POLICY ON STUDENTS INFECTED WITH BLOOD-BORNE PATHOGENS

Issue Date: November 27, 2023
Supersedes: *Policy on Students Infected with Blood-borne Pathogens* dated January 1, 2018.
Last review: November 20, 2023
Related policies: Policy on Blood and Body Fluid Exposure (Needle Stick) dated June 26, 2023 and Policy on Student Accommodation and Accessibility, July 23, 2019.

I. POLICY

It is the policy of New York Medical College (NYMC) and the Touro College of Dental Medicine (TCDM) at NYMC to have standard procedures for the management of Students infected with blood borne pathogens because of the potential risk of provider-to-patient transmission.

II. PURPOSE

The purpose of this policy is to define the procedures for the management of Students infected with blood borne pathogens.

III. SCOPE

This policy applies to all students in the School of Medicine, and the Touro College of Dental Medicine at NYMC.

IV. DEFINITIONS

- Blood borne pathogen: Blood borne pathogen is a microorganism in the blood that is transmissible from person to person by exposure to infected blood or body fluids. For this policy, blood borne pathogens are limited to human immunodeficiency virus (HIV-1), hepatitis C virus (HCV) and hepatitis B virus (HBV).

- Standard Precautions: Infection prevention guidelines by the Centers for Disease Control and Prevention (CDC) based on the principle that all blood, body fluids, secretions (except sweat), excretions, non-intact skin and mucous membranes may contain transmissible infectious agents (1). Standard precautions defines a set of practices for hand hygiene, safe injection practices and use of gloves, gown, mask, eye protection or face shield depending upon anticipated exposure.

- Provider to patient transmission risk: The risk that an infection will be acquired by a patient due to transmission of a pathogen from a health care provider. For blood borne pathogens, this risk depends upon 3 conditions: (a) the health care provider must have sufficient virus circulating in their bloodstream, (b) the health care provider must have an injury (e.g. puncture wound) or condition (e.g. non intact

skin) that allows exposure of his/her blood to the patient's blood (c) the provider's blood or infectious body fluid must come in direct contact with a patient's wound, traumatized tissue, mucous membrane, or similar portal of entry during an exposure-prone procedure.

- Exposure prone procedures: Procedures known or likely to pose an increased risk of percutaneous injury to a healthcare provider and thus pose a risk of blood borne pathogen transmission. pathogen transmission. Procedures are classified in categories 1-3 based upon the risk of transmission.

- Students: NYMC School of Medicine students and TCDM students.

V. PROCEDURE(S)

A. Identification of Students with HIV-1, HCV or HBV infection:
   1. In accordance with NYSDOH policy (2), mandatory screening of healthcare personnel for blood borne pathogens is not recommended.
   2. In accordance with NYSDOH policy (2), mandatory screening of healthcare personnel for blood borne pathogens is not recommended.
   3. Students may be identified as infected with HIV-1, HCV or HBV through disclosure in the medical history submitted by all Students upon acceptance of admission to NYMC / TCDM, or during the course of their education through testing performed by their health care provider or in response to a blood or body fluid exposure.
   4. At admission, the Student's medical history and vaccination requirements include documented immunity to HBV as recommended by the Centers for Disease Control and Prevention (3,4). There is no testing requirement for HCV or HIV-1. In the section on medical history, Students are advised that there is a NYMC policy addressing the issue of Students infected with blood-borne pathogens and this policy is available to the Student upon request.
   5. At the time of a blood or body fluid exposure, Students are tested for HIV-1, HCV and HBV infection in accordance with the policy on blood or body fluid exposure.
   6. Students may request voluntary testing for HIV-1 HCV and HBV infection at any time and are encouraged to seek testing if there is a clinical indication to suggest the need for testing.
   7. Students who disclose infection with HIV-1, HCV or HBV infection to an administrative or faculty member of NYMC will be referred to NYMC Health Services for evaluation.

