

Introduction :

CSSD stands for Central Sterile Supply Department. "Central" obviously implies that all re-processing activities are carried out in one area. "Sterile" denotes that it will properly sterilize items, "Supply" may be to the same health care unit where it is located, or to a unit in the vicinity, and "Department" means that it is not just a room with autoclaves fitted within, but a full fledged facility for producing sterile goods.

Objective :

The study of sop of CSSD and need to revise standard operating procedure of cssd at sir ganga ram hospital

Research Methodology: The study is a analytic study.

Site of Study :

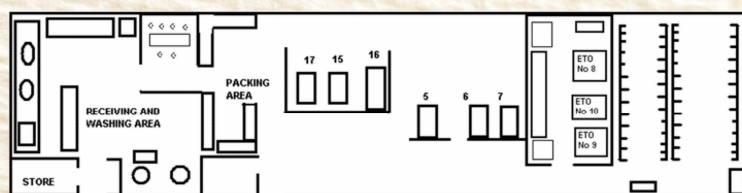
The study is done in CSSD and all the touch point including planning ,zoning ,work flow were observed during the study.

Tools Used :

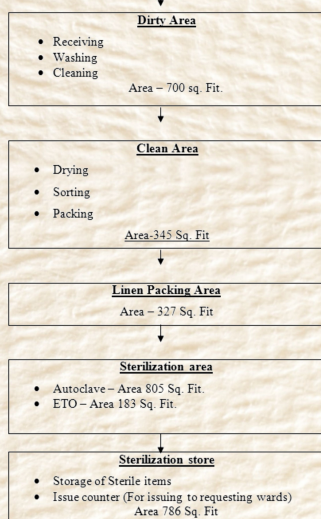
Tool used for this study are personal interviews and keen observation. personal interview are conducted for mapping of CSSD with all department of hospital.

FINDINGS

Location:- Basement :- Lay out



LAY-OUT PLAN OF CSSD (Area wise)



CSSD is situated in the basement of SSRB. It has a total approximately area of 3146 square ft. It is divided into different zones i.e. receiving or dirty zone (for receiving used material from wards) the packing or clean zone (for packing and sterilization of packs) so issuing section for various wards and O.Ts on 6th and 7th floor through dumb waiters.

There is unidirectional flow of work from dirty area to clean area to (sterile) area, the washed item being handed over to packing area There is dedicated staff for each area. The air gradient is from high to low from sterile store to unclean area i.e. in reverse directions as compared to material/work flow.

STERILIZATION OF INSTRUMENTS USED IN POSITIVE CASES

- All positive case instruments are brought separately to the CSSD with a sticker indicating positivity status of the instrument.
- They are immediately put in Washer Disinfector.
- In the Washer Disinfector it is washed with water and enzyme cleaner at 80- 90C temperature
- Washed for 40-45 minutes (single cycle)
- Instruments taken out and washed again with plain water
- Dried and packed as per the set with indicator inside the pack.

The set is then sent for autoclave

EQUIPEMENT USED

S.No.	Name of Equipment	Number
1	Steam Sterilizer SR 24 NHP/HSD	1 (Basement)
	Steam Sterilizer SR 24 FSD/SLD	1 (Basement)
	Steam Sterilizer 16HS	1 (6 th floor TSSU)
	Steam Sterilizer SR24 (SPL) - SLD	2
	Steam Sterilizer SR20 SLD (Microster)	1
	Steam Sterilizer SR 20 HS	1 (6 th floor TSSU)
	Steam Sterilizer P324R	2 (1 Basement + 6 th floor TSSU)
2	EO Machine 5XL	2
3	Washer Disinfector	2 (1+1 in 6 th floor CSSD)
4	Drier (Aeroclave items)	1
5	Nat Steel	1
6	Ultrasonic Cleaner	3 (1+2 in 6 th floor CSSD)
7	Dumb Waiter (Clean)	1
8	Sealing Machine	2+1=3
9	Fumigase-2, M41	2
10	Decalcifier charts	1
11	Gauze cutting device	1
12	Steraid	1

Quality Documents

- Physical verification/functioning of equipment of main CSSD
- Record of Bowie and Dick Test
- Graphs of Autoclaves
- Graphs of EO Sterilizers
- Complaint management
- Bill record issuing dressing sets
- Record of receiving the sets
- Record of issuing the set/drum
- Test for Biological Indicator
- Accident /Incident / Recall register

Chemical used in CSSD and TSSU and their Material Safety Data Sheet

Rapid Multi- Enzyme Cleaner for surgical, medical and dental instruments including flexible and rigid endoscopes.

