5th ICAN Conference
3rd November 2014
Room 1: 10:30-12:00

WHO Revised
CSSD Manual and Guidelines

Dr Nizam Damani
Outline

• Setting the scene
• What is in the revised edition of the Decontamination Manual

‘Decontamination and Reprocessing Manual for Healthcare Facilities’

Term **DECONTAMINATION** includes cleaning, disinfection and sterilization
Processing medical devices

• Reprocessing of medical devices is common worldwide due to:
  – cost constraints
  – availability of adequate no. of devices
Reprocessing of medical devices

<table>
<thead>
<tr>
<th>COUNTRIES</th>
<th>% REUSE</th>
<th>REFERENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRAZIL</td>
<td>97 (including angiography &amp; cardiac catheters)</td>
<td>Amaranta et al., 2008</td>
</tr>
<tr>
<td>SPAIN</td>
<td>80</td>
<td>El Mundo, 2005</td>
</tr>
<tr>
<td>JAPAN</td>
<td>80–90</td>
<td>Koh A &amp; KawaharaK, 2005</td>
</tr>
<tr>
<td>AUSTRALIA</td>
<td>50 (1980s)</td>
<td>Collignon et al., 1996</td>
</tr>
<tr>
<td>GERMANY</td>
<td>40</td>
<td>Ischinger TA, 2002</td>
</tr>
<tr>
<td>DENMARK</td>
<td>37</td>
<td>Christensen PJ et al. 1999</td>
</tr>
<tr>
<td>CANADA</td>
<td>28</td>
<td>Polisena et al., 2008; Hailey et al., 2008</td>
</tr>
</tbody>
</table>

In developed countries, reuse of single-use items is less common but may include **expensive** products.

Walter P et al. *International Journal of Hygiene and Environmental Health* 2010; 213:302–307
Processing medical devices

*Full scale of adverse events* (including HCAIs) due to inadequate decontamination and re-processing of medical devices *is unknown*
Tip of the Iceberg

Under-reporting of infections/outbreaks due to reuse & inadequate decontamination of medical devices

- Under-reporting of cases due to lack of surveillance and/or follow up
- Asymptomatic/carrier infections eg Hep B & C, MRSA
- Difficulty identifying single healthcare exposure
- Barriers to investigation and/or resource constraints
Risk of cross infection due to inadequate decontamination of medical devices

**Spread of BLOOD BORNE VIRAL infections e.g. Hepatitis B&C, HIV**
- Re-use of needles & syringes
- Inadequate cleaning and decontamination of items in dentistry and other settings

**Risk of SURGICAL SITE INFECTIONS**
- Inadequate sterilization of surgical instruments
- Use of non-sterile gloves, wound dressings and other items

**Risk of**
- Catheter associated UTI
- Central Line infections
- Ventilator Associated Pneumonia
- Re-use of single-use sterile devices

**Spread of MULTI-DRUG RESISTANT MICROORGANISMS**
- Inadequate cleaning and decontamination of items/equipment and environment between patients
Central Sterile Supply Dept. in a Public Sector Hospital
Decontamination facilities in low to middle income countries

Courtesy: Dr Pessoa-Silva
| 1. Introduction                        |
| 2. Physical areas and personnel of the sterilization plant |
| 3. Personal protective equipment       |
| 4. Hand washing                       |
| 5. Cleaning of materials               |
| 6. Preparing and packaging materials  |
| 7. Basic guidelines for disinfection and sterilization |
| 8. Disinfection                       |
| 9. Sterilization                      |
| 10. Correctly loading the sterilizer  |
| 11. Handling, transporting and storing materials |
| 12. Methods for controlling the sterilization process |
| 13. Failures in the sterilization process |
| 14. Validating the sterilization process |
| 15. Quality indicators for the sterilization plant |
| 16. Re-use of a single use medical device |
| 17. Environmental cleaning and disinfection of the sterilization plant |
| 18. Occupational hazards              |
| 19. Waste management                  |
| 20. Terms related to sterilization    |
| 21. Bibliography                      |
The Members of the Working group

Decontamination and Reprocessing Manual for Health-Care Facilities

Final Draft

World Health Organization

CONTENTS

• Introduction
• Essential elements of Quality Management System
• Risk management in decontamination & sterilization
• Risk assessment in Sterile Service
• Sterilization options which are currently available
• Sterile Service Dept.
  • Cleaning and processing of Medical Devices
  • Inspection, assembly and packaging (IAP) for reprocessing
  • Transporting medical devices to and from the CSSD
• Assessment and Purchase of Medical Devices
• Chemical Disinfectants
• Decontamination of Endoscopes
• Flash sterilization (immediate use steam sterilization)
• Processing of devices in community based facilities (including dentistry)
• Dealing with prion disease (Creuztfelt-Jacob Disease Variant, CJDv)
• Glossary of terms
• References
2015: Plan to develop

• Teaching material
• Validation and audit tools
• Aide memoires and wall charts
Decontamination in resource limited countries - is this possible?

YES!

Continuous process improvement based on many small, evolutionary steps rather than revolutionary innovations
The Juran Trilogy diagram

*(Structured approach to quality improvement)*

**QUALITY PLANNING**
- **Recognize** that decontamination & sterilization is a priority
- Planned approach on how to achieve these objectives
- **Raise awareness** and provide education and practical training
- **Provide resources and tools** based on the local risk assessment and need

**QUALITY IMPROVEMENT** (Quality Control)
- **Prioritize & implement Good Practice**
- Introduce audit and keep documentation of the processes used for decontamination
- Provide feedback with aim to improve service and provide support

**QUALITY CONTROL (DURING OPERATIONS)**

BEGIN

**CHRONIC WASTE**
*(An opportunity for improvement)*

Original zone of Quality Control

New zone of Quality Control
Thank you