B. Procedures once a Student with HIV, HBV or HCV infection is identified: Responsibilities of the Department of NYMC Health Services:
   1. Health Services will advise the Student to have a viral load performed and, in the case of HBV infection, a Hepatitis e Antigen and Hepatitis e Antibody. (5)
   2. If the Student is not under the care of a provider, Health Services will refer the Student to an Infectious Diseases physician for ongoing

management of HIV-1, HCV, or HBV or to a hepatologist for management of HCV, HBV.

3. In the case of a newly acquired infection after the Student has matriculated to NYMC/TCDM, the infection will be reported as required by the New York State Communicable Disease Reporting Requirements (6).
4. The Student will be advised to have a viral load performed at least every six months, to monitor the status of potential infectivity, in accordance with national guidelines (5). See Table 1 below for testing requirements.
5. Health Services will advise the Student as follows:
    i. In accordance with the NYSDOH, HIV-1, HCV or HBV infection alone does not justify limiting a healthcare worker's professional duties (2).
    ii. Restriction of a healthcare worker's professional duties due to infection with HIV-1, HCV, or HBV infection is recommended based upon a viral load consistent with an increased risk of transmission, the performance of exposure-prone procedures, and other factors that may increase the risk of provider-to patient transmission such as poor infection control technique, exudative skin lesions, lack of adherence to proper technique, mental confusion, or a prior incident of transmission of a blood borne pathogen to a patient (5).
6. Health Services will inform the Student that there is a professional and ethical obligation to evaluate how the presence of a chronic HIV-1, HCV or HBV infection may affect a future career choice.
7. When a Student with a blood borne pathogen (HIV-1, HBV, or HCV) is identified, Health Services will inform the Dean of Students without revealing the individual's identity. Further discussion may be necessary depending upon the results of viral load testing. If indicated (see Table 1 below) an expert panel to review exposure prone procedures and the potential need to modify or restrict clinical practice will be convened. The expert panel will include physician representation in the specialty for the blood borne pathogen being evaluated, (Infectious Disease, Hepatology), the Director of Health Services, Dean of Students, and the Dean for Undergraduate Education.

C. Responsibilities of the student infected with a blood borne pathogen:
    1. Mandatory Infection Prevention and Control Training: Before working with patients, all Students must complete course work or training in infection control practices in accordance with NYSDOH Public Health Law 239 (7). The course must be a New York State Education Department approved syllabus and course provider. This requirement is particularly relevant to this policy because appropriate use of Standard Precautions and Infection Prevention practices is considered adequate to prevent transmission of blood borne pathogens from health care workers infected with blood borne pathogens.
    2. To comply with standard precautions and infection control precautions in any clinical activity.
    3. To comply with all testing as required by this policy. See Table 1.

4. To report all blood and body fluid exposures and comply with testing as indicated.
5. Students with a chronic blood-borne infection have a professional and ethical obligation to evaluate how the presence of a chronic HIV-1, HCV or HBV infection may affect clinical training, the care of patients and future career choices. The Student will be encouraged to disclose their status to the Dean of Students.

D. Responsibilities of the Office of Student Affairs and the Expert Panel Review.
1. Students infected with a blood borne pathogen are not prohibited from participation in patient care activities solely based upon the presence of infection.
2. The Department of Health Services will request an expert panel review (see section 2 g above) based upon viral load result consistent with a potential need for restriction or if a Student is not complaint with testing.
3. If a restriction of activity is required, or if a need for ongoing observation to ensure the Student is compliant with infection control guidance, this will be coordinated with the clinical Clerkship Directors through the Office of Student Affairs. A faculty member of the Office of Student Affairs will be appointed to oversee all requirements and to work with the Student to ensure all educational objectives can be completed.

