Yukon Immunization Program Manual

Section 8 - Biological Products

Meningococcal Vaccines

SECTION 8 – BIOLOGICAL PRODUCTS

Contents

2019 August

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

Supplier: GlaxoSmithKline Inc.

INDICATIONS	INITIAL SERIES❶
Provided free to: **(1)** Close contacts 8 weeks to 55 years of age of a case of serogroup B invasive meningococcal disease who meet the public health criteria for chemoprophylaxis.❶	**(1)(2)** Infants 8 weeks to 20 weeks of age: **3 doses** given as 0.5 mL IM, given at least 4 weeks apart with a **4th dose** after 12 months of age. Infants 24 weeks to 44 weeks of age: **2 doses** given as 0.5 mL IM, given at least 8 weeks apart, with a **3rd dose** after 12 months of age and at least 8 weeks after dose 2. Children 12 months to 10 years of age: **2 doses** given as 0.5 mL IM, given at least 8 weeks apart. Individuals 11 years to 55 years of age: **2 doses** given as 0.5 mL IM, given at least 4 weeks apart.
(2) In consultation with CMOH, individuals 8 weeks to 55 years of age at risk during IMD outbreaks caused by N. meningitidis serogroup B or the emergence of hyperendemic and/or hypervirulent N. meningitidis strains that are predicted to be susceptible to vaccine.❶	

ADMINISTRATION	0.5 mL IM (supplied as a 0.5 mL suspension in a pre-filled syringe)
REINFORCEMENTS	The need for further doses has not been established.
SEROLOGICAL TESTING	Serological testing is not recommended before or after immunization.
CONTRAINDICATIONS	History of anaphylactic reaction to a previous dose of meningococcal B containing vaccine, or to any component of Bexsero®, or to latex.
PRODUCT COMPONENTS	Potential allergens: kanamycin, latex. Other components: aluminum hydroxide, histidine, sucrose.
PRECAUTIONS	Safety of this vaccine in pregnant or lactating women, or in adults over 55 years of age has not been established however vaccination should not be withheld when there is a clear risk of exposure to meningococcal disease.
SPECIAL CONSIDERATIONS	Acetaminophen may be given for the reduction of fever in infants and children up to two years of age. Give one dose at the time of vaccination, followed by two more doses four to six hours apart. The recommended dosage is 10-15mg/kg per dose. The use of acetaminophen to control fever associated with Bexsero® has not been found to reduce the immunogenicity of the vaccine.

	2019 August
Meningococcal B Vaccine (four component recombinant, adsorbed vaccine) BEXSERO® **Supplier: GlaxoSmithKline Inc.**	
ADVERSE EVENTS	**Infants and children** **Local**: Tenderness, erythema, induration, swelling. **Systemic**: fever, sleepiness, irritability, unusual crying. Higher proportion of systemic reactions, including temperature >38 ° C, when given together with other routine vaccines. **Adolescents and adults** **Local**: pain, erythema, induration, swelling. **Systemic**: malaise, headache, myalgia. **Other: Kawasaki Disease** – At the time of approval, 7 cases of Kawasaki Disease were reported in phase 2 & 3 clinical studies, 6 of which were in vaccine recipients. This is higher than normal background levels however no causal relationship has been determined.
❶ In Canada, Bexsero® vaccine has been authorized for use in individuals 8 weeks to 17 years of age. However, data reported in clinical trials indicates that Bexsero® vaccine is immunogenic and safe when given to adults up to 55 years of age using a two dose schedule with an interval of at least one month between doses.	

	2019 August
Meningococcal C Conjugate (MCC) Vaccine NEISVAC-C®; **Supplier: Pfizer Canada Inc., NEISVAC-C®**	
INDICATIONS	**INITIAL SERIES❶**
(1) Two-dose program for infants <12 months of age.	**Dose 1:** 0.5 ml **IM** at 8 weeks of age **or** age at presentation. (If age of presentation is ≥12 months, only one dose is required.) **Dose 2:** 0.5 ml **IM** at ≥ 12 months of age (at least 8 weeks after 1st dose)❷❸
(2) Children who received their last dose of any MCC vaccine when they were < 12 months of age	**(1) One dose:** 0.5 ml **IM.** at ≥ 12 months of age ❷
(3) Medically high risk children ≥ 8 weeks to < 12 months of age❻	**(3)** See p.42 Meningococcal Quadrivalent.
(4) Close contacts of a case of invasive meningococcal group C disease that meet the criteria for chemoprophylaxis❹❺ who have NOT been previously vaccinated with MCC vaccine as directed by YCDC	**(4) Age at presentation:** **≥ 8 weeks to < 12 months of age:** **Dose 1:** 0.5 ml **IM** **Dose 2:** 0.5 ml **IM** at least 8 weeks after 1st dose **Dose 3:** 0.5 ml **IM** at ≥ 12 months of age (at least 8 weeks after 2nd dose) **≥ 12 months of age**: **One dose**: 0.5 ml **IM** ❷
(5) Children who have not received a dose of Men-C-C vaccine after 12 months of age and who are born in 2004 and later.	**(5) One dose:** 0.5 ml **IM** ❷
(6) Adolescents and adults up to 24 years of age inclusive, who have not received a dose of Men-C-C containing vaccine ❼	**(6) One dose:** 0.5 ml **IM** ❷
ADMINISTRATION	No reconstitution required
CONTRAINDICATIONS	History of anaphylactic reaction to a previous dose of any meningococcal vaccine or to any component of Neis Vac-C

