STANDARD OPERATING PROCEDURES

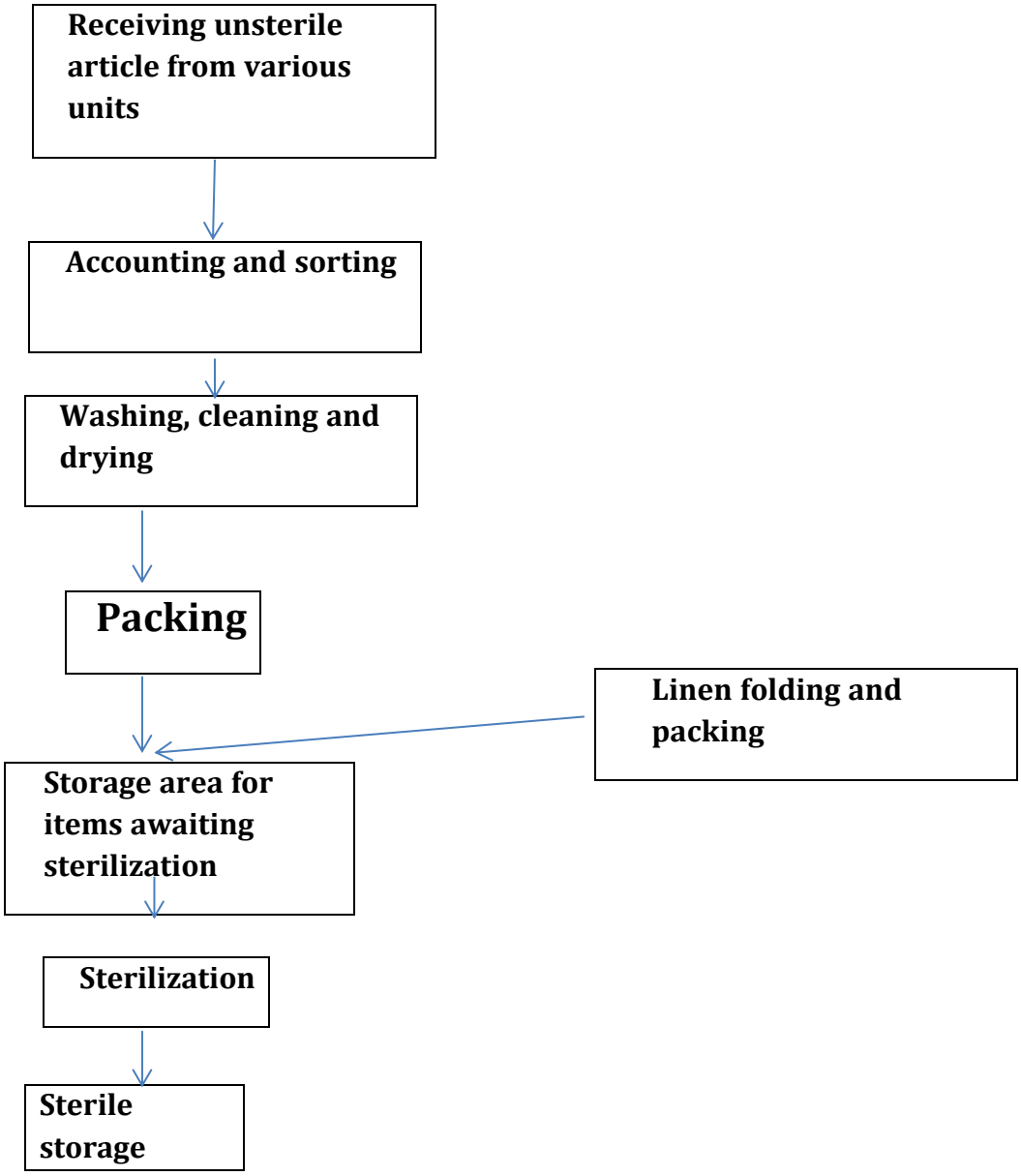
CENTRAL STERILE SUPPLY DEPARTMENT

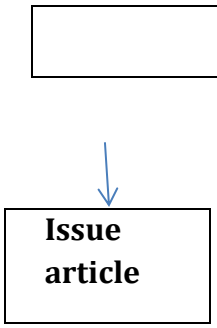
(CSSD)

