Highlighted on Page no. 43 & 44

HOSPITAL INFECTION CONTROL MANUAL

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AMENDMENT SHEET

Sr.No.	**Section no & Page no**	**Details of Amendment**	**Reasons**	**Signature of the Preparatory Authority**
1	HIC 1	Revision of Hospital Infection Control Committee	As per 5th edition of NABH	
2	HIC 7	Revision of CSSD Policy for reusable devices	As per the Hospital Policy decision	
3	HIC 5	Revision of Hospital Acquired Infection Assessment tool	As per 5th edition of NABH	
4	HIC 3	Revision of Infection Control Daily round observation sheet	As per 5th edition of NABH	
5	HIC 6	Infection Prevention and Control guidelines for COVID 19	In view of COVID Pandemic	
6	HIC 6	Revision of audit tool for surveillance activities in high risk areas	As per 5th edition of NABH	

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I. INTRODUCTION

Hospitalinfections are an important cause ofmorbidity and mortality in the current day scenario. They significantly prolong hospitalstay and add to health care expenses. The most effective way to battle themis to prevent them.

Atm.G.mhospital,we have developed acomprehensive infection control program. The policies and procedures that we have adopted are evidence based and updated. They are commensurate with CDC (center for disease control), WHO (World health organization) infection control guidelines and have been adapted to local **needs and National Infection Control Guidelines 2017 draft version by NCDC (National Centre for Disease Control Government of India, Ministry of Health and Family Welfare.**

Thismanual is an attempt to collate the various infection control policies and procedures at our hospital including those on environment cleaning, hand hygiene, prevention of catheter related infection/healthcarepneumonia/urinarytract infections/surgical site infections,isolationprecautions,reporting of communicable diseases, management of occupational exposures to blood and body fluids as well as surveillance of Nosocomial infections. The hospital antibiotic policy is also alluded to as an attempt to prevent antibiotic misuse. To take the antibiotic policy from Dr Urekar 2016, 2017

Thismanual should educate health care staff atm.G.M. Hospital, Kamothe and further improve infection control practices.
Hospitalinfection control manual will be revised as and whenever required.

Thehospitalwill develop an annual infection control programme including awarenesstraining and measures to be taken to controland develop the Infection Control practices in the hospital.Planfor theyearisattached herewith as Annexure. Committee meetings, Surveillance rounds, training schedule of all categories, Infection Control Week, etc

Infection Control Committee:

Chairman Medical Superintendent

Team Microbiologist
Infection control
Nurse Chief Of Quality

Members Internal Medicine
Surgeon
Nursingsuperintendent
Intensivist

Representativesfrom
Engineering& Maintenance
Housekeeping
CSSD In charge
OT In charge
Dietician
Human Resource
Administrator
Blood Bank
Laboratory
Imaging center

Functions of Infection Control Committee:

- Reviewand approve a yearly programme ofactivity for surveillance and prevention
- Toreview the surveillancedata and identify areas for intervention. Ensure appropriate staffraining in infection control and safety
- Communicateand coordinate with other committees to ensure a safe and healthy

environment.

- Setgeneral infection control policy/guidelines and to provide input into specific infection control issues
- All departments to develop and implement infection control procedures
- Prevent and control Nosocomial infection through periodic surveillance
- Nosocomial infection, evaluation and investigation of infection outbreaks
- Educatestaff onmedical waste segregation and management.
- Management of occupational hazards such as exposures to blood and body fluids and Needle stick injury.

Functions of Infection Control Team:

- Takehospital visits periodically to ensureall the infection control practices are being practiced
- Reportany shortcoming noted to the Chairperson,co-ordinate with the chairperson in planning infection control programs andmeasures.
- Management of proper isolation technique
- Provisionofhand washing or alcohol +sterlium /chlorhexidine based hand cleansing

solutions

- Development of standards for management ofproper insertion of and maintenance of medical devices.

- Worksas a clinical supervisor by ensuring all the established policies and protocolsarepracticed e.g. Hand washing procedures, use of hand rub, isolation policies, care ofvascularaccess and urinary catheters, universal precautions, terminal cleaning and disinfection and follow up of exposure to blood and body fluid.

- Workas an investigator along with theinfection control committee to track down outbreaks, evaluate the equipments to detect risks leading to infection hazards

- Workas an educator by participatingin formalandinformalteachingprogramsfor doctors, nurses and other healthcare workers. Attend appropriate courses and workshops

- Works as a researcher in co-coordinating with the other members ofthe committee

- Reportof microbiology about Nosocomial strainseg. MRSA, ESBL,Surgical site infection surveillance

- Incase of open TB, informto ward in-charge on floor and immediately discharge or transfer the patient to isolation room

II. UNIVERSAL PRECAUTIONS:

- Universalprecautions are to be followed by all health care workers for all patients.

- Staffwith abrasions and cutsnot to attend patients, withoutuse of waterproof Band-Aidson the cuts.Use gloves whenever required.

- Washhands before and after work.
- Useonly disposable dressings and syringes.
- Alllinen of the infected patients to be soaked in 01% sodium hypochlorite solutions and handed over to laundry staff.

Personal Protective Equipment

a. **Gloves:**

Weargloves (clean, non-sterile glovesare adequate) when touching blood, bodyfluids, secretions, excretions, and contaminated items. Put on clean gloves just before touchingmucous membranes and non-intactskin. Change gloves between tasks and procedures on the same patients after contact with material that may contain a high concentration of microorganisms. Remove gloves promptly after use, before touching non contaminated items and environmental surfaces, and before going to otherpatient,and wash hands immediately to avoid transfer of microrganismto other patients or environments.

b. **Mask,Eye Protectionand Face Shield:**

Weara mask and eye protection or face shield toprotect mucous membranes of the eyes, nose, and mouth during procedures and patient-care activities that arelikely to generate splashes or sprays of blood, body fluids, secretions, and excretions.

c. **Gowns:**

Weara gown (a clean, non-sterile gown is adequate) to protect skin and to prevent soiling of clothing during procedures and patient-care activities that are likely to generate splashes of blood, body fluids, secretions, or excretions. Select a gown thatisappropriate for the activity and amount offluid likely to be encountered. Remove a soiled gown as promptly as possible and wash hands to avoid transfer of microorganisms to other patients or environments.

Hand Hygiene

- Handwashing is the single most important procedure for preventing Nosocomial infection as hands are an important route of transmission of infection.

- Handwashing involves both mechanical and chemical action. The running water and friction used in cleaning is the**mechanical** action. The soap will emulsify the fat and lower the surfacetension ofwater to facilitate removal ofthe micro- organisms, dirt and oil. This is the **chemical**action.

Indications for routine hand washing and hand antisepsis:

- Beforehaving direct contact with patients
- Beforedonning sterile gloves.
- Beforeand after any procedure
- Aftercontact with blood and body fluid.
- Aftercontact with inanimate objects(including medical equipment) in the immediate vicinity of the patients.
- Afterremoving gloves

What to Use:

- Whenhands are visibly dirty or contaminated wash hands with soap and water
- Ifhands are not visibly soiled, health care worker may use an alcohol-based hand rub.
- Beforeeating and after using of restroomwash hands with soap and water.
- Before giving feed to patient.

