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## EPINet Report:

# Percutaneous Injuries in Outpatient Settings and Physician's Offices

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LITTLE HAS BEEN PUBLISHED ON PERCUTANEOUS injury risks to health care workers employed in physicians' offices and outpatient settings. And when it comes to implementing regulations that protect the health and safety of employees in these settings, the maxim "no data, no problem" applies in full force. Health care workers in office settings may be more vulnerable than others if there are no data to support their need for protective measures.

Although as many as half of all health care workers are employed in non-hospital settings, most published reports on percutaneous injuries to health care workers describe exposure risks in hospitals. The main reason for this is the convenient access to hospital data. Hospitals employ large numbers of health care workers who are required to report at-risk injuries and blood exposures to a central location,

usually the employee health department, where a surveillance database is compiled. Surveys have shown that percutaneous injury rates for different health care worker groups vary from a low of 0.15 injuries per year to a high of more than one injury per year for surgeons, the group at highest risk of injury. In a hypothetical hospital that employs 1,000 health care workers who each have an average annual risk



of 0.2 percutaneous injuries, 200 injuries would occur each year. The accumulated injury data would be sufficient to reveal the risk patterns of the different clinical settings and job categories in that hospital, and create an incentive for the hospital to address these risks and reduce the number of injuries.

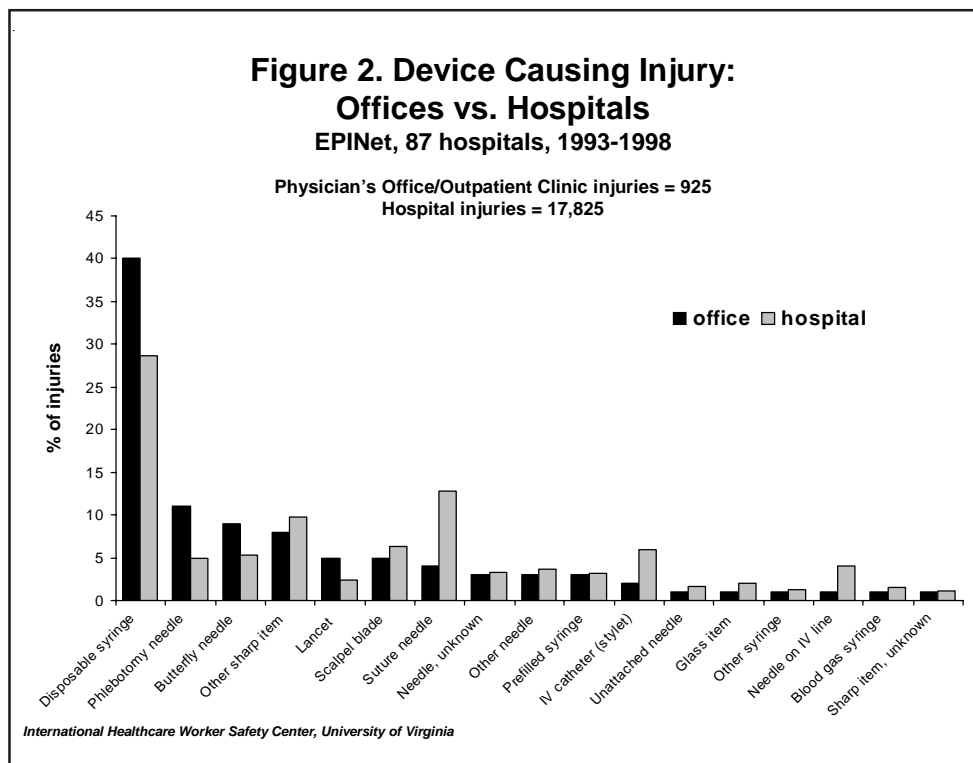
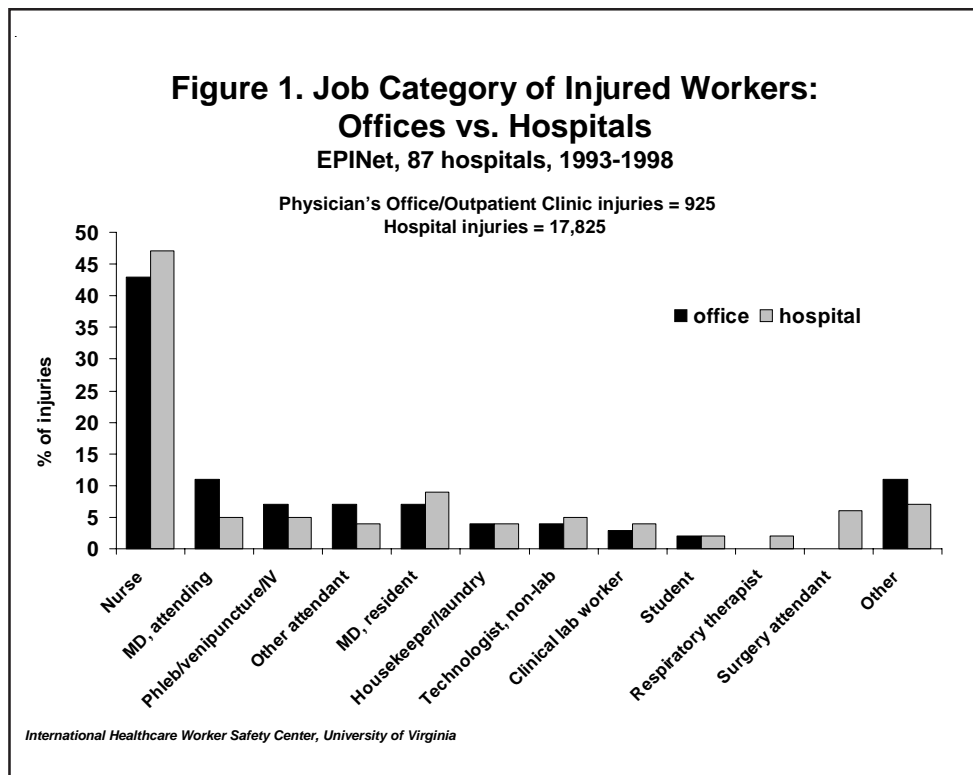
However, the situation is different in physicians' offices where there are relatively few employees. For example, in a practice employing 10 full-time

