



BC Centre for Disease Control
An agency of the Provincial Health Services Authority

Immunization Programs and Vaccine
Preventable Diseases Service
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Date: January 24, 2017

Administrative Circular: 2017:01

ATTN: Medical Health Officers and Branch Offices
Public Health Nursing Administrators and Assistant Administrators
Holders of Communicable Disease Control Manuals

**Re: Update to Communicable Disease Control Manual,
Chapter 2 - Immunization Program, Section III-Immunization of Special Populations &
Section VII-Biological Products**

Section III-Immunization of Special Populations

Table 1: Vaccines Recommended for Immunocompromised Clients

- Congenital immunodeficiency has been added to the introductory content as an immunocompromising condition for which Hib vaccine is recommended for those over 5 years of age regardless of immunization history.
- Congenital immunodeficiency: indication for hepatitis B vaccine has been added.
- HIV infection: indication for HPV vaccine has been added.
- Malignant Neoplasm: the title has been changed to “Malignant Neoplasm (adults)” with an accompanying footnote referring to subsection *1.5.3.1 Immunization of pediatric (those under 18 years of age) oncology clients who have completed treatment, including autologous HSCT* for pediatric oncology clients.
- Solid Organ Transplant (SOT) Candidates and Recipients: indication for hepatitis B vaccine has been changed from “kidney and liver transplant candidates and recipients” to “SOT candidates and recipients”. Content added indicating that live vaccines are contraindicated post-transplant.
- ‘Meningo’ definition in the footnotes has been revised from ‘meningococcal conjugate vaccines’ to ‘meningococcal quadrivalent conjugate vaccine’.

Table 3: Vaccines Recommended for Select Populations

- Men who have sexual contact with men: indication for HPV vaccine has been added.

**Please remove page numbers: 2 & 3 dated November & April 2010
Please add new page numbers: 2 & 3 dated January 2017**

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1.4.2 Referral Form for Varicella Vaccination & 1.4.3 Referral Form for MMR Vaccination

- HIV immunological categories have been revised according to the updated US CDC guidelines.
- The content under “To be completed by physician or nurse practitioner and sent to public health” has been clarified to indicate that individuals may require up to two doses of the respective vaccine given up to 3 months apart.

**Please remove page numbers: 10-11a dated May 2016
Please add new page numbers: 10-11a dated January 2017**

1.5.2 Congenital Immunodeficiency States

- Hepatitis B vaccine has been added to the table, indicating the requirement for the “Hepatitis B Vaccine Higher Dose Schedule”. Post-immunization serology recommendations have been included in the table.

**Please remove page number: 14 dated May 2016
Please add new page number: 14 dated January 2017**

1.5.3 Hematopoietic Stem Cell Transplantation (HSCT)

- The recommendation for initiation of inactivated vaccines post-HSCT has changed from ‘6 months’ to ‘6-12 months’. The appropriate time to commence immunizations is determined by the HSCT specialist, who will provide written guidance to the client for sharing with the Public Health Nurse.
- Content added indicating that live zoster vaccine is not recommended for this population.
- *Table 4: Worksheet for Immunization of Adult Hematopoietic Stem Cell Transplant (HSCT) Recipients (those 18 years of age and older)* revisions include:
 - Column headings have been revised to include visit numbers and intervals between visits (note: the intervals remain unchanged from the previous version). The timing of the first visit has been changed from ‘6 months’ to ‘6-12 months’ post-HSCT.
 - Content added below the table indicating that after each set of vaccines, a record of immunizations should be sent by fax to the Leukemia/Bone Marrow Transplant Survivorship Program.
 - Hepatitis B vaccine footnoted content has been revised to indicate that the “Hepatitis B Vaccine Higher Dose Schedule” is recommended for this population, including a hyperlink to the “Hepatitis B Vaccine Higher Dose Schedule” page in Section VII. NOTE: if the series is initiated with Engerix®-B, a 4-dose series at 0, 1, 2, 6 months is recommended. For those 20 years of age and older, if Engerix®-B is unavailable, Recombivax HB® Dialysis Formulation may be used for this population.