Recommendedhand washing agents:

- Liquidsoap
- Alcoholic+ chlorhexidine /sterlium hand rubs
  (Hand Washing Procedure- refer to Pictorial Chart)

III. ENVIRONMENTAL CLEANING

Effectiveenvironment cleaning is essentialsince contaminated surfaces may act as a reservoir of potential pathogens. The transfer of microorganisms fromenvironment

to patients is possible through air, water & via handcontact with the contaminated surfaces.

Hospitalenvironment is divided into two Zones:

- **Highriskzone: - All critical units (**MICU,SICU, PICU, CCU, CVTSICU, EMSICU, OT,), Laboratory, Triage, Dialysis, unit, Procedure room, Blood Bank.

- **Lowriskzone: -** Wards, Corridors, Non patientblock, Administrative block
  Hotwater and detergent are sufficient for most purposes. Cleaning removes organic matter, salts & visible soils, all of which interfere with microbial inactivation Thephysical action of scrubbing with detergents and surfactants and rinsing with water during environmental cleaningeffectively removesmicroorganisms.

Cleaning schedule:

Area	**Cleaningtime**
Lowriskzone	Ineachshift once and whenever required.
Highriskzone	Ineach shift once and whenever required
Walls–General area	Twicein a week and whenever required
Walls– Patient area	Beforeand after patient use. And once every night
Ceilingand Fan	7 daysand after discharge
Lobby	Ineach shift and whenever required

Discharge cleaning:

- Ondischarge of a normal patient, clear all furniture fromthe room.
- Remove the bed linen
- Changecurtains.
- Dodry dusting.
- Cleanall furniture, bed, mattress, and bedside locker withapproved disinfectant solution.
- Washbathroomwith detergent and water.
- Cleanfan, AC ducts, exhaust fan, walls.
- Mopthe floor with detergent and water.

Cleaning schedule of OT:

Before surgery:

- Allhorizontal surfaces with in the OT are damp dusted before the first scheduled surgical procedure of the day with a clean lint free cloth moistened in the approved disinfectantsolution.
- Visualinspection of commencementof the first surgical case.

Duringsurgical procedure:

- Accidentalspillage in the area outside the surgical field should be promptly cleaned by placing tissue papers over it then pouring 1 % sodiumhypochlorite over it.
- Leaveitfor 10 minutes then collect it inthe scoop, then mop with a disinfectant.
- Discardthe contaminated disposable items in yellow bag.
- Then mop the floor with disinfectant solution

Inbetween surgical procedure:

- Conducta visible check to inspect cleanliness of the operation theatre
- Reusablesuction bottles are emptied and cleaned under running water and dipped in sodiumhypochlorite for 20 min rinse with water and replace.
- Floor,OT table, OT light and other equipments cleaning to be done with disinfectant solution.

Endof the day:

- Terminal cleaning to be done with approved disinfectant.
- Allfurniture, wall surface, fixed andceiling mounted equipments; anesthetic equipments should be cleaned with disinfectant.
- Accessories,handles of cabinet are to be disinfected.
- Scrub to be cleaned with detergent solution under running tap water.
- Floorcleaning to be done with approved disinfectant.
- Bathrooms and toilets to be cleaned with detergent powder &Harpic
- Suctionbottles to be emptied, cleaned anddisinfected by immersing into 1%

sodium hypochlorite solution for 20 min, in case infected for 1 hour.

- Transportvehicles, including straps and attachments and instrument cabinet to be cleaned with approved disinfectant.

Weeklycleaning (Performed on Sunday):

- Remove all movable equipments and furniture fromthe OT
- Washwith soap, water & disinfectant solution
- A.H.U.tobe cleaned with dry vacuum cleaner (ducts and filters to be cleaned weekly and changed as required)
- Ceilingand walls to be cleaned with dry vacuumcleaner
- Floorcleaning to be done with approved disinfectant
- Foggingto be done at night

Periodical cleaning (Done every 6 months):

- Itis 2 day programme
- Theceiling area is opened and cleanedwith dry vacuumand sprayed with disinfectantsolution
- Ductsto be cleaned
- Ceilingis to be reestablished
- Floorcleaning is to be done with approved disinfectant solution
- Wallsand ceiling are sprayed with disinfectant solution
- Foggingto be done.

Surveillance:

- Airsample& swab to be taken weeklybasis, every Sunday morning and proper records to be maintained with OT head nurse.

Scrubsuit policy:

- Thereare 4 color codingof scrub suit

- Bluecolor: for doctors
- Greencolor: for Nurse
- Marooncolor: for technician
- Greycolor: for GDA's

Oneshould not enter the O.T without changing into scrub suit.
Noone should leave the O.T wearing O.T clothes and slippers in any situation.

Instrumentcleaning & de-contamination:

- All used instrument to be rinsed with soap &water and then cleaned with disinfectant…..Composition, then wash it with plain water.
- Sendthe instruments to CSSD in closed container for further treatment.
- For expensive, reusable items like endoscopes- refer to manufacturers manual for disinfection & reuse

Out Patient Area &Treatment room:

- Usedisinfectant for floor moping
- Wipe all tabletops, examination table, with disinfectant (0.5%) Composition lint free duster
- Wipe dressing trolley with spirit
- Changeall curtains every 15 days
- Changelinen on examination tableevery day or as and when required

Isolation room/Ward:

- Changecurtains every 7 days and after discharge of one patient
- Airductsto becleanedperiodically (once a week)
- Foggingto be done with approved disinfectant solutionafterdischarge of infected patient
- Cleaning with approved disinfectant solution to be done in each shift
- Admit a patient only after 1-2 hours after fogging
- Bathroom & Toilets should be cleaned with Phenol, twice in a shift

Disinfection of Blood and Body Fluids Spillage: Add the Spill Management Protocol

- Spillage of Blood/Body fluid over the floor
- Soakit with dry absorbent cotton/ tissue and discard it in the yellow bag
- Coverthe residual spillagearea with 1% sodiumhypochlorite solution for 20minutes
- Andthen mop it
- Proceedwith normal cleaning.

Important Aspects to remember while cleaning:

- Do not flick the dust while dusting or dry mopping
- Changecurtains once every fortnight
- Avoid using the patient's linen for dusting.
- Put'cleaning' sign board or 'wet' signage or 'spillage' signage
- Avoidcleaning in visiting hours.

IV. DISINFECTION AND STERILIZATION:

Medicalandsurgical devices may serve as vehicles for the transmission of infectious disease to susceptible host. Therefore it is most important thatall health care facilities should have comprehensive disinfection policy. The aimof disinfection policy is to make items and equipments safe for patients use by effectively removing microorganisms by cleaning, disinfection and sterilization.

Cleaning:

Cleaningof instruments before decontamination is an essential procedure. This allows the physical removal of dirt and microorganisms.Itprevents inactivation of the disinfectants by organic matter and allows complete surface contact during further decontamination procedures

Disinfection:

- Itis a process that inactivates non- sporinginfectiousgents, using either thermal or(moist or dry heat) orchemical means
- Chemical disinfection does not necessarilykill all microorganisms present but reduce themto a level not harmful to health.The level ofdisinfection

depends upon the category of the instruments.

