CSSD and Infection Control
How to Work Together
By: Intisar Quritum
Consultant in Sterile Services-Kuwait
INTRODUCTION

- Even with the tremendous strides being made in the health care facilities, nosocomial infections or hospital-acquired infection (HAI) continued to be a significant drain on human and economic resources causing human suffering and higher health-care costs.
One aspect of preventing these nosocomial infections in health care facilities is the effective decontamination of medical devices.

The provision of well controlled and validated decontamination processes will have far reaching effects.
Goal of infection control & CSSD

- Sterilization Department and Infection Control teams work together to prevent cross infection to
  1. Patients
  2. Employees
  3. Environment
  4. Others
Relationship between infection control and sterilizing services

- Most departments that are supported by Central Service haven’t fully oriented their staff to the role of CSSD in infection control.
- Infection control and CSSD must jointly be involved in the development of sterilization and disinfection policies and procedures.
The Role of CSSD

- The Central Sterile Supply Department's major function is to provide surgical instruments and medical equipment that have been thoroughly DECONTAMINATED, to render them bacteria free and safe to use during patient’s operation or medical procedure.
It also follows that

- CSSD personnel should be aware of local and state wide infection control policies that may affect the service they provide.

- CSSD personnel have a responsibility for achieving consistent production and management standards in the reprocessing of reusable instruments and equipment.
They should realize that

Reusable medical instruments if not properly handled, cleaned, disinfected or sterilized will be a source of infection risk to both patients and staff.
One of the major roles of infection control with respect to CSSD is to prevent healthcare nosocomial infections, necessitating a close working relationship with the CSSD.
Implementation of infection control policies in CSSD

- Infection control policies and procedures are bared in mind from the first moment of *Designing and Construction of CSSD* and throughout the whole *Decontamination Life Cycle*
The physical design of CSSD is an essential component of infection control strategy, incorporating infection control issues to minimize the risk of infection transmission.

It makes sense, therefore, that the area in which the medical device is prepared, packed, processed and stored should be free from sources of contamination.
Design of CSSD

Internal Design of CSSD gives special consideration to the following:

1. Material of construction and interior finishes, ventilation, etc...

2. Design of work flow during the Decontamination Life Cycle
**1-Material of construction and interior finishes**

Material of construction and interior finish is of prime importance to control spread of infection.

**FINISHES**

- In processing areas, finishes should be suitable for frequent cleaning and tolerant to surface-cleaning agents.
Cont---

- Joints (walls & floors) should be avoided as they can hold moisture, encouraging the growth of organisms.
- Exposed drains should be avoided specially in the clean zones.
Cont---

- Worktops, sinks etc – should be built up to walls and any gaps sealed.

- Where gaps are unavoidable, they should be wide enough for easy cleaning.
To enable easy cleaning and maintenance of the clean zone, it is advisable that workstations and storage units should not be fixed.
FLOORING

- Should have an impermeable, non-slip floor covering uplifted at the edges onto the walls.
- PVC sheet is recommended with welded seams.
- This construction ensures a watertight, hygienic surface, which will withstand daily cleaning.
- Carpet or similar soft flooring should be avoided.
WALLS

- Surfaces should be smooth, free from crevices to hide or harbour soil.

- Exposed piping connections should be avoided.

- Epoxy coating or a sprayed paint finish is appropriate in processing areas.

- Walls should be protected against accidental damage from wheeled traffic.
Ceiling

- should be to clean-room standard and sealed to prevent ingress of airborne particles or other contaminants from the ceiling void”

- Ceilings should be resistant to humidity in zones where steam and moisture may take place

Lightening

- Light fittings and controls in processing and storage areas should be carefully selected to avoid ledges or crevices where dust can collect.
Windows

- Windows in the wash room and clean zones should be non-opening, sealed and flush fitting.

- Windows should not be installed in storage areas.

- Good access, internally and externally, should be provided to all windows to facilitate cleaning.
Doors

- Automatic/semi-automatic doors make it easier for collection and distribution trolleys to pass unimpeded.

- Self closing doors and air locks to provide a barrier against loss of pressure and against entry / exit of contaminated air into clean area.
Ventilation

Design of Air Conditioning and ventilation is governed by IC to:

- Prevent less clean air from neighboring areas entering the clean area by different air pressures.
- Create an air flow pattern that carries contaminated air away from the clean area.
Cont----

- Provide a comfortable environment for the staff with controlled temperature, humidity and ventilation

- Grant the required number of air changes per hour suitable for each area.

