



Student Health Requirements Master of Health Science in Anesthesia

Program Hepatitis B Policy

All MHS Program students are required to be current with required immunizations and must do everything possible to prevent the spread of communicable disease. While the presence of a chronic disease does not affect admission to the college, student participation in clinical training is subject to the policies of the affiliated private hospitals where MHS students train.

The purpose of this document is to define institutional policy regarding hepatitis B immunization, verification of immunity and appropriate serologic testing for Hepatitis B in those students that fail to demonstrate immunity following appropriate immunization. In addition, this policy addresses the required medical evaluation, referral and steps required for clearance to participate in patient care in those students found to be positive for Hepatitis B infection.

Hepatitis B Immunization and Titers

- a) Students must provide the dates and verification (physician signature or vaccination records) of completing a Hepatitis B vaccination series consisting of three (3) hepatitis B injections. Injections are generally given at 0-, 1- and 6-month intervals which means injection two would be given 1 month following injection one, and injection three would be given 6 months following injection one.
- b) If a student does not have all 3 vaccines complete at the time of matriculation, **they must have at least received their first injection and be in the process of completing the subsequent two injections and titer following the above schedule.**
- c) In addition, **all students must provide verification of antibody titers (Surface Antibody, HBsAb)** demonstrating immunity to Hepatitis B. To ensure accuracy, it is recommended that antibody titer testing be performed 4-8 weeks following the 3rd and final injection in the series.
- d) Students who attain protective immunity (by evidence of titer) to Hepatitis B after either the first vaccination series of 3 immunizations or second vaccination series of 3 immunizations (if needed), are considered immune, protected and free of Hepatitis B and therefore do not require additional testing for the disease.
- e) Students who do **NOT** demonstrate immunity through adequate titer levels (after first series)
 - a. Students who have received the initial series of Hepatitis B vaccines and do not seroconvert to demonstrate immunity will be required to repeat the complete series of three immunizations.
 - b. Following completion of the repeat series of 3 Hepatitis B vaccinations, students must obtain another titer (Surface Antibody) to confirm immunity.

To ensure accuracy, it is recommended that antibody titer testing be performed 4 – 8 weeks following the 3rd and final injection in the series.

- c. **Students who still do not demonstrate immunity following the second Hepatitis B immunization series will be considered a vaccine non-responder and must undergo further testing for the presence of HBV infection.**
- f) Students who do **NOT** attain immunity following completion of a **second Hepatitis B immunization series (additional testing required)**
 - a. Per CDC guidelines, any student who does not obtain protective immunity to Hepatitis B after a completion of 2 complete vaccination series (6 total immunizations) will also **be required to obtain serologic testing for Hepatitis B infection.**
 - i. Testing for Hepatitis B is accomplished through evaluation of **serum HBsAg** (Hepatitis B Surface Antigen) and **anti-HBc** (Total Hepatitis B core antibody).
 - 1. Hepatitis B surface antigen (HBsAg) is a protein on the surface of HBV; it can be detected in high levels in serum during acute or chronic HBV 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.
 - 2. 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 HBV in an undefined time frame.
 - b. Students who are required to obtain Hepatitis B testing must provide **results of both HBsAg and anti-HBc** along with the confirmatory lab reports.
 - c. **Results of Hepatitis B testing will not affect a student's matriculation status or offer of acceptance** but will provide valuable information to ensure proper patient care safeguards and adherence to CDC recommendations for the management of Hepatitis B virus-infected health care providers and students are followed (see below for requirements for Hepatitis B – positive students). In addition, testing prior to matriculation provides a baseline status in regard to disease presence in the event that a student has an exposure incident during subsequent clinical activities.
 - d. If testing for Hepatitis B infection is negative, the student will be considered non-immune to Hepatitis B and will then meet with the Associate Dean for Clinical Affairs. Current recommendations and additional education on universal precautions, risk avoidance and treatment options if exposed to HBV will be provided to the student. The student will sign documentation of informed consent to continue their education, acknowledging the medical risk and receipt of this information, but they will not be required to continue additional HBV immunizations.

Students Who Test Positive for Hepatitis B Infection

- a) As noted by the CDC guidelines, HBV infection alone does not disqualify infected persons from the practice or study of medicine. However, to promote and optimize both infected student and patient safety, VCOM has adopted the following set of guidelines for students found to be infected with HBV.
- b) Standard Precautions
 - i. All students, including those with HBV infection, must maintain strict adherence to the tenants to standard (universal) infection control precautions. Students with HBV infection are encouraged to practice double-gloving, especially when

participating in highly exposure-prone procedures, as this intervention has been shown to be efficacious in preventing the spread of HBV infections.

c) Exposure Prone Procedures

- a. In general, exposure-prone procedures include those in which access for surgery is difficult, or those in which needlestick injuries are likely to occur, typically in very closed and limited visibility procedural spaces in which double gloving and the skin integrity of the operator might be compromised.
- b. Given the variety of procedures, practices and providers, each HBV-infected health-care provider performing potentially exposure-prone procedure will need individual consideration. This will include recommendation from an Infectious Disease specialist who has evaluated the student (see below), along with guidance provided by individual hospital, health care system and/or preceptor policies.

