

most part, normal flora; the majority of cultures therefore expose staff to “no growth” or organisms already colonizing most individuals.

- 2) The infectious dose, route of transmission and portal of entry involved for most of the pathogens encountered in bacteriology preclude staff clothing (under the lab coat) from being a noteworthy hazard. Lack of published reports regarding outbreaks of infection among contacts of lab staff (as opposed to staff themselves who have become infected from their *Salmonella* teaching cultures, etc.) substantiates this point.
- 3) The “How safe is safe enough?” aspect of this question is, perhaps, best addressed in the concept of “spray factor” discussed by Dimmick, Vogl and Chatigny (in Hellman et al (eds): *Biohazards in Biological Research*, Cold Spring Harbor Laboratory, 1973). The better question would be, “Do lab staff members carry home a sufficient number of pathogenic organisms on clothing which then act as a suitable vehicle for transmission of infection to family members?”

On epidemiologic grounds, lack of documented transmissions weighs against this fear being a significant problem. On microbiologic grounds, assuming reasonable competence in techniques and hygiene, the probability of significant levels of clothing contamination is very low. Unless extremely virulent organisms or unusually low infectious doses are involved, changing the clothing under a protective laboratory coat or gown does not deserve the support of infection control personnel. Control mea-

asures should be appropriate to the level of risk involved, and, hopefully, cost-effective. I hope that the revised CDC/NIH guidelines, presumably replacing their 1974-1975 documents, will reflect differences in the nature and magnitude of risk in various types of laboratories, therefore, differences in the degree of safeguards required.

Infection control practitioners have an obligation to promote epidemiologic approaches to risk analysis. Gröschel, in using *Mycobacterium tuberculosis* as an example, has selected an organism usually transmitted by droplet nuclei. While an effective barrier garment may be prudent in working with TB cultures, the aerosols produced by clothing are of large mean mass diameters, well beyond the size range capable of penetrating to deep lung areas. Unless one’s family chewed on the clothing worn home, it is difficult to envisage a suitable means of transmission and portal of entry!

Unless clearer citations documenting proven risk could be provided, I respectfully submit that the policy of Nazareth Hospital’s Bacteriology Department is over-reactive.

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*Dieter H.M. Gröschel, MD, was given the opportunity to respond to Mr. Birnbaum’s comments.*

The finally completed CDC/NIH guidelines for biosafety in microbiological and biomedical laboratories still advocate the wearing of protective garments by the bench worker.

Whether these are laboratory coats, uniforms, wrap-around gowns or scrub suits will depend on the biosafety level and the policy of the laboratory. Birnbaum’s letter is based on his own interpretation of both Domm’s letter to the editor and my reply. He states that staff clothing is not a hazard and supports this by an epidemiological approach to risk analysis. I, too, am not aware of published reports implicating staff garments in the transmission of infections to a laboratory worker’s family. I did not see this as the key issue of the inquiry; rather, the question of whether infection control personnel should support the request from laboratory personnel and the pathologist (who is responsible for laboratory safety and, in this case, also the chairman of the Infection Control Committee) for hospital provided garments. Clinical microbiologists handle specimens with unknown microorganisms and, despite proper techniques, laboratory accidents will happen. “Reasonable competence in . . . hygiene. “Reasonable competence in . . . hygiene” suggests that the laboratory worker wear protective garments “to prevent contaminating or soiling of street clothes” (CDC/NIH). Prevention requires foreseeing the unusual. As long as we worry about cryptic transmission of laboratory-acquired infections we must consider the possibility of transmitting pathogens by clothing contaminated by spills and should prevent children from chewing on mother’s laboratory uniform.

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