable cardiopulmonary status. Stay with the patient until EMS assumes responsibility.
7. Notify the home health agency clinical supervisor and the physician for further orders.
8. Provide patient comfort measures.
9. Clean and replace equipment. Discard disposable items according to Standard Precautions.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- Findings
- Actions taken
- Patient’s disposition
- Physician notification
- Standard Precautions
- Other pertinent findings

Complete an incident report as required.
Update the plan of care.
Transfusion or Anaphylactic Reaction

PURPOSE

- To identify and care for patients who experience a transfusion reaction in the home setting.
- To stabilize the patient until EMS assumes responsibility

RELATED PROCEDURES

- Cardiopulmonary Resuscitation (CPR)
- Shock

GENERAL INFORMATION

Patients may have sensitivities to intravenous fluids, particularly when blood or blood products are administered. Anaphylaxis is an allergic reaction that may occur within seconds or up to 30 minutes from the time of transfusion of IV products. Rare occasions of delayed hemolytic reaction have been reported hours to days after the actual transfusion.

Signs and symptoms of anaphylactic reaction include feelings of warmth or flushing; facial edema; respiratory distress, including dyspnea, wheezing, and airway obstruction; complaints of chest tightness and pain; abdominal cramping, nausea, or vomiting; incontinence of bowel and bladder; and cardiopulmonary failure. Obtain standing physician’s orders in the patient’s chart to identify transfusion reaction protocols before initiating procedures that could cause reactions.

EQUIPMENT

1. Epinephrine—1:1,000 1 ml ampules (1 mg/ml); 1:10,000 10 ml prefilled syringes as prescribed by the physician
2. Diphenhydramine—ampules of 25 or 50 mg as prescribed by the physician
3. 3 ml, 25-gauge syringes with 5/8-inch needles
4. Antiseptic and alcohol wipes
5. Adult oral airway (1)
6. Urine specimen cup
7. Disposable nonsterile gloves, sharps container, and an impermeable plastic trash bag (see Infection Control)

PROCEDURE

1. Assess the patient’s cardiopulmonary status, and evaluate for signs of an anaphylactic reaction. Obtain vital signs as soon as possible.
2. Stop infusion immediately if symptoms are present.
3. Be prepared to initiate CPR.
4. Consider the following medication guidelines:
   a. Epinephrine 1:1,000 is given subcutaneously (standard adult dose is 0.2 to 0.3 ml) and is repeated every
      15 to 30 minutes to obtain the desired response; with signs of cardiovascular collapse and shock,
      epinephrine is given IV in dosages of 0.5 to 1 mg, using the 1:10,000 dilution (5 to 10 ml) and is
repeated every 3 to 5 minutes as needed; in addition, rapid infusion of isotonic IV fluids to maintain blood pressure is generally warranted if the patient is in shock
b. Diphenhydramine (Benadryl) is given for the cutaneous responses of redness, swelling, and itching in dosages of 25 to 50 mg, intramuscularly
1. Activate EMS if the patient has an unstable cardiopulmonary status. Stay with the patient until EMS assumes responsibility.
2. If possible, obtain a urine specimen for evaluation.
3. Notify the home health agency clinical supervisor and the physician for further orders.
4. Provide patient comfort measures.
5. Clean and replace equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

It is recommended that certified IV therapy nurses administer antibiotic, total parenteral nutrition, and blood or blood products and be trained to handle transfusion reaction and complications.

Review individual state nurse practice acts regarding the legality of administering blood and blood products in the home.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

• Date, time, and nature of symptoms in relation to the time of administration of blood, blood products, or other IV fluids
• Emergency actions taken, and the patient’s response to treatment
• The time EMS responded to the call, and the actions taken
• Physician notification
• Standard Precautions
• Other pertinent findings

Document medications administered on the medication record.
Complete an incident report as required.
Update the plan of care.
Child or Dependent Elder Abuse or Neglect

PURPOSE

- To initiate appropriate action for the patient who is abused or neglected
- To maximize patient safety

RELATED PROCEDURES

- Clinical Indicators for a Social Service Referral
- Domestic Violence

GENERAL INFORMATION

Identify local and state **hot lines** for child and adult abuse or neglect. Most states require all health care practitioners or social workers to report adult or child abuse or neglect. In most cases, failure to do so is a misdemeanor. State statutes provide immunity from liability when reporting abuse or neglect.

*Abuse* is the willful infliction of pain, injury, or mental anguish. *Neglect* is the failure to provide for basic needs that result in physical harm to the person.

PROCEDURE

1. When abuse or neglect is suspected or observed, notify the home health agency clinical supervisor and the patient’s physician to make a joint decision to notify the hot line.
2. Initiate the hot line call.
3. Report the name, age, and address of the victim.
4. Report the nature and extent of the victim’s condition.
5. Report other relevant information.
6. Notify the home health agency clinical supervisor and the patient’s physician for further orders.

NURSING CONSIDERATIONS

Many patients in the home are at risk for abuse, neglect, or financial exploitation by caregivers and family members. Children and older adults are often victims of isolation and negligence.

Obtain physician’s orders for a social service referral when abuse is suspected or observed.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- Signs of abuse or neglect
- Action taken
- Patient disposition
- Any agency referrals
- Notification of hot line: date, time of call, and caseworker’s name or number
• Plans for a revisit to assess patient safety in the home
• Any patient/caregiver instructions and response to teaching
• Physician notification
• Other pertinent findings

Update the plan of care.

Author: PATRICIA E. FREED, R.N., ED.D.
Clinical Indicators for a Home Health Aide Referral

PURPOSE

- To provide clinical indicators for a home health aide referral
- To maximize the patient’s functional abilities in the home
- To promote self-care in the home

PROCEDURE

1. Consider a home health aide referral when assisted or complete personal care services are needed, including the following:
   a. Bathing
   b. Grooming
   c. Preparing meals
   d. Eating
   e. Oral hygiene
   f. Skin and/or nail care
   g. Toileting and elimination
   h. Ambulating

1. In addition to personal care, consider home health aide services for the following:
   a. Light housekeeping
   b. Grocery shopping
   c. Procedural care within the auspices of the job description

NURSING CONSIDERATIONS

Review state regulations regarding services, qualifications, and requirements of the home health aide.

Obtain physician’s orders for home health aide services.

DOCUMENTATION GUIDELINES

Document the following on the visit report or appropriate form:

- Why the patient needs the home health aide services
- Patient/caregiver refusal of home health aide services
- A home health aide supervisory visit every 14 days (follow Medicare regulations and individual state regulations)
- Physician notification, if applicable

Update the plan of care.
Clinical Indicators for a Home Health Aide Referral

PURPOSE

- To provide clinical indicators for a home health aide referral
- To maximize the patient’s functional abilities in the home
- To promote self-care in the home

PROCEDURE

1. Consider a home health aide referral when assisted or complete personal care services are needed, including the following:
   a. Bathing
   b. Grooming
   c. Preparing meals
   d. Eating
   e. Oral hygiene
   f. Skin and/or nail care
   g. Toileting and elimination
   h. Ambulating
1. In addition to personal care, consider home health aide services for the following:
   a. Light housekeeping
   b. Grocery shopping
   c. Procedural care within the auspices of the job description

NURSING CONSIDERATIONS

Review state regulations regarding services, qualifications, and requirements of the home health aide.

