TELEHEALTH

EXIT 1A

EXIT ONLY
Leveraging Telehealth for Critical Access Hospital Success

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Heartland Telehealth Resource Center (HTRC)
Telehealth Resource Centers (TRCs)

- Federally-designated thru HRSA/ORHP
- TRC Grant Program established in 2006
- Extensive telehealth program implementation experience
- 11 Regional centers, plus
- CTeL - Legal and Regulatory Assistance
- TTAC - Technology Assistance
Regional Telehealth Resource Centers

- **California Telemedicine & eHealth Center (CTEC)**
  CALIFORNIA HEALTH FOUNDATION AND TRUST, SACRAMENTO, CA

- **Great Plains Telehealth Resource & Assistance Center (GPTRAC)**
  UNIVERSITY OF MINNESOTA, MINNEAPOLIS, MN

- **Heartland Telehealth Resource Center (HTRC)**
  UNIVERSITY OF KANSAS / UNIVERSITY OF MISSOURI / UNIVERSITY OF OKLAHOMA
  Primary Service Region: Kansas, Missouri and Oklahoma

- **Northwest Regional Telehealth Resource Center**
  SAINT VINCENT HEALTHCARE FOUNDATION, BILLINGS, MT

- **Pacific Basin Telehealth Center**
  UNIVERSITY OF HAWAII, HONOLULU, HI

- **South Central Telehealth Resource Center**
  UNIVERSITY OF ARKANSAS, LITTLE ROCK, AR

- **Southeastern Telehealth Resource Center**
  GEORGIA PARTNERSHIP FOR TELEHEALTH, WAYCROSS, GA

- **Southwest Telehealth Resource Center**
  UNIVERSITY OF ARIZONA, TUCSON

**New TRCs Coming Soon**
HTRC Service Area

Kansas - Missouri - Oklahoma
Telehealth
Or
Telemedicine?
Technology Terms
(as defined by CMS)

Telehealth - the use of telecommunications and information technology to provide access to health assessment, diagnosis, intervention, consultation, supervision and information across distance.*
*Telehealth (or Telehealth Services) includes such technologies as telephones, facsimile machines, electronic mail systems, and remote patient monitoring devices which are used to collect and transmit patient data for monitoring and interpretation.
Telemedicine - the use of medical information exchanged from one site to another via electronic communications* to improve a patient’s health.
*Electronic communication* means the use of interactive telecommunications equipment that includes, at a minimum, audio and video equipment permitting two-way, real-time interactive communication between the patient, and the physician or practitioner at the distant site.
Two Common Forms of Telemedicine

1. Asynchronous or “Store-and-forward”

Example: Radiology

- Tech takes X-ray image, CAT scan or MRI of patient
  - With digital equipment
  - Image can be scanned into digital
- Image transmitted electronically to radiologist at different location
- Radiologist reads image and responds to PCP/patient
Two Common Forms of Telemedicine

2. **Interactive** or “Real Time”
   - Uses interactive tele-video (ITV)
     - Face-to-face video conferencing

Example: Clinical Consultation
   - Patient and provider schedule an appointment
   - Patient goes to clinic, hospital, CAH, etc., and is taken to exam room
   - An aide remains with patient in exam room
     - Operates equipment, assists provider
   - Provider appears on video monitor
Technology Terms  
(as defined by CMS)

**Originating or “Spoke” Site** means the location of the patient at the time the service being furnished via a telecommunications system occurs.

**Telepresenter** - person who may be on-site to facilitate the delivery of this service.
Distant or “Hub” Site means the site at which the physician or other licensed practitioner delivering the service is located at the time the service is provided via telecommunications system.
History
Telehealth – Feasible for many years.

