

POLICY FOR CLINICAL FACULTY AND SUPPORT STAFF WITH INFECTIOUS DISEASES

FACULTY OF DENTISTRY DALHOUSIE UNIVERSITY

Principles:

The Faculty of Dentistry at Dalhousie University is committed to protecting and maintaining the rights of patients and health care workers as well as the integrity of the educational process of dental professionals.

The provision of patient care at Faculty of Dentistry (through each of its clinical programs) is delivered primarily through students under the direct supervision of clinical faculty and with the support of clinical support staff. The clinical experiences provided include exposure-prone procedures (1-4). These exposure-prone procedures have been determined to pose an increased risk of bloodborne disease transmission due to their nature and the type of instruments and devices typically used for exposure-prone procedures (5-7). Therefore, students, clinical faculty and clinical support staff cannot avoid involvement in the provision of patient care activities that involve exposure-prone procedures.

Entry into the healthcare professions is a privilege offered to those who are prepared for a lifetime of service to the public. Students, faculty and all members of the oral healthcare team have a fundamental responsibility to provide care to all patients assigned to them without prejudice and to ensure that care is delivered competently and safely. A failure to accept this responsibility violates a basic tenet of the dental profession – to place the patient’s interest and welfare first. For this reason, we believe that healthcare workers have an ethical obligation to their patients to know their own infectious disease status and maintain appropriate immunizations.

Healthcare workers are at risk of contracting infectious diseases during the course of patient care activities (8). The risk for either contracting or transmitting an infectious disease can be reduced through appropriate immunizations and training in infection prevention and control (5, 6, 9, 10).

A patient’s right to informed consent may outweigh the worker’s right to privacy when a risk of disease transmission is present (11).

Terms

*“Clinical support staff” includes any Faculty of Dentistry staff involved in the provision of direct patient care or the handling of instruments or materials used in the provision of direct patient care. This would include, **but is not limited to** dental assistants, dispensary staff, CSU (central sterilization unit) staff and dental laboratory staff.*

“Clinical Programs” includes but is not limited to Dentistry, Qualifying Program, Dental Hygiene, Bachelor of Dental Hygiene, Graduate Prosthodontics and OMFS (Oral and Maxillofacial Surgery residency). This also includes any private practice, group practice, courses, short programs, relicensure or re-entry programs within these jurisdictions.

“HCW” means health care worker.

“Exposure-prone procedures” is used for the purpose of managing the risk of bloodborne pathogens transmitted in Canada. They are procedures during which transmission of HBV, HCV or HIV from a HCW to patients is most likely to occur and includes the following:

- a. digital palpation of a needle tip in a body cavity (a hollow space within the body or one of its organs) or the simultaneous presence of the HCW’s fingers and a needle or other sharp instrument or object in a blind or highly confined anatomic site, e.g. during major abdominal, cardiothoracic, vaginal and/or orthopedic operations, or*
- b. repair of major traumatic injuries, or*
- c. major cutting or removal of any oral or perioral tissue, including tooth structures,*

during which there is a potential for the patient’s open tissues to be exposed to the blood of an injured HCW (5).

The Canada Communicable Disease Report (CCDR)- Supplement Volume 24S4- July 1998 (5) further states that this definition is quite broad in its scope and recommends that an expert panel make an informed decision based on factors in a specific case.

“Patient Care Activities” includes the direct and indirect provision of patient care and or the handling of contaminated instruments or materials associated with patient care activities.

“Non-responders” or “individuals with inadequate antibody titres” refer to individuals susceptible to Hepatitis B due to inadequate antibody titres. Such individuals have a titre ≤ 10 mIU/mL for anti-HbsAg (7).

1.0 Immunization and Immunity status of clinical faculty and clinical support staff

All clinical faculty and clinical support staff shall maintain their own record of immunizations of the nature and scope set out in **Appendix A**, and shall know their own immune status. In addition, each clinical faculty and support staff should be knowledgeable and be trained in current infection control guidelines (12).

2.0 Hepatitis B immunization for clinical faculty and clinical support staff

Hepatitis B vaccination is among the immunizations required by this Policy. **Table 1** sets out the course of action to be followed by clinical faculty and clinical support staff based on the hepatitis B serological results (13, 14). These are summarized below:

Note: HCWs in dentistry are at risk for exposures to blood-borne pathogens that include but are not limited to hepatitis B (15, 16). Vaccination to protect against HBV serves to protect patients and HCWs (17).

