Letters to the Editor

Body Substance Isolation

To the Editor:

The proponents of the Body Substance Isolation (BSI) system continue to overlook several important issues regarding the mode(s) of transmission of certain potential pathogens.' BSI is probably satisfactory as an extension or in place of Universal Precautions for patients without signs or symptoms of infection. But when a patient has diarrhea, possibly from an enterovirus or *Clostridium difficile,* or a patient is colonized or infected with methicillin-resistant *Staphylococcus aureus,* the patient's body substances are not the only areas where these organisms are located. They also are present on the patient's linens, furniture, and other articles, and are thus transferred to the clothing and hands of personnel, even if there is no direct contact with the infected or colonized body substance.

Thus, physicians and nurses who sit in the patient's chair or lean against the bed are likely to find these organisms on their clothing, hands, patient's chart, and their stethoscope, and then transport them to the next patient.

BSI is "extended" by strict isolation for varicella. What about isolation for other airborne organisms not necessarily transmitted via contact with body substances? They are not transmitted only by body substances. They require masks even if no splashing is likely (i.e., *Mycobacterium tuberculosis* or *Meningococcus)* .

In our institution, we have retained the card-related categories for another reason. It is often the only way we become aware of patients who develop nosocomial infections (e.g., intravenous site-related infections or wound infections that are not cultured and occur in patients who are only moderately febrile). Our nursing staff is very conscientious about sending us preprinted slips to inform us why they institute isolation or precautions, and thus we have a much more accurate nosocomial infection rate than we would otherwise have.

I feel that BSI is fine for long-term facilities where the types of infections are limited, but not for acute care hospitals. When everyone is on the same "isolation," there is nothing to alert people who only have an occasional contact with the patient that special precautions may be needed. BSI may be easier on the staff, but it does not meet the needs of preventing transmission of organisms that are not part of our normal flora, and thus does not protect patients.

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The authors reply.

Our article' contained only a brief description of each isolation system; the Table contained several examples of various infectious diseases and compared the general management strategy that each system would recommend. The examples in the Table were not meant to be comprehensive. However, similar conditions would be handled in a similar fashion. For example, varicella and the childhood airborne communicable diseases, except for tuberculosis, are handled similarly. Body Substance Isolation (BSI) does not use strict isolation for varicella or other airborne communicable diseases because transmission of these diseases is not affected by apparel; patients likely to be infected receive care from immune healthcare workers in private rooms or with immune roommates.

Recently, the Centers for Disease Control published new recommendations for reducing the risk for transmission of tuberculosis.[2] Masks that filter particles the size of *Mycobacterium tuberculosis* have been developed; surgical masks do not accomplish this, and

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use of surgical masks is unlikely to protect the wearer from tuberculosis or other airborne communicable diseases.

Each of the isolation systems is referenced in our article, and readers who are unfamiliar with a particular system can find a more complete discussion in the referenced publications. Additionally, the American Hospital Association recently published a compendium of isolation policies and procedures, focused on Universal Precautions, accompanied by editorial comments and examples that might be helpful in clarifying the differences among the isolation systems.[3]

When using BSI, the healthcare workers put on clean gloves just before contact with mucous membranes and nonintact skin of all patients, wear gloves when contact with body substances is likely, wear protective barriers when body substances might soil skin or clothing, and manage trash, linen, lab specimens, and soiled supplies as if all contained infectious material. The use of these extensive precautions for all patients is intended to interrupt transmission at the most common source for organisms: colonized body substances. Articles such as furniture and linen have not been found to play a major role in transmission of infectious agents. On the other hand, several investigators have reported that generic precautions rather than diagnosis-based precautions reduced the incidence of colonization and infections in adult and pediatric populations.[4-6]

BSI is not "easier on the staff" because the precautions that would be indicated for infected or colonized patients must be used instead for all patients. However, staff report that it is easier to remember the rules when there are fewer rules to remember. The effectiveness of infection precautions is directly related to compliance of personnel with the recommendations or requirements; anything that fosters compliance (makes it "easier" to comply than not) will benefit patients and healthcare workers. We strive for compliance with the gloving precautions of more than 80% in the critical care units.

We are unable to comment on the benefits of having the nurses report nosocomial infections to the infection control program; neither of us has used a similar system, and there are few reports on the subject. We encourage the writer to evaluate this method in comparison with active casefinding and publish the results.

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