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The National Study to Prevent Blood Exposures in Paramedics: Protecting the Nation's First Responders

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This study presents results on occupational blood exposure from a national mail survey of paramedics, the first national study of occupational blood exposure in this population. Previous studies of local populations showed that paramedics are at risk for occupational blood exposure and infection from blood borne pathogens including hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV). The goal of the study is to reduce occupational exposure to blood borne pathogens among paramedics. The study has four primary aims:

1) Estimate the incidence of blood exposure;
2) Identify risk factors and quantify their effects for exposure to blood;
3) Estimate the use and availability of various exposure prevention measures; and
4) Identify potential strategies for prevention of occupational blood exposure.

Using a two-stage sampling scheme, 6,500 paramedics were selected from lists of licensed paramedics provided by ten state licensing agencies. Questionnaires were mailed to paramedics in California, Connecticut, Florida, Kentucky, Minnesota, North Carolina, Ohio, Pennsylvania, Tennessee, and Texas during fall 2002 through February 2003. Illinois was also selected, but was unable to provide paramedics' contact information because of privacy restrictions.

Paramedics were asked about current job status, use and availability of equipment and devices, safety procedures, and blood exposure incidents within the previous 12 months. For each incident reported, they were asked about route of exposure (needle or lancet stick; other sharp object stick; blood in eyes, nose, or mouth; bite; or blood on non-intact skin), body part exposed, safety devices or equipment that were being used, circumstances contributing to the exposure, and whether the incident was reported.

According to preliminary results, the most frequent exposures reported were mucocutaneous blood splashes to the eyes, nose, or mouth, and perhaps blood contact with non-intact skin. While almost 9% (unweighted) of paramedics reported a bite from a patient, in only 20% of such cases was the skin broken. Combative patients were frequently involved in exposure events. Detailed results on exposure rates, use of protective measures, and risk factors for exposure will be presented.

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