



SRI LAKSHMI MEDICAL CENTRE AND HOSPITAL

18/121 MTP Road,

Thudiyalur, Coimbatore – 641 034.

Document Name :	HOSPITAL INFECTION CONTROL MANUAL
Document No. :	E / NABH / SMCH / HIC / 01 - 08
No. of Pages :	59
Date Created :	01/11/2014
Date of Implementation :	01/11/2014
Prepared By :	Designation : Infection Control Nurse Name : Ms. Kavitha.J Signature :
Approved By :	Designation : Chairman Name : Dr.D.Suresh Kumar Signature :
Responsibility of Updating :	Designation : NABH Coordinator Name : Mrs.Usha Nandhini.N.B Signature :

CONTROL OF THE MANUAL

The holder of the copy of this manual is responsible for maintaining it 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 current status by inserting latest amendments as and when the amended versions are received.

Infection Control Nurse responsible for issuing the amended copies to the copyholders and the copyholder should acknowledge the same and he /she should return the obsolete copies to the Infection Control Nurse.

The amendment sheet, to be updated (as and when amendments received) and referred for details of amendments issued.

The manual is reviewed once a year and is updated as relevant to the hospital policies and procedures. Review and amendment can happen also as corrective actions to the non-conformities raised during the self-assessment or assessment audits by NABH.

The authority over control of this manual is as follows:

Preparation	Approval	Issue
Infection Control Nurse	Chairman, Sri Lakshmi Medical Centre & Hospital.	Accreditation coordinator


The procedure manual with original signatures of the above on the title page is considered as 'Master Copy', and the photocopies of the master copy for the distribution are considered as 'Controlled Copy'.

Distribution List of the Manual:

S.No.	Designation
1	Chairman
2	Infection Control Nurse
3	Accreditation Coordinator

CONTENTS

S.No.	Topics	Page Number
1.0	Organization of Infection Control	5
HIC 1	The Organization Has A Well-Designed, Comprehensive And Coordinated Hospital Infection Prevention And Control Program Aimed At Reducing/ Eliminating Risks To Patients, Visitors And Providers Of Care	5
HIC 2	The Organization Implements Policies And Procedures Laid Down In The Infection Control Manual	8
HIC 3	The Organization Performs Surveillance Activities To Capture And Monitor Infection Prevention And Control Data	34
HIC 4	The Organization Takes Actions To Prevent Or Control The Risk Of Health Care Associated Infections (Hai) In Patients	37
HIC 5	The Organization Provides Adequate Resources For Prevention And Control Health Care Associated Infections	45
HIC 6	The Organization Identifies And Takes Appropriate Actions To Control Outbreaks Of Infections	54
HIC 7	Bio-Medical Waste (Bmw) Is Handled In An Appropriate And Safe Manner	57
HIC 8	The Infection Control Program Is Supported By The Management And Includes Training Of The Staff And Employee Health	59

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 5 of 59

1.0 ORGANIZATION OF INFECTION CONTROL

SMCH recognizes the control of healthcare associated infections (HAI) as an important issue and is committed to fulfilling its responsibility by ensuring that proper safeguards are instituted to identify and prevent HAI. All aspects of hospital function are included in this activity.

Definition of Healthcare associated infection

"Any clinically recognizable microbiological disease that affects the patient as a consequence as being admitted to hospital, or attending for treatment, or the hospital staff as a consequence of their work, whether or not the symptoms of a disease appear while the infected person is in the hospital.


Purpose

- To maintain standards in infection control measures and minimize hospital acquired infections in patients and employees.
- To define policy and procedure regarding healthcare associated infections in the hospital

HIC.1: THE ORGANIZATION HAS A WELL-DESIGNED, COMPREHENSIVE AND COORDINATED HOSPITAL INFECTION PREVENTION AND CONTROL PROGRAM AIMED AT REDUCING/ ELIMINATING RISKS TO PATIENTS, VISITORS AND PROVIDERS OF CARE

- a) Sri Lakshmi Medical Centre & Hospital has documented infection prevention and control program which aims at preventing and reducing risk of health care associated infections.
- b) The infection prevention and control program is a continuous process and updated in every year.

SMCH have an Infection Control Committee which coordinates all infection prevention control activities

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 6 of 59

Hospital Infection Control Committee Members:

- HICC Chairman Senior Surgeon
- Senior Consultant - Physician
- Nursing Superintendent
- Infection Control Nurse
- Pharmacy In charge
- House Keeping Supervisor
- Lab Incharge

Aims of the HICC:


The aim of HICC is to improve hospital infection control practices and to prevent or minimize the potential for nosocomial infections in patients, relatives, and health care providers.

Activities of IC Team

1. The hospital has an infection control team, which coordinates implementation of all infection prevention and control activities. The team is responsible for day-to-day functioning of infection control program.
2. Periodical training of all category staff about Infection Control Protocols and Policies.
3. Establish standard operational procedures for Infection Control practices.
4. Introduce new policies and protocols on the method of disinfection and sterilization.
5. Maintain and implement biomedical waste management protocols.
6. Regular monitoring of Engineering department and water supply system.
7. Supervision of biomedical waste management activities.


The surgeon is designated as **Infection Control Officer (ICO)** in SMCH.

SMCH has a designated **Infection Control Nurse (ICN)** based on training and experience.

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 7 of 59

Responsibility of IC Nurse

1. Maintaining records and statistics regarding IC activities and maintains HAI incidents record.
2. Checking by inspection that Infection Control and prescribed disinfectant procedures are being carried out in accordance with hospital policy.
3. Checking of housekeeping activities like the use of Personal Protective Equipments usage of proper disinfectant, mopping plan, and biomedical waste management.
4. Training of all category staff.
5. Liaison between laboratory and ward staff: Informing head of department and giving advice on infection control problems.
6. Notification of communicable diseases and other Notifiable disease through telephone and as well as through email.
7. Arrangements taken to provide hand washing solutions and alcohol based hand rubs.
8. Work as a clinical supervisor by ensuring all the established policies and protocols are practiced like hand washing procedures, use of hand rubs, isolation policies, care of IV and vascular access, urinary catheters, universal precautions, housekeeping, cleaning and disinfection, PPE, equipment cleaning, etc.
9. Ensure health checkup of all employees.
10. Monitoring engineering activities like maintenance of aqua guard registers and cleaning register of Water tanks etc.
11. Immediate attentions in NSI & Post exposure prophylaxis.

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 8 of 59

HIC.2: THE ORGANIZATION IMPLEMENTS POLICIES AND PROCEDURES LAID DOWN IN THE INFECTION CONTROL MANUAL.

SMCH Hospital identified various high risk areas and procedures, and has policies to prevent infection in these areas.

High risk areas of the hospital are identified as


1. Operation Theatres
2. Intensive care units
3. Causality
4. Endoscopy Room

Concept of Standard Precautions:

There are a number of precautions designed to protect health care workers from exposure to blood borne pathogens. While majority of patients infected with HIV/HBsAg/ HCV are asymptomatic at the time of presentation, all patients are considered as having potentially infectious blood and body fluids. Precautions may vary based on anticipated exposure.

Features of universal precautions:

1. **Use of Personal Protective Equipments**
 - a) Mask-Protection from air borne infections or situation which lead any splash or sprays of blood and body fluid.
 - b) Glove –Use glove when we are touching the hand with blood and body fluids, secretions any wound, or any other contaminated items.
 - c) Apron-Any Chances of splash or contamination on soiling.
 - d) Goggles –During positive cases (OT &LR).
 - e) Boots-If necessary.

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 9 of 59

f) Caps are worn whenever indicated.

2. Prevention of injury with sharps:

Sharps injuries commonly occur during use of needles and surgical instruments and after use during disposal.

Precautions to be observed:

1. Needles should not be recapped, bent or broken by hand.
2. Disposable needles & other sharps should be discarded into puncture resistant containers at the site of procedure
3. Sharps should not be passed from one HCW (Health Care Worker) to another. The person using the equipment should discard it. If necessary a tray can be used to transport sharps.
4. All sharps containers to be discarded when 3/4ths full.

Hand Washing

Hand washing means vigorous rubbing of hand with soap and water or with any antiseptic agents

Types

1. Social hand wash
2. Procedure hand wash
3. Surgical hand wash

Purpose


1. To remove dirt and debris
2. To decontaminate the hands
3. To prevent cross infection
4. To break the chain of infection

Most common mode of transmission of pathogens is via **HANDS**

“Hand washing is the single most important means of preventing the spread of infection”

When?

- Before and after duty
- Before each invasive procedures.

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 10 of 59

- Before and after using gloves
- After touching of blood or body fluid
- Before and after touching patients
- Before touching invasive devices
- After toileting, urination

Indications for Hand Hygiene

- When hands are visibly dirty, contaminated, or soiled, wash with non-antimicrobial or antimicrobial soap and water.
- If hands are not visibly soiled, use an alcohol-based hand rub for routinely decontaminating hands.

