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TO:	Health Alert Network
FROM:	Debra Bogen, M.D., FAAP, Acting Secretary of Health
SUBJECT:	Prenatal Hepatitis B and C Testing Recommendations
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This transmission is a “Health Advisory” and provides important information for a specific incident or situation; may not require immediate action.

HOSPITALS: PLEASE SHARE WITH ALL MEDICAL, PEDIATRIC, INFECTION CONTROL, NURSING AND LABORATORY STAFF IN YOUR HOSPITAL; EMS COUNCILS: PLEASE DISTRIBUTE AS APPROPRIATE; FQHCs: PLEASE DISTRIBUTE AS APPROPRIATE; LOCAL HEALTH JURISDICTIONS: PLEASE DISTRIBUTE AS APPROPRIATE; PROFESSIONAL ORGANIZATIONS: PLEASE DISTRIBUTE TO YOUR MEMBERSHIP

Summary

- **The CDC recommends hepatitis B and C screening for all adults at least once in a lifetime and during each pregnancy.**
- The CDC recommends use of the triple panel (HBsAg, hepatitis B surface antibody (anti-HBs), and total hepatitis B core antibody (anti-HBc)) for hepatitis B screening during each pregnancy – preferably in the first trimester – regardless of vaccination status. Those with prior triple panel screening only need HBsAg screening during each subsequent pregnancy.
- The CDC recommends use of a hepatitis C antibody test with a reflex to a nucleic acid test (NAT) for hepatitis C virus RNA during each pregnancy. If the patient has a history of hepatitis C infection, it is recommended to complete a NAT for HCV RNA during pregnancy.
- All cases of hepatitis B and C should be reported via PA-NEDSS. Please report any suspected clusters of hepatitis B and/or C by calling DOH at 1-877-PA-HEALTH (1-877-724-3258) or your local health department.

The purpose of this Health Advisory is to make clinicians aware of updated recommendations for hepatitis B and hepatitis C testing in pregnancy. These infectious conditions can lead to profound consequences for birthing parents and their infants. Hepatitis B and C testing and linkage to care in pregnancy is critical to the prevention and control of viral hepatitis in Pennsylvania.

Hepatitis B

Hepatitis B is a highly contagious, vaccine-preventable liver infection caused by the hepatitis B virus (HBV) ranging in severity from mild infection to severe life-long disease which can lead to liver disease, liver cancer and even death. Age affects whether HBV will become chronic. The younger a person is when infected with the HBV, the greater the chance of developing chronic infection. About 9 in 10 infants who become infected go on to develop life-long, chronic infection. The risk goes down as a child gets older. There is a safe and effective HBV vaccine which can be administered in pregnancy. Hepatitis B is spread through activities that involve percutaneous or mucosal contact with infectious blood or bodily fluids (e.g., semen and saliva), including during pregnancy or delivery from birthing parent to child

through sexual contact with a person living with HBV, through injection drug use that involves sharing needles, syringes, or drug-preparation equipment, through contact with blood from or open sores, through exposures to needle sticks or sharp instruments, through sharing certain items that can break the skin or mucous membranes (e.g., razors, toothbrushes, and glucose monitoring equipment), and/or through poor infection control practices in healthcare settings (e.g., dialysis units, diabetes clinics).

In 2023, the Centers for Disease Control and Prevention (CDC) published [CDC Recommendations for Hepatitis B Screening and Testing — United States, 2023](#). The updated recommendations advise hepatitis B screening for all adults at least once in a lifetime. In addition, they recommend use of the triple panel for HBV screening during each pregnancy – preferably in the first trimester – regardless of vaccination status. Those with prior triple panel screening only need HBsAg screening during each subsequent pregnancy. Screening allows for timely prophylaxis (Hepatitis B Immune Globulin (HBIG)) for exposed infants which is 71% effective at preventing hepatitis B from being passed to a baby during birth. When HBIG is combined with the hepatitis B vaccine birth dose, effectiveness rises to 94%. Because prenatal visits might be the earliest opportunity or primary way in which a person interacts with the health care system, prenatal visits are an opportunity to offer the triple panel test to the patient and link them to care or vaccination as needed.

