

Document Name -

Infection Control Manual

Objective elements – HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



Control of the Manual

The holder of the copy shall be responsible for maintaining the document in good and safe condition and in a readily identifiable and retrievable manner.

The holder of the copy of this Manual shall maintain it in its current status by inserting latest amendments as when the amended versions are received.

Department HOD is responsible issuing the amended copies to the departmental copyholders and submit the amendments/revisions if any to the Accreditation coordinator as and when it is amended. HOD with the NABH Champions shall review the Manual yearly.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Objective elements – HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



SOP 1.: Introduction and Rationale to IPC

- Purpose: This document is to address several key areas essential for maintaining a safe environment for all patients as well as healthcare workers of KEMH
- Scope: This document applies to all the clinical areas of hospital of KEMH
- Distribution : To a) All Departments
 - b) Hospital administration
 - c) Engineering department

• Definitions:

Healthcare Associated Infections (HCAI) or Hospital Acquired Infections (HAIs) - These are infections that were neither present nor incubating at the time of health care delivery but developed usually after 48 hours as a consequence of healthcare delivery.

Infection Control & Prevention practices: systematic approach encompassing a range of evidence-based strategies, actions, and protocols implemented in healthcare settings to prevent and manage the transmission of infectious diseases.

- Introduction: Healthcare Associated Infections (HCAI) or Hospital Acquired Infections (HAIs) are one of the MOST COMMON ADVERSE EVENTS which affect patient safety and reflect on quality of care. These are infections that were neither present nor incubating at the time of health care delivery but developed usually after 48 hours as a consequence of healthcare delivery. Risk factors for developing hospital acquired infections include extremes of age, immunosuppressed states, longer hospital stays, presence of long standing co-morbid conditions, frequent visits to healthcare facilities, invasive procedures, presence of any indwelling devices and admission to intensive care unit.
- Rationale for IPC: These practices are critical for maintaining patient safety, safeguarding healthcare workers, and minimizing the risk of healthcare-associated infections (HAIs). By implementing robust IPC practices, healthcare facilities can significantly reduce the risk of

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



infection transmission, ensuring a safer environment for both patients and healthcare workers.

Abbreviations:

KEMH = King Edward Memorial Hospital

HAI = Healthcare Associated Infections; IPC = Infection Prevention & Control
Infection Control and Prevention Programme

- Purpose: This document is to address several key areas essential for maintaining a safe environment for all patients as well as healthcare workers of KEMH
- Scope: This document applies to all the clinical areas of hospital of KEMH
- Distribution : a) All Departments
 - b) Hospital administration

• Definitions:

Hospital Infection Control Committee (HICC) = a multidisciplinary team within a healthcare facility responsible for overseeing and coordinating all activities related to infection prevention and control.

Surveillance = systematic collection, analysis, interpretation, and dissemination of the data to the stakeholders

- Goal of Hospital Infection Control Committee (HICC)
 - Promote a culture of safety for both patients and healthcare workers
 - Reduce the risk of healthcare associated infections
 - Reduce the risk of spread of multi drug resistant organisms

• Functions of HICC

- Develop and recommend written policies and procedures pertaining to infection prevention and control
- Update the policies based on evolving evidence

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1



- Recognize and investigate outbreaks of infections in the hospital
- Educate and train health care workers, patients, and relatives as applicable
- Monitor practices regularly and periodically
- Conduct surveillance on HCAI by collecting data from respective departments, analyse and suggest appropriate measures
- Collect annual antibiogram data from microbiology department, analyse and provide feedback
- Develop, implement and monitor antibiotic policy with the antibiotic audit sub- committee
- Develop, implement and monitor infection prevention practices in operating rooms with the Theatre sub-committee
- Develop, implement and monitor airborne infection control plan with Airborne Infection Control sub-committee
- Develop and implement policies pertaining to isolation
- Implement and monitor biomedical waste management
- Provide guidance on setting up of infrastructure, engineering and ventilation that would minimize the risk of infection
- Communicate effectively with concerned staff / department
- Stay updated with the current developments

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Objective elements – HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



• Composition of HICC

Sr No	Name & Designation	HICC Designation	Responsibility
1	Dean	Chairperson	See below
2	By rotation every 3 years	Convener	See below
	HODs or Professor of	Secretary	
	Microbiology / Surgery/ HoD /		
	HoD OBGY / Anaesthesia		
3,4	Asst./ Associate Professor	Infection Control	See below
	Microbiology, Medical	Officers	
	Depts, Surgical Depts and		
	Asst.Medical Officer		
5,6	Sister Tutors / Designated	Infection Control Nurse	See below
	nursing staff		
	Heads of Departments /	Members	See below
	Authorised / Designated Staff		
7 - 25	Anaesthesia		
	Chest Medicine		
	Cardiology		
	Community Medicine		
	CVTS		
	ENT		
	GI surgery		
	Medicine and		
	MICU		

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat	
Revision no:	Revision date :	Pg no:	



Document Name -

Infection Control Manual

Objective elements – HIC 01 to 08

Version No: 1



	Microbiology		
	Neonatology		
	Neurosurgery		
	Nephrology		
	Orthopaedics		
	OBGY		
	Ophthalmology		
	Pediatrics &		
	IPCU Pediatric		
	surgery		
	Pathology		
	Pharmacology		
	Surgery		
	Plastic surgery		
	Urosurgery		
26	Pharmacy / CCSD in charge	Member	
27	Matron	Member	
28	OT sister in charge	Member	
29	Civil Engineering	Member	
30	Mechanical & Electrical	Member	
	Engineering		
31	Deputy Dean	Member and I/c in	
		absence of Dean	
32 - 34	Head Clerks (Stores)	As required	
	Linen and Laundry I/C		
	Kitchen Dept.		

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat	
Revision no:	Revision date :	Pg no:	



Document Name -

Infection Control Manual

Objective elements – HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



ORM I/C	
Timekeeper	
Security	
Officer	

• Duties and Responsibilities of HICC members

Administration (Dean / Medical Superintendent)

- Serve as the chairperson of the committee and nominate the convener / secretary
- Constitute sub-committees to oversee specific infection prevention plans
- Ensure that appropriate resources in terms of manpower, equipment and consumables are available at all times to prevent the risk of infection
- Ensure that effective arrangements are in place for infection prevention and control and that appropriate resources are made available to manage the risks of infection.
- Promote a culture of safety and accountability in all staff members
- Approve suggestions of the committee and authorise the committee to monitor compliance
- Approve the list of committee members and their role
- Review the data on HCAIs and approve suggested corrective measures
- In absentia, authorise Deputy Dean to chair the committee

Convener / Secretary

- Report directly to Dean
- Convene meetings after obtaining consent from the chairperson
- Identify the agenda / points of discussion for these meetings
- Oversee local infection control policy implementation with ICC, ICO and ICN

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



- Authorised by chairperson / Dean, to intervene when inappropriate practices are brought to notice by ICD / ICN
- Assess the impact of current practices, provide feedback to department/s and section /s and with HICC plan appropriate interventions if needed
- Prepare and communicate the annual report on HCAIs with feedbacks received from clinical department heads especially with reference to device associated infections and surgical site infections.
- Prepare and communicate the antibiogram of various clinical departments with feedback from Microbiology especially of multi-drug resistant organisms.
- Plan and conduct training of different healthcare workers with the respective heads of department, designated department co-ordinators and other members of HICC.
- Plan an annual surveillance program of healthcare workers with designated department and HICC members
- Any other activity as identified by Dean

Role of ICO and ICN

- Assist convener / secretary for all identified tasks / function
- Assist Convener / Secretary and HICC in implementing and monitoring practices on a regular basis as decided by HICC
- Provide appropriate feedback to convener / HICC on observations
- Identify and assist in investigating outbreaks
- Assist in investigating detection of unusual organisms or highly resistant organisms
- Assist with procurement (AMO)
- Troubleshoot issues pertaining to BMW management

Role of Members

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Objective elements – HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



- Promote a culture of safety in their own settings and in the hospital
- Participate actively to achieve the objectives
- Assist in investigating outbreaks as applicable
- Plan, implement and update Infection Control Manual
- Conduct training of their department staff on appropriate practices of infection prevention and control
- Pharmacist to develop and ensure that the sterilization and disinfection practices are appropriate
- Pharmacist to collect and review data periodically on antimicrobial indents from various departments

Qualifications of Infection Control Officer (ICO)

- Should be a faculty / staff member of the hospital
- M.D (Microbiology) / M.B.B.S with administrative designation / M.D or MS in any medical / surgical discipline / AMO willing to serve as ICO

Qualifications of Infection Control Nurse (ICN)

- Should be a faculty / staff member of the hospital
- Preferred Has undergone a certificate / fellowship course in IPC
- Willing to perform the duties of ICN

Role of Quality manager –

- To monitor HIC activities and be an active participant in HIC team to do systematic analysis of the QIs
- To maintain departmental Indicators
- Help HIC with the NABH norms and Quality standards

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



• Link between administration, services and operation and HIC team.

Role of Nursing Superintendent:

- Training activities of Nurses clinical and Hic practices
- To communicate important aspects of HIC team to senior and junior Staff nurses
- Help HIC team with HIC quality indicators

Job Responsibilities of Clinician: (Chief Intensivist/ Surgeon)

- Follow appropriate practice of hygiene (e.g. hand washing, isolation).
- Support the Infection Control team.
- Protecting their patients from other infected patients and from hospital staff who may be infected.
- Obtain appropriate microbiological specimens when an infection is present or suspected.
- Notifying cases of HAI as well as on admission of infected patients to the team.
- Complying with the hospital Antibiotic policy
- Advising patients, visitors and staff on techniques to prevent transmission of Infection.
- Institute appropriate treatment for any infections they themselves have and take steps
- To prevent such infections being transmitted to other individuals especially patients.

<u>Role of Infection control team</u>: To meet monthly and carry out surveillance in identified areas, prepare a report ad discuss in ICC meeting.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



SOP 2 – Policy on high risk areas and high risk procedures

POLICY

To identify High-risk Areas and High –risk Procedures, hospital wide for the surveillance activities and other infection prevention and control measures. These areas shall specially be focused for appropriate infection control measures.

<u>PURPOSE</u>

To ensure that a proper identification of High risk areas and Procedures, are done by the Infection Control Team around the hospital such that staff follows proper evidence based practices for the Standard precautions, Surveillance of infections, Cleaning, Disinfection and Sterilization, to minimize the risk of Infection to LTMG Hospital Staff, healthcare workers and patients.

SCOPE

It includes all stakeholders directly attached to these High risk areas

RESPONSIBILITY

All clinical staff, Infection control team

DISTRIBUTION

Hospital wide

DEFINITION

High risk areas in hospital are defined as those areas or departments that are highly prone to infections and require special attention for appropriate infection control measures.

ABBREVIATION:

Abbreviations are as follows:

- (a) ICU Intensive Care Units
- (b) NICU Neonatal intensive care unit

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Objective elements – HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



PROCESS DETAILS:

Following have been identified as High risk Areas and High Risk Procedures/ Processes in the hospital. These areas shall be specially focused for appropriate infection control measures.

- (a) Identified area of hospital associated with High risk of Infection
 - (i) Operation theatres
 - (ii) Laboratory
 - (iii) Cath- lab and intervention radiology
 - (iv) Isolation areas
 - (v) CSSD
 - (vi) Dialysis department
 - (vii) Emergency Room
 - (viii) Labor room
 - (ix) All ICU areas
 - (x) Blood bank
 - (xi) Bio Medical Waste Storage Area
 - (b) Identified Procedures & Processes associated with high risk of Infection
 - (i) Intubation
 - (ii) Invasive vascular line insertion
 - (iii) Urinary catheterization
 - (iv) Surgeries
 - (v) Cath lab, dialysis and interventional procedures
 - (vi) Sterilization and disinfection of instruments
 - (vii) Processing of culture samples
 - (viii) Biomedical waste segregation and handling

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



(ix) Handling and disinfection of linen

Strategies to reduce infection risk associated with above processes.

Following strategies shall be adopted to minimize the risk of infections.

- Enforce Hand hygiene (Refer Policy On Hand Hygiene)
- (b) Implement Standard precautions for infection control (Refer Policy on Standard

Precautions, transmission based precautions & PPE)

- (c) Adoption of VAP bundle care (Refer VAP bundle checklist)
- Adoption of CAUTI bundle care (Refer CAUTI bundle checklist)
- (e) Adoption of CLABSI bundle care (CLABSI bundle checklist)
- (f) Adoption of SSI bundle

REFERENCES

- (a) CDC & WHO Guidelines
- (b) NABH Accreditation Standards for hospitals 5th edition

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Objective elements – HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



SOP 3: Standard precautions and transmission based precautions

POLICY:

- Standard precautions shall be strictly adhered to by all healthcare staff in all situations, and for all the patients
- Additional (transmission-based) precautions which are specific to modes of transmission (Airborne, droplet and contact), shall be also strictly followed by all healthcare staff.
- Infection control committee and team shall monitor the adherence of standard precautions and transmission based precautions, by healthcare staff.
- Regular training shall be provided by Infection control team on standard precautions and transmission based precautions.

PURPOSE:

To ensure that staff follows proper evidence based practices for the Patient Care and Cleaning Disinfection and Sterilization, to minimize the risk of Infection

SCOPE:

All hospital staff involved in direct or indirect patient care

RESPONSIBILITY:

Doctors, Nurses, Technicians, Paraclinical staff and Housekeeping staff

DISTRIBUTION:

Hospital wide

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Objective elements – HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



DEFINITION:

Standard precautions are those measures that need to be practiced by all healthcare workers, while caring for all patients, at all times regardless of their diagnosis or presumed infectious status so as to minimize the risk of transmission of infectious agents in all situations. They are based on the principle that all blood, body fluids, secretions, excretions (except sweat), non-intact skin, and mucous membranes may contain transmissible infectious agents. This ensures safety for patients, healthcare workers, visitors and the environment.

Cardinal rules of standard precautions:

- a. Consider all Patients potentially infectious
- b. Assume all Blood and body fluids are contaminated with a blood borne pathogens.
- c. Assume all sharps are similarly contaminated.

PROCEDURE:

Following standard precautions shall be followed in all health care settings.

- a. Hand washing and antisepsis (hand hygiene);
- b. Personal protective equipment when handling blood, body substances, excretions and secretions;
- c. Appropriate handling of patient care equipment
- d. Appropriate handling of soiled linen;
- e. Prevention of needle stick/sharp injuries;
- f. Environmental cleaning and Disinfection
- g. Blood and body fluids spills-management
- h. Appropriate handling of biomedical waste and segregation.
- i. Safe Injection and Infusion Practices.
- j. Respiratory hygiene/cough etiquette

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



k. Patient placement according to clinical condition

Monitoring of Standard Precautions: Annex 1

Transmission based Precautions

This refers to specific precautions which are to be followed in situations where standard precautions may not be sufficient to interrupt the specific transmission of diseases depending upon their epidemiology and route of transmission of the agent/ disease. These precautions are taken in addition to standard precautions and not as a replacement.

Categories of Transmission based Precautions:

- Contact Precautions
- Droplet Precautions
- Airborne Precautions

Contact Precautions:

Contact transmission can be direct or indirect.

Direct transmission: This occurs when infectious agents are transferred from one person to another without a contaminated intermediate object or person. For example, blood or other body substances from an infectious person may come into contact with a mucous membrane or breaks in the skin of another person.

Indirect transmission: This involves the transfer of an infectious agent through a contaminated intermediate object (fomite) or person.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



These include: hands of HCWs; clothing after care of a patient colonized or infected with an infectious agent, which can then be transmitted to subsequent patients; patient-care devices that are shared between patients without cleaning and disinfection; and environmental surfaces that are inadequately disinfected.

These precautions are to be applied while offering care to patients suffering from following conditions or infected with following microorganisms:

- Abscess/wound infection: major, draining
- Bronchiolitis
- Burkholderia cepacia infections: patient with cystic fibrosis, infection or colonization
- Viral Conjunctivitis
- Gastro-enteritis: C. difficile, Rotavirus, diapered or incontinent person for other infectious agents
- Diphtheria
- Hepatitis, type A and E virus: diapered or incontinent person
- Herpes simplex virus: mucocutaneous, disseminated or primary, severe, and neonatal
- Human metapneumovirus
- Lice (pediculosis)
- Multidrug-resistant organisms: infection or colonization by MRSA, VRE, CRE, MDR GNBs
- Para-influenza virus
- Poliomyelitis
- Pressure ulcer: infected
- Respiratory infectious disease: acute, infants and young children
- Respiratory syncytial virus: in infants, young children and immunocompromised adults
- Rubella: congenital
- Scabies
- Leprosy
- Gonorrhoea

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



• Staphylococcal disease: Impetigo, furunculosis, scalded skin syndrome, burns

Key aspects of applying contact based precautions

- 1. Hand Hygiene
- Follow all 5 moments all the time
- Use soap and water only, when dealing with patients infected with C.difficile

2. PPE

- Wear gloves and gowns upon entering the patient room
- A surgical mask or protective eyewear must be worn if there is potential for generation of splashes or sprays of blood and body fluids into face and eyes.
- Remove and discard the gloves and gown before leaving the area.
- 3. Patient Care Equipment
- Use patient dedicated equipment or single use disposable equipment wherever possible
- If dedicated equipment is not possible, clean the equipment and allow it to dry before using on another patient.
- 4. Patient Placement
- A single-patient room is recommended
- Keep patients notes and bedside charts outside the room
- Keep doors closed
- Disinfect hands upon leaving the room and after writing the chart
- If single room is not available:

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1

Version Date: 20.06, 2024



- Cohort patients with similar infections. Avoid placing these patients with other patients with increased susceptibility of infection
- Change protective attire and perform hand hygiene between contact with patients in the same room.
- 5. Transfer of Patients
- Avoid transfer of patients so far as possible
- If transfer is necessary, ensure that the infected or colonised areas of patients are covered and contained.
- Wear PPE while handling the patients at the destination. Inform about contact precautions at destination.
- 6. Patient and visitor/attendant/relative education
- Inform about contact precautions.

Monitoring of Contact Precautions: Annex 2

Droplet Precautions

These precautions are to be applied while offering care to patients infected with organisms which are transmitted through respiratory droplets (>5µm) generated by patients during coughing, sneezing or talking. As these droplets can travel only short distance (<3-6 feet), precautions are required when close contact with the infected patient is expected. Also special air handling and ventilation are not required.

Following diseases/infectious agents warrant droplet precautions:

• Diphtheria: pharyngeal

• Influenza virus: seasonal

• Invasive disease: H. influenzae type b, N. meningitidis, Streptococcus group A

• Mumps

•Parvovirus B19: erythema infectiosum

of all vovilus B17. Crythema infectiosam		
Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1

Version Date: 20.06, 2024



- Pertussis (whooping cough)
- •Plague: pneumonic Pneumonia: Adenovirus, H. influenzae type b (infants and children), Mycoplasma
- Rhinovirus, Respiratory syncytial virus
- Rubella
- Streptococcus group A disease: pharyngitis and scarlet fever (infants and young children)
- Viral haemorrhagic fevers due to Lassa, Ebola, Marburg, Crimean- Congo fever viruses

Key aspects of applying droplet precautions include:

- 1. Hand Hygiene
- Hand hygiene is must and should be followed as per standard protocol as some infections transmitted by droplet route can also be transmitted through contact.

2. PPE

- A surgical mask is must upon room entry.
- Hand hygiene should be done before putting on the mask and after removing the mask.
- Masks are put whenever HCW is at a short distance from patient (<3 feet).
- N 95 respirators are not required. However, for aerosol-generating procedures, N95 masks should be used.
- 3. Patient Placement
- A single-patient room is recommended.
- If single room is not available:
- 1. Priority for single room is given to those patients who have excessive cough and sputum production.
- 2. Cohort the patients who are infected with the same pathogen and who are suitable room mates.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



- If it becomes necessary to place the patients requiring droplet precautions in the same room with patients who do not require it or do not have the same infection—
- 1. Patients should be physically separated (> 3 feet apart) from each other.
- 2. Avoid placing such patients with in the same room with immunocompromised status or increased susceptibility to infections.
- 4. Transfer of the Patients
- Ask the patients to wear a triple layer mask while they are being transferred and follow respiratory hygiene and cough etiquette.
- 5. Patient and visitor/attendant/relative education
- Inform about droplet precautions.

Monitoring of Droplet Precautions: Annex 3

Airborne Precautions

These precautions are applied while dealing with patients having respiratory infections by pathogens which are transmissible through droplet nuclei $\leq 5 \mu m$. These particles remain suspended in the air for longer duration and can travel longer distances (> 3 feet).

Indications for following these precautions are:

- Influenza A: H7N9, H5N1 etc
- Measles
- •MERS-Corona virus: Middle East Acute Respiratory Syndrome, SARS
- Mycobacterium tuberculosis: Laryngeal and pulmonary disease, extra-pulmonary draining lesion
- Smallpox
- Varicella-zoster: Disseminated disease, localized disease in immuno-compromised patient

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



Essentials of applying airborne precautions include:

1. PPE

- Wear a P2 respirator or N95 mask when entering the patients room.
- Surgical mask do not offer protection but may be given to the coughing patients to limit the spread of aerosols and droplets at the point of generation.
- Gloves and gowns are to be worn as per standard precaution.

2. Patient Placement

- A single-patient room preferably having negative pressure ventilation is recommended
- Door of the room should remain closed

If single room not available:

- i. Priority Isolation of susceptible patients
- ii. Cohorting of patients infected with the same pathogen and suitable room mates
- iii. Patients physically separated (> 3 feet apart) from each other.
- Ask patients to wear surgical mask if he is with other patients in the same room.
- Only staff or visitors immune to the infectious agent should be allowed to enter the room if possible.

3. Transfer of the Patients

- Ask the patients to wear a correctly fitted surgical mask while they are being transferred and follow respiratory hygiene and cough etiquette.
- Limit transfer as much as possible
- Any associated skin lesions with the condition should be covered
- 4. Patient and visitor/attendant/relative education
- Inform about airborne precautions.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



Monitoring of Airborne Precautions: Annex 4

REFERENCES:

- (a) CDC Guidelines for Isolation Precautions: Preventing Transmission of Infectious agents in Healthcare Settings (2007) updated on July 2023 Available from: https://www.cdc.gov/infectioncontrol/guidelines/isolation/.
- (b) Damani N. Pittet D.: Manual of Infection Prevention and Control. 3rd Ed. London, Oxford University Press; 2012.
- (c) Eric Nulens (Author). Isolation of Communicable diseases: Guide to Infection Control in the Hospital, International Society for Infectious Diseases, 2018.
- (d) Prevention of Hospital Acquired Infections: A Practical Guide, 2nd edition. WHO/CDS/CSR/EPH/2002.12
- (e) NABH Accreditation Standards for hospitals 5th edition

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Objective elements – HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



ANNEX 1:

Monitoring of Standard Precautions

Sr.	Components	Yes	No	Feedback
No.				
1.	Hand Hygiene			
	a. Use of appropriate product			
	- Usage of Alcohol based hand rub			
	- Usage of soap and water when indicated			
	a. 7 steps of Hand Hygiene at all times			
	b. 5 moments of Hand Hygiene at all times			
2.	Use of PPE			
	a. Appropriate PPE before contact with the			
	patient			
	b. Appropriate donning technique			
	c. Appropriate doffing technique			
	d. Surgical mask &/or protective eyewear if			
	there is potential for generation of splashes			
	or sprays of blood and body fluids into face/			
	eyes.			
	e. Removal and discard of PPE in appropriate			
	colored waste bin before leaving the area			
3.	Sharps Management			

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Objective elements – HIC 01 to 08

Version No: 1



	a. Disposable, single use needle & syringe for	
	each patient	
	b. Passing of sharps in tray	
	c. Dispose needles & syringes in appropriate	
	sharp container	
4.	Spill Management	
	a. Site of spillage cordoned off	
	b. Informed all concerned	
	c. Easy availability of spill kit with items	
	within expiry date	
	d. Gloves and other appropriate PPE worn as	
	per requirement	
	e. Absorbent material is put over the spillage	
	f. Hypochlorite solution is freshly prepared	
	g. Hypochlorite solution poured appropriately	
	h. Contact with the spill for at least 20 minutes	
	i. Material and PPE discarded in appropriate	
	colored waste bin	
5	Bio-medical waste management	
	a. Segregation of waste at the point of	
	generation	
	b. Disposal of waste in appropriate colored	
	bins with proper labels	

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Objective elements – HIC 01 to 08

Version No: 1



	c. BMW not stored > 48 hrs		
	d. Pre treatment of waste before discard when		
	indicated		
6	Decontamination of linen		
	a. Daily change of linen		
	b. Segregation of linen at the point of		
	generation		
	c. Pre treatment of linen where appropriate		
	d. Use of appropriate washing cycle		
7			
7	Sterilization and disinfection of		
	instruments/equipments and Hospital environment		
	a.Use of appropriate sterilization/disinfection		
	protocol for required equipment/instrument		
	b. Appropriate risk categorization of hospital area		
	c. Use of appropriate method & frequency of		
	cleaning in different risk areas		
8	Respiratory hygiene and Cough etiquettes		

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Objective elements – HIC 01 to 08

Version No: 1



	a. Mouth/nose covered with a tissue when		
	coughing/sneezing, wiping and blowing nose with		
	tissue OR inner elbow		
	b.Prompt disposal of used tissues in the nearest		
	appropriate colored bin after use		
	c.Use of surgical masks on the coughing person		
9.	Safe injection practices		
	a.Appropriate PPE worn		
	b.Sterile, single-use, disposable needle and syringe		
	used for each injection		
	c.Recapping of needles		
	d.Single-dose vials over multi-dose used		
	e.Needles & syringes discarded in appropriate		
	colored waste bin		
10.	Use of masks for insertion of catheters or injection		
	of material into spinal or epidural spaces via lumbar		
	puncture procedures		
11.	HBV vaccine complete course taken		
	Tetanus vaccine taken within last 10 years		
		<u> </u>	

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Objective elements – HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



Annex 2: Monitoring of Contact Precautions

Sr.	Components	Yes	No	Feedback
No.				
1.	Hand Hygiene			
	a. Usage of soap and water / Alcohol based hand rub as			
	necessary			
	b. 7 steps of Hand Hygiene at all times			
	c. 5 moments of Hand Hygiene at all times			
2.	Use of PPE			
	a. Appropriate PPE before contact with the patient			
	including gloves and gown			
	b. Surgical mask &/or protective eyewear if there is			
	potential for generation of splashes or sprays of blood and			
	body fluids into face/ eyes.			
	c. Removal and discard of PPE in appropriate colored			
	waste bin before leaving the area			
3.	Patient Care Equipment			
	a.Patient dedicated equipment or single use disposable			
	equipment used wherever possible			
	b.If dedicated equipment is not possible, equipment			
	appropriately cleaned / disinfected and allowed to dry			
	before using on another patient.			
4.	Patient Placement			
	a.Use of a single-patient room.			

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Objective elements – HIC 01 to 08

Version No: 1



	b.If single room not available			
	- cohort isolation of patients with increased susceptibility			
	of infection			
	- New PPE used and hand hygiene performed between			
	contact with patients in the same room			
	c.Patients notes and bedside charts kept outside the room			
	d.Hand hygiene performed upon leaving the room and			
	after writing the chart			
5	Transfer of Patients			
	a.Transfer of patients avoided			
	b.If transfer necessary, infected or colonized areas of			
	patients are covered and contained			
	c.Staff at destination informed about transfer			
	d.Appropriate PPE worn while handling the patients at the			
	destination			
6.	Patient and visitor education			
	a. patient and visitors educated on contact precautions			
		1	1	I

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Objective elements – HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



Annex 3: Monitoring of Droplet Precautions

Sr.	Components	Yes	No	Feedback
No.				
1.	Hand Hygiene			
	a.Usage of Alcohol based hand rub			
	b.7 steps of Hand Hygiene at all times			
	c.5 moments of Hand Hygiene at all times			
2.	Use of PPE			
	Surgical mask worn before room entry.			
	Hand hygiene performed before putting on the mask			
	and after removing the mask.			
	Masks are used whenever HCW is at a short distance			
	from patient (< 3 feet).			
	Removal and discard of PPE in appropriate colored			
	waste bin before leaving the area			
3.	Patient Placement			
	a.Use of a single-patient room.			
	b.If single room not available,			
	i.Priority Isolation of susceptible patients			
	ii. Cohorting of patients infected with the same			
	pathogen and suitable room mates			
	iii. Patients physically separated (>3 feet apart) from			
	each other.			

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Objective elements – HIC 01 to 08

Version No: 1



4.	Transfer of Patients		
	a.Mask worn by patient at all times		
	b.Respiratory hygiene and cough etiquette followed		
	while transfer		
5.	Patient and visitor education		
	a. patient and visitors educated on droplet precautions		
	a. patient and visitors educated on droplet productions		

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Objective elements – HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



Annex 4:

Monitoring of Airborne Precautions

No. Hand Hygiene a. Usage of Alcohol based hand rub b.7 steps of Hand Hygiene at all times c.5 moments of Hand Hygiene at all times 2. Use of PPE a. Wear appropriate PPE with N95 mask on contact with the patient b. Remove and discard all PPE except N 95 respirator in appropriate colored waste bin before leaving the area c. N 95 respirator removed after exiting the area 3. Patient Placement a. Use of a single-patient room. b. Room with negative pressure ventilation c.If single room not available, i.Priority Isolation of susceptible patients ii. Cohorting of patients infected with the same pathogen and suitable room mates iii. Patients physically separated (>3 feet apart) from each other. d.All patients to wear mask in the same room at all times	Sr.	Components	Yes	No	Feedback
a. Usage of Alcohol based hand rub b.7 steps of Hand Hygiene at all times c.5 moments of Hand Hygiene at all times 2. Use of PPE a. Wear appropriate PPE with N95 mask on contact with the patient b. Remove and discard all PPE except N 95 respirator in appropriate colored waste bin before leaving the area c. N 95 respirator removed after exiting the area 3. Patient Placement a. Use of a single-patient room. b. Room with negative pressure ventilation c.If single room not available, i.Priority Isolation of susceptible patients ii. Cohorting of patients infected with the same pathogen and suitable room mates iii. Patients physically separated (>3 feet apart) from each other. d.All patients to wear mask in the same room at all	No.				
b.7 steps of Hand Hygiene at all times c.5 moments of Hand Hygiene at all times 2. Use of PPE a. Wear appropriate PPE with N95 mask on contact with the patient b. Remove and discard all PPE except N 95 respirator in appropriate colored waste bin before leaving the area c. N 95 respirator removed after exiting the area 3. Patient Placement a. Use of a single-patient room. b. Room with negative pressure ventilation c.If single room not available, i.Priority Isolation of susceptible patients ii. Cohorting of patients infected with the same pathogen and suitable room mates iii. Patients physically separated (>3 feet apart) from each other. d.All patients to wear mask in the same room at all	1.	Hand Hygiene			
c.5 moments of Hand Hygiene at all times 2. Use of PPE a. Wear appropriate PPE with N95 mask on contact with the patient b. Remove and discard all PPE except N 95 respirator in appropriate colored waste bin before leaving the area c. N 95 respirator removed after exiting the area 3. Patient Placement a. Use of a single-patient room. b. Room with negative pressure ventilation c.If single room not available, i.Priority Isolation of susceptible patients ii. Cohorting of patients infected with the same pathogen and suitable room mates iii. Patients physically separated (>3 feet apart) from each other. d.All patients to wear mask in the same room at all		a. Usage of Alcohol based hand rub			
2. Use of PPE a. Wear appropriate PPE with N95 mask on contact with the patient b. Remove and discard all PPE except N 95 respirator in appropriate colored waste bin before leaving the area c. N 95 respirator removed after exiting the area 3. Patient Placement a. Use of a single-patient room. b. Room with negative pressure ventilation c.If single room not available, i.Priority Isolation of susceptible patients ii. Cohorting of patients infected with the same pathogen and suitable room mates iii. Patients physically separated (>3 feet apart) from each other. d.All patients to wear mask in the same room at all		b.7 steps of Hand Hygiene at all times			
a. Wear appropriate PPE with N95 mask on contact with the patient b. Remove and discard all PPE except N 95 respirator in appropriate colored waste bin before leaving the area c. N 95 respirator removed after exiting the area 3. Patient Placement a. Use of a single-patient room. b. Room with negative pressure ventilation c.If single room not available, i.Priority Isolation of susceptible patients ii. Cohorting of patients infected with the same pathogen and suitable room mates iii. Patients physically separated (>3 feet apart) from each other. d.All patients to wear mask in the same room at all		c.5 moments of Hand Hygiene at all times			
with the patient b. Remove and discard all PPE except N 95 respirator in appropriate colored waste bin before leaving the area c. N 95 respirator removed after exiting the area 3. Patient Placement a. Use of a single-patient room. b. Room with negative pressure ventilation c.If single room not available, i.Priority Isolation of susceptible patients ii. Cohorting of patients infected with the same pathogen and suitable room mates iii. Patients physically separated (>3 feet apart) from each other. d.All patients to wear mask in the same room at all	2.	Use of PPE			
b. Remove and discard all PPE except N 95 respirator in appropriate colored waste bin before leaving the area c. N 95 respirator removed after exiting the area 3. Patient Placement a. Use of a single-patient room. b. Room with negative pressure ventilation c.If single room not available, i.Priority Isolation of susceptible patients ii. Cohorting of patients infected with the same pathogen and suitable room mates iii. Patients physically separated (>3 feet apart) from each other. d.All patients to wear mask in the same room at all		a. Wear appropriate PPE with N95 mask on contact			
in appropriate colored waste bin before leaving the area c. N 95 respirator removed after exiting the area 3. Patient Placement a. Use of a single-patient room. b. Room with negative pressure ventilation c.If single room not available, i.Priority Isolation of susceptible patients ii. Cohorting of patients infected with the same pathogen and suitable room mates iii. Patients physically separated (>3 feet apart) from each other. d.All patients to wear mask in the same room at all		with the patient			
c. N 95 respirator removed after exiting the area 3. Patient Placement a. Use of a single-patient room. b. Room with negative pressure ventilation c.If single room not available, i.Priority Isolation of susceptible patients ii. Cohorting of patients infected with the same pathogen and suitable room mates iii. Patients physically separated (>3 feet apart) from each other. d.All patients to wear mask in the same room at all		b. Remove and discard all PPE except N 95 respirator			
3. Patient Placement a. Use of a single-patient room. b. Room with negative pressure ventilation c.If single room not available, i.Priority Isolation of susceptible patients ii. Cohorting of patients infected with the same pathogen and suitable room mates iii. Patients physically separated (>3 feet apart) from each other. d.All patients to wear mask in the same room at all		in appropriate colored waste bin before leaving the area			
a. Use of a single-patient room. b. Room with negative pressure ventilation c.If single room not available, i.Priority Isolation of susceptible patients ii. Cohorting of patients infected with the same pathogen and suitable room mates iii. Patients physically separated (>3 feet apart) from each other. d.All patients to wear mask in the same room at all		c. N 95 respirator removed after exiting the area			
b. Room with negative pressure ventilation c.If single room not available, i.Priority Isolation of susceptible patients ii. Cohorting of patients infected with the same pathogen and suitable room mates iii. Patients physically separated (>3 feet apart) from each other. d.All patients to wear mask in the same room at all	3.	Patient Placement			
c.If single room not available, i.Priority Isolation of susceptible patients ii. Cohorting of patients infected with the same pathogen and suitable room mates iii. Patients physically separated (>3 feet apart) from each other. d.All patients to wear mask in the same room at all		a. Use of a single-patient room.			
i.Priority Isolation of susceptible patients ii. Cohorting of patients infected with the same pathogen and suitable room mates iii. Patients physically separated (>3 feet apart) from each other. d.All patients to wear mask in the same room at all		b. Room with negative pressure ventilation			
ii. Cohorting of patients infected with the same pathogen and suitable room mates iii. Patients physically separated (>3 feet apart) from each other. d.All patients to wear mask in the same room at all		c.If single room not available,			
pathogen and suitable room mates iii. Patients physically separated (>3 feet apart) from each other. d.All patients to wear mask in the same room at all		i.Priority Isolation of susceptible patients			
iii. Patients physically separated (>3 feet apart) from each other. d.All patients to wear mask in the same room at all		ii. Cohorting of patients infected with the same			
each other. d.All patients to wear mask in the same room at all		pathogen and suitable room mates			
d.All patients to wear mask in the same room at all		iii. Patients physically separated (>3 feet apart) from			
		each other.			
times		d.All patients to wear mask in the same room at all			
		times			

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Objective elements – HIC 01 to 08

Version No: 1



	e.Only staff/visitors immune to the infectious agent are		
	allowed to enter the room if possible.		
5.	Transfer of Patients		
	a. Limit transfer as far as possible		
	b. Correctly fitting N95 mask while being transferred		
	c.Respiratory hygiene and cough etiquette followed		
	while transfer		
	d.Any associated skin lesions with the condition should		
	be covered		
6.	Patient and visitor education		
	a. patient and visitors educated on airborne precautions		

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



SOP 4: Policy on Hand Hygiene

POLICY:

To lay down guidelines on hand-hygiene to reduce the risk of health care associated infections across the hospital.

