

**Prevention of mother-to-child transmission of hepatitis B virus**

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**Answers**

CME/CPD/CNE/PEM point: 1

Validity Period: 21 June 2021 to 20 June 2022

<b>College/ Programme</b>	<b>CME/ CPD Point</b>	<b>CME/CPD Category</b>
Anaesthesiologists	1	Non ANA Passive
Community Medicine	1	AP-SS
Dental Surgeons	1	Self-Study
Emergency Medicine	1	PP
Family Physicians	1	Cat 5.2
Obstetricians and Gynaecologists	1	Self-Study
Ophthalmologists	1	Passive
Orthopaedic Surgeons	1	Cat B
Otorhinolaryngologists	1	Cat 1.2
Paediatricians	1	Cat E
Pathologists	1	PP
Physicians	1	-
Psychiatrists	1	SSOL
Radiologists	1	Cat B
Surgeons	1	Passive
<b>MCHK CME Programme for Practising Doctors who are not taking CME Programme for Specialists</b>	1	Passive (Accredited by DH)

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1. Which of the following is **NOT** a correct description about mother-to-child transmission (MTCT) of hepatitis B virus (HBV)?
  - A. Chronicity is more common following acute HBV infection in neonates.
  - B. In Hong Kong, the hepatitis B surface antigen (HBsAg) seroprevalence in antenatal mothers was around 4% in 2019.
  - C. MTCT is an epidemiologically important route of HBV transmission.
  - D. Most of the disease burden of chronic HBV infection comes from infection acquired soon after birth or during early childhood, especially in high-prevalence settings.
  - E. **Hepatitis B vaccination is the only intervention to prevent MTCT of HBV.** ✓
  
2. As outlined in *Global health sector strategy on viral hepatitis, 2016 - 2021*, what is the surrogate for the target of a 90% reduction in incidence of chronic HBV infection by 2030?
  - A. **HBsAg prevalence at 0.1% or below among children 5 years of age** ✓
  - B. HBsAg prevalence at 1% or below among children 5 years of age
  - C. HBsAg prevalence at 5% or below among children 5 years of age
  - D. HBsAg prevalence at 1% or below among adult population
  - E. HBsAg prevalence at 3% or below among adult population
  
3. Which of the following is recommended by World Health Organization (WHO) as regards antenatal HBV screening?
  - A. Hepatitis B surface antibody (anti-HBs) is the test recommended for screening chronic HBV infection among pregnant women.
  - B. HBsAg serological testing should only be offered to those pregnant women with family history of chronic HBV infection.
  - C. HBsAg serological testing should only be offered to those pregnant women with personal history of chronic HBV infection.
  - D. HBsAg serological testing should be routinely offered to all pregnant women in antenatal clinics only when the HBsAg seroprevalence in the general population is >10%.
  - E. **HBsAg serological testing should be routinely offered to all pregnant women in settings with an intermediate ( $\geq 2\%$ ) or high ( $\geq 5\%$ ) HBsAg seroprevalence in the general population.** ✓

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4. Which of the following is **NOT** included in the incremental approach to prevention of HBV infection at birth and in the first years of life?
  - A. 3 doses of hepatitis B vaccine, including a timely birth dose within 24 hours
  - B. Administration of hepatitis B immunoglobulin to infants born to HBsAg-positive mothers
  - C. Administration of hepatitis B immunoglobulin to pregnant women ✓**
  - D. Maternal use of antiviral prophylaxis if maternal HBV DNA viral load is high
  - E. Antenatal HBsAg testing, linkage to care and follow up of infants
  
5. Which of the following is **NOT** a correct description about the safety and efficacy of antiviral prophylaxis in pregnant women?
  - A. The safety and efficacy of antiviral prophylaxis in pregnant women and their children have been evaluated in systematic reviews and meta-analyses.
  - B. Using tenofovir disoproxil fumarate (TDF) prophylaxis in pregnancy has been shown to be effective in reducing the risk of MTCT of HBV.
  - C. The safety of TDF has been documented in the context of preventing MTCT of human immunodeficiency virus (HIV).
  - D. TDF was proven to be significantly associated with higher occurrence of maternal or infant adverse events. ✓**
  - E. The latest systematic review commissioned by WHO did not find an increased risk of postpartum hepatitis B flare after cessation of TDF prophylaxis as compared with the control group.
  
6. According to WHO latest guidelines in 2020, what is the recommended threshold of maternal HBV viral load for using antiviral prophylaxis in pregnancy to prevent MTCT of HBV?
  - A.  $\geq 4.3 \log_{10}$  IU/mL ( $\geq 20\,000$  IU/mL)
  - B.  $\geq 5.3 \log_{10}$  IU/mL ( $\geq 200\,000$  IU/mL) ✓**
  - C.  $\geq 6.3 \log_{10}$  IU/mL ( $\geq 2\,000\,000$  IU/mL)
  - D.  $\geq 7.3 \log_{10}$  IU/mL ( $\geq 20\,000\,000$  IU/mL)
  - E.  $\geq 8.3 \log_{10}$  IU/mL ( $\geq 200\,000\,000$  IU/mL)
  
7. To prevent MTCT of HBV, when should the antiviral prophylaxis start for eligible pregnant women having high HBV viral load?
  - A. Immediately after knowing the test results of viral load in the first trimester
  - B. By the end of the first trimester
  - C. In the third trimester ✓**
  - D. During delivery
  - E. After delivery

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8. Which of the following measures is a new initiative for preventing MTCT of HBV in Hong Kong, as outlined in *Hong Kong Viral Hepatitis Action Plan 2020 – 2024*?
- A. Routine screening of pregnant women for HBsAg during each pregnancy
  - B. Universal childhood hepatitis B vaccination
  - C. Administration of HBIG to babies born to HBsAg-positive mothers
  - D. Provision of the treatment option to use antiviral prophylaxis for pregnant women having high HBV viral load ✓**
  - E. Post-vaccination serologic testing for all new-borns in Hong Kong
9. Which of the following is **NOT** a correct description as regards the use of antiviral prophylaxis to prevent MTCT of HBV in Hong Kong?
- A. Use of antiviral prophylaxis for pregnant women with high viral load has been rolled out to all birthing hospitals under Hospital Authority (HA) since August 2020.
  - B. Baseline HBV DNA level would be assessed for HBsAg-positive pregnant women under care by HA or Maternal and Child Health Centres of the Department of Health.
  - C. Pregnant women having high viral load ( $\geq 200\,000$  IU/mL) would be referred to the hepatology clinic for follow-up and consideration of initiating maternal TDF prophylaxis.
  - D. Pregnant women having viral load less than 200 000 IU/mL would be referred to doctors conversant with HBV treatment for routine assessment and management of the liver condition in accordance with the prevailing practices for hepatitis B patients.
  - E. The use of antiviral prophylaxis is offered to all pregnant women tested positive for HBsAg. ✓**
10. Which of the following is **NOT** the purpose of post-vaccination serologic testing programme for babies born to HBsAg-positive mothers?
- A. To identify babies who do not have an adequate immune response to an initial hepatitis B vaccine series
  - B. To arrange hepatitis B re-vaccination if needed
  - C. To examine the liver function of all babies born to HBsAg-positive mothers ✓**
  - D. To enable identification of HBV-infected babies for appropriate medical care
  - E. To provide useful and systematic information to monitor the effectiveness of the overall MTCT prevention strategy