

**Summer Training at
Sir Ganga Ram Hospital
New Delhi
(April 1 –May 31, 2016)**

Redesigning Standard Operating Procedure for CSSD Department

**By
Rakesh Kumar**

**Under the guidance of
Dr. Tanjul Saxena**

**MBA- Human Resource Management in Health & Hospital
2015-2017**



The IIHMR University, Jaipur

2016

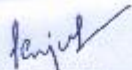
**INSTITUTE OF HEALTH
MANAGEMENT RESEARCH**

WHO Collaborating Centre for District Health System Based on Primary Health Care)

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This is to certify that Dr. Rakesh Kumar has undergone summer training at Sir Ganga Ram Hospital at New Delhi from 1st April 2016 to 31 May 2016.
The candidate completed his project by himself. His approach to the project was sincere and proactive. This summer training is partial fulfillment of the course requirement recommended for the award of MBA Human Resource in Health and Hospital.

We wish success in all future endeavors.



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Declaration

I do hereby declare that I am a student of 1st year of MBA human resource management in hospital and healthcare management IIHMR university,jaipur Rajasthan secession 2015-2017.

I would like to state that I have carried out my internship on the topic of redising the SOP for CSSD department at Sir Ganga Ram Hospital,New Delhi .under the guidance of Dr. Naresh Yadav(Incharge CSSD)at Sir Ganga Ram Hospital New Delhi.for the partial fulfillment for the degree of MBA human resource management in hospital and healthcare management.

This project work is my own and has not been submitted to any other university or institution for the purpose of award of any degree or diploma

Dr.Rakesh Kumar
IIHMR university
2015-2017

INTRODUCTION

Sir Ganga Ram Hospital is a **675-Beded multi-specialty state-of-the-art Hospital in India**. It provides comprehensive Healthcare India services, and has acquired the status of a premier medical institution. It is the only hospital in the private sector that has maintained nearly **100% bed occupancy** due to its reputation of providing the highest level of medical services to patients from Delhi and neighboring states.

The hospital was founded initially in 1921 at Lahore by Sir Ganga Ram (1851-1927), a civil engineer and leading philanthropist of his times. After the partition in 1947, the present hospital was established in New Delhi on a plot of land approximately 11 acres. The foundation was laid in April 1951 by the then Prime Minister of India **Shri Jawaharlal Nehru** and inaugurated by him on 13 April 1954.

Sir Ganga Ram Hospital in India continues to maintain its charitable character in accordance with to the wishes of its founder. Funds generated from the hospital services are partially utilized for providing free health care to the poor and needy patients. All development activities of the hospital are financed from internal resources, with no financial assistance provided by the government or other external agencies.

The Sir Ganga Ram Hospital is committed to make available **20%** beds of total strength for admission of indigenous and financially weaker section of the society. On these beds all facilities (boarding, lodging, investigations, medicine and operative procedures are free.

In addition to that we are running regular OPDs for all disciplines where patients are seen free of charge. **40%** of all the investigations is the OPD patients are free of charge. These facilities are provided strictly on a first come, first serve.

MISSION

Sir Ganga Ram Hospital is committed to provide world class healthcare, teaching, training and research by a team of highly qualified doctors, dedicated nurses, para-medical and non-medical staff with the help of state-of-the-art diagnostic, therapeutic services in a comfortable, caring and safe environment at an affordable cost to all sections of society including free treatment to the economically weaker section as per vision of the founder.

QUALITY POLICY OF THE HOSPITAL

Sir Ganga Ram Hospital is a tertiary-care hospital that has all broad and super-specialties, with firm commitment towards excellence in providing quality, ethical and affordable

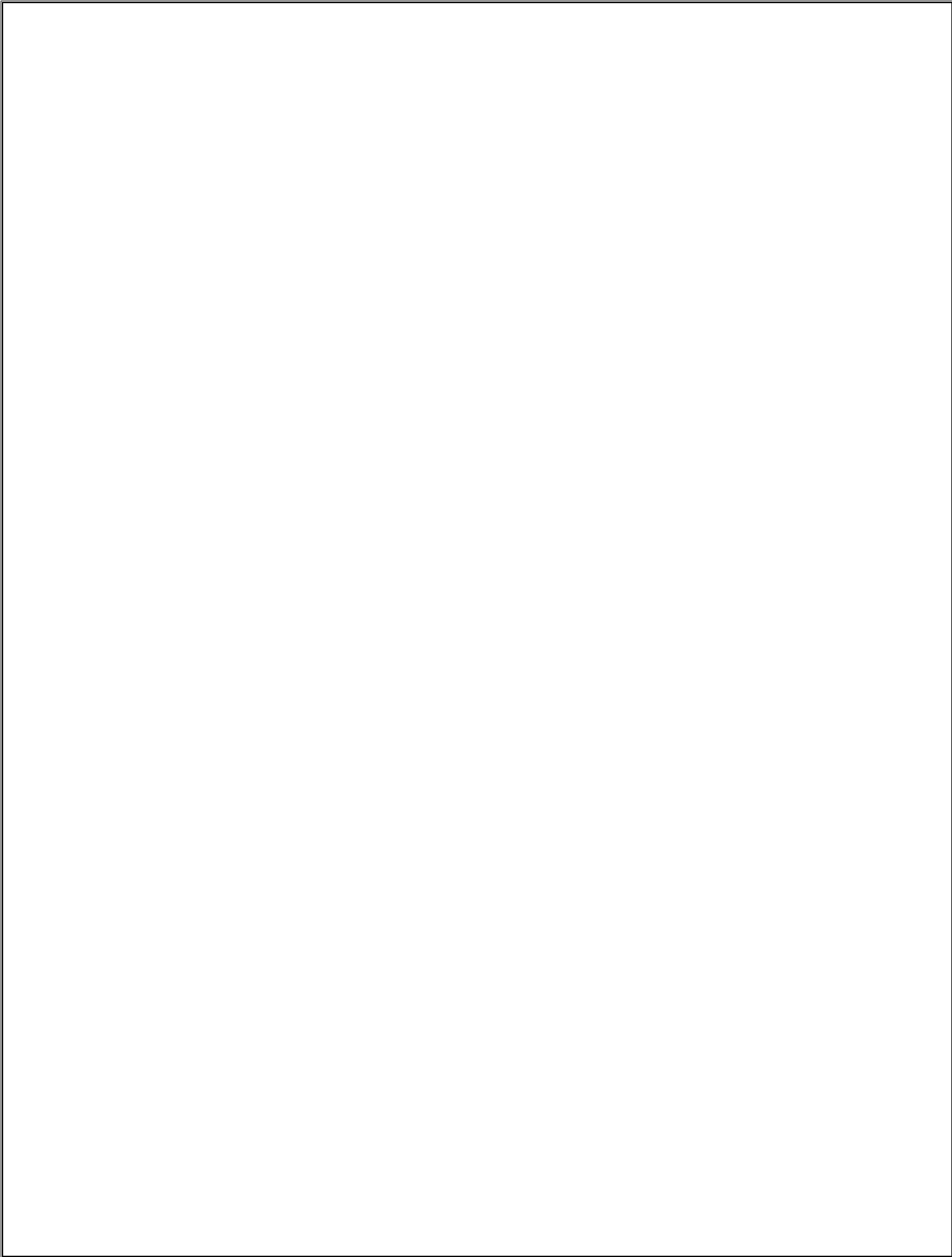
healthcare to all sections of the society with equal stress on integral components of medical education and research.