Antiseptics:

- Chemical used to kill microorganismson skin or living tissues are known as antiseptics.

Sterilization:

- Itis a process, whichachieves the complete destruction or removal ofallmicroorganisms, including bacterial spore.

Categoriesofpatient careequipment:

Classification	**Itemuse**	**Goal**	**Appropriate process**
Criticalitems	Items entering steriletissue,the body cavity, the vascular systems and non- intact mucous membranes e.g. Surgicalinstruments	Objects will besterile(freeofallmicroorganisms including bacterial spores.)	Sterilization(or useofsingle use sterile product)
Semi-critical Items	Items that make contact,directlyor indirectly, with intact mucous membrane or non-intact skin e.g. Endoscopes, anesthetic	Objectswill be freeofallmicroorganisms with the exception of high numbers of bacterial spores	Highleveldisinfection;thermal disinfection; chemical disinfection
Non-critical Items	Objectsthat come intocontactwithintact skin but not mucous membranes e.g. Crutches, BP cuffs.	Objectswill be Clean	Lowlevel Disinfection Cleaning(manual or mechanical)

Disinfectionof patient care utilities:

Items	**Cleaning/disinfection**	**Time Required**	**Frequency**
Nebulizerset	Soap& water wash, dry & place on the trolley	Whenever found dirty	Individual Preference
Stethoscope	Alcoholswab/ Sterlium	1-2 mins.	Aftereachuse
Thermometer	Soap &water. Then wet swab followed by dry cotton swab	2-3 mins.	Individual for each patient. Cleanaftereach use.
Laryngoscope	Blade-withsoapandwater.	30mins.	Eachuse
	Handle& blade –Alcohol	2-3 mins.	
Nasalprongs (no tube)	Soap&water(onlyif dirty)	2-3 mins.	After each use
Oxygenmask	Soap&water& disinfectant	2-3 mins.	After each use
Ambu bag	Soap& water Infected patient- Disinfect by approveddisinfectant.	Dipfor 1 hour	Aftereachuse
Sputummug,Urinal, Bedpan	Soap &water:Immerse in 1%sodiumhypochlorite.	20to 30 mins.	Aftereachuse& once at night
Ventilator parts	Note: Refermanual. 1. Puret&Bennet company two ventilators 840 , 760 Autoclave the inspiratory & expiratory filters 2. E 360 has disposable filters as	NA	Individual Preference
Ventilator	Bacillocid spray or D125 Microgen	NA	Everyday
Emesis basin,Measuringcup Medicine	Soap& water	NA	Aftereachuse
Bpcuffs	Cloth-Soap & water Plastic material– Alcohol swab	NA	Wheneverrequired
Multipara Monitor	Spray What kind of spray		
Monitorcables	Alcoholswab	NA	Aftereachpt.&whenev errequired
Mattress	1% hypo	20 minutes contact	

Methods for sterilization:

Refercssd SOP Place it in the appendix typed and ready

Importantaspects:

- Allused articles should be disinfected in dirty utility room then dryit and send to the CSSD.
- Surgical Instruments:shouldbe sent in clean cabinet.
- Properrecord should be maintainedat all departments and in CSSD.
- Departments should return items nearing expiry date to CSSD one day prior to the date of expiry

V. INFECTION CONTROL POLICIESFORVARIOUSDEPARTMENTS:

Critical Care Area (MICU, SICU,CCU, CVTS ICU, PICU, EMS ICU):

- Before entering footwear to be removed & kept on racks outside the facility; followed by walk through clean area, then put on rubber slippers.
- Strictbarrier nursing care must be given to the patient.
- Entryof visitors should be minimized.
- Thoroughperiodic hand washing and uses of hands rubs
- (4%or 2% chlorhexidine+alcohol) before and after every patient care.
- Afterhand washing, hands tobe dried by tissue paper
- Disposableitems should be used for all patients.
- Aftersingleuse, all disposable items such as suction catheters, nasal prongs, facemask, enema catheters to be discardedas per bio-medical waste management protocols.
- Wearsterile gloves every time while handling the invasive lines(central line, dialysis line, etc.)
- Allthe color coded bags to be placed for proper segregation of the items.
- Punctureproof container (with properlabel) to be placed for sharps.
- Allthe cuts and abrasions of HCW to becovered with water proof Band-Aid while caring the patient
- I/Vcannula to be changed SOS (if any signs and symptoms of inflammation,

redness, or if IV is out.)

- Ventilator'scleaning
- Usedisposabletubing's(Respiratorycircuit) for ventilators with 360 and Suma.
- Changethe bacterial filters every 48 hrs when used.And the catheter mounts every 24 hrsand/orsos.
- Filter to be sent for autoclave for ventilators 840 and 760.
- Distilledwater to be changed every 8 hrs in flow meter.
- Disinfect all electrical equipment with Bacillocid spray / D 125.

Infection Control Policies for Endoscopy room:

Generalinstructions:

- Before entering footwear to be removed & kept on racks outside the facility; followed by walk through clean area, then put on rubber slippers.
- Allhealth care workers must wear the protective gown
- Disinfectionof the unit should be done with approved disinfectant solutions i.e. D 125 solution.
- Allthe procedures must be done with aseptic techniques.
- Strictrestrictions of the visitors inside the procedure room.
- Nosweeping, only dry mopping of the walls and floors to be done.
- Patientshould be provided with O.T gown or dress before procedure.
- T.Vmonitors should be cleaned with clean cloth (Bacillocid + lint free duster)
- Temperature ($20^{o}c$-$25^{o}c$) should be maintained in the procedure room. (Get a thermometer and measure temperature) Sis Aswini will maintain the ambient temperature chart
- Thoroughhand washing and use of hand rub (4% or 2%chlorhexidine+alcohol) before and after every patient care. Label the area for hand washing and Instrument cleaning

Cleaningand Disinfection of Endoscope:

- Thoroughmanual cleaning of the instrument and its internal channels is the most important part of the disinfection procedure.
- Cleaningwithwarmwater with an enzymatic cleanser (Dip the scope in 10% rapid enzymefor 5 minutes and flush it properly.

- Allthe channels to be flushed and brushed, if accessible, to remove all organic materials (e.g. Blood, tissue) and other residue.
- Reusableaccessories (e.g. Biopsy forceps or other cutting instrument) that break the mucosal barriers to be cleaned with warmwater and enzymatic cleanser and then dip in disinfectant and rinsed withdistilled water between each patient.
- Allthe cleanser solution to be discarded after each use.
- Afterproper cleaning the entire scope has to be completely immersed in disinfectant for specified time, after that the scopes to be washed with distilled water.PL SPECIFY THE TIME
- Theinstrument and its channels should bethoroughly forced air-dried. A final drying step that includes flushing all channelswith alcohol followed by purging the channels with air greatly reduces the possibility of the endoscope contamination by microorganism
- Beforethe procedures, the scopes to bethoroughly cleaned and flushed with normal saline or distilled water Pl verify this step
- Scopeshould be stored in scope container.