2.1 HBsAg positive and a viral load greater than 10^3 genome equivalents/mL

Clinical faculty and clinical support staff who are HBsAg positive and have a viral load greater than 10^3 genome equivalents/mL will not be able to be involved in the direct or indirect provision of patient care (including the supervision of students in direct patient care activities).

Clinical faculty and clinical support staff who become HBsAg and whose viral load is greater than 10^3 genome equivalents/mL, have an ethical obligation to report their status to their professional licencing body or directly to the **Ad-hoc Committee on Bloodborne Pathogens** (contact Ms. MacDonald at the College of Physicians and Surgeons of Nova Scotia at 421-2209). If the recommendation from the Committee is to refrain from patient care activities, then such clinical faculty or clinical support staff shall inform others as necessary depending on circumstances, but in all circumstances shall inform the Director, Clinical Affairs or the Infection Control Coordinator.

Note: A viral load greater than 10^3 genome equivalents/mL is a key marker indicating a high risk of infectivity (8, 14, 18-20). The risk of transmission of HBV to patients in cases of needle-stick injury is estimated to be 30%, which is sixty times greater than when the individual is HBsAg positive with a viral load less than 10^3 genome equivalents/mL (19, 21).

2.2 Non-responders to Hepatitis B vaccine

Individuals who have been vaccinated but are either non-responders or have inadequate antibody titres are not considered immune (14). Clinical faculty and clinical support staff in this category should be tested on an annual basis and after any exposure to assess their hepatitis AB and Ag status.

If a clinical faculty or clinical support staff member becomes HBeAg positive or those HCWs whose viral load exceeds 10^3 genome equivalents/mL during the course of their duties in the provision of direct patient

care shall remove themselves from patient care activities and contact the **Ad-hoc Committee on Bloodborne Pathogens described in section 2.1 (22)**. If the recommendation from the Committee is to refrain from patient care activities, then such clinical faculty or clinical support staff shall inform others as necessary depending on circumstances, but in all circumstances shall inform the Director, Clinical Affairs or the Infection Control Coordinator.

2.3 Declination of Hepatitis B vaccine

Clinical faculty and support staff declining to be immunized against Hepatitis B on religious or similar grounds are to be counseled by the Director of Clinics or the Infection Control Coordinator prior to employment or assignment of duties (5, 23, 24).

Individuals in this category should be tested on a regular basis to assess their hepatitis AB status, Ag status and viral load.

If a clinical faculty member or support staff member becomes HBeAg positive or those HCWs whose viral load exceeds 10^3 genome equivalents/mL during the course of their duties in the provision of direct patient care should remove themselves from patient care activities and contact the **Ad-hoc Committee on Bloodborne Pathogens described in section 2.1 (22)**. If the recommendation from the Committee is to refrain from patient care activities, then such clinical faculty or clinical support staff shall inform others as necessary depending on circumstances, but in all circumstances shall inform the Director, Clinical Affairs or the Infection Control Coordinator.

2.4 HBsAg positive and a viral load less than 10^3 genome equivalents/mL

Clinical faculty and clinical support staff whose immunization record indicates that they are HBsAg positive and whose viral load is less than 10^3 genome equivalents/mL will not be restricted from direct patient care activities subject to counseling by the Director, Clinical Affairs or the Infection Control Coordinator.

Note: This carrier state represents a low risk of transmission of hepatitis B from HCW to patient. Between 1972 and 1999, there were a total of 46 reported transmissions of HBV from HCW to patient (25). Nine of these transmissions involved dentists. All of these reported transmissions involved HCW's who were HBeAg positive (20, 26-30). No transmissions were reported from HCW's who were HBsAg positive and HBeAg negative (20, 22, 25-31). These HCWs represent a significantly lower risk for transmission of hepatitis B to their patients (5, 27).

2.5 Hepatitis C carriers

Clinical faculty and clinical support staff who are carriers of Hepatitis C will not be restricted from direct patient care activities subject to counseling by the Director of Clinics or the Infection Control Coordinator.

Note: There is insufficient evidence at this time that identifies "a risk that would justify restrictions on practitioners" (5) and the "risk for HCV transmission from an infected health-care worker to patients appears to be very low" (32).

3.0 HIV Testing

Clinical faculty and clinical support staff with risk factors for HIV are to be counselled to seek HIV testing on a voluntary basis (33-37).

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Note: The low risk of transmission from HCW to patient due to a percutaneous injury of HIV compared to hepatitis B is well documented. The risk of transmission for hepatitis B is 2-40% depending on the antigen status and number of copies of viral DNA present. HIV transmission ranges from 0.2-0.5% (19, 36).