## Percutaneous Injuries in Outpatient Settings (cont.)

health care workers, each with an annual risk of 0.2 percutaneous injuries, only one injury would occur every five years, on average. Workers in this kind of setting may erroneously believe that they are at low occupational risk because they rarely observe percutaneous injuries. Such a viewpoint has been reflected in arguments of small employers seeking exemption from safety regulations or laws because there were few or no recent injuries in their facilities. However, this perspective overlooks the fact that the true risk of exposure in a small office or outpatient setting is not determined by the number of injuries per practice, but rather by the injury rate per device or per at-risk procedure performed. Research on this topic has been hampered by the difficulty in collecting small amounts of data from a large number of clinical sites.

Assessment of the occupational risk of health care workers in outpatient settings should take into consideration (1) whether they perform procedures associated with the risk of bloodborne pathogen transmission, and (2) whether their rate of percutaneous injuries is different from that of hospital workers performing the same procedures.

The Exposure Prevention Information Network (EPINet) database provides some information on the occupational risks encountered in physicians' offices and outpatient clinics. From 1993 through 1998, 84 hospitals provided EPINet data on percutaneous injuries to the International Health Care Worker Safety Center. Most of the data were from in-patient settings. But in some instances, physicians'



offices and outpatient clinics were affiliated with EPINet hospitals, and percutaneous injuries reported from those sites were entered into the EPINet database. Figures 1, 2 and 3 compare the characteristics of percutaneous injuries occurring in in-patient

settings to those occurring in physicians' offices and outpatient clinics.

There were 17,825 percutaneous injuries reported by hospital workers during the six-year interval. Workers in physicians' offices and outpatient clinics reported 925

## Percutaneous Injuries in Outpatient Settings (cont.)

injuries during the same time period. **Figure 1** shows that the distribution of job categories for workers reporting injuries was similar for office and in-patient settings. There were proportionately slightly fewer nurses, and proportionately more physicians, phlebotomists, and attendants, reporting injuries from office settings.

