

Hepatitis B Immunization for Patients Receiving Hemodialysis

Site Applicability

All Hemodialysis Units (SPH In-center, and Community Dialysis Units)

Practice Level

Registered Nurses and Licensed Practical Nurses who have completed required education to provide hemodialysis care for patients at Providence Health Care.

Requirements

A prescriber's order (paper pre-printed or electronic order) is required to utilize the hepatitis B immunization protocol (See Appendices) for chronic hemodialysis outpatients.

Eligibility

All chronic kidney disease patients, receiving hemodialysis or peritoneal dialysis.

Contraindications

History of anaphylactic reaction to previous dose of a hepatitis vaccine or to any component of ENGERIX-B or RECOMBIVAX HB vaccine, or to latex.

Need to Know

1. Immunization protocol can only be applied to patients who are chronic hemodialysis outpatients.
2. ENGERIX®-B and RECOMBIVAX HB® brand vaccines are interchangeable at any dose, using age-specific dosage and recommended schedule for the respective product. Contact the pharmacist or provider (MD/NP) if you need to change vaccines mid schedule.
3. If the immunization series is interrupted after the 1st dose, the 2nd dose should be administered as soon as possible. If only the 3rd dose is delayed, administer as soon as possible. If years have lapsed between the 1st and 2nd dose, it may be prudent to assess antibody response post-series, especially if the patient is at significant risk. Contact pharmacist or providers (MD/NP) for direction.

4. Potential adverse events include pain, redness, or swelling at the injection site. Potential systemic adverse events include fever, headache, nausea, diarrhea, fatigue, malaise.

Protocol

Assessment

1. Review vaccination history to determine if patient had prior vaccination for hepatitis B.
2. Confirm informed consent from patient or substitute decision-maker.
3. Review allergies to ensure no contraindication.
4. Review Hepatitis B lab results (Hepatitis B surface antigen, Hepatitis B surface antibody, Hepatitis B core antibody) to determine whether vaccination is required or not as per established algorithms.

Procedure

1. Select powerplan NEPH Hemodialysis Vaccination.
2. Select add to phase and choose order sentence as per hepatitis B algorithm direction.
 - a. hepatitis B adult vaccine (hepatitis B - RECOMBIVAX 40 mcg/mL) 1 mL intramuscular. To be given at 0, 1 and 6 months
(or)
 - b. hepatitis B adult vaccine (hepatitis B - ENGERIX 20 mcg/mL) 2 mL intramuscular. To be given at 0, 1, 2 and 6 months
 - c. hepatitis B adult vaccine (hepatitis B - RECOMBIVAX 40 mcg/mL) 1 mL intramuscular booster
(or)
 - d. hepatitis B adult vaccine (hepatitis B - ENGERIX 20 mcg/mL) 2 mL intramuscular booster
3. Conditional Orders for Labs for Hepatitis B
 - a. Nurse to place order – One time (If/when vaccination series is administered, then nurse to order anti-HBs 1 month after series completion based on the local Hepatitis B Vaccination Algorithm for Chronic Hemodialysis patients.
 - b. Nurse to place order – One time (If/when anti-HBs equal or greater than 10 IU/L, then Nurse to order anti-HBs yearly based on the local Hepatitis B Vaccination Algorithm for Chronic Hemodialysis patients.
 - c. Ongoing – (If/when HBsAg negative, Anti-HBc negative or Anti-HBs is less than 10 IU/L nurse to order Hepatitis B vaccine (series or booster) as per the local Hepatitis B Vaccination Algorithm for Chronic Hemodialysis patients.