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- The dose of meningococcal C conjugate vaccine at the 4th visit has been replaced with meningococcal quadrivalent conjugate vaccine. An accompanying footnote has been added regarding the recommendation for a booster dose of meningococcal quadrivalent conjugate vaccine every 5 years.
- HPV vaccine indication revised from “Young women born in 1994 or later who were eligible...” to “Eligible individuals...”. Based on a risk assessment, HPV vaccination can be initiated as early as 6-12 months post-HSCT, using a 0, 2 and 6 month schedule.
- The lab requisition for varicella IgG testing has been retitled from “BCCDC Laboratory Services Requisition” to “PHSA Laboratories Serology Screening Requisition”.
- *Table 5: Worksheet for Immunization of Pediatric Allogeneic Hematopoietic Stem Cell Transplant (HSCT) Recipients (those under 18 years of age)* revisions include:
 - Column headings have been revised to include visit numbers and intervals between visits (note: the intervals remain unchanged from the previous version). The timing of the first visit has been changed from ‘6 months’ to ‘6-12 months’ post-HSCT.
 - Hepatitis B vaccine footnoted content has been revised to indicate that the “Hepatitis B Vaccine Higher Dose Schedule” is recommended for this population, including a hyperlink to the “Hepatitis B Vaccine Higher Dose Schedule” page in Section VII. NOTE: For those 16 years of age and older, if the series is initiated with Engerix®-B, a 4-dose series at 0, 1, 2, 6 months is recommended.
 - Footnote added indicating that the HSCT specialist will determine the appropriate time to commence immunizations and will provide written guidance to the client for sharing with the Public Health Nurse.
 - The lab requisition for varicella IgG testing has been retitled from “BCCDC Laboratory Services Requisition” to “PHSA Laboratories Serology Screening Requisition”.
 - HPV vaccine indication revised from “female HSCT recipients” to “eligible HSCT recipients”. Based on a risk assessment, HPV vaccination can be initiated as early as 6-12 months post-HSCT, using a 0, 2 and 6 month schedule.
- *1.5.3.1 Immunization of pediatric (those under 18 years of age) oncology clients who have completed treatment, including autologous HSCT* revisions include:
 - Under *Introduction and General Principles*, the content relating to children who receive vaccines post-treatment has been clarified, indicating that those who are eligible for an age-scheduled dose of that antigen within a year should be vaccinated when they present and will not require the age-scheduled dose. The exception to this is if the post-treatment dose was given prior to the minimum age (e.g., school entry booster dose of DTaP-IPV administered prior to 4 years of age).
 - Content under DTaP-HB-IPV-Hib vaccine has been revised to reference the ‘Hepatitis B Vaccine Higher Dose Schedule’ for allogeneic HSCT recipients.

Please remove page numbers: 15-18e dated June 2014 – February 2016
Please add new page numbers: 15-18e dated January 2017

1.5.4 Human Immunodeficiency Virus (HIV) Infection

- Title has been changed from “Illness that progressively weakens the immune system [e.g., Human Immunodeficiency Virus (HIV)]” to “Human Immunodeficiency Virus (HIV)”.
- Hepatitis B vaccine: revised to indicate the requirement for the “Hepatitis B Vaccine Higher Dose Schedule”.
- HPV vaccine has been added to the table, indicating that it is publicly-funded for those 9-26 years of age (inclusive).
- Rotavirus vaccine has been added to the table, with hyperlinks to the associated subsection and referral form.
- Pneumococcal vaccine recommendations revised to include both conjugate *and* polysaccharide vaccines, with the accompanying footnote B for more information.
- Footnote C has been revised to indicate that MMR and varicella vaccines can be administered on the same day or separated by 4 weeks, and that MMRV is contraindicated in this population.
- The Immunological Categories table has been added, as well as the recommendation to consult the primary care physician, medical specialist or nurse practitioner most familiar with the client’s current medical status prior to immunizing with live vaccine.

Please remove page numbers: 19 & 20 dated November 2010 & January 2009
Please add new page numbers: 19 & 20 dated January 2017

1.5.7 Chronic Liver Disease

- Content regarding those with chronic hepatitis B infection and those who are anti-HCV positive has been moved from the table to a footnote.
- Hepatitis B vaccine: content regarding post-immunization serology has been added to the table. Two accompanying footnotes have also been added:
 - Footnote C indicating the recommendation for pre-vaccination testing.
 - Footnote D indicating the recommendation for standard hepatitis B vaccine dosing for those with chronic liver disease. Those with advanced liver disease who are non-responsive to the initial hepatitis B vaccine series (standard dosing), should be immunized as per the ‘Hepatitis B Vaccine Higher Dose Schedule’ for the second series.
- Pneumococcal vaccine: content has been added regarding the recommendation for a once only revaccination with the pneumococcal polysaccharide vaccine.

