



**NEPHROLOGY PROGRAM  
DEPARTMENT POLICIES AND PROCEDURES**

**Hemodialysis - Section 03 - Patient Assessment & Management - Neph 3-07  
Management of Hepatitis B Surface Antigen Positive Patients on  
Hemodialysis**

**No.: 01210** (TOH Standardized Policy Number)

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**ISSUED BY:**

Hemodialysis Clinical Practice /  
Infection Control

**DATE OF APPROVAL:**

N/A

**APPROVED BY:**

Program Clinical Director / Division Head

**LAST REVIEW/REVISION DATE:**

2017/03

**CATEGORY:**

Patient Assessment and Management

**IMPLEMENTATION DATE:**

2001/12

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**PURPOSE:**

Hepatitis B Virus (HBV) is the blood borne virus that is most efficiently transmitted in the hemodialysis setting; therefore, additional precautions beyond Routine Practices are required in the care of Hepatitis B surface antigen positive (HBsAg positive) hemodialysis patients. Additional precautions are primarily designed to minimize the risks of HBV transmission associated with the environment since the potential for contamination with blood is high

- Refer to [Medical Directive Neph 2-02](#)
- Refer to [Neph 3-04 \(# 00729\)](#)
- Refer to [Neph 3-06 \(# 00730\)](#)

**DEFINITION(S):** N/A

**ALERTS:** N/A

**PROCEDURE:**

**Section A: Patient specific**

1. The Physician will notify all patients who are newly identified as being Hepatitis B surface antigen positive

2. The RN/RPN who receives a positive HBsAg report shall document the results in NephroCare (transplant serology, allergy alert and document in progress notes) and notifies the appropriate Nephrologist
3. All new cases of Hepatitis B require consultation/referral to Viral Hepatitis Clinic or specialist
4. As Hepatitis B is a reportable disease, notify Infection Control of all hemodialysis patients who are HBsAg positive. Infection Control will report these findings to Public Health
5. All HBsAg-positive patient(s) will be dialyzed in a designated room separate from other patients
6. All HBsAg-positive patient(s) will be tested annually for HBsAg

#### **Section B: Personnel specific**

1. RN/RPN will be assigned to care for the HBsAg-positive patient(s) for the duration of their treatment. This RN/RPN will not perform other duties common to all patients
2. Place green Contact Precaution sign at the entry to patient's room

#### **Section C: Procedure/equipment**

1. A dedicated dialysis machine, medication, supplies (thermometer, glucose meter, tourniquet, and tapes) will be provided to patients who are HBsAg positive
2. Appropriate Personal Protective Equipment (PPE) must be worn when entering the room
3. Ensure the health record does not enter the patients' room
4. When exiting the room, remove PPE as per contact precautions

#### **Section D: Post treatment**

1. Do disinfection of the machine as per policy Neph 10-3 (Stripping and Disinfection of the Gambro Artis Hemodialysis Machine). In the event of a blood leak during treatment the dialysis machine must be chemically disinfected (Clean Cart A) before being used on another patient
2. Clean and store the labeled patient specific items in the designated area
3. Ensure that the machine is clearly identified as being a Hepatitis B positive machine
4. Store the Hepatitis B machine in the designated location
5. Once housekeeping completes terminal cleaning of the room, another dialysis machine may be installed in the room to be used by other patients
6. Routine cleaning and disinfection of the external surfaces of the Hemodialysis equipment is performed by the Dialysis Aides (Nursing staff in units where Dialysis Aides are not available)

7. Once the need for isolation is no longer required, the Unit Care Facilitator will inform the Dialysis Aides so that appropriate cleaning/checks can be completed. The Dialysis Aides will remove the Hepatitis B signage before releasing the machine into general use and will inform the Unit Care Facilitator
8. The Dialysis Technologists must be informed should there be signs of excessive blood that cannot be removed with normal cleaning so that an internal verification can be done

**Section E: Management of a Hepatitis B surface antigen(HBsAg) positive patient (outside of Civic Dialysis Unit designated Hepatitis B room)**

