

Risk factors for sharps injuries and the prevalence of blood borne infections among paramedics

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Background:

Although paramedics constitute a group of medical professionals continually at risk for sharps injuries (SI), possibly resulting in occupationally acquired bloodborne infections (BBI), data on blood exposures in this group are rather scant.

Objectives:

To assess the incidence and selected risk factors for SI and to estimate the prevalence of BBI among paramedics.

Methods:

An anonymous cross-sectional serosurvey, with ELISA system used to detect anti-HBc/anti-HCV/anti-HIV, was conducted among paramedics from 10 randomly selected ambulance stations in West Pomerania, Poland, between December 2018–October 2019. Knowledge about infection-control procedures was assessed with the use of 10 multiple choice questions.

Results:

Response rate: 93%. Among 286 participants (76.5% males, Me age 37 years, Me length of practice 14 years) 19.6% sustained ≥ 1 SI in the preceding year (Me = 6.0, range 1–100);

50.8% of incidents were not reported. Regarding the most recent SI - the most often it took place in an ambulance (45.9%), during an emergency procedure (76.3%) and was caused by a hollow-bore needle (60.7%); in 66.1% of cases the device did not have a safety feature. Risk factors for SI were as follows: 52.6% paramedics did not use safety engineered devices at work, 52.2% reported recapping a needle in the preceding year, 5.5% irregularly used gloves; 3.4% had never participated in infection control training. The mean knowledge score was 2.6. The lack of infection control training was associated with higher odds (OR 4.64) of a SI. HBV vaccination coverage was 95.6%. Anti-HBc were found in 7.3% participants, no anti-HCV/anti-HIV positive paramedics were recognized.

Conclusions:

Frequent SI, about half of those unreported, are important risk factors which could contribute to occupational HBV infections reported among paramedics. The risk of SI could be reduced by supply with safety engineered devices, safe work practices and an adequate training in infection-control procedures.

Key messages:

- Most risk factors for sharps injuries among Polish paramedics are modifiable.
- Continuous exposure to sharps injuries should be taken into account while assessing paramedics' risk for acquiring an occupational blood-borne infection.