Obtain physician’s orders for home health aide services.

DOCUMENTATION GUIDELINES

Document the following on the visit report or appropriate form:

- Why the patient needs the home health aide services
- Patient/caregiver refusal of home health aide services
- A home health aide supervisory visit every 14 days (follow Medicare regulations and individual state regulations)
- Physician notification, if applicable

Update the plan of care.
Clinical Indicators for a Hospice Referral

PURPOSE

• To identify clinical indicators for hospice referral
• To maximize the patient’s resources
• To assist the patient and family to cope with terminal conditions
• To support the patient’s decision to receive palliative care
• To promote self-care in the home

GENERAL INFORMATION

For a referral to hospice to be possible, patients must accept the hospice philosophy of palliative care. This should be the basic principle that guides the nurse in discussing a hospice referral with the patient and caregiver.

Under Medicare guidelines, terminally ill patients must meet certain criteria to qualify for hospice benefits, which have advantages that are not available with standard Medicare coverage. In many states this criteria includes a life expectation of 6 months or less according to the physician’s best estimate, the patient must not be undergoing or contemplating any active treatment for the disease, and the patient must have decided to forgo resuscitative measures (CPR) at the time of death. Gray areas of service include chemotherapy, radiation therapy, antibiotic therapy, parenteral or enteral nutrition, surgery, and parenteral measures for pain control. Comfort measures are an important part of the hospice philosophy.

In addition, Medicare-certified hospice requires the services of a multidisciplinary team that meets regularly to review and revise the patient’s care plan. The team must include a physician, registered nurse, social worker, and religious adviser. The plan of care must include the patient’s diagnosis; assessment of the patient’s and family’s needs, including medical, nursing, functional, psychosocial, spiritual, and respite needs; and symptom assessment and control. The team must involve volunteers to provide 5% of the total patient care hours with indirect or no-direct care.

PROCEDURE

1. Consider a hospice referral for the following situations:
   a. Palliative care needs
   b. Respite care needs for the patient/caregiver
   c. When patient care needs are stable, but the patient and family have ongoing needs for counseling and coping that would not be covered by routine home health benefits
   d. Extensive patient care needs that cannot be met by usual home health coverage (e.g., extensive pain management or psychologic or spiritual care needs)
   e. Patient and family needs for extra assistance that could be achieved with volunteers (e.g., picking up medications, groceries, or other supplies; talking with and being with someone)
   f. The home health agency or organization is unable to provide the extent of services that the patient and family needs or requests
   g. At the patient’s and/or family’s request, preparation for what to expect at the time of death and after

NURSING CONSIDERATIONS
Obtain the patient’s and caregiver’s approval and the physician’s orders for a hospice referral.

Follow home health agency protocols for patient admission into a hospice program.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- Findings
- Actions taken
- Patient’s disposition
- Physician notification, if applicable

Update the plan of care.
Clinical Indicators for a Psychiatric Home Health Nurse Referral

PURPOSE

• To identify clinical guidelines for referral to the psychiatric home health nurse
• To reduce patient stress or anxiety
• To promote positive coping mechanisms for home independence
• To promote self-care in the home

RELATED PROCEDURE

• Mental Health Assessment (see Chapter 2)

PROCEDURE

1. Consider a psychiatric home health referral for the following:
   a. Unrelieved stress or anxiety states
   b. Noncompliance with the plan of care related to the patient’s mental status
   c. Patient/caregiver conflict or discord
   d. Depression
   e. Hallucinations
   f. Delusions
   g. Unrealistic or unreasonable thought patterns
   h. Thoughts of suicide
   i. Prolonged grief
   j. Maladaptive coping
   k. Manipulative patients
   l. Chronic, debilitating illnesses
   m. Inability to sleep, rest, or eat
   n. Bizarre dress or behavior
   o. Sexually seductive patients
   p. Patient abuse and/or neglect
   q. Confusion or emotional liability
   r. Patient with no physical limitations but is unsafe outside of the home because of the his or her mental or emotional state

NURSING CONSIDERATIONS

Review Medicare guidelines and individual state regulations regarding services and qualifications of the psychiatric home health nurse.

Obtain the patient’s and caregiver’s approval and the psychiatrist’s orders for physician’s home health services.

DOCUMENTATION GUIDELINES

Document the following on the visit report:
- Findings
- Actions taken
- Patient’s disposition
- Patient affect, behavior, and communication patterns that warrant a psychiatric home health referral
- Physician’s notification, if applicable

Update the plan of care.
Clinical Indicators for a Rehabilitation Referral

PURPOSE

- To identify clinical guidelines for rehabilitation referral
- To maximize patient mobility, strength, and functional competencies with activities of daily living (ADLs)
- To promote self-care in the home

PROCEDURE

1. Consider a rehabilitation referral and evaluation for the following circumstances:

   - Physical Therapy
     a. Patients with a decreased ability to roll, move about, or come to a sitting position in bed
     b. Patients with a decreased ability to transfer
     c. Patients with impaired balance and/or coordination
     d. Patients with decreased gait ability or who require special devices or gait aids; patients who are unable to ascend or descend stairs or enter and exit the home
     e. Patients with functional loss of range of motion or strength in any extremity
     f. Patients who require therapeutic intervention for pain or edema control
     g. Caregivers who require instruction in methods of assisting patients with any of the aforementioned losses or who require instruction in the establishment of a home exercise program
     h. Patients or caregivers who require equipment recommendations to enhance the functional abilities of patients or to increase the ease of caring for patients

   - Occupational Therapy
     a. Patients with decreased ability to perform ADLs: bathing, dressing, toileting, cooking, and eating
     b. Patients with decreased upper extremity function or who require instruction in one-handed techniques
     c. Patients with impaired cognition, perception, or awareness of body parts
     d. Patients who require joint protection techniques, pain or edema control, and/or splinting
     e. Patients who require instruction in energy conservation techniques
     f. Patients who require equipment recommendations or adaptations to the environment to enhance their functional ability
     g. Patients with impaired fine motor skills

   - Speech Language Pathologist
     a. Patients with decreased ability to express and/or receive communication
     b. Patients with impaired cognition and/or memory
     c. Patients with impaired ability to phonate
     d. Patients with dysphagia who thus require swallowing therapy
     e. Patients who are apraxic

NURSING CONSIDERATIONS
When assessing the patient’s needs for rehabilitation services, home health nurses must not concentrate solely on the medical diagnosis, because the therapist treats loss of function and not the specific disease or illness.

Review Medicare and individual state requirements regarding services and qualifications of the physical therapist, occupational therapist, and speech language pathologist.

