
Hospital linen policy
All India Institute of Medical Sciences, Raipur

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Content

1. Introduction and purpose -----	3
2. Duties and Responsibility -----	3
3. Classification of linen -----	3
4. Infection control practices for linen disposal -----	4
5. Laundry process -----	6
6. Monitoring -----	7
7. References -----	7

Version	Number of Pages	Number of Tables	Number of Figures	Number of Appendices
1.0	7	0	0	0

Hospital Linen Policy

1. Introduction–

- a. Hospital should have a policy for laundry infection control. It is important that linen is appropriately managed to ensure contamination does not occur as this can then lead to transmission of micro-organisms to people or the environment.
- b. The purpose of this policy is the prevention of infection or injury in service users and health care staff involved in the use, handling or laundering of hospital linen.

2. Duties and responsibility

a. Medical superintendent

- i. The overall responsibility of implementation of the hospital linen policy resides with the medical superintendent.

b. Finance officer

- i. It is the duty of the finance officer to determine the budget for smooth implementation of the hospital linen policy.

c. Nursing In charge

- i. The nursing in-charges of each ward shall be responsible for operational implementation of the policy.
- ii. Shall take leadership in implementing policy.
- iii. Shall improve and spread best practices.

d. Staff nurses

- i. They should be aware of the policy.
- ii. Shall comply with the policy.
- iii. Report to their In-charges and/or the Infection Control Team if they are unable to do so.

e. Manager of the outsourced company/ CSSD personnel

- i. It is the responsibility of them to ensure
 1. Staff are aware of, and have access to, this policy.
 2. Staff comply with this policy.
 3. Staff receive adequate training.
 4. There is an adequate supply of appropriate protective clothing available.
 5. There is an adequate supply of all other equipment mentioned in this policy available at all times.

f. House keeping staff.

- i. Housekeeping staff must ensure they are aware of the procedures for the management of used linen.
- ii. Report to their managers if they are unable to do so.

3. Classification

For the purpose of infection control, linen can be classified into 4 categories.

- A. **Clean linen** - Linen items that are new, have been processed or are otherwise clean and have not yet been used
- B. **Used linen** – Fouled or blood stained linen from patients not considered to be infectious or have communicable diseases.

- C. **Infectious linen** – Linen from patients with known infectious etiology such as MRSA/VRE/ MDRO or any other infections such as HIV, HAV, HBV, HCV etc.
- a. **High risk group linen** – Diseases that can be transmitted through a low infectious dose of organisms, e.g Escherichia coli O157, shigellosis etc.
 - b. **Infested linen** – from patients infested with lice and fleas.
 - *The laundry should be informed before-hand to ensure proper arrangement for these type of linen.*
- D. **Heat labile linen** – linen which is made from fabrics likely to be damaged by normal disinfection process, e.g personal clothing
- E. **For category 4 pathogens** - Linen originating from patients with these pathogens should be bagged in yellow clinical waste bags and incinerated, e.g anthrax, viral haemorrhagic fever, bioterrorism agents.

3.1 Frequency of bed linen change –

- i. Ideally it should be changed daily.
 - ii. Linen must be changed and laundered between patients and when visibly soiled.
 - iii. Immediately when fouled.
- To monitor daily bed linen change a color code may be applied for each day of the week.

Proposed color code for bed linen

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Peach	White	Light Pink	Light Green	Light Yellow	Lavender	Light Blue

3.2 Storage of new Linen in Ward / Department

- i. Clean linen should be stored in a clean area of the ward in closed cupboard.
- ii. They must be stored separate from used/soiled linen.
- iii. At least 5 sets per bed should be available.

4. Infection control practices for linen disposal

4.1 General consideration –

1. All personnel involved in the collection, transport, sorting, and washing of soiled linen should be *adequately trained and wear appropriate PPE*.
2. All workers must cover all lesions on exposed skin with waterproof plasters and wear appropriate gloves.
3. Gloves used for the task of sorting laundry should be of sufficient thickness to minimize sharps injuries.
4. They must have access to hand washing facilities.

If the laundry services is outsourced then it is important that the hospital administration should include the hospital linen policy in the contract-setting process for provision of such services.

4.2 Laundry bags

1. Single bags of sufficient tensile strength must be used
2. Leak-proof containment is needed if the laundry is wet and can soak through a cloth bag.
3. Only two thirds of the bag be filled to allow secure closure.
4. Bags containing soiled laundry should be clearly identified with labels containing site of origin and colour coding (according to local policy) HCWs may handle these items safely, regardless of whether the laundry is transported within the facility or destined for transport to an offsite laundry service.
5. Infected linen should be placed in an impervious bag that can be emptied into a washing machine with no or minimal handling and the bag either decontaminated in the washing process or disposed of as infectious health care waste.