PURPOSE:

- a) To lay down hand hygiene guidelines for the hospital staff.
- b) To implement an effective hand-hygiene programme throughout the hospital.
- c) To ensure that hospital staff is educated and follows proper hand-washing and hand-disinfection protocol/procedure.
- d) To reduce the incidence of health care associated infections in the hospital.

SCOPE:

This document applies to healthcare profession also for all the cadres at the Hospital RESPONSIBILITY

Doctors, Nurses, Technicians, Housekeeping staff & Infection Control Team.

DISTRIBUTION:

All wards and departments of the hospital.

DEFINITION:

<u>Resident flora</u>- The resident flora (resident microbiota) consists of microorganisms residing under the superficial cells of the stratum corneum and can also be found on surface of skin.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



<u>Transient flora-</u> Transient or temporary flora refers to the microorganisms that transiently colonize the skin. This includes bacteria, fungi, and viruses, which reach the hands, for examples, by direct skin-to-skin contact or indirectly via objects. These are more dangerous since they are usually the more resistant and more virulent nosocomial pathogens.

<u>Hand Hygiene</u>- is a means of achieving a reduction in or removal of visible soiling, transient or resident organisms and/or other hazardous toxic substances from the surface of hands while maintaining the integrity of the skin.

<u>Hand antisepsis/ decontamination</u>. Reducing or inhibiting the growth of microorganisms by the application of an antiseptic hand rub or by performing an antiseptic hand wash.

<u>Alcohol-based hand rub</u>. An alcohol-containing preparation designed for application to the hands in order to reduce the number of viable micro-organisms with maximum efficacy and speed.

ABBREVIATIONs:

HCW-Healthcare worker

WHO-World HealthOrganization ICU-

Intensive care unit

OT-Operation Theatre

PROCEDURE:

Hand hygiene may be performed by following methods depending upon the indications.

- a. Hand washing with plain/anti microbial soap
- b. Hands are rubbed with alcohol-based hand rubs
- c. Surgical hand antisepsis

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

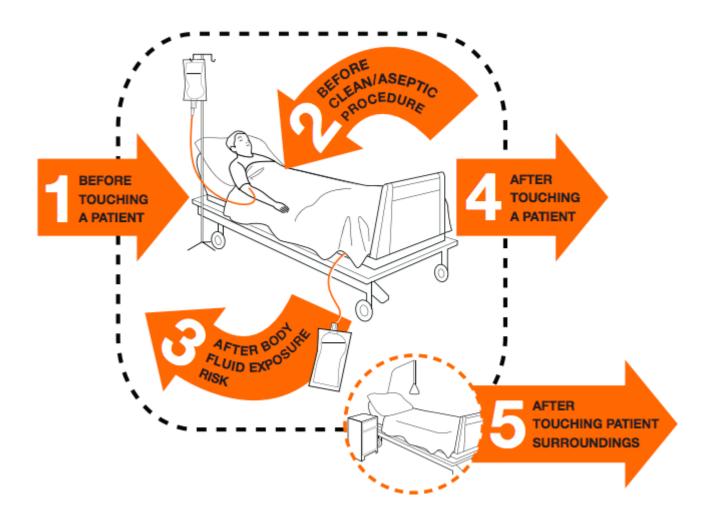
Objective elements – HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



FIVE MOMENTS OF HAND HYGIENE



Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



Handwashing with soap and water:

Indications for Hand Washing

- ➤ If there is visible contamination of hands with blood or body fluids.
- ➤ If there is visible contamination with dirt or organic material.
- ➤ If exposure to potential spore-forming pathogens is strongly suspected or proven, including outbreaks of C. difficile.
- After using toilets/washrooms.
- > Before and after having meals

<u>Steps of hand washing</u>: Steps on how to wash hands when visibly soiled (otherwise, use hand rub. Duration of the entire procedure is40-60 seconds):

- Step 0-Wet hands with water
- Step 1-Apply enough soap to cover all hand surfaces.
- Step 2 Rub hands palm against palm
- Step 3-Right palm over left dorsum with interlaced fingers and vice versa
- Step 4 Palm against palm with fingers interlaced
- Step 5- Back of fingers to opposing palms with fingers interlocked
- Step 6-Rotational rubbing of left thumb clasped in right palm and vice versa Step7-

Rotational rubbing, backwards and forwards, with clasped fingers of right hand in left palm and vice versa

- Step 8-Rinse hands with water
- Step 9-Dry hands thoroughly with a single use towel
- Step 10-Don't use clean hands to turn off the faucet.

Following precautions should be undertaken while performing handwashing:

When washing hands with soap and water, wet hands with water and apply the

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1

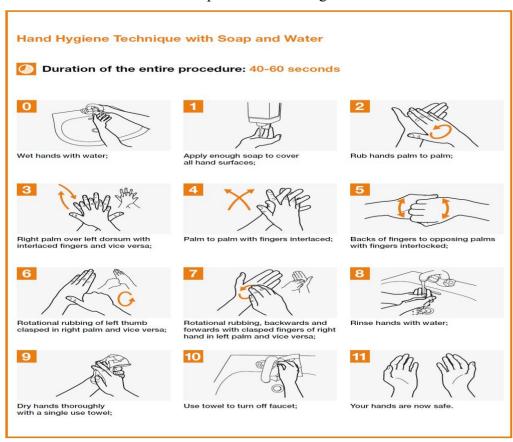
Version Date: 20.06. 2024



amount of product necessary to cover all surfaces.

- Rinse hands with water and air dry thoroughly.
- > Use clean, running water whenever possible.
- Do not use cleaned hands to turn off tap/faucet.
- > Dry hands thoroughly using a method that does not re-contaminate hands.
- ➤ When bar soap is used, small bars of soap in racks that facilitate drainage should be used to allow the bars to dry.

Steps of handwashing



Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



Hand Rub with Alcohol Based Hand Rubs:

Indications for Hand Rub-

Handrub is indicated during routine patient care activities or taking rounds in the wards or ICUs whenever opportunity for hand hygiene arises, except when the hands are visibly soiled with blood or other specimens.

Advantages-

After period of contact, it gets evaporated of its own, hence drying of hands is not required separately.

Steps of hand rub -

Steps on how to use alcohol-based hand rub

- Step 1 -Apply a palm full of the hand rub solution in a cupped hand, covering all surfaces
- Step 2 -Rub hands palm against palm
- Step 3 -Right palm over left dorsum with interlaced fingers and vice versa
- Step 4 Palm against palm with fingers interlaced
- Step 5 -Back of fingers to opposing palms with fingers interlocked
- Step 6 -Rotational rubbing of left thumb clasped in right palm and vice versa
- Step 7 -Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa. Once dry, your hands are safe.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



Steps of hand rub



Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat	
Revision no:	Revision date :	Pg no:	



Document Name –

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



Hand Rub Formulations: Recommended by W.H.O

Hand rubs should be compatible with any of the following requirements

- Any product containing W.H.Of ormulations I or II
- Formulation I:Ethanol 80% v/v, glycerol 1.45% v/v, hydrogen peroxide (H2O2)
 0.125% v/v. FormulationII:Isopropylalcohol75%v/v,glycerol1.45%v/v, hydrogen peroxide 0.125

OR

Any commercially available alcohol based hand rub preparation which meets recognized standards for microbicidal efficacy

Recommended alcohol based products for surgical hand preparation:

- While using W.H.O formulations as above, minimum three applications for the period of 3–5 minutes must be ensured.
- Alternatively, alcohol-based handrubs containing 50–90% of alcohol with additional long-acting compounds like Chlorhexidine Gluconate or Quaternary Ammonium compounds may be used.

Hand rub containing Ethyl alcohol 70% + Chlorhexidine gluconate 0.5% w/v should be preferred for handrubbing in high risk settings like ICUs or while caring for patients with suspected infections with enveloped viruses or spore bearing pathogens.

The hand rub preparations should be available within reach, preferably closer to the point of care, or should be carried by healthcare professional for personal use.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



Hand hygiene for Surgical Preparation (Hand scrub):

Hand scrubbing with an antiseptic agent before beginning a surgical procedure reduces the number of microorganisms, and inhibits growth of microorganisms on hands under the gloves. Chlorhexidine or povidone-iodine-containing soaps are most commonly used products for surgical hand scrub.

The antimicrobial efficacy of alcohol-based formulations is superior to that of all other currently available methods of preoperative surgical hand preparation.

Preparations before Surgical Hand Antisepsis

- ➤ Keep nails short and pay attention to them when washing your hands—most microbes on hands reside beneath the fingernails.
- > Do not wear artificial nails or nail polish.
- Remove all personal ornaments(rings, wrist-watch, bangles and bracelets) before entering the operation theatre.
- ➤ Wash hands and arms with a non-medicated soap before entering the operating theatre area or if hands are visibly soiled.
- ➤ Remove debris from underneath fingernails using a nail cleaner, Preferably under running water.
- Sinks should be designed to reduce the risk of splashes. Surgical hand antisepsis should be performed using either a suitable antimicrobials oap or suitable alcohol-based handrub, preferably with a product ensuring sustained activity, before donning sterile gloves.
- ➤ If quality of water is not assured in the operating theatre, surgical hand antisepsis using an alcohol-based handrub is recommended before donning sterile gloves when performing surgical procedures.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



Indications

- 1. Prior to all operative procedures
- 2. Prior to treatment of all burns cases
- 3. Before insertion of all invasive devices (cardiac catheterization, Insertion of all lines especially arterial and central venous Catheterization).

Precautions before surgical hand preparation using alcohol-based hand rubs:

- Ensure that the hands are visibly clean and dry before application of alcohol hand rub
- Follow the manufacturer's instructions for application times
- Use sufficient product to keep hands and forearms wet with the hand rub throughout the surgical hand preparation procedure
- Use hand rubs after removing gloves when operation is over OR wash with soap and water in case of glove puncture or if any residual talc or biological fluids are present.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



Steps of surgical hand preparation

The handrubbing technique for surgical hand preparation must be performed on perfectly clean, dry hands. On arrival in the operating theatre and after having donned theatre clothing (cap/hat/bonnet and mask), hands must be washed with soap and water.

After the operation when removing gloves, hands must be rubbed with an alcohol-based formulation or washed with soap and water if any residual talc or biological fluids are present (e.g. the glove is punctured).

Surgical procedures may be carried out one after the other without the need for handwashing, provided that the handrubbing technique for surgical hand preparation is followed (Images 1 to 17).



Put approximately 5ml (3 doses) of alcohol-based handrub in the palm of your left hand, using the elbow of your other arm to operate the dispenser



Dip the fingertips of your right hand in the handrub to decontaminate under the nails (5 seconds)



Images 3–7: Smear the handrub on the right forearm up to the elbow. Ensure that the whole skin area is covered by using circular movements around the forearm until the handrub has fully evaporated (10-15 seconds)



See legend for Image 3



See legend for Image 3



See legend for Image 3



See legend for Image 3



Put approximately 5ml (3 doses) of alcohol-based handrub in the palm of your right hand, using the elbow of your other arm to operate the dispenser



Dip the fingertips of your left hand in the handrub to decontaminate under the nails (5 seconds)

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024





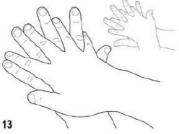
Smear the handrub on the left forearm up to the elbow. Ensure that the whole skin area is covered by using circular movements around the forearm until the handrub has fully evaporated (10-15 seconds)



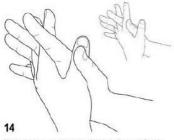
Put approximately 5ml (3 doses) of alcohol-based handrub in the palm of your left hand, using the elbow of your other arm to operate the distributor. Rub both hands at the same time up to the wrists, and ensure that all the steps represented in Images 12-17 are followed (20-30 seconds)



Cover the whole surface of the hands up to the wrist with alcohol-based handrub, rubbing palm against palm with a rotating movement



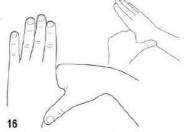
Rub the back of the left hand, including the wrist, moving the right palm back and forth, and vice-versa



Rub palm against palm back and forth with fingers interlinked



Rub the back of the fingers by holding them in the palm of the other hand with a sideways back and forth movement



Rub the thumb of the left hand by rotating it in the clasped palm of the right hand and vice versa



When the hands are dry, sterile surgical clothing and gloves can be donned

avat

Pr Dı In

Repeat the above-illustrated sequence (average duration, 60 sec) according to the number of times corresponding to the total duration recommended by the manufacturer for surgical hand preparation with an alcohol-based handrub.

Revision no: Revision date : Pg no:



Document Name -

Infection Control Manual

Objective elements – HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



Steps of surgical hand scrub:

Procedural steps

- · Start timing. Scrub each side of each finger, between the fingers, and the back and front of the hand for 2 minutes.
- Proceed to scrub the arms, keeping the hand higher than the arm at all times. This helps to avoid recontamination of the hands by water from the elbows and prevents bacteria-laden soap and water from contaminating the hands.
- · Wash each side of the arm from wrist to the elbow for 1 minute.
- Repeat the process on the other hand and arm, keeping hands above elbows at all times. If the hand touches anything at any time, the scrub must be lengthened by 1 minute for the area that has been contaminated.
- Rinse hands and arms by passing them through the water in one direction only, from fingertips to elbow. Do not move the arm back and forth through the water.
- · Proceed to the operating theatre holding hands above elbows.
- · At all times during the scrub procedure, care should be taken not to splash water onto surgical attire.
- Once in the operating theatre, hands and arms should be dried using a sterile towel and aseptic technique before donning gown and gloves.

Responsibility and authority.

- 1. Infection control officer along with Infection Control Team(ICT)
 - Appropriatefacilitiesforhandhygieneinallpatientcareareasareaccessibletoallhealthca re providers.
 - to implement hand hygiene guidelines and periodic audit on strict implementation in all clinical areas
- 2. Sister in Charge of the respective area
 - To implement hand hygiene strictly
 - Adequateandappropriatefacilities and supplies are available and used correctly

References:

- 1. WHO hand hygiene guidelines
- 2. NABH Accreditation Standards for Hospitals(5thedition)

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Objective elements - HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



 National guidelines for infection prevention and control in healthcare facilities by National Centre for Disease Control, Directorate General of Health Services Ministry of Health and Family Welfare, Government of India, January 2020.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Objective elements – HIC 01 to 08

Version No: 1

Version Date: 20.06. 2024



Records and Formats:

Hand Hygiene Assessment Framework

Sr	Questions	Answ	ers
no.		Yes	No
1	Is alcohol based hand rub available easily?		
2	Is there continuous supply of clean running water?		
3	Are there adequate, appropriate and accessible facilities or hand hygiene available (e.g Facility for hand washing/sink ,soap available at each sink)?		
4	Are single-use towels available at each sink?		
5	Poster explaining 5 moments of hand-hygiene technique displayed?		
6	Poster explaining hand-hygiene technique displayed?		

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Compliance rate(%)

Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024

Audit done by _____



Objective elements – HIC 01 to 08

HAND HYGIENE AUDIT

Area & Time of audit_____ Date____

	HCW Profess		Oppor- tunities	HI	H Step		formed pplica		where		
Sr. N o.	ion cadre	Ornaments on hand (Yes/No)	/WHO's HH moments followed	1	2	3	4	5	6	7	Total

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar	Dr. Gita Nataraj, Secretary HIC	Dean, Dr. Sangeeta Ravat
Infection Control Officer	Dr. Chaya A Kumar	
	Prof. and Head, Microbiology	
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

SOP 5 - Policy on environment and equipment cleaning, disinfection & sterilization

POLICY:

All the staff shall strictly follow effective environmental and equipment cleaning, disinfection and sterilization procedures, whenever indicated, according to standard international guidelines.

PURPOSE:

To ensure that staff follows proper evidence based practices for the Cleaning Disinfection and Sterilization, to minimize the risk of Infection to the patients and health care worker

SCOPE:

All patient care area

RESPONSIBILITY:

All health care workers including Nurses, support staff and doctors, handling such equipment, CSSD staff cleaning and sterilizing the equipment.

Support staff for environmental cleaning and disinfection.

DISTRIBUTION:

Hospital wide

DEFINITION:

Cleaning Disinfection and Sterilization of equipment and environment are meant to reduce the risk of transmission of infection from both recognized and unrecognized sources.

PROCEDURE:

The Infection Control Team shall educate all doctors, nurses, housekeeping, patient care attendants and CSSD staff on effective environmental and equipment cleaning, disinfection and sterilization procedures. The

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06, 2024



Objective elements – HIC 01 to 08

trainings shall be conducted at least once annually.

The Management shall ensure that all the resources requisite for successful implementation of environmental and equipment cleaning, disinfection and sterilization procedures, shall be provided to the relevant staff

The Infection Control Team shall monitor the compliance to these procedures, by all relevant staff, in all areas of the Hospital, on a monthly basis.

Equipment, medical devices and instruments shall be cleaned thoroughly, by the end user department, before sending to the sterilization.

The equipment, medical devices and instruments are disinfected or sterilized, according to standard international guidelines, depending on whether these are critical, semi-critical or non-critical items.

Staff shall use only approved disinfectants and products to clean and disinfect, using the appropriate dilutions. All sterilization and high level disinfection procedures shall be validated, using standard international guidelines.

In case of Sterilization failure, recall of issued items shall be according to documented procedures of the Hospital. (Reference of Sterisation controls and recall procedure)

All relevant staff (e.g. nurses, staff responsible for sterilization shall be educated by the Infection Control Team, regarding cleaning, disinfection and sterilization procedures for equipment, medical devices and instruments.

The Management shall provide requisite resources to maintain and clean, disinfect and sterilize the equipment, medical devices and instruments.

All critical, non-critical areas of the Hospital shall be cleaned and disinfected, according to the standard international guidelines. (Reference of Standard Guidelines of hospital)

All relevant staff (e.g. nurses, Housekeeping staff) shall be educated by the Infection Control Team, regarding cleaning, disinfection procedures for various critical and non-critical areas of the Hospital.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

REFERENCES:

CDC, NABH Accreditation Standards for hospitals 5thedition.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:

Seth Gordhandas Sunderdas Medical College & King Edward Memorial Hospital Document Name — Infection Control Manual Version No: 1 Version Date: 20.06. 2024

SOP 6 - Policy on antimicrobial practices – Antibiotic stewardship program

POLICY:

The Antimicrobial Stewardship Program (ASP) will monitor compliance with evidence-based guidelines or best practices regarding antimicrobial prescribing which may include but is not limited to the following activities:

Objective elements – HIC 01 to 08

- 1. Streamlining or de-escalation therapy
- 2. Educational activities
- 3. Antimicrobial management protocols and guidelines
- 4. Surveillance monitoring

PURPOSE:

To comply with evidence-based guidelines or best practices regarding antimicrobial prescribing and promote rational and appropriate antimicrobial therapy while improving clinical outcomes while minimizing unintentional side-effects of antimicrobial use, including toxicity and emergence of resistant organisms.

SCOPE:

Administration, Pharmacy, all wards/critical areas/patient care areas and medical stores

RESPONSIBILITY:

Antimicrobial surveillance team

DISTRIBUTION:

Pharmacy, All wards/critical areas and patient care areas

PROCEDURE:

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar	Dr. Gita Nataraj, Secretary HIC	Dean, Dr. Sangeeta Ravat
Infection Control Officer	Dr. Chaya A Kumar	
	Prof. and Head, Microbiology	
Revision no:	Revision date:	Pg no:



Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Antimicrobial surveillance team (AST)shall be a multidisciplinary inter-professional team which will include but not limited to:

Lead clinician (from each department), Pharmacologist, Pharmacist, Microbiologist, Infection control team

The outcomes and impact of the program shall be tracked and reported to the at a quarterly minimum to include improved utilization of antimicrobials and cost effectiveness. The following activities are to be carried out by the AST team.

- a) Develop a hospital antimicrobial policy
- b) Monitor the implementation of the antibiotic policy
- d) Educating all relevant clinical staff on antibiotic prescribing.
- e) Monitoring the use of antibiotics across the Hospital
- f) Perform prospective audit of antimicrobial use with intervention and feedback.

LIST OF RESTRICTED ANTIMICROBIALS

MEROPENEM

COLISTIN

LINEZOLID

TEICOPLANIN

TIGECYCLINE

VORICONAZOLE

CASPOFUNGIN

DE-ESCALATION/MODIFICATION PROTOCOL

 Modify empiric broad spectrum antibiotics depending on culture and antimicrobial susceptibility reports and patient status

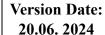
Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar	Dr. Gita Nataraj, Secretary HIC	Dean, Dr. Sangeeta Ravat
Infection Control Officer	Dr. Chaya A Kumar	
	Prof. and Head, Microbiology	
Revision no:	Revision date:	Pg no:



Document Name –

Infection Control Manual

Version No: 1





Objective elements – HIC 01 to 08

- Stop polymyxins and glycopeptides if no carbapenem resistant organisms (CRO) or methicillin resistant Staphylococcus aureus (MRSA) identified on cultures
- Avoid double or redundant Gram negative or anaerobic coverage
- Discontinue antibiotics if a non-infectious mimic identified
- De-escalate combination therapy to a single agent
- Change a broad spectrum antibiotic to a narrow spectrum one
- Change IV to oral antibiotics.

	Empiric therapy	Definitive therapy
via switching to narrower spectrum antibiotics	C4-1:-1-11	De-escalation to narrower spectrum antibiotics based on culture and susceptibility results in the absence of contraindications.
Criteria for de-escalation	Completed course of therapy	
	No indication or infectious causes identified	

Some guiding principles for de-escalation /escalation:

- Vancomycin should be used only for confirmed MRSA infections and not in MSSA infections.
- In case of Pan drug resistant Pseudomonas /Acinetobacter spp. combination therapy using colistin along with beta-lactams should be considered.

The AST will meet on a regular basis once every three months or at least once every year. The minutes of each meeting will be recorded permanently following each meeting.

Additional clinical staff may be requested to join the group when needed to help develop targeted action plans to influence antibiotic prescribing in specific clinical areas.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar	Dr. Gita Nataraj, Secretary HIC	Dean, Dr. Sangeeta Ravat
Infection Control Officer	Dr. Chaya A Kumar	
	Prof. and Head, Microbiology	
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1 Version Date:

20.06. 2024



Objective elements – HIC 01 to 08

Refer: LTMGH Antimicrobial policy

References:

- https://www.idsociety.org/globalassets/idsa/practice-management/as/asp_policy_procedure.doc
- Treatment guidelines for Antimicrobial use in common syndromes-2019-ICMR.
- Treatment guidelines for Antimicrobial use in common syndromes-2022-ICMR.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar	Dr. Gita Nataraj, Secretary HIC	Dean, Dr. Sangeeta Ravat
Infection Control Officer	Dr. Chaya A Kumar	
	Prof. and Head, Microbiology	
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

SOP 7: LINEN MANAGEMENT

POLICY:

This applies to the management of hospital's linen ensuring adequate cleaning of the linen for better hygienic hospital environment and their proper accountability.

PURPOSE:

To provide process, instructions and methodology for Management of Laundry process in the hospital with the following aim

- (a) Clean and timely supply of linen
- (b) Minimization of inventory loss

SCOPE:

Hospital Wide

RESPONSIBILITY:

Manager-Linen and laundry

DISTRIBUTION:

Hospital Wide

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

PROCEDURE:

The main laundering procedures in the hospital linen services shall include

- (a) Dirty linen collection
- (b) Sorting into soiled and unsoiled linen
- (c) Decontamination of soiled linen
- (d) Handover to 3rd party audit
- (e) Receive a clean linen
- (f) Delivery of clean linen to wards
- (g) Condemnation of linen

DIRTY LINEN COLLECTION:

The laundry linen shall be collected by the ward staff from respective wards and user areas. It shall be sorted as soiled and non-soiled linen by ward staff. The soiled linen shall be decontaminated in the ward & handed over to laundry for further processing. Accounting of clothes shall be done by the help of registers kept in wards and laundry department

SORTING:

The sorting of soiled and unsoiled linen will be done in ward itself which shall again be checked in laundry. If any soiled linen is observed it is disinfected in the ward, washed and dried and then sent to laundry.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

DELIVERY OF CLEAN CLOTHES:

This operation will be carried out by the staff of laundry.

CLEANING AND DUSTING:

- (a) The Housekeeping department is responsible for preserving clean environment within the linen store.
- (b) Regular cleaning and dusting of the department is done twice a day by the housekeeping staff.

All wet linen is considered contaminated and should be handled using universal precautions.

LINEN CHANGE:

Linen of the patients shall be changed as follows

- (a) Normally bed linen as well as patients' body linen shall be changed once daily.
- (b) Additionally linen shall be changed whenever needed in case the linen gets soiled with vomiting, faeces, blood spills, urine etc
- (c) Scrub suits for the OT shall be supplied and stored in the change area of the OT as per requirement.

Hypothetically in any single day multiple sets of linen should be kept available

- (a) One set which will be used
- (b) One set ready for use kept in the ward
- (c) One set being processed in the laundry
- (d) One set in transit to be delivered or to be received in the ward

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

(e) One set for holidays and weekends

CONDEMNATION PROCEDURE

(a) Replenishment of linen items shall be immediately done by the central stores in order to maintain adequate inventory level and to ensure smooth functioning of the hospital services.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

RECORDS AND FORMATS:

- (a) A laundry stock register is maintained which contained details regarding the linen stock of the hospital.
- (b) A laundry receipt and issue register will be maintained with department wise categorization for easy operations, at the laundry reception.
- (c) 'Incidents' form to record any accidents or injuries to staff will also be maintained and appropriate action will be taken

REFERENCES:

- (a) NABH Accreditation Standards for hospitals 5th edition
- (b) National Guidelines IPC MOHFW (2020)

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar	Dr. Gita Nataraj, Secretary HIC	Dean, Dr. Sangeeta Ravat
Infection Control Officer	Dr. Chaya A Kumar	
	Prof. and Head, Microbiology	
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

SOP 8 – POLICY ON FOOD SANITATION

POLICY:

The Dietary department ensures that food prepared and served to patients are received, stored assembled and served in a manner that avoids contamination.

PURPOSE:

To provide process, instructions and methodology for Management of Kitchen for providing hygienic and safe food to the patients & staff of the hospital

SCOPE:

The scope of Food & Beverage department is:

- To supply hygienic and balanced food to all the inpatients.
- To supply hygienic and balanced food to all the employees, physicians, visitors and volunteers

RESPONSIBILITY:

Kitchen Department & Dieticians, Administration

DISTRIBUTION:

Kitchen

PROCEDURE:

All food is prepared and served into containers/trays in the main kitchen and then sent to the wards.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

PROCUREMENT & RECEIVING OF RAW MATERIAL:

- All the materials are physically inspected by the Store Personnel on duty for quality.
- Fresh supplies, which include fruits, vegetables are procured on daily basis, milk and milk products, eggs are procured on a one-day prior basis.
- Provisions and other dry commodities are indented from the main stores on a daily basis.
- Substandard materials, if any are rejected at the time of delivery.

STORAGE:

- Provisions and other dry materials are stored on shelves 6" above the floor at room temperature, which are segregated from the processed foods and are stored separately.
- FIFO (First in first out) principle is followed for provisions and other dry material.
 - Milk packets & other perishable items are stored in refrigerator at appropriate temperature.

FOOD PREPARATION:

- Pre preparation and preparation of food shall be carried out in hygienic conditions.
- Each meal is freshly prepared and consumed during the mealtime.
- Leftover, if any, are discarded within 5 hours.

FOOD DISTRIBUTION:

- During transportation and service, the food is supplied in covered trays.
- Food handlers use apron, caps and gloves while serving the food to the patients.
- Based on Consultant's prescription and dietician's advice, patients choose their menu.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

CLEANING PROCESS:

- Cleaning material and sanitizers are used to maintain high standards of cleanliness.
- Food handlers are routinely instructed about food handling techniques and personal hygiene.
- Fruits and vegetables intended for raw consumption are washed.
- Food handlers wear gloves while handling food that is ready for consumption.
- Hands are washed frequently with soap and water in the designated hand washing areas.
- Food handlers cover their head with a cap.
- Eating and drinking are confined to designated areas.

FOOD HYGIENE & SAFETY:

The hospital ensures that the food is prepared, handled, stored & distributed in a safe manner by abiding the following measures-

- Hygienic condition shall be maintained for provision of food to patients
- Food Services maintain a safe and sanitary environment in the preparation and handling of food, the care and cleaning of equipment and work areas and the hygiene of the employees.
- Food Service maintains a safe environment-designed to reduce accidents and promote safety through training, inspection, proper equipment, and a controlled environment.
- Food is protected from contamination and spoilage by ensuring proper storage.
- Thermometers are fixed in each refrigerator and freezer and temperature is monitored and recorded.
- Temperature records are maintained.
- Food in open containers or cooked foods are covered, dated & timed and refrigerated.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

- Freezers are scraped periodically to remove ice and dirt,
- Food in storeroom (dry goods) is kept at 50 to 70 0 F. All food items are stored Six inches off the floor in closed storage.
- Storeroom and walk-ins are swept and mopped daily.
- Perishable foods are stored at proper temperatures, using an appropriate thermometer, and temperature records are maintained.
- Adequate hand washing and hand-drying facilities are located in convenient places throughout the food service areas.
- A disinfectant soap is placed near all hand washing facilities in the kitchen.
- The fans over the grills are cleaned weekly.
- Thorough cleansing and sanitizing of all working surfaces, utensils, and equipment occurs after each period of use. Equipment is constructed of non-toxic material and easily cleaned, kept in good repair, and not used when chipped, cracked, rusted, or badly worn or in such condition as to make difficult to clean and sanitize.
- All working surfaces, utensils, and equipment are washed and rinsed with a food-safe disinfectant. All equipment or utensils are stored so as to remain clean, dry, and dust free.
- Cutting boards are made of non-absorbent material and are washed and sanitized between uses.
- Following procedure shall be followed to address nutritional needs of patients.
- Kitchen Safety- Fire extinguishers are placed in the kitchen and its premises with wellequipped fire-fighting system installed. Fire escape route is demarked in the kitchen and regular training on the same is given to the staff members of the kitchen.
- A safety first-aid kit is placed in order to ensure any unforeseen situations such as cuts

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

etc.

EMPLOYEE HEALTH & HYGIENE:

- Employees with respiratory infection, intestinal disease, or diarrhea, jaundice boils, or any skin infection, particularly on the fingers and hands are not allowed to work.
- Food handlers are subjected to stool examination for pathogenic organisms and parasites once in six months & suitable treatment is provided whenever required.
- All employees adhere to the departmental dress code.
- Hand washing keep hands always neat & clean keep nails short.
- Wash hands after using toilet, contact with unclean equipment, soiled clothing etc. Provide adequate hand washing and hand drying facilities at convenient places

HEALTH HABIT:

- Avoid coughing, sneezing in the vicinity of food, licking fingers before picking up an article of food and smoking on food premises.
- Traffic of unauthorized persons through food preparation area should also be avoided.
- Keep their clothing free from obvious dirt and food spills.
- Use hair nets/cap (hair restraints) while on duty.
- Use utensils to handle food whenever possible.
- Do not consume food or drinks in the food, preparation or serving areas.
- Do not use tobacco products in any form while engaged in the preparation or serving.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

MINIMUM HANDLING OF FOOD:

- Avoid touching food directly with bare hands.
- Use gloves to minimize much contamination.
- Do not touch dirty thing with the glove hand while handling food.

CLOTHING:

Wear clean designated uniforms.

Random sampling of water is carried out once in a month.

FOOD TEMPERATURES:

Cold food items are maintained in refrigeration at a temperature of $39 - 43^{\circ}$ F or below. Storage facilities are maintained at the following temperature. The temperatures are checked daily and a log is maintained of the temperature.

- Vegetables and fruits 0 8 degree C
- Dry stores Room temperature
 - Foods prepared to be served cold are cooled from their preparation temperature to 4 degrees C or below. The cooling period shall not exceed 4 hours.
 - O Both hot and cold food items will be transported in such a manner that appropriate temperatures will be maintained during the transportation of the food.
- Hand washing: Personnel wash with soap and water their hands and exposed
 portions of their arms before starting work. Hand washing includes special
 attention to the fingernails and finger web.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

DEPARTMENTAL INSPECTIONS:

These are carried out in case any problem arises, by the HIC & on a regular basis by dietary staff themselves.

DISPOSAL OF WASTE FROM THE DIETARY DEPARTMENT:

- In food production area food waste and plastic waste are segregated in separate bins with covers.
- It is cleared every day by outsourcing agency.

PEST CONTROL:

• Kitchen area, equipment and staff cafeteria is sprayed/gel for pest control every week

CONTACTS WITH OTHER DISCIPLINES:

When a food borne illness is suspected, the HICC is notified, specimens may be obtained by the Microbiology department from the symptomatic individuals and from suspected food. The outbreak management committee will be responsible for obtaining significant histories and conducting the investigation of a suspected food borne illness.

REFERENCES:

- 1. CDC & WHO Guidelines
- 2. NABH Accreditation Standards for hospitals 5th edition

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

SOP 9: POLICY ON ENGINEERING CONTROLS

The preventive maintenance of all equipment will ensure efficiency of all staff and reduce chances of contamination of air and water. The proper care and maintenance of the entire physical structure will also reduce accumulation of dust and spores in the environment. Thus, the engineering dept and its personnel are important links in the chain of activities towards hospital infection control.

All personnel should apply universal precautions when in contact with patients or blood and body fluids.

PURPOSE:

It is to ensure proper maintenance of all the equipment in the hospital such that at any given time they are efficiently working and apply to all standards and guidelines when in contact with the patients

SCOPE:

All staff and patients coming in contact directly or indirectly to the equipment

RESPONSIBILITY:

Engineering and the Biomedical Department

DISTRIBUTION:

Engineering and the Biomedical Department

PROCEDURE:

The preventive maintenance of all equipment will ensure efficiency of all staff and reduce chances of contamination of air and water.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

The Engineering department should have list of all the equipment ward wise / area wise. The equipment to have a preventive maintenance contract and mechanism for handling breakdowns. Preventive maintenance to be carried out as per manufacturer's instructions.

A copy of the list and the maintenance contract to be provided to end user. The engineering department should ensure the maintenance as per the contract

GENERAL:

Engineering personnel shall report to the ward sister / user department prior to commencing work and ensure work is carried our and informed to concerned.

All engineering personnel must be aware of universal precautions while handling equipments.

Handwashing should be followed before and after leaving the patient care area.

PLUMBING JOB GUIDELINES:

Hospital water supply systems shall not be connected with any other piping system or fixtures that could allow contamination without the use of adequate airgaps or approved backflow preventers or vacuum breakers.

When robbing out main sewer lines, or when exposed to gross contaminated wastes, wear rubber boots and rubber gloves

After exposure to sewer lines or gross contaminated waste, clean exposed areas of body with soap and water. Change uniform if necessary. Do not return to patient care areas before cleaning up.

