most frequent isolate.[2] We recently performed a study that evaluated for bacterial growth on stethoscope diagrams, as well as the peripheral rim that secures the diaphragm, and found that 100% of 40 stethoscopes were contaminated with coagulase-negative staphylococci, and 37.5% were contaminated with *Staphylococcus aureus.*[3] Of note, 87.5% of stethoscope diagrams harbored bacteria and 100% of stethoscopes had bacteria isolated from under the plastic rim that secures the diaphragm. No gram-negative organisms or *Clostridium difficile* were isolated using appropriate culture techniques. In addition, our study was unique in that it documented transfer of micrococcus species from an inoculated stethoscope to the clean skin of a study subject.[3] Although it is difficult to prove that pathogenic organisms can be transferred by the stethoscope in the clinical setting, our study showed that not only are most, if not all, stethoscopes used in the hospital contaminated but also that they have the potential to transfer an inoculum of bacteria to human skin. This has potential important clinical ramifications with the emergence of resistant enterococcal and staphylococcal species,[4,5] which need to be contained to the patient's room by use of isolation techniques (which should include a dedicated stethoscope or use of isopropyl alcohol on the stethoscope diaphragm). The application of isopropyl alcohol to the diaphragm is highly effective in eradicating bacteria from both the diaphragm and rim area.[3]

That inanimate objects can serve as a point source for nosocomial infection has been established in several reports. Outbreaks of nosocomial bacterial infections attributed to electronic thermometers,[6] blood pressure cuffs,[7] and latex gloves[8] have been reported recently. *C difficile* also has been transmitted nosocomially, usually from healthcare worker's hands.[9] Although no documented cases of nosocomial infection due to contaminated stethoscopes have been reported, it certainly seems a possibility, given the transmission of infection through inanimate objects as noted above. Certain patient groups, including burn patients, the immunosuppressed, and patients in the intensive-care unit, may be at higher risk for acquisition of bacterial colonization from the stethoscope, which could lead to infection. That handwashing decreases the risk of nosocomial infection[10] is well-accepted. In my opinion, all healthcare workers also should clean the surface of their stethoscopes regularly. This quick, simple, and inexpensive procedure may be another way to decrease the risk of transmitting infection to our patients.

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The author replies.

I am grateful to Dr. Marinella for presenting his recent data on the potential transmission of organisms by stethoscopes.[1] Unfortunately, his groups' study appeared after my letter was submitted to *Infection Control and Hospital Epidemiology.*

I agree with his advice that all healthcare workers should clean their stethoscopes regularly, so that potential sources of bacterial transmission could be avoided. This is of even greater importance in an era when antimicrobial resistance is increasing.

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Prevention of Nosocomial Cross-Infections

To the Editor:

Complicated technology, the pandemic spread of bloodborne viral infections, and evolution of common bacterial resistance to antibiotics[1] have created situations in healthcare facilities wherein healthcare workers (HCWs) and patients are at high mutual risk for cross-infections. Universal Precautions issued in 1987 for protecting HCWs and patients from bloodborne pathogens led to burgeoning use of unsterile protective latex gloves, at the expense of handwashing.[2] Handwashing declined to 25% of rates before gloving, and examination glove use increased to >9.15 billion per annum in the United States.[3] Side effects include increasing problems with glove allergy in HCWs and increased risk for nosocomial spread of skin-borne pathogens via gloves to patients, especially during the handling of equipment used in veins.[3-5] Because protective latex, vinyl, or nitrile gloves do not protect HCWs from accidental penetrative injuries from hollow-bore steel needles and other sharp instruments contaminated with blood or body fluids, in 1992 it was suggested that blunt instruments should be used, instead of sharp ones, whenever possible in the care of patients.[5] Side effects include a threefold to 10-fold increase in staphylococcal and vancomycin-resistant enterococcal bloodstream infections,[5] partly owing to hidden recesses capable of bacteriologic colonization in needleless intravenous access ports,[4] partly owing to use of unsterile gloves when handling blunt cannulae (as well as needles),[3] and partly owing to the complicated technology involved.[2,5] Therefore, to shield patients from some 2 million

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