These are achieved by:

- Attracting medical professionals of eminence who develop each specialty as a Centre of Excellence in its field.
- Treating patients with respect, compassion and dignity.
- Providing free in- and out- patient medical facilities to the economically weaker sections of the society and organizing community outreach programs and camps.
- Conducting research, promoting academics and providing structured training to medical and paramedical professionals and postgraduate students.
- Complying with all legal requirements.
- Ensuring occupational health and safety standards and protecting our environment.
- Complying with requirements of **NABH, NABL (ISO 15189:2007), ISO 9001:2008 ISO 14001:2004 and OHSAS 18001:2007.**,
- Working towards continuous quality improvement, patient safety and patient satisfaction.

AWARDS –

- **2013** – NABH Accreditation for blood bank transfusion services.
- **2012** – Adjusted among top 10 hospitals of India: ‘The week’
- **2011** – C II-Exim bank award for Business Excellence; Adjusted among the best hospitals in the NCT of Delhi by The week
- **2010** – Adjusted among the top 10 hospitals of the country by the week magazine; Amity leadership award for business excellence for leveraging IT in healthcare sector by Amity University, Noida for its IT services
- **2009** – Best information and communication Technology (ICT) hospital award
- **2008** – Overall best hospital – Non corporate by Express Healthcare Excellence Awards
- **2006** – Asia hospital management award by Singapore Government



DESIGNING STANDARD OPERATING PROCEDURES CSSD



**Sir Ganga Ram Hospital,
New Delhi- 110060**

CSSD, SSRB

DISTRIBUTION LIST

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03	Naresh Kumar Yadav Senior Technical Assistant (In charge CSSD)	

**Sir Ganga Ram Hospital,
New Delhi- 110060**

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Introduction of CSSD

- 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.
- In some hospitals, this department is referred to as CS (Central Service- Especially when sterile as well as non sterile material is issued from here. This nomenclature is common in the US), SPD (Sterile processing department), TSSU (Theatre Sterile Supply Unit) and many others. Also the different units may provide different services but follow similar principles and standards of operation.

Review of literature

Welch JD. The Organization of Central Supply Departments. J Clin Path. 1961; 14: 69-75 2.
Allison VD. Hospital Central Sterile Supply Depts.. BMJ. 1960: 772-778 3. Gardner JF and Peel MM. Introduction to Sterilization, Disinfection and Infection control, Second Edition. Melbourne, Churchill Livingstone. 1991 4. Ayeliffe GAJ et al Control of Hospital Infection: A Practical Handbook. Third Edition. London, Chapman Hall. 1992.

Methodology

the study involve observation hence it is a descriptive study. the study is done in CSSD and all the touch point including planning ,zoning ,work flow were observed during the study

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

HIERARCHY



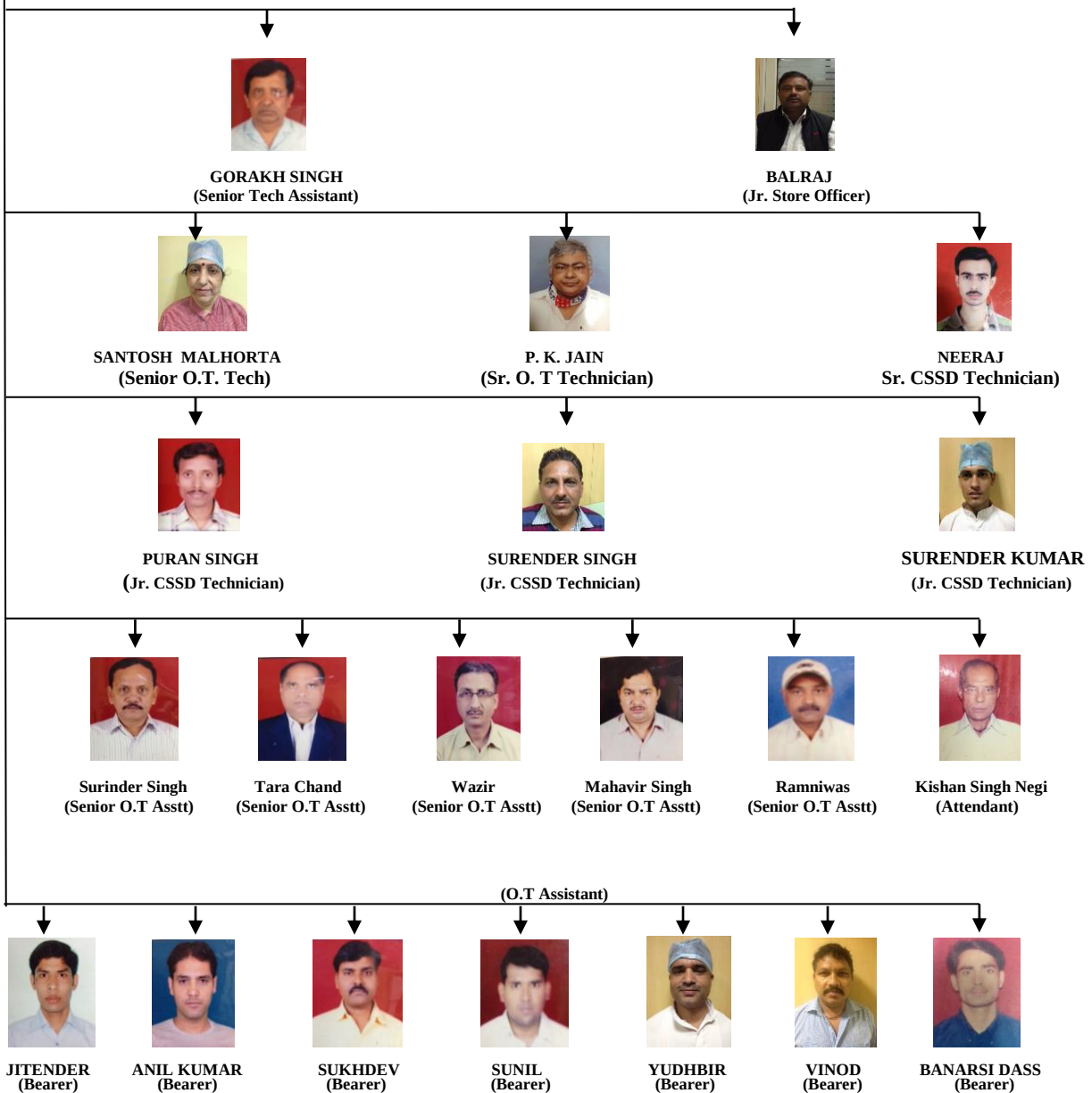
Naresh Kumar Yadav In charge CSSD

(Senior Tech Assistant)