Obtain the patient’s and caregiver’s approval and physician’s orders for rehabilitation referral.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- Findings
- Actions taken
- Patient’s disposition
- Physician notification, if applicable

Update the plan of care.
Clinical Indicators for a Social Service Referral

PURPOSE

- To identify clinical guidelines for a social service referral
- To maximize patient resources
- To resolve social or emotional problems that might be expected or considered to hinder treatment or the stated rehabilitation potential
- To promote self-care in the home

PROCEDURE

1. Consider social services referral for patients with the following conditions:
   a. Severely impaired vision and/or hearing
   b. Living alone with the diagnosis of dysfunctional or organic brain syndrome (dementia or Alzheimer’s disease)
   c. Malnutrition
   d. Terminal conditions (except in the case of certified hospice patients, who usually receive the services of the hospice social worker)
   e. Possible or probable child or adult abuse or neglect
   f. Depression, manic depression, anxiety reaction, or schizophrenia
   g. Recent amputation
   h. Newly diagnosed diabetes
   i. Multiple sclerosis (MS)
   j. Stroke or paralysis
   k. Need for high-technical home care services
   l. Acquired immunodeficiency syndrome (AIDS)
   m. Family conflict
   n. Inadequate housing conditions (e.g., the need for air conditioning or any other assistance with heating and cooling)
   o. Need for stress management
   p. Patient/caregiver nonparticipation with the plan of care
   q. Need for long-term care placement
   r. Inadequate financial resources
   s. Inadequate caregivers or caregivers who are “overwhelmed” with the patient’s many health care needs

NURSING CONSIDERATIONS

Review Medicare and individual state requirements regarding services and qualifications of a social worker.

Obtain the patient’s approval and physician’s orders for a social service referral.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- Findings
- Actions taken
• Patient’s disposition
• How social or emotional problems are hindering the patient’s condition, treatment, and/or recovery
• Physician notification, if applicable

Update the plan of care.
Domestic Violence

PURPOSE

- To prevent violence in the home
- To promote healthy and caring household relationships

RELATED PROCEDURES

- Child and Dependent Elder Abuse and Neglect
- Safety in the Community

GENERAL INFORMATION

Assessing for family violence or abuse in the home is a major challenge for the home health nurse. The code of silence and veil of secrecy about what occurs behind closed doors in the inner sanctum of the home parallels an invisible shield. Family members have learned to guard these secrets, often without being told to do so.

Domestic violence is rapidly reaching epidemic proportions in the United States. It is cyclic in nature, with psychosocial abuse commonly escalating to physical abuse. It is not uncommon for one perpetrator to victimize more than one individual in the household. Children are often kept under emotional hostage when domestic violence is occurring in the home, and their development can be arrested because of continuous exposure to trauma. In addition, children of battered women are commonly physically abused themselves or seriously neglected at a rate 15 times greater than the national average. Therefore it is important that the home health nurse assess for violence in the home during each visit.

Abuse is always about manipulation, power, and control. It is never about love, protection, or respect. It is essential that the home health nurse assessing for domestic violence never lose sight of the dynamics underlying domestic violence. The prevalence of domestic violence, with its physical and psychological sequelae, necessitates routine screening of every woman for relationship abuse. It should be included in every initial health history.

PROCEDURE

1. Assess for evidence of domestic violence in the home.
2. Be aware that battered women want some caring person to ask about abuse. A nonjudgmental, supportive, and receptive manner will usually encourage women to disclose problems with abuse.
3. Arrange to be alone with the patient when the topic of abuse/domestic violence is discussed (this includes not having children, relatives, or friends present).
4. Find a private place to talk without interruption. (It may be necessary to use a bathroom, front porch, or some other place not routinely used for taking a health history or doing an assessment. The patient must be assured of confidentiality to take the risk to disclose.)
5. Avoid judgmental comments because these may precipitate defensiveness and communication barriers. It is essential not to make comments such as, “Why don’t you just leave him?” or “Maybe you could try harder to not make him angry.” Comments like these convey to the woman that she is responsible for her partner’s abusive behavior when in fact she can only be responsible for her behavior and response to the battering.
6. Consider appropriate ways to frame questions about domestic violence. During the physical assessment, the...
home health nurse may say, “Since domestic violence is so common in women’s lives, I routinely ask all my patients about it. Has your partner ever hit you or physically hurt you?” Another question is “Has your partner ever threatened you with physical harm either by words or actions?” If the nurse is uncomfortable asking direct questions, she or he may say, “Every couple has disagreements or arguments. What are these like in your home? Do these disagreements ever become physical? Are you afraid of your partner? Does your partner ever force you to have sex?”

7. Be alert to the patient’s body language as well as her words when she responds to questions or comments about abuse or domestic violence.

8. Instruct the patient to call the police if she feels threatened by her partner (this intervention may save her life).

9. Instruct the patient to create a safe place in the home where she can barricade herself and in which she has access to a phone (ask her to think about getting a cellular phone).

10. Assist the patient to develop a safety plan.

11. Instruct the patient to not announce her intentions to leave before a safety plan is in place . . . then just leave.

12. Encourage treatment (individual or group) for the household (victim, children, and her partner).

13. Consider leaving the batterer a neutral letter only after the patient has told her partner that she has notified you of the “problems.” Ask whether he would like to speak with you.

14. Teach relaxation and meditation techniques to households who can use them to reduce tensions.

15. Work with the patient on improving her self-esteem. Help her to realize that she is not to blame or responsible for her partner’s behavior.

16. Continue to offer support and be available to the woman and encourage her to take care of herself and her children. Foster and promote the woman’s decision-making.

NURSING CONSIDERATIONS

Without specific education and special training, home health nurses are not expected to provide intervention for domestic violence beyond assessment/identification and referral to social services for follow-up. Keep in mind that your role is to support, stay neutral, and link the household up with the appropriate resources if possible. During this time it is important to offer caring and a willingness to assist the woman in locating help. The nurse’s role is not to be a rescuer but a facilitator.

Violence is addictive for the batterer and the victim. Be aware that identification and acknowledgment of this life-threatening health problem is the first step toward health and recovery for the victim.

Follow local ordinances to report actual or suspected child abuse. The National Domestic Violence hot line is available 24 hours a day, 7 days a week. The number (800) 799-SAFE.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- Suspected or self-reported domestic violence
- Patient referral and follow-up evaluation
- Physician notification, if applicable
- Any other pertinent findings

When documenting injuries, precisely describe the appearance of the injury, noting size, location, color, and any other distinguishing feature. Using quotation marks, document verbatim quotes from the patient when she
explains the cause of her injuries. Complete an incident report, if required.

Update the plan of care, noting on each visit any new injuries or statement regarding abuse.

Author: DR. VIRGINIA DRAKE, R.N., D.N.S.C, C.S., A.N.P.
Do Not Resuscitate Status

PURPOSE

- To ensure that a do not resuscitate (DNR) status is documented in the medical record by the patient’s primary physician
- To respect the wishes of the patient or patient’s legal guardian with regard to advanced directives

GENERAL INFORMATION

“Resuscitation” means a standard cardiopulmonary resuscitation (CPR) procedure with full cardiac, pharmacologic, and respiratory support when cardiopulmonary arrest occurs. “Do not resuscitate” means no resuscitation is to be performed when cardiopulmonary arrest occurs. Be aware that laws governing advance directives and living wills vary from state to state; follow home health agency and state policy accordingly.