Prenatal Hepatitis B Testing Recommendations

1. All pregnant people are to be screened for the hepatitis B surface antigen (HBsAg) on the first prenatal visit, or within 15 days, but no later than the time of delivery, as stated in 28 Pa. Code §27.99 (a).
 - a. Complete hepatitis B triple panel screening, preferably in the first trimester, regardless of vaccination status, for pregnant persons without history of previous screening or complete again if high risk. Hepatitis B triple panel includes: HBsAg, hepatitis B surface antibody (anti-HBs), and total hepatitis B core antibody (anti-HBc).
 - b. Testing pregnant persons known to be chronically infected or immune enables documentation of the HBsAg test result during that pregnancy to ensure timely prophylaxis for exposed infants.
 - c. If patient has a history of hepatitis B infection, it is recommended to run hepatitis B DNA (HBV DNA) with initial hepatitis B blood work during current pregnancy.
2. For detailed information about hepatitis B screening and specific serologic markers, see [Interpretation of Hepatitis B Serologic Test Results](#).
3. If the patient is HBsAg negative:
 - a. Record status in the medical record
 - b. Provide a copy of the original lab report to the patient's delivery hospital
 - c. Repeat HBsAg at the time of admission to the hospital for delivery if the patient is in any of the following high-risk categories:
 - i. Recent or current injection drug use
 - ii. More than one sex partner in previous 6 months
 - iii. HBsAg-positive sex partner
 - iv. Evaluation or treatment for a sexually transmitted disease
 - v. Symptoms of clinical hepatitis
4. If the patient is HBsAg positive:
 - a. Record status in the medical record.
 - b. Report the case to the [Pennsylvania Department of Health Perinatal Hepatitis B Prevention Program](#) by contacting your local state health center or county/municipal health department, or through electronic laboratory reporting (ELR), and enter the information in the [Pennsylvania National Electronic Disease Surveillance System](#) (PA-NEDSS).
 - c. Recall patient to clinic to inform of positive status, provide education and support and perform a medical evaluation. Refer to the [Prevention of Perinatal Hepatitis B Infection](#)

[and Management of Pregnant Women, Guidelines for Medical Care Providers](#) for guidance.

- d. Order an HBV DNA test during first trimester and again at 26-28 weeks for pregnant patients who are HBsAg-positive. The HBV DNA test at 26-28 weeks will guide the use of maternal antiviral therapy during pregnancy for the prevention of perinatal HBV transmission. [AASLD](#) suggests maternal antiviral therapy at 28- 32 weeks until birth when the maternal HBV DNA is >200,000 IU/mL.
 - e. Notify hospital maternity/neonatal/pediatric services of patient's HBsAg status. A copy of the original laboratory report should be provided to the hospital or birthing facility and to the HCP who will care for the newborn infant.
5. Medical records of all pregnant persons in the prenatal setting and all birthing hospitals should be reviewed for the HBsAg test when a patient is admitted for delivery.
 6. If a pregnant or delivering patient is admitted to the hospital and has not been screened or the test result is unavailable, HBsAg testing should be performed immediately by the hospital at the time of admission.
 7. It is recommended that all newborn infants born to HBsAg positive birthing parents, or those with unknown status, receive HBIG and the first dose of single-antigen hepatitis B vaccine within 12 hours of birth. Subsequent doses should be administered by pediatrician per CDC immunizations schedule.
 8. It is recommended that all newborn infants born to HBsAg negative birthing parents receive the hepatitis B vaccine as follows:
 - a. Infants who are medically stable and weigh \geq 2,000 g born to HBsAg negative birthing parents should receive the first dose of single-antigen hepatitis B vaccine within 24 hours of birth.
 - b. Infants weighing < 2,000 g born to HBsAg negative birthing parents should receive the first dose of single-antigen hepatitis B vaccine 1 month after birth or at hospital discharge (see Section IV).

Hepatitis C

Hepatitis C is a liver infection caused by the hepatitis C virus (HCV) ranging in severity from short-term illness to severe life-long disease which can lead to liver disease, liver cancer and even death. Hepatitis C primarily is transmitted through parenteral exposures to infectious blood or bodily fluids that contact blood including through injection drug use that involves sharing needles, syringes, or drug-preparation equipment, and during pregnancy or delivery from birthing parent to child. Less frequently, HCV can be spread through sexual contact with a person living with HCV, through exposures to needle sticks or sharp instruments, through unregulated tattooing, through receipt of donated blood, blood products, and organs (rare in the United States since blood screening became available in 1992), and/or through poor infection control practices in healthcare settings (e.g., dialysis units, diabetes clinics). No vaccine against hepatitis C exists and no effective pre- or postexposure prophylaxis is available. More than half of persons who become infected with HCV will develop chronic infection. Direct-acting antiviral treatment can result in a virologic cure in most persons with 8–12 weeks of all-oral medication regimens.