ELECTRICAL JOB GUIDELINES:

All the electrical lines should be checked atleast annually, as a part of electrical safety audit

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

The institution should have a backup generator for all the critical areas, which is maintained and contingency plan checked at regular intervals

In cases of electrical failures due to faulty equipments, the same should be corrected at the earliest with the help of manufacturers of equipment

All staff members to follow electrical to ensure that they are aware of wire codes

The first step of electrical safety, avoid water at all times when working with electricity. Never touch or try repairing any electrical equipment or circuits with wet hands. It increases the conductivity of the electric current.

Never use equipment with frayed cords, damaged insulation, or broken plugs.

Always use insulated tools while working.

PHYSICAL BARRIERS BETWEEN REPAIR AREA AND PATIENT CARE FACILITY:

When any construction or repair work is carried out in patient care areas the supervisors must inform the Medical Superintendent / RMO, who will inform the heads of the concerned departments so that patient may be shifted if required.

When work is carried out in areas where immunecompromised patients or that

requires a sterile atmosphere, adequate physical barriers must be present to prevent the spread of fungus and other such microbes, through dust and debris generated.

All areas that require a sterile atmosphere must be fumigated before use following construction work.

VENTILATION SYSTEMS:

Regular cleaning of all window AC filters must be carried out in a systematic manner through out the hospital.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

In areas such as the microbiology labs where handling of infected material is carried more frequent checks and cleaning of AC filters is required.

In situations where HEPA filters are used, regular checks must be carried out as the environmental dust load is very heavy in these areas and the filters get clogged quickly. A regular maintenance should be carried out for all pre filters. When microbial load increases as evidenced by failed particle count test/validation test, the filters to be replaced to be replaced if necessary.

For OTs annual validation tests for HEPA FILTERS to be carried out and to be replaced if necessary.

For negative pressure, isolation rooms' periodic check records to be maintained and ensure each time when patient is admitted in these rooms.

In areas where central air-conditioning is used the moisture of the air and the air exchanges (ACH) changes must be carefully monitored. All ducts must be cleaned thoroughly at regular intervals.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

SOP 10: POLICY ON HOUSEKEEPING AUDIT

All the staff shall strictly follow effective environmental cleaning and disinfection and sterilization procedures, whenever indicated, according to standard international guidelines.

PURPOSE:

To ensure that staff follows proper evidence based practices for the Cleaning, Disinfection and Sterilization, to minimize the risk of Infection to the patients and Hospital Staff.

SCOPE:

All patient care areas

RESPONSIBILITY:

Nurses and administration.

Housekeeping Managers and staff for environmental cleaning and disinfection.

DISTRIBUTION:

Hospital wide

DEFINITION:

Cleaning and Disinfection ofenvironment are meant to reduce the risk of transmission of infection both recognized and unrecognized sources.

A clean environment plays an important role in the prevention of hospital associated infections

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

(HAI). Many factors, including the design of patient care areas, operating rooms, air quality, water supply and the laundry, can significantly influence the transmission of HAI.

Cleaning: Manual or Mechanical removal of foreign material (e.g., organic and inorganic) from objects and surfaces using water with detergent soaps or enzymatic products.

Terminal Cleaning:

A terminal clean is defined as a procedure required to ensure that an area has been cleaned/decontaminated following discharge of a patient with an infection or communicable disease in order to ensure a safe environment for the next patient.

Disinfection: Process that eliminates pathogenic microorganisms to the point where they no longer cause diseases except bacterial spores, on inanimate objects.

Sterilization: A process that destroys or eliminates all forms of microbial life and is carried out in health-care facilities by physical or chemical methods.

Antisepsis: Prevention of infection by inhibiting or arresting the growth and multiplication of germs on animate surfaces (eg. skin).

Decontamination: Refers to the use of physical or chemical means to remove, inactivate, or destroy all pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Disinfectant: usually a chemical agent (but sometimes a physical agent) or heat that destroys disease-causing pathogens or other harmful microorganisms but might not kill bacterial spores.

Contact time: Time a disinfectant is in direct contact with the surface or item to achieve disinfection/sterilization.

Risk categorization of hospital areas

Different functional areas represent different degrees of risk and, therefore, require different cleaning frequencies, and levels of monitoring and evaluation. A functional area refers to any area in a health care facility that requires cleaning. Accordingly hospital areas can be categorized as:

High Risk Area: Consistently high cleaning standards must be maintained in these areas. Required outcomes will only be achieved through intensive and frequent cleaning.

Moderate Risk Area: Outcomes in these areas should be maintained by regular and frequent cleaning with 'spot cleaning' in between.

Low Risk Area: In these areas, high standards are required for aesthetic and to a lesser extent, hygiene reasons. Outcomes should be maintained by regular and frequent cleaning with 'spot cleaning' in-between.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Categories of Patient Care Area

Document Name – Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Categories of Patient Care Area

High Risk Areas	Moderate Risk Areas	Low Risk Areas
Operation theatre units including recovery area-Major & minor	Medical and allied wards	Departmental areas/office areas
Intensive care units/Cardiac care		Outpatient department
units/ Neonatal ICU etc.		
Renal Dialysis facility		Non sterile supply areas
Emergency department/casualty	Pharmacies	Libraries
Labour room	Dietary services	Meeting rooms
Burn Unit	Laundry services	Medical records section
Chemotherapy ward/room	Mortuary	Stores Section
Central sterile supply department/	Rehabilitation Areas	Nurses/Doctors restrooms
Theatre sterile supply unit		
Isolation wards/rooms	Psychiatric wards	Telephone rooms, electrical,
		Mechanical, External surroundings
Laboratory areas	Surgical wards	Staff areas
Blood bank	ART centre and NTEP centre	

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name – Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Frequency and Method of Cleaning in Different Risk Areas

		Level of	
Category	Frequency	Cleaning	Method of Cleaning
		Required	
High risk	Once every shift	Cleaning and	Cleaning with appropriate disinfectant available on
area	and 'spot	Intermediate	MCGM schedule in the recommended concentration
	cleaning' as	level disinfection	[e.g.alcohol compounds, aldehyde compounds and
	required		hydrogen peroxide]
Moderat	Once every shift	Cleaning and	Cleaning with appropriate disinfectant available on
e risk rea	and 'spot	low level	MCGM schedulein the recommended concentration
	cleaning' as	disinfection	[e.g.alcohol compounds, aldehyde compounds and
	required		hydrogen peroxide]
Low risk	For areas working	Only cleaning	Physical removal of soil, dust or foreign
area	round the clock -		Material followed by cleaning with water and detergent
	at least once in a		soap.
	shift and 'spot		
	cleaning' as		
	required		
	Areas having		
	general shift at		
	least twice in the		
	shift and 'spot		
	cleaning' as		

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

required		

Classification of environmental surfaces for cleaning purposes

Environmental surfaces carry the least risk of disease transmission and can be safely decontaminated using less rigorous methods than those used on medical instruments and devices. Environmental surfaces can be further divided into:

Low Touch Surfaces: Surfaces with minimal hand-contact

High Touch Surfaces: Surfaces with frequent hand-contact

Examples

Low Touch Surfaces	High Touch Surfaces
Floors, ceilings, mirrors, windows ills, walls	Doorknobs, bedrails, light switches, elevator buttons,
	telephone, call bells, computer keyboards, monitors,
	hemodialysis machines, edges of privacy curtains, wall
	areas around the toilet in the patient's room

In general, high touch areas require more frequent and intensive cleaning as compared to low touch areas.

Prepared by Dr. Shreeraj Talwadekar	Reviewed by Dr. Gita Nataraj, Secretary HIC	Approved by Dean, Dr. Sangeeta Ravat
Infection Control Officer	Dr. Chaya A Kumar Prof. and Head, Microbiology	
Revision no:	Revision date :	Pg no:



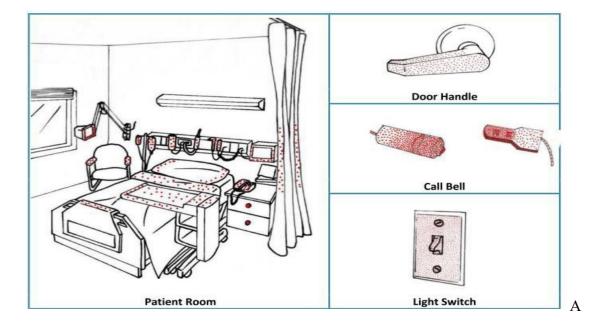
Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024





Prepared by Dr. Shreeraj Talwadekar	Reviewed by Dr. Gita Nataraj, Secretary HIC	Approved by Dean, Dr. Sangeeta Ravat
Infection Control Officer	Dr. Chaya A Kumar Prof. and Head, Microbiology	
Revision no:	Revision date :	Pg no:



Document Name – Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



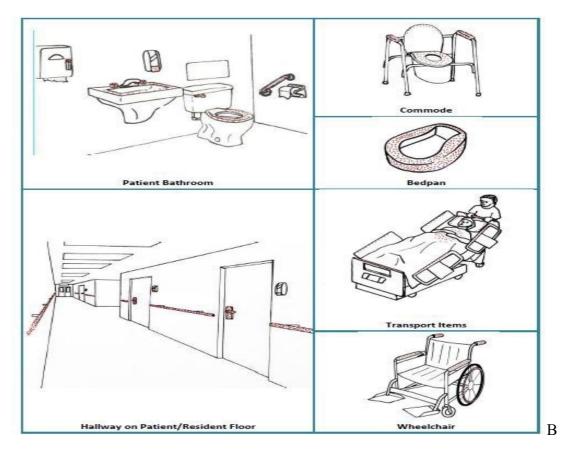


Figure: High Touch Objects in Hospital Environment

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name – Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Method and frequency of patient care items or equipment surfaces

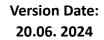
Equipment/site	Routine Method	FREQUENCY
A1 1 1	Detach the parts. Wash with detergent soap soap	
	and water, then send to CSSD for further processing	
Ambu bag and mask	(ETO)	Before and After each use
mask	For infectious cases -Disinfect the Ambu bag then	
	send to CSSD for further processing (Autoclave)	
	Wipe neck or rubber top with 60-80% alcohol or	
A1/: -1	0.5-2% w/v Chlorohexidine solution and allow to	
Ampoules/vial	dry before opening or piercing.	Before each use
S	Note: Do not immerse ampoules/vials in	
	disinfectant solution	
Anaesthesia	Wash with detergent soap soap and dry, followed	
	by cleaning with disinfectant used routinely in	Once daily
trolley	Operation theatre.	
B.P Apparatus	Clean with 60-80% alcohol	Once daily
BP cuff	Washwithdetergent soapandwateranddry/wipe with	0
BP Cull	60-80% alcohol	Once daily
Dalar hatla	Should be soaked in detergent soap water for a	
Baby bath	minimum of 1 hour.	After each use
basin	Note: Use separate basins for each baby	
Baby feeding	Disposable – single use.	After each use
bottles & teats	Re-usable – should be returned to CSSD or	

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name – Infection Control Manual

Version No: 1





	-washed in hot detergent soap and water, rinsed and	
	immersed in cleaning fluid provided by the	
	manufacturer for a minimum of 1 hour (freshly	
	made up from tablets according to manufacturer's	
	instructions)	
Dalassasiahina	A fresh liner should be used for each baby.	After each use
Baby weighing scales	Clean tray with detergent soap and water. Wipe	After each use
	with 0.1% Hypochlorite if contaminated	
	Wash with detergent soap and dry.	
Bed frames	After use by infected patients wipe with	Terminal Cleaning after
	appropriate disinfectant available on MCGM	patient discharge and SOS
	schedule	
	Flush thecontentsdownthedrains.Wash well	
	withwater,drainanddry	After each use
Bedpans	Forinfected patient,	After each use
	washwithhotwateroruseappropriate disinfectant	
	available on MCGM schedule	
Breast pumps	Wash with detergent soap and water.	After each use
Buckets -	Wash with detergent soap and water and immerse in	Once daily, at the end of the
metal/plastic	freshly prepared sodium hypochlorite 0.1% solution	day
	at least for 20 minutes.	

Prepared by Dr. Shreeraj Talwadekar	Reviewed by Dr. Gita Nataraj, Secretary HIC	Approved by Dean, Dr. Sangeeta Ravat
Infection Control Officer	Dr. Chaya A Kumar Prof. and Head, Microbiology	
Revision no:	Revision date :	Pg no:



Document Name – Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Cheatleforceps	Autoclaveandstoredry.	Once daily
Commodes	Seat and armsclean with detergent soap and water, and dryIf soiled or used in isolation wards, wipe with sodium hypochlorite 0.5 % and let dry.	Once daily
Cradles	Clean with detergent soap and water and dried. If contaminated use any of the surface disinfectant	Once daily
Cutlery and	Should be heat disinfected and washed in sink,	After each use
crockery	wash with water and detergent soap.	
Defibrillator	Use single-use disposable ECG pads.	Once Daily
and Monitor.	Clean and disinfect and machine with 70% alcohol.	
Dialysis machine	Clean with 60-80% alcohol	Once Daily
Doorknob	Clean with 60-80% alcohol	Once Daily
	Disposable—Single use;Reusable—Wash with	
Drainage	detergent soap and water, put jars in the disinfectant	
bottles	solution (1% hypochlorite) for 20 mins. Rinse and	
bottles	store dry	
	- Or send to CSSD	
Drains	Clean&Disinfectwith100ppm of chlorine	Weekly
	Wipe with 70 – 80 % alcohol	After each use

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name – Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Dressing Trolley	Wash with detergent soap and dry, followed by cleaning with disinfectant used routinely in the ward.	Once daily
Dustbins	Wash with Detergent soap and water	Once daily
E.C.G. & Transducer Cables	Use single-use disposable ECG pads. Cables - Wipe with 70 – 80 % alcohol	Once daily
Ear pieces of Auroscope	Clean with detergent soap and water and storedry	Once daily
Electronic Weighing Machine	Clean with wet cloth	Once daily
Eye protection gear	-Clean with detergent soap and water and let dryFor blood splashes, blood spillage policy to be followed.	Once daily
Fixtures and fittings(incl.Fa ns and lights)	Wipe with damp cloth	Daily Monthly
Floors(wet cleaning)	Clean with disinfectant solution and water OTs - Wash with detergent soap and water followed by mopping with disinfectant solution	Once every shift Once daily for fixed hour facilities
Furniture	Damp dust with detergent soap and water.	Once daily

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name – Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Glucometer	Wipe with 70 – 80 % alcohol	Once daily
Haemodialysis machines	Thoroughly clean between patients and disinfect at the end of the day as per manufacturer's recommendations. Colonized/infected patients - after cleaning with detergent soap and water, disinfect with 1000 ppm sodium hypochlorite solution or other appropriate disinfectant on MCGMschedule as per manufacturer's recommendations.	-In-between two consecutive patients and -at the end of each day
Hand basins	Clean with detergent soap and water	At the end of each shift
Humidifiercont ainer	Washwithdetergent soapandwater and let dry. Disinfect with100ppm chlorine	Once daily
Infant Incubators	Clean with detergent soap and water and allow to dry, then wipe with $70 - 80 \%$ alcohol	Once daily
Intravenous infusion pumps & Feed pumps	-Clean the outer surface with detergent soap and water and dry. - If used in isolation rooms, wipe with 1% sodium hypochlorite and let dry.	Once daily
IV stands	Wash with detergent soap and let dry.	Once daily
Laryngoscope	Detach the blades, wash with detergent soap and water then clean with $70-80$ % alcohol, dry and then send to CSSD for further processing	After each use

Prepared by Dr. Shreeraj Talwadekar	Reviewed by Dr. Gita Nataraj, Secretary HIC	Approved by Dean, Dr. Sangeeta Ravat
Infection Control Officer	Dr. Chaya A Kumar Prof. and Head, Microbiology	
Revision no:	Revision date :	Pg no:



Document Name – Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Leads and	Dismantle to smallest components and clean with	Once deller	
monitors	detergent soap and water and let dry	Once daily	
Linen	Refer to Linen management policy	Once daily	
Locker Tops	Clean with damp cloth dipped in detergent soap	Once daily	
Locker Tops	solution and allow to dry.	Once dairy	
Lockers	Clean with detergent soap and water	Once daily	
Lockers	Crean with detergent soap and water	After patient discharge	
Mackintosh	Preferably use separate sheet for each patient.	Once daily	
(Rubber Sheet)	Clean with detergent soap and water and let dry	After patient discharge	
	Clean with detergent soap and water between		
	patients and as required.		
Mattresses and	Note: Should not be used if cover is damaged	After patient discharge	
pillows	Contaminated pillows must be discarded	After patient discharge	
	Torn mattress covers must be replaced before		
	mattress is reused.		
Measuring	Wipe with 70 – 80 % alcohol	Once daily	
Tape	wipe with 70 00 70 alcohol	once daily	
Monitors	Wipe with 70 – 80 % alcohol	Once daily	
	-Re-usable- to be washed with detergent soap and	Once every shift	
	water.		
Mops	- If chemical disinfection is required, rinse in water,	After each use	
	soak in recommended disinfectant solution		
	for30minutes,rinseagainand let dry		

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name – Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Oxygen Flow Meter.	Wash with detergent soap and water	After each use of patient Change sterile water once daily	
Oxygen mask	Use fresh mask / cannula for each patient's use. Clean with 70 – 80 % alcohol	SOS	
Nasal Cannula	Use fresh cannula for each patient's use.		
and tubings	Clean with 70 – 80 % alcohol	SOS	
Proctoscope	Clean with detergent soap and water, then send to the CSSD for further processing	After each use	
Pulse oximeter	Wipe with 70 – 80 % alcohol	After each use	
Razors	Use disposable one, fresh for every patient	-	
Scissors	 -Wipe with 70 – 80 % alcohol/ 70-80 % alcohol impregnated wipe. -If visibly soiled, clean first with a detergent soap solution. -For sterile use, follow high level disinfection with 2% glutaraldehyde. 	Before each use	
Detergent soap dispensers	Clean with detergent soap and water and let dry	Weekly	
Splints and walking frames	Clean with detergent soapand water, let dry.	Weekly	

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name – Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



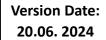
Spotlight	Wipe with detergent soap and water, let dry; followed by wipe with disinfectant solution used routinely in Operation theatre.	Once every shift After each use
Sputum containers	Use disposables only	Autoclave with contents Dispose as per BMW rules (in red bag)
Steam Inhaler	Clean with detergent soap and water, let dry.	Once daily
Steel Tray	Clean with detergent soap and water, let dry. In case of blood spillage—follow spillage policy	Weekly
Stethoscopes	Surface should be wiped with 70 – 80 % alcohol/ alcohol impregnated wipe between patients. Use dedicated stethoscope in high-risk area like ICU.	Once daily
Stretchers	Wash with detergent soap and water, let dry	Once daily
Suction Apparatus	Empty the bottles in every week or SOS. Scrub with detergent soap soap and water. Disinfect with 1% Sodium Hypochlorite solution.	Weekly & after each use
Surgical instruments	Decontamination, cleaning by enzymatic cleaner followed by drying and autoclaving or send to CSSD for further processing.	
Telephones	Alcohol wipe	
Thermometers	Wipe with alcohol and store dry.	

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat	
Revision no:	Revision date :	Pg no:	



Document Name – Infection Control Manual

Version No: 1





Toilet brushes	Rinsed in flushing water and store to dry.	
Tonometer	Immersion in 0.05% hypochlorite (500 parts per	
prisms	million available chlorine) for 10 minutes. Rinse	
(applicators)	with sterile water and dry	
Torch	Wipe with 70 – 80 % alcohol	Once daily
Toys	Clean with detergent soap and water and dried.	
Ultrasound	Clean with detergent soap and dry	
machine	Clean with detergent soap and dry	
Urinals	See bed pans.	
Vaginal	Clean with detergent soap and water and then send	
speculum	to the CSSD for further processing	
Ventilator	Heat disinfection/disposable circuit.	
(mechanical)		
	Clean with detergent soap and water and disinfect	
Vomit bowls	with 0.1% hypochlorite for 30 minutes before	
	reusing	
Walls	Remove visible soiling with detergent soap as	
w ans	necessary.	
Wash bowls	Patients must have own dedicated bowl. After each	
vv asii uuwis	patient's use, should be cleaned with detergent soap	
Washbasin	Clean with detergent soap	
Wheelchairs	Wash with detergent soap and water	

Prepared by Dr. Shreeraj Talwadekar	Reviewed by Dr. Gita Nataraj, Secretary HIC	Approved by Dean, Dr. Sangeeta Ravat
Infection Control Officer	Dr. Chaya A Kumar Prof. and Head, Microbiology	
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Recommendations for cleaning of house keeping and instrument surfaces

General Considerations While Cleaning

Health care staff involved in environmental cleaning must adhere to routine practices while carrying out cleaning. These include:

• Hand hygiene Refer chapter Hand hygiene

Use of Personal Protective Equipment (PPE)Wash hands and put on gloves.

Progress from the least soiled areas (low-touch) to the most soiled areas (high-touch) and from high surfaces to low surfaces.

Remove gross soil (visible to naked eye) prior to cleaning and disinfection.

Minimize turbulence to prevent the dispersion of dust that may contain microorganisms.

• Clean wall mounted items such as alcohol-based hand rub dispensers.

Wet mopping

- to be done for all surfaces and fixtures above shoulder height, including vents.
- Ideally, the patient/resident should be out of the room during wet mopping to reduce the risk of inhaling spores from dust particles.
- should be done once a month.

Be alert for needles and other sharp objects. Safely handle and dispose sharps into puncture proof container. Report any incident to supervisor.

Collect waste, handle plastic bags from the top (do not compress bags with hands).

Change cleaning solutions as per manufacturer's instructions. Change more frequently in heavily contaminated areas, when visibly soiled and immediately after

cleaning blood and body fluid spills.

Remove gloves and clean hands with alcohol-based hand rub; if hands are visibly

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat	
Revision no:	Revision date :	Pg no:	



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

soiled, wash with detergent soap and water.

Do not leave room wearing soiled gloves

Replenish supplies as required (e.g., gloves, Alcohol based hand rub (ABHR), detergent soap, tissue roll/paper towel etc.

Common Agents Used for Disinfection of Environmental Surfaces

Chlorine and Chlorine releasing compounds

Ethyl or isopropyl alcohol (70-90%)

Quaternary ammonium germicidal solutions

- Phenolic germicidal detergent soap solutions (5%)
- Accelerated hydrogen peroxide solutions

Preparation of Hypochlorite Solution Preparation of Working Hypochlorite Solution from Available Sodium Hypochlorite Solution

Concentration	Required	To Prepare 1000 ml		To Prepare 100 ml		Shelf Life
of	Working					
Commercially	Concentration	Hypochlorite	Add	Hypochlorite	Add	
Available		Solution (in	water	Solution (in	water	
Hypochlorite		ml)	(in ml)	ml)	(in ml)	
Solution						
5%	1%	200 ml	800 ml	20 ml	80 ml	8 hours
10%	1%	100 ml	900 ml	10 ml	90 ml	8 hours

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Cleaning of Patient Care Area/ Room / Patient Bed Space Frequency and Method of Cleaning

Area/Surface	Area wise Frequency of Cleaning			Method of Cleaning
	High Risk	Moderate Risk	Low Risk	
All work surfaces / tabletops	Once every	Once every shift	Once daily	Disinfect
	shift			
All high tough aligner (Dogg	0	O	On a a daile.	Clean with
All high touch objects (Door	Once every	Once every shift	Once daily	
knobs, Bedrails,	shift			detergent soap and
Light switches, thermostat,				water followed by
elevator buttons, telephone,				disinfection
call				
Floor (see section of floor				
cleaning)				
Walls and Doors				
Patient's cot				

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name – Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



IV stands	Twice daily	Twice daily	Daily	Clean with detergent soap
	Clean contact	Clean contact		and water
	sites after	Sites after every		
	every use	use		
Cup boards, shelves, lockers,	Daily	Daily	Weekly	Clean with detergent soap
Stools and other fixtures				and water
High dusting	Weekly	Weekly	Weekly	Wet mop
Cleaning of corners	Weekly	Weekly	Weekly	Clean with detergent soap
				and water
Fans and light	Weekly	Monthly	Biannually	Change and send for
	or after			laundering
	discharge			
	Weekly	Monthly	Biannually	Damp dusting
	or after			
	discharge			
	Weekly	Weekly	Monthly	Detergent soap soap and
				water
UV light	Daily	Daily	Daily	70% Alcohol
bells, computer keyboards,				
monitors, hemodialysis				
machines, edges of privacy				
curtains, and surfaces in				
and around toilets in				

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name – Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



patients'				
room)				
Wash basins	Once every	Once every shift	Once daily	Clean with detergent
	shift			soapand water. Use
				HCL to remove stains.
Toilet seats	Once every	Once every shift	Once daily	Clean with brush and
	shift			Detergent soapthen
				disinfect with
				appropriate disinfectant
				on MCGM schedule.
				Use Hydrochloric acid
				(HCL) to remove stains
Floor of bathroom	Once every	Once every shift	Once daily and	Clean with broom and
	shift & after	& after	after discharge	Detergent soap then
	discharge	discharge		disinfect with
				appropriate disinfectant
				on MCGM schedule

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Note*Use surface disinfectant available on schedule. Do not use Phenolic compounds for cleaning/disinfecting purposes in Neonatal units."

Cleaning in Isolation/ Infectious/ Septic Wards –

The strategies for areas housing immune-suppressed, critically ill patients include:

- Wet dusting horizontal surfaces daily with clean cloth per-moistened with a hospital disinfectant.
- Exercises caution when wet dusting equipment and surfaces above the patient to avoid patient contact with detergent soap/disinfectant.
- Regular cleaning and maintenance of equipment to ensure efficient particle removal.

Frequency of floor cleaning

Area	Frequency	Method
Special Wards—MICU, SICU,	With Every Shift or if soiled	Detergent soap soap and water
NICU, Labour room (LR),		Directly with
Transplant		appropriate disinfectant
		on schedule

The guidelines for cleaning the isolation areas/ICUs are:

- An approved disinfectant detergent soap solution should be prepared fresh for each cleaning.
- After cleaning the isolation room, mops and cleaning cloths should be laundered before being reused.
- Dirty water and used disinfectant solutions should be discarded and the

buckets and basins disinfected before being reused. Items used in contaminated isolation area must not be taken into another area.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

- Cleaning of Sterile Areas
- Sterile Processing Areas in CSSD/TSSU*
- Clean all counters and floors daily.
- Clean shelves daily in sterilization areas, preparation and packing areas and decontamination areas.
- Clean shelves daily in sterile storage areas.
- Clean case carts after every use.
- Clean walls once every month.
- Clean light fixtures, sprinkler heads and other fixtures once every month.

User Units/ Clinics, Endoscopy Suites and Other Sterile Storage Areas

- Clean counters and floors daily.
- Clean shelves daily.
- Clean walls once every month.
- Clean light fixtures, sprinkler heads and other fixtures once every month
- Prepare a log sheet of the cleaning activity

Cleaning of Delivery tables:

- The delivery tables should be covered with Macintosh and deliveries should not be conducted on bare table tops.
- Macintosh should be first wiped with sodium hypo chlorite solution.
- Similarly, any blood spilled area in the delivery table as well as floors should be first cleaned with hypochlorite solution.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

- Cots and mattresses Clean daily with 1:100 hypo chlorite solution, freshly prepared
- Replace mattresses whenever surface covering is broken
- Floors once in every shift and spot cleaning when required; Walls (every day if there is spillage of blood / body fluid) and sinks (every shift) must be routinely decontaminated
- Wet mopping of the room should be done once in every shift and spot cleaning when required
- Avoid sweeping and dry dusting

Terminal Disinfection at Discharge/Transfer Cleaning of a Patient Bed Space/Room Strip the bed, discarding linen into linen bag designated for the same

- Remove dirty linen
- All the patient care related items and environmental surfaces should be disinfected as mentioned in above table.

Note: Pillows, mattresses – washed with soap and water

: Linen - Refer linen and laundry management SOP

7 FLOOR CLEANING

- 8.1 General Considerations
- 8.1 Following things should also be considered while mopping the floors:
- 8.1.1 Prepare cleaning solutions daily or as needed and replace with fresh solution
- 8.1.2 Change the mop head at the beginning of the day and after cleaning up large spills of blood or other body substances.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



- 8.1.3 Clean mops and cloths after use and allow drying before reuse; or use single-use, disposable mop heads and cloths.
- 8.1.4 Never shake mops.
- 8.1.5 Use dust control mop prior to wet/damp mop.
- 8.1.6 Wash the mop under the running water before doing wet mopping.
- 8.1.7 Do not' double- dip' cloths (dip the mop only once in the cleaning solution, as dipping it multiple times may re contaminate it).
 - 8.1.8 Cleaning solution to be changed after frequent intervals.
 - 8.1.9 For mopping of floors, 3 bucket system (as described below) should be preferred.
 - 1st Bucket with water: o Dirty mop is rinsed
 - 2nd Bucket with fresh water for rinsing: o Mop rinsed again in this water
 - 3rd Bucket with low level disinfectant: o Mop is immersed in the solution and the floor mopped liberally.
 - Wash the used mop with disinfectant after use and dry thoroughly before reuse.

Table 8.1 Frequency of floor cleaning

Area	Frequency	Methd
General Wards	Every shift	Directly withappropriate disinfectantavailable on MCGM schedule
Special Wards—MICU, SICU, NICU, LR, Transplant	Every shift	Directly with appropriate disinfectantavailable on MCGM schedule.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Operation Theaters	• Before1stcase,	Detergent soap soap-water-
	After and in-between	Disinfectant
	each case,	• Disinfectant (1% hypochlorite)
	• End of the day	on spills and around the table
		Detergent soap soap-water-
		disinfectant

- 8.2 Mopping Floors using Wet Mop and Bucket
- 8.2.1 Working from clean areas to dirty areas
- 8.2.2 Prepare fresh cleaning solution according to the manufacturer's instructions using appropriate PPE according to Material Safety Data Sheet (MSDS).
- 8.2.3 Place 'wet floor' caution sign outside of the room or area being mopped.
- 8.2.4 Divide the area into sections (e.g. Corridors may be divided into two halves, lengthwise, so that one side is available for movement of traffic while the other is being cleaned.)
- 8.2.5 Immerse mop in cleaning solution and wring out.
- 8.2.6 Push mop around skirting first, paying particular attention to removing soil from corners; avoid splashing walls or furniture.
- 8.2.7 In open areas use a figure eight stroke in open and wide spaces, overlapping each stroke. While in small spaces, starting in the farthest corner of the room, drag the mop toward you, then push it away, working in straight, slightly overlapping lines and keeping the mop head in full contact with the floor.
- 8.2.8 Where facility of laundering mops is not available, mops should be changed at following defined intervals:

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

O High risk areas: In each shift

O Moderate risk areas: Each day

O Low risk areas: Every week

8.2.9 After cleaning:

- Tools used for cleaning and disinfecting must be cleaned and dried between uses.
- Clean mop heads daily with detergent soap, soap and warm water.
- All washed mop heads must be dried thoroughly before reuse.
- Clean the buckets after every use.
- 9 Routine Bathroom Cleaning
- 9.1.1 Working from clean areas to dirty areas
- 9.1.2 Clean door handle and frame, light switch.
- 9.1.3 Clean inside and outside of sink, sink faucets and mirror; wipe plumbing under the sink; apply disinfectant to interior of sink; ensure sufficient contact time with disinfectant; rinse sink and dry fixtures.
- 9.1.4 Clean all dispensers and frames.
- 9.1.5 Clean ledges/ shelves.
- 9.1.6 Clean shower, faucets, walls and railing, scrubbing as required to remove detergent soap soap scum; apply disinfectant to interior surfaces of shower, including detergent soap soap dish, faucets and shower head; ensure sufficient contact time for disinfectant; rinse and wipe dry; inspect and replace shower curtains monthly or as required.
- 9.1.7 Clean bedpan support, entire toilet including handle and underside of flush rim; ensure sufficient contact time with disinfectant.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

- 9.1.8 Remove gloves and wash hands.
- 9.1.9 Replenish paper towel, toilet paper, waste bag, detergent soap soap and ABHR as required.
- 9.1.10 Report mould and cracked, leaking or damaged areas for repair.
- 9.1.11 Start from the farthest corner of the room, drag the mop toward you, then push it away, working in straight, slightly overlapping lines and keeping the mop head in full contact with the floor.

REFERENCES:

- (a) CDC & WHO Guidelines
- (b) NABH Accreditation Standards for hospitals x 5thedition

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

SOP 11: Policy on Surveillance Activities

POLICY:

To provide Surveillance guidelines for Healthcare associated infection to organize and maintain an infection control program. Information obtained from surveillance data shall be used in identifying areas of priority and allocating resources accordingly.

PURPOSE:

The purposes are as follows:

- Reducing the infection rates within health care facilities.
- Establishing existing infection rates.
- Identifying outbreaks.
- Convincing medical personnel to adopt recommended IPC practices.
- Evaluating control measures.

Targeted surveillance aimed at high risk areas is more effective and manageable .It can be Site specific, unit specific, rotating or outbreak associated surveillance.

SCOPE:

Hospital Wide

The Scope of surveillance is to track and analyse infection risks and rates.

RESPONSIBILITY:

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Respective incharge of the facility, respective nurse of the facility, Infection control Nurse, Infection Control Team & Infection Control Committee,

Verification of Surveillance data's by The Infection

Control Committee

DISTRIBUTION:

Hospital Wide

PROCEDURE

Area	Frequenc	Surveillance	Responsibility
	y of visit		
ICU	Weekly	Ensure cleaning and	Respective ICU incharge,
		surface disinfection	respective ICU nurse
		Check compliance to	
		waste segregation	
		Check compliance to hand hygiene	
		Check compliance to sterile	
		techniques for procedures	
		Check change of all invasive lines	
		Linen management as per linen SOP	

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name – Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



	Monthly	Survey on HAI (CAUTI, CLABSI,	Respective ICU incharge,
	or as	VAP)– corrective action	respective ICU nurse,
	indicated	Capture the MDR and highly	respective ICO, ICN, ICT
		virulent organisms.	
Dialysis	Weekly or	Ensure proper cleaning	Respective incharge,
	as	Check compliance to hand hygiene	respective nurse
	indicated	Check compliance to waste	
		segregation	
		Check compliance to sterile	
		techniques for procedures	
		Linen management as per linen	
		SOP	
	Monthly	Ensure bi monthly surveillance of RO plant	Respective ICU incharge,
	or as	water	respective ICU nurse
	indicated		
Operating	Monthly	Microbiologic	Respective OT incharge,
room	or as	sampling and	respective OT nurse
	indicated	data maintenance	
		Ensure proper	
		cleaning	
		Maintaining proper ventilation & temp.	
		control	

Prepared by Dr. Shreeraj Talwadekar	Reviewed by Dr. Gita Nataraj, Secretary HIC	Approved by Dean, Dr. Sangeeta Ravat
Infection Control Officer	Dr. Chaya A Kumar Prof. and Head, Microbiology	
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



		Check compliance to waste segregation	
		Linen management as per	
		linen SOP	
		Check compliance on hand washing	
		Surveillance data	respective OT nurse, ICN,
		monitoring	ICT
Sterilizatio	Weekly or	Check expiry dates	
n areas	as	on sterile sets	Respectiveincharg
	indicated	Check records on	e
		biological	
		indicator	
		Ensure proper	
		cleaning	
Labour	Monthly	Check compliance to	Labour room incharge,
room	or as	waste segregation	Labour room sister
	indicated	Check compliance to hand washing	
		Checkcomplianc	
		e to sterile	
		techniques for	
		procedures	
		Linen	
		management as	
		per linen SOP	

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

	Monthly	Check compliance to waste segregation	Respective laboratory
Laboratory	or as	Check	incharge, respective ICO
	indicated	compliance to	
		PPE and sterile	
		techniques	
		wherever	
		applicable	
		Ensure	
		compliance to	
		safe waste	
		disposal	

- Water Bacteriological surveillance Monthly from various OTs of the hospital in rotation
- Blood Bank- Stored Blood component bags are processed for cultures as per protocol
- The investigation of clusters of infections above expected levels will be done.

Routine environmental-surface sampling (e.g.-surveillance cultures) air and water are not recommended. Only as part of epidemiological investigation

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

with prior approval it will be done if indicated.