- Telemedicine – appeared in the 1950s
- First documented consult – 1959
- Brief projects in 1970s
  - In the American Journal of Psychiatry, Dr. Thomas F. Dwyer, a Massachusetts psychiatrist, said that he has practiced telepsychiatry via video teleconferencing, for five years.
    - Its “adoption by psychiatrists and patients,” he predicted, “will proceed quickly . . . .” (August, 1973)
Telemedicine in U.S.

- **Late 1980s** - Current telemedicine movement began
  - Initial growth came from at least one telemedicine program per state
  - Many based in university medical centers
  - Combination of grant and state funding; few are self-sustaining
  - Research and development focused
Telemedicine in U.S.

• **Late 1990s** - Federal support for telehealth began
  
  • Key legislation:
    - **The Balanced Budget Act of 1997 (BBA)**
      - Mandated Medicare reimburse telehealth care
      - Funded telehealth demonstration projects
      - Limited in scope
        - Examples:
          » Provider fee-sharing
          » Patient had to be present
          » No originating site reimbursement
Telemedicine in U.S.

- Consolidated Appropriations Act of 2001 (CCA)
  - Telehealth policies (H.R. 5661, Section 223) - 
    Benefits Improvement and Protection Act of 2000 (BIPA)
      - Objective: to expand rural access
      - Established many of today’s guidelines

- Medicare Improvement to Patients and Providers Act of 2008 (MIPPA)
  - Included SNF
  - Added more originating sites
Telemedicine in U.S.

- American Recovery and Reinvestment Act of 2009 (ARRA)
  - significant investments in health technology
    - Broadband
    - Health IT
    - Telehealth and e-health technologies
Telemedicine in U.S.

- Dept. of Agriculture – Rural Development, Farm Bill Loan Program, Broadband Program

- HRSA – Rural Health Grant Programs

- HRSA – Rural Hospital Flexibility Grant Program
  - Check with your state’s program
Telemedicine in U.S.

- **USAC** – Rural Health Care Support
  - Will pay for % of Internet access cost

- **Dept. of Commerce** – National Telecomm. and Information Admin.
  - Expanding broadband Internet access
  - [http://www.ntia.doc.gov/category/grants](http://www.ntia.doc.gov/category/grants)
HTRC
Service Area
Kansas/Missouri/Oklahoma
Kansas Telemedicine Experience

• First implemented in 1991 with one hospital
  - now over 2,000 clinical consults/yr
• Primarily facilitated by ITV
• Expanded into hospitals, schools, nursing homes, and clinics
• Since 1991, has conducted approx. 24,000 clinical visits across 30 specialties
  - Including: Cardiology, mental health, oncology, pediatrics
SERVING KANSAS
KU CENTER FOR TELEMEDICINE & TELEHEALTH SERVICE LOCATIONS
July 1, 2009 - June 30, 2010

- Location of Clinical Service (43)
  Total number of clinical consultations: 1,602
  Total number of patients: 5,073

- Location of Administration/Other Service (15)
  Total number of events: 99
  Total number of participants: 607

- Location of Educational Service (19)
  Total number of events: 55
  Total number of participants: 564
Missouri Telemedicine Network (MTN)

• Began in 1994 with 10 sites and MU Health Services
• One of the first public-private partnerships
• Maintains own high-speed intrastate network
• Today
  - Over 200 endpoints
  - Continued public-private partnership
  - Nearly 7,000 encounters
  - 31 medical specialty services
MTN County Coverage

- 225 Sites
- 58 Counties
Missouri Telemedicine Network (MTN)

- Participants contract with MTN
- Contracted services include:
  - Procurement of equipment and lines
  - Help with clinical, tech, operational, legal/regulatory aspects of telehealth
  - Receive clinical services
  - Support in providing services to own clinics or to others
Oklahoma Telemedicine Experience

• Began in 1993
  - 45 rural hospitals
  - 15 regional hospitals
  - OUHSC
• Pioneered Store-and-Forward telemedicine
• Collaborative networks and individual providers
• State provides funding & tech support
• Most common services: Radiology, Cardiology, Mental Health, Stroke
Intended Benefits of Telemedicine