Intervention

1. Administer vaccine as per protocol. See appendices:
 - a. [Appendix A](#): Hepatitis B vaccination algorithm for chronic hemodialysis patients – Initial Testing
 - b. [Appendix B](#): Hepatitis B vaccination algorithm for chronic hemodialysis patients – Routine Testing
 - c. [Appendix C](#): Hepatitis B vaccination algorithm for chronic hemodialysis patients – Isolated Core Positive
 - d. [Appendix D](#): Hepatitis B vaccination algorithm for chronic hemodialysis patients – Isolated Core Positive (Vaccine Responder)
2. Patient to remain in hemodialysis unit for 15 minutes post vaccination for observation of any adverse reactions.

Documentation

Sites Live with CST-Cerner

1. Sign for vaccine in MAR (medication administration record), recording dose, site of administration and lot number of vaccine utilizing bar coding scanning.
2. For CERNER sites with split activation ensure vaccine is documented in PROMIS.
3. Document any adverse reactions.

Sites not using CST-Cerner

1. Transcribe vaccination order to paper MAR and Prescriber Order from Pre-printed order - hepatitis B adult vaccine (hepatitis B - RECOMBIVAX 40 mcg/mL) 1 mL intramuscular. To be given at 0, 1 and 6 months or as booster as per algorithm. This is required to facilitate PROMIS data entry.

(or)

Transcribe vaccination order to paper MAR and Prescriber Order sheet from Pre-printed order - hepatitis B adult vaccine (hepatitis B - ENGERIX 20 mcg/mL) 2 mL intramuscular. To be given at 0, 1, 2 and 6 months or as booster as per algorithm.

2. Sign for vaccine on paper MAR recording site of administration and lot number of vaccine.
3. Document vaccine in PROMIS database
4. Document any adverse reactions.