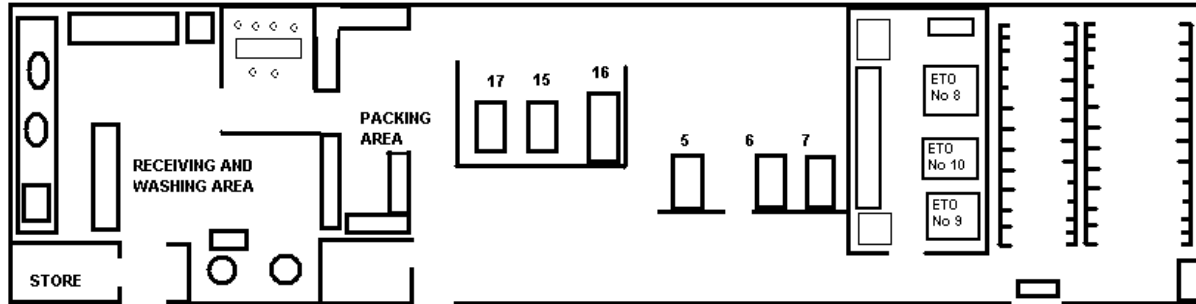


SURJIT SINGH NARWAL, in charge TSSU

(Senior Tech Assistant)



Location:- Basement : -Lay out



LAY-OUT PLAN OF CSSD (Area wise)



Dirty Area

- Receiving
- Washing
- Cleaning

Area – 700 sq. Fit.



Clean Area

- Drying
- Sorting
- Packing

Area-345 Sq. Fit



Linen Packing Area

Area – 327 Sq. Fit



Sterilization area

- Autoclave – Area 805 Sq. Fit.
- ETO – Area 183 Sq. Fit.



Sterilization store

- Storage of Sterile items
- Issue counter (For issuing to requesting wards)
Area 786 Sq. Fit

- **TOTAL AREA: 3146 sq. ft.**

HIC 7 (a) – 3rd Edition

The Organization Provides Adequate Space and Appropriate Zoning for Sterilization Activities

- 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 through a window. 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.
- In 6th floor extension of CSSD also there are separate areas for washing packing and sterilization and staff trained for O.T trays.

ROLE AND RESPONSIBILITY OF CSSD STAFF

Hygiene

- CSSD supervisors must ensure the sterility of the equipment in their charge. This includes evaluating equipment storage facilities and developing procedures to keep the equipment free of contamination.

Reprocessing Medical Devices

- Hospital staff can reuse and re-sterilize many devices after their use and contamination---generally performed as a cost-saving measure. CSSD supervisors must see to the proper cleaning of these devices to prevent infection.

Infection Control

- In addition to ensuring that sterile devices remain free of contamination, CSSD supervisors will also often help identify and prevent other potential sources of infection in the facility, to which they bring related expertise.

Record Keeping

- In order to effectively track and monitor the facility's use of sterile devices, CSSD supervisors must keep diligent records. These records can inform the inventory process and serve as a guide for medical staff seeking to find out which equipment their department is currently deploying in what context.

OBJECTIVE: - EQUIPMENT USED AND STAFFING

To provide sterilized goods to all wards, departments including OTs

EQUIPEMENT USED

S. No.	Name of Equipment	Number
1	Steam Sterilizer SR 24 N/HP/HV/SD/	1(Basement)
	Steam Sterilizer SR 24 /E/SD-SLD	1(Basement)
	Steam Sterilizer 16HS	1(6 th floor TSSU)
	Steam Sterilizer SR24 (SPL) – SLD	2
	Steam Sterilizer SR 24 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 8XL EO Machine 5 XL	2 1
3	Washer Disinfector	2 (1+1 in 6 th floor CSSD)
4	Drier (Anesthesia Items) Nat Steel	1
5	Ultrasonic Cleaner	3 (1+2 in 6 th floor CSSD)
6	Dumb Waiters (Clean)	1
7	Sealing Machine Famose-2+ 3M-1	2+1=3
8	Distillation plants	2
9	Gauze cutting device	1
10	Sterrad	1

STAFFING (as on march 2015):- The department is managed by

In charge (Sr. Technical Assistant (In charge-CSSD)	1
Senior Technical Assistant (In charge TSSU)	1
Senior Technical Assistant	1
Jr. Store Officer	1
Senior OT Technicians	2
CSSD Technician	4
Nursing Assistant	1
Sr. CSSD/OT Assistant	5
Attendant	1
Bearers	7
Ward Boys	18

HIC 7 (a) – 3rd Edition

Documented Procedure guide the Cleaning, Packing, Disinfection and / or Sterilization, storing and Issue of Items

- Rinsed sets are received from wards and washed again in CSSD. Delicate instruments are washed in ultrasonic cleaner, +VE in washer disinfectors. The defective instruments are pruned and replaced with new ones. Contents are checked while receiving and sending for packing. The washed instruments are dried and sent for packing.
- The trays are double wrapped in sequential manner (one after the other) in cloth avoiding gapping and tenting.
- The trays/Linen/Drums are sent for sterilization steam/ETO, marking them with contents (type of set), date, autoclave number and batch number for effective recall if need be.
- The sterilized items are stored in open racks in sterile store which is air conditioned with appropriate ambience and storage racks (at least 8 – 10” above floor 2’ from wall and 5” below from ceiling) with adequate air circulation. Care is taken not to store any material anywhere under the sinks.
- Issuance is done to various wards after receiving due requisition, billing and verifying the identity of person receiving the sets.
- Reprocessing of unused is done after not more than 7 days for heat sterilized items and 30 days for ETO item.