THE MAIN FUNCTIONS WILL INCLUDE (DECONTAMINATION):

- **Receiving and Counting of un-sterile equipments.**
- **Sorting** of contaminated instruments and equipments for appropriate cleaning.
- **Rinsing** of articles should be done in washing area by a trained staff.
- **Cleaning** of instruments and equipments.
- **Inspecting**, **assembling**, **wrapping** and **labelling** of procedure packs, trays and instruments sets.
- **Sterilization** of procedure packs, trays, and /or instruments sets. All sets need to have an indicator slip, which changes colour on exposure to correct temperature, pressure and time. The sets also have to be labelled with the name of the set and expiry date.
- **Storage** of sterilized supplies in sterile area.
- **Distribution** of clean and/or sterilized supplies and equipments to the appropriate user departments.
- **Inventory** and charge control of supplies and equipment delivered.

WORKING FLOW CHART





Flow Chart of CSSD

The CSSD should be designed in such a way that the flow of activities must be Unidirectional from unclean to clean area. There should be limited cross movement to reduce the risk of cross contamination.

MAIN AREAS OF STERILIZATION DEPARTMENT:

DECONTAMINATION AREA

- All the user departments are to rinse the instruments prior to sending them to the Sterilization Department.

- Infected instruments should be labeled "INFECTED", by the user department whereby a disinfection process would be carried out in the washing area. The disinfection cycle of the instruments will be carried out by autoclaving the instruments without opening the packet.

- Dirty instruments will be received in the Decontamination Area or receiving area, where they will be cleaned and dried. Any instrument with stains is to be washed manually with detergent.

- Decontamination area is considered a restricted area with increase potential for contamination from blood or body fluid pathogens on the soiled utensils, carts, and materials. So all the personal dealing with dirty and infected instruments should take safety measures. They should be strictly instructed to use **Personal Protective Equipment (PPE)** such as gowns, aprons, masks, gloves, head coverings and shoe covers.

- Each item should be inspected for functionality, defects, and breakage then appropriately assembled if required.

PREPARING AND PACKING

- Generally called “Prep and pack”, this is a clean area where items processed for decontamination are received, inspected, reassembled, wrapped, and sterilized. Articles for sterilization should be packed in porous Lenin.
- Labelling: Each pack should be marked with Date of Sterilization, Date of Expiry, Pack Number, Produce Name, and List of Contents (in a double pack).

- Sterilization equipment is a part of this area; storage also is required for supplies used in assembling instrument sets and other sterilized items.

- Strictly quality control policies and procedures must be followed in sterilization processes.

- Instructions regarding the operation of the machines should be explicitly explained to all the personnel of the department.

- Routine periodic inspection of all the machines will be done to ensure that the outsourced agency is providing regular and periodic maintenance as per their annual maintenance contract.

- The temperature and the loads to be put into the machines are to be monitored, to ensure optimum utilization of the equipment under given standards.

ISSUE OF STERILE SUPPLIES

- The issue system to be employed shall be as follows:

✓ Each user department will be allocated a pre-determined number of setsof instruments.

✓ As and when the materials/set is used the same will be sent to the SSD periodically and deposited in credit.

- ✓ This set will be rendered sterile and made available to the user department within a time period of 24 hours. Emergency requisitions shall be treated accordingly.

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The advantages of this system are:

- ✓ The user department itself gauges the requirement of sterile stock depending upon its experience.

- ✓ Since each department will have its own stock of material dedicated, the management can assess the performance of the user staff in handling of the material supplied by the SSD.

SHELF LIFEE

- ✓ The shelf life of packaged sterile item depends upon:

- Quality of wrapper material – Porous Linen

- Storage condition

- Conditions during transport

- Amount of handling

A sterile tray packed in porous linen and stored under clean conditions and not handled unnecessarily may be fit for use for 72 hours to one week.

EQUIPMENT MAINTENANCE

- In case of any wrong reading being detected or the equipment not performing appropriately, the in-charge should be informed through the maintenance requisition slip, who would then initiate appropriate action.

- All maintenance records should be maintained determining the equipment down time and the repairs conducted for the equipment.

