

High Risk Needle Stick Injuries

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Accurate data on needle stick injuries is not generally available. Most incidents are not reported. The estimated incidence of percutaneous injury to Health Care Workers is reported to be around 4% [range 1 to 6.2].

The principle concern from needle stick injury is transmission of blood borne viruses; in the main HIV, HBV and HCV, but in certain circumstances also exotic infections like malaria, lassa fever and rabies. The risk of infection is determined by the infectivity of the source subject [best estimated by blood viral load] and the severity of the injury [deep punctures with a hollow bore needle visibly contaminated with blood constitute greatest risk]. The average risk of transmission from patients with HIV, HCV and HBV is 0.3%, 1.8% and 30% respectively.

All needle stick injuries require an immediate and thorough risk assessment. Especially with HIV delay must be avoided. Antiretroviral therapy is of proven effectiveness preventing HIV transmission, but failures have been reported. HBV exposure in non-immune individuals requires a combination of passive and active immunisation. Post exposure prophylaxis is not available for HCV, but individuals who acquire infection can be treated with pegylated interferon and ribavirin. International expert committees have produced algorithms addressing various scenarios.

Needle stick injuries are potentially dangerous and are also associated with substantial psychological distress and financial cost. Strategies to prevent injury are critical and include education, training and legislation. Safe alternatives to using needles often exist and should be encouraged. Changing to IV safety devices has been reported to reduce needle stick injuries by around 50% [range 23-100%].