STERILIZATION OF INSTRUMENTS USED IN POSITIVE CASES

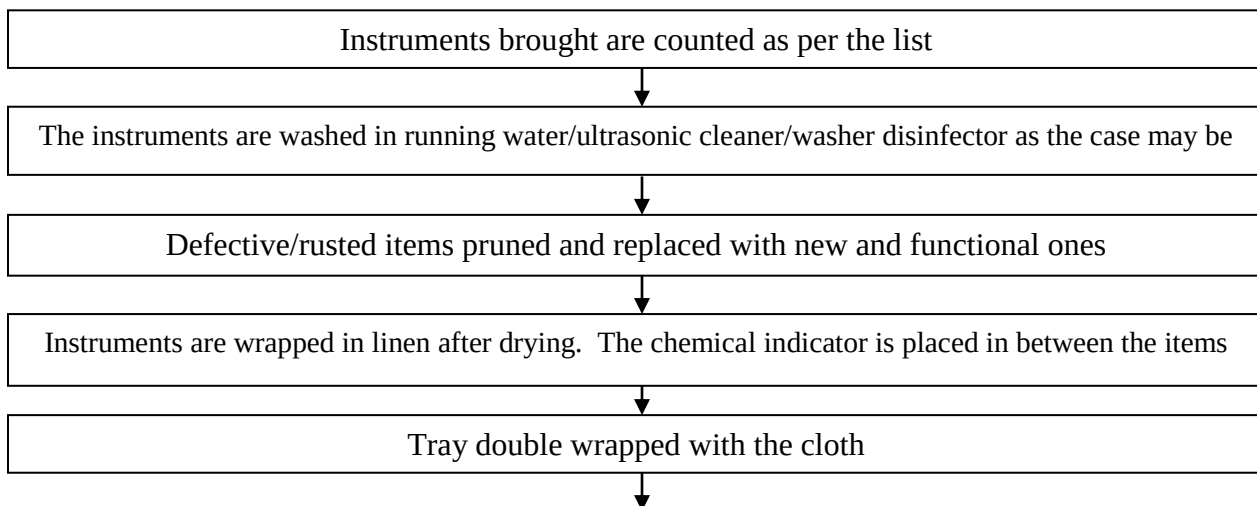
- All positive case instruments are brought separately to the CSSD with a sticker indicating positivity status of the instrument
- They are immediately put in Washer Disinfector
- In the Washer Disinfector it is washed with water and enzyme cleaner at 80°- 90°C temperature
- Washed for 40-45 minutes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

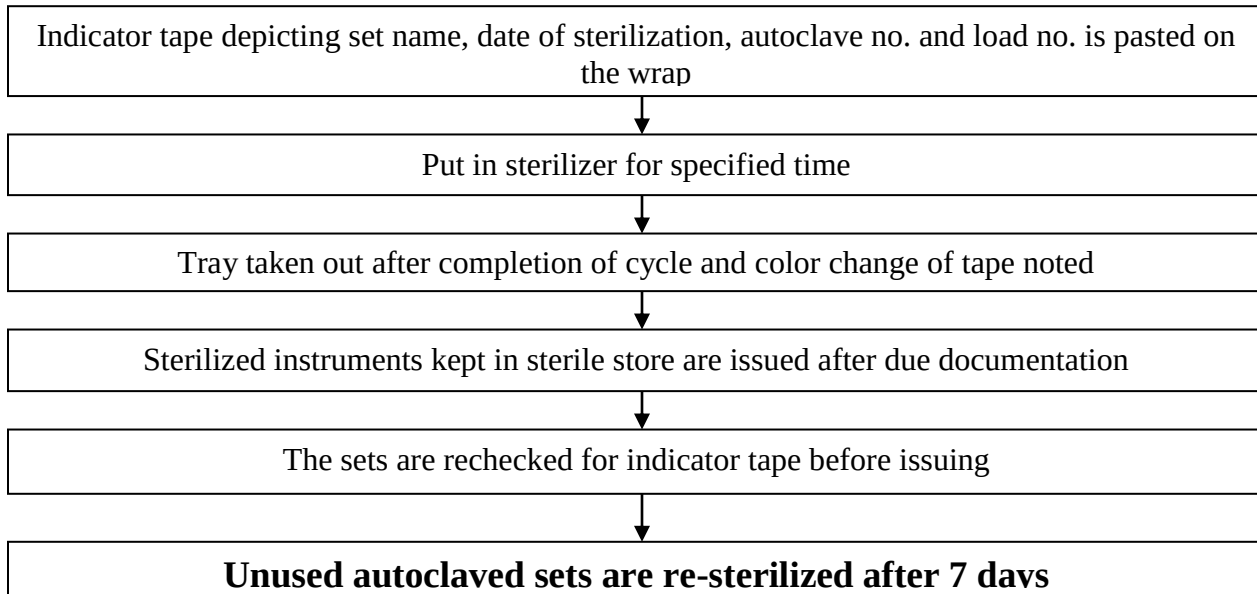
The set is then sent for autoclave

WASHER DISINFECTOR

1. For washing instruments used in +VE cases (as informed by the user Department by a sticker on the set) E.g. HIV, HbsAg, HbcAg, Tub. VREMRSA.
2. If no +VE case, run at least once a day washing other instruments E.g. from wards.
3. Cycle time is 45 minutes.
4. Disinfectant used – 1% Sodium Hypo chloride.

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





Revised on Jan 2012

GAS STERILIZATION (EO)

Now most medical devices and instruments made of materials (e.g., plastics) that require low-temperature sterilization. Ethylene oxide gas has been used since the 1950s for heat- and moisture-sensitive medical devices. Procedure of EO Sterilization in our hospital.

- ❖ All heat sensitive reusable surgical items received (clean and dry) from various wards/OTs for EO sterilization.
- ❖ Packed in medical grade papers with chemical indicator labeled with date, load no., machine no.
- ❖ Sterilized material is taken out after cycle is completed
- ❖ Sterilized goods are issued to various wards/department/O.T as per the requirement

- ❖ Separate PCD chemical indicator put in the machine in each cycle is removed after the cycle is completed and is pasted on the register as a documentary evidence of effective sterilization
- ❖ Graph of each cycle shows date, time, sterilization cycle, errors which is filed
- ❖ **Shelf life of EO Sterilized Material is One Year in normal and favorable condition of storage**

LINEN STERILIZATION (By Steam)

The following linen packs are made in CSSD

- ❖ Abdomen Pack
- ❖ Eye Pack
- ❖ Gown Pack
- ❖ Gynae Pack
- ❖ Sponges Pack
- ❖ Ortho pack

The first cycle daily in each autoclave is dry run with Bowie and Dick test only.

If found to be adequate, then further cycles run at a temperature 134°C / 121°C for 8mts / 20mts at a pressure of 2.2kg / cm² / 1.2 kg cm².

Graph recording temp/humidity/time/ vacuum pulse pressure in each cycle is generated in sterilizer no 5, 6, 7, 15, 16 and 17 which is filed.

Indicator tape depicting all parameters for recall is pasted. (Jan 2012)

Rapid sterilization by Gas Plasma Sterilizer the “STERRAD”

OBJECTIVES:

Rapid and effective sterilization of the material without any environmental hazard as end products

Scope:

Compatible Materials	
Aluminium	Brass
Delrin acetyl resin	Polystyrene
Glass	Polyurethane
KRATON Polymers	Polypropylene
Polyvinyl chloride (PVC)	Silicone elastomers
Neoprene	Latex
Nylon (Polyamide)	Stainless Steel
Polycarbonate	Teflon
Polyethylene	Ethylvinyl acetate (EVA)

Incompatible Material	
Cellulose materials (linen, paper, foam, gauze)	Instruments that cannot withstand a vacuum
Wet instruments	Items with an internal lumen diameter < 1mm
Single-use items	Items with a lumen length > 2m 100S
Implants	
Liquids and powders	
Blind lumened devices	

Vent 1: The chamber is returned to atmospheric pressure, and ions converted to water vapour and oxygen are released

Injection 2: 1.8ml of hydrogen peroxide is injected into the chamber

Diffusion 2: Air enters the chamber and spreads the hydrogen peroxide through the chamber, so that it contacts instruments

Plasma 2: The plasma generator converts the hydrogen peroxide into ions, killing all micro-organisms

Vent 2: The chamber is returned to atmospheric pressure, and ions converted to water vapour and oxygen are released

A printout is generated, accompanied by an audible alarm, and the message “Process complete”

PROCEDURE FOR OPERATING “STERRAD” 100S PLASMA STERILIZER

1. Start the machine

- a. Switch on the main MCB power supply
- b. Turn the machine switch (located at the back of the machine) by lifting up the lever from ‘ 0 ‘ to ‘ 1 ‘
- c. Wait until the machine warms up. The system window displays “WARMING UP”. This may take up to 45 minutes.
- d. After warming up, the machine displays the message “READY TO USE “.