PROCEDURE

1. Discussion of the DNR status will be conducted among the patient, the patient’s legal guardian or surrogate, the home health agency, and the patient’s primary physician.
2. The discussion should include the following:
   a. Date and names of participants
   b. Summary of conversation(s)
   c. Patient’s/legal guardian’s and family’s understanding of what DNR is and what DNR means for the patient
   d. A formal decision for DNR status communicated to all parties involved
   e. Guidelines for reassessment of DNR order
1. A written DNR order will be issued by the patient’s primary physician (if the DNR order was originated during the patient’s hospital stay, a new order must be obtained for use by the home health agency).
2. The DNR status will be reviewed if there is a change in the patient’s health status, at the request of the patient/legal guardian, at the discretion of the home health agency, and at the time of recertification for home health services.
3. The patient’s primary physician is to be immediately contacted if the patient/legal guardian requests cancellation of the DNR order.
4. When a written DNR order has been established in the medical record, the home health agency will assist with this process by alerting the local emergency medical services (EMS) and the funeral director, as needed.

NURSING CONSIDERATIONS

If there is a written DNR order in the patient’s medical record and should the patient experience cardiopulmonary arrest, the home health nurse will not perform CPR. The home health nurse will notify the patient’s primary physician, legal guardian, family members, funeral director, and authorities of the patient’s death as required by individual state laws. In the absence of a written DNR order in the patient’s medical record, the home health nurse will perform CPR and call EMS for transport of the patient to a local hospital.

DOCUMENTATION GUIDELINES

DNR status should be documented either on an addendum physician’s order or on HCFA form 485 with
recertification.

Update the plan of care to reflect DNR status.
Fire Safety Assessment

PURPOSE

- To prevent a fire in the patient’s home
- To maximize patient and nurse safety in the event of a fire

RELATED PROCEDURES

- Burns (see Chapter 15)
- Cardiopulmonary Resuscitation (CPR) (see Chapter 15)

PROCEDURE

1. Explain the procedure to the patient/caregiver.
2. Become familiar with the layout of the patient’s home, paying particular attention to the location of the fire extinguishers and the home smoke alarms.
3. Tape or post appropriate emergency phone numbers, such as 911 and the home health agency number, by the telephone.
4. Preplan escape routes with the patient and caregiver in the event of a fire in the home.
5. If a fire should occur during the nursing visit, take the following measures:
   a. Remember that safety for the patient/caregiver and you is the first priority
   b. Close the door to the burning area
   c. Evacuate the patient from immediate danger (e.g., smoke, fumes, fire)
   d. If the fire can be safely extinguished, use a blanket or fire extinguisher to contain it
   e. If it is appropriate, call 911 or the emergency fire alert number

1. Review Burns and CPR in Chapter 15.

NURSING CONSIDERATIONS

Obtain a physician’s order for social services referral if the patient cannot obtain a smoke alarm or if housing is unsafe.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- The procedure, including any patient/caregiver instructions that are given in regard to home safety and fire prevention

Update the plan of care.
Home Environmental (Potential Toxins) Assessment

PURPOSE

• To enhance the home health nurse’s awareness of environmental threats in the home
• To assist the home health nurse and patient/caregiver to identify environmental threats or toxins in the home that may adversely affect the entire household
• To instruct the patient/caregiver on how to promote a healthy home environment

GENERAL INFORMATION

The home environment is not always a safe place. Like a hidden enemy, the home may harbor a number of toxic substances that can pose serious health problems for those who live in it. This is particularly true for the elderly homebound patient or the patient with chronic respiratory disease who may already be in a weakened and debilitated state. Moreover, environmental threats in the home not only adversely affect the health of the “patient” but predispose the entire household to allergies and disease that are costly to society. By virtue of where they work, home health nurses are in a unique position to identify risk and provide information to assist their patients to have toxic-free home environments. Such interventions promote comfort and quality of life and are a key to good health. Moreover, the potential cost savings to both public and private health care organizations resulting from the improved health of their patients is an important consequence of “environmental care.”

PROCEDURE

1. Instruct the patient/caregiver on the procedure. With the patient’s/caregiver’s permission, make an inspection of the home and note any potentially harmful environmental toxins or threats.
2. Assess for the following:
   a. Lead exposure. Lead is a heavy metal that may cause toxic effects related to exposure. Lead may cause acute toxicity (plumbism) resulting in peripheral neuropathy, anemia, coma, and even death. Lead is primarily absorbed through the gastrointestinal tract and lungs. Common sources of lead found in the home include lead-based paint and lead-contaminated house dust. Home health nurses are advised to contact their local public health department for current recommendations regarding lead screening and care.
   b. Volatile organic compounds. Exposure to volatile organic compounds (VOCs) can occur through the digestive, dermal, and inhalation pathways. As VOCs disintegrate or are heated, they often emit toxic gas. This is referred to as “off-gassing.” Such substances may be found in paints (including household and craft paints as well felt-tip pens), dry-cleaning fluids, pressed wood, household cleansers, and gasoline as well as other organic chemical compounds.

The adverse health effects resulting from exposure to VOCs are still under investigation. Neurologic deficits are associated with exposure to VOCs.

VOC contamination of ground water, a primary source of household drinking water in the United States, is an increasingly common problem. Benzene and other organic chemicals including trichloroethylene, 1-dichloroethylene, byproducts of chlorine disinfection, carbon tetrachloride, bromodichloromethane, mercury, and halogenous acids, have been found in household water. Dermal exposure to contaminated waters through household activities such as showering and washing dishes may be of concern. A risk
assessment of groundwater used for household purposes is advised. Discontinuing both ingestion of and
dermal contact with contaminated household water are recommended.

Carbon monoxide poisoning, produced from the combustion of organic compounds, is one of the most
common causes of accidental death in humans. Carbon monoxide is an odorless, tasteless gas that gives
no warning of its presence. Kerosene space heaters without proper chimneys, poorly constructed wood
stoves, and malfunctioning gas or oil furnaces may emit carbon monoxide and other VOCs, such as
nitrous oxide (a known lung toxin). Proper installation and maintenance of such equipment and proper
ventilation in the home are key interventions to prevent poisoning from VOCs.

c. **Radon.** Radon is a radioactive gas present in land formations throughout the United States. It is
colorless, odorless, and releases harmful alpha particles as it decays to short-lived radionuclide
compounds. Lung cancer is the principle disease associated with radon exposure. The Environmental
Protection Agency (EPA) has estimated that between 5000 and 20,000 Americans die each year from
lung cancer caused by indoor radon exposure. Exposure occurs by inhalation. Of note, cigarette smoking
is believed to act synergistically with radon exposure, further increasing the risk for cancer.

Soil is the main source of household radon. Radon gas usually enters the home through the foundation.
This process results from negative pressure in the home, relative to the soil. Negative pressure can be
caused by home ventilation or by warm air rising from the fireplace or other heat sources.

The EPA recommends that all persons in the United States with basements or first-floor or second-floor
living quarters test their home for radon. An inexpensive kit may be purchased for this purpose. The
primary method of controlling radon levels is to increase ventilation within the home.

d. **Fine particulate matter and biological contaminants.** Fine particulate matter and biological
contaminants in the home are attributed to cigarette smoking, cooking food, burning candles, pet hair,
animal dander, asbestos, feces, and debris from dust mites and cockroaches, house dust, mold and
bacterial, and indoor plant pollens. The method of exposure to fine particulate matter primarily occurs
through inhalation. Diseases associated with exposure to fine particulate matter include increased
susceptibility to allergies; asthma; respiratory distress; bronchoalveolar pathologies, including
pulmonary fibrosis and lung cancer.