1. Improve health care access
2. Reduce patient travel time and cost
3. Reduce provider travel time/cost to outreach sites
4. Retain patients locally in their home communities
5. Addresses physician shortage
Past Challenges for Telemedicine

1. Limited adoption by providers
   - Limited Federal/State reimbursement
   - Private reimbursement not standardized
   - Seemingly not integrated in clinic flow
   - Technology concerns
     • Initial investment of equipment
     • Ongoing support
     • Lack of standardization
     • Inconsistent broadband internet service

2. Lack of financial sustainability models
Technology
Telemedicine in Early 1990’s
Telemedicine Today
Telemedicine on Smaller Scale
Telehealth Peripherals

Digital Stethoscopes

http://www.telehealthtac.org/toolkits/patient-exam-cameras-technology-overview#Patient_Exam_Cameras
Technology Specific to Health Care

- Peripheral devices
  - Otoscope
  - Stethoscope
  - Dermascope
  - Ophthalmoscope
  - General exam camera
  - Handheld retina camera
Technical Advances

- Smaller, less expensive equipment
- From analog to digital
- From telephone lines to internet lines
- Wireless
- Encryption
- Integration
Applications
Group Sessions and Educational Events
Specialty Consultation via ITV
Telestroke / Physician-to-Physician
School-Based Programs
Electronic Otoscope for Pediatrics
Intra-Oral Scope (Tele-Sleep Study)
What Tele-Sleep Presenter Sees
Oncology Care (Hospital Exam Room)
Home Telehealth / Home Monitoring

• Newest, most active segment
• Preventive care
• Popular with aging population in U.S.
• Designed to delay Nursing Facility placement
  – Could reduce Medicaid costs for states
• Remote management of chronic illness
• Particularly useful for post-acute care management
Home Telehealth / Home Monitoring

• Can include both wired and wireless monitoring devices

• Personal health management – expected to be linked to personal devices
  – iPads
  – Tablets
  – Smartphones
Disease Management - Diabetes
Disease Management - Diabetes
Home Monitoring Devices
Home Monitoring Process

Measuring Device

“Home” Unit

Central Data Collection (Web-based)
Home Dialysis
Latest Developments
Telehealth Peripherals

**Total Exam Camera**

- Features
  - Digital
  - Records image
  - Has own lighting
  - HD

- Advantages
  - Same Features
  - Less expensive
  - Easily Available

**Digital Camera/Camcorders**

VS

http://www.telehealthtac.org/toolkits/patient-exam-cameras-technology-overview#Patient_Exam_Cameras
Technical Advances

• Next generation:
Robotics
Telemedicine Evaluation
Feasibility, Satisfaction

• Interactive Tele-Video (ITV) model has been tested across numerous specialties and services
• Patient satisfaction historically very high, not studied much anymore
• Provider satisfaction mixed depending on context
CAH Cost-benefit

• “Hard Dollar” Benefits
  - Can depend on context/purpose
  - Examples:
    • Patient
      - Reduced travel costs
      - Reduced time off from job
    • Provider - PCP
      • Educational
    • Institutional costs
      • Reduced staffing costs
      • Greater efficiency for radiology
CAH Cost-benefit

- Long-term revenue generation(?)
  - Enables new staffing models
    - Specialists do not need to be physically located at hospital
    - Continue patient services while staff physicians on vacation
    - Reduce recruiting costs
    - Serve greater number of patients
    - Staffing for other facilities
  - Facility fees for originating site
  - Increased use of Lab, X-Ray/MRI or Pharmacy
CAH Cost-benefit

• Community economics
  - Retaining patients locally

  • Direct
    - Patient satisfaction = patient retention
    - Efficient use of employees = Full value of human capital investment
    - Increased use of local lab, pharmacy

  • Indirect
    - Community activity level increases
      » housing, food, shopping
Reimbursement
Good News!
There Is Reimbursement

• Medicare (2001)
• Medicaid varies by state, but generally followed Medicare guidelines:
  – Missouri (2008)
  – Oklahoma (1998)
Medicare Benefit Policy - Telehealth Guidelines

• Telecommunications system may substitute for an in-person encounter for:
  - Consultations (since Oct 2001)
  - Outpatient visits
  - Individual psychotherapy
  - Pharmacologic management
  - Psych diagnostic interview exam (March 2003)
  - End stage renal disease (Jan 2005)
  - Individual med nutrition therapy (Jan 2006)
  - Neurobehavioral status exam (Jan 2008)
Medicare Benefit Policy - Telehealth Guidelines

• Telecommunications system may (cont’d):
  - Follow-up inpatient consultations (Jan ‘09)
  - Initial inpatient consultations (Jan 2010)
  - Individual (Jan 2010) and Group health and behavior assessment & intervention (Jan 2011)
  - Group medical nutrition therapy (Jan 2011)
  - Individual and group KDE (Jan 2011)
  - Individual and group DSMT (Jan 2011)

Source: CMS, Medicare Benefit Policy Manual, Chapter 15 - Covered Medical and Other Health Services, Sec. 270.2 – List of Medicare Telehealth Services
Medicare Benefit Policy - Telehealth Guidelines

• Patient location must be:
  - Physician/Practitioner’s office
  - Hospital or CAH
  - RHC or FQHC
  - Skilled nursing facilities
  - In-hospital/CAH dialysis centers
  - Community mental health center
  - HPSA county outside metro area
Medicare Benefit Policy - Telehealth Guidelines

• Physician/Provider location (distant site)
  – No limitation on location

• Who may receive payment
  – Physician, P.A., Nurse practitioner, Nurse midwife, clinical nurse specialist, Clinical Psychologist, Clinical social worker, Registered dietitian / nutrition professional

• Telepresenters
  – Medical professional not required
Medicare Benefit Policy - Telehealth Guidelines

• Interactive audio and video telecommunication must be used in real-time communication
  – Patient must be present and participating
• Payment is equal to the current fee schedule amount
• Telehealth Facility Fee (for originating site)
Medicare Telehealth Services & CPT Codes

- Consultations (99241-99255)
- Office or Outpatient Visits (99201-99215)
- Psych therapy and Dx interview (90804-90809; 90801)
- Pharmacy management (90862)
- End stage renal (G0308, G0309, G0311, G0312, G0314, G0315, G0317, G0318)
- Individual medical nutrition therapy (G0270, 97802, 97803)
- Neurobehavioral status exam (96116)
- Originating site fee (Q3014)
Medicare Telehealth Services & CPT Codes
(Effective January 3, 2011)

- Kidney Disease Education (G0420, G0421)
- Diabetes Self-Mgmt Training (G0108, G0109)
- Group MNT and HBAI (97804, 96153, 96154)
- Subsequent hosp care services – limit one visit every 3 days (99231, 99232, 00233)
- Subsequent NF care services – limit one visit every 30 days (99307 – 99310)
Telehealth Laws and Regulations
3 Main Topics

• Credentialing and Privileging
  - 2011 Changes
• Licensure
  - What is required
• HIPAA
  - What does/does not apply
Credentialing & Privileging

• Where patient is located is place of service
• Providers need to be credentialed / privileged/ licensed at each place of service
  - Effective July 2011 – hospital’s governing body still responsible for all privileging decisions, but can accept credentials from distant-site Medicare hospital for telemedicine providers. CMS
Insurance & Licensure

• Standard malpractice insurance covers telehealth

• Very low risk service to date
  – 3-4 known cases (2 were online prescribing)
  – 2 New Mexico cases bring up telehealth use – If available and not used, there may be liability

• No national physician license
  – A few states require telemedicine license
    • Supplemental licensing
HIPAA Issues

• Security Rule does NOT apply to telemedicine events
  – Not considered electronic Protected Health Information by CMS
  • Not pre-recorded or stored like PHI ("Not in electronic form before transmission... ")
HIPAA Issues

• “The standards and specifications of the Security Rule are specific to electronic protected health information (e-PHI). . . E-PHI does not include paper-to-paper faxes or video teleconferencing or messages left on voice mail, because the information being exchanged did not exist in electronic form before the transmission. In contrast, the requirements of the Privacy Rule apply to all forms of PHI, including written and oral.”

