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# ACCU-EDITORIAL

*Be Aware. . . Be Safe. . .*

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## DISPOSABLE vs REUSABLE GOWNS:
### (A BATTLE FOR INFECTION CONTROL AND SUSTAINABILITY)

Surgical site infection is one of the major burdens of any surgery; especially in orthopedic surgery, where a prosthetic infection can lead to disastrous consequences. Surgical site infection is the leading nosocomial infection, accounting for approximately 22% of all nosocomial infections.

According to CDC estimates updated this year, 157,000 surgical site infections (SSIs) occur each year. When SSIs occur, they extend patients' hospital stays by 7.3 days and augment in-hospital costs by more than $20,000 according to latest estimates. SSIs cause the direct death of 3,251 patients and contribute to 9,726 deaths a year. Therefore, an active quest has been underway to reduce the risk of SSI.

One effective strategy against SSI is to adhere to a strict aseptic practice. The use of drapes and a proper surgical gown, an active barrier against bacterial contamination of the surgical field, has a large role to play in the prevention of SSI. While nearly 90% of surgeries in the United States are performed using disposable gowns and drapes, reusable material accounts for half of the materials used during surgical procedures performed in Europe. This has led to comparative research between the two practices, not only based on the patient's protection against SSI, but also on health workers' comfort, health care economics and the environmental life cycle.

A surgical gown serves two main purposes: to decrease the transmission of skin flora from health care staff and to protect the staff against the blood-borne pathogens of the patient. The protection should be reproducible and maintained during the whole surgery, even in the event of the gown getting wet with blood, sweat or fluid. Bacterial strike-through is a function of the material used, fluid exposure and pressure applied.

We lack a proper consensus on which type of gown to use due to the heterogeneity of materials and production techniques used in making gowns, the type of surgeries and other surgical factors, as well as the lack of a proper method to determine bacterial strike-through and its relationship to SSI. Moreover, the materials used in reusable gowns have undergone a dramatic change, making older literature about these gowns and their protection outdated. Despite these facts, recent published studies still favor disposable gowns as having a more solid, reliable and reproducible bacterial impermeability. With reusable gowns, these properties seem to fade with wetting or repeated wash. While reusable gowns, being more pliable and breathable, may seem more comfortable, this may dispel its concept of being an effective bacterial barrier.

Reusable gowns have been traditionally advocated based on ecoxnomic and environmental basis. However, proper analysis of these aspects is hard to perform due to many factors that should be taken into consideration such as production, transport, storage, disposal, decontamination, sterilization and unexpected loss and damage, especially of reusable gowns. Even if an economic analysis might favor reusable gowns due to their environmental impact and jobs related to their production, one should not lose the sight of their main purpose: to reduce SSIs.

**- Reference : Sleiman Haddad, MD (Orthopedics Today, September 2014)**

"Currently, single-use disposable linens are commonly used in the perioperative setting. "The benefits of using single use disposable linens include the fact that product quality is consistent. In a recent study comparing single-use and textile products, 56% of the textiles showed serious faults impairing functionality compared to 0 % of the single use products."

**Extract : Pyrek K. Barrier-Protection Properties are key to Surgical Gown Performance. (Surgi Strategies. 2004 October)**



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