c. Category I Procedures

1. Those **known or likely to pose an increased risk of percutaneous injury to a health-care provider that have resulted in provider-to-patient transmission of HBV**
2. Are generally limited to:
 - a. Major abdominal, cardiothoracic, and orthopedic surgery
 - b. Repair of major traumatic injuries
 - c. Abdominal and vaginal hysterectomy
 - d. Caesarean section
 - e. Vaginal deliveries
 - f. Major oral or maxillofacial surgery.
3. Techniques that have been demonstrated to increase the risk for health-care provider percutaneous injury and provider to patient blood exposure include:
 - a. Digital palpation of a needle tip in a body cavity and/or
 - b. The simultaneous presence of a health care provider's fingers and a needle or other sharp instrument or object (bone spicule) in a poorly visualized or highly confined anatomic site
4. **Students with HBV infection may be restricted from performing Category I procedures based on recommendations from an Infectious Disease specialist or based on hospital or preceptor policy.**

d. Category II Procedures

1. All other invasive and noninvasive procedures.
2. **Pose low or no risk for percutaneous injury to a health-care provider or, if a percutaneous injury occurs, it usually happens outside a patient's body and generally does not pose a risk for provider to patient blood exposure.**

3. Procedures include:
 - a. Surgical and obstetrical procedures that do not involve the techniques listed for Category I
 - b. The use of needles or other sharp devices when the health-care provider's hands are outside a body cavity (e.g., phlebotomy, placing and maintaining peripheral and central intravascular lines, administering medication by injection, performing needle biopsies, or lumbar puncture)
 - c. Dental procedures other than major oral or maxillofacial surgery
 - d. Insertion of tubes (e.g. nasogastric, endotracheal, rectal or urinary catheters)
 - e. Endoscopic or bronchoscopic procedures
 - f. Internal examination with a gloved hand that does not involve the use of sharp devices (e.g. vaginal, oral, and rectal exam)
 - g. Procedures that involve external physical touch (e.g. general physical or eye examinations or blood pressure checks).
4. **Students with HBV infection are generally not restricted from performing Category II procedures.**

d) Expert evaluation, management and recommendations

- a. Students with HBV infection will be **required to establish ongoing care with a primary care physician** who will assist in the coordination of their care with consulting specialty physicians. Students will be responsible for the cost of any customary co-pay associated with their primary care or specialty visits.
- b. All students with HBV infection will also be **required to have complete evaluation by an Infectious Disease specialist to evaluate the students clinical and viral burden status and make recommendations regarding treatment and any appropriate limitation to participation in specific procedures. The Infectious Disease consultant should:**
 - i. Provide a complete evaluation and order additional testing as needed to define the student's HBV infection. This **should include but not limited to HBV DNA levels** (serve as a predictive indicator of infectivity).
 1. CDC recommends that an HBV level 1,000 IU/ml (5,000 GE/ml) or its equivalent is an appropriate threshold for a review panel to adopt.
 - ii. Determine an appropriate treatment regimen if indicated
 - iii. **Make a recommendation regarding the student's ability to participate in patient care including any restriction from specific procedures or patient care activities** (Based on Category 1 or Category II Procedures above).
 - iv. Coordinate with the student's PCP for ongoing care and establishment of appropriate follow up which must include at least an annual exam.
 - v. **Complete the Hepatitis B Information form (see accompanying document)** documenting the above information and submit it to the department of clinical affairs
 1. The consultation and completed form must be received before the student begins 3rd year clinical rotations. Students will not be able to participate in clinical rotations until this is completed.
 2. Students will also need a follow up visit and submission of a follow up form prior to the start of 4th year clinical rotations (must have a follow up exam

at least once every 12 months or sooner based on specialist recommendation)

e) Notification of Student HBV Status

- a. As per CDC guidelines, routine notification of patients regarding student HBV status is not indicated unless the provider exposes the patient to a bloodborne infection.
- b. To ensure HBV infected students are following all institutional policies regarding the provision of care by infected providers, the Clinical Site Coordinator and/or preceptor will be notified of the students HBV infection prior to the rotation as well as the recommendations of the Infectious Disease specialist regarding any suggested restriction from patient care activities.

f) Modification of student plan of study

- a. Students who are cleared by the evaluating specialist to participate in unrestricted patient care will have no modification of their clinical education or rotation experience unless mandated by their specific clinic site.
- b. Students who are restricted from performing specific clinical procedures (Category 1) by the evaluating specialist or site may have their educational curriculum or rotation experience modified as needed. This may include the substitution of simulation-based aids or cadaveric models to provide equivalent procedural experiences.
- c. Any need to modify student procedural experiences based on consultant or site recommendations will not adversely affect a student's grade as the student will be evaluated utilizing one of the alternative methods noted above.
- d. The choice for alternative educational / procedural experience will be determined by consultation with the discipline clinical chairs, discipline preceptors and associate deans for clinical affairs on each campus.

Student Acknowledgement of Policies

My signature below acknowledges that I have read and understand the above policies regarding Hepatitis B infected students. I have also met with the Assistant Program Director for Clinical Affairs or Medical Director to review the policies and understand that all requirements must be met prior to beginning clinical rotations.

Student Name _____

Signature _____ Date _____

MHSA Administration _____

Signature _____ Date _____