2. Inserting a new cassette

- a. If the machine prompts to insert a new cassette, by displaying the message “ INSERT NEW CASSETTE, NO MORE CYCLES CAN BE RUN”, insert the cassette in the rectangular window located above the chamber at the front of the machine. The cassette can be inserted in one direction only, as is directed on the cassette (THIS SIDE UP and THIS WAY IN are clearly marked on the same). Check expiry date of the cassette before inserting.
- b. Each cassette has 10 ampoules and can run 5 cycles. After completion of 5 cycles, the cassette is automatically disposed into the Cassette Collection Box located at the side of the machine.
- c. **DO NOT INSERT A CASSETTE IF THERE IS ALREADY ONE IN THE SYSTEM**
- d. **DO NOT ATTEMPT TO TAKE THE CASSETTE OUT OF THE MACHINE**

3. Pack items to be loaded.

- a. Items must be thoroughly washed, rinsed and dried prior to packing. Items may be packed in pouches or trays.
- b. Ensure that chemical indicators are present with all instruments packed. Pack a chemical indicator strip in a pouch and place in the chamber. Pouches have in-built indicators, and do not need additional indicators.
- c. The materials that can be sterilized in the Sterrad are listed on a separate sheet affixed next to the machine. Please refer to the same before sterilizing.
- d. Run the biological indicator as per Hospital Policy. Biological Indicator must be packed and run with the first cycle with instruments. It must be placed at the back of the chamber, on the lower shelf. Instructions for processing the Biological Indicator are available on a different chart.

4. Load the chamber

- a. Press the “OPEN DOOR” button to open door, after the machine displays the message “ READY TO USE “.
- b. Place trays flat on the shelves side by side, and pouches vertically, all pouches, facing the same direction. Do not place items one on top of another. Do not stack trays. DO not allow any items to touch the electrode (aluminum grid) on the side, back, or top of the chamber.
- c. The chamber should not be loaded to more than 70% of the total capacity.

5. Start the cycle

- a. Select the “Short” or “Long” Cycles as per instruments loaded. The SHORT cycle can be started by pressing “START” button 2 times, and the LONG cycle can be selected by pressing “START CANCEL START “ buttons.
- b. Items that can be loaded in the SHORT cycle are all items that do not have long lumens and that have internal diameters more than 6 mm. The detailed chart of items that can be loaded has been affixed next to the machine.

6. Completion of the cycle

- a. Upon completion of the cycle, check chemical indicator tape for change of color from red to yellow.
- b. Check that all pouches are sealed, and that in-built indicators have changed color from red to yellow.
- c. Check that all parameters as per the printout are within range. The details of parameters for both cycles are affixed next to the machine.
- d. Complete load documentation sheet.
- e. Store sterilized items on designated racks.

7. Cancellation of cycle

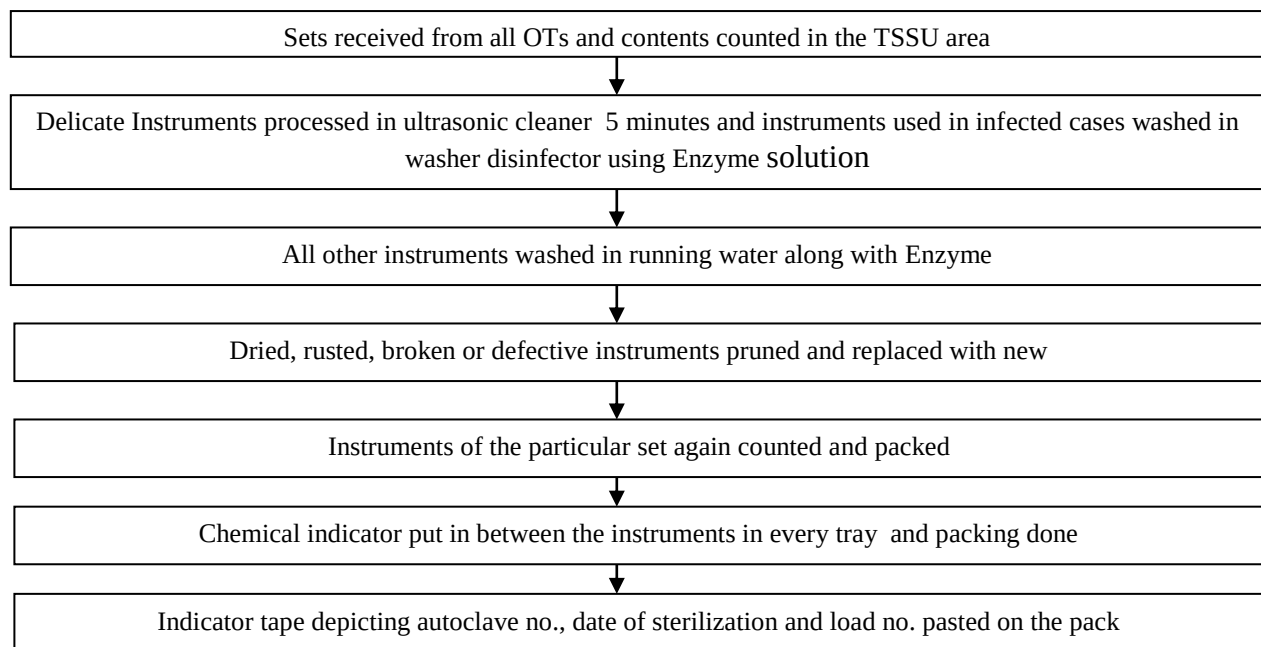
- a. In case of cycle cancellation, check printed message.
- b. Take corrective action, as provided in the Users’ Guide.

