Letters to the Editor

Methicillin-Resistant Staphylococcus aureus in Nursing Home Residents

To the Editor:

We were encouraged to read the article by Hsu on methicillin-resistant *Staphylococcus aureus* (MRSA) in nursing home residents' and the accompanying editorial by Boyce.[2] There currently are more residents of nursing homes in the United States than there are patients in our acute care hospitals. In spite of this, nursing homes are not used as sites for conducting research as often as they should be.

But if an investigator is planning a study in this setting, familiarity with the increasing literature on functional assessment of the elderly is essential. It is with this aspect of Dr. Hsu's study that we have the most concern. Table 4 lists prevalence rates of MRSA among residents with or without various clinical conditions; bedridden or chair/bed confined are two of the variables quoted. How these variables are defined or how they were measured is not described at all in the methods section. These are very unprecise measures of function, mean different things to different people, and vary from institution to institution based on nursing practices. There are many well-established, validated, and easily administered functional assessment scales that could have been used in the study described.[3] The Philadelphia Geriatric Center Scale is one such measure that would have been applicable.[4] We also wonder if the results in Table 4 would have been more meaningful if odds ratios with 95% confidence intervals for each had been calculated and reported.

In the results section, it is stated that debilitated patients had a significantly high incidence of MRSA colonization ($p < .001$). But at no stage in the article is debilitated defined, nor is any mention made as to how it was measured.

We feel these points are important because our own initial investigations, in a similar population, indicate that impaired physical function is a risk factor for developing MRSA.[5,6] MRSA colonization in nursing home residents may be a marker for degree of illness and an indicator of a poor outcome rather than an independent risk factor for a poor outcome. To address this question, rigorous measures of function and disease burden in the subjects studied will be required.

In Dr. Hsu's article, data are presented on antibiotic sensitivities of the MRSA isolates identified. A high rate of resistance to ciprofloxacin was reported, with only 23% of strains being sensitive. Muder et al reported universal resistance to ciprofloxacin among MRSA isolates in a Veterans' Affairs-affiliated long-term care unit.[7] A review of 50 MRSA isolates from 35 patients of a 360-bed skilled nursing facility associated with our academic family medicine program indicated that only 4% of the isolates (2/50) were sensitive to ciprofloxacin (minimum inhibitory concentration [MIC] < 1 kg/ml). These isolates were obtained from a variety of body sites including urine (20), wound (14), nares (5), and sputum (4) from June 1989 to the present. We feel the high rate of ciprofloxacin resistance found by Hsu deserved more emphasis and discussion, especially because ciprofloxacin recently has been recommended for treating MRSA colonization and infection.[8,9]

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The author replies.

I believe that in my epidemiologic study, it was more important to describe the mobility of these nursing home residents than to have their physical function assessed. As to the meaning of "bedridden" and "chair/bed confined," I have to concede that I did not expect that there would be some readers who would be confused by these terms. Those nursing home residents whose activities are confined within their beds and chairs (including wheelchairs) were described as "chair/bed confined." Those who could only lie in bed were described as "bedridden." Thus, "debilitated patients" in Table 4 needs no further explanation or measurement.

Concerning how to express the result in Table 4, the prevalence rate was more straightforward and meaningful than the odds ratio for our purposes. Coll et at also suggest that we have more emphasis and discussion about the high rate of ciprofloxacin resistance of methicillin-resistant *Staphylococcus aureus* (MRSA). I believe that is was adequate just to mention it in the results section, because no one is going to administer ciprofloxacin for MRSA without first checking the drug sensitivity of the bacteria, regardless of what the literature says. Coll et al may realize that there are different ways to present research data depending upon the investigator's objectives.

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Universal Precautions

To the Editor:

I believe it is time that infection control practitioners call for "no touch' for all blood and body fluids to be incorporated into Universal Precautions (UP). It is difficult to separate the "how," "when," and "what" when educating healthcare workers. This problem has been amplified by the signs (door signs, stickers, etc.) with which we identify infections. With new information continually surfacing regarding organisms and their pathology and transmission, these signs become out of date quickly. In fact, these signs can promote wasteful and improper use of supplies, in addition to a misunderstanding of the methods of exposure to infectious material.

I am proposing a concerted effort to end the confusion regarding what barriers should be used with which body fluid. I propose that the term UP be used to describe those practices that apply when caring for any patient, including surgical patients. I further propose that gloves, masks, gowns, and eye protectors be standard equipment in all rooms in hospitals, clinics, nursing homes, and emergency service areas.

I believe in prevention, and the ounce of prevention when using basic barriers during all patient care (if contact with body fluids or blood is likely) is better than the pounds of cost for curing a resulting infection. I propose the use of UP to mean use of barriers at all times to prevent contact with any patient's blood or body fluids. I further propose that this term replace the confusing messages presented on signs. UP should truly be universal.

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This letter was forwarded to Sue Crow, RN, MSN, CIC, for a response.

You are correct; Universal Precautions (UP), should be "universal," but I am afraid that many questions go unanswered, because UP are not really universal. Sounds as confusing as it is.

The term "universal precautions" literally means, according to Webster, a generic word to the wise. Being careful with all bloody fluids is simply the best way to institute this concept.

At this time, healthcare workers are not willing to accept that body fluids such as feces, sputum, and urine without blood are not infectious. Because simplicity is always the best answer, it would seem that being cautious with all body fluids is most practical.

Whether we call it Body Substance Isolation or UP, or regardless of who named the concept, we need to be uniform in our policies. Otherwise, only infection control practitioners understand the argument, and the healthcare worker directly involved with patient care is left holding the bag trying to determine whether to glove or not to glove.

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Correction

In the Readers' Forum "Management of the Healthcare Worker Infected With Human Immunodeficiency Virus: Lessons From Nosocomial Transmission of Hepatitis B Virus" by Weber, Hoffmann, and Rutala (1991;12 [10]:625-630), the Table on page 626 should have indicated 5 reports of outbreaks associated with gynecologists, not 25, as printed.

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