Specific Indications for Hand Hygiene

Before:

- a) Patient contact
- b) Donning gloves when inserting a CVC
- c) Inserting urinary catheters, peripheral vascular catheters, or other invasive devices that don't require surgery


After:

- a) Contact with a patient's skin
- b) Contact with body fluids or excretions, non-intact skin, wound dressings
- c) Removing gloves

1. Social hand washing (10 -15 sec)

Indications

1. Before handling food
2. After visiting toilet
3. Before and after nursing the patient (Bathing and bed making)
4. It can be used in community and public places

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 11 of 59

2. Procedure hand washing or hygienic hand washing (30sec -1mt)

Indications

1. Before each invasive procedures
2. Before attending Immuno compromised patients
3. Before and between caring for high risk patients
4. Before and after use of gloves
5. After touching of blood or body fluid


Methods of Hand Washing

1. Wet hands with running water.
2. Obtain soap or detergent that contains antimicrobial agents spread all area of the hands.
3. Vigorous rubbing of hands (all area) about 30 sec to 1 min.
4. Wash hands thoroughly with running water.
5. Rinse and dry.
6. Turn off water with using paper towel or use elbow to close the tap handle.

Steps of Procedure Hand Washing



1. Palm to Palm
2. Right palm over left dorsum and left over right dorsum.
3. Palm to palm finger interlocked.

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 12 of 59

4. Back of finger to opposing palms with finger interlocked.
5. Rotational rubbing of right thumb clasped in left palm and vice versa
6. Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa.
7. Rotational rubbing of right wrist and vice versa. Dry thoroughly.

3. Surgical Hand Wash (3-5mts)

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).

Method

1. Hands are washed up to the elbow freely using disinfectant
2. Scrubbing of fingers, space between fingers and nails ,brush used to scrub the nails
3. wash hands thoroughly with running water .after wash the tap should be closed with elbow
4. Keep the hand finger upright position.
5. Dry the hand with sterile towel





**SRI LAKSHMI MEDICAL CENTRE
& HOSPITAL**

**HOSPITAL INFECTION
CONTROL MANUAL**

Doc. No.

E / NABH / SMCH / HIC / 01 - 08

Issue No.

01

Rev. No.

00


Date

01/11/2014

Page

Page 13 of 59



	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 14 of 59



Hand Rub

In Chlorhexidine /alcohol 70% hand rub in all areas

When?

- i. Before touching invasive devices
- ii. After touching the patient
- iii. Before handling the patient
- iv. Before preparing any injections

Safe Injection and Infusion Practices


A safe injection, lancet procedure or intravenous device insertion is one that:

- A. Does not harm the recipient
- B. Does not expose the provider to any avoidable risk
- C. Does not result in any waste that is dangerous for other people.

Purpose:

The purpose of SAFE I is to promote implementation of safe practices associated with the following medical procedures:

- Intradermal, subcutaneous and intramuscular needle injections
- Intravenous infusions and injections

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 15 of 59

- Lancet procedures.

General safety practices

This section describes the following practices that are recommended to ensure the safety of injections and related practices:

- Hand hygiene
- Gloves where appropriate
- Other single-use personal protective equipment
- Skin preparation and disinfection

A. Hand hygiene- Perform hand hygiene **BEFORE:**

- ❖ Starting an injection session (i.e. preparing injection and giving injections)
- ❖ Coming into direct contact with patients for health-care related procedures
- ❖ Putting on gloves (first make sure hands are dry).

A. Hand hygiene- Perform hand hygiene **AFTER:**

- ❖ An injection session
- ❖ Any direct contact with patients
- ❖ Removing gloves.

Key Elements	Indications	Precautions
Hand hygiene (hand washing or alcohol-based hand rub)	<p>Hand hygiene before and after contact with every patient is the single most important means of preventing the spread of infection</p> <p>When hands are visibly dirty or contaminated with proteinaceous material, wash them with antibacterial or plain soap and running water, then dry them using single-use paper ,towels</p> <p>When hands appear clean (i.e. are</p>	<p>DO NOT use alcohol-based hand products when hands are visibly soiled</p> <p>DO NOT use alcohol-based hand products when hands are visibly soiled</p> <p>DO NOT use alcohol- based hand products after exposure of nonintact skin to blood or body fluids; in such cases, wash hands with antibacterial or</p>



**SRI LAKSHMI MEDICAL CENTRE
& HOSPITAL**

**HOSPITAL INFECTION
CONTROL MANUAL**


Doc. No.	E / NABH / SMCH / HIC / 01 - 08
Issue No.	01
Rev. No.	00
Date	01/11/2014
Page	Page 16 of 59

Not visibly soiled), clean them with an alcohol-based hand product for routine decontamination, then dry them using single-use paper towels	plain soap and running water, then dry them using single-use paper towels
---	---

B. Staff at SMCH, who are in direct contact with patients, shall wear non-sterile, well-fitting latex or latex-free gloves when coming into contact with blood or blood product. Indications for glove use in injection practice are

Key Elements	Indications	Precautions
Glove use	<p>Wear non-sterile, well-fitting, single-use gloves:</p> <ul style="list-style-type: none"> •when there is a likelihood of coming into direct contact with a patient’s blood or other potentially infectious materials (e.g. body fluids, moist body substances and saliva [in dental procedures]), mucous membranes and nonintact skin •when performing venepuncture or venous access injections, because of the potential for blood exposure at the puncture site •if the health worker’s skin is NOT intact (e.g. through eczema, or cracked or dry skin) 	<p>When undertaking injections,</p> <p>DO NOT use gloves:</p> <ul style="list-style-type: none"> •for routine intradermal, subcutaneous and intramuscular injections •if the health worker’s skin is intact •if the patient’s skin is intact. <p>Gloves DO NOT provide Protection against needle-stick or other puncture wounds caused by sharp objects.</p> <p>Needles, scalpels and other sharps should be handled with extreme caution.</p>

D. Other Single-Use Personal Protective Equipment

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 17 of 59

- ❖ Masks, eye protection and other protective clothing ARE NOT indicated for the injection procedures unless exposure to blood splashes is expected.
- ❖ When using single-use personal protective equipment, dispose of the equipment immediately after use.

E. Skin Preparation And Disinfection

To disinfect the skin, use the following steps

1. Apply a 60–70% alcohol-based solution (isopropyl alcohol or ethanol) on a single-use swab or cotton-wool ball. DO NOT use methanol or methyl-alcohol as these are not safe for human use.
2. Wipe the area from the centre of the injection site working outwards, without going over the same area.
3. Apply the solution for 30 seconds then allow it to dry completely.

F. Injection Devices

The management of SMCH shall ensure that an adequate supply of single-use devices is available, to allow providers to use a new device for each procedure.

G. Practical Guidance On Use Of Injection Devices


When using a sterile single-use device

- a) Use a new device for each procedure, including for the reconstitution of a unit of medication or vaccine;
- b) Inspect the packaging of the device to ensure that the protective barrier has not been reached;
- c) Discard the device if the package has been punctured, torn or damaged by exposure to moisture, or if the expiry date has passed.

H. Medication

I. When giving medication:

- a) NOT use a single loaded syringe to administer medication to several patients (i.e.ensure one needle, one syringe, one patient!)

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 18 of 59

- b) DO NOT change the needle in order to reuse the syringe
- c) DO NOT use the same mixing syringe to reconstitute several vials
- d) DO NOT combine leftover medications for later use.

Single-dose vials – Whenever possible, use a single-dose vial for each patient, to reduce cross-contamination between patients.

Multi dose vials – Only use multi dose vials if there is no alternative.

- i. Open only one vial of a particular medication at a time in each patient-care area.
- ii. If possible, keep one multi dose vial for each patient, and store it with the patient's name on the vial in a separate treatment or medication room.
- iii. DO NOT store multi dose vials in the open ward, where they could be contaminated with spray or spatter.

Discard a multi dose vial:

- I. If sterility of content is compromised
- II. If the expiry date or time has passed (even if the vial contains antimicrobial preservatives)
- III. If it has not been properly stored after opening
- IV. Within 24 hours of opening, or after the time recommended by the manufacturer, if the vial does not contain antimicrobial preservatives
- V. If found to be undated, improperly stored, inadvertently contaminated or perceived to be contaminated, regardless of expiry date.


Preparing injections

Injections should be prepared in a designated clean area where contamination by blood and body fluids is unlikely.

Practical guidance on preparing injections

Three steps must be followed when preparing injections.

- ❖ Keep the injection preparation area free of clutter so all surfaces can be easily cleaned.
- ❖ Before starting the injection session, and whenever there is contamination with blood or body fluids,

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 19 of 59

clean the preparation surfaces with 70% alcohol (isopropyl alcohol or ethanol) and allow to dry

- ❖ Assemble all equipment needed for the injection
 - Sterile single-use needles and syringes;
 - Reconstitution solution such as sterile water or specific diluent
 - Alcohol swab or cotton wool;
 - Sharps container.

Labeling

After reconstitution of a multi dose vial, label the final medication container with

- Date and time of preparation
- Final concentration
- Expiry date and time after reconstitution
- Name and signature of the person reconstituting the drug.

For multi dose medications that DO NOT requires reconstitution, add a label with:

- Date and time of first piercing the vial
- Name and signature of the person first piercing the vial.

Administering Injections

An aseptic technique should be followed for all injections.