- Air Fans should not be used in the processing zones.
2- Design of work flow throughout the Decontamination Life Cycle

- Work flow should be designed in such a way to achieve the following minimum IC requirements
- Zoning i.e sequence of increasingly clean zones
The flow of both the **STAFF** and the **EQUIPMENT** must allow no cross-over of soiled and clean materials.
Success in decontaminating medical devices is dependant on the successful completion of each stage of the Decontamination Life Cycle.
Decontamination Life Cycle

- Transport
- Use
- Sterile Storage
- Transport
- Quality Assurance
- Cleaning/Disinfection
- Sterilization
- Packaging
- Inspection & Tray Assembly
INFECTION CONTROL POLICIES

- CSSD must have a written policies, procedures and guidelines that cover all stages of the Decontamination Life Cycle and other related critical issues such as:-
Cont----

- Hand Hygiene and Skin Care
- The Use of Personal Protective Equipment (PPE)
- Risk assessment
- Spillage Management
- Management and treatment of needle stick/sharps injuries.
- the Safe Handling and Management of Clinical Waste
- Environmental Cleaning
Hand Hygiene and Skin Care

PREVENTION IS PRIMARY!

Protect patients... protect healthcare personnel...
promote quality healthcare!

CLEAN HANDS SAVE LIVES
Protect patients, protect yourself

SAFER • HEALTHIER • PEOPLE™

P R E V E N T I O N
I S P R I M A R Y!

WFHSS W/S Muscat
2006

IQ 32
The Use of Personal Protective Equipment (PPE)
Risk assessment

- Staff must decontaminate all **reusable medical devices** following each episode of use.

- In 1968, Dr E.H. Spaulding classified medical devices into three groups that require different **levels of processing**.
Classifying Medical Devices before Processing

- Non-critical
- Semi-critical A
- Semi-critical B
- Critical A
- Critical B
- Critical C

- Robert Koch Institute – (RKI)

The skin acts as a wrapper on the outside.

The mucous membrane lines the inside.

- Provides a physical barrier to microorganisms
- Permanently covered by normal microorganisms
- Sweat and sebaceous oils provide further protection.

- Provides a physical barrier to microorganisms
- Permanently covered by normal microorganisms
- Mucus provides further protection.
Spillage Management

- Incident Report
- Liquid Disinfectant Spray
- Disinfectant Powder
- Wipes
- Scoop
- Hazardous Waste Bag
- Face Mask
- Spillage Kit
Management and treatment of needle stick/sharps injuries.

- Putting your hand into a used sharps container
- Injuries from syringes or other sharps when handling or disposing of them
- Bending or breaking used sharps which can injure you or cause blood inside to splash out
- Splashes of blood or other bodily fluids onto cuts or cracked skin or into the eyes or mouth
- Sticking yourself when putting caps back on needles after use
- Sharps hidden in unexpected places such as in surgical drapes
The Safe Handling and Management of Clinical Waste
Precautions with end users

- Another IC issue is to maintain the sterility of sterile goods till used by end users.

- Therefore all necessary precautions and guide lines for proper handling should be strictly adhered.
CSSD Staff

- Enough investment should be paid to make the staff well trained to and have faith on what they are doing.

- Qualified and faithful staff will make IC polices implemental.
FEEDBACK

To give room for continuous improvement and updating the procedures and polices following tools are recommended:

- Customer (end user) satisfaction questionnaires
- IC team feedback and comments
Kuwait experience

Integration between IC&CSSD was given the priority from the early stages of the service in Kuwait

- IN 1978 CSSD was put under the supervision of the Infection Control Committee, and this was the starting point.

- In 1983, the Directorate of Sterilization and Infection Control was established.

- In 1984 specialized training programs to graduate qualified technicians had started in co-operation with the Public Authority for Applied Education & Training.

- Since then, the Directorate of Infection Control set special emphasis on introducing the latest technologies in the field of sterilization parallel with continuous training programs.
CSSD in Kuwait
CSSD in Kuwait
CSSD in Kuwait
CSSD in Kuwait

WFHSS W/S Muscat
2006

IQ

46
CSSD in Kuwait

WFHSS W/S Muscat
2006
References

- NHS (E states training program)
- HBN 13 Sterile Services Department
- BS EN ISO 14644
- HTM 2025: ‘Ventilation in healthcare premises’.
- CDC
Thank you for your attention.