COMMUNICABLE DISEASE MANUAL POLICIES/PROCEDURES

HEPATITIS B - HBV

OBJECTIVE: Control and management of Hepatitis B Virus (HBV)

DESCRIPTION: Hepatitis B is an inflammation of the liver caused by the B virus. Hepatitis B illness ranges from asymptomatic seroconversion to fatal hepatitis. Chronic infection and a carrier state can occur. A carrier state is defined as a person who is HBsAg positive for 6 months or more. A carrier state increases the risk of hepatocellular cancer.

EQUIPMENT: MDSS User Manual (disease specific form will be found in MDSS). MDCH interpretation of Lab tests, Hepatitis Contact Sheet, Viral Hepatitis B Fact Sheets and pamphlets, Perinatal Hepatitis B Info and Intake Forms, and MDCH Notification of Serious Communicable Disease Fax Sheet for HBsAg positive pregnant women only. Perinatal Hepatitis B Prevention Program Manual. Also MDHHS Web site at www.michigan.gov/cdinfo and CDC Web site at www.cdc.gov/diseasesconditions/az/a.html.

POLICY: Legal Responsibility: Michigan's communicable disease rules of Act No. 368 of the Public Acts of 1978, as amended, being 333.5111 of the Michigan Compiled Laws. Follow up time 72 hours post referral except Hepatitis B in a pregnant female, which is 24 hours AND ENTER INTO MDSS WITHIN 24 HOURS OF RECEIPT OF REFERRAL.

PROCEDURE: A. Case Investigation

1. Referral received per phone call, laboratory results, or automatically through MDSS.
2. Check MDSS, PHN database, or family folder for past records and document all case investigation proceedings.
3. It is imperative that each time the health department receives an HBsAg positive result on a woman of childbearing years an investigation is conducted, regardless of how many times they have been reported in the past. This is to determine if they are currently pregnant, recently delivered, or have any new household or sexual contacts that may need to be tested or treated. Complete the Perinatal Hepatitis B Intake Form and fax along with Notification of Serious Condition fax to 517-335-9855 or call 517-335-8122 with the information. This form will help in completing the Perinatal Hepatitis B Form in MDSS. (See Perinatal Hepatitis B Prevention Program Manual)
4. If it is determined that a chronic HBsAg positive women who is new, or has been reported in the past is pregnant, recently delivered, or there is no response from the client; please forward these cases immediately to the MDCH Perinatal Hepatitis B Prevention Program Coordinator for additional follow-up by faxing the Notification of Serious Communicable Disease form to 517-335-9855, or phone to 517-335-8122.
5. Contact MD and/or client to start process of completing disease specific form in MDSS.

B. Lab Criteria for Diagnosis
1. See MDCH Hepatitis B Reporting Flowchart and case definition and Hepatitis B Serology Interpretation for MDSS entry/Closure of Cases for interpretation of Hepatitis Testing.

a. Interpretation of Hepatitis Profile Markers:

1. The pattern below means a person has immunity either naturally or by vaccine. It is NOT REPORTED
   HBsAg – Negative
   Anti-HBs – Positive
   Anti-HBc – Positive – (A positive anti-HBc does not occur if vaccine given)

2. Any time the HBsAg is positive, a client is contagious and it is reported to MDHHS using the appropriate MDSS disease specific form of chronic, acute, or perinatal (if pregnant).

C. Control Measures

1. All women of childbearing years regardless of past positive HBsAg history, or previously reported results in the past to State need to have an investigation conducted. The investigator needs to ask are you currently pregnant, did you recently deliver, are there any new household or sexual contacts that may need to be tested or treated? Complete Perinatal Hepatitis B Intake Form and fax to MDCH.

2. For persons exposed to Hepatitis B.

   a. Individuals who should be considered for prophylaxis are those who had exposure of mucous membranes or broken skin to body secretions or blood of an active case or carrier through any contact, by needle stick, sexual exposure or sharing toothbrushes and razors.

   b. HBIG and HB vaccine may be obtained from private physician or VB/CassHDD if the appropriate program is available to the contact. Medicaid reimburses for both.

   c. Household contacts to Hepatitis B Virus:

      1.) Exposed infants (younger than 12 months) should receive HBIG and be vaccinated when acute Hepatitis-B infection is diagnosed in the infant's mother, father, or principal caretaker.

      2.) Household contacts and sexual partners of HBsAg positive persons should receive Hepatitis B vaccine.

      3.) All susceptible persons whose sexual partners have acute hepatitis B infection or whose sexual partners are discovered to be hepatitis B carriers should receive a single dose of HBIG (0.06 mL/kg), if it can be given within 14 days of the last sexual contact or if sexual contact with the infected person is ongoing. In such
cases, the susceptible person should receive Hepatitis B vaccine in the recommended three-dose schedule. Giving the vaccine with HBIG may improve the efficacy of postexposure treatment. The vaccine has the added advantage of conferring long-lasting protection. Sexual partners need to be prescreened before administering Hepatitis B vaccine for HBsAg status. Give vaccine only if test negative for HBsAg.

