

Risk of Environmental Exposure to Methicillin Resistant *Staphylococcus Aureus* in Healthcare Programs

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ABSTRACT

The opportunity for disease transmission increases with potential pathogen exposure. Environmental exposure provides an avenue for not only active infection, but also for bacterial colonization. Of the various bacteria that exhibit regular colonization in humans, methicillin-resistant *Staphylococcus aureus* (MRSA) is of particular interest in health care. To determine the potential for MRSA transmission from public restrooms, we cultured 72 sites within 9 buildings on the University of Alaska Anchorage (UAA) campus. *Staphylococcus aureus* was isolated in 5 of the 9 buildings but was not significant for exposure risk ($P = 0.07$). However, MRSA was isolated in the Health Science Building and was determined to be an independent risk factor for pathogen transmission ($P < 0.05$).

The discovery of MRSA in a building dedicated to health care professional education and one that is absent from all other public restrooms on the UAA campus suggests a subpopulation of colonized students and faculty. Because students and faculty in health care-related programs have proximity to patients, a screening process for MRSA-carrier status should be implemented to determine potential transmission risk during clinical rotations.

ABBREVIATIONS: MRSA - methicillin-resistant *Staphylococcus aureus*, UAA - University of Alaska Anchorage.

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