Practical guidance on administering injections

General

When administering an injection:

- check the drug chart or prescription for the medication and the corresponding patient's name and dosage
- perform hand hygiene
- wipe the top of the vial with 60–70% alcohol using a swab or cotton-wool ball
- open the package in front of the patient to reassure them that the syringe and needle have not been used previously
- Using a sterile syringe and needle, withdraw the medication from the ampule or vial.

Reconstitution

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 20 of 59

- If reconstitution using a sterile syringe and needle is necessary, withdraw the reconstitution solution from the ampule or vial, insert the needle into the rubber septum in the single or multi dose vial and inject the necessary amount of reconstitution fluid.
- Mix the contents of the vial thoroughly until all visible particles have dissolved.
- After reconstituting the contents of a multi dose vial, remove the needle and syringe and discard them immediately as a single unit into a sharps container.

Delay in administration

- If the dose cannot be administered immediately for any reason, cover the needle with the cap using a one-hand scoop technique.
- Store the device safely in a dry kidney dish or similar container.

Important points

- DO NOT allow the needle to touch any contaminated surface.
- DO NOT reuse a syringe, even if the needle is changed.
- DO NOT touch the diaphragm after disinfection with the 60–70% alcohol (isopropyl alcohol or ethanol).
- DO NOT enter several multi dose vials with the same needle and syringe.
- DO NOT re-enter a vial with a needle or syringe used on a patient if that vial will be used to
Withdraw medication again (whether it is for the same patient or for another patient)


Prevention of sharps injuries to health workers

Use of best practices can help to prevent sharps injuries to health workers

Practical guidance on prevention of sharps injuries

To avoid sharps injuries:

1. Ensure that the patient is adequately prepared for the procedure
2. Do not bend, break, manipulate or manually remove needles before disposal
3. Avoid recapping needles, but if a needle must be recapped, use a single-handed scoop technique
4. Discard used sharps and glass ampules immediately after use in the location where they were used, disposing them into a robust sharps container that is leak and puncture resistant
5. Place the sharps container within arm's reach (preferably in a secured area) to allow for easy disposal

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 21 of 59

of sharps

- Seal and replace sharps container when the container is three quarters full.

Define Infection


SMCH adheres to transmission based precautions at all times. Infection is the invasion and multiplication of microorganisms. Hospital infection control is important for patients, health care workers and public .The Infection control Team plays a major role in the prevention and control of nosocomial infections.

Precautions Against Airborne Transmission

- ❖ These precautions are designed to reduce the risk of airborne and droplet transmission of infectious agents, and apply to patients known or suspected to be infected with epidemiologically important pathogens that can be transmitted by these routes.
- ❖ Components of respiratory isolation:
- ❖ Place the patient in a single / private room with closed doors. Patients with same illness (but no other infection) can be cohorted in one room.
- ❖ Masks to be worn by those who enter the patient’s room. Susceptible persons should not enter the room of patients known or suspected to have measles or Varicella (chicken pox).
- ❖ Gowns are not routinely necessary. Use gowns if soiling is likely.
- ❖ Gloves are necessary while handling patients.
- ❖ Hand must be washed after touching the patient or potentially contaminated articles and before taking care of another patient.
- ❖ Articles contaminated with infective material must be discarded or bagged and labeled before being sent for decontamination and reprocessing.

Precautions Against Contact Transmission:

Contact isolation precautions are recommended for specified patients known or suspected to be infected or colonized with epidemiologically important microorganisms that can be transmitted by direct contact with the patient (hand or skin-to-skin contact that occurs when performing patient care) or indirect contact (touching) with

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 22 of 59

contaminated environmental surfaces or patient care items.

Components:

- ❖ Gowns are indicated if soiling is likely.
- ❖ Gloves are indicated for touching infected material / area
- ❖ Hands must be washed after touching the patient or potentially contaminated articles and before taking care of another patient.
- ❖ When possible, dedicate the use of non-critical patient - care equipment to a single patient (or cohort of patients infected or colonized with the pathogen requiring precautions) to avoid sharing between patients. If use of common equipment or items is unavoidable, then adequately clean and disinfect them before use for another patient.
- ❖ Articles contaminated with infective material must be discarded or bagged and labeled before being sent for decontamination and reprocessing

Precautions Against Blood Borne Transmission:

Instruction for wards


Admission: Patients with HIV / HBV / HCV disease but presenting with unrelated illnesses may be admitted in any ward as per existing rules. Confidentiality shall be maintained with appropriate precautions to prevent nosocomial transmission.

Preparation of patient: It is the responsibility of the attending physician to ensure that patients, testing positive are informed about the result and receive counseling.

The nursing staff will explain to patients, attendants and visitors (when necessary), the purpose and methods of hand washing, body substance and excreta precautions, and other relevant precautions.

Red bag (Reusable non-sharp material) :The ward sister must ensure that the prescribed bag is obtained from CSSD when a patient with HIV, HbsAg or HCV infection is admitted. All contaminated items that are to be sent to CSSD for disinfection are placed in the bag and sent for autoclaving. Sharps are not to be discarded in the red bag. Linen and procedure trays to be sterilized separately.

HAI /Nosocomial infection/ Cross infection:

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 23 of 59

Infection acquired during or as a result of hospitalization generally after 48 hrs of admission. It can manifest even after discharge.

Cleaning Protocols

1. Mopping plan - clean to unclean area

2. Mopping plan means cleaning done from clean area to unclean area.
3. It gives special information to cleaning staff about priority of cleaning.
4. Mopping plan contains four categories

The order of cleaning is

- a) Immuno compromised patient's room
- b) Room of the patient with clean case -Clean room
- c) General
- d) Infected

If there is a patient with communicable disease that room should be cleaned in the last, irrespective of plan (Direction will be given by the Head nurse/ Sr. Staff Nurse on duty


Housekeeping supervisor/ HIC Nurse)

2. Environment:-

- ❖ Clean the floors with a disinfectant thrice a day.
- ❖ Clean with soap solution first and then with Super Shine Solution 3 times a day
- ❖ Wash the floors with soap & water and disinfecting solution using scrubbing machine once in a week.

Do not carry out any cleaning activities while

1. Sterile supplies are being handled.
2. Sterile procedures are in progress.
 - a. Use 1 % Sodium Hypochloride solution to clean environment surfaces if contamination with blood and body fluids occur.
 - b. Use 1 % Sodium Hypochloride solution for 30 min for disinfecting mops used for cleaning blood.

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 24 of 59

- c. Detach the pads and brushes of scrubbing machine after each use, clean thoroughly and dry.
- d. Clean the walls and ceilings weekly and on transfer / discharge/ death of a patient.

3. High Risk Areas:-

- a. Floors are cleaned with prescribed disinfectant five times a day with Super Shine 2%
- b. Ventilator parts are cleaned with prescribed disinfectant.
- c. All equipment including monitor are cleaned with prescribed disinfectant spray.
- d. Some plastic items like ambu bag, ventilator tubing, O₂ mask, Nebulization set are sterilized by formalin gas (generally ETO sterilization recommended - implement the same)
- e. Change the HEPA filter (ventilator) every 72 hours.
- f. Keep a disinfectant hand rub solution in each bed side.
- g. Keep separate stethoscope, BP always ready to use with a standby.
- h. Damp dust bed frames, railings, I/V stands, lockers etc daily with prescribed disinfectant.
- i. Floor cleaning done four times in a day with prescribed disinfectant.
- j. Cover the mattresses and pillows with water proof covers.
- k. Use disposable plastic sheets / Mackintosh to protect the bed linen.
- l. Disinfect the patient's unit with prescribed disinfectant solution after the transfer / discharge / death.
- m. Check the expiry date of CSSD items every day.

4. Wards:-

- a. Damp dust the bed frames, railings, I/V stands, lockers etc. daily with prescribed disinfectant.(Name the disinfectant)
- b. Floor cleaning done three times a day from clean area to unclean area
- c. Cover the mattresses and pillows with water proof cover.
- d. Use disposable plastic sheets or mackintosh to protect the bed linen.
- e. Disinfect the unit with prescribed disinfectant after the discharge/ death of a patient.
Fumigate the room after the transfer/ discharge/ death of an infected patient with Super Shine.



**SRI LAKSHMI MEDICAL CENTRE
& HOSPITAL**

**HOSPITAL INFECTION
CONTROL MANUAL**

Doc. No.

E / NABH / SMCH / HIC / 01 - 08

Issue No.

01

Rev. No.

00

Date

01/11/2014

Page

Page 25 of 59

Fogging (Fumigation)

- This method of disinfection is used after discharge of a patient with communicable diseases or before admitting a patient after high risk operation.
- action time 45 minutes to 1 hr.
- Mode of use: 11% Hydrogen Peroxide + 0.01 Silver Nitrate in water (800 ml water and 200 ml solution)
- Room should be kept closed for two hours.

Disinfection and cleaning of equipments

S.NO.	Items	Disinfection/Cleaning	Duration and periodicity
1	B.P Apparatus & Stethoscope	Clean properly with spirit	Daily
2	B.P Apparatus- Cuff	Wash thoroughly with Soap and water and dry it properly Wash and dry the B.P cuff if used for an infected patient after the discharge.	Weekly Clean if used for an infected patient after the discharge.
3	Digital Thermometer	Clean properly with Sprit/Ethanol 70%	Daily - After the use of every patient
4	Glucometer	Clean properly with spirit	Daily
5	Dressing Trolley	Clean with Super shine Keep the Store solutions in their original bottles. Avoid refilling to smaller bottles.	Daily
6	Steel Tray	Wash with soap and water	Daily
7	Measuring Tape & Torch	Clean properly with spirit	Daily & SOS



**SRI LAKSHMI MEDICAL CENTRE
& HOSPITAL**

**HOSPITAL INFECTION
CONTROL MANUAL**

Doc. No.