4) Percutaneous or permucosal exposure to HBsAg positive blood.

a.) Source of exposure is HBsAg positive:

(1.) If the contact has not had Hepatitis B vaccine series, vaccination should be initiated. A single dose of HBIG (0.06 mL/kg) should be given as soon as possible after exposure and within 24 hours, if possible. The first dose of Hepatitis B vaccine should be given intramuscularly at a separate site (deltoid for adults) and can be given simultaneously with HBIG or within 7 days of exposure. Subsequent doses should be given as recommended for the specific vaccine. If the exposed person has begun but not completed vaccination, one dose of HBIG should be given immediately, and vaccination should be completed as scheduled.

(2.) Exposed person has already been vaccinated against Hepatitis B, and anti-HBS response status is known.

(a.) If the exposed person is known to have had adequate response in the past, the anti-HBs level should be tested unless an adequate level has been demonstrated within the last 24 months. Although current data show that vaccine-induced protection does not decrease as antibody level wanes, most experts consider the following approach to be prudent: a) If anti-HBs level is adequate, no treatment is necessary; b) If anti-HBs level is inadequate, a booster dose of Hepatitis B vaccine should be given.

(b.) If the exposed person is known not to have responded to the
primary vaccine series, the exposed person should be given either a single dose of HBIG and a dose of Hepatitis B vaccine as soon as possible after exposure, or two doses of HBIG (0.06 mL/kg), one given as soon as possible after exposure and the second 1 month later. The latter treatment is preferred for those who have failed to respond to at least four doses of vaccine.

(3.) Exposed person has already been vaccinated against Hepatitis B, and the anti-HBs response is unknown. The exposed person should be tested for anti-HBs.

(a.) If the exposed person has adequate antibody, no additional treatment is necessary.

(b.) If the exposed person has inadequate antibody on testing, one dose of HBIG (0.06 mL/kg) should be given immediately, and a standard booster dose of vaccine should be given at a different site.

3. Source of exposure is known to be HBsAg-negative.

a. If unvaccinated, the exposed person should be given the first dose of Hepatitis B vaccine within 7 days of exposure, and vaccination should be completed as recommended. If the exposed person has not completed vaccination, vaccination should be completed as scheduled.

b. Exposed person has already been vaccinated against Hepatitis B. No treatment is necessary.

4. Source of exposure is unknown or not available for testing.

a. If unvaccinated, the exposed person should be given the first dose of Hepatitis B vaccine within 7 days of exposure, and vaccination should be completed as recommended. If the exposed person has not completed vaccination, vaccination should be completed as scheduled.

b. Exposed person has already been vaccinated against Hepatitis B, and anti-HBs response status is known.
1.) If the exposed person is known to have had adequate response in the past, no treatment is necessary.

2.) If the exposed person is known not to have responded to the vaccine, prophylaxis may be considered if the source of the exposure is known to be at high risk of HBV infection.

c. Exposed person has already been vaccinated against Hepatitis B, and the anti-HBs response is unknown. The exposed person should be tested for anti-HBs.

1.) If the exposed person has adequate anti-HBs, no treatment is necessary.

2.) If the exposed person has inadequate anti-HBs, a standard booster dose of vaccine should be given.

d. Refer to the fact sheet for the education of case and contact.

D. MDSS Case Report

1. Complete case investigation using disease specific form in MDSS.

2. When investigation complete mark “Review” for supervisor to review for completeness.

E. Testing for Hepatitis B

HBV testing is recommended for anyone at increased risk for HBV infection including:

- Injection drug users
- Men who have sex with men
- Persons needing immunosuppressive therapy, including chemotherapy, immunosuppression related to organ transplantation and immunosuppression for rheumatologic or gastroenterologic disorders.
- Persons with elevated ALT/AST or unknown etiology
- Donors of blood, plasma, organs, tissues, or semen
- Hemodialysis patients
- All pregnant women
- Infants born to HBsAg positive mothers
- Household, needle-sharing, or sex contacts of persons known to be HBsAg positive.
- Persons who are the sources of blood or body fluids resulting in an exposure (e.g., needlestick, sexual assault) that might require postexposure prophylaxis
- HIV positive persons
- Persons born in regions of high and intermediate HBV endemicity (HBsAg prevalence > 2% - Africa, most Asian countries including Pacific Islanders, upper South America region, and Greenland)
RESOURCES:

- Current Red Book
- Current Control of Communicable Diseases Manual
- Current disease specific “Fact Sheet”
- Websites:  [www.cdc.gov/diseasesconditions/az/a.html](http://www.cdc.gov/diseasesconditions/az/a.html)
  [www.michigan.gov/cdinfo](http://www.michigan.gov/cdinfo)