• Routine surveillance of HCW for MRSA is not indicated. Only target surveillance will be done with prior approval, when there is epidemiologic evidence implicating HCW as a source of ongoing transmission.

SURVEILLANCE PROGRAMS:

Sr.No.	Area	Samples to be taken from	Frequency
1	OT – All operating rooms	Water culture from scrub station	Once a week
		air sampling plates	Once in a week after fogging
2	Cath lab	Air sampling plates Water sample	Once in a week after fogging Once a week
		Glutaraldehyde efficacy test	With each cycle

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

References:

Guidelines for Environmental Infection Control in Health-Care Facilities, Recommendations of CDC and the Healthcare Infection Control Practices Advisory Committee (HICPAC), 2003

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

SOP 12: POLICY ON REPORTING NOTIFIABLE DISEASES

The hospital has a policy of reporting the notifiable diseases to the local health authorities.

PURPOSE:

To ensure proper submission of statistics of notifiable diseases to the concerned Government Authorities.

SCOPE:

All notifiable diseases

RESPONSIBILITY:

MRO In-charge / Community Medicine department

DISTRIBUTION:

Emergency, MRO, All patien tcare areas, Administration

DEFINITION:

Notifiable Disease: Notifiable disease is any disease that is required by law to be reported to government authorities. The collation of information allows the authorities to monitor the disease and provides early warning of possible outbreaks.

Prepared by	Reviewed by	Approved by		
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat		
Revision no:	Revision date :	Pg no:		



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

ABBREVIATIONS:

Abbreviations are as follows

MRO= Medical records Office

MOH=Medical officer Health

IHIP= Integrated Health

Information Portal

PROCEDURE:

- Notifiable disease formats available in MRO / Community Medicine Department
- Community Medicine shall enter required information and mail to the EPID cell.
- Duplicate copy will be maintained in MRO.
- Notifiable Disease Reporting File shall be maintained in MRO (with received signature and the seal of the Health authority).
- If the information is sent to health authorities through hand delivery /courier, the copy of dispatch is maintained in the MRO.
- Frequency of dispatching the information:
 - a) All notifiable diseases will be reported to the concerned Authority- Daily, weekly, monthly, as advised.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

- b) During Monsoons (June, July and August)information to be dispatched daily.
- c) In-case of SWINE FLU, the information is to be sent to authority within 24 hours of disease detection.
- The flow of information will be from the clinicians and microbiologists, to the Community Medicine Department office and from there information is reported on a specific format (C Form & L Form respectively) to the Epid Cell.
- Medical Record Officer to maintain and send the data to Epid cell after Death / discharge / DAMA of the patient.
- Tuberculosis is notified on NIKSHAY Id once case is notified with Bank Details of the patient to receive financial aid from the Government.

NOTIFIABLE DISEASES:

As per IHIP portal, the list of Notifiable diseases is as follows:

- 1. <u>Disease</u>
 - a) Anthrax
 - b) Chickenpox
 - c) Chikungunya
 - d) Cholera
 - e) CCHF
 - f) Dengue / Dengue Haemorrahagic Fever / Dengue Shock Syndrome
 - g) Diphtheria
 - h) Human Rabies

Prepared by	Reviewed by	Approved by		
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat		
Revision no:	Revision date :	Pg no:		



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

- i) Japanese Encephalitis
- j) Kyasanur forest disease
- k) Leptospirosis
- l) Malaria
- m) Measles
- n) Meningococcal Meningitis
- o) Mumps
- p) Pertussis
- q) Shigella Dysentery
- r) Scrubtyphus
- s) Typhoid
- t) Viral Hepatitis A
- u) Viral Hepatitis E
- v) Others Rabies is now a notifiable disease for Maharashtra w.e.f. March 2023

2. Syndromes

- a) Fever with bleeding
- b) Fever with altered sensorium
- c) Cough ≥ 2 weeks with fever
- d) Cough ≥ 2 weeks without fever
- e) Jaundice \geq 4 weeks
- f) Acute flaccid paralysis

Prepared by Dr. Shreeraj Talwadekar	Reviewed by Dr. Gita Nataraj, Secretary HIC	Approved by Dean, Dr. Sangeeta Ravat	
Infection Control Officer	Dr. Chaya A Kumar Prof. and Head, Microbiology		
Revision no:	Revision date :	Pg no:	



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

- g) Animal bite Snake Bite
- h) Animal bite Dog Bite
- i) Animal bite Other
- j) Acute Diarrhoeal disease
- k) Acute Encephalitis syndrome
- l) Acute Hepatitis
- m) Acute Respiratory Illness (ARI) / Influenza like Illness (ILI)
- n) Severe Acute Respiratory Illness (SARI)
- o) Dysentery

RECORDS AND FORMATS:

Notifiable disease information form - L form

Line list of positive cases

Weekly Dengue Report Format - NVBDCP

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat	
Revision no:	Revision date :	Pg no:	



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat	
Revision no:	Revision date :	Pg no:	



Document Name – Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Notifiable disease information form - L form

Prepared by	Reviewed by	Approved by			
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat			
Revision no:	Revision date :	Pg no:			



Document Name – Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

	FORM L		
***	(Weekly Reporting Form		
Name of the Laboratory	Hospital Name: Nair hospital, Mambai.	Institution: TNMC, Mumbai	
State Maharashira	District : Mumbus	City: Musibai	
Officer-in-Charge N	arne: Dr. Reena Set	Signature:	
IDSP Reporting Week :	Start Date:	Date of Reporting:	
	End Date		
Diseases	Name of test & No. of Samples Tested	Name of test & No. of Samples positive	
	Elisa IgM - NS1 -	Elisa igM - NS1 -	
Dengue / DHF / DSS	Rapid: IgM+ NSI-	Rapid: IgM+ NS1-	
	PCR:	PCR:	
Chikungunya	ELISA- PCR:	ELISA- PCR :	
Æ			
Moningscreeal Moningitis			
Typhoid Fever	WIDAL-	WIDAL-	
	Blood culture-	Blood culture-	
	Clot culture-	Clot culture-	
Diphtheria			
Cholera	Hanging drop-	Hanging drop-	
	Stool culture-	Stool culture-	
Shipella Dysentery			
Viral Hepatitis A			
Viral Hepatitis E			
	ELISA:	ELISA:	
Leptospirosis	Rapid:	Rapid:	
	PCR:	PCR:	
Maleno	RMAT:	RMAT : Pv: Pt. Pv+Pf mis:	
	PSMP:	PSMP:	
HINI	PCR-	PCR-	
	Gene Xpen-	Gene Xpert-	
Other (Specify)			

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat	
Revision no:	Revision date :	Pg no:	



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Line list of positive cases

Sr.	Full Name	Age	Gen	Address	Name of	Diagnosis
No.	Unit/Reg. no.		der		the test	

Prepared by	Reviewed by	Approved by			
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat			
Revision no:	Revision date :	Pg no:			



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Weekly Dengue Report Format - NVBDCP

- 2	PERIOD -			-				-	District	and the last of th	Market Services		Fron	11									
	A 300 1	Hospital Name	Susupected Dengue cases		No. of serum namples sested for ELISA (IgM/NSI)		No. of serum samples tested +ve by ELISA (IgM/NS1)				Serum samples tested for	Rapid tests +ve		Total Positive Cases		Death Comitte Confirmed Death							
r.	Name of District / Municipality						NSI+ve IgN		gM+ve Total	Rapid (NSI/IgM)		performed (IgM/NS1)		(ELISA + Rapid)		Suspected		Probable Confin		rmed			
			During week	Prog	During week	Prog	During week	Prog	During week	Prog	Positive (NSI+IgM)	During week	Prog	During week	Prog	During week	Prog	During week	Prog	During week	Prog	During week	Pro
1	Gr Membai																						
																					*		
								-															
_	State Total				-	-							-		-		-		-		-		

References:

1. National guidelines for infection prevention and control in healthcare facilities, Ministry of Health and Family Welfare Government of India

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

2. Hospital Infection Control Guidelines, Indian Council of Medical research SOP 13: POLICY ON ISOLATION PRACTICES

Isolation practices are meant toprevent transmission of pathogenic micro-organisms within the hospital.

PURPOSE:

- 1. To prevent the transmission of pathogenic micro-organisms within the hospital
- 2. To recognize the importance of all body fluids, secretions and excretions in the transmission of nosocomial pathogens
- 3. To practice adequate precautions for infections transmitted by airborne droplet &contact.
- 4. Measures for reduction of transmission

SCOPE:

Hospital Wide

RESPONSIBILITY:

Doctor, Nurses, Infection Control Nurse, Infection Control team & Infection Control Committee DEFINITION:

Isolation nursing - is carried out by placing the patient in a single room or side room.
 Patient(s) is kept at bay and extra precautions are implemented to prevent spread of the pathogens.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

DISTRIBUTION:

Hospital Wide

TRANSMISSION-BASEDPRECAUTIONS:

There are three categories of Transmission-Based Precautions:

- 1. Contact Precaution
- 2. Droplet precaution
- 3. Airborne Precaution

Transmission-Based Precautions are used when the route(s) of transmission is (are) not completely interrupted using Standard Precautions alone. When Transmission-Based Precautions are indicated, efforts must be made to counteract possible adverse effects on patients. i.e., anxiety, depression and other mood disturbances, perceptions of stigma, reduced contact with clinical staff, and increase in preventable adverse events in order to improve acceptance by the patients and adherence by HCWs

1. Contact Precautions

Situations for Contact precaution:

MRSA/MDR Gram Negative Bacteria/VRE/Group A Streptococci

• in, Wound swab culture/Tissue Culture- if the wound is a big one and there is oozing

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

- Urine culture (if the patient is catheterized/incontinent)
- ET tube secretion culture(if the patient has ETtube/tracheotomy with excessive secretions)
- Blood(if the patient has ac entral/arterial line which is frequently handled)
- Wounds or abscesses with continous drainage
- Scabies

Common enteric conditions:

- Hepatitis A
- Typhoid patient with diarrhea
- Enteroviral infections in infants and small children
- Enteric infections with Clostridium difficile, Rotavirus, RSV, Parainfluenzavirus.
- Acute diarrhea with unknown etiology

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

CONTACT PRECAUTIONS

Display sign outside the door.

<u>Dishes/Utensils:</u>

No special precautions. Kitchenware sanitized appropriately.

Equipment and supplies:

- Use dedicated or disposable equipment when available.
- Clean and disinfect reusable equipment including IVpumps, cellphones or pagers (if used in room) and other electronics, supplies and equipment prior to removing from patient's room.
- Only essential supplies in room.

Linen Management:

Bag linen in the patient's room.

Personal Protective Equipment:

Put ON inthisorder:	Take OFF anddisposeinthis order:
1. Washor gelhands	1. Gloves
2. Gown	2. Goggle(ifused)
3. Mask(ifneeded)	3. Gown
4. Goggle(ifneeded)	4. Mask(ifused)
	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Cohort patients that harbor the same organism but no other infection.

Room Cleaning:Routine cleaning procedures

Discontinue precautions once the patient is discharged

Contact Enteric Precautions

Display sign outside the room.

Dishes/Utensils:

No special precautions. Kitchenware sanitized appropriately

Equipment/Supplies:

- Use dedicated or disposable equipment when available.
- Clean & disinfect reusable equipment including IV pumps, cell phonesorpagers (if used in rooms), electronics, supplies & other equipment prior to removing from the patient's room.
- Ensurebloodpressurecuff&stethoscopearecleanedanddisinfected between patients.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

LinenManagement:

Baglineninthepatient'sroom

Patientidentificationprocedures:

Usepatient'slabel for validationofpatientidentityanddestroyinroom after use and replace withnew tag.

Personalprotective equipment:

Put ON thisorder	Take OFF & dispose in this order
(Donning)	(Doffing)
1. Washorgelhands	1.Gloves
2. Gown	2.Goggle(ifused)
3. Mask(ifneeded)	3.Gown
4. Goggle(ifneeded)	4.Mask(ifused)
5. Gloves	5. Washorgelhands(evenif gloves used)

Cohort patients that harbor thesameorganism butnoother infection.

RoomCleaning: Routine cleaning procedures

	Transport: Essential	transport only Dress natient in clear	n gown	
Pre	pared by	Reviewed by	Approved by	
Dr.	₽₩₩₩₩₩₩₩₩₩	tmentragårdingpatientie isolation pr	e6eati, 61. Sangeesa Ravat	
Infe	ction Control Officer	Dr. Chaya A Kumar		
	Disinfecttrans	pent प्रवी भिनेहत, Microbiology		
		- ,		
Rev	ision no:	Revision date :	Pg no:	



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

2. <u>DropletPrecautions</u>

CommonConditions:

- Influenza
- Gr.AStreptococcalpharyngitis
- Rubella
- Mumps
- BordetellaPertussis
- RSV
- Adenovirus
- Invasive meningitis

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

DROPLETPRECAUTION

Display sign outside the room. Remove sign after room is cleaned Limit visitors Dishes/Utensils:

No special precautions. Kitchenware sanitized.

Equipment/Supplies:

Use dedicated or disposable equipment when available. Clean & disinfect reusable equipment including IV infusion pumps, cell phones or pagers (if used in rooms), other electronics, supplies & other equipment prior to removing from the patient's room. Ensure blood pressure cuff & stethoscope are cleaned and disinfected between patients. Only essential supplies in room.

Linen Management:

Bag linen in the patient's room

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Patient identification procedures:

Usepatient's label for validation of patient identity and destroy in room after use and replace with new tag.

Personal protective equipment

Put ON inthisorder	Take OFF & dispose in this order
1.Washorgelhands	1.Gloves(ifused)
2. Gown(ifneeded)	2.Goggle(ifused)
з. Mask	3.Gown(ifused)

Cohort patients that harbor the same organism but no other infection.

Room Cleaning: Routine cleaning procedures

Transport: Essential transport only. Dress patient in clean gown .Alert receiving department regarding patient's isolation precaution status.

Disinfect transport vehicle

Discontinue precautions once the patient is discharged

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

3. <u>Airborne Precautions</u>

Common conditions for Airborne contact precautions:

- 1. Chickenpox
- 2. Disseminated herpes zoster(shingles).
- 3. Localized zoster in immunocompromised individuals
- 4. Measles(Rubeola)

Common conditions for Airborne respirator precautions:

1. Pulmonary tuberculosis(Open)

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

AIRBORNE RESPIRATOR Precautions

Display sign outside the room.Remove sign after room is cleaned.

Family and Visitors may visit only if exposed and should wear mask.

Airborne Infection Isolation Room:

Use airborneisolationroom. Nursetonotify Infection controlnurse and Facilities/ Engineering of room number when starting and stopping precautions.

Dishes/Utensils:

Nospecialprecautions. Kitchenwaresanitizedindishwasher.

Equipment/Supplies:

- Usededicatedordisposableequipmentwhenavailable.
- Clean & disinfect reusable equipment including IV pumps, cell phones or pagers (if used in room), other electronics, supplies & equipment prior to removing from patient's room.
- Ensurebloodpressurecuff&stethoscopearecleanedand disinfected between patients.
- Onlyessential supplies in room.

LinenManagement:

Baglineninthepatient'sroom

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Personal protective equipment:

Put ON thisorder(Donning)	Take OFF & dispose in this order
1. Washorgelhands	(Doffing)
2 FittedN-95maskrequired	1. FittedN-95 mask
	2. Washorgelhands(evenif
	i i\

(Ifwoundexists:TBcanbeaerosolizedbyirrigationandinhaled,somasks andevenrotectionforwoundcareisrequired)

RoomCleaning:

Afterpatientisdischarged, keepdoorclosed for one hour then routine cleaning procedures

Transport:

Essentialtransportonly. Have patient wear a surgical mask. Clean and disinfect transport vehicle. Alert receiving department

Discontinueprecaution after discharge.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

AIRBORNECONTACTPRECAUTIONS

Displays ignouts ide the room. Remove sign after room is cleaned

Doctors, Staff, Families and Visitors enterroom only if immune! (By history, titer, or immunization)

Be certain visitors are immune- parents and siblings who have not had the diseaseorimmunizationmaybeincubatingthediseaseandbecontagious for two days prior to the onset of rash or other symptoms, putting other patients and staff at risk.

AirborneInfectionIsolationRoom:

Useairborneisolationroom.NursetonotifyInfectioncontrolnurseand Facilities/ Engineering of room number when starting and stopping precaution.

Dishes/Utensils:

Nospecialprecautions. Kitchenwaresanitized.

Equipment/Supplies:

Use dedicated or disposable equipment when available. Clean & disinfect reusable equipment including IV pumps, cell phones or pagers (if used in

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat	
Revision no:	Revision date :	Pg no:	



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

rooms),otherelectronics,supplies&equipmentpriortoremovingfromthe patient's room.

Ensure blood pressure cuff& stethoscope are cleaned and disinfected between patients.

Only essential supplies in room.

LinenManagement:

Baglineninthepatient'sroom

Patientidentificationprocedures:

Usepatientlabelforvalidationofpatientidentityanddestroyinroomafter use and replace with new tag.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Personalprotectiveequipment

PutONthisorder	TakeOFF&disposeinthisorder
1.Washorgel hands	1.Gloves
2.Gown	2.Goggle(ifused)
3.Mask(ifneeded)	3.Gown
,	4.Mask(ifused)

RoomCleaning:

Routinecleaningprocedures

Transport:

Essentialtransportonly. Have patient wear a surgical mask. Clean and disinfect transport vehicle. Alert receiving department regarding patient's

Discontinueprecautionsafter discharge.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

FUNDAMENTALSOFISOLATIONPRECAUTIONS:

Requirements for isolation: Provide the following,

Inside

- Disposablenon-sterileglovesAntiseptichanddetergentandhandrub
- Yellow&Redwastebag&wastebinGown
- Designatedmedicalequipment
- Washbowlandcommodeifnoen-suitefacilities.

Outside

- Isolationcardonthedoor
- Alcoholrub
- Additional supply of disposable nonsterile gloves
- Gown

Toiletarea

- Designated cleaning equipment
- Redlinenbagwithwatersolubleliner

Screening

Screenallthepatientswithanyofthefollowingriskfactors:

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

- PatientstransferredfromotherhospitalsorNursinghome.(Durationofstay>48HRS)
- Patientswithopen/dischargingwounds
- Patientwithventilator
- Patientswithcentralline/Foleyscatheterorinfectedperipheralline.
- Patientswithmultipleivantibioticsinlast90days
- PatientwithTPN/RTfeed

Placethepatientoncontactisolationtillreportsareavailable.

For diseases not mentioned in this list butfor which there is adoubt please check with the ICT.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

PROTOCOL FOR SCREENING MULTIDRUG RESISTANT ORGANISM- MRSA/VRE:

$\underline{Infection control measures for MRSA and VRE or Multidrugres is tant cases}$

- Implement contact is olation precautions.
- Investigateanyoutbreak:
 - Otherpatients.
 - O Staff.
- Educatestaffonhandwashing, caringskinlesions, and anti-bioticuse.
- Screen hospital transfer patients, where the hospital of transfer carries a risk of MRSA infection

AdministrativeConsiderations

Staff

- Screeningcarriedoutonstaffwithinfectivedermatitisorotherexfoliatesskinconditions.
- Duringoutbreaksituation

Procedureforscreeningpatientsinthe"atrisk"group

- ForMRSA:Samplingfromanteriornaresissufficient.
- ForVRE:Stool,rectalorperirectalsamplesarecollected.

MRSAdecolonization

Implementedwhenappropriate

- Outbreaks,

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual Version

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

- Preoperativedecontamination
- Highriskpatients
- Specialcareunits.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

VREdecolonization:Limitedsuccessrate-Notroutinelycarriedout.

RecommendationforDiscontinuingIsolation

MRSA: 3 negative cultures from the original site and from the narescollected 1 week apart VRE: 3 negative stool cultures collected off antibiotics and collected 1 week apart is sufficient ESBL: 3 negative stool cultures collected off antibiotics and collected 1 week apart is sufficient.

PROTOCOLFOR-MRSA:

TreatmentofMRSACarriers

- Colonizationmaybetransientormaypersistforweeks,ormonths.
- Antibiotics should not be used, as local treatment includes use of skin preparation (soap or
 - lotion) and shampoo containing chlorhexidine or hexachlor ophene, or Triclosane very day for 5 days.
- Nasal ointment or spray 1% chlorhexidine ointment thrice daily for 15days or 1%Mupirocin thrice daily for 5 days.
- Threeconsecutiveswabs for culture, taken from all previously colonized sites at intervals of noless than 24 hours are necessary before clearance can be given.

Typeofisolationneeded

Any patient with MRSA from any specimen should be shifted to an isolation room as soon as the culture is positive. A Contact isolation tag should be put on the door specifying

the

precautionsthatneedtobetakenonentry.IftheMRSAisisolatedfromwound,tissue, blood,

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

body fluids or urine, only gown and gloves are needed to enter the room. If ET suctiontip,orsputumispositiveforMRSA,a mask is also neededinadditiontogown

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

and gloves to enter the room. During out breaks, if adequate numbers of roomsarenotavailable,cohorting(patientswiththesamestrainofMRSAput together) canbedone. The cubicle should be treated as an "isolation cubicle", and all the precautions should be followed for all the cohortedpatients. MRSA 'tag' should be put outside the cubicle also.

Precautionstobefollowed

- Handwashing
- All HCWs including doctors should strictly do hand washing as soon as they comeout oftheisolationroombeforewalkingtothenextpatient
- If a washbasin is not available near the isolation room, a alcohol hand rub should be usedforhanddisinfection.
- Gown-IsusedtopreventcontaminationoftheHCW's uniform andtherebytransmission
 ofMRSA toother patients.Gown shouldbekeptinsidetheisolation room.Alwaysusea gown
 to enter the MRSA isolationroom if contact with the patient, or any of the surfaces in the
 patient's room is expected. Dispose beforecoming out of the room.
- Gloves-For routine care, non-sterile gloves must be used while entering the isolation room. Gloves serve as extra means of preventing contamination of the HCW's hands. Discard the gloves inside the room after use, and wash hands immediately.

Handlingthepatient'slinen

The linen of MRSA patient should be double bagged to avoid contamination, labeled as 'infectious' before sending to laundry. Do not mix it with other patient's linen. Gown and gloves should be worn while handling the used linen also.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

ProtocolregardingMask

Is indicated if MRSA is isolated from respiratory secretions. It should be worn while doing suctioning. Mask will helpto prevent nasal colonization of the HCW with MRSA.

Restrictionofvisitorsandstaff

Limitthenumberofvisitors.Frequentvisits by visitors can causetransmission of MRSA. There can be transmission of MRSA by hospital personnel like dietary staff, social workers, physiotherapists etc. The dietary staff should be restricted from entry, and the concerned nursing staff can handle the patient's food.Social workers, physiotherapists, X-ray and ECG technicians etc, who must enter the room, should also be instructed to strictly follow the precautions.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Careofpatient'sarticles

MRSA can be transmitted through fomites, i.e. through the articles and equipment's used for thepatient. Therefore uses eparatearticles for the MRSA isolation room. Thoroughly disinfect or sterilizere usable articles prior to nextuse. All the patient care equipments hould be cleaned with the hospital approved disinfectant every day, and assoon assoiling occurs, e.g. bed, side rails, locker, cardiac table, I/V stands, syring e pump, infusion pumps, monitor, urinal, bedpan and anyother item in the roomshould be disinfected. Stethoscope should be cleaned with spirit. All critical items should be cleaned and sterilized. In addition, the contaminated surfaces of other equipment like X-ray machine, Echo machine, ECG machine, physiotherapy equipment etc. should be disinfected before transport. Thorough cleaning of the surfaces should be done after shifting the patient back

<u>Wastedisposal</u>

Same as for other patients, yellow and red types of waste bins should be made available inside the room.

Discontinuingisolation

Itcanbedoneif,

- Two repeat cultures done 24 hours apart from thesame siteshow no growth for MRSA.Make surethatothersitesarenot infectedorcolonizedwithMRSA.For MRSAwoundinfection, the wound should be clean and no more oozing shouldbe present in addition repeat culture negative.
- 2. If the patient is colonized or infected with MRSA until discharge, the isolation precautions shouldbefollowed aslong asthe patient remains in the room. At ag should be put on such

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

patient's OP files othat the patient can be received in an isolation room on subsequent admission and the same precautions followed until repeat cultures become negative.

Cleaning

1. DailyCleaning

Floorshouldbecleaneddailywith.Useseparatemopsfortheisolationroom.Themop headshouldbewasheddailyandtreatitseparatelyinthelaundry.Highlytouched surfaces like door knobs, light switches, patient bed side table are cleaned with disinfectant twice daily.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

2. TerminalCleaning

On discharge, dispose of all the disposables. Take out all the items tobe sterilized or disinfected. Remove the curtains and send to laundry labeled as infectious. Then wash the room thoroughly with soap and water. Later clean the entire room and articles. Use alcohol on these surfaces as per the availability on electronic equipments and metal surfaces.

<u>Patienttransporttootherareas</u>

Notify the receiving department if transport is needed, for eg:to the Radiology, Echo room etc. cover the patient with a gown to avoid dispersal of the bacteria during transport. Thorough cleaning of the surfaces should be done after shifting the patient back.

Recordfile

Shouldbekeptoutsidetheroom.

REVERSEISOLATIONCATEGORY:

- The purpose of reverse isolation category is toprevent infections in the immunocompromised patients. The principle is to prevent contact between pathogenic micro-organisms from HCWs or fomites and susceptible patients who have severely impaired resistance.
- Diseasesthatrequirereverseisolationare-
- Severeneutropenia
- Leukaemiaandothermalignancies

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

- Organandtissuetransplantpatients
- Patientsonimmunosuppressivetherapy
- Burnsandextensivewoundssusceptibletoinfection

Although instructing and preparing visitors for patients in isolation is time consuming and oftenfrustrating. Their presence is valuable to the emotional wellbeing of the patient.

- 1. The ward sisters and the doctors concerned shall have the responsibility of informing the patients' relatives of the measures to betaken andtheimportance of restriction of visitors. This shouldbe doneated mission of the patient.
- 2. The patient and the relatives must be given healtheducation about the cause, spread and prevention for the infection, in detail. The need for isolation and restriction of visitors should be discussed with the mand information sheet should be handed over to the by stander.
- 3. Handwashingafterallcontactwiththepatientwillhavetobestressed.
- 4. Nomorethantwoadultvisitorsshouldbeallowed 'atatime' during the hospital visiting hours and the 6 ft length of stay should be governed by the needs of the patient.
- 5. Childrenbelow12yearsarenotallowedintotheisolationareas.
- 6. Beforeenteringtheroom, visitors must enquire at the nurses' station for instructions and for gown and mask if indicated. Visitor's footwear, bags etc., should be left

outside the room. Only articles that can be discarded, disinfected or sterilized should be taken the control of the control

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

ken into the room.

- 7. Visitorsarenotallowedtositonthepatient'sbed.
- 8. Visitors should wash their hands well withsoap and water before entering and when leaving the room.
- 9. Active immunization of attendants and other follow up steps, where applicablemustbeadvisedbythephysicianin-charge

REFERENCES:

- $1. \quad NABHA ccreditation Standards for Hospitals; \\ 5the dition$
- 2. CDCGuidelines
- 3. NationalguidelinesonIPCinHCF–MOHFW,GOI (2020)

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

SOP 14: Policy on Prevention of HAI

POLICY

The organization takes actions to prevent & control Healthcare Associated Infections (HAI) in patients.

PURPOSE

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

To prevent & control Health care Associated Infections (HAI) in patients

SCOPE

Hospital wide

RESPONSIBILITY

Doctors, Nurses, Support staff, Infection Control Nurse, Infection Control Team & Infection Control Committee

DISTRIBUTION

Hospital Wide

DEFINITION

CDC defines a Health care associated infection (HAI) as a localized or systemic condition resulting from an adverse reaction to the presence of an infectious agent(s) or its toxin(s). There must be no evidence that the infection was present or incubating at the time of admission to the acute care setting.

CDC uses the generic term 'health care associated infection (HAI)' instead of 'nosocomial infection'.

ABBREVIATION

Abbreviations are as follows:

HAI-Hospital Associated Infection

UTI-Urinary Tract Infections

RTI-Respiratory Tract Infections

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

BSI-Blood Stream Infections SSI-Surgical Site Infections

PROCEDURE:

URINARY TRACT INFECTIONS (UTI):

DEFINITION:

It is an infection anywhere in the urinary tract. Normally the urine is sterile. It contains fluids, salts and waste products, but it is free of bacteria, viruses and fungi. An infection occurs when microorganisms, usually bacteria from the digestive tract cling to the urethra or opening to the urinary tract and begin to multiply.

RISK FACTORS:

Elderly

Neurogenic bladder

Females—indwelling catheter

Males—indwelling and condom

Debilitation

Immobility immunosuppression

Gynaec and obstetric condition

CAUSES OF INFECTION:

Poor aseptic insertion

Immigration of bacteria from outer surface of catheter

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Open drainage

Break in closed drainage system

Poor perineal hygiene

Cross contamination

SYMPTOMS:

Burning on urination - ureteritis

Cystitis - fever, lower abdominal pain / discomfort

Colour / appearance (cloudy, dark, blood tinged)

Smell -funny odour

TYPESOFINFECTION:

Endogenous – patients own flora

Exogenous – due to contaminated hands of personnel

COMMONORGANISMS:

E.coli

Enterococci

Pseudomonas

Klebsiella spp.

Enterobactor

Proteus spp

Fungi

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

ASYMPTOMATIC URINARY TRACT INFECTION;

DEFINITION: Asymptomatic urinary tract infection must meet at least one of the following criteria:

Criterion 1: patient has at least one of the following signs or symptoms with no other recognized cause of fever (>38°C), like urgency, frequency, dysuria or supra pubic tenderness and Patients has a positive urine culture that is >105 microorganisms per cm3 of urine with no more than two species of microorganisms.

Criterion 2: patients has at least two of the following signs or symptoms with no other recognised cause: fever (>38oc), urgency, frequency, and dysuria or supra pubic tenderness and at least one of the following:

Pyuria (urine specimen with >10 WBC mm3 or >WBC high power field of unspun urine)

Organism seen on Gram stain of unspun urine.

At least two urine culture with repeated isolation of the same uropathogen (gram-negative bacteria or S.saprophyticus) with > 102 colonies / ml in non-voided specimens < 105 colonies ml of a single uropathogen (gram negative bacteria or S.saprophyticus) in a patient being treated with an effective Anti-microbial agent for a urinary tract infection.

Physician diagnosis of a urinary tract infection.

Physician institutes appropriate therapy for a urinary tract infection

Criterion 3: patient < 1 year of age has at least one of the following signs or symptoms with no other recognized cause:

Fever (>38°C), hypothermia (<37°C), apnea, bradycardia, dysuria, lethargy or vomiting and

Patient has a positive urine culture, that is >105 microorganisms per cm3 of urine with no more than two species of microorganisms.

Criterion 4: patient < 1 year of age has a tleast one of the following signs or symptoms with no other recognized cause: fever (>38°C), hypothermia (<37°C), apnea, bradycardia, dysuria, lethargy, or vomiting and

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

At least one of the following:

Pyuria (urine specimen with > 10 WBC/mm3 or > WBC/highpower field of unspun urine)

Organism seen on Gram stain of unspun urine

At least two urine culture with repeated isolation of the same uropathogen (gram-negative bacteria or S.saprophyticus) with >102colonies / ml in non-voided specimens.

<105 colonies / ml of a single uro pathogen (gram negative bacteria or S.saprophyticus) in a patient being treated with an effective antimicrobial agent for a urinary tract infection

Physician diagnosis of a urinary tract infection

Physician institutes appropriate therapy for a urinary tract infection

INDICATIONS FOR CATHETERISATION

Acute obstruction / retention, which cannot be treated with non traumatic intermittent catheterization

Measuring urine production in critically ill patient

Patient undergoing rapid diuresis

Perioperative patients to need completely empty bladder

PREVENTION OF UTI:

STRONG RECOMMENDATIONS:

Educate personal incorrect techniques of catheter insertion and care

Catheterize only when necessary

Emphasize hand washing

Aseptic technique during catheterization

Secure catheter properly

Maintain closed sterile drainage

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Obtain urine samples aseptically

MODERATELY RECOMMENDED:

Periodically re-educate personal in catheter care

Avoid irrigation unless needed to prevent or relieve obstruction

Avoid changing catheters at arbitrary fixed intervals

WEAKLY RECOMMENDED:

Consider alternative techniques of urinary drainage before using an indwelling urethral catheter.

Replace the collecting system when sterile closed drainage has been violated

Spatially separate infected and uninfected patients with indwelling catheters

Avoid routine bacteriologic monitoring

DRAINAGESYSTEM

Maintain sterile and continuous closed drainage system

Catheters and drainage tube should not be disconnected unless for irrigation

If disconnected / leakage / break in aseptic technique the collecting system should be changed using asepsis.

IRRIGATION

Before irrigation the catheter-tubing junction should be disinfected before disconnection

Irrigation should not be performed as a routine measure for prevention of infection

Follow strict asepsis

If catheter becomes obstructed and needs to be frequently irrigated, changing the catheter is advisable.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

COLLECTIONOFSPECIMEN

Urine for specimen should be aspirated from the distal end of the catheter after cleaning with a disinfectant with the help of a sterile syringe and needle.

URINARYFLOW

Flow should be unobstructed unless for specimen collection / diagnostic procedures which is temporary

Prevent catheter and collecting tube from kinking

Collecting bag should be emptied every shift

The draining spigot and non-sterile collecting container should never come in contact

Collecting bags should always be kept at a lower level.

MEATALCARE

Perineal care every shift

Clean the catheter with antiseptic twice a day

Use soap and water when indicated

CATHETER CHANGE INTERVAL

Indwelling catheter should be changed every14days

If catheterization indicated for longer duration, silicon catheter should be preferred which has to be changed every third month

The urobag has to be changed every 7th day

PRECAUTIONS

Peri-urethral cleaning with a disinfectant

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Handwashing

Secure catheter to avoid movement

Closed drainage

Collection with syringe and needle

Do not allow the bag to stand on the floor

Disinfectant in the urobag if infection rate is high

Use condom catheter when indicated with penile care

Discontinue condom catheter at first sign of penile irritation / skin breakdown

Avoid using condom catheter for 24 hours, other methods to be preferred / diapers / absorbent pads.

RESPIRATORY TRACT INFECTIONS (RTI):

Health care associated pneumonia can be characterized by its onset hospitalisation –Early or Late.

Early onset pneumonia – occurs during the first 96 hrs of hospitalization and is often caused by M.catarrhalis, H.influenzae and S.pneumoniae.

Late on set pneumonia – if pneumonia develops after 96 hrs of hospitalization. Causative agents include gram negative bacilli or S.aureus including MRSA. Viruses (influenza A & b, RSV) cause early or late on set pneumonia, whereas yeasts, fungi, legionellae and P.jiroveci are usually pathogens of late onset pneumonia.

There are 3 specific types of pneumonia

Clinically defined pneumonia

Pneumonia with specific laboratory findings

Pneumonia in immunocompromised patients

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Ventilator associated pneumonia: is defined as pneumonia in persons who had a device to assist or controlled respiration continuously through a tracheostomy or by endotracheal intubation within 48hr period before the onset of infection, inclusive of weaning period.

PREVENTION IN MECHANICALLY VENTILATED PATIENTS:

Staff education and Infection Surveillance

Interrupting Transmission of Microorganisms

Sterilization and Disinfection of equipment and devices

Interrupting person to person transmission of bacteria

Modifying Host Risk for Infection.

SUNCTIONING:

Hand washing

Wear gloves to prevent cross-contamination Use

Sterile fluids to remove secretions

Gentle suctioning as dictated by the volume and character of secretions

Suction patients to remove secretions collecting about the endotracheal tube cuff before removing the cuff.

MEDICATION NEBULIZERS:

Use sterile medications and fluids for nebulization

Dispense sterile medications aseptically and store according manufactures recommendations

Donotuselargevolumenebulizersunlesstheycancleanedandreprocesseddaily

Small, hand held nebulizers

Minimize unnecessary use

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Between uses for the same patient disinfectant, rinses with sterile water, or air dry and store in a clean, dry place.

