

Infection Prevention and Control Guidelines for Anesthesia Care

Chapter XX: Vaccinations, Post Exposure Prophylaxis, and Screening

Introduction

Preventive measures like vaccinations, prophylaxis, and screening tests are important for protecting healthcare providers from contracting and spreading infectious diseases in healthcare settings.¹ Healthcare facilities may establish policies requiring certain vaccinations for their healthcare personnel, which has been shown to increase vaccination coverage rates among providers.¹⁻⁴ However, when implementing vaccination policies, facilities must comply with applicable local, state, and federal laws and regulations, as well as accreditation standards.² Facilities should provide reasonable accommodations for personnel who are exempt from mandatory vaccination.⁵ For specific clinical guidance on dosing, contraindications, and other details for each vaccine, healthcare providers should consult the package inserts and recommendations provided by the vaccine manufacturers.

Purpose

This chapter outlines preventive measures to protect healthcare providers from occupational exposures to infectious diseases like influenza, hepatitis B, SARS-CoV-2, and tuberculosis. It covers recommended vaccinations, post-exposure protocols, screening tests, and guidance for healthcare facilities to establish effective policies and maintain compliance with regulations.

Audience

This resource is intended for Certified Registered Nurse Anesthetists (CRNAs), also known as nurse anesthesiologists or nurse anesthetists, resident registered nurse anesthetists, other anesthesia providers, members of the interdisciplinary team, administrators involved in policy developed and implementation, quality assurance professionals, and other interested stakeholders.

Seasonal Influenza (Flu) Vaccination

The CDC recommends that all healthcare providers receive an annual influenza vaccine.^{1,3,6-8} Facilities may encourage healthcare providers to obtain required vaccinations through interventions such as making vaccine available at no cost at the workplace along with active promotion of vaccination to increase vaccination rates among healthcare provider.¹ Healthcare personnel who receive the live attenuated influenza vaccine (LAIV4) should avoid contact with severely immunosuppressed patients for 7 days after vaccination.⁹ If a healthcare provider is unable to obtain the influenza vaccine, facility policy should be consulted regarding patient care.

Hepatitis B Vaccination

The risk of HBV transmission to healthcare professionals is 3-5 times higher than to the general public.^{6,10-12} Healthcare providers who perform tasks that may involve exposure to blood or body fluids should consider receiving a three-dose series of hepatitis B vaccine at 0-, 1-, and 6-month intervals, as appropriate for the vaccine brand.^{10,13,14} Test for hepatitis B surface antibody (anti-HBs) to document immunity 1-2 months after the third dose.¹⁰ Positive results for anti-HBs equal to or >10 mIU/mL confirm immunization.^{9,10,14}

SARS-CoV-2 Vaccination

Healthcare workers have an increased risk of exposure to SARS-CoV-2 and studies show COVID-19 vaccines are highly effective at preventing transmission in real-world conditions.^{15,16} The AANA supports offering COVID-19 vaccinations to frontline healthcare personnel, including CRNAs and nurse anesthesiology students. The AANA strongly encourages healthcare personnel to be vaccinated to protect their patients, colleagues, families, and themselves. While vaccine hesitancy exists among some patients and healthcare providers, AANA encourages education and review of scientific evidence about the vaccine and its impact on infection prevention, patient care, infection spread, and herd immunity.

Post-Exposure Prophylaxis (PEP)

In the event of a high-risk exposure, such as needlestick injury, to hepatitis B virus (HBV), hepatitis C virus (HCV), human immunodeficiency virus (HIV), or *Mycobacterium tuberculosis* (TB), healthcare providers should immediately review and follow their facility's policies and procedures.

PEP for HIV

- PEP for HIV should be initiated as soon as possible, ideally within 2 hours but no later than 72 hours after potential exposure, and consists of a 28-day course of two or three antiretroviral medications.¹⁷⁻²⁰
- Following PEP administration, healthcare providers should follow up with HIV testing at baseline, 4-6 weeks, 3 months, and 6 months post-exposure, and should be educated about the importance of adherence to the full 28-day regimen, potential side effects, and the need for additional precautions to prevent HIV transmission during the follow-up period.¹⁷⁻²⁰

Tuberculosis Screening

- Healthcare providers who may have occupational exposure should receive annual TB skin testing (Mantoux tuberculin skin test) or blood tests, as well as post-exposure testing.
 - A positive TB skin test (Mantoux tuberculin skin test) or TB blood test only indicates that a person has been infected with TB bacteria. It does not tell whether the person has latent TB infection (LTBI) or has progressed to TB disease.²¹⁻²³

- Other tests, such as a chest x-ray and a sample of sputum, determine the presence of active TB disease, in accordance with symptoms such as fever, weight loss, and night sweats.^{22,23}
- Review facility policy for specific guidelines for identification, reporting, and management of an active TB case.
 - Facility policies should be implemented in accordance with Occupational Safety and Health Administration (OSHA) and state health department standards.²⁴
 - Refer to the *Equipment and Environmental Cleaning, Disinfection, and Sterilization* chapter for information regarding the use of filters and appropriate cleaning procedures for the anesthesia machine following a suspected case of active TB.

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155 The *Infection Control Guide for Certified Registered Nurse Anesthetists* was adopted by the AANA Board of Directors
156 in 1992 and revised in 1993, 1997, November 2012. In February 2015, the AANA Board of Directors archived the
157 guide and adopted the *Infection Prevention and Control Guidelines for Anesthesia Care*.

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