E / NABH / SMCH / HIC / 01 - 08

Issue No.

01

Rev. No.

00

Date

01/11/2014

Page

Page 26 of 59

8	Nebulizer	Clean properly with spirit	Daily
9	O2 Flow Meter.	Wash with soap and water	Weekly - After each use of patient-Change sterile water every day
10	Suction Apparatus	Empty the bottles in every week or SOS. Scrub with soap and water. Disinfect with 1% Sodium Hypochloride solution.	Weekly & after each use
11	Infusion Pumps and Monitors	Clean with Super shine.	Daily - After the use of every patient
12	Refrigerator	Defrost and Wash with soap and water	Weekly
13	Laryngoscope Blades	Detach the blades ,wash with soap and water, Clean with spirit	Daily - After the use of every patient
14	Weighing Machine	Clean with soap and water	Daily
15	Electronic Weighing Machine	Clean with Super shine	Daily
16	Telephone	Clean with sprit	Daily
17	Ventilator	Rinse& disinfect the expiratory channel with Spirit Humidifier to be cleaned with water and then to be disinfected with codex for 3 to 6 hrs. Rinse with sterile water & dry before replacing Disinfect the transducer with 70% alcohol about 1hr Silicon tubing are used after ETO. Change the bacterial filter (HME) every 72 hrs or SOS	After each use of the patient



**SRI LAKSHMI MEDICAL CENTRE
& HOSPITAL**

**HOSPITAL INFECTION
CONTROL MANUAL**

Doc. No.

E / NABH / SMCH / HIC / 01 - 08

Issue No.

01

Rev. No.

00

Date

01/11/2014

Page

Page 27 of 59

		Expiratory & Inspiratory filters are send to CSSD for plasma sterilization Attach one bacterial filter to the expiratory port if used for an infected patient	
18	Patient Trolley & Wheel Chairs	Clean with soap & water	Daily
19	Steam Inhaler	Wash with soap and water	Daily
20	IV Stand	Clean with soap and water	Weekly
21	Defibrillator and Monitor.	Incidure	Daily
22	Pulse Oxymeter	Clean with sprit	Daily
23	Airway	Use disposable airways for each patient. Scrub with soap and water daily and SOS Discard after discharge/death of the patient.	After each use
24	E.T. Tubes Tracheostomy Tubes: -	Use disposable E.T. and Tracheostomy tubes. Refer -Equipment related protocol No.4	
25	Oxygen mask / Nasal Cannula	Use fresh mask / cannula for each patient's use. Clean with alcohol SOS. Don't reuse nasal cannula	After each use
26	Ambu Bag & Mask:-	Detach the parts. Wash with soap and water. Send to CSSD for ETO. Disinfect the Ambu bag with Hypochloride 1% solution for 10 hrs for infectious cases and send to CSSD.	After each use
27	Proctoscope	Clean with spirit.	After each use



**SRI LAKSHMI MEDICAL CENTRE
& HOSPITAL**

**HOSPITAL INFECTION
CONTROL MANUAL**

Doc. No.

E / NABH / SMCH / HIC / 01 - 08

Issue No.

01

Rev. No.

00

Date

01/11/2014

Page


Page 28 of 59

		Clean with soap and water. Send to the CSSD for sterilization.	
28	E.C.G. & Transducer Cables	Clean with spirit daily. Wash and dry the B.P cuff if used for an infected patient after the discharge. Wash BP cuff weekly.	After each use
29	Bedpan, Measuring jar, Commode	Clean properly with soap and water. Immerse in 1% antiseptic solution for 45 mts.	Solution to be changed every week.
30	Urinal and Sputum Mug	Disposable	
31	Endoscopes	Glutraddehyde	After each use

Laundry And Linen Management :All used linen shall be considered contaminated and shall be bagged at the location of use before being taken to laundry.

A. Soiled linen:

- ❖ Soiled linen shall be collected in the designated container and taken to laundry
- ❖ Designated container shall be covered during transport of soiled linen.
- ❖ Cloth liners /containers shall be washed daily
- ❖ Dirty utility room shall be swept daily and washed /Mopped with a detergent/Disinfectant weekly and whenever visibly soiled
- ❖ Soiled linen shall be handled as little as possible and with minimum agitation, in order to prevent gross microbial contamination of the air and of persons handling the linen
- ❖ All soiled linen shall be bagged at the location of use. Soiled linen shall not be sorted in-patient care areas.
- ❖ Bags containing soiled linen shall be tied before being taken to laundry in order prevent spillage
- ❖ All linen that is contaminated with blood, excreta or other body fluids shall be placed in designated laundry bags

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 29 of 59

- ❖ Personnel shall wear protective clothing, including gloves and gowns/aprons
- ❖ When handling soiled linen. Employees collecting linen at the laundry shall also wear heavy-duty gloves and a gown.
- ❖ Hands shall be washed after gloves are removed.
- ❖ Staff shall be instructed in the principles of personal hygiene, including frequent hand washing

Clean linen:

- ❖ Hand washing for 10-15 seconds, with attention to nails and areas fingers is mandatory before handling clean linen.
- ❖ Clean linen shall not be handled more than necessary in order to
- ❖ Minimize contamination
- ❖ Any linen dropped shall be considered soiled
- ❖ Covered linen carts shall be used to transport clean linen to the units
- ❖ Clean linen shall be stored in a clean, dry area.

Facilities:

- ❖ Hand washing facilities are available to all employees in the linen area
- ❖ Barriers to protect employees from blood, body fluids, secretions and excretions are located in the laundry area. Employees shall be informed of the location and of barriers at the time of orientation to the unit.
- ❖ Carts must be cleaned before transporting clean linen


Patient linen

- ❖ Bed linen is to be changed daily and whenever soiled with blood or body fluids.
- ❖ Patient's gown is to be changed every day and whenever soiled with blood or body fluids. Dry dirty linen is to be sent to the laundry for regular wash.

Engineering Controls to Prevent Infection:

SMCH adopts appropriate engineering control to prevent infections.

1. The hospital patient care areas are designed in such a manner to ensure optimum bed spacing.
2. Operating rooms are provided with HEPA filter, to ensure double filtration of air.

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 30 of 59

3. Periodical checking of water resources
4. Periodical checking and maintenance of equipments, AC ducts, AHUs, replacement of filters.
5. Periodical checking, replacement/ repair of plumbing and sewer lines.
6. Machinery and equipment should be checked, cleaned and repaired routinely
- 7 Urgent repairs should be carried out at the end of the day's list
8. Air conditioners and suction points should be checked, cleaned and repaired on a weekly basis.
9. Preventive maintenance on all theatre equipment to be carried out weekly and major work to be done at least once every year.

OT: Air Changes Per / Hour:

1. Air Change Per/ Hour:

- a) All the General OT's of SMCH are installed with laminar flow system so as to maintain air exchanges. All these OT's have a minimum 5-10 air exchanges per hour and not more than 25 per hour
- b) The fresh air component of the air change is required to be minimum 4 air changes out of total minimum 25 air changes.


2. Temperature and Humidity: The temperature should be maintained at 21 ± 3 Deg C inside the OT all the time with corresponding relative humidity between 40 to 60% though the ideal Rh is considered to be 55%.

House Keeping In SMCH

I. House Keeping in Wards

A patient admitted to the hospital can develop infection due to bacteria that survive in the environment. Therefore, it is important to clean the environment thoroughly on a regular basis. This will reduce the bacterial load and make the environment unsuitable for growth of micro-organisms.

1. The floor is to be cleaned at least twice in 24 hours. Detergent and copious amounts of water should be used during one cleaning.
2. The walls are to be washed with a brush, using detergent and water once a week
3. High dusting is to be done with a wet mop
4. Fans and lights are cleaned with soap and water once a month.
5. All work surfaces are to be disinfected by wiping with suitable disinfectant (Super Shine-Benzalkonium

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 31 of 59

Chloride) then cleaned with detergent and water twice a day.

6. Cupboards, shelves, beds, lockers, IV stands, stools and other fixtures are to be cleaned with detergent and water once a week.
7. Curtains are to be changed once a month or whenever soiled. These curtains are to be sent for regular laundering. In certain areas, eg. ICUs, more frequent changes are required.
8. Patient's cot is to be cleaned every week with detergent and water. 1% hypochloride to be used when soiled with blood or body fluids. In the isolation ward, cleaning is done daily.
9. Store rooms are to be mopped once a day and high dusted once a week.
10. The floor of bathrooms is to be cleaned with a broom and detergent once a day and then disinfected.
11. Toilets are cleaned with a brush using a detergent twice a day (in the morning and evening). Disinfection and stain removal solution may be used.
12. Wash basins are to be cleaned every morning
13. Regular AC maintenance is required. The AC section should draw up a protocol for this.