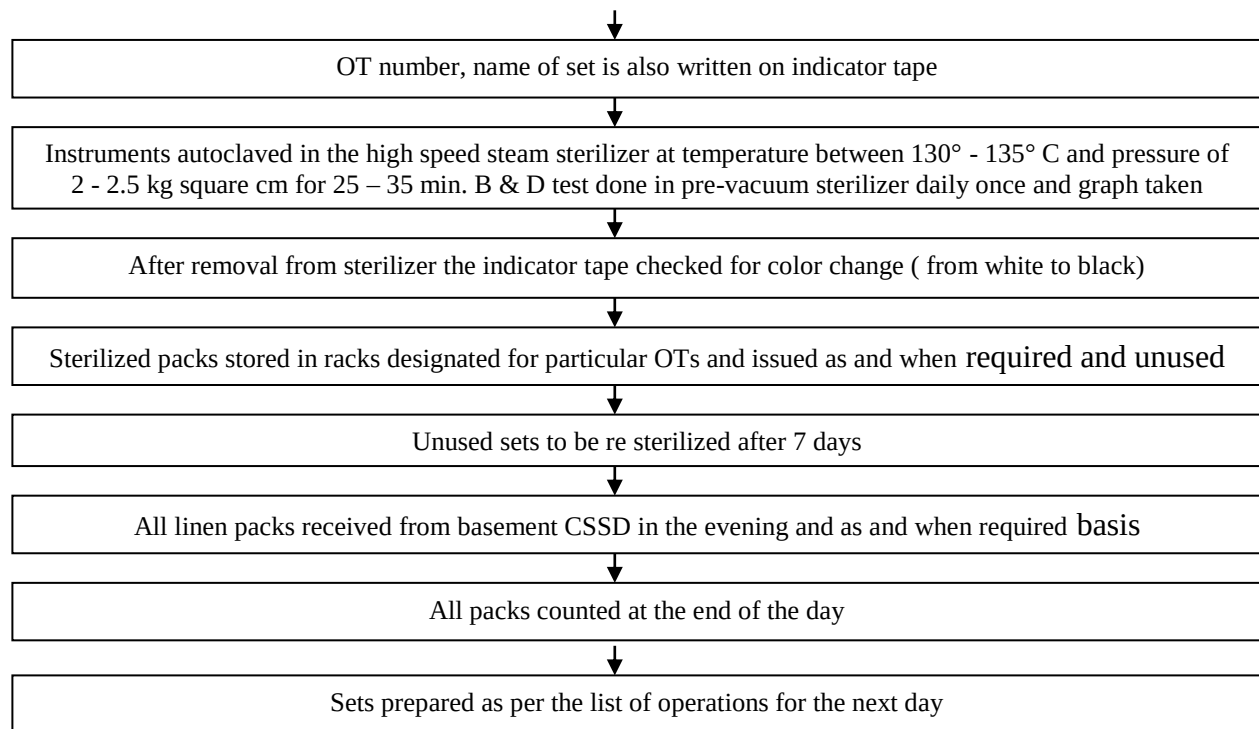
Quality Assurance

Spore testing done periodically as per hospital policy
 Graph of each cycle showing all parameters of the process
 Chemical indicator in every cycle

❖ Shelf life of Tyvac peel pouch is One Year

Steam Sterilization in CSSD, TSSU





Revised in Jan 2012

HOUSEKEEPING ACTIVITIES

- ❖ The cleaning of the floor is done twice daily with detergent. Cleaning of racks once.
- ❖ Disinfection of racks with suitable disinfectant: Once a week (Sunday)
- ❖ Fogging of sterile store: Once a week (Sunday)
- ❖ Dumb waiter is daily cleaned and disinfected by spraying Disinfectant (Bacillol 25%) in every shift.
- ❖ All CSSD personal to use hand rub/cap/gloves at the entrance and before undertaking any procedure.

MONITORING OF EFFECTIVE STERILISATION

(a.)Checking of optimum running of machines

S.No.	Machine	Quantity	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 disinfectant	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

(b) Monitoring of effective sterilization

- First cycle of all pre vacuum steam autoclave is run with Bowie and Dick test sheet.
- Chemical indicator is put inside all procedure tray packs for steam autoclave.
- Computerized print out of pressure, temp, time and humidity etc. of each cycle is generated by pre vacuum steam autoclaves, EO machines and STERRAD.
- The packing material meant for EO sterilization has indicators printed on it and color changes noted.
- Biological indicator test (Spore test) is done every week for all autoclaves. The culture report from microbiology is obtained and filed.
- All autoclaves sets are kept in sterile room and decontaminated after 7 days in not used.
- Hollow load PCD for ETO sterilizers in every cycle
- Compliant register is maintained for any breakdown of the machines
- Sterilized section fogged weekly.

- Regular calibration of the equipment
- Dumb waiter pit and cab sprayed with Bacilol spray twice in a shift

BOWIE AND DICK TEST

- 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.
- Insert Bowie and Dick test strip into PCD.
- Check the movement of the dark bar.
- It should cover entire window. Which indicate a “Pass” result?
- Maintain record of Bowie and Dick strip.

Jan 2012

(B & D test is performed in pre vacuum steam sterilizers in the first empty cycle every morning. It shows the effectiveness of vacuum created for effective steam penetration in the sets. It is also called porous load PCD. The Bowie and Dick strip is put into a Process Challenge Device (PCD) and should cover entire window if the vacuum inside the autoclave is complete. It indicates removal of air from the autoclave for that day. Daily record is kept for a period of three months.)

FORMATS

Receipt of material from wards/ OT

- Dressing and Special Sets Receiving Book

Ward name	Name of the set	Quantity	Handed over by

- Ward / Departments Drum Record

Ward name	Material	No. of drums	Handed over by

Issue of material

- Drums to Ward /OPD

Dept.	Item description	Quantity	Received By

- Sets issued to Department/Ward

Register No of the Patient	Ward/Bed No	Receipt No	Name of the set	Quantity	Received By

- Linen Issue

Department	Material	Received by

- State of Linen Packing

Date of linen packed	Material	Signature

Daily Checking of Machines

CSSD, SSRB (Basement)

D A T E	Ultra Sonic	Gauze Cutting Machine	Washer Disinfect or	D/ Water Plant No 1	D/ Water Plant No 2	24 HS Mann D. No 15	24SR/E SLD D. No 16	24 SR/E SPL D. No 17	24 SR/ DS SLD D. No 5	24 SR/ DS SLD D. No 6	24 SR/ DS SLD D. No 7	E.T.O 8XLD No 8	E.T.O 8XL D No 9	ETO 5XL D No 10	Ana Dry Heat
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TSSU, 6th Floor

Dump Waiter	FAMOUS HEAT SEALING MACHINE			16 H.S D. No	16 H.S D. No	20 H.S D. No	U/Sonic Getting	U/Sonic New	Washer Disinfector	STERRAD Plazma	Remark	Signature
	1	2	3	11	13	14						

- **Log book of machines (for machines which do not give printouts - High Speed Steam sterilizer)**

Machine Loaded at	Required pressure obtained at	Steam exhaust at	Load out at

- **Printouts of Steam Sterilizer (SR 24s)**

Time in hh:mm:ss	Pressure bar	Temp	Process Current Status

- **Repairs (When spare parts are put)**

S. No	Date	Name of Repairing Agency	Name of part replaced, if any	Expenditure Incurred	Bill Number/Date

- **Stock Ledger: - Stock Book (Equipment/Instrument name) - Page Number**

Date	
Particulars	
Opening Balance	
Number or Quantity Received	
Total	
To whom Issued	
Number or Quantity Issued	
Balance	
Signature of officer issuing the articles	
Signature of the officer receiving the articles	
Remarks	

- **Graph of ETO machines**

Graph shows pressure, temperature variation on the axis of time. It shows the day, date and time of beginning of the procedure, machine name, pre set aeration time, cycle temperature, cycle number and load number. The graph also shows the time the door was opened. If the printout shows “Sterilization Cycle Complete” and “No Errors”, it means the process is successfully completed. The actual expose time and actual aeration time is also cited. Caution, if any, is also mentioned in the graph.

