WHO Revised CSSD Manual and Guidelines

Dr Nizam Damani
Outline

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

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>
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<tbody>
<tr>
<td>BRAZIL</td>
<td>97 (including angiography &amp; cardiac catheters)</td>
<td>Amaranta et al., 2008</td>
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<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>
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<td>AUSTRALIA</td>
<td>50 (1980s)</td>
<td>Collignon et al., 1996</td>
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<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>
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</table>

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

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
CONTENTS
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

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)*

<table>
<thead>
<tr>
<th>QUALITY PLANNING</th>
<th>QUALITY CONTROL (DURING OPERATIONS)</th>
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<td>QUALITY PLANNING</td>
<td>QUALITY IMPROVEMENT (Quality Control)</td>
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<tr>
<td>• Recognize that decontamination &amp; sterilization is a priority</td>
<td>• Prioritize &amp; implement Good Practice</td>
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<td>• Planned approach on how to achieve these objectives</td>
<td>• Introduce audit and keep documentation of the processes used for decontamination</td>
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<td>• Raise awareness and provide education and practical training</td>
<td>• Provide feedback with aim to improve service and provide support</td>
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<td>• Provide resources and tools based on the local risk assessment and need</td>
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BEGIN

CHRONIC WASTE

(An opportunity for improvement)

ORIGINAL ZONE OF QUALITY CONTROL

New zone of Quality Control

Lessons learned
Thank you