

concerns are relatively easy to address. For example, a liver transplant patient in our hospital who was colonized with vancomycin-resistant enterococci wanted to smoke. We allowed the patient to wash her hands with chlorhexidine and put on a cover gown. A healthcare worker took the patient outside where she could smoke and then escorted the patient back to her room. However, despite

our best efforts to explain the isolation precautions and to make the precautions as flexible as possible, some patients also may need counseling or medicine to help them cope with isolation precautions.

Wagenvoort et al have sent an important message. We in infection control must protect the population of patients, visitors, and healthcare workers in our hospitals from acquiring

highly resistant organisms. However, we also must protect the autonomy of the patients who are in isolation, and we must make every effort to alleviate the negative emotional effects of isolation.

Loreen A. Herwaldt, MD

Department of Internal Medicine
University of Iowa Hospitals and Clinics
Iowa City, Iowa

Nurses' Occupational Exposure to Blood

Gina Pugliese, RN, MS
Martin S. Favero, PhD

Since the mid-1980s, there have been a number of studies conducted to help define healthcare workers' risk of occupationally acquired bloodborne viral infections. Some studies focus on infection rates and others on rates of injuries that place healthcare workers at risk of exposure to blood. Investigators from the University of Pennsylvania recently published the results of a large study that examined nurses' risk of exposure to blood resulting from injuries with needles and sharps, the methods of estimating those risks, and factors affecting risks. The study data were derived from 40 inpatient units in 20 hospitals that cared for AIDS patients. They were located in 11 cities with a high incidence of AIDS. Percutaneous injuries were documented for every shift during a 30-day period. These prospective reports were compared with retrospective and institutional reports.

Factors affecting the likelihood of injuries also were explored.

Based on the prospective reports, the rate of injuries to staff nurses was 0.8 per nurse year. Prospective and retrospective rates were similar, whereas reported institutional rates were significantly lower. Factors associated with increased injuries included recapping needles and temporary work assignments. There were fewer injuries associated with working in hospitals characterized by professional nurse practice models (eg, decentralized decision making, policies promoting nurse autonomy and control, and work organization emphasizing continuity of care) and taking precautions to avoid blood contact. The investigators concluded that injuries from needlesticks are more common than institutional reports suggest and do not occur at random. The prospective and retrospective-report data used in this study yielded similar estimates, indicating that nurses sustain an average of 0.7 or 0.8 injuries per year, or between 3 and 4 injuries every 5 years.

In this study, recapping of needles appeared to be the most important practice related to the risk of an injury. The authors commented that recapping persists despite CDC recommendations against this practice, suggesting that providing nurses with safer devices is warranted despite the higher costs of such devices and seeming opposition of hospital managers to paying for them. The authors conclude that diminishing the frequency with which nurses recap needles, increasing precautions they take, reducing use of temporary nursing personnel, and implementing organizational changes may lower the odds of nurses being injured. Further, the authors believe that these findings indicate that the recent downsizing or "deprofessionalizing" of the hospital's work force is not without potential adverse consequences.

FROM: Aiken LH, Sloane DM, Klocinski JL. Hospital nurses' occupational exposure to blood: prospective, retrospective, and institutional reports. *Am J Public Health* 1997;87:103-107.