- **History Book**

1. Name of the Equipment/Instrument
2. A) Country of Manufacture
B) Name of Manufacturer
C) Indian Agents, if any (for imported machines)
3. Supply Order No. and Date
4. Cost of Equipment /Instrument
5. A) Date of Installation
B) Date of Commissioning
6. Probable life of Equipment/ Instrument
7. Other Particulars, if any
8. Disposal of Equipment/ Instrument

CHECKLISTS:

Checklist for High Speed Steam Sterilizers (CSSD)

- Record the Date – time machine loaded at – time required pressure obtained at – time steam exhaust at – time load out at in registers machine wise.
- Autoclave number, date and time to be put on packs before autoclaving
- While removing the sterile goods from the machine, indicator tape is checked for color change from white to black
- Every day Chamber to be cleaned with wet cloth to avoid corrosive action
- Biological Test carried out weekly. Biological indicator are sent to Microbiology Department weekly for effective sterilization check and records maintained
- All machine serviced quarterly and gauges and thermometers checked

Checklist for EO Machine

- Time - Temperature- Pressure - Vacuum checked for every load with the help of graph from machines.
- Graph checked for the “No Errors” and “Sterilization Cycle Complete” note after every process

- While removing the sterile goods from machines, EO sterilization Integrator checked for sterilization assurance by seeing the color change from light yellow to dark yellow
- Microbiological test to be undertaken once a week and record maintained
- All machines serviced quarterly and gauges and thermometers checked

Checklist for SR 24 machines

- Check Time - Pressure - Temp - Process Current Status in the printout and note whether the “sterilizing” status has been undertaken in the requisite temperature and pressure required for the process.
- Check the light indicators for *process on* (orange), *alarm* (red), *door closed* (green), *process end* (white)
- While removing the sterile goods from the machine, indicator tape is checked for color change from white to black
- Biological Tests carried out weekly. Biological indicators are sent to Microbiology Department weekly for effective sterilization check and record maintained
- Bowie Dick Test to be undertaken daily in first cycle in every autoclave

Checklist for drier (for anesthetic items)

□ For NAT Steel Machine

- Timer and temperature set
- Time and temperature indicator checked from time to time

Checklist for Ultrasonic Cleaner

- Set temperature, and time

Checklist while issuing items on loan

- Receive the loan slip with the sticker or department name and the name of the set to be taken on loan.
- Check for the stamped bill
- Make the entry in the Department/Ward Issue Register for billed items
- Make entry in the Ward/OPD Issue Register for unbilled items
- Check for color change in chemical indicator before handing over the set

Checklist while receiving items

- Check all the items which were issued to the ward
- Return loan slip
- Make entry in the receiving books

“Recall of material in case of breakdown of sterilization system”
(Ref. chapter 5 clause HIC 7C)

Objective:

To ensure that linen, instrument or any other material used on patient in carrying out any procedure on the patient is effectively sterilized.

Activities:

- All the autoclaves to be numbered.
- The indicator tape on linen packs, instrument trays, gauze and gloves drums etc. will bear the **BATCH NO.** which includes:
 - Load No. /Machine No.
 - Packing Date of Sterilization
 - Expiry Date of sterilization
 - Type of set
- The packing paper used in EO sterilization will also bear the number of sterilizer and date of sterilization.

In case of any information from any Department / Ward / OPD is received regarding no change in the color of the indicator then telephonically all the areas in

the hospital are asked to send the sets bearing the same load no., machine no., date of sterilization back to the CSSD and ensures withdrawal of the same

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 disinfectant
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
10	ETO Gas Leak	•

Quality Documents

1. Physical verification/functioning of equipment of main CSSD
2. Record of Bowie and Dick Test
3. Graphs of Autoclaves
4. Graphs of EO Sterilizers
5. Complaint management
6. Bill record issuing dressing sets
7. Record of receiving the sets
8. Record of issuing the set/drum
9. Test for Biological Indicator
10. Accident /Incident / Recall register

TYPES OF SETS AVAILABLE

L.P. SET

S. No.	CONTENTS	QTY
1	Tray Wire	1
2	Tray Towel	1
3	SS Bowl	1
4	Sponge Holder	1
5	Towel clips	2
6	L.P. Needle	1
7	Tray Towel	1
8	Cut Sheet	1
9	Glass Vial	4
10	Gauze	5
11	Cotton swab	5

BONE MARROW SET

S. No.	CONTENTS	QTY
1	Tray Wire	1

2	Tray Towel	1
3	Sponge Holder	1
4	Towel Clips	2
5	Kidney Tray	1
6	SS Bowl	1
7	B. M. Needle Different Size	4 each
8	Cut Sheet	1
9	Towel	1
10	SS Tray	1
11	Glass Vial	4
12	Gauze	5
13	Cotton Swab	5

ASPIRATION SET

S. No.	CONTENTS	QTY
1	Tray Wire	1
2	Tray Towel	1
3	SS Bowl	2
4	Sponge Holder	1

5	Artery Forceps 6"	1
6	Towel Clips	2
7	Aspiration Needle	2
8	Skin Towel	1
9	Cut Sheet	1
10	Glass Vial	4
11	Gauze	5
12	Cotton Swab	5

TRACHEOSTOMY SET

S. No.	CONTENTS	QTY
1	SS Tray	1
2	Tray Towel	1
3	SS Bowl	1
4	Artery Forceps Mosquito	4
5	Sponge Holder	1
6	BP handle	1
7	Dissecting Forceps Non Tooth	1
8	Dissecting Forceps Tooth	1
9	Needle Holder	1
10	Allis Forceps	2
11	Towel Clips	4
12	Retractors Double Hook	2
13	Retractors Single Hook	2

14	Rt. Angle Retractors (Langenback)	2
15	Tracheostomy Dilator	1
16	Cut sheet	1
17	Gauze Piece	5
18	Cotton Swab	5
19	Skin Towel	1
20	O.T. Towel	3

CUT OPEN SET

S. No.	CONTENTS	QTY
1	SS Tray	1
2	Tray Towel	1
3	SS Bowl	2
4	Sponge Holder	1
5	Needle Holder	1
6	BP Handle	1
7	Artery Forceps Mosquito	4
8	Dissecting Forceps Non Tooth	1
9	Dissecting Forceps Tooth	1
10	Towel Clips	2
11	Cut Sheet	1
12	OT Towel	3
13	Blade	1
14	Gauze	5
15	Cotton Swab	5