US Dept. of Health & Human Services
HIPAA Issues

• Does not require encryption (but most encrypt)
• Privacy rule DOES apply
  • Telemedicine room should be private just like any other clinic room
  • Use private connections when possible
Clinical Models

• Level and frequency of telemedicine intervention determined by comfort of provider and specialty needs
  - **TelePsychiatry** – completely by telemedicine, no in-person
  - **TeleOncology** – hybrid model of some in-person (often 1st appt.) and some telemedicine follow-up
  - **TeleRehabMedicine** – more in-person, less telemedicine
CAH Opportunities: Meeting Goals through Telehealth
What are Your CAH Objectives/Needs?

• Increasing access to care
  • Meet currently unavailable specialty requests
  • ED after-hours coverage

• Improving quality/outcomes
  • Additional certification training for staff
  • Improve patient outcomes
Collaborative Networks

1. Hospital w/ Other Businesses
   - Members of Current Networks
   - Supporting Hospital
   - Local/regional clinics
   - Health Departments

2. Community Networks
   - Hospital w/ Others in Rural Community
#1 - Collaborative Networks

The traditional strengths of hospital networks

- Increased purchasing power
- Billing administration
- Cost-sharing
- Risk-sharing
- Data-sharing
Network Opportunities for CAHs

• Look for tie-in/networking opportunities among:
  • Members of Current Networks
  • Supporting Hospital
  • Local/regional clinics
  • Health Departments
#2 - Hospital w/ Community Collaborative Networks
Significant Achievements by Rural Hospital/Community Networks

• 31% - Organizational Development
• 18% - Improving member effectiveness
• 16% - Improving access to care
• 15% - Survival/stability
• 10% - Administrative development
• 5% - Clinical development
• 5% - Improving community health

Source: 2009 Survey
#2 - Hospital w/ Community Collaborative Networks

How do I start?
What can I accomplish?
Basic Telehealth Start

Example:

Southwest Concho Valley (TX) Telehealth Network

- Kimble County Hospital, a fifteen bed CAH in Junction, Texas
  - Serving nearly 9,000 people
  - 4,300 square mile service area
  - 3 counties

Tschirch, P., Whitson, L., Creating a Model for Rural Telehealth Network Development, Texas Case Study
Rural Texas Health Care

Junction, TX

Kimble Hospital

Tschirch, P., Whitson, L., Creating a Model for Rural Telehealth Network Development, Texas Case Study
Network Partners

- Junction School District
  - 738 students; 1 county

- University of Texas Medical Branch Telehealth Center, Galveston, TX
**Step One: Establish Relationships**

1. Initial Contact by Kimble Hospital

2. Meetings in Galveston and Junction to discuss organizational goals, needs, potential fit as partners
   - Junction School district
   - UT Medical Branch

3. Mutual respect for the skills, knowledge and resources brought by each partner

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Tschirch, P., Whitson, L., Creating a Model for Rural Telehealth Network Development, Texas Case Study
Step Two: Needs Assessment

- County has 1 primary care physician, no specialists
- Kimble is the only hospital for three counties and the only designated Level IV Trauma Center in a 60-mile radius
- ER staffed by mid-level providers
- High volume of trauma patients
- Nursing concerns managing complex patients
- Many school children were uninsured
Step Three: Identification of Priority Needs

• Top Priority - Telemedicine program to provide back-up consultation for the Emergency Dept.