Infection control policy in Dialysis:

Generalinstructions:

- Before entering footwear to be removed & kept on racks outside the facility; followed by walk through clean area, then put on rubber slippers.
- Aseptictechnique to be maintained
- Allhealth care workers must wear the protective gown
- Strictrestriction of the visitorsinsidethe unit.
- Nosweeping, onlywet mopping of the walls and floors to be done.
- Temperature (20oc-25oc) should bemaintained inside the unit.INDENT A THERMOMETER AND MAINTAIN REGISTER FOR TEMPERATURE MONITORING
- A separate Dialysis Machine is used for Hepatitis-Bpositive and Hepatitis-C positive patients.
- Forreactive patients the machines to bekept separately. Never dialyze the non- reactive cases with positive cases
- Allnon-reactive patient's blood samples to be investigated every 3 months interval
- Hepatitisb vaccination must be done for all HCW whowill be posted in Dialysis unit
- Hepatitis– B Vaccination of Non- Reactive Patients in Dialysis Unit

- Beforedialysis, pre vaccination screening to be done
- 1ml Hepatitis B vaccine to be administered
- 1st dose any day
- 2nd dose after one month from 1st dose
- 3dose after 6 months from 1st dose
- After1month of administration of 3rddose,Anti hbsag Titer to be checked
- Nextdose will be decided according to the Titer level

Post – Dialysis:

- Careof Tubing
- Rinsewith RO water.
- Fill up with hypochlorite solution5% and keep for 30 minutes.
- Rinseagain with RO water and remove all the clots.
- Filltube with Renaline4% solution and preserve it in respective chambers ofeach patient.

Care of Cleaning Dialysis:……

- Rinsewith RO water.
- Fillit with Renaline4% solution and preserve accordingly in the chambers of each patient.
- Careof Machine
- Rinsemachine (for 15 minutes with water)
- Rinsewith the chemical (Bleach 10% for15 minutes) (Depends on themachine)
- Waitfor 15 minutes
- Againrinse with waterfor 15 minutes.

Cleaning of unit:

- Cleanpatients bed after each dialysis with approved disinfectant solutions.
- Moppingshould be done in each shift and a required with approved disinfectant solutions.
- Everysaturday end of the day, clean whole unit with warm water and detergent.
- Cleanallfurniture oftheunit with approved disinfectant solutions.
- Cleandressing trolley and injection loading area.
- Spray approved disinfectant solutions, and closes the unit for 1 hour. Then do

through moping of unit.

- Beforeand after cleaning take culture swab for surveillance and surveillance record to be maintained with head nurse.

Operation theatre:

- Physicaldesign elements
- Temperature: between 20 to 22 degree centigrade.
- Humidity: 50% to 60%.
- Airhandlingunit: 5 microfilters changes per hour.
- Airflow should be unidirectional, positive airflow.

Laminar Air Flow:

- Airflow is unidirectional.
- Totalair changes 20-30/ hour
- Positiveair pressure with velocity 110ft/min at filter point and 50-70 ft. /min at the operating table level.
- Filtersused are pre filter of 10 micron, micro filters of 5 micron and hepa filters of0.3microns. Verify with Mr AMOL

Methodsofdisinfection:

- Surfacecleaning
- Fogging
- Keepair conditioning switched off
- Switchoffall lights
- Allequipments to be covered with plastic
- Keeproomclosed for 1-2 hours
- Switchon exhaust for 15 minutes prior starting AC
- Airconditioning to be started after 1 hour of the procedure.

Preparation and concentrationof disinfectant for fogging:

Forhydrogen peroxide and silver nitrate:

Space	Dilution	Foggingduration
Cu.Ft.		
1000	200mlin 1000ml	20min
2000	400mlin2000ml	40min
3000	600mlin3000ml	60min

Infectioncontrol policies in pathology:

Referlaboratory SOP

Infectioncontrol polices for Laundry:

Generalinstructions:

- Healthcare Workers, involved in collection, sorting, transportation, and washing of soiled linen should be trained
- Allthe Health Care Workers must wear mask,plastic apron, during the laundry process
- Duringsorting, all the hcwmust wear mask & gloves
- Allthe infected linen (infected casessuchas tuberculosis, diphtheria, skin lesion, blood borne pathogens HIV, HIV+ve and multi drug resistant bacteria) to be disinfectedwithapproved disinfectant solutions in ward itself.
- Allthe infected wet linento be squeezed out properly before sending to laundry
- Alltheblood soaked linen (green linen fromo.T) to be disinfected with approved disinfectant solution and washed with water before sending to laundry
- Ifemployees dress is soiled with infected blood or body fluid put in yellow bag and give to laundry Sis Divya Krishnan – Please check the above

Laundry Process:

Refer laundry SOP – No policy available

Kitchen:

Refer Kitchen SOP – Policy to be appended

CSSD:

Refer to CSSD SOP – Policy to be appended

Mortuary:

Refer to Mortuary SOP – Sis Richa might be having the Protocol

Blood Bank:

Refer to Blood Bank SOP – Dr Seema , please provide the protocol

VI. ISOLATION PRECAUTIONS AND POLICY

Generalinstructions:

- Universalprecautions are to be followed for all patients admitted to the hospital irrespectiveof their diagnosis.
- Specialtransmission based precaution regarding blood borne pathogen isolation (BBP), airborne pathogen (droplet) isolation and contact isolation have to be followed for patients having specific diseases.
- Whena patient isadmitted,the exact diagnosis may not be known and hence based on symptom complex, the isolation method is provided below.
- Oncethe diagnosis is established; initiation, change or stoppage of an isolation method may be warranted. The list of disease withisolationmethod and duration of isolation is also listed.

Definitions:

Airborneisolation:

- Negative-pressureroompreferred.
- Forpatients with chicken-pox, measles only immunized staff to provide care
- Forpatients with open tuberculosis, wear mask before entering the room
- Limit patients movement, place a surgical mask if patient is to be transported outside

Contactisolation:

- Privateroompreferredor else cohort patient with patient ofsimilar illness
- Weargloves prior to any patient contact
- Wearclean non sterile gown if any contactwith body fluids, infectious materials or spillage anticipated
- Remove the gloves and gown before leaving the room/patient care area
- Donot touch environment surface, fomites after removing the gloves/gown
- Limit patient transportation.

Droplet isolation:

- Privateroompreferred, else cohort patient with patient ofsimilar pure illness.
- Weargloves prior to any patient contact.
- Wearclean non sterile gown if any contact with body fluids, infectious materials or if spillageisanticipated.
- Remove the gloves and gown before leaving the room/patient care area.
- Donot touch environment surface,fomites after removing the gloves/gown.
- Limit patient transportation.

Blood borne pathogen isolation:

- Handwashing before and after patient contact
- Weargloves if contact with blood, body fluids, secretions,excretions and contaminated items anticipated
- Wearmask, eye protection and gown before activities likely to generate splashes andsprays
- Takeutmost care to prevent needle stick injury
- Handleall patient care items properly, dispose appropriately waste and sharps.