- Any equipment to be scrapped should be done only under the authorization of the In-charge

QUALITY CONTROL

- The parameters to be taken into consideration to maintain sterility of equipment should be referred to quality control parameter listed in the guideline. CHEMICAL PARAMETERS Sign log [Steam indicator tape] should be affixed on every pack before loading. Once the required temperature is achieved in the chamber, the colour of the tape changes [white to black]

CHEMICAL PARAMETERS

- Periodically, once in two weeks a capsule [biological indicator] consisting of bacillus stereothermophilus should be kept along with a load. After the cycle is over, the capsule should be sent to the Microbiology Laboratory where the viability of the organisms is checked. These organisms are supposed to be the most resistant to the heat. If they are killed, it can be presumed that the packs are sterile.

- In case of any aberrant results while testing any of the parameters, the BES personnel should be informed for performing an equipment check.

- Sterile area should be fumigated once a week.

MICROBIOLOGICAL TESTING:

- Periodically, once in two weeks a capsule [biological indicator] consisting of bacillus stereothermophilus should be kept along with a load. After the cycle is over, the capsule should be sent to the Microbiology Laboratory where the viability of the organisms is checked. These organisms are supposed to be the most resistant to the heat. If they are killed, it can be presumed that the packs are sterile.

- In case of any aberrant results while testing any of the parameters, the BES personnel should be informed for performing an equipment check.

- Sterile area should be fumigated once a week.

RECORD AND REPORTS TO BE MAINTAINED IN STERILIZATION

DEPARTMENT

The following records should be maintained:

- **Receipt Register:** This option will allow user to receive all soiled, used articles from different departments. Where user will enter the data like department code, department name, list of packs, items received with quantity, time of receipt, name of the person who brought all items from department to CSSD etc.

- **Issue item:** This option will allow user to issue items to user departments depending upon the issue system.

- **Replacement items:** This option will allow CSSD to replace damaged or unused items and instruments with new articles for user department.

- **Equipment log book:** This option will allow user to maintain a complete log book of all equipment and contain the following features like equipment breakdown time, period, engineer, type of service (AMC or any other), performance, calibration reports data (periodic or randomly) etc. This feature must be networked with BES.

- Daily Activity recording equipment-wise e.g. daily recording of each sterilization cycle with temperature, pressure, load, time period etc.

- **For Steam Sterilizer:**

✓ Sterilizer Instruction Manual
✓ Record of each cycle
✓ Record of thermographs of each cycle
✓ Chemical Indicator
✓ Daily Air Removal Indicator Test
✓ Weekly Vacuum Leak Test
✓ Weekly Spore Test or Biological Indicator Result

- **Random & Planned Micro-biological testing or infection control auditing**

Reports: To measure and check the degree of infection in CSSD, random and planned micro – biological tests should be carried out. These tests should also be recorded (Test no., Date, type of test, Name of the test, test done by, Result, conclusion, recommendations, follow-up & post-follow up testing).

MONTHLY REPORT

Monitor infection control tests and their result and recommendations monthly.

SAFETY AWARENESS IN CENTRAL STERILE SUPPLY DEPARTMENT

- All personnel should follow established work and traffic flow patterns.
- All staff should wear appropriate personnel protective equipment designated for the department.
- Staff should adhere to dress code and polices before entering and when leaving the area.
- Staff should follow and practice hand washing guidelines (before and after each task).
- If spills occur, refer to management of body fluids spillages in infection control guideline (*3rd edition, infection control and waste management guideline 2020, page 83-84*)

DEPARTMENT DRESS CODE

- Upon entering the sterile supply department, all staff should change into the dresses provided by department in the changing room.
- Staff engaged in the handling and processing of incoming equipments in the wash area should put on an extra protection, gown or apron, gloves and protective goggles (when splashing is anticipated in addition to the departmental uniform).
- When leaving the wash area, staff should remove apron and discard the gloves, mask and wash their hands.
- Visitor entering the preparation area should wash and dry their hands.

- Staff visiting from other areas should wear the department uniform and must comply with the dress code while moving within the areas of the department.

SIGNATORIES

Name of staff(MO/NO/CO/COI/MIDWIFE/ ETC)

Name: …….. *sign……* *Date:*
Department in charge

Name:…….. *sign……* *Date:*
Nursing Officer in charge

Name:…… *sign……* *Date:*
Hospital Administrator

Name:…… sign…… Date: