

<b>LOCAL HEALTH DEPARTMENT DISEASE INVESTIGATION STEPS</b>	
<b>NC REPORTABLE DISEASE/CONDITION</b>	<b>INFECTIOUS AGENT</b>
<b>HEPATITIS B</b>	<i>Hepatitis B Virus</i>
<b>PREPARING FOR INVESTIGATION</b>	
<b>KNOW THE DISEASE/CONDITION</b>	<ul style="list-style-type: none"> <li>• Read about Hepatitis B in the <a href="#">CD Manual</a> <ul style="list-style-type: none"> <li>○ See the case definitions for Hepatitis B acute and chronic.</li> </ul> </li> <li>• Study APHA <i>Control of Communicable Diseases Manual</i>, 19th ed., pp 284 - 293.</li> <li>• Review the American Association for the Study of Liver Disease guidelines: (<a href="https://www.aasld.org/sites/default/files/2019-06/HBVGuidance_Terrault_et_al-2018-Hepatology.pdf">https://www.aasld.org/sites/default/files/2019-06/HBVGuidance_Terrault_et_al-2018-Hepatology.pdf</a>)</li> <li>• Refer and review the CDC’s Pink Book on HBV: (<a href="https://www.cdc.gov/vaccines/pubs/pinkbook/downloads/hepb.pdf">https://www.cdc.gov/vaccines/pubs/pinkbook/downloads/hepb.pdf</a>)</li> <li>• Refer to the CDC’s Viral Hepatitis page for HBV: (<a href="https://www.cdc.gov/hepatitis/hbv/index.htm">https://www.cdc.gov/hepatitis/hbv/index.htm</a>)</li> </ul>
<b>CONDUCTING INVESTIGATION</b>	
<b>REVIEW LABORATORY INFORMATION</b>	<ul style="list-style-type: none"> <li>• Evaluate laboratory results specific to this disease and determine if the case definition is met for reporting.</li> <li>• Contact the healthcare provider for the following: <ul style="list-style-type: none"> <li>○ Additional tests that were or may be ordered and their results.</li> <li>○ Medical record pertinent to Hepatitis B investigation.</li> <li>○ Vaccine record if they don’t use NCIR.</li> </ul> </li> </ul>
<b>COLLECT CLINICAL INFORMATION</b>	<ul style="list-style-type: none"> <li>• Use your Statewide Hepatitis B NC EDSS access to search and determine if the individual has ever been reported as having Hepatitis B.</li> <li>• Obtain patients medical record from either their healthcare provider or from recent hospitalization to include admissions note, progress note, lab results report (including ALT/AST and bilirubin) and discharge summary. Inform the provider that you will contact the patient prior to completing your investigation.</li> <li>• Determine why testing was done: <ul style="list-style-type: none"> <li>○ Was the patient symptomatic for disease?</li> <li>○ Currently pregnant?</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>○ Any known co-infections (HIV, HCV, HAV)? If yes, add to event lab results and/or create corresponding event.</li> <li>● Interview the patient to obtain additional clinical information (symptoms &amp; risk factors) and to determine potential source of infection. Identify household, sexual and/or needle sharing/drug equipment sharing, and mucosal or blood contacts. Contacts should be advised to get tested and vaccinated by either the local health department communicable disease nurse or by the patient.</li> <li>● Review recent health history (6 months prior to positive lab). Every newly reported case of hepatitis B requires an interview/investigation with at least the patient.</li> <li>● Obtain vaccination record.</li> <li>● Healthcare associated infection (HAI): <ul style="list-style-type: none"> <li>○ No known risk factors aside from recent healthcare procedure/invasive medical procedure 6 months prior to onset of symptoms.</li> <li>○ Any suspected HAI cases should be investigated to determine their validity. CDC has steps for investigating HAI HBV cases found at: <a href="https://www.cdc.gov/hepatitis/outbreaks/pdfs/HealthcareInvestigationGuide.pdf">https://www.cdc.gov/hepatitis/outbreaks/pdfs/HealthcareInvestigationGuide.pdf</a></li> </ul> </li> </ul>
<p style="text-align: center;"><b>APPLY THE CASE DEFINITION</b></p>	<ul style="list-style-type: none"> <li>● Review the case definitions for Hepatitis B, acute and chronic.</li> <li>● Review all clinical information including positive and negative lab results and apply them to the case definitions. Remember that both clinical and laboratory findings must satisfy the criteria to meet case definition.</li> <li>● Please note: An event that does not meet the acute case definition as confirmed <u>may</u> meet the case definition for probable chronic.</li> <li>● If you need assistance in applying the case definitions, please call the Hepatitis B Surveillance Nurse or your Regional CD Nurse Consultant.</li> <li>● Lab condition reports should only be sent to the state if: <ul style="list-style-type: none"> <li>○ Patient was previously identified as having Hepatitis B In NCEDSS.</li> <li>○ Patient’s residence is out of NC jurisdiction. In the administrative package the question: Is this event the responsibility of another state or county to report? Should be answered yes and the event reassigned back to the state.</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>○ Patient is currently pregnant and previously identified in NCEDSS.</li> <li>○ Lab results do not meet case definition.</li> </ul>
<b>IMPLEMENTING CONTROL MEASURES</b>	
<b>ATTEMPT TO IDENTIFY SOURCE OF EXPOSURE</b>	<ul style="list-style-type: none"> <li>● Review the clinical records for potential source(s) of exposure.</li> <li>● Given the long incubation period of 60 to 150 (average of 90) days, this may be difficult to determine.</li> <li>● Acute HBV and chronic probable-investigations should account for the 6 months prior to positive lab(s).</li> <li>● Chronic HBV confirmed-investigations should account for patient’s entire life or back to prior negative testing.</li> </ul>