	2019 August
Meningococcal C Conjugate (MCC) Vaccine NEISVAC-C® **Supplier: Pfizer Canada Inc., NEISVAC-C®**	
SEROLOGICAL TESTING	Serological testing is not recommended before or after immunization.
VACCINE COMPONENTS	**Potential allergens:** tetanus toxoid protein **Other components:** Aluminum hydroxide.
ADVERSE EVENTS	**All:** redness, swelling and pain at injection site; headache, fever **Infants and toddlers:** crying, irritability, drowsiness, somnolence/impaired sleeping **Infants:** vomiting/nausea/diarrhea/loss of appetite.
SPECIAL CONSIDERATIONS	Upon storage, a white deposit and clear supernatant can be observed. Shake the vaccine well in order to obtain a homogenous suspension.

❶ There must be an interval of at least 24 weeks since the prior administration of a meningococcal polysaccharide vaccine and the administration of Neis Vac-C.
❷ Meningococcal C conjugate vaccines are interchangeable for those ≥ 12 months of age.
❸ If an infant has a history of receiving their last dose before 12 months of age, give an additional dose at ≥ 12 months of age.
❹ Administer concurrently with chemoprophylaxis or as soon as possible.
❺ A MCC vaccine is preferred in this situation as it provides longer duration of protection and induction of immunologic memory than does a meningococcal C-containing polysaccharide vaccine.
❻ See Meningococcal Quadrivalent Conjugate Vaccine for list of medical indications.
❼ These individuals are eligible up to 24 years of age (inclusive)

	2024 February
Meningococcal Quadrivalent Conjugate Vaccine (Groups A, C, Y, W-135) **MENACTRA®** **Supplier: Sanofi Pasteur Limited.** **NIMENRIX®** **Supplier: Pfizer Canada, Ltd.** **MENVEO™** **Supplier: GlaxoSmith Kline Inc.**	
INDICATIONS	**DOSING AND SCHEDULE ❶❷**
(1) Provided free to individuals at higher risk of invasive meningococcal disease 8 weeks of age and older: ❸ • Functional or anatomic asplenia • Congenital immunodeficiency states (complement, properdin, factor D deficiency or primary antibody deficiencies). • Hematopoietic Stem Cell Transplant (adult and pediatric). • Solid organ or islet cell transplant (candidate or recipient). • Acquired complement deficiency due to receipt of the terminal complement inhibitor eculizumab (Soliris®) Refer to Yukon Immunization Program Manual, Section 5, for more information on specific medical conditions.	**A. If initiating the series between 6 and less than 12 months of age, contact YIP to review schedule.** **B. 12 months up to and including 23 months of age: Use Menveo vaccine only.** Contact YIP to order. **Dose 1:** 0.5mL IM **Dose 2:** 0.5mL IM at least 8 weeks after dose 1 **Booster doses:** 3 years after dose 2 and every 5 years as long as risk continues. **C. 24 months of age and older:** May be given as Menactra®, Nimerix®, or Menveo™. **Dose 1:** 0.5mL IM **Dose 2:** 0.5mL IM at least 8 weeks after dose 1 **Booster doses:** ▪ If meningococcal immunization series was initiated at 6 years of age or younger, administer a booster dose 0.5mL IM 3 years after dose 2, followed by a booster 0.5mL IM every 5 years as long as risk continues. ▪ If meningococcal immunization series was initiated at 7 years of age and older, administer a booster dose 0.5mL IM every 5 years as long as risk continues.
(2) Close contacts (2 months of age and older) of a case of invasive meningococcal disease (serogroups A, Y, or W-135) who meet the public health criteria for immunoprophylaxis ❹	**A. If initiating the series between 6 and less than 12 months of age, contact YIP to review schedule.** **B. 12 months up to and including 23 months of age: Use Menveo vaccine only.** Contact YIP to order. ○ **Unimmunized:** **Dose 1:** 0.5mL IM **Dose 2:** 0.5mL IM at least 8 weeks after dose 1 ○ **Previous immunization with Men-C-C** (regardless of when last Men-C-C was administered): **Dose 1:** 0.5mL IM **Dose 2:** 0.5mL IM at least 8 weeks after dose 1

