

## The Need for Aseptic Barriers

### To the Editor:

As two of some 2,000 medical devices, the use of surgical gowns and drapes is simply one of those things that has evolved to be a standard of practice because of prudence. In 1952 it was first recognized that although the materials used for gowns and drapes were considered to provide an acceptable bacteriological barrier when dry, they lost whatever barrier capabilities they had once they became wet.<sup>1</sup> And it is this principle that has become the very cornerstone of aseptic technique in terms of using gowns and drapes as aseptic barriers.

In 1975 the Association of Operating Room Nurses (AORN) commendably advanced the role of gown and drape materials in terms of their contribution to aseptic technique. Specifically, these materials were now required to have barrier capabilities, that is, to be resistant to blood and aqueous fluids.<sup>2</sup> In acknowledging AORN's position, the American College of Surgeons' Committee on the Operating Room Environment called for the development of performance standards that would demonstrate the material's ability to perform satisfactorily.<sup>3</sup> Although efforts to develop these performance standards failed, there was a consensus of opinion that readily permeable fabrics, such as the traditional all cotton Type 140 loosely woven muslin, could not be considered satisfactory aseptic barriers.<sup>4</sup>

Subsequently, Moylan published a study concluding that the use of nonwoven disposable barrier surgical gowns and drapes were responsible for a reduction in the rate of surgical wound infection (SWI).<sup>5</sup> Since its publication, this study has been frequently referenced by those supporting the use of barrier materials. Their position has recently been reinforced by the publication of a second study by Moylan.<sup>6</sup>

Overlooked in the interim, however, are the results of two other independent studies, one by Garibaldi,<sup>7</sup> the other by Schaaf.<sup>8</sup> Each investigator found no difference in the SWI rates when using a (disposable) barrier gown and drape system compared with the rate reported with a (reusable) nonbarrier system.

With the disclosure of these two studies challenging the influence of barrier materials on SWI rates, the question now is whether or not the infection control community is prepared to reconsider and reassess an aseptic practice that has been recommended for over a decade. It could well be that a departure from the universal application of the barrier principle, such as with general clean and clean-contaminated procedures, may not compromise the quality of care, while proving at the same time to be economically advantageous as well.

A thought-provoking notion to say the least.

### REFERENCES

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## An Appropriate Category of Isolation for Antibiotic-Resistant Organisms

### To the Editor:

Colonization of patients with methicillin-resistant *Staphylococcus aureus* (MRSA) or aminoglycoside-resistant, gram-negative organisms can, for two reasons, be as dangerous as infection. First, colonizing organisms can be as easily transmitted between patients and staff, and second, colonization often precedes infection. This condition was demonstrated very clearly