Empiricisolation precautions to beinstitutedtill diagnosisestablished:

Sr. No.	Condition	Potentialpathogens	Typeof isolation
1	Diarrhea	Entericpathogens	Contact
2	Meningitis	Meningococci	Droplet
3	Petechialrash	Meningococci	Droplet
4	Vesicular Rash	Varicella zoster	Airborne&Contact
5	Maculo popular rash in child	Measles	Airborne
6	Cough,fever and upper lobe Pulmonary infiltrate in an adult	Measles	Airborne
7	Paroxysmal/ severe persistentcough	Pertussis (Whoopingcough)	Droplet
8	Historyof infection or Colonizationwithmulti drug resistant organisms	Resistant bacteria	Contact
9	Skin,wound or urinary tract Infection in a patient with recent stay at hospital or nursing home	Resistant bacteria	Contact
10	Abscessor draining wound thatcannotbe covered	Staphaureus	Contact
11	Respiratoryinfectionininfants Andchildren	RSV,Para influenza	Contact

Isolationprecautions for specific conditions:

Disease	Isolation	Duration

Abscess(major)	Contact	DI(Duration of Illness)
Celluliteswith drainage	Contact	DI
Chickenpox	Airborne, Contact	Tillall lesions have crusted
Conjunctivitis(viral)	Contact	DI
Diphtheria	Droplet	Untiltwo cultures taken 24 hrs. Apart are Negative
Diarrhea	Contact	DI
Hepatitisa	Contact	For 3years of age duration of hospitalization; Inchildren 3 to 4 years of age, until 2 weeks after onset ofsymptoms; and in others, until 1 week after onset of symptoms
Hepatitisb	Bloodborne Pathogen	DI
Hepatitis	Bloodborne Pathogen	DI
HIV	Bloodborne Pathogen	DI
Herpessimplex	Contact	DI
Herpeszoster in Immune-compromised or disseminated	Airborne, Contact	Tillall lesions have crusted
Localizedherpes Zosterin normal immune status	Contact	DI
Influenza	Droplet	DI
Avianinfluenza in Humans	Airborne/contaminatedact	7days (21 days in less than 12 years)
Measles	Airborne	5days after rash
Mumps	Droplet	Tillswellingsubsides (usually 9 days)

Meningococcal Infections	Droplet	24hrs. After starting antibiotics
MRSA	Contact	Tillcultures negative
Pertussis	Droplet	5days after starting antibiotics
H1N1	Droplet/Airborne	Tillfurther investigations
Pneumonia in infants and young:		
Rabies	Contact	DI
Rubella	Droplet	7daysafter onset of rash
Sorethroat/Scarlet Fever	Droplet	24hours of antibiotics
Tuberculosis Pulmonary	Airborne	Till3 sputumsmears collected on different Daysarenegative

Policy for Patient with Smear Positive Pulmonary Tuberculosis:

Ascertain whether hospitalization is required for the patient

Hospitalization not required:

- Informthe concerned HOD/consultant for immediate discharge or shifting of the patient
- Meanwhilegive the patient surgical mask to wear
- Ensurethat there is no post-operative patient or immuno-compromised patient in the vicinity.

A. Hospitalization required:

- ICU care not required.
- Shift the patient to the atb ward.
- Informall the healthcare workers about the isolation of the patient.
- Keepthe door of isolationroomclosed at all time
- Providefiltermask to the visitors of the patient.
- Restrictthe patient's movements to the roomitself.
- Oncehealth is stable discharge immediately.

B. Icucare required

- Ifthe patient is on closed circuit ventilation, he/she need not be isolated
- Non-ventilated patients to be keptin negative pressure isolation room
- Patient is step down to a single room
- Instituteall air borneprecautions in addition

Policy for Patient with Varicella Zoster (Chicken Pox):

- Shift the patient immediately to the isolation room
- Keepdesignated immune staff (previous history of chicken pox orthose that received two doses of the vaccine)
- Immunizethe exposed nurse if not immune
- Keepthe door of the roomclosed at all times
- Instituteall air borne precautions andabovegivenprecautions till the scabs dry.

Policy for Patient with Methicillin resistantstaphylococcusaureus(MRSA): Dr Suhasini to verify the protocol

- Methicillinresistant*staphylococcusaureus*is a human pathogen thatisresistanttopenicillin, Cephalosporin and a number ofother antibiotics.
- Drugslikevancomycin, Teicoplanin and Linezolid are recommended to treat mrsainfection.
- Screenall the patients with any ofthefollowing risk factors for MRSA:
    - o Interhospital transfer.
    - o Admission with central line access in-situ from other hospitals.
    - o Admission with Foleys catheter in-situ from other hospitals.
    - o Previoussurgery or hospitalization during past 12 months
    - o Placethe patient under contactisolation till report ofmrsastatus is received

Sourceofinfection:

- Mrsais common in many hospitals. Infected and colonized hospital patients are the major primary reservoirs in the health caresetting. Colonization of hospitalized patients depend on:
- Lengthof hospital stay
- Severityof underlying disease.
- Presenceof wound and / or invasive devices
- Unhygienicenvironment
- Infectedpatients of MRSA
- Nutritionalstatusofthe patient
- Carrierstatus of hcwsandsurgicalteam

Modeof transmission:

Themajor route of transmission of MRSA within institutionis:

- Patientto patient via hands ofthe health care workers
- Inadequatehand washing facility
- Inadequateknowledge about infection control practices and policies
- Non-compliance of healthcareworkersfor hand-washing practices
- Colonizedsurface and environment are also significant factor

Mrsapatient care:

Ifpatient is identified or detected as acolonized in the ward/ICU, following steps to be carried out in department (ward/ICU):

- Isolationof patient
- Handwashing with 2% chlorhexidinescrub(clean and dry with tissue paper) after touching blood, body fluid, secretions, excretions and contaminated items.
- Useof personal protective equipments
- Gloves:use of gloves according toneed (sterile or unsterile)
- Mask:use of mask where droplet or airborne infection are anticipated. (E.g.whilechestpt.)
- Gown:use clean gowns to protect skin and prevent soiling of clothes
- Plasticaprons while doing any procedure or chances of splashing
- Roomsurface should be moped with disinfectant solution
- Dailybath or sponge to patient with 2% chlorhexidine at least for week till 3 negative screening
- Healtheducation to relative regarding the transmission
- Disposalof waste according to policy
- Allused linen should be disinfected before sending to laundry.

Treatment of MRSA Carrier:

- Nasalcarriage :1%chlorhexidine paste thrice daily for 15 days
- Mupirocinin a paraffin base should be applied to the anterior nares thrice daily for 5 days.
- Skincarriage: the staphylococcal load on the skin may be reduced by using an antiseptic detergent for skin hair washing for one week. The agent used includes chlorhexidine, povidine iodine and triclosan
- Treatment of other site colonization Hexachlorophene powder can be applied for colonizationofaxilla and groin (not to be used on broken skin.)
- Seriousinfection should be treated with Inj. Vancomycin.

Clearance:

Infected/ colonized patient should be screened weekly. Three negative screening indicates clearance Health care worker withnasal carriage can continue working once on Mupirocin which is effective within 24 hours.

