Screening and Referral Algorithm for Hepatitis B Virus (HBV) Infection among Pregnant Women

- Report HBsAg positive pregnant women to Perinatal Hepatitis B Prevention Program
- Identify all household and sexual contacts and recommend screening by primary care provider

No further action needed

- Consider vaccination during pregnancy or postpartum
- Repeat HBsAg testing when admitted for delivery

Order Additional Tests:
- HBeAg (hepatitis B e-antigen)
- HBV DNA Concentration
- ALT (alanine aminotransferase)

- Refer for care postpartum
- Refer to specialist immediately during pregnancy

*High risk for HBV infection includes: household or sexual contacts of HBsAg-positive persons; injection drug use; more than one sex partner during the past six months; evaluation or treatment for a sexually transmitted disease; HIV infection, chronic liver disease, or end-stage renal disease; and international travel to regions with HBsAg prevalence of ≥2%.

Hepatitis B serologic testing involves measurement of several hepatitis B virus (HBV)-specific antigens and antibodies. Different serologic “markers” or combinations of markers are used to identify different phases of HBV infection and to determine whether a patient has acute or chronic HBV infection, is immune to HBV as a result of prior infection or vaccination, or is susceptible to infection.

**Hepatitis B surface antigen (HBsAg):**
A protein on the surface of hepatitis B virus; it can be detected in high levels in serum during acute or chronic hepatitis B virus infection. The presence of HBsAg indicates that the person is infectious. The body normally produces antibodies to HBsAg as part of the normal immune response to infection. HBsAg is the antigen used to make hepatitis B vaccine.

**Hepatitis B surface antibody (anti-HBs):**
The presence of anti-HBs is generally interpreted as indicating recovery and immunity from hepatitis B virus infection. Anti-HBs also develops in a person who has been successfully vaccinated against hepatitis B.

**Total hepatitis B core antibody (anti-HBc):**
Appears at the onset of symptoms in acute hepatitis B and persists for life. The presence of anti-HBc indicates previous or ongoing infection with hepatitis B virus in an undefined time frame.

**IgM antibody to hepatitis B core antigen (IgM anti-HBc):**
Positivity indicates recent infection with hepatitis B virus (<6 mos). Its presence indicates acute infection.

### Hepatitis B Serologic Test Results Interpretation

<table>
<thead>
<tr>
<th>HBsAg</th>
<th>anti-HBc</th>
<th>anti-HBs</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>negative</td>
<td>negative</td>
<td>negative</td>
<td>Susceptible</td>
</tr>
<tr>
<td>HBsAg</td>
<td>anti-HBc</td>
<td>positive</td>
<td>Immune due to natural infection</td>
</tr>
<tr>
<td>negative</td>
<td>negative</td>
<td>positive</td>
<td>Immune due to hepatitis B vaccination</td>
</tr>
<tr>
<td>HBsAg</td>
<td>anti-HBc</td>
<td>positive</td>
<td>Acutely infected</td>
</tr>
<tr>
<td>negative</td>
<td>positive</td>
<td>negative</td>
<td>Chronically infected</td>
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</tbody>
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