

## European Recommendations for the Management of Healthcare Workers Occupationally Exposed to Hepatitis

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### Abstract

Exposure prevention is the primary strategy to reduce the risk of occupational bloodborne pathogen infections in healthcare workers (HCW). HCWs should be made aware of the medicolegal and clinical relevance of reporting an exposure, and have ready access to expert consultants to receive appropriate counselling, treatment and follow-up. Vaccination against hepatitis B virus (HBV), and demonstration of immunisation before employment are strongly recommended. HCWs with postvaccinal anti-HBs levels, 1-2 months after vaccine completion,  $\geq 10$  mIU/mL are considered as responders. Responders are protected against HBV infection: booster doses of vaccine or periodic antibody concentration testing are not recommended. Alternative strategies to overcome non-response should be adopted. Isolated anti-HBc positive HCWs should be tested for anti-HBcIgM and HBV-DNA: if negative, anti-HBs response to vaccination can distinguish between infection (anti-HBs  $\geq 50$  mIU/ml 30 days after 1st vaccination: anamnestic response) and false positive results (anti-HBs  $\geq 10$  mIU/ml 30 days after 3rd vaccination: primary response); true positive subjects have resistance to re-infection, and do not need vaccination. The management of an occupational exposure to HBV differs according to the susceptibility of the exposed HCW and the serostatus of the source. When indicated, post-exposure prophylaxis with HBV vaccine, hepatitis B immunoglobulin or both must be started as soon as possible (within 1-7 days). In the absence of prophylaxis against hepatitis C virus (HCV) infection, follow-up management of HCV exposures depends on whether antiviral treatment during the acute phase is chosen. Test the HCW for HCV-Ab at baseline and after 6 months; up to 12 for HIV-HCV co-infected sources. If treatment is recommended, perform ALT (amino alanine transferase) activity at baseline and monthly for 4 months after exposure, and qualitative HCV-RNA when an increase is detected. Introduction Bloodborne pathogens such as hepatitis B (HBV) and C virus (HCV) represent an important hazard for healthcare workers (HCWs) [1]. In the general population, HCV prevalence varies geographically from about 0.5% in northern countries to 2% in Mediterranean countries, with some 5 million chronic carriers estimated in Europe; while HBV prevalence ranges from 0.3% to 3%. The World Health Organization (WHO) estimates that each year in Europe 304 000 HCWs are exposed to at least one percutaneous injury with a sharp object contaminated with HBV, 149 000 are exposed to HCV and 22 000 to HIV. The probability of acquiring a bloodborne infection following an occupational exposure has been estimated to be on average.

**Keywords:** European, Recommendations, Management, Healthcare, Workers, Occupationally, Exposed, Hepatitis

### Introduction

Bloodborne pathogens such as hepatitis B (HBV) and C virus (HCV) represent an important hazard for healthcare workers (HCWs) [1]. In the general population, HCV prevalence varies geographically from about 0.5% in northern countries to 2% in Mediterranean countries, with some 5 million chronic carriers estimated in Europe; while HBV prevalence ranges from 0.3% to 3%. The World Health Organization (WHO) estimates that each year in Europe 304 000 HCWs are exposed to at least one percutaneous injury with a sharp object contaminated with HBV, 149 000 are exposed to HCV and 22 000 to HIV.

We present here recommendations for the general management of occupational risk of bloodborne infections, HBV vaccination and management of HBV and HCV exposures. A description of the project and recommendations for HIV post-exposure management, including antiretroviral prophylaxis, has been previously published [2], and so issues related to occupational risk and prevention of HIV infection following an occupational exposure will not be discussed further.