• Clinical services needed from UT Emergency Medicine Department

• Telemedicine unit needed at Kimble Hospital
Step Four: Implementation

- Identify funding sources for project sustainability
  - Medicare billing for telemedicine consultations
  - Grant funding for equipment and network development
- Bring in additional partners
Additional Network Partners

• Hospital District Home Health Agency
• County EMS
• Nursing Home
• Additional County School District
Challenges Faced

- Initial funding for equipment
- Issues with rural telecommunications infrastructure
- Limited resources at rural hospitals
- Time demands on rural clinicians
Rural Characteristics Beneficial to Hospital/Community Network Development

- Fully engaged communities
- Resourcefulness and ingenuity
- Willing to commitment to innovation
- Academic Health Centers contribute
  - Extensive clinical expertise
  - Grant development

Tschirch, P., Whitson, L., Creating a Model for Rural Telehealth Network Development, Texas Case Study
Networks Rewarded Under Current Federal Policies?

**CMS** - strategy to achieve its goal of high-quality care:

“Work through partnerships to improve performance.”

Examples

- Surgical Care Improvement Partnership (public-private group)
- Alliance for Cardiac Care Excellence
- Hospital Quality Alliance (HQA)
- Ambulatory Quality Alliance (AQA)
How to Locate Opportunities

• Check with your Regional TRC
Three New Telehealth Resource Centers! (TRCs)

• **Northeast Telehealth Resource Center**
  Augusta, Maine
  New England and New York

• **Mid-Atlantic Telehealth Resource Center**
  Charlottesville, VA
  Virginia, D.C., Delaware, Kentucky, Maryland, North Carolina and West Virginia

• **Upper Midwest Telehealth Resource Center**
  Terre Haute, IN
  Indiana, Illinois, Ohio and Michigan
Who do TRCs serve?

- Hospitals and Critical Access Hospitals (CAH)
- Rural Clinics
- Providers
- Health Care Organizations
- Health Care Networks
- Community Health Systems
- and others...
How TRCs can help...

- Telehealthresourcecenters.org
  - Legislation/Regulations
  - Forms & Protocols
  - Toolkits
  - Event Announcements

- Staff training
  - Onsite - at your CAH (inc. travel)
  - Telepresenters, Basic Processing

- Peer to peer connections
  - Learn from other’s mistakes
  - Tele-All (Stroke, ICU, etc.)
  - No regional limitations
How TRCs can help...

• Technical Assistance
  – Call or Email - FREE
  – Instant access to > 30 of the most experienced telehealth professionals in the U.S.
  – National and local resources for regulatory matters
  – Solve technology mysteries
    o What is latest & greatest
    o What is basic & dependable
How TRCs can help...

• Technical Assistance (cont’d.)
  – Assessments
    o Market Conditions
    o Needs & Prioritization
    o Organizational Readiness
    o Technology
    o Peer Comparison
  – Basic strategic planning
    o Sources for revenue generation
    o Expense reductions
    o Cost Center/Residual benefits
    o Start Up / Replacement funding
How TRCs can help...

• Technical Assistance (cont’d.)
  
  – Business Model Development
    o Equipment Selection
    o Program development
    o Operational support
    o Education on Insurance
    o Reimbursement
    o Quality Assessment
How TRCs can help...

• Technical Assistance (cont’d.)

  – Advanced business planning (<two hours)
    o Experienced telehealth consultants available on fee or hourly basis for
      • Research
      • Writing
      • Editing
      • Presenting
      • implementation assistance
      • Evaluation
      • Quality Improvement
The National Telehealth Resource Center Webinar Series

Complete Series Coming Soon!
www.telehealthresourcecenters.org

1. School-Based Telehealth – Dr. Eve-Lynn Nelson
   Produced by: The Heartland TRC

2. Telehealth Legal / Regulatory Review
   Produced by: The Center for Telehealth & E-Health Law
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