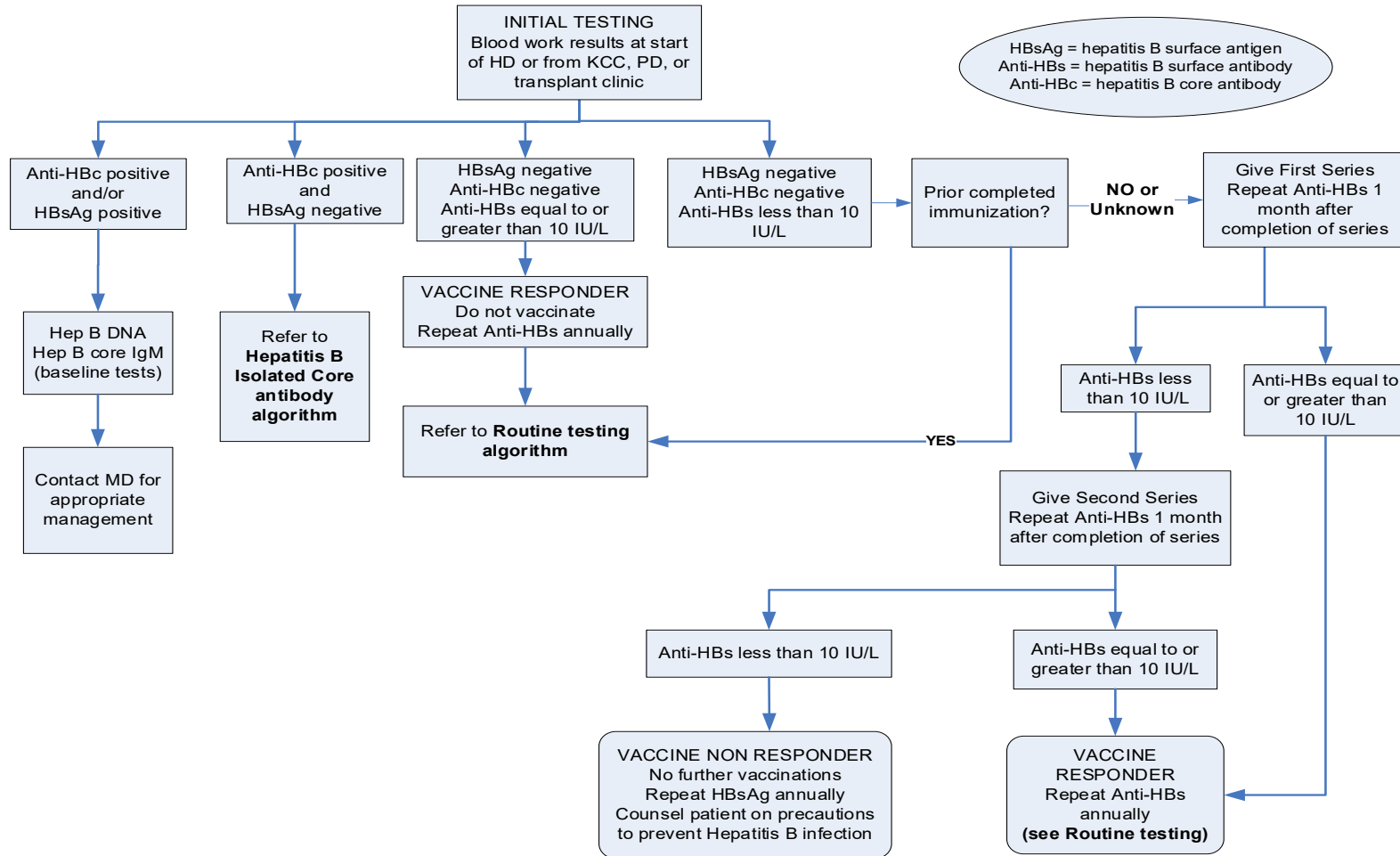
Patient and Family Education

1. Patient to observe for any adverse reactions and report them to a health care professional immediately or seeking emergency assistance if they cannot breathe feel throat tightening or swelling.
2. Inform patients that local reactions (redness, soreness or swelling) at the site of injection are not uncommon.

Related Documents

- BCCDC Communicable Disease Control Manual: Chapter 2 Immunizations, Part 4 Biological Products
 - [Hepatitis B Vaccine Program for Chronic Kidney Disease Clients](#)
 - [Informed Consent for Immunizations](#)
 - [Contraindications and Precautions for Immunization](#)
- Hand Hygiene
 - [PHC Hand Hygiene](#)
- Immunization Guidelines
 - [BC Renal-Hepatitis B Guideline](#)
- British Columbia College of Nurses and Midwives
 - [Registered Nurses Scope of Practice, Standards, Limits, Conditions](#) (Acting with Client-Specific Orders)
 - [Licensed Practical Nurses Scope of Practice, Standards, Limits, Conditions](#) (Acting with Client Specific Orders)