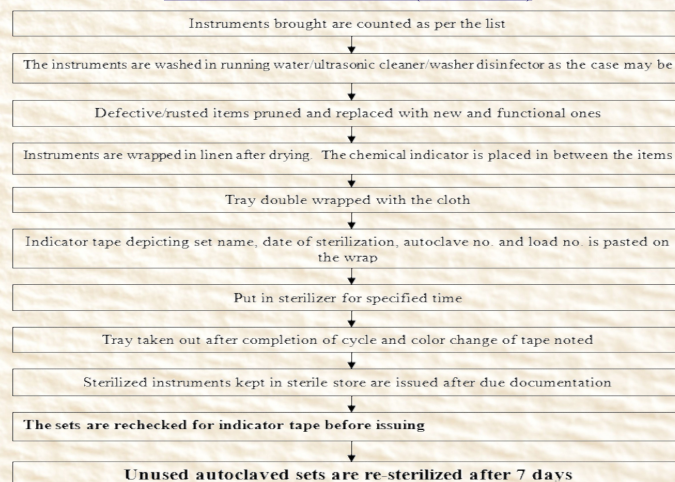
Bacillicid: - For Carbolized

Ecoshield: - For Fumigation

Directions:

Rapid can be diluted at various rates (see chart below). After dilution, immerse instrument and leave soaking for 2 to 10 minutes. For heavier soiling and if a residue has been allowed to dry, apply longer soak times. After removal of instruments rinse with water prior to disinfection/sterilization discard solution after use.

TEAM AUTOCLAVING OF INSTRUMENTS – BROUGHT FROM VARIOUS WARDS/AREAS OF HOSPITAL (EXCEPT O.T.)



Monitoring Of Effective Sterilisation

(a.) Checking of optimum running of machines

S.No.	Machine	Quant ity	Frequency of checking
1	High speed steam sterilizer	1	Daily
2	SR 24 with Microster	1	Daily
3	SR 24 (SPL)-SLD	3	Daily
4	Periclave P324	2	Daily
5	Nat Steel 24SR/E	1	Daily
6	Nat Steel 20 Auto	1	Daily
7	EO machines	3	Daily
8	Washer disinfector	2	Daily (even if no positive tests present)
9	Drier	1	Daily
10	Ultrasonic cleaner	3	Daily (for special tests)
11	Dumb waiter	1	Daily

➤ Bowie and Dick test strip keep every morning in the first cycle of the Pre-Vacuum Autoclaves No 5, 6, 7, 13, 14, 15, 16 and 17

Hazard/Risk Identification and Safety Precautions

S. No	Occupational Hazard	Safety Precaution
1	Exposure of E.O	- Outlet already opening on rooftop - Use mask and gloves while taking out sterilized goods - MSDS displayed
2	Injury due to excessive heat/ steam from autoclave	- Open the door slowly - Use cloth to remove the hot sets
3	Injury from Gauze cutting machine	To take precautions while using Cover the blade while not in use
4	Infection due to instruments used on positive cases	- Gloving - Follow waste management practices - Use washer disinfector
5	Exposure to high environmental heat	- Exhausts and air conditioner have provided - Advise to take plenty of fluid
6	Inhalation of small cotton fibers while working on gauze cutting machine	Use mask
7	Exposure to chemicals e.g. Phosphoric acid and Rapid Enzyme	- Use of PPEs - MSDS displayed
8	Injury due to sharp e.g. blades, needle, broken edge of the bowl or tray	Immediately wash with running water and report to staff physician / CMO
8	Too much Noise	Use of Ear Devices
9	Use of Disposable PPE	Use in Receiving area and with Austerity in other area

Recommendation

- Autoclave machine should be placed in such a way that its placement should act as a physical barrier between packing zone and sterile zone.
- There should be a separate receiving counter for receiving dirty instruments in dirty area
- Use of disposable gloves instead of reusable gloves
- Staff should use proper measures of safety while receiving dirty instrument like face mask , head cap, and gloves ,gumboots and disposable gowns.
- There should be first aid box in every area
- Autoclave machine which has to use steam for sterilization from out side should be stop.
- Double door machine should be used instead of single door for proper separation of clean zone and sterile area for making it a unidirectional work flow.
- In positive case instrument should be brought in color coded poly bags which can be easily distinguished from normal dirty instrument. only sticker label is not sufficient.
- One autoclave machine should be kept reserve for emergency.
- Staff those work in sterile area should work in shifts of 2-3 hours due to high humidity and high temperature.

Conclusion

CSSD is a crucial function in any hospital that when integrated with a hospital HIS helps in automating the workflow in sterilization of hospital equipments viz., surgical tools and instruments, syringes, catheters/tubes/other rubber goods, lab equipments in various departments and procedure sets.

An alarming rate of Hospital Acquired Infections (HAI) in Indian hospitals has highlighted the importance of CSSD. If the CSSD is not in place, there is a definite surge in HAI.

The rise in incidence of nosocomial infection with corresponding increase in mortality, length of stay and cost can be brought down by establishing a good CSSD set-up with revised and accurate SOP's.