

A Study on the Disposable Textile Based Products Highly Used in Medical Area

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Article Received: 09 June 2017

Article Accepted: 23 June 2017

Article Published: 28 June 2017

ABSTRACT

Medical is a branch of health and hygiene. Textile products are highly used in medical area today, disposable textile products plays a dynamic role in hospital area. It is used to control the high rate of infection which generally seen in the hospitals. Disposable products are used only for one time, they cannot be used again and again. Disposable products have short life applications, maintain the hygienic perspective. It is highly used in surgical area masks, bandages, napkins, caps, tissues, gloves. Used for the prevention of bacteria and other virus.

Keywords: Medical, Hygienic, Bacteria, Virus, Hospital and Dynamic.

1. INTRODUCTION

Meaning of disposable products which are designed to dispose or thrown away after use. Disposable products are highly used in medical area now a days, for the purpose of hygiene in hospitals. Textile material used in hygiene, health and personal care as well as surgical applications. The present paper will primarily focus on disposable products in Medical area. Healthcare and hygiene products are play a role in the field of medicine and surgery. Use of disposable products in the hospital area to reduce the rate of infections.

“Medical and surgical device manufacturers to worldwide produce a multitude of items that are intended for one use only. The primary areas on is infection control; when an item is used only once it cannot transmit infectious agents to subsequent patients. Like medicines and other health technologies, they are essential for patient care”.

The demand of these goods is not only because of their “one time use” property but also due to the hygienic methods adopted to produce them. General medical disposables that are being in demand in domestic as well as in international market includes: medical gloves, syringes, gowns, catheters, blood transfusion units. Protection from infection is a major concern for the patient and health care professional. The disposable nonwovens used in surgical environment possess barrier protection from fluid, particulate and microorganism to reduce the chance of cross infection. Surgical gowns should be breathable so it provides physical comfort. General surgical operation shows that there has significant reduction in the post-operative infection rate when disposable gown and drapes were used. Disposable product also reduces the chance of wound infection.

2. REQUIREMENT OF DISPOSABLE NONWOVEN

Requirement of medical are absorbency, breathability, softness, tenacity and biodegradability. Surgical gowns prevent the release of pollutant to the air, conventional cotton gown contain high level of dust and woven fabric has more possibility of cross infection through blood born pathogen. In surgical gown the comfort is achieved by the combination of shape or size of garment and ability to maintain satisfactory environment within the garment by micro porous melt blown

sheet within the composite structure. The gown will shows resistant to fluid but permeable to moisture can maintain the body temperature and reduce humidity.

Disposable gowns prevent the health personal from blood born-pathogens. Disposable drapes are also used to maintain sterility of environmental surface. Single use nonwoven fabric for surgical gowns and drape are spun lace, hydro entangled or spunbond/ meltblown/ spunbond fabric bonded together by means of adhesive or thermally. Chemical treatments on the fabric are given to improve liquid repellence. The choice of a single-use gown or drape becomes easier when considering criteria, put forth by experts. Factors such as aseptic assurance, comfort, economics, and environmental issues are important considerations. Reusable gowns eventually lose barrier properties. This results from abrasion and damage during wear and the breakdown of the fabric during laundering and sterilization. If such products are used, quality assurance programs must be used to determine when the product needs repair or needs to be removed from service Hidden costs of reusable include the carrying of inventory, loss replacement, and space for storage and processing.

Therefore, potential problems with reusable can be:

- Perception of less barrier protection.
- Actual loss of barrier properties as a result of wear, abrasions, and breakdown of fabric during laundering and sterilization.
- Uneven consistency of product with multiple reprocessing.
- Lack of confidence in laundering and sterilization of reusable.
- Warnings from manufacturers regarding lack of guarantees of performance or results.
- Limited mandatory quality standards for laundries.

Today's different surgical gowns are designed to handle different surgeries the cost of gowns varies with the amount of protection afforded. Disposable gowns offer benefits that hospital can dispose the contaminated textile quickly. Proper fit of gowns more effectively repeal the dangerous infection.

It must allow the necessary mobility without rubbing and must resist tearing and linting. It must fit closely but not resist the body movement. It also provides easy donning and doffing without contamination.

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