Miscellaneous items

Kidney trays, basins, bed pans, urinals, etc to be cleaned with detergent and water and disinfected with 7% Lysol.

II. House Keeping In the Operation Theatre

Theatre complex should be absolutely clean at all items. Dust should not accumulate at any region in the theatre. Soap solution is recommended for cleaning floors and other surfaces. Operating rooms are cleaned daily and the entire theatre complex is cleaned thoroughly once a week.


Before the start of the 1st case

Wipe all equipment, furniture, room lights, suction points, OT table, surgical light reflectors, other light fittings, slabs etc with soap solution. This should be completed at least one hour before the start of surgery.

a. Linen & gloves

Gather all soiled linen and towels in the receptacles provided. Take them to the service corridor (behind the theatre) and place them in trolleys to be taken for sorting. The dirty linen is then sent to the laundry. Use gloves while handling dirty linen.

b. Instruments

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 32 of 59

Used instruments are cleaned immediately by the scrub nurse and the attender. Reusable sharps are decontaminated in Lysol / hypochloride and then washed in the room adjacent to the respective OT by scrubbing with a brush, liquid soap and vim. They are then sent for sterilization in the CSSD. After septic cases the instruments are sent in the instrument for autoclaving. Once disinfected, they are taken back to the same instrument cleaning area for a manual wash described earlier. They are then packed and re-autoclaved before use.

c. Environment


Wipe used equipment, furniture or table etc., with **detergent and water**. If there is a blood spill, disinfect with sodium hypochloride before wiping.

Empty and clean suction bottles and tubing with disinfectant.

d. After the last case

The same procedures as mentioned above are followed and in addition the following are carried out.

- ❖ Wipe over head lights, cabinets, waste receptacles, equipment, furniture with disinfectant like rapid incidur, foam incidur etc...
- ❖ Wash floor and wet mop with liquid soap and then remove water and wet mop with Super Shine solution.
- ❖ Clean the storage shelves, scrub & clean room.
- ❖ **Weekly cleaning procedure**
- ❖ Remove all portable equipment.
- ❖ Damp wipe lights and other fixtures with detergent.
- ❖ Clean doors, hinges, facings, glass inserts and rinse with a cloth moistened with detergent.
- ❖ Wipe down walls with clean cloth mop with detergent.
- ❖ Scrub floor using detergent and water or Super shine.
- ❖ Stainless steel surfaces - clean with detergent, rinse & clean with warm water.
- ❖ Replace portable equipment: Clean wheel castors by rolling across toweling saturated with detergent.
- ❖ Wash (clean) and dry all furniture and equipment (OT table, suction holders, foot & sitting stools, Mayo stands, IV poles, basin stands, X-ray view boxes, hamper stands, all tables in the room, holes to oxygen tank, kick buckets and holder, and wall cupboards)
- ❖ After washing floors, allow disinfectant solution to remain on the floor for 5 minutes to ensure destruction of


	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 33 of 59

bacteria.

II. Protocol for body fluid splash & spillages

Blood and body fluid spillage

- ❖ Prepare 1% hypochloride solution (200 ml 5% hypochloride in 800 ml of water)
- ❖ Wear gloves pour 1% hypochloride on the spillage
- ❖ Cover it with a piece of paper or cloth
- ❖ Keep it there for 10 – 20 minutes
- ❖ Wipe the spillage using the covered paper or cloth
- ❖ After wiping discard the same in the yellow cover
- ❖ If it is a large spillage, after covering the spillage with paper or cloth
- ❖ Mop it with Separate mop (mop should be dipped in 1 % hypochloride for 30 minutes)

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 34 of 59

HIC.3: THE ORGANIZATION PERFORMS SURVEILLANCE ACTIVITIES TO CAPTURE AND MONITOR INFECTION PREVENTION AND CONTROL DATA.

Methods of Surveillance

Fumigation and Random Culture from High Risk Areas

HICC decided that culture swab to be taken from critical areas once in two months or when an infection is suspected. Take the swabs according to the table shown below. The request of sample to be approved by the Infection Control Nurse. The original copy of the culture report to be filed in the infection control department and a copy of the report to be filed in the concerned department as well.

Surveillance Culture Schedule

S.NO	Department	Duration	Period for surveillance culture	Period for Fumigation	Weekly cleaning	Air culture
1	ALL OT	WEKLY	Monthly twice (Sunday)	Every Sundays, day before any major surgeries & any infected cases notified	Every Sunday & SOS	Every 6months
2	NICU	MONTHLY	Every month	Twice a Month & SOS	Every Sunday	Once in a Year
3	SICU	MONTHLY	Every month & SOS	Every month & SOS	Every Sunday	Once in a Year
4	ICCU	WEEKLY	Every month & SOS	Every month & SOS	MOTHLY	ONCE IN A YEAR



**SRI LAKSHMI MEDICAL CENTRE
& HOSPITAL**

**HOSPITAL INFECTION
CONTROL MANUAL**

Doc. No.

E / NABH / SMCH / HIC / 01 - 08

Issue No.

01

Rev. No.

00

Date

01/11/2014

Page

Page 35 of 59

5	Casualty Procedure room		Every month	Every 3 rd month	Every Sunday	Once in a Year
6	CSSD		Monthly	Weekly		
7	Labour room		Every month & SOS	Every month & SOS		
8	Endoscopy		Every month & SOS	Every month & SOS		


The collection of surveillance data is an ongoing process in SMCH

The infection control team verifies the data on a regular basis.


The surveillance activities in SMCH also incorporates tracking and analyzing of infection risks, rates and trends

Monitoring activities includes

- ❖ The surveillance activity include monitoring of compliance with hand hygiene guidelines
- ❖ Surveillance activities in SMCH hospital also include monitoring of effectiveness of house keeping service on a regular basis using a checklist.
- ❖ Report regarding HAI rates is informed to all the departments' monthly wise.
- ❖ SMCH hospital identifies all Notifiable diseases and ensures that this is sent at the specified frequency and in format as required by statutory authorities.
 1. Acute diarrheal disease
 2. Acute Dysentery – Amoebic / Bacillary
 3. Acute flaccid paralysis
 4. Cholera or Cholera- like disease
 5. Diphtheria

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 36 of 59

6. Encephalitis
7. Plague
8. Hepatitis-viral
9. Leptospirosis
10. Malaria
11. Measles
12. Meningitis – Pyogenic/ Prescribed disinfectant
13. Rabies
14. Tetanus
15. Enteric fever
16. Pertussis
17. Dengue
18. Chickenpox
19. Chikungunya
20. H1N1(Swine flu)

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 37 of 59

HIC.4: THE ORGANIZATION TAKES ACTIONS TO PREVENT OR CONTROL THE RISK OF HEALTH CARE ASSOCIATED INFECTIONS (HAI) IN PATIENTS.

There are predominately four types of hospital acquired infections. They can be recorded on the basis of clinical and /microbiological data

Urinary Tract Infections

The urinary tract infections may be symptomatic [fever, dysuria, lumbar pain] or asymptomatic. Their recordings depend partly on the microbiological tests performed.

Respiratory Tract Infections

Analyzing the respiratory tract infections through the following;

- ❖ Ventilated days
- ❖ Fever
- ❖ X ray findings
- ❖ Neutropenia

Post-Operative Infections

Any surgical wound which results in a purulent discharge must be regarded as a hospital acquired infections whether the bacteria are of endogenous or exogenous origin is not taken in to the account.

A. The organization takes action to prevent Urinary tract infections.


Urethral catheterization

Personnel

- ❖ Only persons who know the correct technique of aseptic insertion and maintenance of catheters should handle catheters.

Catheter Use

- ❖ Urinary catheters should be inserted only when necessary and left in place only as long as medically

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 38 of 59

indicated.

Hand wash:

- ❖ Hand washing should be done immediately before and after any manipulation of the catheter site or apparatus.

Catheter Insertion

- ❖ Catheters should be inserted using aseptic technique and sterile equipment. Use an appropriate antiseptic solution for periurethral cleaning.
- ❖ As small a catheter as possible, consistent with good drainage, should be used to minimize urethral trauma. Indwelling catheters should be properly secured after insertion to prevent movement and urethral traction.

Anchoring the catheter


Strapping of the catheter is done to the lower anterior abdominal wall in male patients. This is to prevent direct transmission of the weight of the bag on the catheter, so that pulling and inadvertent dislodgment of the catheter does not occur. This also helps to prevent stricture of the penile urethra if the patient is on a catheter for a long duration.

B. SMCH hospital takes action to prevent respiratory tract infections.

In addition to the general guidelines that are to be adhered to the following should also be noted with regard to respiratory care .Mouth flora influences development of nosocomial pneumonia in ventilated patients. Frequent chlorhexidine mouthwashes minimize the chances of pneumonia.

1. Ventilator

- ❖ Sterile water is to be used in nebulizers and humidifiers. This should be replaced once or twice a day.
- ❖ Pneumatic circuits (masks, Y connection and tubes) are to be changed every 24-48 hours.
- ❖ Condensate in tubing should not be drained into the humidifier or airway as they contain large numbers of pathogenic organisms. This should be drained only into water traps. Use disposable circuits if cost permits.
- ❖ Use heat and moisture exchanging filter (HMEF) at Y connection for all patients if feasible and cost

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 39 of 59

permits. Heat and moisture exchanging filter (HMEF) is to be changed every 24- 48 hours. It should not be removed from circuit except at the time of changing.