4.0. Communicable Disease Status

Any clinical faculty and clinical support staff with any active infectious disease is required to comply with the recommendations in **Table 2**.

Clinical faculty and clinical support staff who develop an infectious disease during the course of their employment at the Faculty of Dentistry must follow the same protocol.

Any clinical faculty and clinical support staff who is diagnosed with an infectious disease is required to immediately inform the appropriate authorities such as their Division Head, Department Chair, Supervisor, Director (School of Dental Hygiene), Director, Clinical Affairs and or their regulatory body.

With respect to medical conditions, work related illness and work restrictions, clinical faculty and clinical support staff in the Faculty of Dentistry are responsible for monitoring their own health status. Clinical faculty and clinical support staff who have acute or chronic medical conditions that render them susceptible to opportunistic infection should discuss with their personal physicians whether the condition might affect their ability to safely perform their duties. It is the ethical obligation of clinical faculty and clinical support staff to report such conditions to their Division Head, Department Chair, Supervisor, Director (School of Dental Hygiene) or the Director, Clinical Affairs. The Director, Clinical Affairs has the authority and responsibility to exclude clinical faculty and clinical support staff from work or patient contact to prevent further transmission of infection. Decisions concerning work restrictions will be based on the mode of transmission and the period of infectivity of the disease (see Table 2) (22, 23, 38-40).

This policy is consistent with the Canadian Dental Association’s Code of Ethics which states, under Article 2, Competency (41):

“A practitioner should inform the dental licencing authority when a serious injury, dependency, infection or other condition has either immediately affected, or may affect over time, his or her ability to practice safely and competently.”

The reporting obligations will be consistent with the requirements of the Nova Scotia government.

Table 1. HBV infectivity by serologic marker status and curriculum restrictions for HCWs (14)

HBsAg	*Anti-HBc	HBeAg	**HBV DNA	Curriculum Restrictions.
Negative	Negative	Negative	N/A	No restrictions or modifications necessary. Offer counseling and recommend immunization. As the individual is susceptible to acquiring hepatitis B, recommend annual assessment of HBsAg and testing if an exposure occurs.
Negative	Positive	Negative	N/A	No restrictions. Immune status should be confirmed by HBsAb testing. If HBsAb negative, such individuals should receive hepatitis B immunization. If the individual remains HBsAb negative, he/she is still susceptible to acquiring hepatitis B, and annual assessment of HBsAg and testing if an exposure occurs is recommended.
Positive	Positive or Negative	Negative	Negative	No restrictions or modifications necessary.
Positive	Positive or	Positive or	Positive	Serological status results in cessation of direct patient care activities. Refer to Ad-hoc Committee on Bloodborne Pathogens for counseling. Consider antiviral therapy.

	Negative	Negative		Seroconversion to non-infective state can allow for a reassignment to patient care activities.
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*HBc antibody (Anti-HBc) is not routinely reported in test results. However, this column is included for completeness.

**HBV DNA testing would only be performed if indicated by a positive test result for HBsAg.

Antiviral therapy can be considered successful when serology is HBV DNA negative [$<10^3$ copies/mL or HBsAg negative (22)]. **Table 1 is modified from Luu, NS "Dental Students with Hepatitis B: Issues to Be Considered When defining Policies", JDE 2004;68(3):306-315.**

Table 2. Work Restriction Guidelines for HCW's with Infectious Diseases

Table 2		Work restrictions for HCWs infected with or exposed to major infectious diseases in health care settings.	
Disease/Problem	Clinical Restriction	Duration	
Conjunctivitis	Restrict from patient contact and contact with patient's environment.	Until discharge ceases.	
Cytomegalovirus Infection	No restriction		
Diarrheal Disease Acute stage (diarrhea with other symptoms) Convalescent stage Salmonella species	Restrict from patient contact, contact with patient's environment, and food handling Restrict care of patients at high risk	Until symptoms resolve. Until symptoms resolve; consult with local and provincial health authorities regarding need for negative stool cultures.	
Enteroviral Infection	Restrict from care of infants, neonates, and immunocompromised patients and their environments	Until symptoms resolve.	
Hepatitis A	Restrict from patient contact, contact with patient's environment, and food handling.	Until 7 days after onset of jaundice.	
Hepatitis B Personnel with acute or chronic hepatitis B surface antigenemia who do not perform exposure-prone procedures. Personnel with acute or chronic hepatitis B with antigenemia who perform exposure-prone procedures.	No restrictions, refer to provincial regulations. Routine practices are always to be followed. Do not perform exposure-prone procedures until counsel from the Ad-hoc Committee on Bloodborne Pathogens has been sought; Committee should review and recommend procedures that	Until HBe antigen is negative and viral DNA $<10^3$ copies/mL.	