In 2020, the Centers for Disease Control and Prevention (CDC) published [CDC Recommendations for Hepatitis C Screening Among Adults – United States, 2020](#). The updated recommendations advise hepatitis C screening at least once in a lifetime for all adults 18 years and older. In addition, they recommend HCV testing during each pregnancy. Infants who are perinatally exposed should be tested using a nucleic acid test (NAT) for HCV RNA at age 2 – 6 months to identify children who might develop chronic HCV infection. Infants aged 7 – 17 months who have not been previously tested should receive a NAT for HCV RNA. Children aged 18 months and older who have not been previously tested should receive an HCV antibody test with a reflex to NAT for HCV RNA (i.e., automatic testing when antibody is reactive). [See complete Recommendations for Hepatitis C Testing Among Perinatally Exposed Infants and Children—United States, 2023](#)

Prenatal Hepatitis C Testing Recommendations

1. All pregnant people are to be screened for HCV during each pregnancy, except in settings where the prevalence of HCV infection (HCV RNA-positivity) is <0.1%.
 - a. Complete HCV antibody test with a reflex to NAT for HCV RNA. CDC recommends that all samples needed to diagnose hepatitis C be collected in a single visit and HCV RNA testing be performed automatically when the HCV antibody is reactive.
 - b. If patient has a history of hepatitis C infection, it is recommended to complete a NAT for HCV RNA during pregnancy.
 - c. CDC estimates that [prevalence](#) of HCV infection among pregnant people in Pennsylvania is about 1%.
2. For detailed information about hepatitis C test interpretation see [Interpretation of Results of Tests for HCV Infection | CDC](#).
3. If the patient is HCV RNA negative:
 - a. Record status in the medical record.
 - b. Provide a copy of the original lab report to the patient's delivery hospital.
 - c. Consider repeating HCV RNA at the time of admission to the hospital for delivery if the patient is in any of the following high-risk categories:
 - i. Recent or current injection drug use including sharing needles, syringes, or other drug preparation equipment.
 - ii. Symptoms of clinical hepatitis.
4. If the patient is HCV RNA positive:
 - a. Recall patient to clinic to inform of active HCV infection, provide education around curative treatment, linkage to care, transmission prevention, and the need for infant testing.
 - b. Provide information about the need for infant testing.
 - c. It is recommended that all infants born to HCV RNA positive birthing parents, or those unknown status should be NAT tested for HCV RNA at age 2 – 6 months.
 - d. Infants aged 7 – 17 months who have not been previously tested should receive a NAT for HCV RNA.
 - e. Children aged 18 months and older who have not been previously tested should receive an HCV antibody test with a reflex to NAT for HCV RNA.
 - f. Care for infants with detectable HCV RNA should be coordinated in consultation with a health care provider with expertise in pediatric hepatitis C management.

Infants with undetectable HCV RNA do not require further follow up unless clinically warranted. All cases of hepatitis B and C should be reported via [PA-NEDSS](#). Please report any suspected clusters of hepatitis B and/or C by calling DOH at 1-877-PA-HEALTH (1-877-724-3258) or your local health department.

All pregnant individuals should be offered a test for syphilis at the first prenatal visit, at the third trimester of pregnancy, and at delivery. All pregnant individuals should be tested for HIV during the first and third trimester in accordance with CDC testing recommendations. All individuals with a recent positive test for another sexually transmitted disease, such as gonorrhea or chlamydia, should be tested for syphilis and HIV regardless of timing in pregnancy.

Individuals interested in receiving future PA-HANs can register [here](#).

Categories of Health Alert messages:

Health Alert: conveys the highest level of importance; warrants immediate action or attention.

Health Advisory: provides important information for a specific incident or situation; may not require immediate action.

Health Update: provides updated information regarding an incident or situation; unlikely to require immediate action.

This information is current as of 3/11/2024, but may be modified in the future.
