

A Perspective On Healthcare Textiles: Issues, Challenges & Quality Standards Requirement

A DISCUSSION BY USER

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About Textiles in Healthcare



- Healthcare Textiles are used as Medical Textiles for direct patient care as well as Non-Medical Textiles mainly for normal human usages or for office/patient accommodation spaces.

Purpose of hospital textiles

- Healthcare textiles are used to improve quality of health care delivery by minimizing the risk of infections & providing comfort to patients who are bedridden for 24 hours.

Broad Categories of Hospital Textiles

(I) INDIRECT TEXTILES :

1. **Office Linen:** incl. Office Linen e.g. Curtains, Furniture/furnishing Linen
2. **Housekeeping Linen:** Wipes & Dusters
3. **Linen for Support Services:**
 - i. Drapes & gowns for Kitchen
 - ii. Wrappers for CSSD-Sterile Supplies
4. **Bed Linen:** This is of two types:
 - i. Linen for admitted patients: Bed Sheets, Pillow Covers, Blankets
 - ii. Linen for Attendants

(II) DIRECT PATIENT CARE TEXTILES : For Hygiene Purpose

This is of following types:

1. Linen for Patient use: Hygiene Textiles

- Patient uniforms in General Wards
- Patient uniform in Intensive Care Units/Operation Theatres/Procedure Rooms

2. Surgeon' uniform in OTs/ICUs: Surgeon's Operating Dresses & Gowns

3. OT drapes/Surgical Table Linen/Surgical Sheets

(III) PATIENT PROCEDURE TEXTILES : For Treatment Purpose

1. Organ Procedure Materials

- Surgical Sutures
- Surgical Implants: e.g. Grafts, Mesh for Hernia,
- Non-implant materials e,g, dressings, plaster pads

2. Extra corporeal devices: e.g. Artificial kidney

(IV) PROFESSIONAL UNIFORMS LINEN (Liveries)

Professionals Uniform (Liveries) which include Staff
Uniforms & Dresses

Recent Advances in Hospital Textiles

Anti-Microbial Fabrics

- Antimicrobial fabric is a textile that has been treated to help inhibit or destroy the growth of disease-causing microbes.
- Common compounds used are:
 - ▣ **Quaternary Ammonium compounds:** targets the microbial membrane.
 - ▣ **Triclosan**
 - ▣ **‘Smartsilver/Livinguard Technology’:** Nano particles (Silver) coated/TiO₂ coated ‘infection free’/stain free fabric

Usage of KHADI in Hospitals

- Recently hospitals started using Khadi fabric items.
- Hospital Khadi products which are approved by the Ministry include bed sheets, abdomen sheets, dressing towels, surgeon gown, surgical patient gown, kurta pajama, doctor's coat.
- Khadi being the most natural and organic skin friendly fabric
- High user satisfaction.

Shift to Disposable Fabrics

- Allows air and moisture to pass through
- Allows Economic aspect vary from product to product (surgeon's dress to patient sheets)



CHALLENGES AND ISSUES of HOSPITAL USERS

Linen Selection at Hospital

- Linen is provided in most of hospitals as per the technical specifications provided by the Linen Selection Committee.
- However very few hospitals in India are having standards and specifications for medical linen.

Hospital Linen Policy

- No Standard Protocols except in few hospitals. Poor selection & poorly changed linen enhances the treatment cost.
- Many hospitals change linen everyday, some not. Recently Introduction of Colour Bedsheets on all seven days in a week started in Central Government Hospitals to ensure hygiene.

COLOURED BED SHEETS CHART FOR DIFFERENT DAYS OF THE WEEK

<i>Weekday</i>	<i>Colour</i>
Monday	White
Tuesday	Pink
Wednesday	Green
Thursday	Yellow
Friday	Purple
Saturday	Blue
Sunday	Peach



Quality Challenges

- Indigenous R& D required for medical textiles in order to bring down the treatment cost.
- Scientific study required with regard to appropriate application of various Medical Textile products.
- Lack of customized production & design in India specially for patients needs to be looked for.
- Union Ministry of Textiles identified BIS/SITRA standards should be used by all hospitals for selection of hospital textiles.

Washing Challenges

Hospital textile is different from normal textile.

- Washing done at high temperature (60-80degree Celsius) with drying at 80-130 degree Celsius
- Purpose: To make fabrics infection free. However it leads to decreased life of fabric!

Linen Washing Standards for Hospitals

- Hospital Laundry needs to have standards for washing in India just like Hospital Laundry Accreditation Council (HLAC) standards in West.
- Different washing procedures destroy the very basic purpose of hospital fabrics: Infection free healing.

Washing detergent & formula standards

- Standards similar A.I.S.E. Guidelines on the implementation of the Detergents Regulation required for India.
- Ingredient Datasheet for Medical Personnel provided in these standards.

Holistic Hospital Textiles

- Attention on Hospital Textiles in Holistic Manner: A Recent Phenomenon
- Medical Textiles are part of Healing Process: Equally important as Medicine for control of infections & disease

*Thanks to Effort of Industry & Textiles Associations:
Medical Textiles coming as an aid to therapeutics for
admitted patients!*

Hospital Textiles: An aid to health:
Swacch Bharat is Swastha Bharat!
Clean India is Healthy India!

MAKE IN INDIA



TEXTILES AND GARMENTS

Thank You!