

These short summaries are taken from a range of other evidence-based journals and publications

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Needlestick and hepatitis C transmission

Sulkowski MS, Ray SC, Thomas DL. *Needlestick transmission of hepatitis C.* *JAMA* 2002; 287:2406–2413

Wang TY, Kuo HT, Chen LC, et al. *Use of polymerase chain reaction for early detection and management of hepatitis C virus infection after needlestick injury.* *Ann Clin Lab Sci* 2002; 32:137–141

This Electronic Bandolier article reviews two recent papers about needlestick injury and hepatitis C virus (HCV) transmission. The papers include five studies documenting the transmission of HCV to healthcare workers. There were 329 exposed persons with an overall transmission rate of 4.3% but this ranged from 0 to 10%. There are differences between the studies including determination of transmission (RNA or antibody measurements, completeness of follow-up, and whether all source patients were HCV-positive, or the nature of the injury).

The studies do not provide as much information as we need to be sure of the rate of transmission of HCV. The bottom line, however, is that a sensible estimate for the transmission rate of HCV is 5%.

Electronic Bandolier www.jr2.ox.ac.uk/bandolier/booth/needlestick/hepctran.html

Occupational exposure and antiretroviral prophylaxis

Russi M, Buitrago M, Goulet J, et al.

Antiretroviral prophylaxis of health care workers at two urban medical centers. *J Occup Environ Med* 2000; 42:1092–1100

Following guidance about blood-borne human immunodeficiency virus (HIV) infection, a protocol was drafted for provision of a 24-h immediate evaluation of blood-borne pathogen exposure. Instruction sheets were developed, education sessions held, and special laboratory requests implemented to ensure confidentiality of results and to streamline follow-up. Initial prescriptions were made available for a 96-h supply of antiretroviral medication while the results from laboratory tests were awaited.

Over 18 months, there were 639 potential exposures. Of these, 44% occurred in nurses, 22% in doctors, 22% in clinical technicians and the remainder in housekeeping, and other, staff. Most of the exposures (62%) involved hollow-bore needles. The HIV status was known to be positive in 7%, negative in 63% and was unknown in 30%. HIV-positive tests were found in 0.15% of exposed workers.

The hepatitis C virus status was positive in 4.8% of source patients, and 1% among exposed workers.

A total of 82 individuals (13%) took postexposure prophylaxis for HIV, with two-thirds taking it for less than 96 h. Ten completed the full 4-week course. Following confirmation that the source patient tested negative for HIV 65% discontinued, 13% did so with adverse gastrointestinal effects, 4% with headache, and 18% made a personal decision after counseling.

Prophylaxis was accepted more by men than women, more by doctors than nurses or clinical technicians, and when the source patient was known to have tested positive for HIV. In all, 29 workers did not accept prophylaxis even when the source patients tested positive for HIV. For exposure involving hepatitis C virus-positive source patients, 26% accepted postexposure prophylaxis.

In summary, nurses and clinical technicians had most needlestick injuries. The occupation and sex of the exposed healthcare worker was a major determinant of uptake of postexposure prophylaxis.

Electronic Bandolier www.jr2.ox.ac.uk/bandolier/booth/needlestick/occp.html

Occupational exposure and hepatitis C

Yee LJ, Weiss HL, Langner RG, et al.

Risk factors for acquisition of hepatitis C virus infection: a case series and potential implication for disease surveillance. *BMC Infectious Diseases* 2001; 1:8 (www.biomedcentral.com/1471-2334/1/8)

This study examined the risk factors for acquisition of hepatitis C virus (HCV) infection in a group of individuals chronically infected with HCV (hepatitis B virus and human immunodeficiency virus-infected people were excluded) in the US, using a detailed questionnaire during an interview with a single investigator.

In this group of 148 people (88 men, 60 women) of between 18 and 72 years of age, only 5% had no known risk factor. The most commonly found known risk factors were injecting drug use, sharing razors and toothbrushes, body piercing, being a recipient of blood products, sexual exposure and occupational exposure to blood (48–32% of cases) Tattooing was associated with 17% of cases. There were differences between the sexes with 92% of women having body piercing. Most cases had more than one risk factor.

Bandolier is developing a site pulling together information about needlestick injuries. This can be viewed at <http://www.jr2.ox.ac.uk/bandolier/booth/needlestick/intersr.html>

Electronic Bandolier www.jr2.ox.ac.uk/bandolier/booth/needlestick/occhcv.html