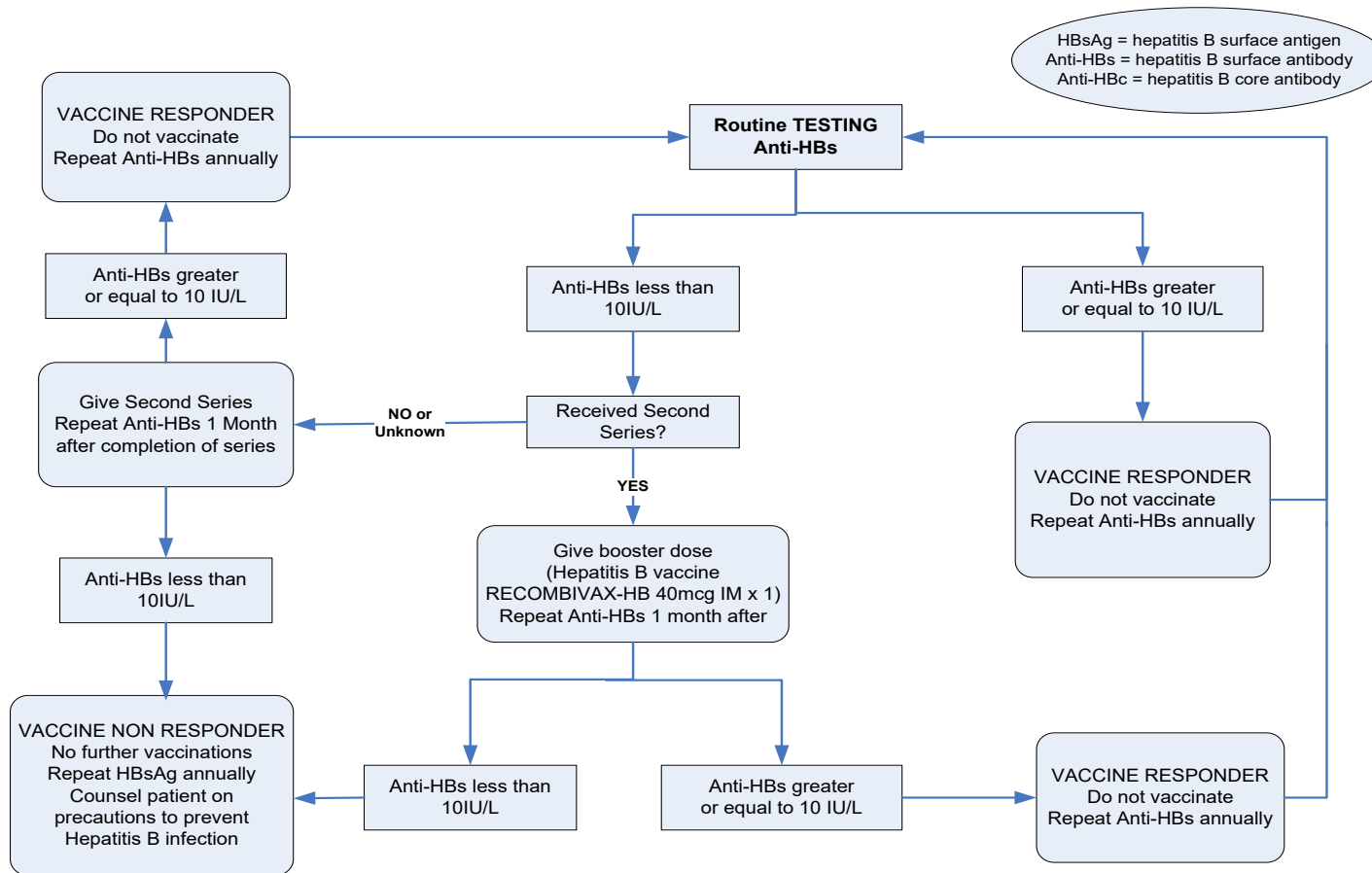
Appendix A: Hepatitis B Vaccination Algorithm for Chronic Hemodialysis Patients – Initial Testing



Note: Hepatitis B vaccine (Recombivax HB) series given on a 0, 1 and 6 month schedule