Tobacco smoke contains a wide range of toxic vapors and particles that when inhaled are injurious to the
smoker (active smoking) and to those around the smoker (passive smoking). The harmful effects of
passive smoking are of concern to families who may be chronically exposed to tobacco smoke. For
example, research indicates that there is an increased risk for cardiovascular and lung diseases among
persons living with spouses who smoke because of the exposure to tobacco smoke in the home. In
addition, exposure to tobacco smoke during childhood may predispose the individual to asthma and
other pulmonary pathologies in both childhood and adulthood. Identification and elimination of all forms
of indoor air pollution are key interventions to reducing household exposure to these toxins.

e. **Pesticides.** Common pesticides and herbicides kept around the home are a source of potentially harmful
toxins. Exposure to pesticides in the home primarily occurs through inhalation.

Exposure to pesticides can cause neurologic deficits, cancer, and death. Proper application of these
agents and correct storage are key interventions to reducing hazardous exposure. *Home Safe Home* by D.
Electric and magnetic fields. Electric and magnetic fields are present whenever electrical conduction occurs. Adverse health effects attributable to exposure to electric and magnetic fields are a matter of controversy. However, research suggests an increased risk of cancer with exposure. In addition, chronic exposure to electric and magnetic fields may impair the immune system and delay wound healing. Avoidance and use of alternative energy sources may be helpful. However, no special mode of prevention has been recommended by the Centers for Disease Control and Prevention.

1. Instruct the patient/caregiver of sources of potential toxins in the home.
2. Instruct the patient/caregiver on ways to reduce toxic substances and environmental threats in the home.

NURSING CONSIDERATIONS

Characteristics of the home may influence the nature of environmental threats. For example, research indicates that higher indoor air pollution (especially concentrations of carbon monoxide, sedimented dust, and heavy metals) exists in homes with coal-burning and open fireplaces than in homes with central heating. In addition, the presence of mold or mildew growth, water damage, basement water, or presence of damp spots in the home is associated with an increased incidence of household asthma and respiratory disease.

The presence of radon in the home is also influenced by geologic and housing characteristics. For example, the presence of a crawl space or a concrete slab associated with a basement has been shown to increase radon concentrations in the home. Houses built on hilly terrain appear more contaminated than those set on even ground. Also, radon levels are lower in houses where central heating (mainly by oil and gas) is used and where during summer months the homes are opened up to outside ventilation.

The age and physical condition of the home can also be important factors in an environmental risk assessment. For example, lead from house paint before 1950 is thought to be the most prominent source of lead poisoning in the household. Since lead dust may be transported from the work environment to the home, the location, age, and physical condition of the home and/or workplace should be taken into consideration when identifying potential sources of lead. In addition, home remodeling projects may result in exposure to lead dust from old painted surfaces.

In terms of home construction, bedrooms located over garages predispose family members to exposure to carbon monoxide and other VOC fumes. Hence, the bedroom is the obvious room in the house for aggressive environmental controls because of the amount of time family members spend in the rooms sleeping.

Personal habits and occupations of the home’s residents can influence the household’s exposure to environmental threats. For example, homes that are not kept clean become a breeding ground for mold, bacterial, dust mites, and cockroaches. Pets in the home, especially those who sleep in a bed with family members, predispose individuals to allergies and respiratory disease.

DOCUMENTATION GUIDELINES

Document the following on the visit report:

- Any identified environmental threats in the patient’s home that affects the health of the patient
- Any patient/caregiver instructions, including adherence to recommendations to improve the home environment
- Physician and/or public health department communications, if applicable
• Other pertinent findings

Update the plan of care.
Home Improvisation of Equipment

PURPOSE

- To use equipment for patient care made from materials or resources found in the home
- To promote self-care in the home

EQUIPMENT

1. Improvised household resources

PROCEDURE

1. Explain the procedure and the use of improvised equipment to the patient/caregiver.
2. Assess the household resources, and assemble the materials
3. Examples of improvised household items include the following:
   a. *Linen protectors*—plastic trash bags
   b. *IV pole*—attach the bag of intravenous (IV) fluids through the hook of a coat hanger; slip one of the triangular ends of the coat hanger onto the coat hook of the bedroom door
   c. *Transfer belt*—use the patient’s belt
   d. *Call bell*—a soda can filled with small stones, or a dinner bell
   e. *Shawl*—a large bath towel folded into a triangle; place it on the patient, and secure it with a safety pin
   f. *Robe*—use a blanket; form the collar by making a fold along the length of the blanket; adjust it on the patient’s shoulder, with the center of the collar at back of the neck; bring the blanket around to the front, and pin it; make the sleeves by centering the width of the blanket and draping it across the wrists; turn back the cuff, and pin the sides of the blanket to make the sleeves and sides of the robe
   g. *Bed table*—use a clean, heavy cardboard carton; remove the bottom; cut out the sides to allow the table to fit over the patient’s lap; cut small holes in the short ends for hand holds to use in lifting the table; draw a picture on top or color with crayons to personalize; the long end of an ironing board adjusted over the patient’s lap may also be used as a bedside table; a book can also be used to make a firm surface
   h. *Backrest*—pillows or card table propped against the head of the bed, tied securely and padded
   i. *Backrest*—pillows or card table propped against the head of the bed, tied securely and padded
   j. *Bed cradle*—make a bed cradle by using the instructions for the bed table in step g; place it over the feet, and bring the covers over the cradle
   k. *Medicine organizer and dispenser*—egg carton, muffin tray, envelopes, check-off chart of daily or weekly medicines made from poster board or a large piece of paper
   l. *Foot towel*—tape a washcloth around the bottom of a yard stick; the patient may use this to dry the feet or between the toes if he or she has difficulty bending over or reaching the feet
   m. *Diabetic tray*—place a glucose meter and supplies in a large bowl or container for easy access to supplies (bath or personal care supplies may also be organized in this manner)
   n. *Sharps container*—use a heavy-duty plastic laundry detergent bottle with a screw-in lid, and attach a label that indicates it as a sharps container; when the bottle is two thirds full, tape on the lid with duct tape. Store out of reach of children (consider bedroom closet shelf).

NURSING CONSIDERATIONS

Home improvised equipment should be inexpensive, safe, easy to use, and practical.
DOCUMENTATION GUIDELINES

Document the following on the visit report:

• Equipment needed and provided
• Any patient/caregiver instructions and response to teaching, including ability to safely use home-improvised equipment
• Other pertinent findings

Update the plan of care.
On-Call Guidelines

PURPOSE

- To provide working guidelines for field staff who provide home health agency services after regular office hours
- To promote safe and effective patient care after regular office hours

GENERAL INFORMATION

True emergencies such as chest pain, respiratory distress, or other life-threatening situations should be handled by instructing the patient/caregiver to call 911 or local emergency medical services as needed.

PROCEDURE

1. The on-call home health nurse will immediately telephone and respond to the patient’s/caregiver’s request for assistance. If the on-call home health nurse determines that a home visit should be made, the visit will be made within 1 hour of receiving the patient’s/caregiver’s request for assistance.