	personnel can perform, taking into account specific procedures as well as skill and technique. Routine practices are always to be followed.	
Table 2 (continued)	Work restrictions for HCWs infected with or exposed to major infectious diseases in health care settings.	
Hepatitis C	No restrictions on professional activity. HCV-positive health care personnel should follow aseptic technique and routine practices.	

Disease/Problem	Clinical Restriction	Duration
Herpes simplex Genital	No restrictions	Until lesions heal. See Faculty Guidelines on Management of Patients with Herpetic Lesions.
Hands (herpetic whitlow)	Restrict from patient contact and contact with patient's environment.	
Orofacial	Evaluate need to restrict from care of patients at high risk.	
Human immunodeficiency virus	Do not perform exposure-prone procedures until counsel from the Ad-hoc Committee on Bloodborne Pathogens has been sought; Committee should review and recommend procedures that personnel can perform, taking into account specific procedures as well as skill and technique. Routine practices are always to be followed.	
Measles Active	Exclude from clinical activity	Until 7 days after the rash appears. From fifth day after first exposure through twenty-first day after last exposure or 4 days after rash appears.
Post exposure (susceptible personnel)	Exclude from clinical activity	
Meningococcal infection	Exclude from clinical activity	Until 24 hours after start of effective therapy.
Mumps Active	Exclude from clinical activity	Until 9 days after onset of parotitis.
Post exposure (susceptible)	Exclude from clinical activity	From twelfth day after first

personnel)	exposure through twenty-sixth day after last exposure, or until 9 days after onset of parotitis.
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Table 2 (continued)		Work restrictions for HCWs infected with or exposed to major infectious diseases in health care settings.
Disease/Problem	Clinical Restriction	Duration
Pediculosis	Exclude from clinical activity	Until treated and observed to be free of adult and immature lice.
Pertussis Active	Exclude from clinical activity	From beginning of catarrhal stage through third week after onset of paroxysms or until 5 days after start of effective antibiotic therapy.
Post exposure (asymptomatic personnel)	No restriction, prophylaxis recommended	
Post exposure (symptomatic personnel)	Exclude from clinical activity	Until 5 days after start of effective antibiotic therapy.
Rubella Active	Exclude from clinical activity	Until 5 days after rash appears.
Post exposure (susceptible personnel)	Exclude from clinical activity	From 7th day after first exposure through twenty-first day after last exposure.
Staphylococcus aureus infection Active, draining skin lesion	Exclude from clinical activity	Until lesions have resolved
Carrier state	No restriction unless personnel are epidemiologically linked to transmission of the organism.	
Streptococcal Infection, group A	Exclude from clinical activity	Until 24 hours after adequate treatment is started.
Tuberculosis Active disease	Exclude from clinical activity	Until proven non-infectious
Positive TST (latent TB)	No restriction	

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Table 2 (continued)	Work restrictions for HCWs infected with or exposed to major infectious diseases in health care settings.	
Disease/Problem	Clinical Restriction	Duration
Varicella (Chicken pox)		
Active disease	Exclude from clinical activity	Until all lesions dry and crust.
Post exposure (susceptible personnel)	Exclude from clinical activity	From tenth day after first exposure through twenty-first day (twenty-eighth day if varicella- zoster immune globulin [VZIG] administered) after last exposure.
Zoster (shingles)		
Localized, in healthy person	Cover lesions, restrict from care of patients at high risk	Until all lesions dry and crust.
Generalized or localized in immunosuppressed person	Exclude from clinical activity	Until all lesions dry and crust.
Post exposure (susceptible personnel)	Exclude from clinical activity	From tenth day after first exposure through twenty-first day (twenty-eighth day if varicella-zoster immune globulin [VZIG] administered) after last exposure or if varicella occurs when lesions crust and dry.
Viral respiratory infection, acute febrile	Consider excluding from care patients at high risk, or contact with such patients' environment during community outbreak of respiratory syncytial virus and influenza	Until acute symptoms resolve.

Table 2 is modified from *Morbidity and Mortality Weekly Report (MMWR) RR-17 Guidelines for Infection Control in Dental Health Care Settings- 2003* (23)

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