Policy for Patient with Hepatitis-B, Hepatitis-C, andhivinthe Ward:

- Staffshould follow strict universal precautions during care of the patient
- Casesdiagnosed outside should be confirmed after admission of the patient
- Hcwto ensure that all the cuts and the abrasions be coveredwith waterproof band- aids while caring for this patient
- Hcwgiving care to the patient must havereceived completed dose of Hep-B vaccine
- Allusedlinen patient should be disinfected before sending to laundry

Pre-Operative Preparation:

- Ensurethat pre-operative profile is done for the patient
- Cleaningof the part should be done withchlorhexidine or 0.5% betadine
- Allthe sharps should be disposed along withneedle in the puncture proof container
- Allhealthcare Workers should weargloves while preparing the patient
- Priorintimation to OT

Inthe Operation Theater:

- Postas last case of the day
- Allthe team members should wear double gloves, gogglesand protective clothing during the procedure
- Disposablepatient draping should be used
- Allthe instruments usedfor the procedure to bedisinfected thoroughly with disinfectant and then plain water
- Allthe used linen to be dipped in the disinfectant solution foronehour and sent to the laundry
- Aftershifting the patient, all the surfaces, wall and table to be cleaned with approved disinfectionsolutionandthereafter fogging, after 3-4 hours thoroughly clean all the surfaces with disinfectant solution.

VII. PREVENTION OF Healthcare Associated Infection

A. Preventionof Catheter Related Blood Stream Infection (CRBSI)

Peripheralcatheters:

- Establishthe vein prior disinfection. Upper extremity preferred over lower extremity
- Practiceprocedural hand washing technique with soap & water OR Use hand rub.
- Disinfectthe site selected using "3swabmethod"withisopropyl alcohol+ Chlorhexidine and wait till dries.
- Cleangloves are appropriate in non-touch technique is used
- Donot touch the site ungloved after disinfection
- Donot reuse a vascular access device
- Leavesite visibly dry after access is established
- Applydressing
- Changedevice if any signs of infection, infiltration &phlebitisor patient complaint of severe pain.

Centralvenous Catheters (CVP) Insertions:

- Sub-clavianpreferred over jugular preferred over femoral
- Inchildren no such preference, use the route which is most comfortable
- Useminimum number of lumens
- Antibioticcoated catheters superior to routine catheters ifthey are expected to remain in place for more than 5 days SIS DIVYA PL CHECK
- Practicesurgicalhand washing prior to procedure
- Usemaximum barrier precautions (cap, mask, sterile gown and gloves.)
- Cleanthe site with isopropyl alcohol and2 % chlorhexidine or 10% betadinemay be used. Clean in circular manner each (1 min) time for 3 times if povidine iodine is used allow at least 2 minutes for drying
- Insertcatheter with aseptic precautions
- Leavesitedry after insertion
- Afterinsertion clean the areawith 2% chlorhexidine and pat dry with sterile gauze and apply the Micropore dressing with plain sterile gauze
- Donot apply any ointment,betadine,Mupirocin
- Dressingandmaintenance
- Regulardressing every 2 days for gauze and 7 days for transparent dressing
- Changedressing earlier if damp, loosened or soiled
- Properhand hygiene with sterilegloves before dressing
- Inspectfor any evidence ofcathetersite infection
- Cleanwith 2% chlorhexidine in circular manner dry with sterile gauze apply sterile gauze and apply dressing

- Cleancatheter and stopcocks with 2 % chlorhexidine&wrapthe 3 ways with sterile green towel.
- Ifmulti lumen catheter is used designateone port exclusivelyfor hyper alimentation.
- Cleanall stopcocks with 70% alcohol or 2 % chlorhexidine prior to use.
- Capall stopcocks when not in use.

Removal:

- Remove when no longer necessary
- Noneed to send routine surveillance cultures fromthe catheters. Iftipofcatheter is send for cultures then send parallel blood cultures fromperipheral site along with tip for culture
- Replacecatheter if there is any evidence of infection at exit site
- Remove all catheters if person is hemo-dynamically unstable and CRBSI is suspected
- Ifcrbsi is suspected do not replace catheters over a guide wire.

Arterialcatheters:

- Thesame principles for insertion, maintenance and removal as CVC apply
- Usedisposable transducers preferably. Usesterile reusable transducers inaccordance with manufacture's instruction ifdisposable transducers not available
- Replacethe transducer at 72 hours interval along with other components of the systemincluding the tubing, the flush solution and continues flush device
- Keepall components of the pressuremonitoringsystemsterile
- Minimize manipulations and keep a closed flush system
- Whenthe pressure monitoring system isaccessed through a diaphragmrather than stop cock wipe diaphragm with 70% alcoholor 2 % Chlorhexidine prior to access
- Donot use any parenteral fluids or dextrose containing fluids through the system

Umbilical catheters:

- Thesame principles as for CVC apply
- Umbilical artery catheters should ideally not to be left for more than 5 days. Can be kept up to 2 weeks if aseptic precautions followed.
- Remove earlier and do not replace if CRBSI,thrombosis, vascular insufficiency is suspected.

Administration sets, fluids, medication:

- Bloodand Blood Products: Single Use
- Lipid,Amino acid : 24 hours
- Primary Infusions :72 hours
- Antibiotics:72hours
- Others:72hours
- Usecollapsible bags for IV fluids whenever possible especially for patients at high risk for Healthcare associated infection (avoid using needles for air inlets.)
- Preferablyuse single dose vials.
- Ifmulti-dose vials are used, refrigerate after each use andwipe the access surface with70%alcohol before inserting the needles.

B. Prevention of urinary tract infections (CAUTI):

- Educatepersonnel for correct techniques of catheter insertion and care. Periodically re-educate HCW in catheter care
- Catheterizeonly when necessary. Condomcatheterdrainage,supra-pubiccatheterization, and intermittent urethral catheterization can be useful alternatives to indwelling urethral catheterization
- Usesmallest suitable bore catheter consistent with gooddrainage and to minimize urethraltrauma
- Proceduralhand washing with soap & water or use hand rubs
- Insertcatheter using aseptic technique and sterile equipment. Use sterile gloves, sterile drape, swab, lubricant jelly and antiseptic solution(betadine)Securecatheter properly to prevent movement and urethral traction
- Asterile, continuously closed drainage systemto be maintained
- Thecatheter and collecting bag should be emptied regularly using a separate collection containerfor each patient(the draining spigot and nonsterile collecting container should not come in contact.)
- Thecollecting bag should always be kept below the level of the bladder
- Ifbreaks in aseptic technique, disconnection, or leakage occur, the collection system should be replaced usingaseptic technique after disinfecting the catheter-tubing junction
- Ifsmall volumes of fresh urine are needed for examination, the distal end of the catheter, or preferably the sampling port if present, should be cleansed witha disinfectant, and urine then aspirated withsterileneedle and syringe

- Largevolumes of urine for special analysisshould be obtained aseptically fromthe drainage bag
- Daily care to be given with betadine solution
- Regularbacteriologicalmonitoring of catheterized patients is not recommended
- Changingfor catheter and bag
    - Simple Foleys Cath.: 14 days
    - Silicone Foleys Cath: 3 months
    - Urinecollection bag: With Foleys Cath. Or If Spoiled, any leakage