4.3 Segregation

Infectious linen should be *segregated at the point of generation and not at the laundry site.*

4.4 Sorting

1. Soiled and infected linen must be handled with care at all times.
2. Linen should be placed into bags at the point of generation as soon as possible.
3. Bags must be securely tied to prevent spill over.
4. Rinsing soiled laundry at the point of generation should not be done.
5. *Infectious linen must not be sorted and loaded into a washing machine with no or only minimal handling.*

4.5 Transport

1. There should be separate, designated bags and storage receptacles for clean and used linen and must never be transported together.
2. Soiled linen in bags can be transported by cart.
3. Clean linen must be wrapped or transported in a closed container to prevent inadvertent contamination from dust and dirt during loading, delivery, and unloading.
4. Trolleys should be cleaned and disinfected
 - a. After any spillage
 - b. After transportation of dirty laundry
 - c. Thorough cleaning with soap and water at least weekly

4.6 Storage

1. Clean linen should be stored in a clean area of the ward in closed cupboard.
2. They must be stored separate from used/soiled linen.

4.7 Disposal of linen

Criteria for condemnation

- i. There will be no more than three patches in any 35cm square
 - ii. No repairs or patches will be larger than 15cm square
 - iii. There will be no more than 5 patches over the entire piece of Linen
1. The linen that required to be disposed off must be disinfected and duly washed as soiled linen.

2. After maintaining a log book for such linens, it should be shredded and then disposed off in yellow bag to bio medical waste collector for final disposal.

5. Laundry process

Linen and clothing used in health care facilities are disinfected during laundering and generally rendered free of vegetative pathogens (hygienically clean), but they are not sterile.

5.1 Laundry area

- a. All laundry area must have impermeable floor surfaces.
- b. Walls & floors should be washable.
- c. The ventilation should include adequate filtration and exhaust.
- d. The area should be partitioned into two areas
 - i. A "dirty" area for receiving and handling the soiled laundry.
 - ii. A "clean" area for processing the worked items and textile storage.

5.2 Washing cycles

The washing cycles used for laundering may be

- 5.2.1 Thermal washing cycle
- 5.2.2 Low temperature cycle
- 5.2.3 Dry cleaning
- 5.2.4 Home washing machines

5.2.1 Thermal washing cycle

Washing machines in health care facilities can be either washer/extractor units or continuous batch machines.

A typical washing cycle consists of three main phases, i.e. pre-wash, main wash, and rinse cycle.

- Pre wash cycle – linen should be washed with water and soap and detergent. Antimicrobial action is due to cleaning, dilution and agitation during the pre-wash cycle.
- Main wash – minimum holding time 65 °C for 10 minutes. (71 °C for 3 minutes). Additional time should be given to allow mixing and heat penetration.
- Rinse cycle – removes excess of the soap and detergent present, if any.

5.2.2 Low – temperature washing cycle

This is useful for

- Heat labile fabrics
- To reduce hot water consumption.
- i. The steps are same as that of the typical thermal washer except that *Sodium hypochlorite (NaClO)* is used as disinfectant instead of heat.
- ii. Usual recommendation for bleach – 150 ppm.

5.2.3 Dry cleaning

- It involves use of organic solvents such as *perchloroethylene* to remove soil from heat labile linen.
- It should not be used routinely as it is relatively ineffective in reducing the microorganisms.

5.2.4 Home washing machine –

Can be used for cleaning staff uniforms..

- **If the staff uniforms become grossly contaminated should be washed as “used” or “infected” hospital linen.**

5.3 Drying and ironing

1. Drying of the linen is done preferably in a drier.
2. Heavy duty washers/ driers are recommended for drying.
3. Dryer temperatures and cycle times are determined by the type of materials in the fabric.
4. Ironing is done preferably by automated systems or may be manually.

If the laundry service is outsourced, then it is to be ascertained that the laundry process is being carried out properly by the vendor.

5.4 Pillows, Duvets, blankets, Mattress Overlays –

- i. These must be protected by heat-sealed, waterproof covers which are cleaned with detergent and water between service users.
- ii. Duvets, pillows, blankets must be laundered between service users if waterproof covers are not suitable.
 - a. Blankets can be dry cleaned or hand washed. Hand-washing can be done by firstsoaking for 15 minutes in lukewarm water. The soap suds are squeezed through the blanket and then rinsed in cold water at least twice. The blanket should not be twisted or wrung. It should be dried by spreading it on a clean surface.
 - b. Pillows and mattresses can be washed with soap and water and left to dry in the sun.
- iii. If clostridium difficile is present, they should be wiped with a solution of chlorine based disinfectant.

6. Monitoring

1. Routine microbiological sampling is not recommended.

Indication

- i. When commissioning new machines.
- ii. During outbreak investigation – if epidemiological evidence suggests linen or clothing as a source of disease transmission.

References –

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