ENTERAL FEEDING IN MECHANICALLY VENTILATED PATIENTS:

Verify placements of the feeding tube in the stomach or small intestine

Elevate the head of the bed 30 - 45 degrees

Monitor the adequacy of intestinal mobility.

STRATEGIES FOR PREVENTING ASPIRATION:

Semi recumbent positioning of Patients

Patients receiving mechanical ventilation should be placed in a semi-recumbent position to reduce the occurrence of aspiration

Measures to reduce unplanned extubation (e.g. appropriate use of physical) and chemical restraints and securing of the endotracheal tube to the patient) and the need for subsequent re-intubation performed with the patient in the supine position may also be beneficial.

Avoidance of Large Gastric Volumes:

Gastric over distention should be avoided by Reducing the use of narcotics and anticholinergic agents, Monitoring gastric residual volumes after intragastric feedings,

Using agents that increases gastrointestinal motility (e.g., metoclopramide),

Oral (Non-Nasal) Intubation:

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Prolonged nasal intubation(for more than 48hrs) should be avoided because of the association between nosocomial sinusitis and ventilatator-associated pneumonia.

Therefore the preferred route of intubation is the oropharynx.

Continuous subglottic Suctioning:

Secretions that pool above inflated endotracheal-tube cuffs may be a source of aspirated material and thus ventilator-associated pneumonia

Thus pressure of the endotracheal-tube cuffs should be adequate to prevent the leakage of colonized subglottic secretions into the lowerairway.

RE-PROCESS OF RESPIRATORY EQUIPMENT

Clean all equipment

Sterilize or use high level disinfectants for all items that come into direct or indirect contact with mucous membrane of the respiratory tract

Rinse and dry items that have been chemically disinfected Rinsing to be done only with sterile water Packed and store items to prevent contamination before use

GENERAL GUIDELINES FOR PREVENTION OF PNEUMONIA:

Strict adherence to Infection Control protocols and standard precautions is required Provide chlorehexidine mouth wash per shift

Use aseptic technique while carrying out tracheostomy or endotracheal care chart and report any change in secretion colour and odour, elevated temperature, erythema, purulent stoma drainage

Discard the endotracheal and tracheostomy suction catheter after use

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Breathing circuits:

Do not change routinely, on the basis of duration of use, the breathing circuit (i.e.,ventilator tubing and exhalation valve and the attached humidifier) that is in use on an individual patient.

Change the circuit when it is visibly soiled or mechanically malfunctioning.

Periodically drain and discard any condensate that collects in the tubing of mechanical ventilator, taking precautions not to allow condensate to drain toward the patient.

Wear gloves to perform the previous procedure and / or when handling the fluid.

Use sterile water to fill humidifier. Change the water in the humidifier daily and label it with date and time of filling discard the water if the oxygen is discontinued

Bacterial filtrate should not be used for more than 48hrs. It is mandatory to label it with date and time

Change the humidifier tubing (including any nasal prongs or mask) that is in use on one patient when it malfunctions becomes visibly contaminated

Between treatments on the same patient clean and dry small volume in line or hand held medications nebulizers Use only sterile fluid for nebulization and dispense the fluid in the nebulizer aseptically.

Whenever possible use aerosolized medications in single dose vials, if multidose medication vials are used, follow manufacturers instruction for handling storing and dispensing the medications.

Reusable resuscitation bags should be sterilized before being used on different patients.

SURGICAL SITE INFECTIONS (SSI)

DEFINITION: SSI can be classified into

SUPERFICIAL INCISIONAL

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

DEFINITION: Infections occurs within 30 days after the operative procedure & involves skin & subcutaneous tissue of the incision.

Patient has at least one of the following:

Purulent drainage

Organisms isolated from culture of fluid or tissue.

Presence of one of the signs of infection

Diagnosis of SSI by surgeon.

DEEP INCISIONAL SSI:

DEFINITION: Infections occurs within 30-90 days after the operative procedure involves deep soft tissues (e.g.,facial and muscle layers) of the incision.

CRITERIA: Patient has at least one of the following:

Purulent drainage

A deep incision deliberately opened by a surgeon when the patient has atleast one of the following signs or symptoms:

Fever (>38°C),

Localized pain, or localized tenderness unless incision is culture –negative.

An abscess or other evidence of infection involving the deep incision is found on

Direct examination, during reoperation, or by histopathologic or radiological examination

Diagnosis of a Deep Incisional SSI by surgeon.

ORGAN / SPACE Surgical site infection

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

DEFINITION: An organ / space SSI involves any part of the body, excluding the skin incision, fascia, or muscle Layer that is opened or manipulated during the operative procedure.

CRITERIA: Infections occurs within 30-90 days after the operative procedure and the infection appears to be related to the operative procedure. And infection involves any part of the body, excluding the skin incision, fascia, or muscle layers operative procedure.

Patient has at least one of the following

Purulent drainage from the organ / space

Organisms isolated from culture of fluid or tissue in the organ / space

An abscess or other evidence of infection involving the organ / space is found on direct examination, during reoperation, or by histopathologic or radiological examination

Diagnosis of an organ /space SSI by surgeon.

GUIDELINES TO PREVENT SSI PREOPERATIVE:

PREPARATION OF THE PATIENT

Whenever possible, identify and treat all infections remote to the surgical site before elective operation and post pone elective operations on patient with remote site infections until the infection has resolved.

Do not remove hair pre-operatively unless the hair at or around the incisions site will interfere with the operation

If hair is removed, remove immediately before the operation, preferably with electric clippers

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Adequately control serum blood glucose levels in all diabetic patients and particularly avoid hyperglycemia preoperatively.

Encourage tobacco cessation at minimum, instruct patients to abstain for atleast 30 days before elective operation from smoking cigarettes cigars pipes, or any other form of tobacco consumption (e.g.,chewing/dipping)

Do not withhold necessary blood products from surgical patient as a means to prevent SSI Preoperative antimicrobial body wash.

Hand / forearm antisepsis for surgical team members:

Keep nails short and do not wear artificial nails

Perform a preoperative surgical scrub for atleast 3 to 6 minutes using an appropriate

Antiseptic scrub the hand and forearms upto the elbow

After performing the surgical scrub keep hands up and away from the body (elbows in flexed position) so that water runs from the tip of the finger towards the elbows, gown and gloves.

Clean underneath each fingernail prior to performing first surgical scrub of day

Do not wear hand or arm jewellery.

Management of infected or colonized surgical personnel.

Educate and encourage surgical personnel who have signs and symptoms of a transmissible infectious illness to report conditions promptly to their supervisory and occupational health service personnel.

Develop well defined policies concerning patient care responsibilities when patient have potentially transmissible infectious conditions.

This policies should govern

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

- Personnel responsibility in using the health service and reporting illnesses
- Work restrictions, and
- Clearance to resume work after an illness that required work restriction. The policies should also identify persons who have the authority to remove personnel from duty
- Obtain appropriate culture from, and exclude from duty, surgical personnel who have draining skin
 lesions until infection has been ruled out or personnel have received adequate therapy and infection
 has resolved
- Do not routinely exclude surgical personnel who are colonized with organisms such as S.aureus (nose, hands, or bodysite) or group A streptococcus, unless such personnel have been linked epidemiologically to dissemination of the organism in the health care settings.

Administer a prophylactic antimicrobial agent only when indicated, and select it based on its efficacy against the most common pathogens causing SSI for a specific operation and published recommendations.

A single does with induction of anesthesia is recommended except in surgeries lasting for more than 3 hrs where second dose is recommended.

Administer by the intravenous route the initial dose of prophylactic antimicrobial agent, timed such that a bactericidal concentration of the drug is established in serum and tissues when the incision is made.

Maintain therapeutic level of the agent in serum and tissues throughout the operation and until, atmost, a few hours after the incision is closed in the operating room. Before elective colorectal operations, mechanically prepare the colon by use of enemas and cathartic agents administer non absorbable oral antimicrobial agents in divided doses on the day before the operation.

For high risk caesarean section, administer the prophylactic antimicrobial agent immediately after the umbilical cord is clamped.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Do not routinely use vancomycin for antimicrobial prophylaxis.

INTRAOPERATIVE

Ventilation:

Maintain positive—pressure ventilation in the operating room with respect to the corridors and adjacent areas. Maintain a minimum of 20 airchanges per hour, at least 4 should be fresh air for general OT. In case of the Orthopedic for joint replacement, Neuro, Transplant, Cardiac etc theatre the air changes recommended are 25 per hour with at least 4 fresh air exchanges. During periods when the theatre is not in use the number of air changes required are 8 changes per hour.

Introduce all air at the ceiling and exhaust near the floor

Do not use UV radiation in the operating room to prevent SSI

Keep operating room doors closed except as needed for passage of equipment, personnel and the patient Consider performing orthopaedic implant operations in operating rooms supplied with ultraclean air. Limit the number of personnel entering the operating room.

Cleaning and disinfections of environmental surfaces:

When visible soiling or contamination with blood or other body fluids of surfaces or equipment occurs during an operation, use an approved hospital disinfectant to clean the affected areas before the next operation Do not perform special cleaning or closing of operating rooms after contaminated or dirty operations.

Do not use tacky mats at the entrance to the operating room suite or individual operation room for infection control

Wet vacuum the operating room floor after the last operation of the day or night with an approved hospital disinfectant.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Sterilization of surgical instrument

Sterilize all surgical instruments according to published guidelines, practicing incorporated in the SOP Perform flash sterilization only for patient care items that will be used immediately (e.g.,to reprocess an inadvertently dropped Instrument) Do not use flash sterilization for reason of convenience, as an alternative to purchasing additional instrument sets, or to save time.

Surgical attire and drapes:

Wear a surgical mask that fully covers the mouth and nose when entering the operating room if an operation is about to begin or already underway, or if sterile instruments are exposed Wear the mask through out the operation. Wear a cap or hood to fully cover hair on the head and face when entering the operating room. Do not use shoe covers for the prevention of SSI. Wear sterile gloves, after donning a sterile gown. Use surgical gowns and drapes that are effective barriers when wet (i.e.,materials that resist liquid penetration) Standards for the type of cloth and the weave are to be defined.

Asepsis and surgical technique

Adhere to principles of the asepsis when placing intravascular devices (e.g.,central venous catheters).

Spinal or epidural anesthesia catheters or when dispensing and administering intravenous drugs.

Assemble sterile equipment and solutions immediately prior to use.

Handle tissue gently maintain effective homeostasis minimize devitalized tissue and foreign bodies (i.e., sutures, charred tissues necrotic debris) and eradicated dead space at a surgical site.

If drainage is necessary, use a closed suction drain. Place a drain through a separate incision distant from the operative incision. Remove the drain as soon as possible.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

POST OPERATIVE CARE

Protect with a sterile dressing for 24 to 48 hours post operatively an incision that has been closed primarily.

Wash hands before and after dressing changes and any contact with surgical site.

When an incision dressing must be changed, use sterile technique.

Educate the patient and the family regarding proper incision care training symptoms of SSI and need to report such symptoms.

SURVEILLANCE:

Use CDC definitions of SSI without modification for identifying SSI among surgical inpatients and outpatients For inpatient case finding (including readmissions) use direct prospective observation, indirect prospective observation or a combination of both direct and indirect method for duration of patient's hospitalization.

When post discharge surveillance is performed for detecting SSI following certain operations (e.g.,coronary artery bypass graft) use a method that accommodate available resources and data need.

For out patient case finding, use a method that accommodate available resources and data need.

Assign the surgical wound classification upon completion of an operation. A surgical team member should make the assignment.

For each patient undergoing an operation chosen for surveillance record those variables shown to be associated with increased SSI risk (e.g., surgical wound class, ASA class and duration of operation).

Periodically calculate Operation specific SSI rate stratified by variables shown to be associated with increased SSI risk e.g.NNIS risk index)

Report appropriately stratified, Operation specific SSI rate to surgical team members.

The optimum frequency and format for such rate computations will be determined by stratified case load sizes (denominators) and the objectives of local, continuous quality improvement initiatives.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

BLOOD STREAM INFECTIONS (BSI):

Definition:

According to the definitions proposed by the CDC, health care associated BSI is defined in a patient with a clinically important blood culture positive for a bacterium or fungus that is obtained more than 48 hours after being admitted to the hospital.

CAUSES FOR BSI:

From the local area

Some adjacent areas (hematogenous seeding)

Through catheter hub.

RISKFACTORS:

Agammaglobulinemia

Immunosuppressive therapy

Severe trauma

COPD

DM

SIGNS AND SYMPTOMS OF BSI

Fever >100.4°F [>38°c], chills, or hypotension, and any

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Significant growth of a microorganism (>15cfu) from the catheter tip, subcutaneous segment of the catheter, or catheter hub

Exit site infection

Erythema or indurations within 2 cm of the catheter exit site, in the absence of concomitant within blood stream infection (BSI) and without concomitant purulence

Clinical exit site infection (or tunnel infection)

Tenderness, erythema or site indurations > 2 cm from the catheter site along the subcutaneous tract of atunneled (e.g. Hickman or broviac) catheter, in the absence of concomitant BSI

Pocket infection

Purulent fluid in the subcutaneous pocket of a totally implanted intravascular catheter that might or might not be associated with spontaneous rupture and drainage or necrosis of the overlaying skin, in the absence of contaminant BSI

Infuscate-relatedBSI

Concordant growth of the same organism from the infusate and blood cultures (preferably percutaneous drawn) with no other identifiable source of infection.

TYPES OF BSI

Laboratory – confirmed BSI

Clinical Sepsis

Catheter associated BSI

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

CATHETER RELATED BSI

BSI is considered to be associated with a central line if the line was in use during the 48 hr period before development of BSI. If the time interval between the onset of infection and device use is > 48hrs, there should be compelling evidence that the infection is related to central line.

Bacteremia / fungemia in a patient with an intravascular catheter with at least one positive blood culture obtained from a peripheral vein, clinical manifestation of infection (fever, chills, and / or hypotension), and no apparent source for the BSI except the catheter. One of the following should be present,

Criteria 1: a positive semiquantitative culture (>15 CFU / catheter segment) and the same organism isolated from peripheral blood.

Criteria 2: positive quantitative (>103CFU / catheter segment) and same organism from the peripheral blood

Criteria 3: simultaneous quantitative blood cultures with a > 5:1 ratio CVC versus peripheral.

Criteria 4: differential period of CVC culture versus peripheral blood culture positivity of > 2hrs.

STEPS TO CONTROL:

Peripheral cannulae:

Avoid their use if at all possible

Document rationale for its insertion and continuation.

Document date and site of insertion

Review the need daily

Change the cannula within 72hours or earlier

Avoid positioning a cannula near a joint

Inspect the site each shift and report pain, redness or swelling to the doctor

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Insertion of Cannula:

An aseptic technique must always be used

Follow Universal Precautions

A good light is important

Choose the correct size device for the patient's needs.

Avoid touching any part of the cannula that will enter the body

Disinfect the skin before insertion

Secure the cannula to reduce movement

Cover the insertion site with a sterile dressing

Central venous catheters

Central venous catheter should be inserted using full a septic technique. Sterile gowns, gloves and drapes should be used i.e. Universal Precautions should be followed.

The insertion site should bed is infected with an antiseptic solution prior to insertion. (e.g. Alcoholic 10% providone iodine & 70% alcohol/2% chlorehexidine gluconate with alcohol). The antiseptic should be applied liberally and allowed to remain in contact with the skin for at least 30 seconds, then allowed to dry.

A sterile dressing should be applied to cover the site, and changed according to patient needs or policy.

All IV tubing should be changed every 72 hours or 24 hours in the case of Total Parental Nutrition.

Between changes of tubing and other components, IV system should be maintained as a closed system as much as possible. All entries into the tubing for administration of drugs should be made through injection ports. These are to be disinfected prior to entry, with an alcohol wipe and allowed to dry.

If infection is suspected the catheter should be removed and the tip sent for culture along with Peripheral blood cultures carried out at the same time.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Central line should not be used for more than 14 days.

GUIDELINES FOR PREVENTION OF HEALTH CARE ASSOCIATED BLOOD STREAM INFECTION:

Strict adherence to infection control protocols and Universal Precautions is required.

Properly dispose of all needles and syringes after procedure. Do not reuse disposable needles and syringes.

Do not recap, bend or break needles.

Place contaminated needles and syringes in a readily available puncture resistant container.

Intra venous sets:

Intra venous sets should be used not more than 72 hours after initiation of use.

Replace tubing used to administer antibiotics within 24 hours of initiating the infusion

Tubing's used for administering TPN to be discarded after use.

If the solution contains only dextrose, saline, or electrolytes, the administration set does not need to be replaced more frequently than every 72hours.

Tubing's used for blood and blood products to be discarded after each use.

Infusion syringes and extension tubing's to be replaced every 72 hours.

It is mandatory that all the intravenous set, extension tubings, infusion syringes to be labelled with date and time of initiation.

Peripheral catheters:

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Scheduled replacement of intravascular catheters should be done to prevent Phlebitis and catheter related infections.

Peripheral catheters should be used for not more than 72 hours.

Evaluate the catheter insertion site daily: for signs of phlebitis or infection.

The peripheral line should have proper labels mentioning the date of insertion and date of dressing ie. DOI and DOD respectively.

Removal peripheral venous catheters if the patient develops signs of phlebitis (eg.Warmth, tenderness, erythemia, and palpable venous cord), infection or a malfunctioning catheter.

Replace catheter-site dressing if the dressing becomes damp, loosened or visibly soiled

Central line Catheters:

To be changed as and when oozing or inflammation or signs of infection is seen.

Central line dressing should be done everyday using aseptic technique when the dressing becomes damp, loosened or visibly soiled

The central line dressing should have proper labels mentioning the date of insertion and of dressing i.e. DOI and DOD respectively

Multiple dose vials should be limited to a single patient use.

It should be secured and covered properly.

Ampoules should be appropriately cleaned prior to opening. Their contents should be aspirated with a filter needle, which is removed prior to administration. Cleanse rubber stoppers of vials prior to each use. Only sterile access systems should be used for each penetration of the stopper.

Do not reprocess for multiple uses any intravenous fluids, tubing or other intravascular infusions or connectors that are single-use disposable items. This includes transducers, tubing and other items that make contact with the vascular system or other body compartments.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Stop cocks and injection ports are major sites of contamination. When administering medications intravenously, all access portals must be maintained aseptically.

Always before administration of fluids or medicines, injection point should be cleaned with spirit and allowed to dry.

SURVEILLANCE OF HEALTHCARE ASSOCIATED INFECTIONS

Surveillance of Health care associated infection is the foundation for organizing and maintaining an infection control programme. Information obtained from surveillance data is a useful tool in identifying areas of priority and allocating resources accordingly.

Objectives of surveillance:

Reducing the infection rates within healthcare facilities.

Establishing endemic infection rates.

Identifying outbreaks.

Convincing medical personnel to adopt recommended preventive practices.

Evaluating control measures.

Targeted surveillance aimed at high risk areas is more effective and manageable. It can be Site specific, unit specific, rotating or outbreak associated surveillance

REFERENCES

NABH Accreditation Standards for Hospitals; 5thedition

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

National guidelines on IPC in HCF –MOHFW, GOI(2020) CDC Guidelines

RECORDS AND FORMATS

Surveillance data\

Quality Indicators data

MOM of infection control committee

SOP 15: POLICY ON SHARPS MANAGEMENT, PEP & NSIs AUDIT

Healthcare personnel are at risk for occupational exposure to blood borne pathogens, including Hepatitis B Virus (HBV), Hepatitis C Virus (HCV), and Human Immunodeficiency Virus (HIV). Exposures occur through needle sticks or cuts from other sharp instruments contaminated with an infected patient's blood or through contact of the eye, nose, mouth, or skin with a patient's blood. Important factors that influence the overall risk for occupational exposures to blood borne pathogens include the number of infected individuals in the patient population and the type and number of blood contacts. Most exposures do not result in infection. Safe handling and disposal of sharps is a vital component of the Standard Precautions approach to reduce the risk of transmission of blood borne virus.

PURPOSE:

To have in place a system for reporting exposures in order to quickly evaluate the risk of

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

infection, inform about treatments available to help prevent infection, monitor for side effects of treatments, and determine if infection occurs. This may involve testing blood and offering appropriate post exposure treatment.

.

SCOPE:

Hospital wide

RESPONSIBILITY:

Doctors, Nurses, Infection Control Nurse, Infection Control Team, Infection Control Committee

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

DISTRIBUTION:

Hospital wide

DEFINITION:

An exposure that might place HCW at risk for HBV, HCV, or HIV infection is defined as:

- Sharp Injury-a percutaneous injury (e.g. a needle stick injury (NSI) or cut with a sharp object
- Blood and body fluid exposure (BBF)-Contact of mucous membrane or non-intact skin (e.g. exposed skin that is chapped, abraded or affected with dermatitis) – Contact with blood, tissue, or other body fluid that are potentially infectious

ABBREVIATION:

Abbreviations are as follows

NSI: needle stick injury

PEP: post exposure prophylaxis

HBV: Hepatitis B virus HCV: Hepatitis C virus

HIV: Human Immunodeficiency virus

HCW: health care worker

ICTC: Integrated Counseling and Testing Center ART: Anti-

Retroviral Therapy

HBIG: Hepatitis B Immunoglobulin AEB: Accidental exposure to blood

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

PROCEDURE:

- Contamination risk, from an Infected Known or Highly Suspected Person to another recipient are:
 - O Hepatitis B virus1:3
 - O Hepatitis C virus1:30
 - O Human Immunodeficiency Virus1:300

It has been estimated that the risk of acquiring HIV through mucous membrane exposure splashed with contaminated body fluids is much less (probably 1 per

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

1000 injuries) 0.1%.Risk of infection is 3% after Hepatitis B virus exposure and approximately 30% after Hepatitis C virus exposure.

Post Exposure Prophylaxis:

Post exposure prophylaxis refers to the comprehensive management given to minimize the risk of infection following potential exposure to blood borne pathogens (HIV, HBV, HCV).

Categories of exposure:

Categories of exposi	ure
Category	Definition &example
Mild exposure	Mucous membrane/non-intact skin with small volumes E.g.: a superficial wound with a plain or low caliber needle, Or contact with the eyes or mucous membranes, subcutaneous Injections following small-bore needles
Moderate exposure	Mucous membrane/nonintact skin with large volumes or percutaneous Superficial exposure with solid needle E.g.: a cut or needle stick injury penetrating gloves

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Severe exposure	Percutaneous with large volume. E.g.:
	An accident with a high caliber needle (>18G) visibly
	contaminated with blood;
	A deep wound(hemorrhagic wound and/or very painful); Transmission of
	a significant volume of blood;
	An accident with material that has previously been used intravenously Or
	intra-arterially.

The wearing of gloves during any of these accidents constitutes a protective factor.

Note: in case of an AEB with material such as discarded sharps/needles, contaminated for over 48 hours, the risk of infection becomes negligible for HIV, but still remains significant for HBV. HBV survives longer than HIV outside the body.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

MAIN RISKS FROM NEEDLE-STICK INJURY AND BLOOD CONTAMINATION:

The main concern is the transmission of bloodbornevirusesi.e.

- HEPATITIS B (HBV)
- HEPATITIS C (HCV)
- HUMAN IMMUNODEFICIENCY VIRUS (HIV)

At risk categorization of body fluids -Refer occupational healh: Health care workers

WHENDOESNSIOCCUR?

- Recapping needles(Most important)
- Performing activities involving needles and sharps in a hurry
- Handling and passing needles or sharp after use
- Failing to dispose off used needles properly in puncture-resistant sharps containers
- Poor health care waste management practices
- Ignoring Universal Work Precautions

GOODPRACTICEINVOLVES:

To avoid NSI, good practices of handling the sharps should be followed. StandardizedpracticesshouldbefollowedinallkindsofAccidentalExposureto Blood (AEB).

Refer to biomedical waste disposal

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024

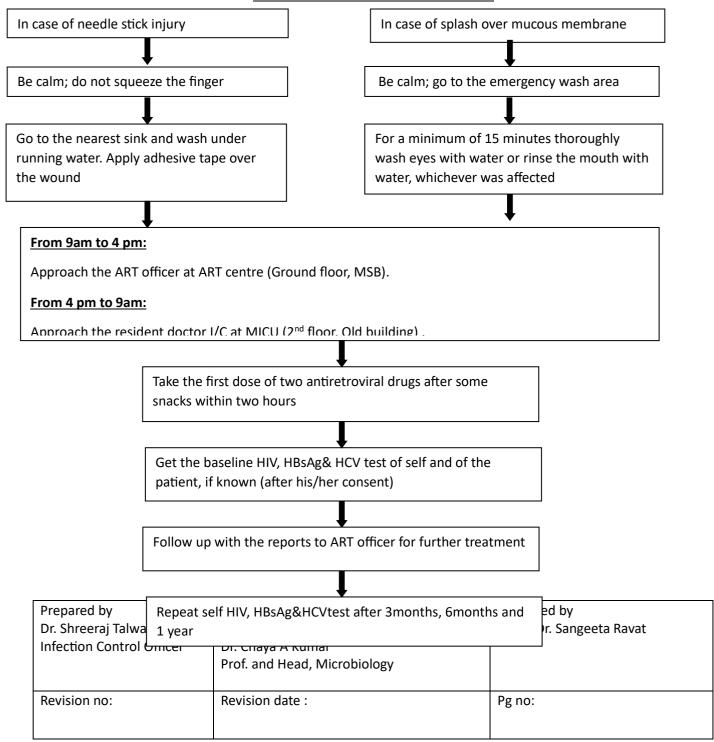


Objective elements – HIC 01 to 08

Managementoftheexposedsite:

To be followed as per the NACO guidelines given below

POST EXPOSURE PROPHYLAXIS





Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

1. Reporting the Incident

- Report the exposure incident to the Department In Charge. He / She shall immediately make available to the exposed employee a confidential medical evaluation and follow-up. Refer to the ART centre in routine hours and MICU in emergency hours for PEP if required. He will also document the details of the exposure in the occurrence log.
 - 2. Reporting to ART centre /MICU
- The incident should be reported to the to the MICU
- After assessing the risk of the exposure, the medical officer will decide on the necessity of starting anti retroviral drugs for PEP and administration of Hepatitis B Immunoglobin, as required.

Determination of the Exposure Code (EC)

Exposure code can be defined as per the flow chart given below

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

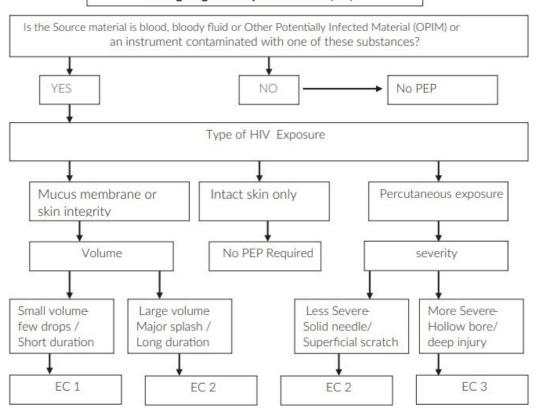
Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

Assigning HIV Exposure Code (EC)



Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

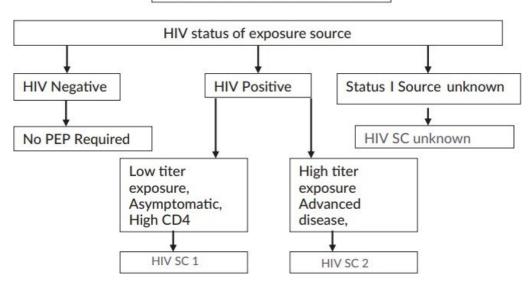
Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Algorithm for HIV Source Code (SC)



Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Determine Post-Exposure Prophylaxis (PEP) Recommendation:

EC	HIVSC	PEP	Duration
1	1	Not warranted	-
1	2	Recommended PEP	28days
2	1	Recommended PEP	28days
2	2	Recommended PEP	28days
3	1or2	Recommended PEP	28days
2/3	Unknown	Consider PEP if HIV prevalence is high in given population in the region and risk categorisation	28days

3. Counsel and prescribe PEP

Persons should receive appropriate information about what PEP is about & the risk & benefits of PEP in order to provide informed consent. It should be clear that PEP is not mandatory.

PEP for HIV

Antiretroviral drugs if required should ideally be started within 2 hours and not later than 72 hours.
 Refer policy Occupational health: Health care worker

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

PEP for HBV

- Hepatitis B Immunoglobin should be taken if the source is seroreactive for HBV, but the HCW is not protected by previous vaccination.
 - Availability of PEP needs to been sure in for round- the-clock availability of PEP. The utilization data should be prepared on monthly basis as per NACO guidelines.

HBV prophylaxis for reported exposure incidents

HBV status of person	34 33 34 34 34 34	Significant exposure		Non-significan	t exposure
Exposed	HBsAg positive source	Unknown source	HBsAg negative source	Continued risk	Nofurther risk
≥1 dose HB vacane pre-exposure	Accelerated course of HB vaccine* HBIGx1	Accelerated course of HB vaccine*	Initiate course of HB vaccine	Initiate course of HB vaccine	No HBV prophylaxis Reassure
≥2 doses HB vaccine pre-exposure (arti-HBs not known)	One dose of HB vaccine followed by second dose one month later	One dose of HB vaccine	Finish course of HB vaccine	Finish course of HB vaccine	No HBV prophylaxis Reassure
Known responder to HB vaccine (anti-HBs > 10 miU/ml)	Consider booster dose of HB vaccine	Consider booster dose of HB vacciné	Consider booster dose of HB vaccine	Consider booster dose of HB vaccine	No HBV prophylaxis Reassure
Known non-responder o HB vaccine (anti-HBs <10 miLl/ml2-4 months post-immunisation)	HBIG×1 Consider booster dose of HB vaccinel	HBIG×1 Consider booster dose of HB vaccine	No HBIG Consider booster dose of HB vaccine	No HBIG Consider booster dose of HB vaccine	No prophylaxis Reassure

Hepatitis C Virus

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

There is presently no prophylaxis available against hepatitis C. Post exposure management for HCV is based on early identification of chronic HCV disease & referral to a specialist for management.

Pregnancy and PEP:

Based on limited information, anti-retroviral therapy taken during 2nd and 3rd trimester of pregnancy has not caused serious side effects in mothers or infants. There is very little information on the safety in the 1st trimester. If the HCW is pregnant at the time of exposure to HIV, the designated authority/physician must be consulted about the use of the drugs for PEP.

Records and formats:

NEEDLE STICK INJURY AUDIT FORM

S	Sr.no.	Particulars	Details
1		Name of employee	

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

2	Department	
3	Ward	
4	Designation	
5	Address	
6	Contact no.	
7	Date & time of incident	
8	Date & time of reporting	
9	Procedure at the time of incident	
10	Purpose of sharp used for	
11	Cause of injury	
12	Nature of injury	
13	Type of contamination	
14	Date of last Hepatitis course/booster/anti-	
	HBsAg	
15	Date of last tetanus	
16	Source of patient(known/unknown)	
17	PEP procedure initiated	
18	HIV PEP completed/not completed	
19	Reported to: Name, sign &Date	

References:

a.CDC Guidelines

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

b. NACO Guidelines

c. National Technical Guidelines on AntiRetroviralTreatment:National AIDS Control Programme Care Support and Treatment Services, NACO, under MOHFW, GOI.(Pg 125-140)

SOP 16: POLICY ON CONTROL OF OUTBREAKS

Hospital needs to establish incidence of hospital-acquired infection so that it can identify abnormal levels or outbreaks when they occur. Clinical departments and infection control team shall identify investigations and handle outbreak of any infection in the hospital in accordance with good clinical practices.

PURPOSE:

To identify, control & prevent outbreak of infection.

SCOPE:

Concerned clinical department.

RESPONSIBILITY:

Infection Control Committee, Infection Control Team and concerned clinical department, department of community medicine.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

DISTRIBUTION:

Hospital Wide

DEFINITION:

An outbreak is defined as an occurrence of disease at a rate greater than that expected within a specific geographical area over a defined time period.

Timely notification of a possible outbreak relies on the past experience of clinical and laboratory staff, and on them being alert to the condition of individual patients.

PROCEDURE:

HANDLING OUTBREAK:

The initial problem in dealing with an outbreak is recognition that an outbreak is occurring. In some outbreaks this may be immediately obvious (for example, outbreaks of shigellosis or virus diarrhoea) but infection occurring in patients discharged after a short hospital stay (childbirth, day surgery etc.) may go unrecognized for some time. This also applies to infections with long incubation times such as tuberculosis. It is vital therefore that medical and nursing staff report any suspicions to the ICT. It does not matter if investigation subsequently shows an outbreak is not occurring, but the implications of any delay in investigating a genuine outbreak may be grave.

Many outbreaks are first detected by the microbiology laboratory due to increased isolation of unusual pathogens. The laboratory must report suspicions to the ICO as soon as possible.

MANAGING OUTBREAKS:

- 1. Recognition of an outbreak
- a. Preliminary Investigation:
 - i. Develop a case definition, which includes site, pathogen and affected population.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

- b. Verify diagnosis:
 - i. By reviewing each case with the definition.
- c. Determine the magnitude of the problem:
 - i. Number of cases and the severity.
- d. Confirm that an outbreak exists:
 - i. By comparing the present rate with the existing rate.
- e. Take immediate relevant control measures:
 - i. Study the available information to identify relevant control measures.
 - ii. Review and strengthen the relevant infection control practices e.g. hand washing, isolation, environmental cleaning, aseptic procedures, disinfection and sterilization.
 - iii. Restrict visitors.

2. Notification of Outbreak

Notify the Infection Control team, hospital administration, relevant departments and epidemiological unit. Educate the staff, patients and visitors.

- a. Outbreak Control Committee:
 - i. ICT may consider forming an Outbreak Control Committee depending on the nature and magnitude of the outbreak.
 - ii. This committee should
 - Meet regularly until the outbreak is under control.
 - Major decisions such as ward closure should be taken by this committee.
 - Designate a person to work with media if necessary.

3. Active case Finding

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Search for the additional cases by using clinical and microbiological records.

- a. Microbiological Investigations:
 - i. Microbiological investigations should be done depending upon the suspected epidemiology of the causative organism. Consult the microbiologist or obtain off-site microbiologist's opinion to decide on appropriate specimens.
- b. Epidemiological Typing:
 - i. Typing of the etiological agent could be done depending on the facilities available.
- c. Line listing:
 - i. Prepare a data collection tool, e.g. Questionnaire.
 - ii. Record all the cases noting patient details, date and time of onset of symptoms in each case, date of admission, place infection details etc.
- d. Data Analysis:
 - i. Analyze the data to identify common features of the cases. E.g. age, exposure to risk factors.
 - e. Formulating and testing hypotheses:
- i. Formulate a hypothesis about suspected causes for the outbreak based on literature survey and common features of cases.
- ii. Hypothesis is tested by a case control study, or microbiological study to delineate the problem and identify the source.
 - Case control study a group of uninfected patients (control group) is compared with infected patients (case group).
 - Microbiological study planned according to the known epidemiology of infection problem. This identifies possible sources and routes of transmission.

4. Control Measures

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

- a. Strengthen specific control measures as soon as the cause of outbreak is identified.
- b. These may include,
 - i. Identification and elimination of the contaminated product.
 - ii. Modification of nursing procedures.
 - iii. Identification and treatment of carriers.
 - iv. Correction of lapses in technique or procedure.

Monitor:

Continue follow up of cases after the outbreak clinically as well as microbiologically.

1. Evaluate:

Evaluate for the effectiveness of control measures. Cases should cease to occur or return to the endemic level.

2. Document the Outbreak:

Prepare a report on the investigation and management of the outbreak and present to the infection control committee, departments involved and the administration

References:

1. National guidelines For infection prevention and control in healthcare facilities: Ministry of Health and Family Welfare, Government of India

SOP 17: POLICY ON STERILIZATION

KEMH is committed to ensuring highest standard of sterilization of equipments, instruments and other articles so as to ensure maximum infection control possible.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

PURPOSE:

To establish and maintain standardized procedures for sterilization of different articles used in the hospital. The prime role of this is to prevent the transmission of disease- causing microorganisms from medical items to susceptible patients.

