

Table 1 - Hepatitis B transmission risk by exposure type

Exposure		Risk per exposure (unless otherwise stated)
Needlestick	Healthcare setting, patient known	HBeAg (+) = 37-62% risk of serologic evidence of infection in recipient HBeAg (-) = 23-37% risk of serologic evidence of infection, 1-6% clinical infection. [3]
	Healthcare setting, patient unknown, or patient known but serology unknown	Requires risk assessment
	Community setting	2 case reports only [208, 80]. Risk very low. Requires risk assessment. For example, if the local PWID population has a seroprevalence of 50%, the risk from a community acquired needlestick is 12-31% [53]. (Note: seroprevalence in PWID in Ireland is lower than 50% - see epidemiology section).
Other percutaneous injuries with blood exposure	Healthcare sharp (e.g. lancet)	Risk per exposure unknown. 36.8% [209] -42% [210] developed HBV after repeat exposures.
	Exposure prone procedure by infected healthcare worker	Transmission rates vary between 6 and 15% [88] - most were before standard precautions introduced
Transfusion		52-69% transmission if transfused with HBsAg (+) blood [211]
Human bites		Risk negligible in the absence of visible blood. Case reports only. Requires risk assessment.
Percutaneous exposure to other body fluids (e.g. saliva)		Very low risk. Case reports - HBeAg (+) source. [78] Requires risk assessment.
Sexual exposures	Heterosexual exposures in general	18% [212]– 40%[213] - 44.2% [214] infection rate seen in regular partners of HBV infected people Increased risk if: multiple partners [67, 71] syphilis [71, 72, 215] gonorrhoea [215] receptive anal intercourse [72].
	Men who have sex with men	Increased risk of HBV transmission associated with ulcerative STI, gonorrhoea/chlamydia, sexual partner with HIV/AIDS, multiple sexual partners, commercial sex work [216] history of insertive anal intercourse. [217]
	Receptive oral sex (fellatio)	Possible means of transmission [218].

Risk assessment

- Type/details of injury – as above
- Source status – increased risk with HBeAg, high viral load
- Recipient status – increased risk if immunocompromised
- For unknown source, consider where injury occurred – community setting versus hospital setting
 - if in hospital – consider high-risk ward/patients
 - if in community – consider prevalence of HBV and of PWID locally