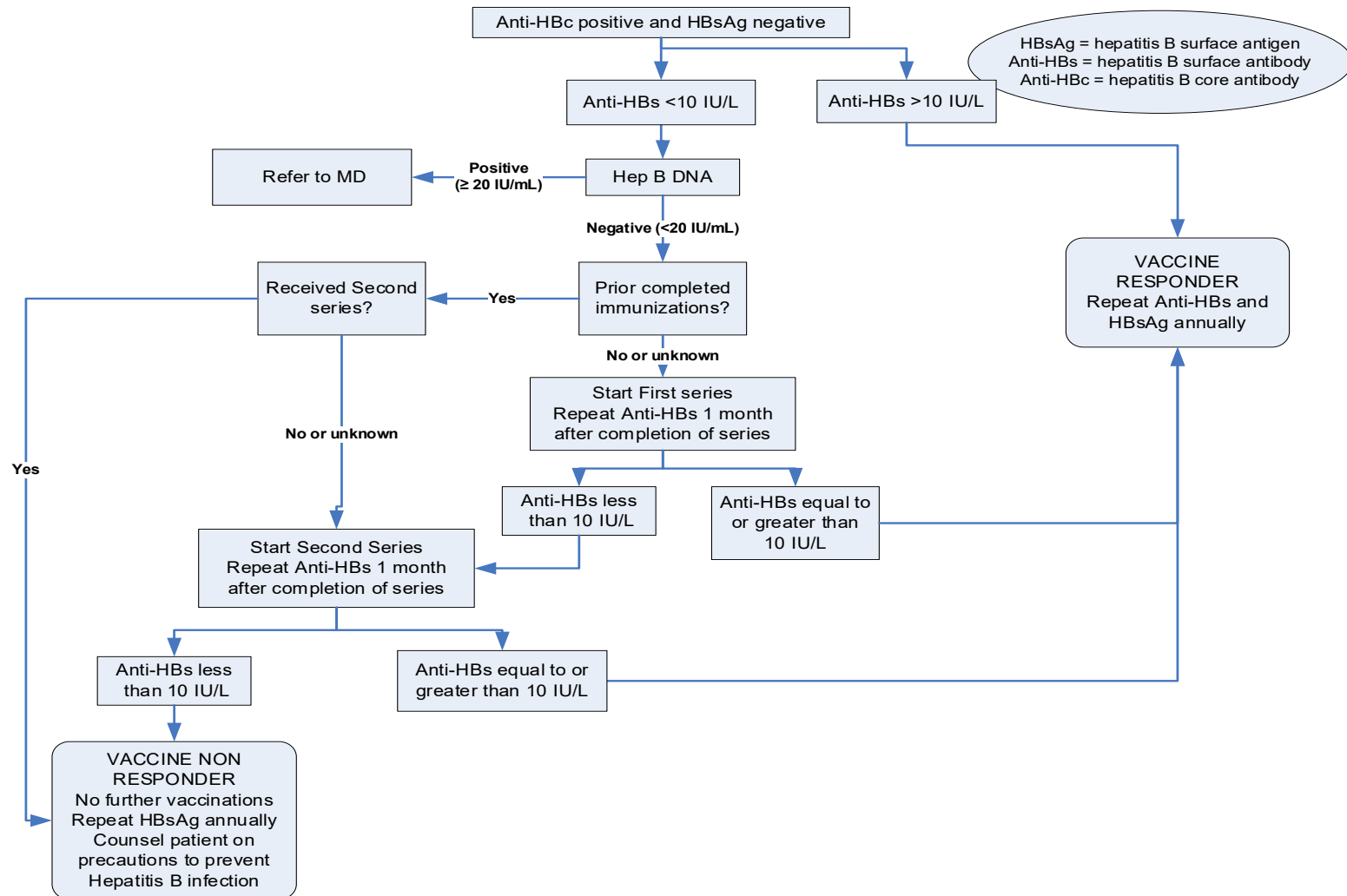
Hepatitis B vaccine (Engerix-B) series given on a 0, 1, 2 and 6 month schedule

Appendix B: Hepatitis B Vaccination Algorithm for Chronic Hemodialysis Patients – Routine Testing