	2024 February
Meningococcal Quadrivalent Conjugate Vaccine (Groups A, C, Y, W-135) **MENACTRA®** **Supplier: Sanofi Pasteur Limited.** **NIMENRIX®** **Supplier: Pfizer Canada, Ltd.** **MENVEO™** **Supplier: GlaxoSmith Kline Inc.**	
Indication (2) continued	○ **Previous immunization with Men-C-ACYW at less than 1 year of age or clients at high risk of IMD due to underlying medical conditions:** Administer 1 dose of Menveo™ 0.5mL IM if at least 4 weeks since last dose of Men-C-ACYW; otherwise, re-immunize if at least one year since last dose of Men-C-ACYW. ○ **Previously immunized with Men-C-ACYW at 1 year of age or older and not at high-risk of IMD due to an underlying medical condition:** Administer 1 dose of Menveo™ 0.5mL IM at least one year after last dose of Men-C-ACYW. **C. 2 years of age and older: May be given as Menactra®, Nimerix®, or Menveo™.** ○ **Unimmunized:** 1 dose 0.5mL IM ○ **Previously immunized with Men-C-C:** Administer 1 dose of Menactra®, Nimerix®, or Menveo™ 0.5mL IM regardless of when the last dose of Men-C-C was administered. ○ **Previously immunized with Men-C-ACYW at less than 1 year of age or clients at high risk of IMD due to underlying medical conditions:** Administer 1 dose of Menactra®, Nimerix®, or Menveo™ 0.5mL IM at least 4 weeks after last dose of Men-C-ACYW. ○ **Previously immunized with Men-C-ACYW at 1 year of age or older and not at high-risk of IMD due to an underlying medical condition:** Administer 1 dose of Menactra®, Nimerix®, or Menveo™ 0.5mL IM at least 1 year after last dose of Men-C-ACYW.
(3) Universal vaccination of healthy adolescents and young adults in grade 9, ages 13 to 18 years inclusively. ❺	One dose of Menactra®, Nimerix®, or Menveo™ 0.5mL IM

	2024 February
Meningococcal Quadrivalent Conjugate Vaccine (Groups A, C, Y, W-135) **MENACTRA®** **Supplier: Sanofi Pasteur Limited.** **NIMENRIX®** **Supplier: Pfizer Canada, Ltd.** **MENVEO™** **Supplier: GlaxoSmith Kline Inc.**	
(4) Recommended, but NOT provided free to: • research, industrial, and clinical laboratory personnel who are routinely exposed to *N. meningitidis* • military recruits • travellers for whom meningococcal vaccine is indicated • Post-Secondary Students over the age of 18.	One dose of Menactra®, Nimerix®, or Menveo™ 0.5mL IM. Booster doses may be required as outlined below in 'REINFOCEMENTS'
ADMINISTRATION	**MENACTRA** is supplied in a single dose prefilled syringe. No reconstitution is required. **NIMENRIX** must be reconstituted by adding the entire content of the pre-filled syringe of diluent to the vial containing the powder. After reconstitution, the vaccine should be used immediately. A new needle should be used to administer the vaccine. **MENVEO** must be reconstituted by adding the entire contents of the diluent (liquid MenCWY) into the vial containing the powder (MenA). Shake vigorously in order to mix. After reconstitution, the vaccine should be used immediately. A new needle should be used to administer the vaccine. **MENACTRA**, **NIMENRIX,** and **MENVEO** should be administered intramuscularly. Inspect for extraneous particulate matter and/or discolouration before use. If any exists, the product should not be administered. **MENACTRA**, **NIMENRIX,** and **MENVEO** can be administered concomitantly with live or inactivated age-appropriate vaccines.

	2024 February
Meningococcal Quadrivalent Conjugate Vaccine (Groups A, C, Y, W-135) **MENACTRA®** **Supplier: Sanofi Pasteur Limited.** **NIMENRIX®** **Supplier: Pfizer Canada, Ltd.** **MENVEO™** **Supplier: GlaxoSmith Kline Inc.**	
REINFORCEMENTS	**The following booster doses and re-immunization are recommended and publicly funded:** • For medically high-risk clients: ❻ Vaccination initiated at 6 years of age and under: provide a booster dose every 3-5 years. Vaccination initiated at 7 years of age and older: provide a booster dose every 5 years. • At the time of exposure for contacts of a case of invasive meningococcal disease in some circumstances. • During a community outbreak of invasive meningococcal disease in some circumstances. **The following booster doses and re-immunization are recommended but not publicly funded:** • For military personnel who remain at risk due to travel or overcrowded conditions, a booster dose of Men-C-ACYW is recommended every 5 years if at ongoing risk. • For all laboratory personnel who are potentially routinely exposed to N. meningitidis. Booster doses of Men-C-ACYW should be given at routine 5 year intervals for those laboratory workers who remain at ongoing risk of exposure. • When travelling to areas where meningococcal vaccine is recommended or required, re-vaccination with Men-C-ACYW is recommended every 3 to 5 years for those vaccinated at 6 years of age and younger, and every 5 years for those vaccinated at 7 years of age and older. Previously vaccinated travelers are advised to check requirements for re-vaccination with meningococcal vaccines prior to travel.