- ❖ Oxygen masks, venture devices and nebulizer chambers are cleaned carefully and then sterilized by ETO.
- ❖ Humidifier domes are ETO sterilized. Ambu bags are cleaned thoroughly and are then sent for ETO sterilization.
- ❖ Microbiological surveillance of respiratory therapy equipment is practiced in our hospital.

2. Tracheostomy Care / Endotracheal Tube

- ❖ Careful attention to post-operative wound care is mandatory.
- ❖ The patient should receive aerosol therapy to prevent desiccation of the tracheal and bronchial mucosa or the formation of crusts. The skin around the tracheostomy tube should be cleaned with betadine (Povidone-iodine 5%) every four hours or more frequently, if necessary.
- ❖ In case of metal tracheostomy tubes, the inner cannula should be cleaned every four hours and more often if necessary to prevent the formation of crusts. The inner cannula is cleaned with water, immersed in hydrogen peroxide for 15 minutes and then rinsed with fresh & sterile normal saline. The plastic tracheostomy tubes are removed, another plastic tube is inserted, and the tube is cleaned, with hydrogen peroxide, and rinsed well before reuse.
- ❖ The tracheostomy tube should be changed every 24 hours. This tube must be tied securely at all times.
- ❖ The first complete tube change should be performed not earlier than 4-5 days to allow time for the tract to be formed. Subsequent changes should be done weekly or as necessary.
- ❖ Clean technique should be used to change the tracheostomy tube unless there is a medical indication for sterile technique.
- ❖ The obturator should be at the bedside (preferably taped to the head of the bed) to be used if the tracheostomy tube accidentally is dislodged or is removed for any reason.


3. Suctioning of endotracheal / tracheostomy tube :

Employees should be instructed and supervised by trained personnel in proper technique before performing this procedure on their own. Assess the patient using auscultation, ECG, (if available) and vital signs prior to suctioning.

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 40 of 59

a. Sterile Suctioning

1. Wash your hands.
2. Use a catheter with a blunt tip.
3. The wall suction should be set no higher than 120 mm Hg for adults and between 60 and 80 mm Hg for children.
4. Attach the suction catheter to the suction tubing; do not touch the catheter with bare hands (leave it in its protective covering).
5. Put on sterile gloves. The wearing of a mask is also strongly recommended.
6. However, if saline does need to be instilled, '1/2 cc of sterile saline is put into the tracheostomy tube on inspiration only.
7. If on a respirator, pre-oxygenate the patient by connecting the resuscitation bag to the artificial airway and ventilating the patient with three or four deep breaths. A mechanical ventilator on 100% oxygen may also be used by depressing the manual ventilation button three or four times.
8. Insert the catheter gently through the inner cannula until resistance is met. Do not apply suction during insertion.
9. Withdraw the catheter approximately 1 cm and institute suctioning.
10. Carefully withdraw the catheter, rotating it gently between the thumb and forefinger applying intermittent suctioning.
11. Continuous suctioning for longer than 10 seconds may create an unacceptable level of hypoxia.
12. The patient should be given time to rest between suctioning episodes. If possible, this time should be from two to three minutes. If the patient is receiving oxygen or ventilator support, reapply the oxygen or ventilator for at least two minutes before re-suctioning.
13. Observe for unfavorable reactions such as increased heart rate, hypoxia, arrhythmia, hypotension, cardiac arrest, etc.
14. If oral suctioning is necessary, it should be done after the tracheostomy is suctioned.
15. When suctioning is completed, clear the catheter and tubing of mucous and debris with sterile water or saline.
16. Discard the catheter, water container, and gloves appropriately.
17. Wash hands.
18. The tubing and suction canister should be changed every 24 hours. The canister should be labeled with the

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 41 of 59

date and time when they are changed. If debris adheres to the side of the tubing or the canister, either or both should be changed. The tubing should be secured between suctioning periods so that it will not fall to the bed, floor, etc.

4. Sri Lakshmi Medical Centre & Hospital has taken action to prevent intra vascular device infection.

I. Hand washing

Wash hands before every attempted intravascular cannula insertion. Antimicrobial hand washing soaps are desirable, and are preferred before attempted insertions of central intravenous catheters, catheters requiring cut downs, and arterial catheters.

II. Preparation of skin

Povidine-iodine (PVP) or 70% alcohol may be used for cleaning the skin. Insertion sites should be scrubbed with a generous amount of antiseptic. Beginning at the centre of the insertion site, use a circular motion and move outward. Antiseptics should have a contact time of at least 30 seconds prior to catheter insertion. Antiseptics should not be wiped off with alcohol prior to catheter insertion.

III. Applying dressings

Sterile dressings should be applied to cover catheter insertion sites. Unsterile adhesive tape should not be placed in direct contact with the catheter-skin interface.

IV. Record Time and date of IV insertion.

V. Inspecting catheter insertion sites


Intravascular catheters should be inspected daily and whenever patients have unexplained fever or complaints of pain, tenderness, or drainage at the site for evidence of catheter related complications.

VI. Inspect for signs of infection (redness, swelling, drainage, tenderness) or phlebitis and also palpate gently through intact dressings.

VII. Manipulation of intravascular catheter systems

Strict aseptic technique should be maintained when manipulating intravascular catheter systems. Examples of such manipulations include the following:

- Placing a heparin lock
- Starting and stopping an infusion
- Changing an intravascular catheter site dressing

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 42 of 59

- Changing an intravascular administration set

Flushing IV lines

Solutions used for flushing IV lines should not contain glucose which can support the growth of microorganisms. Do not reuse syringes used for flushing. One syringe is used for flushing only one IV line once.

a. Peripheral IV sites (short term catheters):

Dressing changes.

Peripheral IV site dressings should not usually require routine changes, since peripheral IV catheters, should be removed within 72 hours.

Replacement of Peripheral IV Catheters:

Peripheral IV catheters should be removed 72 hours after insertion, provided no IV-related complications, requiring catheter removal are encountered earlier.

A new peripheral IV catheter, if required, may be inserted at a new site.

b. Central intravascular catheters (long term catheters) Dressing changes.


Central IV catheter dressings should be changed every 72 hours. Replacement Central IV catheters do not require routine removal and reinsertion. The catheter can be kept for a maximum of 3 months, provided there is no sign of catheter related infection or other complications.

Catheter related Infection:

At the time of catheter removal, the site is examined for the presence of swelling, erythema, increased tenderness and palpable venous thrombosis. Any antimicrobial ointment or blood present on the skin around the catheter is first removed with alcohol. The catheter is withdrawn with sterile forceps, the externalized portion being kept directed upward and away from the skin surface.

(If infection is suspected, after removal, the wound is milked in an attempt to express purulence. For 5.7 cm catheters, the entire length, beginning several millimeters inside the former skin surface catheter interface, is aseptically cut and sent for culture. With longer catheter, (20.3 cm and 60.9 cm in length), two 5-7 cm segments are cultured a proximal one beginning several millimeters inside the former skin catheter interface and the tip. Catheter segments are transported to the laboratory in a sterile container.)

Three way with extension is used only when multiple simultaneous infusion or Central Venous Pressure monitoring are required.

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 43 of 59

All invasive procedure are recorded in a book.(please keep a register for this in nursing areas)

5. The organization takes action to prevent surgical site infections.

Surgical wounds

- Surgical wounds after an elective surgery are inspected on the third post-operative day, or earlier.
- All personnel doing dressings should wash their hands before the procedure. Ideally, a two member technique is followed. One to open the wound, and one to do the dressing.
- If two health care workers are not available, then, take off the dressing, wash hands again before applying a new dressing.
- A clean, dry wound may be left open without any dressing after inspection.
- If there is any evidence of wound infection, or purulent discharge, then dressings are done daily, using povidone-iodine to clean the wound and applying dry absorbent dressings.
- If any Surgical site infection occur
 - Surgical site infection reporting format is filled up by surgeons.
 - Records maintained by registrar in charge. Data collected every quarterly by secretary HICC and presented.

Special studies will be conducted as needed. These may include


- The investigation of clusters of infections above expected levels.
- The investigation of single cases of unusual or epidemiologically significant nosocomial infections.
- Prevalence and incidence studies, collection of routine or special data as needed and sampling of personnel or the environment as needed.
- Injection abscess.

Calculation of Total HAI:

A percentage is calculated based on the detected number of HAI and the total number of long stay patients in the hospital.

Calculation of device associated infection rate:

$$\text{Device- associated Infection Rate} = \frac{\text{Number of device -associated infections for a specific site}}{\text{Number of device days}} \times 1000$$

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 44 of 59


Calculation of numerator = No. of isolates from lab device samples

Calculation of denominator = No of days of exposure to device by all of the patients in a month. For this note down the number of patients exposed to the device on each day of the month. The total is the denominator.

This is done for 3 devices namely.