SCOPE:

The scope of Sterilization services is to provide sterilized instruments and linen to all user departments in time for efficient patient care.

RESPONSIBILITY

In charge: Respective O.T in charges shall be responsible for the proper sterilization of surgical instruments

DISTRIBUTION:

All O.Ts

DEFINITION:

<u>Decontamination:</u> According to OSHA, "the use of physical or chemical means to remove, inactivate, or destroy blood-borne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal".

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

<u>Cleaning:</u> Mechanical removal of foreign material (e.g., soil, and organic material) from objects or surfaces and is normally accomplished using water with detergents or enzymatic products.

<u>Antisepsis:</u> Prevention of infection by inhibiting or arresting the growth and multiplication of germs (infectious agents).

<u>Disinfection:</u> Reducing the number of pathogenic microorganisms to the point where they no longer cause diseases. Usually involves the removal of vegetative or non-endospore forming pathogens

<u>Sterilization:</u> Killing or removing all forms of microbial life (including endospores) in a material or an object.

<u>Contact time</u>: Time a disinfectant is in direct contact with the surface or item to achieve disinfection/sterilization.

<u>Disinfectant:</u> usually a chemical agent (but sometimes a physical agent) or heat that destroys disease-causing pathogens or other harmful microorganisms but might not kill bacterial spores.

ABBREVIATION:

C.S.S.D – Central Sterile Supply Department.

OSHA: Occupational Safety and Health Administration

PROCEDURE:

Spaulding <u>classification</u>: The level of microbial control required to use/reuse an equipment/device on a given patient has been described by Spaulding as follows:

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name – Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Device classification	Item used	Objective	Appropriate Process
Critical items	Surgical instruments,	Objects that enter	Must be purchased as
	cardiac and urinary	sterile tissue or	sterile or be sterilized
Items entering sterile	catheters, implants,	the vascular	with steam if possible.
tissue, the body	and ultrasound probes	system must be	
cavity, the vascular	used in sterile body	sterile because	
system and non-intact	cavities.	any microbial	Heat-sensitive objects
mucous membranes		contamination	can be treated with EtO,
		could transmit	hydrogen peroxide gas
		disease	plasma; or if other
			methods are unsuitable,
			by liquid chemical
			sterilant. Germicides

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



	categorized as chemical
	sterilant
	include ≥2.4%
	glutaraldehyde-based
	formulations, 0.95%
	glutaraldehyde with
	1.64%
	phenol/phenate,7.5%
	stabilized hydrogen
	peroxide,7.35%
	hydrogen
	peroxide with 0.23%
	peracetic acid, 0.2%
	peracetic acid, and
	0.08% peracetic acid
	with 1.0% hydrogen
	peroxide.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Semi-critical items	This category includes	These medical	Minimally require high-
	respiratory therapy	devices should	level disinfection using
Items that make	and anesthesia	be free from all	chemical disinfectants.
contact, directly or	equipment, some	microorganisms;	Glutaraldehyde,
indirectly, with	endoscopes,	however, small	hydrogen
intact	laryngoscope blades,	numbers of	peroxide, ortho-
Mucous	esophageal	bacterial spores	phthalaldehyde, and
membranes or non-	manometry probes,	are permissible.	peracetic acid with
intact skin.	cystoscopies,	Intact mucous	hydrogen peroxide.
	anorectal manometry	membranes are	Compatibility to be
	catheters, Tonometer	generally	checked and contact
	Diaphragm.	resistant to	time to be followed
		infection by	

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



		common bacterial	rigidly.
		spores.	
			Laparoscopes and
			arthroscopes entering
			sterile tissue ideally
			should be sterilized
			between patients. Items
			should be rinsed and
			flushed thoroughly
			using sterile water after
			high-level disinfection
			After rinsing, items
			should be dried (forced
			air drying or alcohol
			flush expedites drying)
			and stored (e.g.
			packaged) in a manner
			that protects
			them from
			recontamination
Non critical items	Non critical items are		Low level disinfectants
are those that come	divided into		

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



in contact with intact	a) non critical patient	
skin but not mucous	care items e.g. BP	
membranes.	cuffs ,ECG leads	
	etc. and b) non critical environmental surfaces e.g. crutches, Tabletops, Bedpans, bedrail, bedside table.	

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

7.7.2 Cleaning

- Cleaning is the removal of foreign material (e.g., soil, and organic material)
 from objects and is normally accomplished using water with detergents or
 enzymatic products.
- Thorough cleaning is required before high-level disinfection and sterilization because inorganic and organic materials that remain on the surfaces of instruments and interfere with the effectiveness of these processes.
- If soiled materials dry or bake onto the instruments, the removal process becomes more difficult and the disinfection or sterilization process less effective or ineffective.
- Surgical instruments should be pre-soaked or rinsed to prevent drying of blood and to soften or remove blood from the instruments.

A. Methods of cleaning

There are various methods used for cleaning of instruments and equipments:

a) Manual cleaning

All surfaces of the instrument/equipment must be cleaned taking care to reach all channels and bores of the instrument. If instruments are being washed manually the following procedure should be followed: wear personal protective equipment (plastic

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

apron, thick rubber gloves, eye protection ,surgical mask and/or face shield), remove any gross soiling on the instrument by rinsing in tepid water(15-18degrees) take instrument apart – fully and immerse all parts in warm water with a biodegradable, non-corrosive, nonabrasive, low foaming and free rinsing detergent or use an enzymatic cleaner if necessary ensure all visible soil is removed from the instrument–follow manufacturers' instructions rinse in hot water (unless contraindicated) dry the instrument either in a drying cabinet, or hand dry with clean lint-free cloth inspect to ensure the instrument is clean.

b) Enzymatic cleaners

Used for fibre optic instruments and accessories, and other items those are difficult to clean. These products are hazardous and care should be taken when in contact with them.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

c) Ultrasonic cleaners and automated washers

Ultrasonic cleaners and automated washers are recommended for cleaning basic instruments that can withstand this process. Using a machine to wash the instruments will cut down on the handling of the instruments. These cleaners must be compliant with national guidelines and standards, and must be used according to the manufacturers' instructions. Ultrasonic cleaners do not disinfect the instruments. By causing high frequency, high-energy sound waves to hit the instrument/equipment, the soiling matter drops off the instrument, or becomes easy to remove during the rinsing process. These cleaners are not appropriate for use on cannulated instruments (they cannot clean inside the instrument), plastic materials, two or more different metals, or some glass instruments, syringes and lenses. Daily efficiency tests should be done.

B. Instrument cleaning process (steps of cleaning)

Always wear utility gloves, a mask, and protective eyewear when cleaning instruments and other items. Avoid using steel wool or abrasive cleansers. These products can scratch or pit metal or stainless steel, resulting in grooves that can become a nesting place for microorganisms. This also increases the potential for corrosion of the instruments and other items. STEP 1 has to be performed at User area. All other steps to be performed at CSSD.

Fig 7.1: Steps of Cleaning

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



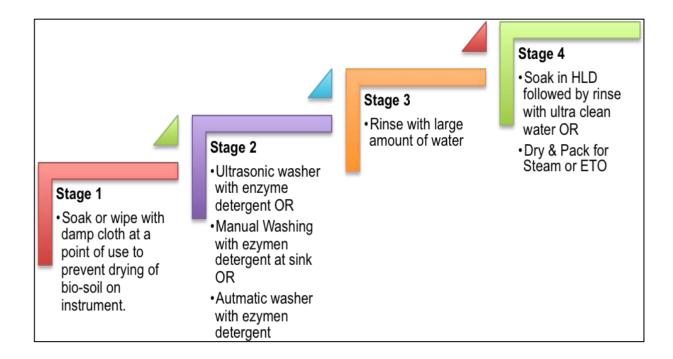
Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024





Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Step 1

- Soak or wipe with damp cloth at a point of use to prevent drying of bio-soil on instrument.
- Decontaminateinstrumentsandotheritemsbyplacingtheminaplasticcontainer of 0.5% Hypochlorite solution/Bleaching Solution. Let them soak for 10 minutes. A container of this solution should be kept in every operating theatre and procedure room, so that used items can be place directly into the bucket.
- Users should put instruments and other items into the solution as soon as they are finished using each item. Open or unlock jointed instruments, such as haemostats and scissors. Disassemble those instruments with sliding or multiple parts.
- After 10 minutes, remove the items from the Hypochlorite solution/Bleaching Solution and either rinse with water or clean immediately. Do not leave items in the solution for more than 10 minutes, since excessive soaking in the solution can damage instruments and other items. Always wear gloves when removing instruments and other items from a chlorine solution. Dried out instruments then can be taken for further processing.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Step 2

- Using a soft brush or old toothbrush, detergent, and water, scrub instruments and other items vigorously to completely remove all blood, other body fluids, tissue, and other foreign matter.
- Hold items under the surface of the water while scrubbing and cleaning to avoid splashing.
- Disassemble instruments and other items with multiple parts, and be sure to brush in the grooves, teeth, and joints of items, where organic material can collect and stick.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Step3

Rinse items thoroughly with clean running water to remove all detergent. Any detergent left on the items can reduce the effectiveness of further chemical processing.

Step 4

Allow items to air-dry (or dry them with a clean towel).

Note: Instruments that will be further processed with chemical solutions must dry completely to avoid diluting the chemicals; items that will be high-level disinfected by boiling do not need to be dried first.

7.7.3 Sterilization

Sterilization is defined as a process where all microbes are removed from a defined object Inclusive of bacterial endospores.

A. Methods:

- i. Heat Sterilization:
 - Moist Heat: Exposure to saturated steam at 121 0C for 15-20 min OR 1340C for

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

4 min in any autoclave.

- Dry Heat: Exposure to dry heat at 1600C for 120 min.
- ii. Chemical Sterilization: (for heat sensitive items)
 - Ethylene oxide
- iii. Low temperature Sterilization
 - Plasma sterilizer using Peracetic acid or hydrogen peroxide.

Autoclave:

- Commonly used method of sterilization
- Heat sterilization depends on the temperature to which the articles are exposed, the type of heat (moist better than dry heat) and the exposure time.
- Steam or water boiling at atmospheric pressure and at a temperature of 100°C DOES NOT sterilize.
- At a pressure of 15 lb/in2, water boils at 121° C and at a pressure of 32lb/in2 water

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

boils at 134° C. Steam at these temperatures will sterilize objects in 15 mins and 3 mins respectively. This is the principle of the autoclave.

- The temperature and holding time for sterilization fo rclean items is 121°C for 20 minutes or 134°C for 3.5 minutes depending on the setting of the autoclave.
- All air should be removed from the autoclave for increasing the efficiency of steam.
- This can be achieved by the downward displacement autoclave or by vacuum method.

ETO sterilizer:

The following points need to be noted.

- ETO is used for sterilizing heat sensitive equipment.
- Essential parameters of ETO sterilization includes:
- Temperature –Should be 40-55°C
- Exposure time –16 hours
- Test for effectiveness of sterilization—using spore strips containing 106 spores of B. subtilis.
- Each cycle should be monitored using at least one spore strip.
- All articles which have undergone ETO should be well aerated before use.

<u>Flash method of sterilization</u> is not to be used for implants.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Heat for disinfection: 80-100°C for20minutes.

B. Packing & Loading

- For effective sterilization, selection of packaging material plays important role apart from sterilization parameters. The following are keys in selecting a suitable packaging material:
- The packaging material must be permeable to sterilizing agent.
- The packaging material must be impermeable to bacteria and other contaminants.
- The packaging material must resist tears and punctures.
- It should facilitate aseptic presentation of packaged content.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08



Textile pack should not exceed 5kg or exceed 30cm wide by 30cm high by 50cm long.



Package the object loosely

- Proper loading of material inside sterilizer is very critical for efficient sterilization. Relative humidity in the processing area should be at least 35%.
- When loading sterilizer there should be space between items to facilitate circulation and penetration of sterilant.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

- There should be no contact between items and chamber wall.
- In mixed load, linen should be kept on to pracks and metal on bottom
- Peel pouches should be kept on the edge facing same direction
- Textile should be kept on the edge
- Instrument sets should be placed flat

C. Monitoring

- ➤ Mechanical, chemical and biological monitors can be used to evaluate the effectiveness of the sterilization process.
- Each load is monitored with mechanical (time, temperature, pressure) and chemical (internal and external) indicators.
- ➤ Biological indicators (spores) should be used weekly to monitor the effectiveness of

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Sterilization. Vials are removed from sterilizers and put in designated incubator. Monthly report are sent to ICN.

- ➤ Chemical indicators as strips should be used with every batch.
- An expiry date is given for sterile articles based on the packing material used.
- **D.** Quality Indicators (Before use & after use) Monitoring protocol of Autoclave:
- <u>1. Temperature, Pressure and time</u> of each cycle is recorded is followed according to manufacturer's recommendations. Records should be maintained for each cycle.
- 2. Various quality indicators are used to check the efficacy of sterilization:
 - a) Exposure control: Autoclave indicators tape is pasted on all packs to be kept in autoclave.
 - b) <u>Load Control</u>: Biological indicators (spores of Bacillus stearothermophilus) are used once a week (Monday) in all autoclave machines in first load and with every load which contain any implant. This indicator gives us rapid results, i.e. positive result in one hour and negative result in 3 hours. If result is positive means sterilization is not adequate that whole load is recalled & re-autoclaved.
 - c) Pack control: Class 5 chemical integrator –It is used in every pack.

<u>Equipment control:</u> Bowie Dick Autoclave Tape Test (For vacuum-based sterilizer): In the center of the load, is placed a piece of paper to which is fixed a cross of

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

approved autoclave tape. This tape shows a colour change whenever exposed to steam. If all the air has been removed the tape will show a uniform colour change. If all the air has not been removed, when steam is admitted the air will be forced in the centre of the pack where it will collect as a 'bubble' and there will be no change in the colour of the tape in that region. Reading of the test – When the cycle is finished, the pack should be taken out and the strip examined. All these tape results should be recorded and the tapes themselves preserved.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

- d) Chamber leak test every week.
- e) For autoclaves, the chamber leak rate test should be performed daily.

Performance of the chamber leak rate test – Draw a vacuum in the autoclave chamber, close all valves leading to the chamber, stop the vacuum and observe the chamber pressure at the end of 5 mins and 15 mins respectively. At the start of the test, the chamber pressure should be less than 40m bar. During the last 10 mins, the chamber pressure should be less than 13 mbar.

- 1. Wet pack is not accepted as <u>sterile</u>. These are repacked and resterilized (even if the indicators show the appropriate changes.
- 2. There are <u>different trolleys</u> for carrying sterile and unsterile instruments.
- 3. <u>Personnel entry:</u> No person allowed to enter in sterile room without Personal Protective Equipments (PPE) (i.e. Cap, mask, gown & slippers etc.)
- 4. Expiry of items: All sterile items must be used within 72hours after 72hours items should be sent for re-autoclaving

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Monitoring protocol for ETO sterilizer

- AN1087 Dosimeters are placed with every run. They change color from yellow to blue when exposed to Ethylene oxide. They integrate the effects of time, temperature and the concentration of Ethylene oxide in contact with the crystals in the capillary tube.
- For a load to be considered sterile, the color change from yellow to blue must extend past the triangular mark on the label. No laboratory testing is required. The information is available immediately at the end of a sterilization cycle.

Biological Indicators—Done weekly

- Each AN1080 Biological and Chemical Sterilizer Control pouch is a complete sterility control. Steri test eliminates the possibility of a false positive by including both a spore strip and an ampoule of sterile culture broth sealed in a transparent, gas permeable, waterproof, plastic pouch.
- Place the unopened Steri test with the items to be sterilized. At the end of the cycle, remove the Steri test and look at the Dosimeter. A color change from yellow to blue that extends to the triangular mark on the Dosimeter label indicates that a dose of Ethylene oxide sufficient for sterilization has been delivered. Without opening the Steri test pouch, manipulate the ampoule of culture broth inside of its break shield so that the neck of the ampoule is broken.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

• Gently shake the broth down to cover the spore disk. Incubate the Steri test at 37.5°C for 72 hours. A change in the color of the broth from blue to orange indicates growth of bacteria and therefore an unsterile load.

7.7.4 Recall policy:

Actions to be taken if any monitoring indicators fail:

- > Recall the item immediately with the help of load number
- > Supervisor are informed immediately.
- > Personnel should try and discover the cause of the failure and arrange for corrective action.
- > The item are reprocessed and then supplied after confirmation of sterility.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

7.7.5 Record keeping:

- Entry of all the items made in receipt register including date, time, type of instruments in the pack, name of department, procedure used for, case infected not, name and signature of person receiving the items.
- > Inventory of sterile packs is checked so that they are not distributed directly to the user department.
- Record of all the indicators tests and culture report is kept.
- Result of load control, equipment control and glutaraldehyde solution monitoring result are submit to the HIC department on monthly basis.
- ➤ Recall event should be documented and record should be maintained in a recall register.

7.7.6 <u>Disinfection</u>

Disinfection is a process where most microbes are removed from defined object or surface, except bacterial spores.

High level disinfection is that which kills all microorganism and high number of bacterial spores.

A. Classification of Disinfectants

(a) High Level Disinfectants:

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

They destroy all microorganisms including vegetative bacteria, most bacterial spores, fungi, viruses including enteroviruses and mycobacterium tuberculosis except some bacterial spores.

Ex: more than 2%Glutaraldehyde, Ethylene Oxide,1%SodiumHypochlorite(10,000ppm of chlorine)

Used for semi critical instruments and equipments (those that are in contact with intact mucous membrane without penetration)

For gastrointestinal endoscopes, endotracheal tubes, anesthesia breathing circuits, respiratory therapy equipments.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

(b) <u>Intermediate Level Disinfectants:</u>

They destroy vegetative bacteria, Mycobacterium tuberculosis, most viruses e.g. enteroviruses and fungi but not bacterial spores. E.g. Isopropyl alcohol(70%),ethyl alcohol, sodium hypochlorite (0.1%),Chlorhexidine, hydrogen peroxide, phenolic solutions.

(c) Low Level Disinfectants:

They destroy most vegetative bacteria, fungi and enveloped virus e.g. HIV but will not kill bacterial spores, Mycobacteria and non-enveloped viruses like enterovirus. E.g., Quaternary ammonium compounds like benzyl konium chloride, some soaps.

B. Guidelines for Selection of Disinfectants:

There is no ideal disinfectant. Each application requires careful view of following:

- 1. Type and number of organisms.
- 2. Type and amount of organic matter
- 3. Contact time
- 4. Type of surface(Rough/Corrugated)
- 5. Type of water(hard/soft)
- 6. Manufacturers data on efficacy
- 7. Safety and environmental aspects(chlorine is not free from toxicity)
- 8. Cost, shelf life and convenience of use

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

9. Residual activity

Two Approaches for Selection of Disinfectants:

- 1) Accept the manufacturers data
- 2) Validate yourself

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

C. Guidelines for Use of Disinfectants

Name of Disinfectant	Method of Dilution	Contact Time	In Use Span/ Use
Aldehyde Solutions:			
	Add activator	Disinfection: 20-30	14 days used for heat
	powder / liquid to the	mins	sensitive
Glutaraldehyde (2%)	liquid in 5 liter jar	Sterilization: 10	instruments e.g.
	and use undiluted	hours	Endoscopes
	Same as above water	Same as above	
	1 part: 49 parts	Disinfection :	
	(20 ml + 980 ml)	15	
		min	Long acting (28 days)
OPA		Sterilization :	24 hours
(orthophthalyl		5	Used as surface
aldehyde)		hours, 30 min	disinfectant or 2%
			solution in
			Operation theaters and
Glutaraldehyde +			0.5% in wards,
Formaldehyde + Benzy	1		dressing room.
chloride			Can be used in a low
			pressure sprayer.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

(Glutaraldehyde +	water	Disinfection :	14 days (used for
formaldehyde)	1 part : 9 parts	15 min	instrument
	(10 ml + 990 ml)	Sterilization :	sterilization)
		5	
		hour, 30 min	
6% Hydrogen Peroxide	20 ml H2O2 + 80 ml	6-8 minutes	Use immediately after
(Available as	normal saline		preparation forsurgical
30% stabilized	= 6% H2O2		dressings.
solution)	(use		
	freshly prepared)		
1% Sodium	5%: 80 ml water +	20-30 minutes	7 hours
Hypochlorite	20 ml bleach to make		Used for blood spills
Ex. : Polar Bleach 5%	it 1% solution. 10%:		and laboratory
Polar Bleach 10%	90 ml water +		decontamination
	10 ml bleach		

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Calcium hypochlorite	1.4 gms / liter of water	20-30 min.	24 hours Disinfection
Ex. : Bleaching powder	for visibly		of toilets,
(70% available	contaminated articles		bathrooms and
chlorine)			may be used if liquid
			bleach not
			available
70% Alcohol	Do not dilute	2-5 minutes	24 hours used for
			surface disinfection
Chlorhexidine (2%)w/v	Ready to use	2-3 minutes	2%:Up to 6-8 hours
4% Chlorhexidine w/v			for disinfection of
			hands
			4%: Used before a
			procedure.
Povidine Iodine 10%	Ready to use	Allowed to dry	For skin preparation
			before surgery
1% Triclosan	Ready to use	Antiseptic soap or	For MRSA
		bathing liquid	(Methicillin resistant
			Staphylococcus
			aureus)

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

(2 propanol -	Ready to use	30 seconds	Hand rub
1 propanol,			
macetronium ethyl			
sulfate)			
(Stabilized H2O2 11%	10 % w/v solution	60 minutes	Surface disinfection
w/v with 0.01% w/v			
diluted silver nitrate			
solution)	20% w/v solution	60 minutes	For fogging*

^{*(}Fogging is not routinely recommended, however, every institution may decide as per their local needs).

7.7.7 Decontamination Procedure for commonly used Equipments

Decontamination encompasses cleaning, disinfecting and sterilizing of equipment/device: Pre-cleaning of any item/ medical device is an essential step prior to disinfection.

Prepared by
Dr. Shreeraj Talwadekar
Infection Control Officer

Dr. Chaya A Kumar
Prof. and Head, Microbiology

Revision no:

Revision date:

Propared by
Dr. Gita Nataraj, Secretary HIC
Dr. Chaya A Kumar
Prof. and Head, Microbiology

Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

7.7.8 Endoscopes-cleaning and disinfection

- 1. Mechanical cleaning: This is the most important step. Flush the air/water channel for 10-15 seconds to eject any blood or mucus. Aspirate detergent through the biopsy/suction channel to remove gross debris. Use a cleaning brush suitable for the instrument and channel size to brush through the suction channel.
- <u>2. Disinfection:</u> The endoscope and all internal channels are soaked in 2% Glutaraldehyde for 20 minutes.
- 3. <u>Rinsing:</u> Following disinfection, rinse the instrument internally and externally to remove all traces of disinfectant.
 - 4. Drying: Dry the endoscope externally. Flush air through each channel.
 - <u>5. Store:</u> store the endoscope in a way that prevents recontamination and promotes drying (e.g. hung vertically).
 - <u>6. Monitoring:</u> Monitoring of disinfection procedure of endoscope is done on regular basis (through round sheet) and disinfectant is checked on regular basis.

Prepared by
Dr. Shreeraj Talwadekar
Infection Control Officer

Dr. Chaya A Kumar
Prof. and Head, Microbiology

Revision no:

Revision date:

Prof. Approved by
Dean, Dr. Sangeeta Ravat

Prof. Prof. Sangeeta Ravat

Prof. Pro



Document Name – Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

RECORDSANDFORMATS

Format of supply of sterile equipment

Sr	Ward	No. of	No. of	Bag	Total	Name & sign	Name & sign	Sign of
		big	small		(handed	of recipient	of Supervisor	in-
no		drums	drums		over)			charge

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Log book entry of daily sterilization work (it should have at least following columns)

Recall register format

Sr.	Drum	Contents	Date	Sterilizatio	Chemical	Reason	Date	Recall	Supervisor	Sign
no.	ID/tray	of drum/	&	n method &	indicator	for	&	informe	sign	of in-
	ID	tray	time	Cycle no.	strip	recall	time	d to		charg
	with		of				of			e
	date of		run				recall			
	receipt									

Sr	Drum	Contents	Nam	Date	Steriliza	Cycle	Temp,	Chemical	Supe	Sign
	ID/tray	of drum/	e &	&	tion ion	no.	pressur	indicator strip/	rviso	of in-
no	ID with	tray	sign	time	method		e &	result of	r sign	charg
	date of		of	of			holdin	biological		e
	receipt		recip	run			g time	indicator when		
			ient					used		

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

Sterilization Audit

Sr.no.	<u>Particulars</u>	Yes/No	<u>Remarks</u>	<u>Supervisors</u>
				<u>sign</u>
1	The organization provides adequate			
	space and appropriate zoning for			
	sterilization activities.			
2	Cleaning, packing, disinfection and/or			
	sterilization, storing and the issue of			
	items is done as per the written			
	guidance. *			
3	Regular validation tests for sterilization			
	are carried out and documented. *			
4	The established recall procedure is			
	implemented when a breakdown in			
	the sterilization system is identified. *			

REFERENCES:

- 3. CDC & WHO Guidelines
- 4. NABH Accreditation Standards for hospitals 5th edition

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name – Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

SOP 18: POLICY ON BIOMEDICAL WASTE MANAGEMENT

All Biomedical waste shall be segregated at the point of generation, collected, stored, transported, treated destroyed or disposed of as per the provisions of Bio-Medical Waste (Management & Handling) Rule 2016. It is a statutory requirement and compliance is must.

PURPOSE:

To define and document the instructions and methodology of Waste Management Process with the aim to

- A. Ensure the compliance to Statutory Requirements
- B. Prevent Infection to staff, patient and attendants objective
- C. Safety of the Environment

SCOPE:

This applies to waste generated hospital wide.

RESPONSIBILITY:

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual Versi

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

Dy Dean for effective implementation of this process.

DISTRIBUTION:

Hospital Wide

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

DEFINITION:

Biomedical wastes (BMW) are defined as wastes that are generated during the laboratory diagnosis, treatment immunization of human beings or animals, in research activities pertaining there to, or in the production of biologicals.

ABBREVIATION:

- BMW-Bio-Medical Waste Management
- MOEF & CC : Ministry of Environment, Forest and Climate Change
- CBWTF: Common Bio-medical Waste Treatment Facility
- ICO: Infection Control Officer
- BMWM: Biomedical waste Management
- PWD: Public Works Department
- NACO: National Aids Control Organization
- PPE : Personal protective equipment
- EP/STP: Effluent Plant/ Sewage Treatment Plant
- MPCB: Maharashtra Pollution Control Board
- MOHFW: Ministry of Health and Family Welfare.

PROCEDURE:

LEGAL COMPLIANCES

Legislation & Gazette

The Biomedical Waste (Management and Handling rules)2016 enacted through legislation and gazette bind us to follow the rules and regulations of segregation, collection and disposal of the Bio medical

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

waste.

Method

- A. Segregation
- B. Collection
- C. Storage
- D. Transport
- E. Treatment
- F. Disposal

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

A. Segregation

- Separation of different types of waste by sorting into designated categories.
- Best method is to classify into different categories and putting them into color bags Segregation is done at source.
- Bio-Medical waste shall not be mixed with other wastes. A colour code as per schedule I of BMW Rules (detailed below) is followed.
- Appropriately colour coded waste bags are placed in colour coded bins in all patient care areas near the points of generation.
- Bags and containers are marked with biohazard symbol as per schedule IV of BMWM Rules 2016.
- Liquid chemical waste shall be segregated at the source and shall be pretreated or neutralized prior to mixing with other effluent generated from the hospital.
- Dead Fetus below the viability period (as per MTP Act 1971 and amendments) can be considered as anatomical waste. Such may be handed over to CBWTF in yellow bag with a copy of official MTP Certificate from the Obstetrician or Medical Superintendent.
- Microbiology waste & other clinical laboratory waste, blood samples & blood bags should be
 pretreated through non-chlorinated disinfection or sterilization (autoclaving)on-site, as per the
 WHO or NACO guidelines.
- Syringes shall be mutilated and needles shall be cut and then stored in tamper proof, leakproof and puncture resistant sharp containers.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name – Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Fig 6.1: Biomedical waste segregation protocol

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Colour of the bag	Type of waste	Waste treatment	
Yellow	a) Human anatomical waste	Incineration or plasma pyrolysis or deep burial	
	b) Animal anatomical waste		
X	c) Soiled waste	Incineration or plasma pyrolysis or deep burial	
A	d) Expired or discarded medicines	Returned to the manufacturer or supplier for incineration at >1,200°C	
(W)	e) Chemical waste	Incineration, plasma pyrolysis, deep burial or encapsulation	
	f) Chemical liquid waste	Pre-treatment and then disposal	
	g) Discarded linen, mattresses, beddings contaminated with blood or body fluids	Non-chlorinated chemical disinfection followed by incineration or plasma pyrolysis	
	h) Microbiology, biotechnology and other clinical laboratory waste	Pre-treated to sterilise with non-chlorinated chemicals on-site as per NACO or WHO guidelines, thereafter incinerated	
Red	Contaminated waste (recyclable) like plastic bag, bottles, pipes or containers	Autoclaving or microwaving/hydroclaving followed by shredding or mutilation Treated waste to be sent to registered or autoclaved recyclers or for energy recovery of plastics to diesel or fuel oil or for road-making	
White translucent	Waste sharps including metals: Needles, syringes with fixed needles, needles from needle tip cutter or burner, scalpels, blades	Autoclaving or dry-heat sterilisation; followed by shredding or mutilation or encapsulation in metal container or cement concrete Sent for final disposal to iron foundries (having consent to operate from the state pollution control committees) Alternatively, sent to sanitary landfill or designated concrete waste sharp pit	
Blue cardboard box with blue label or blue leak- & puncture-proof container	Glassware: Broken or discarded and contaminated glass including medicine vials and ampoules except those contaminated with cytotoxic wastes; metallic body implants	Disinfection (by soaking the washed glass waste after cleaning with detergent and sodium hypochlorite treatment) or through autoclaving or microwaving or hydroclaving; then, it is sent for recycling	

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

Advantages of Segregation:

- Minimize quantities of hazardous waste
- Minimize the associated risk
- Minimize the cost of management

B. Collection

- Bags are packed when ³/₄ full.
- Waste bags are tightly closed or sealed at neck when removed from the
- Containers for safe and easy handling by waste handlers.
- Labelling of all the bags with predesigned labels specified in schedule IV with information including hospital name, patient care unit name, date and weight is done before usage of bags.
- Waste from various patient care areas is collected daily or more frequently as required.
- The staff is provided with personal protective equipment (PPE).

C. Storage

- Biomedical waste storage location has been designated inside the health care establishment, away from patient care area & kitchen near Gate No 7.
- This temporary storage site shall be secured & locked, well ventilated, have a biohazard sign visible from a distance and have access to transportation vehicle from CBWTF.
- The storage room has a pucca floor with its level above the ground level
- The waste bags should not be stored on the floor. There should be either trolleys or shelves

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

for this purpose.

- Red and Yellow bags should be stored separately.
- There shall be provision of washing in the storage area and the waste trolleys to be washed after each emptying.
- Drainage of Storage area to be treated with disinfectant and then discarded.
- Untreated human anatomical waste, animal waste, soiled waste, Biotechnology waste shall not be stored for more than 48 hours.

D. Transportation

a) On-site transportation

- The bags are transported by the housekeeping department at defined timings via defined routes. (Avoid heavy footfall areas)
- The bags are transported to the central waste near Gate No 7 receiving terminal in colour coded covered trolleys with biohazard signage
- The trolleys should be leak-proof, without any sharp edges, easily washable with provision for
 drainage of washing water and wheels & handles for easy transportation by waste handler.
 Avoid the transport of too many bags at one time and contact of the bag with the body of
 personnel. The trolley should not be overfilled and trolley cover should snugly fit to cover the

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

bags in trolley appropriately.

- The personnel involved in handling and transporting the biomedical waste bag should wear appropriate PPE which includes at least three ply surgical mask, heavy duty rubber gloves (NOT the surgical gloves), plastic gown with sleeves and shoes. When handling liquid waste goggles/face shield also should be worn.
- All patient care units shall record the weight of all categories of waste handed over to the waste collectors and should bear the name, signature, date and time of waste handover.

b) Off-site Transportation

• The operator of common bio-medical waste treatment facility shall transport the biomedical from the premises of an occupier to the authorized off- site CBWTF.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06, 2024



Objective elements - HIC 01 to 08

- Only authorized vehicle shall be used to transport BMW from the premises of occupier to off- site CBWTF
- The vehicle shall have the label & information as specified in part 'A' & part 'B' of schedule IV
- The vehicle shall comply with the conditions stipulated by MPCB as well as requirements contained in Motor Vehicle Act, 1988, if any or the rules made there under for transportation of such infectious waste.
- Waste shall be weighed and handed over under supervision of a designated hospital staff.
- A record of vehicle registration no., date& time and quantum of waste handed over shall be maintained.

E. Treatment & Disposal:

- No final treatment or disposal of biomedical waste is done within the hospital premises.
- This is undertaken by an outsourcing agency (CBWTF) authorized by MPCB in accordance with schedule I of BMWM rules 2016
- In case of non-collection of BMWM for final treatment & disposal by the operator within the intended time, prescribed authority

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

shall be informed immediately.

- Treatment and disposal of liquid waste shall be done in accordance with water treatment & disposal of liquid waste as per Water Act, 1974
- At present liquid chemical waste is treate with disinfectant and then discarded.
- Residual or discarded chemical wastes, used or discarded disinfectants, chemical sludge to be sent to Hazardous Waste treatment, storage & disposal facility shall be sent through CBWTF only.

8. REFERENCES:

- 1. Biomedical waste management rule, India, 2016 (including amendment added in 2018 and 2019)
- 2. NABH Accreditation Standards for hospitals 5 th edition

RECORDS AND FORMATS:

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

<u>Daily Record:</u> Date, Time, Weight, Number of bags

- a. At the point of generation
- b. At the time of collection
- c. At the time of handing over for transport to CBWTF

BIO-MEDICAL WASTE MANAGEMENT AUDIT TOOL

Ward	Date	Round taken by
------	------	----------------

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Sr. No.	Particulars to be checked	Yes	No
1	Waste segregation proper		
	a. Red bag		
	b. Yellow bag		
	c. Punctured proof container		
	d. Cardboard box with blue marking		

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar	Dr. Gita Nataraj, Secretary HIC	Dean, Dr. Sangeeta Ravat
Infection Control Officer	Dr. Chaya A Kumar	
	Prof. and Head, Microbiology	
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

	eBlack bag	
	(Non infectiouus kitchen waste)	
2	Display of BMW charts/ poster	
3	Record book of BMW	

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar	Dr. Gita Nataraj, Secretary HIC	Dean, Dr. Sangeeta Ravat
Infection Control Officer	Dr. Chaya A Kumar	
	Prof. and Head, Microbiology	
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual Ver

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

	(date, weight etc.)
4	BMW bag with label
5	Any other observations
6	Transportation of BMW
	A .Whether PPE available for the staff
	transporting BMW
	B. Availability of Designated trolley
	c. Availability of Designated path
7	Storage of BMW away from patient area
8.	Documentation of any accident

SOP 19: POLICY ON PPE USE

Use of personal protective equipments appropriate for the task while providing patient care by all the health care providers inorder to avoid associated infections.

PURPOSE:

To promote and practice use of personal protective equipments among health care workers.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

C		\cap	D		
	ι.	O	ייי	E,	:

Hospital wide

RESPONSIBILITY:

Adminstration to provide adequate PPEs to Doctors, Nurses & Infection Control Team DISTRIBUTION:

To health care professionals of all the departments

DEFINITION:

Specialized clothing or equipment worn by an employee or health care professional for protection against infectious materials.

ABBREVIATION:

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

PPE: Personal Protective Equipment

INTRODUCTION:

Potential source of infection - one's own mucous membranes, airways, skin and clothing.