E. Summary Recommendations for Management:

Restrictions based upon Viral Load and Testing Requirements			
Viral Load	Categories of Clinical Activity –	Testing Requirements	Recommendations for Restriction
Hepatitis B virus			
$< 10^4$ GE /ml	I, II, III	Every 6 months	No restriction
$\geq 10^4$ GE /ml	I, II	Per expert provider	No restriction
$\geq 10^4$ GE /ml	III	Per expert provider	Restricted
Hepatitis C virus			
$< 10^4$ GE /ml	I, II, III	Every 6 months	No restriction
$\geq 10^4$ GE /ml	I, II	Per expert provider	No restriction
$\geq 10^4$ GE /ml	III	Per expert provider	Restricted
HIV-1			
$< 5 \times 10^2$ GE /ml	I, II, III	Every 6 months	No restriction
$\geq 5 \times 10^2$ GE /ml	I, II	Per expert provider	No restriction
$\geq 5 \times 10^2$ GE /ml	III	Per expert provider	Restricted
GE= genome equivalents			

Categorization of Health Care-Associated Procedures According to Level of Risk for Blood-borne Pathogen Transmission (ref 3):

Category l: Procedures with minimal risk:

1. Regular history-taking and/or physical or dental examinations, including gloved oral examination with a mirror and/or tongue depressor and/or dental explorer and periodontal probe
2. Routine dental preventive procedures (e.g., application of sealants or topical fluoride or administration of prophylaxis), diagnostic procedures, orthodontic procedures, prosthetic procedures (e.g., denture fabrication), cosmetic procedures (e.g., bleaching) not requiring local anesthesia
3. Routine rectal or vaginal examination
4. Minor surface suturing
5. Elective peripheral phlebotomy
6. Lower gastrointestinal tract endoscopic examinations and procedures, such as sigmoidoscopy and colonoscopy
7. Hands-off supervision during surgical procedures and computer-aided remote or robotic surgical procedures
8. Psychiatric evaluations

Category II: Procedures for which blood-borne virus transmission is theoretically possible but unlikely:

1. Locally anesthetized ophthalmologic surgery
2. Locally anesthetized operative, prosthetic, and endodontic dental procedures
3. Periodontal scaling and root planning
4. Minor oral surgical procedures (e.g., simple tooth extraction [i.e., not requiring excess force], soft tissue flap or sectioning, minor soft tissue biopsy, or incision and drainage of an accessible abscess)
5. Minor local procedures (e.g., skin excision, abscess drainage, biopsy, and use of laser) under local anesthesia (often under bloodless conditions)
6. Percutaneous cardiac procedures (e.g., angiography and catheterization)
7. Percutaneous and other minor orthopedic procedures
8. Subcutaneous pacemaker implantation
9. Bronchoscopy
10. Insertion and maintenance of epidural and spinal anesthesia lines
11. Minor gynecological procedures (e.g., dilatation and curettage, suction abortion, colposcopy, insertion and removal of contraceptive devices and implants, and collection of ova)
12. Male urological procedures (excluding transabdominal intrapelvic procedures)
13. Upper gastrointestinal tract endoscopic procedures
14. Minor vascular procedures (e.g., embolectomy and vein stripping)
15. Amputations, including major limbs (e.g., hemipelvectomy and amputation of legs or arms) and minor amputations (e.g., amputations of fingers, toes, hands, or feet)
16. Breast augmentation or reduction
17. Minimum-exposure plastic surgical procedures (e.g., liposuction, minor skin resection for reshaping, face lift, brow lift, blepharoplasty, and otoplasty)
18. Total and subtotal thyroidectomy and/or biopsy
19. Endoscopic ear, nose, and throat surgery and simple ear and nasal procedures (e.g., stapedectomy or stapedotomy, and insertion of tympanostomy tubes)

20. Ophthalmic surgery
21. Assistance with an uncomplicated vaginal delivery
22. Laparoscopic procedures
23. Thoracoscopic procedures
24. Nasal endoscopic procedures
25. Routine arthroscopic procedures
26. Plastic surgery
27. Insertion of, maintenance of, and drug administration into arterial and central venous lines
28. Endotracheal intubation and use of laryngeal mask
29. Obtainment and use of venous and arterial access devices that occur under complete antiseptic technique, using universal precautions, "no-sharp" technique, and newly gloved hands