2. Typical reasons for which the on-call home health nurse may be contacted by patient/caregiver after regular office hours include the following:
   a. Complaints of pain associated with intravenous (IV) therapy. If the patient is experiencing pain around the IV site or problems with IV equipment, discontinue and restart peripheral IVs that show signs of infiltration or phlebitis.
   b. Patient/caregiver problems with indwelling Foley catheters. If the patient is complaining of abdominal pain or discomfort associated with the Foley catheter or is unable to urinate, it may be necessary to irrigate or change the catheter.
      Leaking catheters are not an emergency and usually do not require a home visit. If the catheter is leaking or comes out, instruct the patient/caregiver to pad the patient’s bed and make arrangements for a next-day early morning visit by a home health nurse to replace the Foley catheter.
   c. Patient/caregiver problems with a feeding tube. If the feeding tube comes out and the patient requires medication or a feeding through the tube that evening, reinsert the feeding tube.
   d. If the feeding tube comes out but the patient can wait until the next morning, have the home health nurse reinsert the feeding tube at that time.
   e. Patient falls and/or injuries. If the patient complains of minor pain associated with a fall, evaluate and assess the patient. Patients with severe pain or injuries should be instructed to go to the emergency room for medical evaluation.
   f. Lack of supplies. Instruct patients/caregivers that home medical supplies cannot be delivered after regular office hours. If possible, make arrangements to have supplies delivered to the patient the next day.

NURSING CONSIDERATIONS

If home health nurses encounter an unusual or difficult patient situation after regular office hours, they should contact the on-call supervisor for assistance with problem-solving. If the on-call supervisor is unavailable or the on-call home health nurse determines that the on-call supervisor’s suggestions or directions are unsafe or unsatisfactory, the on-call home health will contact administrative staff representing the home health agency’s chain of command until the situation is properly resolved.

Original procedures copyright © 2000 by Mosby, Inc.
Be aware that patient threats of suicide or bizarre patient/caregiver behavior are rare but do occur in home care. Home health nurses should never place themselves in situations in which their personal safety is in jeopardy. In such circumstances, after conferring with on-call supervisory staff, it may be necessary to call EMS or the local police to manage problems with unsafe behavior or domestic violence in the patient’s home.

Obtain physician’s orders for all procedural care.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- Any procedures implemented
- Patient response to therapy
- Patient/caregiver instructions
- On-call supervisor notification (including chain-of-command communication), if applicable
- Physician notification, if applicable
- *Standard Precautions*
- Other pertinent findings

As advised by the home health agency, it may be necessary to complete an incident report.

Update the plan of care.
Post Mortem Care

PURPOSE

- To support the family in between home visits
- To assist the family at the time of death and after

GENERAL INFORMATION

Each municipality has specific regulations for handling death in the home; be aware of and abide by local rules and ordinances.

PROCEDURE

1. Explain the procedure to the caregiver.
2. Identify and follow appropriate lines of communication. Contact the family and all appropriate personnel (e.g., physician, funeral home, home health agency)
3. Consult the family members regarding their wishes for viewing the body or for the religious rituals and customs that they want initiated immediately after the patient’s death. Notify the clergy or religious adviser promptly. Assist the family members as requested.
4. Remove all tubes, dressings, and other devices, unless contraindicated by the physician. (If an autopsy is to be performed or if the death was unexpected, tubes may need to be left securely in place. If you are unsure, ask the physician before removing anything.)
5. Maintain the body in proper alignment as much as possible.
6. Close the eyes by gently pulling the eyelashes downward. Cover the patient.
7. Allow the family members who are present to have the time they desire and need alone with the deceased loved one.
8. Prepare the body for removal from the home as requested by the family in the following manner:
   a. Remove all jewelry and personal items; give these to family members
   b. Place drainage pads where they are needed (e.g., under the perineum, any open or oozing wound)
   c. Wrap the body with a clean sheet if possible (the funeral home or ambulance will most likely provide this).
1. After the body has been removed from the home, you may wish to remove equipment and supplies or you may wish to return the next day to do so, at the family’s convenience. Immediately dispose of all controlled drugs in the presence of a witness and according to state law. Encourage the family to dispose of the deceased patient’s medications.
2. Comfort the family. Plan for a follow-up visit.
3. Clean and replace the equipment. Discard disposable items according to Standard Precautions.

NURSING CONSIDERATIONS

At the time of the patient’s death, family members may need support, and they should become the focus of care. Most families appreciate this support.

Touching the person who has just died is encouraged and confirms the reality of the situation.

The nurse should use the word **died** rather than an euphemism. The nurse should be kind and caring but not overly sentimental or emotional; however, the home health nurse should not be embarrassed if she or he shares a
few tears with the family.

As part of the bereavement follow-up, the home health agency sends a letter of condolence. A bereavement visit and support services are required when hospice services are provided.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The exact time of death
- The time the physician and other personnel were notified and responded (list all)
- The disposal of belongings to the family or guardian
- The disposal of controlled drugs
- *Standard Precautions*
- Other pertinent findings

Update the plan of care and complete the discharge summary.
Safety in the Community

PURPOSE

• To establish guidelines that maximize personal safety when working in the community and home settings

RELATED PROCEDURES

• Domestic Violence

PROCEDURE

1. Take the following precautions before visits:

   a. Appearance

      (1) Wear a name badge and uniform that clearly identify you as a representative of the home health agency.
      (2) Call patients in advance and alert them to the approximate time of your visit. Confirm directions to their residence.
      (3) Request that unruly or overfriendly pets be properly secured before making visits. Back away, never run from a dog. Walk slowly around farm animals to keep from frightening them.
      (4) Keep change for a phone call in your shoe or pocket. Do not carry a purse. Before leaving the agency, lock your purse in the trunk of the car or cover your purse with a blanket if it is visible.

   a. Precautions when traveling

      Car

      (1) Keep your car in good working condition with plenty of gas. Obtain an automobile club membership for possible car problems.
      (2) Consider use of a personal cellular phone to maximize communication.
      (3) Store a blanket in the car in the winter, and keep a thermos of cool water in the summer. Keep a snack in the glove compartment.
      (4) If your car fails, turn on emergency flashers, put a “CALL POLICE” sign in the window, and wait for the police. Do not accept rides from strangers.
      (5) Keep your car locked when parked or driving. Keep windows rolled up if possible.
      (6) Park in full view of the patient’s residence (avoid parking in alleys or deserted side streets).

      On Foot

      (1) Have your nursing bag/equipment ready when exiting the car. Keep one arm free.
      (2) Walk in a professional, businesslike manner directly to the patient’s residence.
      (3) When passing a group of strangers, cross to the other side of the street, as appropriate.
      (4) When leaving the patient’s residence, carry car keys in your hand (pointed ends of keys between fingers may make an effective weapon).
      (5) Avoid subways or routes frequented by gangs.
      (6) Use common walkways in buildings; avoid isolated stairs or dark (unlit) areas.

   a. Precautions during visits
In the home environment
(1) Always knock on the door before entering a patient’s home.
(2) If relatives or neighbors become a safety problem, consider the following:
   (a) Discuss the problem with the patient, and schedule a visit time when the relative is gone
       or the neighborhood is quiet.
   (b) Make joint visits with another home health nurse or arrange for escort service.
   (c) Close the case when the patient, physician, and you are unable to resolve the problem.
(1) Request escort services, as appropriate, for night visits.

