Letters to the Editor

Response to Surgeon-Specific Infection Rates

To the Editor:

Since 1987, the Epidemiology Program at Fort Sanders Regional Medical Center in Knoxville, Tennessee has analyzed and reported surgeon-specific wound infection rates for clean and clean-contaminated (class I and class II) operations done at our hospital. The denominator data is collected with the assistance of the operating room director. The numerator data is collected using our standard surveillance definition, which includes the microbiology laboratory, daily nursing condition sheets, data on readmission to the hospital, and reports from physicians and nurses. We include operations done in our day surgery program, and these are followed up by personnel in day surgery as part of a routine postoperative telephone questionnaire. The major deficiency, we believe, in our case finding, is in those cases of wound infection which present to and are handled by the surgeon in his or her private office without cultures being sent to our hospital's laboratory.

The response to this system by the surgeons at our institution has been gratifying. Although our infection rates are low (less than 1.5%), several of our surgeons have requested further information on each of the infections we reported to them. In one case, a surgeon had an infection rate significantly higher than that of the other members of his department. Reflecting the experience of others, further surveillance indicated that this physician brought his infection rate in line during the following quarter (three-month interval used in reporting).

Dr. Scheckler has pointed out that surgeon-specific wound infection rates are potentially misleading.[1] We certainly understand this argument, but we believe, based on our program, that the best analyses we can perform in a community hospital setting with a low infection rate are achieved and that our system is well received and probably effective.

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How Simple Is Disease-Specific Isolation?

To the Editor:

I have some thoughts about the recent article titled "Searchin"' by Sue Crow, MSN, RN, CIC and curiously printed in the journal under the category of Product Commentary (1988; 9(7):328-329). In an effort to describe the evolution of isolation technique the reader is taken from biblical times to the present and advised that one way to address the ubiquitous "fear of contagion" is to isolate the patient. Further, the reader is advised that the simple and efficient way to do this is to practice a disease-specific isolation system. Issue must be taken with the description of this system as simple. Function of the system is dependent on reference material readily available at each nursing unit, specific signage outlining a variety of disease-specific steps required to provide patient care, special techniques for linen, waste and equipment reprocessing. and most important, clinical or diagnostic information to trigger initiation of the precautions. For the same reasons, efficiency of such a

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system would be questioned. However, the most critical question to address is efficacy. During the 20 years that various editions of this type of diagnosis-driven system have been used, system users have described problems with its effectiveness in preventing nosocomial transmission of infection.

By way of one specific example, there are many reports in the literature of outbreaks caused by methicillin-resistant *Staphylococcus aureus* (MRSA) in intensive care units, newborn nurseries, and burn units.[1-6] These outbreaks have occurred in many different centers, suggesting that individual hospital implementation of this isolation system is not the problem. If outbreaks of this type occur with this system in place, one wonders about its efficacy. The disease-specific isolation system has never been studied prospectively, but it has been lamented retrospectively. Chasing outbreaks with added control measures, additional education of-staff, increased antimicrobials, increased laboratory activity, and so on can not only drain a hospital's budget but also increase the cost of care for the client.

Contamination of caregiver's hands from an undiagnosed patient source has been implicated as the source of transmission in the majority of MRSA outbreaks.[5-7] Caregiver handwashing frequency has been noted to be suboptimal after patient contact[8] and this behavior is reinforced when they are taught to practice "special" precautions for diagnosed/labeled infections, as in disease-specific isolation. The unstated corollary is that less than "special" care is acceptable for undiagnosed/unlabeled cases. On the other hand, gloving for anticipated contact with contamination provides caregivers with clear, consistent instructions that are the foundation of body substance isolation. Ms Crow's observation of improper gloving technique, that is, gloving for activities that do not involve anticipated contamination, is attributable more to caregiver anxiety and inappropriate application of information than to any given precaution system. Indeed, "overgloving" is a health care industry-wide problem and occurs in facilities practicing body substance isolation as well as those using either "old" or "updated" universal precautions. Refining gloving technique to appropriate tasks is a problem we need to face together rather than attempt to use as an indicator of system competition.

Finally, the comment that "little emphasis is placed on airborne infections," directed at both universal precautions and body substance isolation, reflects a lack of understanding of either system. Universal precautions is a system designed to prevent transmission of hepatitis, acquired immunodeficiency syndrome, and other blood-borne diseases. These are not spread by the airborne route. Body substance isolation is a two-tiered system: (1) precautions to prevent contact-transmitted diseases are practiced on all patients, all the time; (2) for patients who are suspected of or diagnosed as having diseases spread by the airborne route (pulmonary tuberculosis, pharyngeal diphtheria, etc), additional precautions are taken, such as segregation of the patient from those who are susceptible. This category, referred to as stop sign isolation, relates to the Centers for Disease Control's categories of respiratory/strict isolation, except that more emphasis is placed on restriction of nonimmune individuals.

As practitioners of infection control, we are responsible for determining which system of infection prevention precautions is most effective for our own institutions. To do that we must assess the nosocomial infections that occur and why they occur, assess the level of knowledge of our caregivers relative to the behaviors we expect them to exhibit in order to prevent transmission, evaluate our systems to identify the effect of a diagnosis-driven system (what services/employees/patients are at risk from an undiagnosed case?), and the cost-effectiveness of procedures that bag, burn, or cook items from diagnosed cases. The choice before all of us must be made in recognition of these issues and with accurate information regarding alternatives. Ardent searchers are open to "erroneous recommendations" only if they are ill-informed and make erroneous assumptions.

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Sue Crow, MSN, RN, CIC replies to Ms McDonald.

I appreciate the letter from Ms McDonald. Obviously, she is as concerned as I am about the continual world-wide problem we have with implementing isolation in health care institutions. Although we think differently in regard to the solutions to this ageless dilemma, actually, there probably are no answers.

First, to explain why this article was printed in the Product Commentary section of the journal: As you know there alp many intangible products sold to institutions today that are not packaged in a bottle and brought to our attention by an attractive salesperson. Many subtle products used in institutions are "ideas" that can indeed be considered patient care products because they have an obvious effect on patient care. It is the purpose of the Product Commentary section to make our readers aware of as many