C. Prevention of health care associated pneumonia: Ventilator associated pneumonia (VAP)

- Usenoninvasive ventilation to reduce the need or shorten the duration of endotracheal intubation.
- Unlesscontraindicated by the person's condition performortracheal rather than naso-tracheal intubation.
- Performendotracheal intubation withsterile technique after procedural hand wash/hand rub and sterile gloves.
- Avoidfrequent endotracheal intubation.
- Iffeasible, use an endotracheal tube with a dorsal lumenabove the endotracheal cuff to allow drainage (by continuous or frequent intermittent suctioning) of tracheal secretion that accumulates in the patient's sub-glottic area.
- Inthe absence of medical contraindication elevate head end at 30 to 45 degree to preventaspiration.
- Performgood chest physiotherapy for incubated patients. And do proper suctioning with aseptic precautions.
- Maintaingood oral hygiene to prevent oropharyngeal colonization and subsequent aspiration.
- Changethe ventilator tubing wheneverrequired and use only single use tubing.
- Routinelyverify appropriate placement of the feeding tube.

Preventionof postoperative pneumonia:

- Instructpreoperative patients, especially those at high risk forcontractingpneumonia, about taking deep breaths and ambulatingas soon as medically indicated in the post-operative period

- Insist patient for chest physiotherapy (incentive spirometry) on post-operative
- Careof patients with tracheostomy
- Performtracheostomy under aseptic conditions
- Dailytracheostomy care to be given
- Followasepticprecautions while doing tracheostomy suction
- Whenchanging a tracheostomy tube, weara gown, use aseptic technique and replace the tube with sterile new tube.

D. Preventionofsurgicalsiteinfections (SSI)

Pre-operative:

- Wheneverpossible, identify and treat all infectionremote to the surgical site before elective operation and postpone elective operations on patients with remote site infection until the infection has resolved
- Donot remove hair preoperatively unless the hair or around the incision site will interfere with the operation
- Ifhair is removed, remove immediately before the operation, preferablywith clip removal
- Controlblood glucose of diabetic patients
- Requiredpatients to shower or bathe with 4% chlorhexidine twice pre-operative or at least the night before the operative day
- Encouragetobacco cessation in any format least 30 days before the elective operation
- Keeppreoperativehospital stay as short as possible.

Peri-operative:

- Keepnails short and do not wear artificial nails. Do not wear hand or armjewelry
- Changeinto scrub suit and wear appropriate personal protective equipments (cap, mask, eye protection,)
- Dosurgical hand washing
- Donsterile gown and sterile gloves
- Changethe PPE when visibly soiled, contaminated, and/or penetrated by blood or other potentially materials
- Useappropriate antiseptic agent for skinpreparation of the

patients(70%alcohol,10%povidine iodine, 4% chlorhexidinegluconate)

- Followthe antibiotic policy for antibiotic prophylaxis
- Handletissue gently, maintain effective hemostasis, and minimize devitalized tissue and foreign bodies (i.e. Sutures, charred tissues, necroticdebris.)And eradicate dead space at the surgical site
- Ifdrainage is necessary, use a closed suction drain. Place a drain thought a separate incision distal fromthe operative incision. Remove the drain as soon as possible

Post-Operative:

- Protectwith a sterile dressing for 24 to 48 hours post-operatively an incision that has been closed primarily
- Washhands before and after dressing and any contact with the surgical site
- Whenan incision dressing mustbe changed, use sterile technique
- Educatethe patient on discharge regarding proper incision care, symptomsof SSI, and the need to report such symptomsdrsuhasini shall take it up and do the needful

Antibiotic prophylaxis for surgery

- Refer antibiotic policy.

VIII. ANTIBIOTIC POLICY:

- Refer Antibiotic policy.

IX. BIO-MEDICAL WASTE MANAGEMENT:

Thehospital follows 3 color codes for segregating waste and disposal as per guidelines.

Blackbag:

Thisencompasses general waste &kitchenwaste, is sent to the NMMC for final disposal.Itincludes:

- Officepapers,
- Papercups,
- Tissuepapers,
- Kitchenwaste.

Yellowbag:

Thisencompasses the infectious wastewhich is handed over to Mumbai waste managementltd. It includes:

- Human tissues.
- Organsand body parts.
- Bloodand body fluid tinged dressingmaterials.
- Microbiology waste.
- Pathologywaste.

Bluebag:

Thisencompasses the infectious plastics waste which is handed over to Mumbai waste

management Ltd. It includes:

- Syringes.
- Catheters.
- All Tubing.
- Ivbottles.
- Cap&mask.
- Teenasheet.
- Adult& baby diaper
- Gloves

Punctureproof container:

Thisencompasses what all which can puncture skin which is handed over to Mumbai waste managementltd. It includes:

- Blades
- Needles
- Scalpels
- Broken glasses
- Ampoules

Unbrokenglasses and Plastic bottles:

Collectionofunbroken glasses and plastic bottles should be in different blue bag at dirty utility. It is handed over for scrap selling.

Change the SOP to the new one Sis Divya Krishnan

X. OCCUPATIONALEXPOSURESTO BLOOD BORNE PATHOGENS:

Managementprotocol:

- Donot squeeze or suck the area
- Donot panic
- Washthe area with plenty of soap and water immediately
- Reportto the casualty and give all details of exposure to CMO about exposure/source and your own immunization status
- Informto supervisor on duty and infection control nurse about incident
- Followthefollowing chart for treatment.

Postexposure prophylaxis for HIV:

- Exposureof blood and body fluid to intact skin does not require any PEP.

Determineexposure code:

EC-1= Small volume (e.g. Few drops/contact for short duration)
EC-2=Large volume (e.g. Large volume/major splash/contact for long duration) several minuteormore.
EC-3=Deep puncture/large volume/visible blood on device.

Determinesourcecode:

Sourcesero –Ve =SC 1
Sourcesero +Ve =SC 2
Sourceunknown =SC 2 $\Longrightarrow$ SC3

Useof following treatment regimen as per EC& SC:

EC	**SC**	**PEP Regimen**
1	1	PEP not required
1	2/3	basicregimen
2	2/3	Expanded Regimen
3	2/3	Basic Regimen& Expanded Regimen
2/3	1	Evaluate Risk Factor of Source*

- Source high risk behavior Yes No

If'No', then No Treatment /If 'YES', Follow Basic Regimen.

Basicregimen:
Tab.Duovir(Lamivudine 150mg+ Zidovudine300mg) tab twice a day for 28 days.

Expandedregimen:
Basic+ Indinavir 800mg thrice a day for 28 days.

Highriskbehavior:
Checkwith the high risk assessment of source patient.

Treatmentto be initiated within 4 hours & not later than 48 hours.

