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Healthcare Purchasing News

Response to an April 2009 Article
"Softer, stronger fabrics enhance gowns and drapes"

To the Editors:

Having read the report entitled, **"Softer, stronger fabrics enhance gowns and drapes"** in your April, 2009 issue, I wish to comment on a number of points in the section of the article entitled, **Reusable vs. Disposable**.

Claims that it takes,"one and a half gallons of water to launder one surgical gown and as much as four gallons of water to launder a reusable drape," are misleading.

The report does not take into account that with today's modern tunnel washing systems, which have built in water reuse capabilities, we can launder surgical textiles and achieve maximum quality while using 0.5 – 0.7 gallons of water per pound of textile.

A large majority of reusable surgical gowns weigh under a pound. Accordingly, the amount of water used to launder one gown, requires less than 0.5 gallons of water.

With regard to surgical drapes and wraps, they vary in size from about 18" x 18" to some as large as 60" x 90". These may range in weight from a few ounces to nearly 30 ounces, with the majority weighing somewhere between these figures.

Smaller drapes, at 36" x 36", or less, would also require under 0.5 gallons of water to launder. The very largest drapes and wraps would be expected to use about one gallon of water to launder. The claim that drapes require four gallons of water to wash is significantly exaggerated.

The report goes on to state that disposable products actually have a lower environmental burden on the environment. The following points should be considered which are contrary to this premise:

- One should consider that the **Clean Air Act** identifies six recognized forms of pollution. These are sulfur and nitrous oxide, carbon monoxide, volatile organic compounds, particulate matter and lead.

- Single-use, disposable products need to be incinerated in medical waste incinerators (MWIs) or taken to waste landfills. Both methods of disposal have been identified as producing numerous factors adversely impacting on the environment.

- The U.S. EPA has found that MWIs produce negative consequences for air quality. They reported that MWIs result in emissions containing furans, carbon monoxide, heavy metal and dioxin. Further, the EPA has identified MWIs as the largest known source of dioxin emissions in the U.S. (Dioxins, says EPA findings, can result in cancerous and noncancerous human health effects.)

- The alternate procedure for disposing of hospital waste is through the use of landfills. Waste landfill sites have been found to yield many environmental difficulties. Included in these are the proliferation of leachate which can impact negatively on ground water, aquifers and entire ecosystems.

- In addition to the preceding, solid waste landfill sites are known to generate large quantities of methane and other gases containing volatile organic compounds (VOCs).

- Multiple studies reported in *Environmental Health Perspectives, Archives of Environmental Health* and *Environmental Research* disclose that in populations living adjacent to landfill sites, there are significantly higher levels of many health problems ranging from birth defects to many forms of cancer.

Comment was made in the April report that reusable gowns and wrappers also eventually find their way to landfill sites. While this point is true, reusable products, more often than not, are downgraded and recycled when they no longer meet the performance requirements of the surgical suite. Frequently, such products continue in use for the cover-up needs of housekeeping, food service, maintenance and engineering departments. Downgraded wraps and drapes are also utilized as excellent equipment and dust covers and tarpaulins, as needed.

One should also not forget the EPA/AHA Memorandum of Understanding, known as Hospitals for a Healthy Environment (H2E), continuing to call for a 50% reduction in hospital waste by 2010.

In addition, it should also be noted that the European Textile Services Association, (E.T.S.A.) commissioned dk TEKNIK ENERGY & ENVIRONMENT, a Life Cycle Assessment organization headquartered in Denmark, to evaluate the environmental impact of reusable and disposable surgical gowns. A number of environmental impact categories were evaluated, including energy consumption, global warming, acidification (of water and soil), eutrophication (nutrient discharged to the water environment), and post- consumer waste. Directed by an independent Critical Review Panel, the Life Cycle Assessment was carried out in an objective manner and based on ISO standards. Several categories of reusable and disposable gowns were studied. It was concluded that, in the overall comparison, reusable surgical gowns have the lowest negative impact on the environment.

While neither reusable nor disposable products will meet every single requirement of healthcare's critical needs in the 21st Century, all of the preceding demonstrates a preponderance of details that favor reusable healthcare materials as the most Green and environmentally advantageous choice for our society. Certainly a 90%, usage rate of disposable surgical products, as claimed in the report referred to with this narrative, is not a practical plan to sustain our future environment.

Respectfully submitted,

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Howard M. Zins is the principal of Howard M. Zins Associates, a consulting firm specializing in the area of material technology related to institutional textiles. Formerly Director, Textile Development, with Angelica Uniform Group, he serves on the board of the American Reusable Textile Association, (ARTA). ***www.arta1.com***