<b>IMPLEMENT CONTROL MEASURES TO PREVENT DISEASE AND ADDITIONAL EXPOSURES</b>	<ul style="list-style-type: none"> <li>● Refer to <a href="#">10A NCAC 41A .0203</a> to review control measures specific to Hepatitis B.</li> <li>● All HBV positive individuals should be informed of control measures.</li> <li>● All sexual, needle sharing, and household contacts to acute or chronic cases need to be tested and vaccinated with Hepatitis B vaccine. <i>(Remember to have blood drawn prior to vaccine administration).</i> <ul style="list-style-type: none"> <li>○ There is no need to wait for test results; both testing and vaccination can be done on the same day. <ul style="list-style-type: none"> <li>▪ If susceptible, as determined by lab results (HBsAg negative and anti-HBs negative), complete the Hepatitis B vaccine series.</li> </ul> </li> </ul> </li> <li>● Percutaneous (bite or needlestick) or mucosal exposure to HBV positive blood or body fluids that contain blood the administration of both HBIG (if available) and the hepatitis B vaccine is recommended within 7 days of exposure.</li> <li>● Sexual (assault/abuse), needle sharing contact/exposure to a known hepatitis B infected person administration of both HBIG (if available) and the hepatitis B vaccine is recommended within 14 days of exposure.</li> <li>● Victims of sexual assault/abuse to either blood and/or body fluids of a person with an unknown hepatitis B status the administration of the hepatitis B vaccine is recommended. <ul style="list-style-type: none"> <li>○ <a href="https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5516a3.htm?s_cid=rr5516a3_e">https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5516a3.htm?s_cid=rr5516a3_e</a></li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• Individuals who have been reported as acute or chronic probable should be retested 6 months after diagnosis to determine: clearance (which confers inactive carrier status) or progression to chronic carriers status.</li> <li>• If the patient is an infant born to a Hepatitis B positive mother, contact the Hepatitis B Perinatal Coordinator for further guidance.</li> <li>• Use the CDC website: <a href="https://www.cdc.gov/hepatitis/hbv/index.htm">https://www.cdc.gov/hepatitis/hbv/index.htm</a> to educate at risk people about the disease.</li> <li>• Instruct individuals to refrain from donating blood, plasma, organs, tissue and semen pursuant to 10A NCAC 41A .0203.</li> <li>• Documentation that control measures were provided will be entered in the clinical package under Isolation/Quarantine/Control Measures section in NCEDSS. <ul style="list-style-type: none"> <li>○ The second question (Restrictions to movement or freedom of action (i.e. work, child care, school, etc.?) in that package should be changed to yes and sexual behavior and blood and body fluid checked.</li> </ul> </li> </ul>
<b>REPORTING INVESTIGATION</b>	
<b>REPORT TO NC COMMUNICABLE DISEASE BRANCH (CD)</b>	<ul style="list-style-type: none"> <li>• Use your statewide Hepatitis B NC EDSS access to search the system to determine if the individual has been previously reported with Hepatitis B.</li> <li>• If the individual has <u>not</u> been previously reported, create a new Hepatitis B event (either Acute or Chronic, depending on the determination of case classification) and complete <u>all</u> question packages.</li> <li>• If the individual has been previously reported, create a Hepatitis B Lab/Condition Report event and complete the Subsequent Report package using the earliest specimen date in that event (if there are multiple labs from different dates and/or provider/facilities please complete this package for each specific lab date/provider.</li> <li>• Assign the event to State Disease Registrar when case investigation is complete.</li> <li>• For further guidance, please refer to the “Hepatitis B Business Rules for Investigation and Reporting in NC EDSS” found at: <a href="http://epi.publichealth.nc.gov/cd/lhds/manuals/cd/ncedss.html">http://epi.publichealth.nc.gov/cd/lhds/manuals/cd/ncedss.html</a></li> </ul>

<p><b>MANAGEMENT OF OCCUPATIONAL EXPOSURE TO HBV</b></p>	<ul style="list-style-type: none"> <li>• Recommendations for follow-up of occupational HBV exposures may be found in the CDC MMWR: Updated Public Health Service Guidelines for Evaluating Health-Care Personnel for Hepatitis B Virus Protection and for Administering Postexposure Management. December 20, 2013; Volume 62 No. 10; pp 12-15. Available at: <ul style="list-style-type: none"> <li>○ <a href="https://www.cdc.gov/mmwr/pdf/rr/rr6210.pdf">https://www.cdc.gov/mmwr/pdf/rr/rr6210.pdf</a></li> <li>○ <a href="https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5011a1.htm">https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5011a1.htm</a></li> </ul> </li> <li>• Investigation of suspected healthcare acquired Hepatitis B or Hepatitis C</li> <li>• Healthcare investigation guide <ul style="list-style-type: none"> <li>○ <a href="https://www.cdc.gov/hepatitis/outbreaks/Healthcare-associatedOutbreaks.htm">https://www.cdc.gov/hepatitis/outbreaks/Healthcare-associatedOutbreaks.htm</a></li> </ul> </li> </ul>
<p><b>HEPATITIS B POSITIVE PREGNANT WOMEN</b></p>	<ul style="list-style-type: none"> <li>• If the patient is pregnant and meets the case definition for either acute or chronic disease or, the case is entered as a Perinatally Acquired Hepatitis B Event, contact the Hepatitis B Perinatal Coordinator with the Immunization Branch for further guidance.</li> </ul>