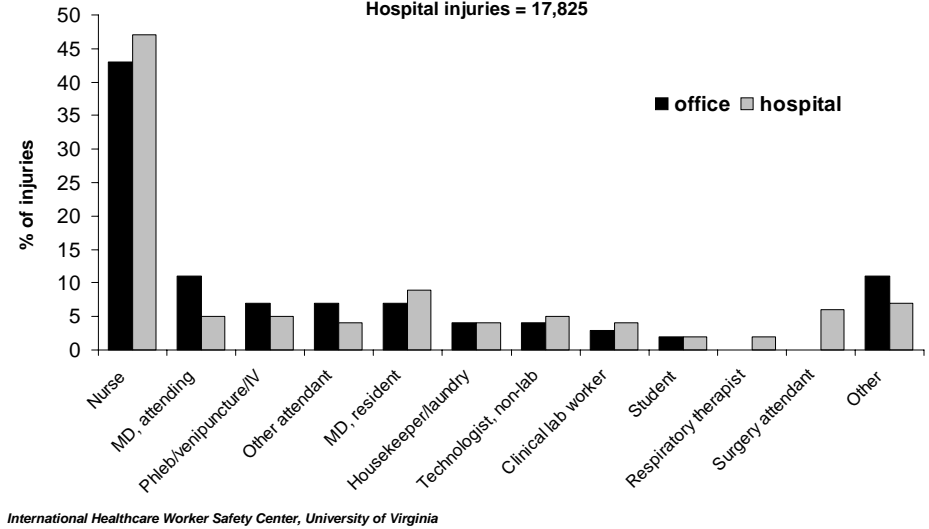
More pertinent to the question of risk is the type of device causing injury and the procedure being performed. Blood-filled, hollow-bore devices, such as those used for blood drawing and vascular access, carry a higher infection transmission rate than needles used for injections. **Figure 2** compares the patterns of device risks in the two settings. In office settings, there are proportionately more injuries from syringes, phlebotomy needles, butterflies and lancets. In hospitals, there are proportionately more injuries from scalpel blades, suture needles, IV catheter stylets, and needles accessing IV ports.

**Figure 3** compares the procedures associated with the devices causing injuries. This comparison shows that, in office settings, proportionately more injuries were associated with injections and blood drawing, whereas in hospital settings, proportionately more injuries were associated with suturing, cutting, and intravenous access. Overall, 29.0% of injuries in office settings were “high risk,” that is, associated with blood drawing or intravenous access. The percentage of high-risk injuries in hospitals was lower, with 24.4% of injuries associated with blood drawing or intravenous access.

**Figure 1. Job Category of Injured Workers: Offices vs. Hospitals**

EPINet, 87 hospitals, 1993-1998

Physician's Office/Outpatient Clinic injuries = 925  
Hospital injuries = 17,825



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Annual percutaneous injury rates for the different job categories could not be calculated or compared using EPINet data. However, a previous survey of phlebotomists conducted in 1994 and reported in *AEP* (vol. 1, no. 1, pp. 6-7) provides data on percutaneous injury risks to phlebotomists working in hospitals versus those working in non-hospital settings. When adjusted to a standard 40-hour work week, 76 phlebotomists working in hospitals had an annual needlestick rate of 0.33, while 64 phlebotomists working in non-hospital settings had a higher adjusted needlestick rate of 0.40 injuries per year.

## Conclusions

These figures show that when sufficient data are compiled on percutaneous injuries sustained in physicians' offices and outpatient clinics and compared to injuries

occurring in hospital settings, a similar spectrum of risks can be seen in both settings. And when the causes of the injuries are compared, workers in physicians' offices and outpatient settings have a proportionately higher frequency of injuries from blood-filled needles—those most likely to transmit bloodborne pathogens. Currently, there are no data that suggest that the risks of occupational blood exposure are less for health care workers in non-hospital settings than for those employed by hospitals.

In conclusion, wherever health care workers must handle sharp medical devices, including injection equipment, blood-drawing devices, and vascular access needles, they are in need of equal protection afforded by the safest technology, regardless of clinical setting. □