PEP for Hepatitis-B virus:

Immunizationstatus of staff:		
Non-immunized	Yes	No
Immunizationschedulecompleted (3Doses)	Yes	No
Partiallyimmunized (one or doses orinappropriately	Yes	No
Antibodytiter known (> 10 IU)	Yes	No

Pepdeterminationfor HBV:

Sr. No	Immunizationof staff	Source	Treatment
1	Fullyimmunized	Hbsag–Veor +Ve	No HB Ig,No vaccine
2	Partiallyimmunized	Hbsag–Ve	Followvaccine aspervaccinationschedule.
3	Notimmunized	Hbsag–Ve	Noaction if antibody titers are

			Adequate(>10 IU/Ml)
4	Partiallyimmunized	Hbsag+Ve	Starthbig&follow Vaccinationas per schedule
5	Notimmunized	Hbsag+Ve	Starthbig&followvaccinationas per schedule

Hbig Dose: 0.07ml/kg IM stat.

Ifantibody titer is unknown: Advice for a titer checks within 24 hours & initiates Ig as per indication.

Followthebelowmentioned schedule for vaccination if staff not immunized

0dose (1ml) a t the time of injury
1st dose(1 ml)after 1 month
2nd dose(1ml)after 6 months

XI. HANDLING OF OUTBREAKS:

Definition:

Anincrease in the isolation rate of an organismor clustering of clinical case in the same time frame suggests as outbreak.

Factorssuggesting an outbreak:

- Alaboratory report of a bacteriology specimen grows an alerting organism.
- Twoormore patients are found to have aninfection attributed to a species not previously documented, particularly if it has occurred after a surgical procedure.
- Theclinician or ward/department staffreports multiple infection ofa similar nature.

Investigationof an outbreak:

- Anoutbreak is an infection control emergency; measure should be taken as soon as out-break is suspected
- Beginpreliminary evolution and determine a background rate of infection
- Confirmthe existence of an outbreak
- Confirmthe diagnosis usingthemicrobiological methods
- Createa case definition that may include laboratory and clinical data. Start with a

broad case definition that can beredefined at a later date

- Developline listing by identifying and counting cases or exposures. Describe that data in terms of time, place and person.Remember that cases may have been discharged fromthe health care facilities.
- Takeimmediate control measures. Determine who is at risk ofbecoming ill. Look at changes that may have affected the rate ofinfection, e.g. New staff, new procedures, new laboratory test, and health care workers, patient ratio. Etc.
- Communicateinformation to relevant personnel.
- Write a coherent report(preliminary and final).
- Summarize investigationand recommendations to the appropriate authorities.
- Implement long terminfection control measures for prevention of similar outbreaks.

XII. SURVEILLANCE AND MONITORING:

- Labrecords scrutiny.
- Infectioncontrol nurse examines lab reports daily and discusses it with microbiologist and consultants whenever required.
- Thenvisit all patients and collect the history of patients as per infection control point of view.
- Dailyvisits to all wards and department.
- Infectioncontrol nurse has tovisit all wards and department daily to examine all records of all clinical infections.

Healthcare Associated Infection rates:

- Surgical siteinfection (SSI)
- Intravascularcatheterinfectionratesperthousand catheter days.
- Ventilator associated pneumonia rates per thousand ventilator days.
- Urinarytract infection rates per thousand catheter days.

Periodical tests done by infection control committee:

Testdone on	**Testedfor**	**Frequency**
Water	Microbiology	Everymonth
Airsamples: OT Dialysis icus Surfaceswabs	Microbiology	Everyweek
Airsamples:	Microbiology	6weekly

Wards,ER, OPD		
F& B: Foodplates	Microbiology	Everymonth
Foodhandlers: Stool, blood test& nasal swabs	Stoolfor routine and Microscopy	Everysix monthly

Auditingdone by Infection control team:

- Centrallineaudit
- Peripheralline audit
- Foley'scatheter
- Handhygiene compliance Audit

XIII. EMPLOYEE WELFARE MEASURES:

Hepatitis-B Vaccinationfor Health Care Workers (HCW)

Immunization / Vaccination:

Immunization against Hepatitis-B will minimize the risk of Hepatitis-B transmission through blood and body fluid contacts. All the health care workers are immunized against Hepatitis-B vaccination. The ICN coordinates the programme under the guidance of HR and the Infection Control Committee.

Vaccinationschedule:

Sr. No	Duration	Dose
1.	0Month	1st Dose (1ml I/M in adults)
2.	1Month	2nd Dose (1ml I/M in adults)
3.	6Month (fromthe1stdose)	3rd Dose (1ml I/M in adults)

XIV. NOTIFICATIONS TO MUNICIPAL CORPORATION:

Thefollowing cases are notified to Municipal Corporation .The data is sent by Infection Control Nurse:

Water Borne Diseases:

- Vibrio cholera
- Hepatitis A and E
- Typhoid
- Filariasis
- Dysentery

Vector Borne Diseases:

- Malaria
- Dengue
- Kala-azar
- Japanese Encephalitis
- Chikungunya

Others:

- HIV/ AIDS
- Acute Flaccid Paralysis (AFP)
- Chicken Pox
- Hepatitis B and C
- Tuberculosis
- Leprosy

- Leptospirosis
- Polio
- Rabies

XV. ANNEXURE:

All formats used for monitoring the infection control practices.

STANDARDIZATION OF DISINFECTION SOLUTION FOR ICU AND WARDS

Disinfection & Skin antisepsis	**Standardization**
Hand Antisepsis for Invasive procedures	**Surgical Scrub with:** 4% chlorhexidine Followed by micro shield (2.5% chlorhexidine and 70% ethanol).
	Surgical Scrub OT: 7.5% povidine iodine thrice /4%chlorhexidine scrub thrice followed by micro shield(2.5%chlorhexidine and 70% ethanol)
Skin Preparation	**Peripheral line insertion** : micro shield, chlorhexidine 2.5% and 70% ethanol
	Blood culture: 10% betadine three times followed by micro shield (2.5% chlorhexidine and 70% ethanol)
	Central line Insertion: Scrub with 4% chlorhexidine in a circular manner thrice followed by cleaning of the area with micro shield (2.5% chlorhexidine and 70% ethanol).
	Skin preparation: Body bath with soap and water and use the triclosan as a moisturizer and keep contact time of 1 minute and rinse body with plain water. Followed by10% betadine paint on the designated surgery site / all over the body.

	<u>Foleys catheter insertion:</u> 5% betadine solution for cleaning the external genital area and for the prepuce. In case of female mucus membrane to be cleaned with Savlon solution 1ml in 15 ml water dilution.
	<u>Skin preparation for surgery OT:</u>Scrub with 7.5% povidine Iodine twice followed by swabbing with 2.5% micro shield hand rub, wait for it to dry then paint the site with 10% betadine.
Floor and surface Cleaning	**<u>Fogging:</u>** Eco shield (20%) Surface disinfection during fogging - Eco shield (10%) Electrical equipments - Bacillol 25. Disinfectant solution in Sharp containers - Lonza ID-50 (2%). Daily surface disinfection – Bacillocid Extra (1%)
Decontamination of non – critical instruments used for patient care	Solution Lonza guard ID 50 2% (400 ml in 20 liter of water)
Disinfection of equipments used for care of patients	Chittle forceps: whole unit to be autoclaved daily and to be kept dry. Cidex OPA all other critical care equipments that cannot be autoclaved contact time 10 minutes.
Corridors and General lobby Cleaning	R2 solution (2-5%)