Defense techniques
(1) Run
(2) Scream, yell “fire” or “stranger”
(3) Kick—shins, instep, or groin
(4) Bite, scratch
(5) Use a whistle attached to your key ring, chemical sprays, or nursing bag for defense

NURSING CONSIDERATIONS
Visit neighborhoods with questionable safety or gang-/drug-related problems in the morning. Some areas may
have to be declared unsafe and, therefore, not serviced by your home health agency.

Regard uniforms and agency identification badges as important parts of identification to the public and as aids
to your personal safety.

In the event of robbery, never resist to keeping your nursing bag. It can be easily replaced.

When on duty, notify the home health agency clinical service manager for further instructions if there is any car
trouble, auto accident, or incident in which personal safety is in question.

Never go into or stay in a home if you feel that your personal safety is in question. Always respect and listen to
your “gut feelings.”

DOCUMENTATION GUIDELINES
Complete an incident report to document if your personal safety has been potentially or actually threatened
while you were on duty.

Animal or human bites need to be documented and turned into the infection control manager. Review local
ordinances regarding animal bites.

Consult with the home health agency clinical supervisor and administration regarding notification of violation
or threats to personal safety to appropriate public officials.
Socioenvironmental Assessment

PURPOSE

- To obtain a data base to establish the plan of care
- To identify potential patient problems and needs regarding resources, housing, finances, and support systems on the patient care plan

RELATED PROCEDURES

- Clinical Documentation Guidelines for Medicare Reimbursement
- Clinical Indicators for a Social Service Referral

GENERAL INFORMATION

The socioenvironmental assessment should be performed when the patient is admitted to the home health agency. Data are both subjective and objective and are usually obtained from the patient. However, information may be supplemented from a secondary source, such as the caregiver or multidisciplinary team or from the referring institution’s records.

PROCEDURE

1. Explain the purpose of the interview to the patient/caregiver.
2. Conduct the interview to include the following:

   **Personal Data**

   Name, date of birth, age, Medicare or Medicaid number, nationality, religion, education, occupation, language barrier or cultural considerations, wishes regarding advanced directives (durable power of attorney for health care or living will), interests, hobbies, and socialization

   **Household Data**

   Address and directions to the patient’s residence, telephone number, family members’ names; inquire about conflict, substance abuse, weapons or pets, and farm animals

   **Support Systems**

   Available caregivers (relationship to patient); caregiver’s telephone number; local pharmacy; primary physician; physician’s address and telephone number; family members or caregivers who are able to call the home health agency if problems arise; and church or other support groups

   **Home**

   Size, condition, cleanliness, pests, water, heating, air-conditioning, smoke alarm, safety hazards, and accessibility from street or road
Neighborhood

Friendly or disruptive neighbors, bars, liquor stores, parks, gangs, crack houses, adequate street lighting, and urban versus rural setting

Food

How many meals are eaten each day, food preferences, special diet or food or fluid restrictions, Meals on Wheels, working refrigerator and stove, and an ability to prepare and obtain food

Economic Data

Medical bills; ability to purchase medicine, heating, electric, gas, food, telephone, and housing

NURSING CONSIDERATIONS

Particular attention should be paid to the availability of support systems and to the extent that resources may be limited for health care needs. Any problematic areas should be reported to the physician and reflected in the patient care plan. A referral to social services may be required.

See the Patient Education Guidelines box, Safety in the Home.

DOCUMENTATION GUIDELINES

Use the data base to implement the plan of care and to develop the patient care plan.

Identified problems on the patient care plan should be a focus on the visit report.

Update the plan of care to reflect the current patient status.
Telephone Visit

PURPOSE

• To identify circumstances in which to use telephone communication as a means to make a home visit and improve outcomes of care for the homebound patient
• To organize and schedule caseload visits
• To provide documentation guidelines for telephone communication with patients/caregivers
• To promote self-care in the home

GENERAL INFORMATION

Home health nurses can use telephone visits to identify needs and provide care to patients/caregivers. Implementing effective communication and advanced assessment skills, the nurse can use the telephone as a means to supplement physical visits and decrease costs of unnecessary home health services.

PROCEDURES

1. Consider using the telephone to communicate and/or assess the following:
   a. To communicate scheduling issues (e.g., letting the patient/caregiver know the approximate time and date of the home visit or notifying them of a change in the visit schedule)
   b. To call the patient/caregiver on the day of the scheduled visit before going to the patient’s home and verifying that the patient is at home and will be available for the visit
   c. To assess whether the patient/caregiver has had any medication changes or concerns about his or her medications
   d. To assess whether the patient has any problems or needs with home medical equipment
   e. To assess whether the patient has any home medical supply needs
   f. To assess whether the patient has any clinical concerns or needs, including the following:
      (1) Patients with respiratory problems should be assessed for potential symptoms of respiratory infection (e.g., new cough, changes in color or amount of mucus, difficulty in breathing)
      (2) Patients with cardiac problems should be assessed for potential symptoms of chest pain; hypotension, which frequently is a side effect of blood pressure medication; edema (ask the patient whether he or she is experiencing chest pain, is dizzy, or how much he or she weighed that day)
      (3) Patients with diabetes should be assessed for self-monitoring of home blood glucose (ask the patient what his or her blood glucose level was that morning, and follow-up as needed)
      (4) Elderly patients should be assessed for falls or home safety needs
      (5) Patients with problems that require high-tech care (e.g., ventilator dependent patients) should be assessed for equipment needs or concerns about operation/maintenance of equipment in the home
   a. To teach patients about changes in treatment or medications or health care needs
   b. To provide telephone counseling interventions and support of patient caregiver(s) and family members
   c. To identify patient/caregiver satisfaction with case coordination, multidisciplinary care, and home health agency services

NURSING CONSIDERATIONS

Communicate patient physical needs to the physician as appropriate. Obtain physician’s orders to make a same-day or next-day visit if the patient has changes in medications, exacerbation of illness, or an unsafe home
situation. Advise the patient who complains of unstable physical status (e.g., unrelieved chest pain, new onset shortness of breath) to go to the emergency room for evaluation. Communicate physician’s orders to the patient or ensure that the physician’s office will call the patient in response to concerns or needs. Be aware that telephone physician’s orders must be verified with written orders in the medical record; make arrangements to obtain written physician’s orders for care.

Communicate patient medical supply and equipment needs to the appropriate person.

Be aware that cellular phones do not afford privacy; cellular phone transmission can be intercepted by anyone. Conduct cellular phone conversations in a manner that best protects the patient’s dignity and rights.

Keep in mind that a phone visit should be used to supplement and not replace all physical visits. The telephone offers a means to extend the coverage of home health services and foster working relationships between the nurse and patient to prevent unnecessary and costly hospitalizations. Be aware that phone visits may not work in every circumstance (e.g., with patients who are hard of hearing or who do not have a working phone in the home). Be aware that phone visits are a beginning step toward on-line technologies for telecaring.