The selection of PPE is based on the nature of the interaction with the patient and/ or the likely mode(s) of transmission of infectious agents, according to the risk assessment.

In determining the type of personal protective equipment to use for given procedure, HCWs should consider the following factors:

- ➤ Probability of exposure to blood and body substances;
- Amount of blood / body fluids likely to be encountered;
- > Type of body tissue involve:Full protective wear, including gloves, impermeable gowns or aprons, masks, protective eye/ face-shields, protective foot wear and head cap is recommended for operating room or mortuary procedures.

Otherwise, separate equipment scan be used as per exposure situation

PPE should be put on just prior to the interaction with the patient.

When the purpose for which the PPE was used has ended, PPE should be removed immediately and disposed off in the appropriate receptacle.

The process of PPE removal requires strict adherence to a formal protocol to prevent recontamination.

Personal Protective Equipment should be changed if they become heavily contaminated or torn/split during a procedure.

Risk assessment

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

The risk assessment should take account of various factors that include:

- Nature of the task to be undertaken (Sterile or non-sterile gloves required)
- Risk of contamination to either patient or user.
- ➤ Barrier efficacy of gloves

Risk assessment helps us to decide which all protective equipments are required for the situation.

Gloves

Definition:Medical gloves are defined as disposable gloves used during medical procedures; they include:

- Examination gloves(non-sterile or sterile)
- Surgical gloves that have specific characteristics of thickness, elasticity and strength and are sterile

As a general rule, if the risk is to the patient then 'Sterile' gloves are required.

If the risk is to the user then 'Non sterile' gloves will probably be sufficient.

When handling chemical disinfectants you may need to wear 'industrial or domestic gloves'.

Rationale for using medical gloves:

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Medical gloves are recommended to be worn for two main reasons:

1. To reduce the risk of contamination of health-care workers hands with blood and other body fluids.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

2. To reduce the risk of germ dissemination to the environment and of transmission from the health-care worker to the patient and vice versa, as well as from one patient to another.

Gloves are worn when dealing with:

- Any blood or other body fluids, such as synovial fluid, peritoneal fluid, amniotic fluid, pleural fluid.
- Any wound or broken skin.
- ➤ Handling chemicals or disinfectants, which could cause skin irritation.

Must remember:

- ✓ If the integrity of a glove is compromised (e.g., punctured), it should be changed as soon as possible and complemented with hand hygiene.
- ✓ Double gloving is considered an appropriate practice in:
 - places with a high prevalence of HBV, HCV and HIV
 - for long surgical procedures
 - for procedures with contact with large amounts of blood or body fluids
- for some high-risk orthopaedic / CVTS procedures etc.
- Use of petroleum-based hand lotions or creams may adversely affect the integrity of latex gloves and some alcohol-based hand rubs may interact with residual powder on health-care workers' hands.

The Glove Pyramid

To aid decision making on when to wear (and not wear) gloves

Gloves must be worn according to STANDARD and CONTACT PRECAUTIONS. The

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

pyramid details some clinical examples in which gloves are not indicated, and others in which examination or sterile gloves are indicated. Hand hygiene should be performed when indicated regard lessof indications for glove use.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Fig:The glove pyramid

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Ρ

Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

STERILE GLOVES INDICATED

Any surgical procedure; vaginal delivery; invasive radiological procedures; performing vascular access and procedures (central lines); preparing total parental nutrition and chemotherapeutic agents.

EXAMINATION GLOVES INDICATED IN CLINICAL SITUATIONS

Potential for touching blood, body fluids, secretions, excretions and items visibly soiled by body fluids.

DIRECT PATIENT EXPOSURE: Contact with blood; contact with mucous membrane and with non-intact skin; potential presence of highly infectious and dangerous organism; epidemic or emergency situations; IV insertion and removal; drawing blood; discontinuation of venous line; pelvic and vaginal examination; suctioning non-closed systems of endotrcheal tubes.

INDIRECT PATIENT EXPOSURE: Emptying emesis basins; handling/cleaning instruments; handling waste; cleaning up spills of body fluids.

GLOVES NOT INDICATED (except for CONTACT precautions)

No potential for exposure to blood or body fluids, or contaminated environment

DIRECT PATIENT EXPOSURE: Taking blood pressure, temperature and pulse; performing SC and IM injections; bathing and dressing the patient; transporting patient; caring for eyes and ears (without secretions); any vascular line manipulation in absence of blood leakage.

INDIRECT PATIENT EXPOSURE: Using the telephone; writing in the patient chart; giving oral medications; distributing or collecting patinet dietary trays; removing and replacing linen for patient bed; placing non-invasive ventilation equipment and oxygen cannula; moving patient furniture.

vat

Revision no:	Revision date :	Pg no:	



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Type of gloves to be used:

As a general policy, selection of non-powdered gloves is recommended since this avoids reactions with the alcohol-based hand rub in use within the health-care facility.

Re-use/reprocessing:

• At present no standardized, validated and affordable procedure for safe glove reprocessing exists.

Summary of the indications for using glove and for glove removal

	Indication
Gloves on	Before a sterile procedure When anticipating contact with blood or another body fluid, regardless of the existence of sterile conditions and including contact with non- intact skin and mucous membrane Contact with a patient(and his /her immediate surroundings)

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

Gloves off	As soon as gloves are damaged(torn or integrity suspected)
	When there is an indication for hand hygiene.
	When the intended use of gloves has been accomplished
	When contact with blood, another body fluid, non-intact skin and mucous
	membrane has occurred and has ended
	When contact with a single patient and his/her surroundings,or a contaminated
	body site on a patient has ended

Don't forget

✓ Gloves are single use items and should be changed after each procedure to further minimize the risk of infection.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



- ✓ Gloves do not provide complete protection against hand contamination. Pathogens may gain access to the caregivers' hands via small defects in gloves or by contamination of the hands during glove removal. Hence, hand hygiene must be performed after removal of gloves.
- ✓ Glovesshouldbeusedduringallpatient-careactivitiesthatmayinvolveexposure to blood and all other body fluid (including contact with mucous membrane and non-intact skin), during contact precautions and outbreak situations.
- ✓ It is important that health-care workers are able to differentiate between specific clinical situations when gloves should be worn and changed and those where their use is not required (refer "The Glove Pyramid").
- ✓ Moreover, the health-care worker should be accurately informed on the moment (see table below) for donning and removing gloves.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Technique for Gloving and Degloving non-sterile examinationgloves

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

Annex 4.

Technique for donning and removing non-sterile examination gloves

When the hand hygiene indication occurs before a contact requiring glove use, perform hand hygiene by rubbing with an alcohol-based handrub or by washing with soap and water

I. HOW TO DON GLOVES:



1. Take out a glove from its original box



Touch only a restricted surface of the glove corresponding to the wrist (at the top edge of the cuff)



3. Don the first glove



 Take the second glove with the bare hand and touch only a restricted surface of glove corresponding to the wrist



5. To avoid touching the skin of the forearm with the gloved hand, turn the external surface of the glove to be donned on the folded fingers of the gloved hand, thus permitting to glove the second hand

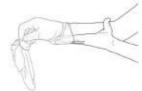


 Once gloved, hands should not touch anything else that is not defined by indications and conditions for glove use

II. HOW TO REMOVE GLOVES:



 Pinch one glove at the wrist level to remove it, without touching the skin of the forearm, and peel away from the hand, thus allowing the glove to turninside out.



Hold the removed glove in the gloved hand and slide the fingers of the ungloved hand inside between the glove and the wrist. Remove the second glove by rolling it down the hand and fold into the first glove

3. Discard the removed gloves

4. Then, perform hand hygiene by rubbing with an alcohol-based handrub or by washing with soap and water

Source: Glove Use Information Leaflet. World Health Organization, Geneva, 2009. Available from: http://www.who.int/gpsc/5may/tools/training_educational/en/





Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Technique for donning and doffing of sterile examination gloves

1. Opening the package:

Sterile gloves may be wrapped inside your sterile tray (on top of supplies) or packaged on their own.

- Packaged inside the sterile tray:
 - Wash your hands.
 - Open your sterile dressing tray.
 - Take the sterile gloves out of the tray by pinching the middle of the paper in which the gloves are wrapped.
 - Put the paper on a clean dry surface. Do not put the paper on your sterile supply wrapper.
- Packaged in a paper wrapper separate from the sterile tray:
 - Wash your hands.
 - Open the outer wrap of the sterile glove pack.
 - o Take out the inner wrap.
 - Put the wrapped sterile gloves on a clean, dry surface like a table or countertop. Do
 not put the wrapped gloves on the sterile supply wrapper.
- 2. Putting on the gloves(Donning):

Open the wrapper, so you can see both gloves. With the hand you usually write with, grasp the opposite glove at the folded edge of the cuff.

Pick the glove up by the folded edge.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



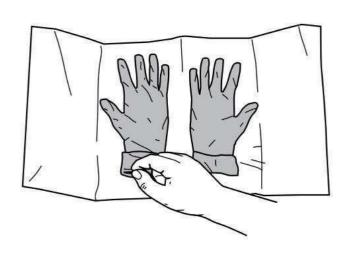
Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024





Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

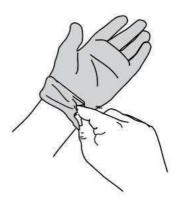
Version No: 1

Version Date: 20.06. 2024

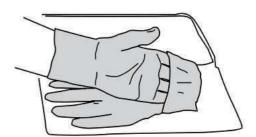


Objective elements – HIC 01 to 08

Slip your hand in to the glove. Keep your hand at and your thumb tucked in. Pull the glove on. Be careful not to touch the outside of the glove. Touch only the part of the glove that will be next to your skin. Leave the cuff on the glove folded.



With your gloved hand, slip your fingers into the folded cuff of the other glove. Pick up the second glove.



Slip the glove over your fingers. Keep the hand that you are putting the glove on .Keep the

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

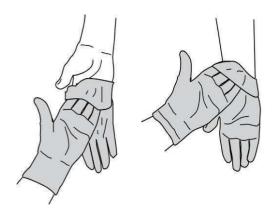
Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

gloved thumb up and back to keep from touching your bare palm or wrist.



Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Pull the glove over your hand.

Adjust each glove to get a snug fit. Reach under the cuffed part to pull up or adjust.

Once you have your gloves on, keep your hands in front of you and above your waist. Do not touch anything outside the sterile field.

3. Removing the gloves (Doffing): procedure is same as that of non-sterile gloves.

Procedure for changing gloves during any procedure

- i. When gloves require changing intra-operatively due to a puncture or inadvertent contamination, the glove must be removed in a way that avoids further contamination. This can be achieved by pulling the gloves downwards by the fingers and palms (whilst also grasping the cuff of the gown), until the glove comes over the end of the hands /fingers. The glove may then be discarded into the appropriate receptacle.
- ii. Hands must remain inside the sleeves of the gown and the closed glove technique is used to don a new glove as described in the gloving procedure.
- iii. On occasions it may be preferable to don a second pair of gloves taking care not to contaminate them during the gloving procedure.
- **iv.** Alternatively a new glove may be donned with the assistance of another member of the surgical team as described below:

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

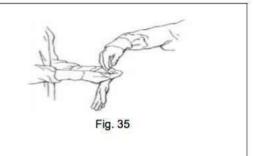
Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Grasp the right glove firmly at waist level. Keeping your thumbs extended and covered by the glove cuff; stretch the cuff so that the practitioner can introduce their hand without touching your gloves.

The scrub person protects own gloved fingers by holding them beneath the cuff of the glove, and their thumbs by holding them away from the partly-gloved hand.



Gowns and aprons

The purpose of wearing gowns and aprons is to protect susceptible patients from infection and protect the wearer from contamination as well as maintaining the uniform or clothes worn under the apron in a clean and dry state. Gowning must be done before all invasive procedures like lumbar puncture, insertion of central lines etc.

Gowns and aprons should not be worn outside the area they are intended to be used.

Remove your gowns/aprons when moving out of area they are intended to be used.

Surgical gowns are folded with the inside facing the scrub person. This method of folding facilitates picking up and donning the gown without touching the outside surface. If the scrub person touches the outside of the gown whilst donning it, the gown must be considered to be contaminated. If this occurs discard the gown and wear a new one

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

The scrub person's hands and arms are contaminated if they are allowed to fall below waist level or to touch the body therefore hands and arms should be kept above the waist and away from the body at an angle of about 20 to 30 degrees above the elbows.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

After donning the surgical gown, the only parts of the gown that are considered sterile are the sleeves (except for the axillary area) and the front from waist level to a few inches below the neck opening. If the gown is touched or brushed by an un-sterile object the gown is then considered contaminated. The contaminated gown must be removed using the proper technique and then a new sterile gown should be donned.

Donningofgown

- 1. Select proper size of the gown.
- 2. Gown should be worn as per design of it and manufacturer's guidelines. There are different types of gowns/aprons available like dungaree.
- 3. The ties should be at back. Gown should cover trunk, both arms and both legs. Additional head gear that covers neck should be added.
- 4. If gown size is not sufficient, two gowns should be worn. First should cover the back and ties coming in front .The second gown should cover the front and ties should be at back.
- 5. Precaution to be taken as to not contaminate the outer surface. Donning area should be clean.
- 6. Final Tie of gown- Practitioner should secure their gown with assistance from the circulating person.

Removing/doffing the Gown

On completion of a surgical case the outer part of the gown and gloves are considered to be

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

contaminated by microbes from the procedure and the scrub personmustremovethemverycarefullytoavoidcontaminationtotheirforearms

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

and hands. The gloves should be removed after the gown. The procedure is as follows:

After the circulating person unties the neck and back ties, the scrub person performs the following procedure by themselves. Grasp the gown at the shoulders and pull the gown forward and down over the arms and gloved hands. (Fig 31)	Fig. 31
Holding arms away from the body fold the gown so that the outside is folded in and discard it into the appropriate bag. (Figure 32)	Fig 32

Masks

They offer protection against potential splashing on the mouth and face during certain procedures such as minor operations, physical decontamination or cleaning instruments with a brush.

The type of mask best suited to a particular situation depends on the body substances likely to be encountered and the nature of the activity.

There are two main types of masks used in health care:

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



- 1. Surgical masks—fluid-repellent paper filter masks worn duringsurgical and dental procedures
- 2. Particulate filter personal respiratory protection devices(P2respiratory

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

protection devices / N95)— close fitting masks capable of filtering $0.3\mu m$ particles and worn when attending patients with active pulmonary infection.

Dust mist masks (FFP3) must be available in theatre for procedures where there is a risk of exposure to TB.

Mask must:

- ✓ Be fitted and worn according to the manufacturer's instructions;
- ✓ Fit snugly to the face to prevent passage of air around the sides andfogging of glasses if worn;
- ✓ Not to be touched by hand while being worn;
- ✓ Cover both mouth and nose while being worn;
- ✓ Be removed as soon as possible after they become moist or visibly soiled;
- ✓ Be removed by touching the string sand loops only; and not be worn loosely around the neck, but be removed and discarded as soon as possible after use.

Mask in OTs

- A surgical mask is worn primarily to protect the patient from bacteria exhaled by operating room personnel.
- All members of the scrub team should wear a mask, but the wearing of masks by other personnel should be at the discretion of the Consultant in charge.
- Every individual in the operating theatre should wear a mask when prosthesis / implant surgery is taking place.
- A fresh mask should be donned immediately before beginning the scrub procedure.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

➤ If the mask becomes damp, droplets from the nose and mouth can easily pass though it and the mask no longer serves as a barrier to germs, then the mask should be changed after each procedure and more often if it

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

becomes damp.

A mask should never be allowed to dangle around the neck, placed in a pocket or on a clean surface and should only be handled by the ties after it is removed. Careful handling of a used mask by the ties prevents the spread of micro-organisms throughout the surgical site. As soon as the mask is removed, it should be placed in a designated receptacle and the hands should be washed.

Steps of wearing (donning) a mask/respirator

- 1) Perform hand hygiene
- 2) Position the mask on mouth and nose by touching only the ties or outer surface of the mask. DO NOT TOUCH INSIDE OF THE MASK.
- 3) Tie the upper strings first. The knot should be positioned at back of the head so that the strings are horizontal.
- 4) Tie lower strings so that the knot is positioned at the top of the head thus making a cross with the upper strings.
- 5) If mask has elastic bands,make sure that the bands are positioned in a way to avoid air leaks. Follow manufacturer's instructions depending on type of mask/respirator.
- 6) Pinch the nose clip with both hands to secure air leak from sidesof nose.
- 7) Do not touch the outer side of mask while it's worn.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Steps of removing (doffing) a mask/respirator

- 1) Avoid touching the outer layer of mask. Touch only the strings/bands. Untie/tear the lower strings first.
- 2) Lean forward and untie upper strings so that the mask doesn't touch any body part.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar	Approved by Dean, Dr. Sangeeta Ravat
intection control officer	Prof. and Head, Microbiology	
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

- 3) If mask has around the head type elastic bands, lean forward and remove the bands one by one taking care not to touch any body part. Follow manufacturer's instructions depending on type of mask/respirator.
- 4) Pinch the nose clip with both hands to secure air leak from sides of nose.
- 5) Do not touch the outerside of mask while it's worn.

"Gaps can be caused by choosing the wrong size or type of mask and when a mask is worn with facial hair."

Protective eye or facewear

Protection of the mucous membranes of the eyes, mouth and nose is essential in procedures that involve splashing or spraying of blood, body fluids or bonechips and the preparation of some cytotoxic chemotherapy and during the physical decontamination or cleaning of instruments.

Protective eyewear covering front and side of the eyes, or full face visors must be worn by the surgical scrub team and those performing invasive procedures. These should either be disposable or cleaned according to manufacturer's instructions after use. Ordinary prescription spectacles do not provide sufficient protection. Visors cannot be used with magnifying loupes and should, therefore be fitted with side shields.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Shoe-cover

Shoe-cover must be worn before entering the ICU,Operating Theatre, Dialysis, CSSD and HDU.

Dedicated personalised closed toe non-slip foot wear must be available for all regular theatres in the theatre complex. Boots should be worn if there is a

Prepared by	Reviewed by	Approved by	
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat	
Revision no:	Revision date :	Pg no:	



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

high risk of heavy blood/body fluid loss. Observers to theatre procedure within the operating theatre must be provided with spare theatre shoes.

Protective footwear should be used when handling biomedical waste as unnoticed cuts and wounds are quite common in the legs. Foot wear is also essential to protect legs from 'sharps' injury.

Headcap

Headcap should cover the hairs of the health care provider in order to prevent contamination in the high risk areas.

equence of donning full PPE
erform Hand Hygiene Gown, Head Cap, Shoe Cap Mask/Respirator
yewear/Face Shield ——— Gloves (One/Two Pair)
equence of doffing full PPE irst PairOfGloves(Outer) Eyewear/FaceShield Gown, HeadCap,Shoe
tap Mask/ Respirator Second Pair Of Gloves (Inner)
erform Hand Hygiene Don't forget:
✓ Mask/respirator should be doffed after leaving the doffing area. Separate discard bucket
should be made available immediately at the exit of the doffing area.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

✓ All the PPE's MUST BE discarded in appropriate receptacle.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Discarding PPE:

Item	Appropriate	Comment
	Garbage bag	
Gown/coverall, headcap, shoe	Red	Contaminated recyclable
cap(if made up of plastic)		Plastic item
Gown/coverall, head cap, shoe	Yellow	Contaminated non recyclable item.
cap(if made up of non plastic woven		Needs to be incinerated.
fabric material)		
Gown/coverall, head cap (made	Send to	To be cleaned and reused
up of cloth)	laundry	
Surgical Mask/respirator like	Yellow	Needs to be incinerated.
N95		
Cloth mask	Send to	To be cleaned and re used
	laundry	
Eyewear/face shield	Red	Contaminated recyclable
		Plastic item
Gloves(all types)	Red	Contaminated recyclable
		item

RECORDS AND FORMATS:

NotApplicable

Prepared by	Reviewed by	Approved by	
Dr. Shreeraj Talwadekar	Dr. Gita Nataraj, Secretary HIC Dean, Dr. Sangeeta Ravat		
Infection Control Officer	Dr. Chaya A Kumar		
	Prof. and Head, Microbiology		
Revision no:	Revision date :	Pg no:	



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06, 2024



Objective elements – HIC 01 to 08

REFERENCES:

- 1. Glove use information leaflet. World Health Organization, Geneva,2009. Available from: http://www.who.int/gpsc/5may/tools/training_educational/en
- National guidelines for infection prevention and control in healthcare facilities by National Centre for Disease Control, Directorate General of Health Services Ministry of Health and Family Welfare, Government of India, January 2020.
- 3. NABHAccreditationStandardsforHospitals(5thedition)

SOP 20-Policy on infection control during construction and renovation

POLICY:

To provide a safe and clean environment for patients, visitors, and health care workers during construction and remodelling projects through the use of barriers, special ventilation/air handling, increased cleaning, and traffic control.

PURPOSE:

To provide a plan for controlling the risks of infection associated with construction. The purpose of this policy is to evaluate, identify potential risks, and control impacts of construction and routine work activities on patient safety. SCOPE:

Hospital wide

RESPONSIBILITY:

Management, Infection Prevention & Control, Safety & Security

DISTRIBUTION:

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06, 2024



Objective elements – HIC 01 to 08

Hospital wide (all hospital departments)

ABBREVIATION:

HVAC – Heating, Ventilation, Airconditioning PE – Protective Environment

HEPA – High efficiency particulate air

PROCEDURE:

The focus of a properly implemented infection-control program during construction and repairs is containment of dust and moisture. This objective is achieved by

- a) Educating construction workers about the importance of control measures
- b) Preparing the site;
- c) Notifying and issuing advisories for staff, patients, and visitors;
- d) Moving staff and patients and relocating patients as needed;
- e) Issuing standards of practice and precautions during activities and maintenance;
- f) Monitoring for adherence to control measures during construction and providing prompt feedback about lapses in control

Prepared by	Reviewed by Approved by	
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

- g) Monitoring HVAC performance;
- h) Implementing daily clean-up, terminal cleaning and removal of debris upon completion; and
- i) Ensuring the integrity of the water system during and after construction.

These activities should be coordinated with engineering staff and infection-control professionals. Infection-control measures for construction and repair projects

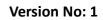
Infection-	Steps for
control	implementation
measure	
Prepare for the project	Use a multi-disciplinary team approach to incorporate
	infection control into the project
	2. Conduct the risk assessment and preliminary walk-through
	with project managers and staff
Educate staff	Educate staff and construction workers about the
and	importance of adhering to infection control measures
construction workers	during the project
	2. Provide educational materials in the language of the workers
	3. Include language in the construction contract requiring
	construction workers and subcontractors to participate in
	infection-control training.
Issue hazard	Post signs to identify construction areas and potential
and warning	hazards.
notices.	2. Mark detours requiring pedestrians to avoid the work area.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual







Relocate high-	1.	Identify target patient populations for relocation
risk patients as		based on the risk assessment.
needed	2.	Arrange for the transfer in advance to avoid delays
especially if the	3.	At-risk patients should wear protective respiratory
construction is		equipment (e.g., a high-efficiency mask)when outside
in or		their PE rooms
adjacent to a PE area		
Establish alternative	1.	Determine appropriate alternate routes from the risk
traffic patterns for		assessment.
staff, patients,	2.	Designate areas (e.g., hallways, elevators, and
visitors, and		entrances/exits) for construction-worker use.
construction	3.	Do not transport patients on the same elevator with
workers.		construction
		materials and debris.
Erect appropriate	1.	Use prefabricated plastic units or plastic sheeting
barrier containment.		for short-term projects that will generate minimal
		dust.
	2.	Use durable rigid barriers for ongoing, long-term projects.
Establish proper	1.	Shut off return air vents in the construction zone, if
	po	ssible, and seal

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar	Dr. Gita Nataraj, Secretary HIC	Dean, Dr. Sangeeta Ravat
Infection Control Officer	Dr. Chaya A Kumar	
	Prof. and Head, Microbiology	
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



ventilation.		around grilles.
	2.	Exhaust air and dust to the outside, if possible.
	3.	If recirculated air from the construction zone is
		unavoidable, use a pre- filter and a HEPA filter before the
		air returns to the HVAC system.
	4.	When vibration-related work is being done that may
		dislodge dust in the ventilation system or when
		modifications are made to ductwork serving occupied
		spaces, install filters on the supply air grilles temporarily.
	5.	Set pressure differentials so that the contained work
		area is under negative pressure.
	6.	Use air flow monitoring devices to verify the direction of
		the air pattern.
	7.	Exhaust air and dust to the outside, if possible.
	8.	Monitor temperature, air changes per hour (ACH), and
		humidity levels (humidity levels should be <65%).
	9.	Use portable, industrial grade HEPA filters in the
		adjacent area and/or the construction zone for additional
		ACH.
	10.	Keep windows closed, if possible.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar	Dr. Gita Nataraj, Secretary HIC	Dean, Dr. Sangeeta Ravat
Infection Control Officer	Dr. Chaya A Kumar	
	Prof. and Head, Microbiology	
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual



Version Date: 20.06. 2024



1.	When replacing filters, place the old filter in a bag prior to
	transport and dispose as a routine solid waste.
2.	Clean the construction zone daily or more often as needed.
3.	Designate a removal route for small quantities of solid
	debris.
4.	Mist debris and cover disposal carts before transport (i.e.,
	leaving the construction zone).
5.	Designate an elevator for construction crew use.
6.	Use window chutes and negative pressure equipment for
	removal of larger pieces of debris while maintaining
	pressure differentials in the construction zone.
7.	Schedule debris removal to periods when patient exposures
	to dust is
	minimal.
1.	Make provisions for dry storage of building materials.
2.	Do not install wet, porous building materials (i.e., sheet
	rock).
3.	Replace water-damaged porous building materials if they
	cannot be completely dried out within 72 hours.
1.	Monitor the construction area daily for compliance with
	the infection- control plan.
2.	Protective outer clothing for construction workers should
	be removed before entering clean areas.
3.	Use mats with tacky surfaces within the construction zone at
	the entry;
	2. 3. 4. 5. 6. 7. 2. 3.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar	Dr. Gita Nataraj, Secretary HIC	Dean, Dr. Sangeeta Ravat
Infection Control Officer	Dr. Chaya A Kumar	
	Prof. and Head, Microbiology	
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



	cover sufficient area so that both feet make contact with the
	mat while walking through the entry.
4.	Construct an anteroom as needed where coveralls can be
	donned and removed.
5.	Clean the construction zone and all areas used by
	construction workers with a wet mop.
6.	If the area is carpeted, vacuum daily with a HEPA-filtered-
	equipped vacuum.
7.	Provide temporary essential services (e.g., toilets) and
	worker conveniences (e.g., vending machines) in the
	construction zone as appropriate.
8.	Damp-wipe tools if removed from the construction zone or
	left in the area.
9.	Ensure that construction barriers remain well sealed; use
	particle sampling as needed.
10.	Ensure that the clinical laboratory is free from dust
	contamination.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Complete the project	1.	Flush the main water system to clear dust-contaminated
		lines.
	2.	Terminally clean the construction zone before the
		construction barriers are removed.
	3.	Check for visible mold and mildew and eliminate (i.e.,
		decontaminate and remove), if present.
	4.	Verify appropriate ventilation parameters for the new area
		as needed.
	5.	Do not accept ventilation deficiencies, especially in special
		care areas.
	6.	Clean or replace HVAC filters using proper dust-
		containment procedures.
	7.	Remove the barriers and clean the area of any dust
		generated during this work.
	8.	Ensure that the designated air balances in the operating
		rooms (OR) and protective environments (PE) are achieved
		before occupancy.
	9.	Commission the space as indicated, especially in the OR
		and PE,
		ensuring that the room's required engineering specifications
		are met.

Risk Assessment and Control measures planning:

Prior to all infrastructure modification works an "Hospital infection prevention risk assessment "should be done. Which will help in identifying potential hazards to the patient, workers and the environment and helps in preventing such exposures.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06, 2024



Objective elements - HIC 01 to 08

Key steps:

- 1. Determining the type of the infrastructure modification needed.
- 2. Ascertain the risk groups.
- 3. Identify the class of the intended work.
- 4. Implementation of the measures pertaining to the confinement of nosocomial infections as per the prescribed manual.
- 5. Obtaining work permit as per the classification.

Process

An infection control risk assessment (ICRA) is a systematic process that determines level of risk to patients and defines controls to reduce risk. The purpose of the risk assessment is to identify the effects of the construction or renovation activities on air and water quality. Once the effects are understood, then control measures are designed and implemented for the purpose of reducing health risks to patients, visitors and staff.

Completing an ICRA for any construction or renovation project includes four steps:

- 1. Identify the type of construction
- 2. Identify the patient/resident or staff risk group that will be most affected
- 3. Determine the level of infection control classification using the ICRA Matrix
- 4. Assign appropriate controls that are needed to reduce or eliminate risk to patient/resident or staff risk group. Infection controls are documented in the ICRA Permit.
- 5. The permit for starting construction work has to be obtained from infection control officer before starting.
- 6. The area should be used again only after the inspection of infection control officer who determines the fitness of the unit for taking in patients after the completion of the renovation.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar	Dr. Gita Nataraj, Secretary HIC	Dean, Dr. Sangeeta Ravat
Infection Control Officer	Dr. Chaya A Kumar	
	Prof. and Head, Microbiology	
Revision no:	Revision date :	Pg no:
		-



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06, 2024



Objective elements – HIC 01 to 08

Steps Involved

Step 1: Identify the type of construction: For the purposes of performing an infection control. Risk assessment, construction activities have been divided into four types: A, B, C, and D.

Step 2: Identify the patient/resident or staff risk group: Each healthcare facility may have its own unique patient/resident population with different susceptibility to construction related infections. Likewise, each facility may have different departments that have strict cleanliness requirements, which can be adversely affected by construction dust. For example, the Sterile Processing Department and Perioperative Department have very strict cleanliness requirements, whereas the facility's lobby or waiting areas likely have less stringent cleaning requirements.

The patient/resident and staff risk group is obtained from a table with different assigned ratings of susceptibility to infections from airborne contaminants that may be released during construction/renovation activities.

Step 3: Determine the level of infection control classification using the ICRA matrix: Once the type of construction project and risk group is defined, then these two pieces of information are matched in a matrix to determine the infection control classification most appropriate for the project.

Step 4: Assign appropriate controls that are needed to reduce or eliminate risk to patient or staff risk group

Step One:

Using Table 1, Identify the Activity

Type (A-D). Table1- Activity Type:

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

Inspection and non-invasive activities.

Includes but is not limited to:

Type Α

- Removal of ceiling tile for visual inspection limited to 1 tile per 50 square feet with limited exposure time.
- Limited building system maintenance (e.g., pneumatic tube station, HVAC system, fire suppression system, electrical and carpentry work to include painting without sanding) that does not create dust or debris.
- Clean plumbing activity limited in nature.

Small-scale, short duration activities that create minimal dust and debris.

Type Includes but is not limited to:

В

- Work conducted above the ceiling (e.g., prolonged inspection or repair of firewalls and barriers, installation of conduit and/or cabling, and access to mechanical and/ or electrical chase spaces).
- Fan shutdown/startup.
- Installation of electrical devices or new flooring that produces minimal dust and debris.
- The removal of dry wall where minimal dust and debris is created.
- Controlled sanding activities (e.g., wet or dry sanding) that produce minimal dust and debris.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

	Large-scale, longer duration activities that create a moderate amount of dust and debris.			
	Includes but is not limited to:			
	Removal of pre existing floor covering, walls, case work or other building			
Type	components.			
С	New dry wall placement.			
	• Renovation work in a single room.			
	Non-existing cable pathway or invasive electrical work above ceilings.			
	• The removal of dry wall where a moderate amount of dust and debris is created.			
	• Dry sanding where a moderate amount of dust and debris is created.			
	Work creating significant vibration and/or noise.			
	Any activity that cannot be completed in a single work shift.			
	Major demolition and construction activities.			
Туре	Includes but is not limited to:			
D	 Removal or replacement of building system component(s). 			
	Removal/installation of dry wall partitions.			
	Invasive large-scale new building construction.			
	Renovation work in two or more rooms.			

Step 2

Using Table 2, identify the Patient Risk Group(s) that will be affected. If more than one risk group will be affected, select the higher risk group.

Table 2 – Patient Risk Group:

Prepared by Dr. Shreeraj Talwadekar	Reviewed by Dr. Gita Nataraj, Secretary HIC	Approved by Dean, Dr. Sangeeta Ravat
Infection Control Officer	Dr. Chaya A Kumar Prof. and Head, Microbiology	
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Lo	w Risk	Medium Risk	Hig	h Risk	Hi	ghest Risk
No	n-patient care areas	Patient care support	Pati	ent care areas	Pro	ocedural, invasive,
suc	ch as:	areas such as:	sucl	n as:	ste	rile support and
					hig	ghly compromised
					pat	tient care
					are	eas such as:
•	Public hallways	Waiting areas.	•	Patient care	•	All transplant
	and gathering areas	Clinical engineering.		rooms and		and intensive
	not on clinical	Materials		areas		care units.
	units.	manageme	•	All acute care	•	All oncology units.
•	Office areas not on	nt.		units	•	OR theaters
	clinical units.	• Sterile	•	Emerg		and restricted
•	Break rooms not	processing		e ncy		areas.
	on clinical units.	department –		depart	•	Procedural suites.
•	Bathrooms or	dirty side.		m ent	•	Pharmacy compounding.
	locker rooms not on	Kitchen, cafeteria,	•	Employee health	•	Sterile processing
	clinical units.	gift shop, coffee	•	Pharmacy-		department
•	Mechanical rooms	shop, and food		general	•	Clean side.
	not on clinical	kiosks.		work zone	•	Transfusion services.
	units.		•	Medication	•	Dedicate
•	EVS closets not on			rooms and		d
	clinical units.			clean utility		isolation
				rooms		wards/uni
			•	Imaging		ts.
				suites:	•	Imaging suites: invasive

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

diagnostic • Imaging. imaging
Laboratory.

Match the Patient Risk Group (Low, Medium, High, Highest) from Step Two with the planned Construction Activity Project Type (A, B, C, D) from Step One using Table 3 to find the Class of Precautions (I, II, III, IV or V)or level of infection control activities required. The activities are listed in Table 5 – Minimum Required Infection Control Precautions by Class.

Table3 -Class of Precautions:

Construction Project Type

TYPE A	TYPE B	TYPE C	TYPE D
I	I	II	III*
	I		
I	I	III*	IV
	I		
	I I	TYPE A TYPE B I I I I I I I I	I I II

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

HIGH Risk Group	I	I	IV	
		I		
		I		
HIGHEST Risk Group	I	I		
	I	V		
	I			

Infection control permit and approval will be required when Class of Precautions III (Type C) and all Class of Precautions IV or V are necessary.

Environmental conditions that could affect human health, such as sewage, mold, asbestos, gray water and black water will require Class of Precautions IV for LOW and MEDIUM Risk Groups and Class of Precautions V for HIGH and HIGHEST Risk Groups.

*Type C [Medium Risk groups] and Type D [Low Risk Groups] work areas [Class III precautions] that cannot be sealed and completely isolated from occupied patient care spaces should be elevated to include negative air exhaust requirements as listed in Class IV Precautions.

Step 4

Assess potential risk to areas surrounding the project. Using Table 4, identify the surrounding areas that will be affected and the type o impact that will occur .If more than one risk group will be affected, select the higher risk group using.