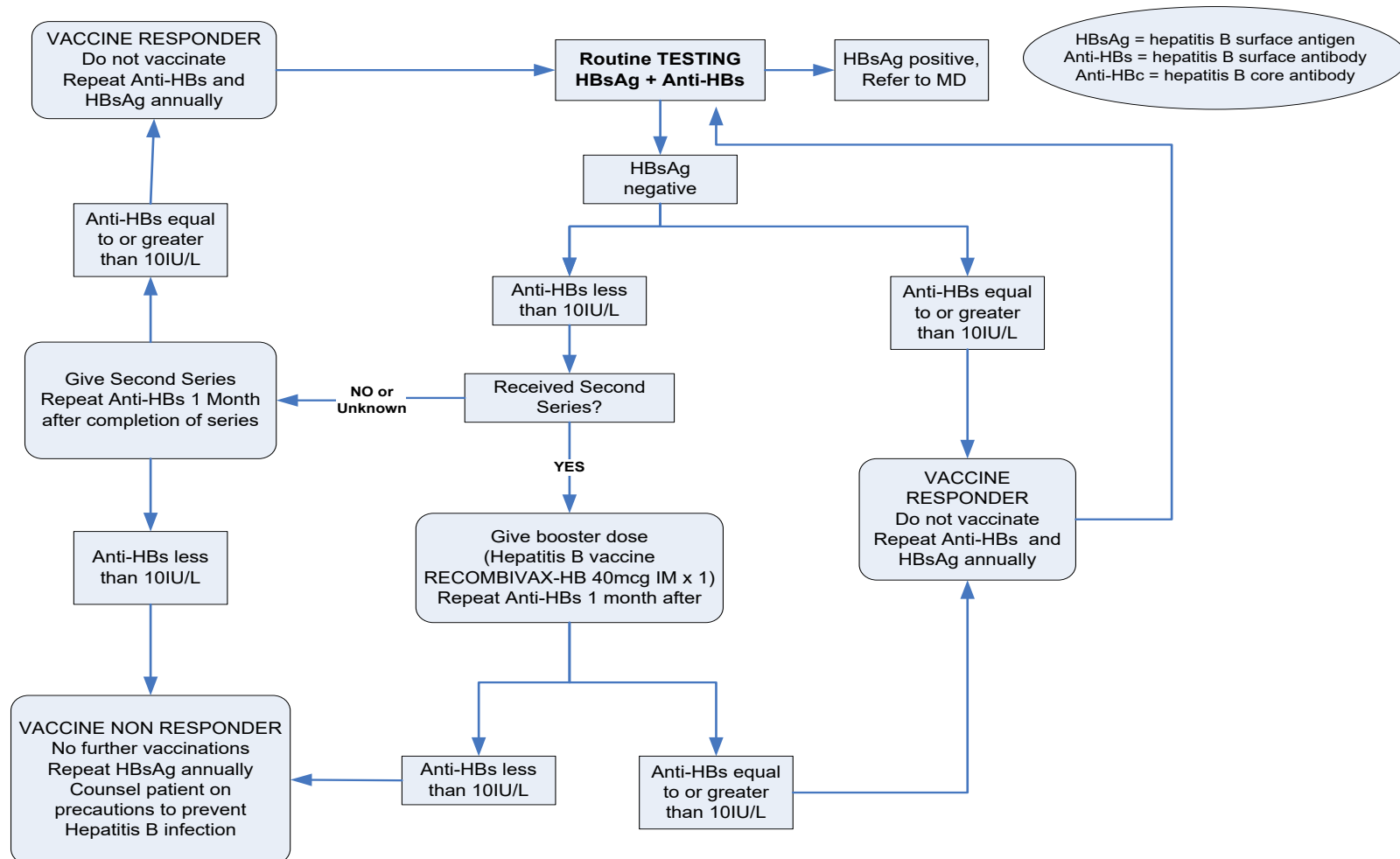
Note: Hepatitis B vaccine (Recombivax HB) series given on a 0, 1 and 6 month schedule

Appendix C: Hepatitis B Vaccination Algorithm for Chronic Hemodialysis Patients – Isolated Core Positive



Note: Hepatitis B vaccine (Recombivax HB) series given on a 0, 1 and 6 month schedule

Appendix D: Hepatitis B Vaccination Algorithm for Chronic Hemodialysis Patients – Isolated Core Positive (Vaccine Responder)



Note: Hepatitis B vaccine (Recombivax HB) series given on a 0, 1 and 6 month schedule

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Persons/Groups Consulted:

Clinical Practice Group, PHC Renal Program

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