



Central Sterile Supply Department (CSSD) -“ Need of the Hour”

Introduction:

The Central Sterile Supply Department (CSSD) is a service unit of the hospital responsible for providing guaranteed sterile equipments / instruments to all the departments of hospital for immediate use in patients care – A step towards the prevention of hospital acquired infections (HAI).

Objectives:

- To provide sterilized material from a central department where sterilization practices is conducted under conditions, which are controlled, thereby contributing to a reduction in the incidence of hospital infection.
- To maintain record of effectiveness of cleaning disinfection and sterilization process.
- To monitor and enforce controls necessary to prevent cross infection according to infection control policy.
- To maintain an inventory of supplies and equipments.
- To stay updated regarding developments in the fields in the interest of efficiency, economy, accuracy and provision of better patient care.
- To provide a safe environment for the patients and staff.

Faculty:

Dr. (Prof.) Nandini Duggal, Consultant and HOD.

Dr. (Prof.) Rakesh Kumar Mahajan, Consultant

Dr. Anuradha, Associate professor

Location:

In Dr. RML Hospital, CSSD is located in ground floor of X-ray building.

Timings:

CSS Department is open all 365 days a year from 09:00 am to 04:00 pm.

Timing for receiving and issuing of routine items:

Morning : 09:00 am to 11:00 am (Receiving and issuing)

Evening : 02:00 pm to 02:30 pm (Receiving and issuing)

ORGANIZATIONAL STRUCTURE



CSSD Layout:

CSSD Layout designed for a unidirectional flow, CSSD has been divided into 3 zones

1. Protective Zone
2. Clean Zone
3. Sterile Zone

1. Protective zone includes:

- i) Receiving window
- ii) Cleaning area (includes decontamination and drying)
- iii) Assembling and packaging area

2. Clean zone includes:

- i) Autoclaving area

3. Sterile zone includes:

- i) Sterile storage room
- ii) Issuing window

Workflow in CSSD

Receiving:

CSSD assistant receives unsterile items from various departments of hospital and checks their status and its record is maintained. After receiving of instruments, segregation is done and checking done for the damages. If the instruments are damaged they are sent for the repair or discarded as required.



Cleaning:

After segregation cleaning is done either manually or by the ultrasonic cleaning system this function means cleaning of used instruments / procedure sets (I.e. Cut down set, tracheostomy sets, Lumber puncture sets, sterna puncture sets, Aspiration sets, Catheterization sets, suturing sets, Dressing sets etc.



- Ultrasonic cleaning system: It is divided into five chambers
 - i) Pre cleaning chamber: in this chamber all instruments are primarily cleaned with plain water to remove visible particles.
 - ii) Disinfection chamber: In this chamber soiled instruments are decontaminated with the help of savlon solution and water.
 - iii) Ultrasonic Chamber: In this chamber instruments are cleaned with the help of Multi-enzyme cleaning solution 1%.
 - iv) Rinsing Chamber: in this chamber instruments are rinsed with plain water.
 - v) Drying chamber: In this chamber all cleaned items are dried with the help of dryer at a temperature of 60o C for 15 minutes.

Assembling and packaging area:

Here all the instruments are assembled and packed either manual or by sealing machine for sterilization after cleaning and drying. Labels and autoclave indicator tapes are pasted on all the packs.



Autoclaving Area:

In this area sterilization process is carried out by different types of autoclaves (Two are vacuum assisted and three are gravity displacement autoclaves). Technicians place the packs in the autoclave machine and run the machine as per cycle of appropriate temperature (121 c) and pressure (20 psi) for 30 minutes. At the end of the sterilization the packs are removed from the sterilizing units, the autoclave indicators are checked to confirm adequate sterilization of the packs and in case the sterilization is not adequate the process is to be repeated. A material is pronounced sterile if it achieves 99.99% kill of bacterial spores. Packs which are adequately sterilized are stored in the sterile storage area if the sterile packs are torn, opened, wet etc then the whole process is to be repeated again.



Sterile storage area:

In this area sterile items are placed and some of the items that cannot be issued to wards in same day are kept in ultraviolet storage cabinet.

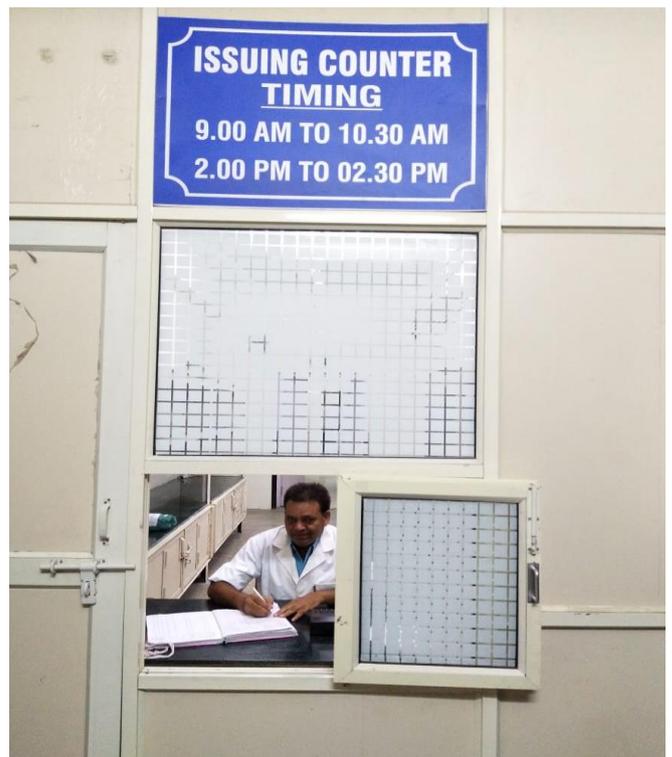


ULTRAVIOLET STORAGE CABINET



Issuing window:

All the sterile instruments and other supplies are distributed to concerned departments from a separate window, after entry of all the items in the appropriate issuing register.



Monitoring protocol of CSSD

1. Temperature, pressure and time of each cycle is recorded and followed according to standard recommendations.
2. Various quality indicators are used to check the adequate of sterilization:
 - a. Exposure control: Autoclave indicator tape with date of sterilization is pasted on all packs to be kept in autoclave.
 - b. Load control: Rapid Biological indicators are used twice in a week in all autoclave machines in first load. This indicator gives us rapid results, i.e positive result in one hour and negative result in 32 hours if result is positive means sterilization is not adequate that whole load is re- autoclaved.
3. Wet pack is not accepted as sterile. These are repacked and re-sterilized (even if the indicators show the appropriate changes).
4. There are different trolleys for carrying sterile and unsterile instruments.
5. No person is allowed to enter in sterile storage room except duty staff.

Record keeping:

1. Entry of all the items is made in CSSD receipt register including date, time, type of instruments in the pack, name of department, name and signature of person receiving the items.
2. Record of all the indicator tests and culture reports are kept.

Maintenance of Equipments:

This is done as per AMC / Warranty. All the details are maintained in the logbook / register.

Recall Policy:

Actions to be taken if any monitoring indicators fail:

- a. CSSD supervisor should be informed immediately.
- b. CSSD personnel should try and discover the cause of the failure and arrange for corrective action.
- c. The item should be reprocessed and then supplied after confirmation of sterility.

Performance Evaluation:

Performance evaluation is carried out on the basis of appropriate records and statistical indices regarding on quality productivity, consumption of material etc. On routine basis, internal quality audit is carried out every month on the basis of performance records and on the spot inspection to assess the efficacy of the system. The feedback coming out of such evaluation is recorded and made use of in improving the quality related activities in future.