	2024 February
Meningococcal Quadrivalent Conjugate Vaccine (Groups A, C, Y, W-135) **MENACTRA®** **Supplier: Sanofi Pasteur Limited.** **NIMENRIX®** **Supplier: Pfizer Canada, Ltd.** **MENVEO™** **Supplier: GlaxoSmith Kline Inc.**	
SERIOLOGICAL TESTING	• Serological testing is not recommended before or after immunization.
CONTRAINDICATIONS	• History of anaphylactic reaction to a previous dose of any meningococcal vaccine or any component of the specific vaccine to be given.
SPECIAL CONSIDERATIONS	• Menveo is the preferred Men-C-ACYW vaccine for clients 8 weeks to two years of age. • The recommended interval between any meningococcal C conjugate vaccine and meningococcal quadrivalent conjugate vaccine is 4 weeks (regardless of which vaccine is given first). For close contacts and outbreak control, however, health care providers may provide Men-C-ACYW at any time after Men-C-C vaccine if indicated (as above). • Eligible individuals previously vaccinated with a polysaccharide meningococcal vaccine should be given meningococcal quadrivalent conjugate; this should be offered at least 6 months after vaccination with polysaccharide meningococcal vaccine. • It is preferable to give vaccine at least 14 days prior to splenectomy. In the case of an emergency splenectomy, vaccine should be given 14 days after the splenectomy. If the client is discharged earlier and there is concern that he/she might not return immunization should be given prior to discharge. Case by case consultation with the treating physician and MOH is recommended if there will be less than 14 days between vaccine administration and splenectomy. • Individuals prescribed eculizumab (Soliris®) should receive meningococcal vaccine at least two weeks before receiving the first dose if possible.
PRODUCT COMPONENTS	**MENACTRA: Potential allergens**: diphtheria toxoid protein. **Other components**: Sodium chloride, sodium phosphate dibasic anhydrous, sodium phosphate, monobasic, water for injection. **NIMENRIX: Potential allergens:** tetanus toxoid carrier protein. **Other components:** sodium chloride, sucrose, tometamol, water for injection. The vaccine does not contain any preservatives or adjuvants. **MENVEO:** Potassium dihydrogen phosphate, sodium chloride, sodium phosphate buffer, sucrose, water for injection.
ADVERSE EVENTS	**Local**: pain, redness, swelling, **Systemic**: headache, malaise, chills, fever, nausea, muscle soreness, fatigue, irritability and loss of appetite.

	2024 February
Meningococcal Quadrivalent Conjugate Vaccine (Groups A, C, Y, W-135) **MENACTRA®** **Supplier: Sanofi Pasteur Limited.** **NIMENRIX®** **Supplier: Pfizer Canada, Ltd.** **MENVEO™** **Supplier: GlaxoSmith Kline Inc.**	
STORAGE AND HANDLING	Store MENACTRA, NIMENRIX, and MENVEO at 2°C – 8°C until the printed expiry date. Do not freeze. Protect from light.

❶ Menveo™ should be used for individuals ages 2 months to 23 months inclusively. Contact YIP to order MENVEO™. Either Menactra®, Nimenrix®, or Menveo™ vaccines may be used for individuals 2 years of age and older.

❷ Men-C-ACYW vaccines may be given a minimum of 4 weeks apart if an accelerated immunization schedule is needed.

❸ For medically high-risk individuals as listed above, Menveo™ should be given in place of Men-C-C as part of the routine schedule and administered according to age at presentation.

❹ If the client is a close contact meeting public health criteria for Immunoprophylaxis, this dose should be given as soon as serotype information is available. For immunization of contacts who have received prior meningococcal vaccine doses, see: http://www.hss.gov.yk.ca/pdf/ycdc_meningococcal.pdf. Vaccine may be administered concurrently with chemoprophylaxis.

❺ Individuals that do not receive Men-C-ACYW immunization in the school-based program are eligible for one dose up to and including 24 years of age.

❻ Booster dose should be offered as long as medical condition persists. As needed, a clinical opinion as to the persistence of the condition may be sought from the physician most responsible for the client's care.

PROGRAM NOTES

- Men-ACYW-135 indication #3 updated to include all grade 9's (13 - 18 years of age) February 2024.