- Central line, Sample from CVP tip, Ventilator Sample from endotracheal tube secretions
- Water from humidifier after being in use for 12 hours

Foley's Catheter - Urine sample

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 45 of 59

HIC.5: THE ORGANIZATION PROVIDES ADEQUATE RESOURCES FOR PREVENTION AND CONTROL HEALTH CARE ASSOCIATED INFECTIONS.

Sri Lakshmi Medical Centre & Hospital provides adequate and appropriate personal protective equipment for employees, soaps and disinfectant at the point of use and adequate inventory is maintained at all time to ensure availability of these.

Personal protective equipments includes

- ✓ Gloves
- ✓ Protective eye wear
- ✓ Mask
- ✓ Apron
- ✓ Gown
- ✓ Boots/ shoe covers
- ✓ Cap/ hair cover


The hospital have adequate and appropriate facilities for hand hygiene in all patient care area such as liquid hand wash, large wash basin with elbow operated taps, tissue paper/ hand dry, hand rubs etc. are available to all health care providers.

- a. The hospital defines the conditions where isolation , barrier nursing or both isolation and barrier nursing is required. The organization provides barrier nursing facilities such as clothing , mask , gloves...etc.

Isolation protocols

Definition: It is the separation of infected persons from the non-infected persons for the period of communicability under conditions which will prevent the transmission of infection.

When a patient comes with any infectious disease/ Immuno compromised state, the concerned ward staff will inform the ICN and she will arrange the room or if the patient is critically ill admit the patient in side bed allocated for ISOLATAION PATIENTS of the concerned ICU. If the patient can't afford the room patient will be admitted in the isolation room, the patient and the family members will.

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 46 of 59

Strict Isolation

Strict isolation is an isolation category designed to prevent transmission of highly contagious or virulent infections that may be spread by both air and contact.

Specification for strict isolation

1. Private room is indicated; door should be kept closed.
2. Masks, gowns & gloves are indicated for everyone entering the room.

Contact Isolation


- a) Contact isolation is designed to prevent transmission of highly transmissible or epidemiologically important infections (or colonization that do not warrant strict isolation.
- b) All diseases or conditions included in this category are spread primarily by close direct contact.

Specification for Contact Isolation

1. Private room is indicated.
2. Masks are indicated for those who come close to the client.
3. Gowns are indicated if soiling is likely.
4. Gloves are indicated for touching infective material.

Multiple resistant bacterial infection, or colonization (any site) with any of the following

- Gram-negative bacilli resistant to all aminoglycosides that are tested. Staphylococcus aureus resistant to penicillin.
- Pneumococcus resistant to penicillin.
- Haemophilus influenzae resistant to ampicillin (betalactamase –positive) and chloramphenicol.
- Other resistant bacteria may be included if they are judged by the infection control team to be of special clinical and epidemiological significance.
- Pediculosis
- Pharyngitis, infections, infectious, in infants and young children.

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 47 of 59

- Pneumonia, viral, in infants and young children.
- Pneumonia, Staphylococcus aureus or group A streptococcus.
- Rabies
- Rubella, congenital and other.
- Scabies
- Scalded skin syndrome, staphylococcal (Ritter's disease)

Skin wound or burn infection, major (draining and not covered by dressing or dressing does not adequately contain the purulent material) including those infected with Staphylococcus aureus or group A streptococcus.

1) Respiratory Isolation


Respiratory isolation is designed to prevent transmission of infectious diseases primarily over short distances through the air (droplet transmission).

Specifications for Respiratory Isolation

1. Private room is indicated.
2. Masks are indicated for those who come close to the client.
3. Gowns are not indicated.
4. Gloves are indicated if contamination of hands is anticipated.

Requiring Respiratory Isolation

- Epiglottitis, Haemophilus influenzae
- Erythematous infections
- Measles
- Meningitis
- Haemophilus influenzae, known
- Meningococcal, known or suspected
- Meningococcal pneumonia
- Meningococemia
- Mumps

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 48 of 59

- Pertussis (whooping cough)
- Pneumonia, Haemophilus influenzae, in children (any age)

2) Tuberculosis Isolation (AFB Isolation)

Tuberculosis isolation (AFB isolation) is an isolation category for clients with pulmonary tuberculosis who have a positive sputum smear or a chest film that strongly suggests current (active) tuberculosis. Laryngeal tuberculosis is also included in this isolation category.

Specification for Tuberculosis Isolation (AFB Isolation)

1. Private room with special ventilation is preferred; door should be kept closed.
2. Masks are indicated only if the client is coughing and does not reliably cover mouth.
3. Gowns are indicated only if needed to prevent cross contamination of clothing.
4. Gloves are indicated if contamination of hands is anticipated.

3) Enteric Isolation


Enteric precautions are designed to prevent infections that are transmitted by direct or indirect contact with faeces.

Specification for Enteric Precautions

1. Private room is indicated if client's hygiene is poor. (A client with poor hygiene does not wash hands after touching infective material, contaminates the environment with infective material, shares contaminated articles with infective material, or shares contaminated articles with other clients.)
2. Masks are not indicated.
3. Gowns are indicated if soiling is likely.
4. Gloves are indicated for touching infective material.

Disease Requiring Enteric precautions

- Amoebic dysentery, Typhoid, Hep A
- Cholera
- Coxsackievirus disease
- Enterocolitis caused by Clostridium difficile or Staphylococcus aureus

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 49 of 59

- Enteroviral infection
- Tetanus
- Gastroenteritis caused by
 - ✓ Campylobacter species
 - ✓ Cryptosporidium species
 - ✓ Dientamoebafragilis
 - ✓ Escherichia coli (enterotoxigenic, enteropathogenic, or enteroinvasive)
 - ✓ Giardia lamblia
 - ✓ Salmonella species.
 - ✓ Shigella species
- Vibrio parahaemolyticus
- Viruses – including Norwalk agent and rotavirus


Protocol for receiving patient with Dengue and Chikungunya, Lepto, Malaria

1. Receive the patient in isolation room. / ward.
2. Inform Infection Control Nurse.
3. Confirm report from laboratory.
4. Provide isolation measures with facilities of mosquito net, mosquito repellent.
5. Send notification card to Infection Control Nurse.
6. Infection Control Nurse will inform to DMO – Health by telephone and then send notification through e-mail to DMO.
7. Instruct the relatives to protect themselves and others by keeping the environment free from mosquito.

Drainage / Secretion Precautions

Body substance isolation

Drainage /secretion precautions are designed to prevent infections that are transmitted by direct or indirect contact with purulent material or drainage from an infected body site.

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 50 of 59

Specification for Drainage /Secretion Precautions

1. Masks are not indicated.
2. Gowns are indicated if soiling is likely.
3. Gloves are indicated for touching infective material.

Disease Requiring Drainage / Secretion Precautions

The following infections are examples of those included in this category provided they are not


1. Caused by multiple resistant microorganisms;
2. Major draining (not covered by a dressing or does not adequately contain the drainage) skin wound, or burn infections, including those caused by *Staphylococcus aureus* or group A streptococcus.
3. Gonococcal eye infections in newborns. See contact isolation if the infection is one of these:
 - Tetanus
 - Abscess, minor limited.
 - Burn infection, minor limited.
 - Conjunctivitis.
 - Decubitus ulcer, infected, minor or limited.
 - Skin infection, minor or limited.
 - Wound infection, minor or limited.

Blood body fluid isolation

This type is designed to protect the caregiver from getting infected by the disease.

1. Specifications for Blood and body fluid isolation:

- a. Private room required only if the person's hygiene is poor.
- b. Use of mask is indicated if the client is suffering from other infections e.g. Active Tuberculosis, Pneumonia etc.
- c. Gowns are indicated if spoilage with blood and body fluids is likely.
- d. Gloves are indicated for touching blood and body fluids.
- e. Wash hands immediately if potentially contaminated by blood or body fluids.

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 51 of 59

2. Disease conditions requiring blood and body fluid isolation.


- a. Acquired Immune Deficiency Syndrome.
- b. Creutzfeld- Jacob Disease.
- c. Hepatitis B (And HBsAg carrier).
- d. Hepatitis C
- e. Hepatitis non-A, non-B.

The following points are common for all the types of isolation.

- a. Hands must be washed after touching the client or potentially contaminated articles and before taking care of any other client.
- b. Stick BIO-HAZARD symbol on the contaminated articles before sending to the CSSD.
- c. Discard all infectious wastes- non-plastic in yellow plastic bag.

MRSA Protocol

1. Admission to an Isolation room
2. Single use Disposable plastic apron should be worn for patient contact
3. The gown/plastic apron & gloves should be removed before leaving the room
4. Single use disposable gloves should be worn for handling contaminated tissue, dressing or linen.
5. Hands must be decontaminated after removing the gloves
6. High efficiency filter type masks should be used for procedures that may generate aerosols
7. Bed linen / clothing should be changed daily
8. Linen bags must be sealed at the bed side and removed directly to the dirty utility area or the collection point
9. All instruments used for the patient care must be kept with the patient
10. Use dedicated equipments
11. Hand must be washed before and after contact with the patient or their environment .Use Chlorhexidine or alcoholic based hand rub.

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 52 of 59

12. All single use items must be disposed of as clinical waste. Clinical waste bags must be sealed before leaving the room. All reusable items would be processed in accordance with the local disinfection policy.