**DOCUMENTATION GUIDELINES**

Document the following on the visit report:

- The date and time of the phone visit
- The person(s) with whom the home health nurse spoke
- Patient/caregiver verbalizations of concerns or health care needs
- Any health teaching and patient/caregiver response
- Other pertinent findings or primary elements of the phone conversation

Document any communication with the physician or physician’s office and verbal response to the home health nurse’s phone call. Document any communication regarding the patient’s health care needs with the multidisciplinary team, as needed. Document any communication with home medical supply or equipment vendors regarding the patient’s request for supplies or concerns about equipment. Problem-solve any legal/ethical issues that may arise from the telephone visit with the home health agency administrative staff, and document as needed.

Update the plan of care.
Patient/Caregiver Guidelines to Promote a Toxin-Free Home Environment

Reducing Exposure to Particles and Biological Contaminants

- Install and use exhaust fans that are vented to the outdoors in kitchens and bathrooms and vent clothes dryers outdoors.
- Ventilate the attic and crawl spaces to prevent moisture build-up.
- Thoroughly clean and dry water-damaged carpets and building materials (within 24 hours if possible) or consider removal and replacement with tile or hardwood flooring.
- Keep the house clean; vacuum and dust weekly. If a vacuum is not available, dust and sweep daily. House dust mites, pollens, animal dander, and other allergy-causing agents can be reduced, although not eliminated, through regular cleaning.
- Don’t smoke, especially in the presence of children and the elderly.
- If you must have pets in the home, don’t sleep with them.
- Consider using miniblinds in the bedroom instead of drapes.
- Heat dry pillows on “high” 3 times a week to reduce growth of bacteria and molds.
- Have well water tested for biological contaminants.

Reducing Exposure to Volatile Organic Compounds

- Take precautions when operating fuel-burning unvented space heaters.
- Install exhaust fans over gas-cooking stoves and ranges; keep burners properly adjusted.
- Keep woodstove emissions to a minimum; choose properly sized new stoves that are certified as meeting EPA emission standards.
- Do not idle the car in the garage.
- Have central-air handling systems, including furnaces, flues, and chimneys inspected and cleaned annually (replace air filters annually); open and ventilate the home the first day the furnace or air conditioner is turned on.
- To reduce exposure to household chemicals, follow label instructions carefully.
- Throw away partially full containers of old or unneeded chemicals safely. Buy limited quantities of paints, paint strippers, kerosene for space heaters, or gasoline for lawn mowers; buy only as much as needed at present. Keep exposure to methylene chloride and benzene to a minimum; both are used in household products and are known carcinogens. Keep exposure to perchlorethylene “perc” emissions from newly dry-cleaned materials to a minimum because this chemical has been shown to cause cancer in animals. Avoid using pressed wood products in the home because they emit formaldehyde—a known carcinogenic agent.
- Run water through the faucet a few minutes before using it.
- Have well water tested for the presence of toxic chemicals.

Reducing Exposure to Radon

- Test your home for radon.
- Make repairs to your home if the radon level is 4 picocurie per liter or higher; contact your state radon office.
Reducing Exposure to Pesticides

- Use pesticides sparingly, according to manufacturer’s instructions; consider natural and nonchemical methods of pest control when possible.
- Store in sealed glass jars, preferably in a shed away from the home.
- Wear a mask and gloves when spraying pesticides.
- Make sure to provide plenty of fresh air when using these products; ventilate the area well after pesticide use.
- Mix or dilute pesticides outdoors.
- Dispose of pesticides according to the directions on the label or public health directives.
- Take pets or plants outdoors when applying pesticides indoors.
- Store clothes with moth repellents in separately ventilated areas, if possible.
- Keep indoor spaces clean, dry, and well-ventilated to avoid pest and odor problems.

Reducing Exposure to Lead

- Leave lead-based paint undisturbed if it is in good condition; do not sand or burn off paint that may contain lead.
- Do not bring lead dust into the home. If your work or hobby involves lead, change clothes and use doormats before entering your home.
- Vacuum the inside of your car weekly.
- Run cool water through a faucet for a few minutes before using it for eating or cooking purposes; do not use hot faucet water for cooking purposes.
- Eat a balanced diet, rich in calcium and iron.

Telephone Numbers for Federal Information Services

- U.S. Environmental Protection Agency (EPA), Washington, DC (202) 260-7751
- Indoor Air Quality Information Clearing House, Washington, DC (800) 438-4318
- National Radon Hotline, Washington, DC (800) SOS-RADON
- National Lead Information Center, Washington, DC (800) LEAD-FYI

Comments: ______________________________________________________
_______________________________________________________________
_______________________________________________________________
_______________________________________________________________

Nurse’s signature and title: ______________________________________

Patient Education Guidelines

Safety in the Home

Be aware of potential hazards in your home, and take the following actions to protect your family and yourself:

1. For natural disasters, do the following:
   - Leave your home if uncontrolled flooding or fire occurs. (Get out of smoke-filled rooms as quickly as possible.)
   - Move yourself and your family to the safest area in the home in the event of a tornado or hurricane. (Lie down in as low an area as possible; basements are safest.)
   - Remember that safety of yourself and your family is the first consideration when taking actions during a disaster.
   - Call the American Red Cross for help with food and for temporary housing.

2. Put a smoke alarm and fire extinguisher in your home. Check them periodically to make sure that they are in good working order. Have an emergency exit plan in case of a fire.

3. Tape or post local emergency numbers, including the home health agency and your physician’s office number, by your telephone.

4. Take the following precautions to avoid falls (falls are the leading cause of death from injury in persons older than 65 years):
   - Remove scatter rugs or objects that may cause tripping and falling.
   - If you have a walker or a cane for ambulation, use it instead of relying on furniture for support and balance.
   - Highlight stairs with white tape if you have difficulty with vision.
   - Place a restraining gate at the top or bottom of stairs to prevent accidental falls.
   - Place a rubber bath mat in the tub or shower to prevent slipping.
   - Wear well-fitting shoes with nonskid soles, avoid long cumbersome clothing, and wear glasses as needed.
   - Keep an eye on your pets to avoid tripping over them.
   - Secure oxygen therapy tubing or Foley catheter tubing to decrease risk of tripping over the tubing.

5. Check the water temperatures for extreme heat before taking a bath, soaking your feet, or washing dishes.

6. Keep walkways free of toys, barriers, cords, or clutter that might cause a fall.

7. Set up rest stops, using chairs in your home where needed.

8. Make sure your stairs, walkways, and bathroom have good lighting.

9. Make sure that all outlets and switches have cover plates so that no wiring is exposed.

10. Make sure gas heaters, kerosene heaters, chimneys, and wood-burning equipment are properly installed.

11. Unplug electrical appliances when not in use (keep electrical appliances away from bath water).

12. Store medications in their original containers.

13. Call the home health agency and physician to report any problems with your medication. Always take your prescribed amount of medicine at the correct time. Notify your nurse or home health agency clinical
supervisor if you are unable to obtain your medicines.

14. Call your nurse or the home health agency clinical supervisor and report any problems with durable medical equipment or problems with obtaining medical supplies.

A limited number of this guideline may be made for free distribution to patients and families. All other rights are reserved.