Category III: Procedures for which there is definite risk of blood-borne virus transmission or that have been classified previously as "exposure-prone":

1. General surgery, including nephrectomy, small bowel resection, cholecystectomy, subtotal thyroidectomy other elective open abdominal surgery
2. General oral surgery, including surgical extractions, hard and soft tissue biopsy (if more extensive and/or having difficult access for suturing), apicoectomy, root amputation, gingivectomy, periodontal curettage, mucogingival and osseous surgery, alveoplasty or alveoectomy, and endosseous implant surgery
3. Cardiothoracic surgery, including valve replacement, coronary artery bypass grafting, other bypass surgery, heart transplantation, repair of congenital heart defects, thymectomy, and open-lung biopsy
4. Open extensive head and neck surgery involving bones, including oncological procedures
5. Neurosurgery, including craniotomy, other intracranial procedures, and open-spine surgery
6. Non-elective procedures performed in the emergency department, including open resuscitation efforts, deep suturing to arrest hemorrhage, and internal cardiac massage
7. Obstetrical/gynecological surgery, including cesarean delivery, hysterectomy, forceps delivery, episiotomy, cone biopsy, and ovarian cyst removal, and other transvaginal obstetrical and gynecological procedures involving hand-guided sharps
8. Orthopedic procedures, including total knee arthroplasty, total hip arthroplasty, major joint replacement surgery, open spine surgery, and open pelvic surgery
9. Extensive plastic surgery, including extensive cosmetic procedures (e.g., abdominoplasty and thoracoplasty)
10. Transplantation surgery (except skin and corneal transplantation)
11. Trauma surgery, including open head injuries, facial and jaw fracture reductions, extensive soft-tissue trauma, and ophthalmic trauma
12. Interactions with patients in situations during which the risk of the patient biting the physician is significant; for example, interactions with violent patients or patients experiencing an epileptic seizure
13. Any open surgical procedure with a duration of more than 3 hours, probably necessitating glove change

VI. REFERENCES

1. Siegel JD, et al. and the Healthcare Infection Control Practices Advisory Committee, 2007 Guideline for isolation precautions: Preventing transmission of infectious agents in healthcare setting. http://www.cdc/gov/ncidos/dhqp/pdf/isolation
2. Centers for Disease Control and Prevention. Updated recommendations for the management of hepatitis B virus-infected healthcare providers and students. Morbidity and Mortality Weekly Report 2012: 61 (RR-12): 1-12.
3. Schillie S, Vellozzi C, Reingold A, et al. Prevention of hepatitis B viral infection in the United States: Recommendations of the Advisory Committee on Immunization Practices, MMWR, Recomm Rep 2018: 67 (No. RR-1) 1-31. e
4. Henderson DK, Dembry L, Fishman NO, et.al. SHEA guideline for management of healthcare workers who are infected with hepatitis B virus, hepatitis C virus and/or human immunodeficiency virus. *Infect Control Hosp Epidemiol* 2010; 31: 3: 203-232.
5. Section 239 of the New York State Public Health Law- Course work or training in infection control practices. https://www.health.ny.gov/regulations/public_health_law/section/239/
6. New York State Department of Health. Appendix B; NYSDOH policy statement and guidelines to prevent transmission of blood-borne pathogens from infected health care personnel through medical/dental procedures. http://www.health.ny.gov/publications/1852/appendb.htm
7. New York State Sanitary Code (10NYCRR 2.10,2.14)

VII: EFFECTIVE DATE:

This policy is effective immediately

VIII. POLICY MANAGEMENT:

Executive Stakeholder: Dean, School of Medicine, Dean Touro College of Dental Medicine
Oversight Office: Health Services; Office of Student Affairs