An analysis of blood and body fluid exposures sustained by house officers, medical students, and nursing personnel on acute-care general medical wards: a prospective study. Infect Control Hosp Epidemiol

Abstract:

OBJECTIVE: To prospectively examine the epidemiology of blood and body fluid exposures sustained by medicine housestaff, medical school students, registered nurses (RNs), licensed practical nurses (LPNs), and nurses' aides (NAs) on general medicine wards and to define problem areas that may be amenable to change. DESIGN: Daily data collection during 9 months using a self-reporting questionnaire. SETTING: General medical wards in 2 tertiary referral hospitals. PARTICIPANTS: Medicine housestaff/students and nursing personnel. RESULTS: Physicians reported 644 exposures, of which 98 (15.2%), 296 (46.0%), and 250 (38.8%) were sustained by medicine residents, interns, and students, respectively. Blood contact occurred with 591 (91.8%) exposures. For physicians, 575 (89.3%) exposures occurred during venipuncture, intravenous catheter manipulation, and arterial punctures. Interns and students most commonly incurred exposures during venipunctures and intravenous manipulations; residents commonly were exposed during emergent intravenous catheter placements. Five-hundred-twenty-two (81%) exposures occurred between 7 A.M. and 7 P.M. During 524 (81.4%) exposures, physicians were not using barrier devices. Nurses reported 235 exposures, of which 140 (59.6%), 23 (9.8%), and 72 (30.6%) were sustained by RNs, LPNs, and NAs, respectively. RN exposures commonly occurred during intravenous manipulations and glucometer fingersticks. LPNs and NAs incurred a higher percentage of exposures during nonprocedural patient care. Blood contact and wound drainage accounted for 167 (71.1%) and 31 (13.2%) exposures, respectively. CONCLUSIONS: Exposures to blood and body fluids frequently are incurred by healthcare workers on general medical wards. Efforts to reduce these exposures should be directed not only at improving procedural skills of healthcare workers for venipunctures, intravenous catheter insertions, and glucometer fingersticks, but also in increasing barrier use during procedural and nonprocedural tasks.