Please remove page number: 27 dated November 2010
Please add new page number: 27 dated January 2017

1.5.9 Candidate For Or Recipient Of Solid Organ Or Islet Cell Transplant

- Hepatitis B vaccine: content has been revised to indicate the requirement for the “Hepatitis B Vaccine Higher Dose Schedule”. Post-immunization serology information has been moved from the footnotes to the table.
- *Table 8: BC Children’s Hospital Multi-organ Transplant Clinic Accelerated Immunization Schedule for Children Expected to be Transplanted Before 18 Months of age* has been revised to indicate the requirement for the “Hepatitis B Vaccine Higher Dose Schedule”.
- *Table 9: BC Children’s Hospital Multi-organ Transplant Clinic Routine Immunization Schedule for Children Expected to be Transplanted After 18 months of age* has been revised to indicate the requirement for the “Hepatitis B Vaccine Higher Dose Schedule”, as well as moving Men-C-ACYW-135 vaccine from Grade 6 to Grade 9.

**Please remove page numbers: 29-32 dated May 2016
Please add new page numbers: 29-32 dated January 2017**

Please also remove the Table of Contents for Section III-Immunization of Special Populations dated May 2016 and replace with the enclosed updated Table of Contents dated January 2017.

Section VII-Biological Products

Diphtheria - Tetanus- Acellular Pertussis - Hepatitis B- Polio- Haemophilus Influenzae Type b Adsorbed (DTaP-HB-IPV-Hib) (INFANRIX hexa®)

- Product page reformatted.
- INDICATIONS revisions include:
 - The addition of “Select special populations as indicated in Section III-Immunization of Special Populations” (i.e., pediatric oncology clients).
 - Footnote B has been added, indicating that INFANRIX hexa® can be used as a booster dose for those under 7 years of age who require protection against tetanus, diphtheria, pertussis, polio, Hib and hepatitis B, regardless of which product was used for the primary series.
- BOOSTER DOSES: revised to indicate that there is no booster recommendation using INFANRIX hexa®; accompanying footnote C has been added referring to Section IIA-Immunization Schedules for information regarding booster doses using the age appropriate tetanus and diphtheria-containing vaccines.
- CONTRAINDICATIONS: removal of “INFANRIX hexa® is not indicated for children ≥ 7 years of age.”, as this vaccine is recommended as a booster dose for pediatric oncology clients up to 18 years of age.
- PRODUCT COMPONENTS has been revised.
- SPECIAL CONSIDERATIONS: revised to indicate that INFANRIX hexa® contains only a single dose of HB vaccine (as Engerix®-B) and is not indicated for infants and children requiring the ‘Hepatitis B Vaccine Higher Dose Schedule’.
- ADVERSE EVENTS has been updated.

Please remove page number: 1 dated June 2015
Please add new page numbers: 1 & 1a dated January 2017

Hepatitis B Vaccine (Recombivax HB® & Engerix®-B) , Pre- & Post-Exposure Indications