In the event that a HBsAg positive patient is not dialyzed in the designated room at the Civic Dialysis Unit the following is required:

1. HBsAg positive patient must be dialyzed in a private room on contact precautions
2. Designate and label a machine to the HBsAg positive patient or if available when dialyzing at the Civic Dialysis Unit one of the designated Hepatitis B machines can be used
3. RN/RPN caring for the HBsAg positive patient may be assigned another patient(s) with the additional patient(s) meeting the following criteria:
  - The Hepatitis B surface antibody (HBsAb) level is done within the last month and is above 10 IU/L.1 Monthly screening is required while the patient(s) is part of this assignment
  - \*\*\*The 2:1 or 3:1 assignment must also take into consideration the patients that may overlap in the second or third station with the HBsAg positive patient therefore their immunity must also be known\*\*\*
  - Under no circumstance during which time the RN/RPN is caring for the HBsAg positive patient shall they be assigned a patient that does not meet the above criteria
4. It is the responsibility of the RN/RPN making the assignment (or delegate) that the additional patients meet the above criteria
5. If for any reason the assignment is changed and another patient is part of the HBsAg positive RN/RPN assignment this patient must meet this criteria (no exceptions will be made)
6. RN/RPN assigned to the HBsAg positive patient is responsible for the on/off hemodialysis procedure unless due to unforeseen circumstances the patient was required to come off the machine while away on break
7. HBsAg positive patient assignment can be covered for break time by another RN/RPN in the unit. The covering nurse is not expected to be doing routine tasks that can be provided to by the assigned nurse (i.e. administering routine meds, changing dressing, etc)
8. RN/RPN assigned to the HBsAg positive patient does not cover for other patients for breaks nor provides care for other patients while the HBsAg positive patient is under their care

9. Follow Section D: Post Treatment for cleaning, disinfection and storage of Hepatitis B machine after use

#### **Section F: Management of Hepatitis BsAg positive result on a previously Hepatitis BsAg negative patient**

1. If a Hepatitis B surface antigen comes back positive on a previously negative patient, the patient is to be isolated on a designated machine until further investigation is done
2. Send Hepatitis B surface antigen, Hepatitis B e antigen, Hepatitis B e antibody, Hepatitis B core total and IgM antibodies. In addition, send Hepatitis B DNA bloodwork to the Virology Lab at CHEO.
3. This patient will be dialyzed in a private room on contact precautions until directed by Infection Control
4. This machine must be identified as being dedicated to this patient
5. This patient must not be dialyzed on the dedicated Hepatitis B machines
6. This patient must not be dialyzed with HBsAg positive patients
7. Nephrologist to consult Viral Hepatitis Clinic (TOH General Campus) as required
8. Patient to remain on isolation until seen by Viral Hepatitis Clinic and/or evaluation complete
9. Notify TOH Infection Control for Nephrology

#### **RELATED POLICIES / LEGISLATION:**

1. Nephrology Policies and Procedures - [Hemodialysis - Section 02 - Medical Directives - Neph 2-02 Routine Testing at Initiation of Dialysis](#)
2. Nephrology Policies and Procedures - [Hemodialysis - Section 03 - Patient Assessment and Management - Neph 3-04 \(#00729\) Hemodialysis: TB, Viral Testing and Vaccination Guidelines](#)
3. Nephrology Policies and Procedures - [Hemodialysis - Section 03 - Patient Assessment and Management – Neph 3-06 \(#00730\) Infection Control Practices for the Hemodialysis Unit](#)

#### **REFERENCES:**

1. Centre for Disease Control and Prevention. Recommendations for Preventing Transmission of Infections Among Chronic Hemodialysis Patients. MMWR 2001 / 50(RR05); 1-43 <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5005a1.htm>
2. Expert opinion from Dr. Curtis Cooper, Viral Hepatitis Program
3. Expert opinion from Dr. Toye, Medical Microbiologist, Director of Laboratory Medicine

#### **COMMENTS / SIGNIFICANT REVISIONS: N/A**

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