Pre and Post Exposure Prophylaxis

SMCH hospital provides Hepatitis B vaccination for all staff as a part of pre exposure prophylaxis

Managing exposure to potentially infectious body fluid:

Categories of exposure:

1. Needle stick injuries
2. Non- intact skin exposure
3. Mucosal exposure e.g. Splash into eye

Immediate action to be taken

1. Wash in running water.
2. Non intact skin exposure: Wash for 10 minutes with soap and water.

Report to infection control nurse

3. Mucosal exposure e.g. splash into eyes


Wash for 10 minutes by using clean water or normal saline to irrigate the eye. The eyelid should be held open by another person wearing sterile gloves. Do not use soap and water or disinfectant.

NEEDLE STICK INJURY

DO NOT SQUEEZE

(Post exposure prophylaxis)

- | |
|---|
| <ol style="list-style-type: none"> 1. Wash hand in running water with soap 2. Inform Infection Control Nurse. 3. If housekeeping staff injured, <ol style="list-style-type: none"> a. Inform housekeeping supervisor and Housekeeping Supervisor is responsible to inform infection control nurse. |
|---|

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 53 of 59

Steps – Protocol/Manual

1. Check status of the injured staff
2. Status of the source:
3. Inform the consultant
4. Inform patient – Check patient's serology

Step-1

1. If patients serology – HepB+ve /Known case of **HepB+ve**
2. Check vaccination status of injured person.
 - If vaccinated → Check HB3 A3 titer
 - If not vaccinated → Provide Hepatitis B vaccine.
 - If patient is +ve case → Check HbsAg titer
 - If HbsAg Titer value < 10 Provide immunoglobulin within 24 hour


Step-2

If patient known case of HIV +ve / Unknown and staff is injured

1. Consult concerned physician
2. Start Anti Retro Viral Therapy (ART) as early as possible.
3. If patient is HCV positive: hand washing in running water with soap.
4. Consult concerned physician

After Post exposure of Known case of Hepatitis-B, HIV & HCV/Unknown

- Follow up the serology of staff for 3months,6 months and 12 months
- Infection control nurse to monitor, follow up and maintain documents.

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 54 of 59

HIC.6: THE ORGANIZATION IDENTIFIES AND TAKES APPROPRIATE ACTIONS TO CONTROL OUTBREAKS OF INFECTIONS.

SRI LAKSHMI MEDICAL CENTRE & HOSPITAL documents the procedures for identifying and managing an outbreak.

Procedure to Identifyan Outbreak

The occurrence of two or more similar cases relating to place and time is identified as a cluster or an outbreak and needs investigation to discover the route of transmission of infection, and possible sources of infection in order to apply measures to prevent further spread. If the cases occur in steadily increasing numbers and are separated by an interval approximating the incubation period, the spread of the disease is probably due to person to person spread. On the other hand if a large number of cases occur following a shared exposure e.g an operation, it is termed a common source outbreak, implying a common source for the occurrence of the disease.

SRI LAKSHMI MEDICAL CENTRE & HOSPITAL has a laid down procedure for handling such outbreaks.

Investigation of an outbreak:


I. Epidemiological methods

The investigation of an outbreak may require expert epidemiological advice on procedures. Formulation of a hypothesis regarding source and spread is made before undertaking microbiological investigations in order that the most appropriate specimens are collected.

Steps to be taken to investigation an outbreak

a. Step 1

- Recognition of the outbreak. Is there an increase in the number of cases of a particular infection or a rise in prevalence of an organism? Such findings indicate a possible outbreak.
- Preliminary investigation must be begun by developing a case definition, identifying the site, pathogen and affected population.
- Determination of the magnitude of the problem and if immediate control measures are required. If so general control measures such as isolation or cohorting of infected cases; strict hand washing and asepsis should be immediately applied.

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 55 of 59

- Verification of the diagnosis. Each case should be reviewed to meet the definition.
- Confirmation that an outbreak exists by comparing the present rate of occurrence with the endemic rate should be made.

b. Step 2

The appropriate departments and personnel and the hospital administration should be notified and involved.

c. Step 3

- ✓ Additional cases must be searched for by examining the clinical and microbiological records.
- ✓ Line listings for every case, patient details, place and time of occurrence and infection details should be developed.
- ✓ An epidemic curve based on place and time of occurrence should be developed, the date analyzed, the common features of the cases e.g age, sex, exposure to various risk factors, underlying diseases etc. should be identified.
- ✓ A hypothesis based on literature search and the features common to the cases; should be formulated to arrive at a hypothesis about suspected causes of the outbreak.
- ✓ Microbiological investigations depending upon the suspected epidemiology of the causative organism should be carried out. This will include (a) microbial culture of cases, carriers and environments (b) epidemiological typing of the isolates to identify clonal relatedness.
- ✓ The hypothesis should be tested by reviewing additional cases in a case control study, cohort study, and microbiological study.


d. Step 4

- ✓ Specific control measures should be implemented as soon as the cause of outbreak is identified.
- ✓ Monitoring for further cases and effectiveness of control measures should be done.
- ✓ A report should be prepared for presentation to the HICC, departments involved in the outbreak and administration

The hospital takes appropriate corrective action to prevent the recurrence

Immediate control measures

Control measures should be initiated during the process of investigation. An intensive review of infection control

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 56 of 59

measures should be made and general control measures initiated at once. General measures include:

- Strict hand washing;
- Intensification of environmental cleaning and hygiene.
- Adherence to aseptic protocols, and
- Strengthening of disinfection and sterilization.

Microbiological Study

Microbiological study is planned depending upon the known epidemiology of the infection problem. The study is carried out to identify possible sources and routes of transmission. The investigation may include cultures from other body sites of the patient, other patients, staff and environment. Careful selection of specimens to be cultured is essential to obtain meaningful data.


Specific control measures

Specific control measures are instituted on the basis of nature of agent and characteristics of the high-risk group and the possible sources. These measures may include:

- Identification and elimination of the contaminated product;
- Modification of nursing procedures;
- Identification and treatment of carriers, and
- Rectification of lapse in technique or procedure

Evaluation of efficacy of control measures

- The efficacy of control measures should be evaluated by a continued follow-up of cases after the outbreak clinically as well as microbiologically. Control measures are effective if cases cease to occur or return to the endemic level.
- The outbreak should be documented.

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 57 of 59

HIC.7: BIO-MEDICAL WASTE (BMW) IS HANDLED IN AN APPROPRIATE AND SAFE MANNER.

The organization adheres to statutory provisions with regard to Bio-medical Waste.

Waste management policy at Sri Lakshmi Medical Centre & Hospital has been implemented in accordance with the rules of Biomedical Waste Management Act. The hospital has got the consent to operate under pollution control board.

COOPERATIVE HOSPITAL adopts color coded segregation of biomedical waste in all patient care areas. This is monitored by HIC team on daily basis

All waste containers are emptied when they are 3/4ths full

Segregation is done at source. A color code is followed and appropriately coded waste bags are placed in bins in all patient care areas. Segregated bio medical waste is stored and transported to the central waste collection area of the hospital in proper covered containers in secured manner.


- ❖ Waste from various patient care areas is removed twice a day or more if necessary. All bags that are being transported to the central waste collection area will have to be tied at the mouth to avoid spillage during transport
- ❖ Smaller bags are collected into larger bags and carried by the on-duty housekeeping staff to designated storage areas on trolleys. Bags should be picked up and then transported before become completely fill.
- ❖ Avoid the transport of too many bags at one time and contact of the bag with the body of personnel
- ❖ Avoid mixing of segregated wastes
- ❖ The staff is provided with personal protective equipment (PPE)

DISPOSAL OF CONTAMINATED NEEDLES AND SYRINGES


- Contaminated needles are destroyed using a needle destroyer.
- Contaminated syringes are put in puncture proof container (white)
- At segregation, syringes are put in red color coded plastic cover.

Bio Medical Waste treatment facility.

The hospital has tie- up with IMAGE (Common waste management facility by IMA). The waste is collected from the collection area of hospital by IMAGE workers and transported in a covered vehicle to the treatment facility of IMAGE. The hospital conducting periodic visit to Outsourced facility to ensure waste disposal according to BMW

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 58 of 59

rules. Annual report of waste generated is maintained by administration and report submitted to Pollution Control Board. All categories of staff handling bio medical waste are using appropriate personal protective measures.

	SRI LAKSHMI MEDICAL CENTRE & HOSPITAL	Doc. No.	E / NABH / SMCH / HIC / 01 - 08
		Issue No.	01
	HOSPITAL INFECTION CONTROL MANUAL	Rev. No.	00
		Date	01/11/2014
		Page	Page 59 of 59

HIC.8: THE INFECTION CONTROL PROGRAM IS SUPPORTED BY THE MANAGEMENT AND INCLUDES TRAINING OF THE STAFF AND EMPLOYEE HEALTH

- ✓ The management makes available resources required for the infection control program.
- ✓ The hospital management ensures the availability of resources required for the infection control program.
- ✓ The hospital conducts induction training for all newly joined staff as and when required. Induction training includes policies, procedures and practice of infection control program. All categories of staff under goes induction training and the records are maintained.
- ✓ The hospital conducts in service training for all staff as per the training schedule. The frequency of training decided by the hospital based on the priority of the topic.