- All pages have been reformatted.
- *Hepatitis B Vaccine Pre-Exposure Indications* revisions include:
 - The new indication “Individuals born in 1980 or later” has been added, with accompanying footnote B referring to the implementation of the infant and Grade 6 programs in BC. As such, the following indications have been removed as they are captured within the addition of this indication:
 - Grade 6 students
 - Children born on or after January 1, 2001
 - Children under 12 years of age who are new immigrants (within the past year) to Canada from regions of high hepatitis B prevalence (e.g., Asia and Africa).
 - ‘Candidates or recipients of a kidney transplant’ has been changed to ‘Candidates or recipients of a solid organ transplant’
 - ‘Individuals with congenital immunodeficiency’ has been added.
 - ‘Pharmacists’ has been moved to the list of Health Care Workers for whom the hepatitis B vaccine is recommended; however the employer is responsible for the cost and administration of this vaccine.
 - Footnote D has been revised to indicate the requirement for the “Hepatitis B Vaccine Higher Dose Schedule”.
- *Hepatitis B Vaccine for Students of Health Care Professions* revisions include:
 - Naturopathic physicians have been added.
 - The content related to post-immunization anti-HBs serology has been revised for clarity.
- *Hepatitis B Vaccine Post-Exposure Indications* page has been moved to follow the *Hepatitis B Vaccine Pre-Exposure Indications* pages.
- Engerix®-B and Recombivax HB® pre- and post-exposure content has been consolidated into each respective product page. Revisions to the Engerix®-B and Recombivax HB® product pages include:
 - Addition of hyperlinks to Pre-Exposure and Post-Exposure Indications.
 - Footnote B added, indicating the requirement for the “Hepatitis B Vaccine Higher Dose Schedule” for certain special populations. All references to the previous “double mcg dose” recommendations have been removed.
 - Footnote D revised from “High risk infants” to “Infants” weighing less than 2000 grams at birth who received doses on a 0, 1 and 6 month schedule will require a 4th dose of hepatitis B vaccine at 8 months of age.
 - Footnote E added, indicating that if appropriate, a 3-dose schedule given as 0.5 mL IM at 0, 1 and 6 months can be used for Grade 6 students and adolescents 11-15 years of age.

- Minimum interval recommendations have been removed from the footnotes as this information is now contained in Section IIA-Immunization Schedules, which is consistent with other product pages.
- BOOSTER DOSES: content added indicating that booster doses and/or re-immunization may be recommended for certain special populations. A hyperlink to the *Communicable Disease Control Manual, Chapter 1: Hepatitis B, 12.0 Booster Doses and Re-Immunization* has been added.
- SEROLOGICAL TESTING: content added indicating that post-immunization serologic testing is not recommended after receiving hepatitis B-containing vaccine in routine programs. However, serological testing is recommended for certain special populations. A hyperlink to the *Communicable Disease Control Manual, Chapter 1: Hepatitis B, 11.0 Serological testing for Hepatitis B in Specific Groups* has been added.
- ADVERSE EVENTS has been updated.
- Recombivax HB® SPECIAL CONSIDERATIONS revised to indicate that for infants and children less than 11 years of age, the routine 0.5 mL (5 mcg) dose contains the 'Hepatitis B Higher Vaccine Dosing' required for certain special populations.
- All references to thimerosal have been removed as both products are thimerosal-free.
- The new 'Hepatitis B Vaccine Higher Dose Schedule' page has been added, which outlines the dosing and schedule recommendations for certain special populations. In addition, post-vaccination serology recommendations for these populations have been included.

Please remove page numbers: 14-20 dated January 2009-June 2015

Please add new page numbers: 14-20a dated January 2017

Meningococcal B Vaccine (four component recombinant, adsorbed vaccine)
(BEXSERO®)

- Bexsero® supplier has been changed from Novartis Pharmaceuticals Canada to GlaxoSmithKline Inc.
- INDICATIONS: the age criteria for each indication has been revised from “2 months to 55 years of age” to “2 months of age and older”. Accompanying footnote A has been added indicating that Bexsero® is approved for use in children 2 months to 17 years of age (inclusive), however based on expert opinion (as per the Canadian Immunization Guide), it may be administered to individuals 18 years of age and older.
- A Health Canada alert has been issued indicating that an increased risk of hemolysis or low hemoglobin has been observed when clients already being treated with eculizumab (Soliris®) were vaccinated with Bexsero®. This content has been added to footnote B and SPECIAL CONSIDERATIONS, including a hyperlink to the Health Canada alert for recommendations on vaccinating such clients.

- SPECIAL CONSIDERATIONS content related to the recommendation for routine prophylactic administration of acetaminophen has been revised as per the Canadian Immunization Guide.
- Content regarding Kawasaki Disease under ADVERSE EVENTS has been simplified.

Please remove page numbers: 37 & 38 dated September 2014 & June 2015
Please add new page numbers: 37 & 38 dated January 2017

If you have any questions or concerns, please contact Christine Halpert, Senior Practice Leader, BCCDC at telephone (604) 707-2555 or by email at christine.halpert@bccdc.ca or Stephanie Meier, Public Health Resource Nurse, BCCDC at telephone (604) 707-2577 or by email at stephanie.meier@bccdc.ca.

Sincerely,



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