16	Skin Towel	1
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PAEDIATRIC EXCHANGE SET

S. No.	CONTENTS	QTY
1	SS Tray	1
2	SS Bowl	2
3	SS Kidney Tray	1
4	Tray Towel	1
5	Sponge Holder	1
6	BP Handle	1
7	Dissecting Forceps Non Tooth	1
8	Dissecting Forceps Tooth	1
9	Aneurysm Needle	1
10	Towel Clips	2
11	Fine Artery Forceps Sets	2
12	Fine Artery Forceps CU	2
13	Needle Holder	1
14	Rubber Tube	2
15	Cut Sheet	1
16	Surgical Blade	1
17	Skin Towel	1
18	Cotton Swab	5
19	Gauze Piece	5
20	O.T Towel	3

SPECIAL DRESSING SET

S. No.	CONTENTS	QTY
1	SS Tray	1
2	Tray Towel	1
3	SS Bowl	1
4	Sponge Holder	1
5	Artery Forceps	1
6	Dissecting Forceps	1
7	Sinus Forceps	1
8	Skin Towel	1
9	Gamjee Roll	4
10	Gamjee Pad	6
11	Gauze Piece	20
12	Cotton Swab	05

DRESSING SET

S. No.	CONTENTS	QTY
1	SS Tray	1
2	SS Bowl	1
3	Artery Forceps	1
4	Sinus Forceps	1
5	Dissecting Forceps	1
6	Cotton Pad	2
7	Gauze Piece	10
8	Cotton Swab	5
9	Skin Towel	1

DIALYSIS DRESSING SET

S. No.	CONTENTS	QTY
1	SS Tray	1

2	SS Bowl	2
3	Tray Towel	1
4	Sponge Holder	1
5	Skin Towel	1
6	Gauze Piece	10
7	Cotton Swab	5
8	Cotton Bandage	1

FEMORAL SET

S. No.	CONTENTS	QTY
1	SS Tray	1
2	Tray Towel	1
3	SS Bowl	2
4	Skin Towel	1
5	Abdomen Sheet	1
6	Sponge Holder	1

7	Gauze Piece	10
8	Cotton Swabs	5
9	Cotton Bandage	1

LIVER BIOPSY SET

S. No.	CONTENTS	QTY
1	SS Tray	1
2	SS Bowl	1
3	Sponge Holder	1
4	Towel clips	2
5	L.B. Needle	2
6	Tray Towel	1
7	Cut Sheet	1
8	Glass Vial	4
9	Gauze, cotton, swab	5

RECEIVING AND PACKING OF GREEN LINEN PACK

All Green Linen would be washed by out source laundry and handed over to Black Beret Staff, after counting the green linen all linen handed over to CSSD and TSSU.

CSSD staff use that green linen for different types of packs e.i, Abd Pack, Gown Pack, Gynae Pack, KTP Pack, LTP Pack and Eye Pack for OT and wards.

TSSU staff use that linen for packing of Instrument Tray for OT.

Abdomen Pack

S. No.	CONTENTS	QTY
1	Abdomen Sheet	1
2	Bed Sheet	1
3	OT Towel	4
4	Draw Sheet	2

Gown Pack

S. No.	CONTENTS	QTY
1	Surgical Gown	4
2	Skin Towel	4

Gynecology Pack

S. No.	CONTENTS	QTY
1	Gynecology Sheet	1
2	Legging	2
3	Draw Sheet	3

Eye Pack

S. No.	CONTENTS	QTY
1	OT Towel	4
2	Eye Sheet	1

Ortho Pack

S. No.	CONTENTS	QTY
1	Cotton Two Layer	125 gm
2	Bandage 6"	2
3	Bandage 4"	1

Sponge Pack

S. No.	CONTENTS	QTY
1	Sponge Abdomen	5

All used dirty green linen counted by Black Beret staff and handed over to out source laundry.

1.0 POLICY:

There are documented procedures for sterilization activities in the organization

2.0 NABH Reference

Chapter – 05/HIC-07 (a, b & c)

3.0 Responsibility:

CSSD In-charge

4.0 Procedure:

Sterilization activities in the organization

Objective Element –

- a. There is adequate space available for sterilization activities

Lay-out plan of CSSD is attached along with

- b. Regular validation of tests for sterilization are carried out and documents

Reference: ISO manual: DOC. No CSSD/PROC/01: Pg No 15, 16, 20, 21 &

Annexure 7

- c. An established recall procedure when breakdown in the sterilization system is identified and established

Reference: ISO manual: Doc. No: CSSD/PROC/01: Pg No: 23

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.

Bacillocid: - 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.

S. No	Inhalation	Skin contact	Eye Contact	Ingestion
1	Remove to fresh air	Rinse with running water	Immediately flush with water/if needed see a physician	Flush oral Cavity/drink plenty of water/see a physician if needed Do not induce vomiting/Plenty of milk
2	Do	Do	Do	Do
3	Do	Do	Do	Do

Risk:

May cause sensitization by inhalation, Irritating to respiratory system and skin. Risk of serious damage to eyes

First Aid:

Eye contact: in case of contact with eyes. Rinse immediately with plenty of water and seek medical help.

Skin Contact:

Immediately flush skin with large amount of water for at least 15 minutes. Remove contamination clothing and shoes. Get immediate medical attention.

Ingestion

If swallowed do not induce vomiting. Get victim two glasses of water. Seek medical advice immediately.

Inhalation:

Inhalation can be dangerous. If inhaled bring person to fresh air. Should there be breathing difficulty seek immediate medical attention.

Receiving Register

Date:

Name of the ward	Name of the set	Quantity	Handed over by
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CSSD, SSRB (Basement)

[illegible]**TSSU, 6th Floor**[illegible]

Load Monitoring is the most important work of CSSD

AAMI ST79

Recommends monitoring all loads containing implant of implant surgical material with a PCD that contain class 5 indicator **(10.6.1)**

According to AAMI ST79, recommends practice using a Class 4 or Class 5 Chemical Indicator in each package **(10.5.2.2.2)**.

We are doing load monitoring with class 5 indicator in PCD and process Indicator which contain

1. Hospital Name

2. Load No

3. Machine No

4. Operator

5. Date of Packing

6. Date of Expiry

And Class 4 indicators in each pack

L. No or Cycle No	Machine No		Machine No	
1	Process &	Class V Indicator	Process &	Class- V Indicator
2	Process &	Class V Indicator	Process &	Class V Indicator
3	Process &	Class V Indicator	Process &	Class V Indicator
4	Process &	Class V Indicator	Process &	Class V Indicator

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References:

- . NABH manual.**
- . Hospital manual.**
- . ISO manual**
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- .Allison vd. Hospital central sterile and supply dept.. BMJ 1960 772-778**
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