Prepared by Dr. Shreeraj Talwadekar	Reviewed by Dr. Gita Nataraj, Secretary HIC	Approved by Dean, Dr. Sangeeta Ravat
Infection Control Officer	Dr. Chaya A Kumar Prof. and Head, Microbiology	
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Table4-Surrounding Area Assessment

Unit Below:	Unit Above:	Uni t Lateral:	Unit Behind:	Unit inFront:
Risk Group:	Risk Group:	Risk Group:	Risk Group:	Risk Group:
Contact:	Contact:	Contact:	Contact:	Contact:
Phone:	Phone:	Phone:	Phone:	Phone:
Additional Controls:	Additional Controls:	Additional Controls:	Additional Controls:	Additional
□ Noise	□ Noise	□ Noise	□ Noise	Controls:
□ Vibration	□ Vibration	□ Vibration	□ Vibration	□ Noise
□ Dust control	□ Dust control	□ Dust control	□ Dust control	□ Vibration
☐ Ventilation	□ Ventilation	□ Ventilation	□ Ventilation	□ Dust control
☐ Pressurization	□ Pressurization	☐ Pressurization	☐ Pressurization	□ Ventilation
☐ Vertical Shafts	□ Vertical Shafts	□ Vertical Shafts	□ Vertical Shafts	□ Pressurization
☐ Elevators/Stairs	□ Elevators/Stairs	□ Elevators/Stairs	□ Elevators/Stairs	□ Vertical Shafts
0				□ Elevators/Stairs
Systems impacted:	Systems impacted:	Systems impacted:	Systems impacted:	
□ Data	□ Data	□ Data	□ Data	Systemsimpacted:
□ Mechanical	□ Mechanical	☐ Mechanical	□ Mechanical	□ Data
□ Med Gases	□ Med Gases	□ Med Gases	□ Med Gases	□ Mechanical
☐ Hot/Cold Water	☐ Hot/Cold Water	☐ Hot/Cold Water	☐ Hot/Cold Water	□ MedGases
1				□ Hot/ColdWater
Noise & Vibration Mit	tigation Strategies			

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06, 2024



Objective elements – HIC 01 to 08

Use diamond drills instead of powder-actuated fasteners. Schedule noise-making periods with adjacent spaces.

Use beam clamps instead of

shot. Prefab where possible.

Use tins nips to cut metals tuds instead of using a chop saw.

Install metal decking with vent tabs, then use cellular floor deck

hangers. Consider compression style fittings instead of

soldering, brazing or welding. Wet core drill instead of dry core

or percussion.

Instead of jack hammering concrete, use wet

diamond saws. Use HEPA vacuums instead of

standard wet/dry vacuums.

Use mechanical joining system sprinkler fittings instead of threaded.

Where fumes are tolerated, use chemical adhesive remover (flooring glue) instead of mechanical. To remove flooring, consider abrasive blasting instead of using a floor scraper.

Use electric sheers instead of reciprocating saw for duct

work cutting. Install exterior man/material lifts.

Ventilation & Pressurization Mitigation Strategies

HEPA to exterior.

Install temporary ductwork.

Utilize temporary HVAC

equipment. Vacate the area.

Install temporary partitions.

Use carbon filtration to filter odors.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

	α	C 4	N 4	C
mnact to	()ther	Victeme	Mitigation	Strategues
impact to	Oulci	Dystellis	winganon	Dualegies

Schedule out ages. Provide temporary systems. Back-feed electricity or medical gases.

Table 5 - Minimum Required Infection Control Precautions by Class | before and During Work Activity

Class of	Mitigation Activities
Precautio	(Performed Before and During Work Activity)
n	
s	

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual



Version Date: 20.06. 2024



Class I 1. Perform non invasive work activity as to not block or interrupt patient 2. Perform non invasive work activities in areas that are not directly occur with patients. 3. Perform non invasive work activity in a manner that does not create du 4. Immediately replace any displaced ceiling tile before leaving the area and/or attend of non invasive work activity. Class II 1. Perform only limited dust work and /or activities designed for basic facilities and engineering work. 2. Perform limited dust and invasive work following standing precautions procedures approved by the organization. 3. This Class of Precautions must never be used for construction or renov activities. Class III 1. Provide active means to prevent air borne dust dispersion into the organization.	
with patients. 3. Perform non invasive work activity in a manner that does not create du 4. Immediately replace any displaced ceiling tile before leaving the area and/or attend of non invasive work activity. Class II 1. Perform only limited dust work and /or activities designed for basic facilities and engineering work. 2. Perform limited dust and invasive work following standing precautions procedures approved by the organization. 3. This Class of Precautions must never be used for construction or renov activities. Class III 1. Provide active means to prevent air borne dust dispersion into the organization into the organization.	oied
3. Perform non invasive work activity in a manner that does not create du 4. Immediately replace any displaced ceiling tile before leaving the area and/or attend of non invasive work activity. Class II 1. Perform only limited dust work and /or activities designed for basic facilities and engineering work. 2. Perform limited dust and invasive work following standing precautions procedures approved by the organization. 3. This Class of Precautions must never be used for construction or renov activities. Class III 1. Provide active means to prevent air borne dust dispersion into the organization into the organization.	
4. Immediately replace any displaced ceiling tile before leaving the area and/or attend of non invasive work activity. Class II 1. Perform only limited dust work and /or activities designed for basic facilities and engineering work. 2. Perform limited dust and invasive work following standing precautions procedures approved by the organization. 3. This Class of Precautions must never be used for construction or renov activities. Class III 1. Provide active means to prevent air borne dust dispersion into the organization into the organization.	
and/or attend of non invasive work activity. Class II 1. Perform only limited dust work and /or activities designed for basic facilities and engineering work. 2. Perform limited dust and invasive work following standing precautions procedures approved by the organization. 3. This Class of Precautions must never be used for construction or renov activities. Class III 1. Provide active means to prevent air borne dust dispersion into the organization into the organization.	st.
Class II 1. Perform only limited dust work and /or activities designed for basic facilities and engineering work. 2. Perform limited dust and invasive work following standing precautions procedures approved by the organization. 3. This Class of Precautions must never be used for construction or renov activities. Class III 1. Provide active means to prevent air borne dust dispersion into the organization into the organization.	
facilities and engineering work. 2. Perform limited dust and invasive work following standing precautions procedures approved by the organization. 3. This Class of Precautions must never be used for construction or renov activities. Class III 1. Provide active means to prevent air borne dust dispersion into the organization.	
Perform limited dust and invasive work following standing precautions procedures approved by the organization. This Class of Precautions must never be used for construction or renov activities. Class III Provide active means to prevent air borne dust dispersion into the organization.	
procedures approved by the organization. 3. This Class of Precautions must never be used for construction or renovactivities. Class III 1. Provide active means to prevent air borne dust dispersion into the organization.	
This Class of Precautions must never be used for construction or renovactivities. Class III 1. Provide active means to prevent air borne dust dispersion into the or	
activities. Class III 1. Provide active means to prevent air borne dust dispersion into the o	
Class III 1. Provide active means to prevent air borne dust dispersion into the o	ation
areas.	ccupied
2. Means for controlling minimal dust dispersion may include hand-held	
HEPA vacuum devices, poly ethylene plastic containment, or isolation	
of work area by closing room door.	
3. Remove or isolate return air diffusers to avoid dust from entering the H	VAC
system.	
4. Remove or isolate the supply air diffusers to avoid positive pressurizat.	on of
the space,	
5. If work area is contained, there it must be neutrally to negatively press	ırize at
all times.	
6. Seal all doors with tape that will not leave residue.	
7. Contain all trash and debris in the work area.	
8. Nonporous/ smooth and clean able containers (with a hard lid) must be	

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar	Dr. Gita Nataraj, Secretary HIC	Dean, Dr. Sangeeta Ravat
Infection Control Officer	Dr. Chaya A Kumar	
	Prof. and Head, Microbiology	
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

used to transport trash and debris from the construction areas. These containers must be damp-wiped cleaned and free of visible dust/debris before leaving the contained work area.

- 9. Install an adhesive (dust collection) entrance of contained work area based on facility policy
 - .Adhesive mats must be changed routinely and when visibly soiled.
- 10. Maintain clean surroundings when area is not contained by damp mopping or HEPA vacuuming surfaces.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Class IV

- 1. Construct and complete critical barriers meeting NFPA 241 requirements including: Barriers must extend to the ceiling or, if ceiling tile is removed, to the deck above, and all penetrations through the barrier shall meet the appropriate fire rating requirements.
- 2. All (plastic or hard) barrier construction activities must be completed in a manner that prevents dust release. Plastic barriers must be effectively affixed to ground and ceiling and secure from movement or damage. Apply tape that will not leave a residue to seal gaps between barriers, ceiling or floor.
- 3. Seal all penetrations in containment barriers, including floors and ceiling, using approved materials (UL schedule fires top if applicable for barrier type).
- 4. Containment units or environmental containment units (ECUs) approved for Class IV precautions in small areas totally contained by the unit and that has HEPA-filtered exhaust air.
- 5. Remove or isolate return air diffusers to avoid dust entering the HVAC system.
- 6. Removeorisolatethesupplyairdiffuserstoavoidpositivepressurizationofthespace.
- 7. Negative airflow pattern must be maintained from the entry point to the anteroom and into the construction area. The airflow must cascade from outside to inside the construction area. The entire construction area must remain negatively pressurized.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

- 8. Maintain negative pressurization of the entire workspace by use of HEPA exhaust air systems directed outdoors. Exhaust discharged directly to the outdoors that is 25 feet or greater from entrances, air intakes and windows does not require HEPA-filtered air.
- 9. If exhaust is directed in doors, then the system must be HEPA filtered. Prior to start of work, HEPA filtration must be verified by particulate measurement as no less than 99.97% efficiency and must not alter or change airflow /pressure relationships in other areas.
- 10. Exhaust into shared or recirculating HVAC systems, or other shared exhaust systems (e.g., bathroom exhaust) is not acceptable.
- 11. Install device on exterior of work containment to continually monitor negative pressurization. To assure proper pressure is continuously maintained, it is recommended that the device(s) have a visual pressure indicator.
- 12. Contain all trash and debris in the work area.

References

Guidelines for Environmental Infection Control in Health-Care Facilities,

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

Recommendations of CDC and the Healthcare Infection Control Practices Advisory Committee (HICPAC), 2003

SOP 21: POLICY ON SPILL MANAGEMENT

Blood and body fluid spillages should be dealt with immediately or as soon asit is safe to do so in order to prevent associated health hazards.

PURPOSE:

To ensure prompt management of blood or body fluid spills and to ensure safety of health care workers, patients and visitors.

SCOPE:

Hospitalwide

RESPONSIBILITY

All cadres of HCWs, Infection Control Officer, Infection Control Team

DISTRIBUTION:

Hospitalwide

DEFINITION:

Notapplicable -

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

ABBREVIATION:

HCW:Healthcareworker

MSDS- Material Safety Data Sheet PPE-

personalprotectiveequipment

MPCB-Maharashtra Pollution ControlBoard

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

OPIM-other potentially infectious material

PROCEDURE:

A) Management of spills of blood and OPIM(otherpotentiallyinfectious material)

- Blood and body fluid spillages should be dealt with immediately or as soon as it is safe to do so.
- Other persons should be kept away from the spillage until the area has been cleaned and dried.
- Care should be taken if there are sharps present and should first be disposed off appropriately into a sharps container.
- Spills should be removed before the area is cleaned.
- Area should be well ventilated if using chlorinating agents.
- Adding liquids to spills increases the size of the spill and should be avoided.
- Chlorinating agents should be used (1%hypochlorite) in a well ventilated area and are generally only recommended on a small spill.
- Chlorinating agents should not be placed directly on spillages of urine.
- Chlorinating agents are not suitable for use on soft furnishings.
- It is recommended that supplies of personal protective equipment, paper towels and healthcare risk/ yellow waste bags are available for spills management.
- If non-disposable cloths/mops are used to clean spillage area they must be thermally or chemically disinfected.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

- Every patient care area must prepare the spill management kit.
- The kit should be prominently labeled and placed at the most accessible site.
- The kit contents should be reviewed daily to ensure completeness of the kit.
- The spill kit must be immediately replenished after use and stored at the original location after every use.

Contents of spill management kit:

- PersonalProtectiveEquipment
- Gloves–2pairs(singleuse)
- PlasticApron-1
- Face masks–2
- Caps–2
- Goggle–1
- ShoeCovers–2pairs
- Forceps
- Absorbent Material(Cotton/Blotting Paper/TissuePaper)
- Yellow Biohazard bag
- Small cardboard Sheets
- Sodium hypochlorite solution(use Phenol/Lysol in case of spill cleanup of urine)

Fig: Contents of spill management kit

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024





ProcedureofSpillcleanup

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



- Assemble materials required for dealing with the spill prior to putting on PPE.
- Inspect the area around the spill thoroughly for splatters or splashes. Restrict the activity around the spill until the area has been cleaned and disinfected and is completely dry.
- Promptly clean and decontaminate spills of blood and other potentially infectious materials.
- Discard blood-contaminated items.
- Use1% Sodium hypochlorite for small spills and 10% hypochlorite solution for large spills.
- The detailed procedure is explained in the flowchart given below.

Sodium Hypochlorite	Recommended Use	Precautions
Formulation		
Sodium hypochlorite 1% in-	Disinfection of material	Should be used in
use dilution; 5% solution to	contaminated with blood and	well- ventilated
be diluted 1:5 in clean water	body fluids	areas
		Protective clothing
		required while
		handling and using
		undiluted
		Do not mix with strong

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



	acids to avoid release
	of chlorine gas
	Corrosive to metals

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

Procedureforspillcleanupflowchart

Cordon off the site of spillage

Wear gloves and other appropriate PPE as per requirement Inspect the area around the spill thoroughly for splatters or splashes.

If spill of >10ml or covers >10 cm area

If spill is <10ml /covers<10cm

Cover the spill with absorbent material

material

Cover the spill with absorbent

Collect the material with card board sheets Prepare therequired quantity of 1% And discardiny ellowbag. hypochlorite solution freshly.

Pour the prepared hypochlorite solution over the absorbent material Allow the hypochlorite solution tohave a contactwiththespillforatleast

20minutes

Collect the material with the help of cardboard sheets and put in the biohazard bag.

bin

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar	Approved by Dean, Dr. Sangeeta Ravat
intection control officer	Prof. and Head, Microbiology	
Revision no:	Revision date :	Pg no:



b

o

h

a

Z

a

r d

Sea

Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



bag in appropriate coloured waste		
1	Mop the area with remaining hypochlorite solution	
a	Remove the PPE and discard in appropriate coloured wastebin	
n		
d		
D		
i		
S		
c		
a		
r		
d		
t		
h		
e		

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

B) Mercury spill

Metallic mercury has high chronic toxicity and can cause significant damage to central nervous system, kidney and liver. Both high level/short term and low level/long term exposures can lead to serious health problems. Mercury exposure can occur from absorption through the skin, inhalation of the mercury vapor and ingestion. Therefore immediate management of mercury spill is necessary.



Mercury spillage kit contains:

- Latex or rubber gloves
- Spatula or plastic cards, or any other rigid paper.
- Plastic dust pan
- Zipper-lock plastic bags
- Flashlight
- Wide-mouth plastic container with screw-on lid.

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



- In case of mercury spillage the spillage sign board should be placed so as to ensure that movements are restricted and there is no further dispersal of mercury.
- Remove all items near the mercury spill area.
- > Switch off the fan and Exhaust fan if in use

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

- Children and pregnant women to be evacuated from that space
- Wear face mask and goggles
- Remove the jewelry and watch from hands, then wear gloves
- Locate all Mercury beads, then carefully use the cardboard strips or Chart Sheet to gather them together.
- ➤ Put off the light and flash the torch together on all the smaller non identifiable mercury particles which will shine in the dark.
- Use the syringe or dropper to draw up the Mercury beads, transfer them into the water filled plastic container and close and seal airtight
- Small and hard-to-see beads can be located with the flashlight, after removing the larger beads, use adhesive tape to collect those beads
- ➤ If Mercury is spilled on linen, that portion to be cut and removed
- AllthematerialsusedforMercuryspilltobeplacedintheplasticbagand to be labelled as "CONTAMINATED WITH MERCURY".
- Send it to the biomedical department for re-use, in case it cannot be re- used it will then be further disposed by the biomedical department in the biomedical waste segregation room for further disposal by the MPCB.
- Anincidentreportshouldberaised.
- Doorsandwindowsoftheroomtobekeptopenfor24hours.
- Ensure that no part of the body has comes in contact with the spilled mercuryincaseofanexposureofmercurytotheskin,throughwashing of the area has to be carried out.

Procedure of Mercury Spill Clean Up <u>DON'Ts</u>

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



- Never use broom to clean up mercury.
- Never useVacuum cleaner to clean up mercury.
- Never use bare hands to touch Mercury.
- Never continue wearing shoes and clothing that are contaminated with

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

Mercury.

C) Chemicalspillagemanagement

For Chemical spillage, follow the Manufacturer's Instruction as mentioned in the MSDS (Material Safety Data Sheet) of the chemical products.



Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Recordand formats

ANNEXURE:SPILLMANAGEMENT

SPILLINCIDENCEREPORT

Sr.no.	Particulars	Details
1	Date of spill	
2	Time of spill	
3	Department/building/roomno.	
4	Supervisors name with date(to whom incidence	
	was reported)	
5	Circumstances causing the spill	
6	Potential hazard that caused/resulted from the	
	incidence	
7	Spill response action taken	
8	Was spill kit available ?	

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar	Approved by Dean, Dr. Sangeeta Ravat
intection control officer	Prof. and Head, Microbiology	
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



9	Preventive and corrective actions resulting from
	incidence investigation record
	Maintained
10	Spill management action completed by name, sign
	with date
11	Spill management action supervised by name, sign
	with date
12	Regular training for spill management
	documentation available (yes/no)

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

	Spill kit audit		
Ward	Date	Roundtaken by	

Sr.	Particularstobechecked	Yes	No
No.			
1	Personal protective equipment		
2	Gloves		
3	Plastic apron		
4	Face masks		
5	Caps		
6	Goggles		
7	Shoe cover		
8.	Absorbent material/cotton		
9	Yellow biohazard bag		
10	Hard cardboardsheet /dustpan		
11	Freshly prepared Sodium hypochlorite solution(1%)		

References:

 $1. \quad NABHA ccreditation Standards for Hospitals (5^{\mbox{th}} edition).$

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

- 2. https://www.epa.gov/mercury/
- National guidelines for infection prevention and control in healthcare facilities by National Centre for Disease Control, Directorate General of Health Services Ministry of Health and Family Welfare, Government of India, January 2020.

SOP 22: Policy on Injection Safety Policies and Procedures

Purpose:

To prevent the spread of blood borne pathogens and bacterial infections through the use of safe injection practices and ongoing standardized competency training.

Policy:

All members of the healthcare team will follow best practices guidance regarding the safe use of needles, syringes, medications, cannulas and intravenous delivery systems.

Procedures:

The following procedures apply to the use of all needles, syringes, medication vials, intravenous delivery systems and sharps containers.

- 1. Follow hand hygiene guidelines at all times;
 - a. Before patient contact
 - b. Before carrying out a clean/aseptic procedure such as handling an invasive device, preparing injections
 - c. Immediately after contact with body fluids, mucous membranes or wound dressings
 - d. After touching patient surroundings, all inanimate surfaces in the patient care area and upon leaving the patient room
- 2. Injections are prepared using aseptic technique in a clean area free from contamination or contact with blood, body fluids, or contaminated equipment.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

- 3. Needles and syringes are used for only one patient (this includes manufactured prefilled syringes and cartridge devices such as insulin pens).
- 4. The rubber septum on a medication vial is disinfected with alcohol prior to piercing.
- 5. Medication vials are entered with a new needle and a new syringe, even when obtaining additional doses for the same patient.
- 6. Single-dose or single-use medication vials, ampules, and bags or bottles of intravenous solution are used for only one patient.
- 7. Medication administration tubing and connectors are used for only one patient.
- 8. Multi-dose vials are dated by healthcare worker when they are first opened and discarded within 28 days unless the manufacturer specifies a different (shorter or longer) date for that opened vial. Note: This is different from the expiration date printed on the vial.
- 9. Multi-dose vials are dedicated to individual patients whenever possible.
- 10. Multi-dose vials to be used for more than one patient are kept in a centralized medication area and do not enter the immediate patient treatment area (e.g., operating room, patient room/cubicle). Note: If multi-dose vials enter the immediate patient treatment area, they should be dedicated for single-patient use and discarded immediately after use.

•	Approved by (signature)	:
	Date:	Annual review date:
Ref	Gerence: https://www.cdc.g	gov/injection-safety/about/index.html

SOP 23: POLICY ON OCCUPATIONAL HEALTH: HEALTH WORKERS

POLICY: To formulate program to prevent or decrease the healthcare associated infections in staff.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

PURPOSE:

- 1. To decrease the health care associated infections in health care workers at all levels, by means of pre employment health check ups of employee, by offering immunization, & restricting the work of those having transmissible infectious disease condition.
- 2.To provide adequate personal protective equipment to health care workers.
- 3.To prevent infections through occupational exposure.

SCOPE: Hospital wide

DISTRIBUTION: Hospital wide.

DEFINITIONS: As per World Health Organization's Occupational safety & Health document, Occupational health is defined as an area of work in public health to promote and maintain highest degree of physical, mental and social well-being of workers in all occupations.

Occupational exposure- Occupational exposure refers to exposure to potential blood-borne infections (HIV, HBV, HCV) that may occur in healthcare settings during performance of job duties. Post exposure prophylaxis (PEP) refers to comprehensive medical management to minimise the risk of infection among Health Care Personnel (HCP) following potential exposure to blood-borne pathogens (HIV, HBV, HCV). This includes counselling, risk assessment, relevant laboratory investigations based on informed consent of the source and exposed person, first aid and depending on the risk assessment, the provision of short term (four weeks) of antiretroviral drugs, with follow up and support.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

RESPONSIBILITIES: Infection control Nurse, Infection control Team, Administrator.

METHOD: Institute will design the programme to identify the risk of infection in different circumstances & will implement the measures to avoid the risk of transmission of infection to health care workers.

It includes:

Pre-employment health check up data of employee.

Immunization policy for health care workers, including Hepatitis B vaccine to all Health care workers & Anti Hepatitis B titers after immunization.

Protocol for Needle stick injury management

Safe Occupational Health involves the following aspects:

- A. Pre-Employment Checkup
- B. Occupational Exposure Management
- C. Vaccination of all HCPs
- D. Special care for pregnant / non-vaccinated / Immunocompromised HCPs who are admitted to the hospital

A. Pre-Employment Checkup

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

- Before being allowed to work in high-risk areas, all staff should be assessed and offered testing and/or vaccination for specific infectious diseases.
- Details of medical history, particularly for infectious diseases such as rubella, measles, mumps, chickenpox (varicella), hepatitis B, immune disorders and skin conditions, and for prior exposure to tuberculosis should be recorded.
- Except in cases of outbreaks, routine screening of HCWs for carrier state is not recommended.
- Besides following safe work practice, HCWs can be protected from HAIs by preventive health checkups once a year

B. Occupational Exposure Management

"Exposure" which may place an HCP at risk of blood-borne infection is defined as:

- 1. Per cutaneous injury (e.g. needle-stick or cut with a sharp instrument) or
- 2. Contact with the mucous membranes of the eye / mouth or
- 3. Contact with non-intact skin (particularly when the exposed skin is chapped, abraded, or afflicted with dermatitis) or
- 4. Contact with intact skin when the duration of contact is prolonged (e.g. several minutes or more) with blood or other potentially infectious body fluids.

'At Risk' categorization of body fluids & the associated risk of HIV transmission

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Exposure to body fluids considered 'at risk'	Exposure to body risk'	fluids considered 'not at	
Blood	Tears		
Semen			
/aginal secretions	sweat	lass these securities	
Cerebrospinal fluid	Urine and faeces	unless these secretions contain visible blood	
Synovial, pleural, peritoneal, pericardial fluid	Office and faeces		
Amniotic fluid	saliva		
Other body fluids contaminated with visible blood	*		

Assessment of exposure:

Three categories of exposure can be described based on the amount of blood/fluid involved and the entry port. These categories are intended to help in assessing the severity of the exposure but may not cover all possibilities.

Refer to Chapter 15 – Policy on NSIs, Sharps management & PEP

Assessing the HIV status of **Source** of exposed patients.

Categories of situation depending upon the test results of source.

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

Source HIV Status	Definition of risk in source
HIV negative	Source is not HIV infected but consider HBV and HCV
Low risk	HIV positive and clinically asymptomatic
High risk	HIV positive and clinically symptomatic (see WHO clinical staging)
Unknown	Status of the patient is unknown, and neither the patient nor his/her blood is available for testing (e.g. injury during medical waste management the source patient might be unknown). The risk assessment will be based only upon the exposure (HIV prevalence in the locality can be considered)

Assessment of exposed individual:

The exposed individual should have confidential counseling and assessment by a designated person/trained doctor must assess the risk of HIV and HBVtransmission following an AEB.

This evaluation must be made rapidly, so as to start any treatment as soon as possible after the accident (Ideally within 2 hours but certainly within 72 hours).

This assessment must be made thoroughly (because not every AEBrequires prophylactic treatment).

- The exposed individual should be assessed for pre-existing HIVinfection; intended for people who are HIV negative at the time of their potential exposure to HIV.
- Exposed individuals who are known or discovered to be HIVpositive should not receive PEP. They should be offered counseling and information on prevention of transmission and referred to clinical and laboratory assessment to determine eligibility for antiretroviral therapy (ART).

Check for Pregnancy is exposed HCP is a female

• Besides the medical assessment, counseling to exposed HCPis essential to allay fear

Steps for Managing Occupational Exposure

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

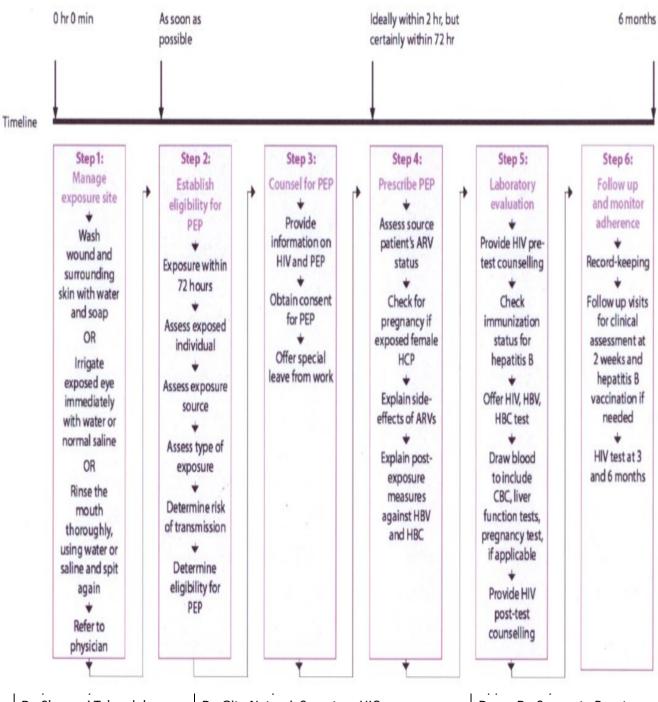
Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08



Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

I. First Aid in management of Occupational Exposure:

Most Important is to tell the HCP – NOT TO PANIC

The further steps depend on the type of exposure

Type of exposure	First aid measures
If the skin is broken following an injury with a used needle or sharp instrument	 Do not squeeze or rub the injury site. Wash the site immediately using soap or a mild disinfectant solution that will not irritate the skin. Do not use strong solutions, such as bleach or iodine, to clean the site as these may irritate the wound and make the injury worse.
After a splash of blood or body fluids on broken skin	Follow the same steps as for broken skin.
After a splash or contact with the eye	 Irrigate the exposed eye immediately with water or normal saline. Sit in a chair, tilt the head back and have a colleague gently pour water or normal saline over the eye, pulling the eyelids up and down to make sure the eye is cleaned thoroughly. If contact lenses are worn, leave these in place while irrigating the eye. Once the eye has been cleaned, remove the contact lenses and clean them in the usual manner. Do not use soap or disinfectant in the eye.
After a splash or contact with the mouth	 Spit the fluid out immediately. Rinse the mouth thoroughly, using water or saline, and spit again. Repeat this process several times. Do not use soap or disinfectant in the mouth.

II. Assessing Eligibility for PEP

Indications for PEP:

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat	
Revision no:	Revision date :	Pg no:	



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

- 1. The exposed person is HIV negative.
- 2. The source person is HIV positive, or at high risk of recent infection and thus likely to be in the window period.
- 3. The exposure to the following poses a risk of transmission:
- a. Parenteral or mucous membrane exposure (sexual exposure and splashes to the eye, nose or oral cavity)
- b. Bodily fluids may pose a risk of HIV infection: blood, blood-stained saliva, breast-milk, genital secretions and cerebrospinal, amniotic, rectal, peritoneal, synovial, pericardial or pleural fluids.
 - c. sexual assault;
 - d. exposure of non-intact skin or mucous membranes to potentially infectious body fluids.
- *The list is not exhaustive and all cases should be assessed clinically and decisions made by the health-care workers as to whether exposure constitutes significant risk.

PEP is **NOT** indicated if the:

- exposed individual is HIV positive;
- source is established to be HIV negative; and
- exposure is to body fluids posing an insignificant risk of transmission, such as tears, non-blood-stained saliva, urine and sweat.
 - III. Counseling for PEP must include the following:
 - the risk of acquiring HIV infection from a specific exposure;

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements - HIC 01 to 08

- risk and benefits of HIV PEP;
- the importance of having an initial baseline HIV test;
- Link to treatment for those who are HIV positive;
- Enhanced adherence counselling to take the medicine daily for its effectiveness
- common side-effects that may be experienced while taking PEP;
- Safety of PEP during pregnancy and breastfeeding;
- Specific support in case of sexual assault;
- For non-occupational exposure, provide HIV prevention counselling.

Counselling the exposed person must be followed by obtaining an informed consent for initiating PEP

IV. Prescription for PEP after baseline Laboratory Evaluation

Check Immunisation status for HBV

- Get a baseline test for HIV antibody, HBsAg and HCV Abs and monitor for seroconversion at 6 weeks, 3 months and 6 months after exposure.
- Draw blood for CBC, LFT, Pregnancy test etc.

For initiation of post exposure prophylaxis, the following need to be contacted:

During routine working hours - ART center physician

During emergency hours - MICU I/C / Casualty medical officer

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name -

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

- Start as soon as possible, preferably within 2 hours and maximum within 72 hours of exposure. The duration of treatment is 28 days.
- Initiation of PEP where indicated should not be delayed while waiting for the results of HIV testing of the source of exposure

Pregnancy and PEP:

Based on limited information, anti-retroviral therapy taken during 2nd and 3rd trimester of pregnancy has not caused serious side effects in mothers or infants. There is very little information on the safety in the 1st trimester. If the HCW is pregnant at the time of exposure to HIV, the designated authority/ physician must be consulted about the use of the drugs for PEP.

HBV prophylaxis for reported exposure incidents

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name –

Infection Control Manual

Version No: 1

Version Date: 20.06. 2024



Objective elements – HIC 01 to 08

HBV status of person	34 33 34 34 34 34 34 34 34 34 34 34 34 3	Significant exposure		Non-significan	t exposure
Exposed	HBsAg positive source	Unknown source	HBsAg negative source	Continued risk	Nofurther risk
≥1 dose HB vacque pre-exposure	Accelerated course of HB vaccine* HBIG×1	Accelerated course of HB vaccine*	Inhate course of HB vaccine	Initiate course of HB vaccine	No HBV prophylaxis Reassure
≥2 dosesHB vaccine pre-exposure (anti-HBs not known)	One dose of HB vaccine followed by second dose one month later	One dose of HB vaccine	Finish course of HB vaccine	Finish course of HB vaccine	No HBV prophylaxis Reassure
Known responder to HB vaccine (anti-HBs > 10 miU/ml)	Consider booster dose of HB vaccine	Consider booster dose of HB vacciné	Consider booster dose of HB vaccine	Consider booster dose of HB vaccine	No HBV prophylaxis Reassure
(nown non-responder o HB vaccine anti-HBs <10 miLl/ml2-4 nonths post-immunisation)	HBIG×1 Consider booster dose of HB vaccinel	HBIG×1 Consider booster dose of HB vaccine	No HBIG Consider booster dose of HB vaccine	No HBIG Consider booster dose of HB vecaine	No prophylaxis Reassure

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name – Infection Control Manual

Objective elements – HIC 01 to 08

Version No: 1 Version Date: 20.06, 2024



When indicated immune prophylaxis should be initiated as soon as possible, preferably within 24 hours

Determination of HBIG (Immunglobulin) need

- For percutaneous (needle stick), ocular, or mucous- membrane exposure to blood known to contain HBsAg and for human bites from HBsAg carriers that penetrate the skin, a single dose of HBIG (0/.06 ml/kg or 5.0 ml for adults) should be given as soon as possible after exposure and within 24 hours if possible.
- HB vaccine 1 ml (20 μg) should be given IM at a separate site as soon as possible, but within 7 days of exposure, with the second and third doses given after one month and 6 month, respectively.
- If HBIG is unavailable, immunoglobulin may be given in an equivalent dosage (0/06 ml/kg or 5.0 ml for adults). If an individual has received at least two doses of HB vaccine before an accidental exposure, no treatment is necessary if serologic tests show adequate levels(>10MIU/DL) of anti- HBs.
- For persons who choose not to receive HB vaccine, the previously recommended two doses HBIG regimen may be used

Hepatitis C Virus

There is presently no prophylaxis available against hepatitis C. Post exposure management for HCV is based on early identification of chronic HCV disease & referral to a specialist for management.

Follow-Up of HCW

For HIV – Repeat Ab testing at 3 months & 6 months

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name – Infection Control Manual

Objective elements – HIC 01 to 08

Version No: 1 Version Date: 20.06. 2024



• If found positive, HCW should be appropriately counselled & referred to ART centre

For HBV & HCV

SGOT and SGPT test - at six weeks following exposure and at twelve weeks following exposure

- In case above mentioned parameters are found deranged then HCW should be screened for seroconversion.
- If found positive, HCW should be referred to Hepatologist.
- C. Vaccination of HCPs

Vaccinations Recommended for HCPs

Prepared by Dr. Shreeraj Talwadekar Infection Control Officer	Reviewed by Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Approved by Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name – Infection Control Manual

Objective elements – HIC 01 to 08

Version No: 1 Version Date: 20.06. 2024



Vaccine	Dose and Remarks	
Hepatitis B		
	Three-dose series at 0, 1 and 6 months	
	Test for hepatitis B surface antibody (anti-HBs) to document immunity 1–2 months after third dose	
	If anti-HBs is at least 10 mIU/ml (positive), the patient is immune. No further serologic testing or vaccination is recommended	
	If anti-HBs is less than 10 mIU/ml (negative), the patient is unprotected from hepatitis B virus (HBV) infection; revaccinate with a three-dose series. Retest anti-HBs, 1–2 months after dose 3	
	If anti-HBs is negative after six doses of vaccine, patient is a non-responder	
Measles, Mumps and Rubella (MMR)	Two doses four weeks apart	
Tetanus	Booster once every 10 years	
Meningococcal	One dose to HCW who might contact patients with meningococcal infections	
Varicella	For HCW who have no serologic proof of immunity, prior vaccination or history of varicella disease (chickenpox). Two doses of varicella vaccine, four weeks apart	
Influenza	Appropriate dose of vaccine which confers protection from the current circulating epidemic strain must be given, as and when available, and recommendations by the Government of India must be followed	

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no:



Document Name – Infection Control Manual

Objective elements – HIC 01 to 08

Version No: 1 Version Date: 20.06. 2024



D. Special care for pregnant / non-vaccinated / Immunocompromised HCPs who are admitted to the hospital

When Pregnant / non-vaccinated / Immunocompromised HCPs are admitted to the hospital, special care is to be taken to see that they are NOT to be placed in:

- High Risk areas
- In Proximity to patients having Infectious conditions like Chicken pox, Measles etc.

References:

- 3. National guidelines for infection prevention and control in healthcare facilities, Ministry of Health and Family Welfare Government of India
- 4. Hospital Infection Control Guidelines, Indian Council of Medical research

Prepared by	Reviewed by	Approved by
Dr. Shreeraj Talwadekar Infection Control Officer	Dr. Gita Nataraj, Secretary HIC Dr. Chaya A Kumar Prof. and Head, Microbiology	Dean, Dr. Sangeeta Ravat
Revision no:	Revision date :	Pg no: