Meningococcal Conjugate (Groups A, C, Y and W-135) Vaccine

Alberta Health Services
Communicable Disease Control

BIOLOGICAL PAGE

Section 7	Biological Product Information	**Standard # 07.281**	
Created and approved by	Provincial Immunization Program Standards and Quality		
Approval date	March 29, 2012	**Revised**	March 3, 2025

	Nimenrix	**Menveo**	**Menactra**
Manufacturer	Pfizer Canada ULC	GlaxoSmithKline Inc.	Sanofi Pasteur Limited
Classification	Non-live: conjugate		
Indications for Provincially Funded Vaccine	**Pre-exposure:**		

2 months up to and including 23 months of age at high risk for invasive meningococcal disease (IMD) including the following (**Only use Menveo vaccine).**

- Asplenia - anatomical or functional (including sickle-cell disease).
- Acquired complement deficiency such as due to receipt of the terminal complement inhibitor eculizumab (Soliris) or ravulizumab (Ultomiris).

  Note:
  - Individuals prescribed eculizumab or ravulizumab should receive meningococcal vaccine at least two weeks before receiving the first dose of eculizumab or ravulizumab.
- Congenital complement, properdin, factor D or primary antibody deficiencies.
- Human immunodeficiency virus (HIV) infection especially if it is congenitally acquired.
- Hematopoietic stem cell transplant (HSCT) recipients - see Standard for Immunization of Transplant Candidates and Recipients.
- Solid organ transplant (SOT) candidates and recipients.
  - To determine eligibility, appropriate vaccine and schedule see Standard for Immunization of Transplant Candidates and Recipients.

2 years and older:

- Students in grade 9 – routine program in Alberta.
  - Students should receive the vaccine regardless of previous meningococcal immunization received in a routine infant/preschool program.
  - Students who are eligible in Grade 9 but do not receive the vaccine, continue to be eligible until the end of Grade 12 through public health clinics.
- Individuals at high risk for IMD including the following:
  - Asplenia - anatomical or functional (including sickle-cell disease).
  - Acquired complement deficiency such as, due to receipt of the terminal complement inhibitor eculizumab (Soliris) or ravulizumab (Ultomiris).

    Note:
    - Individuals prescribed eculizumab or ravulizumab should receive meningococcal vaccine at least 2 weeks before receiving the first dose of eculizumab or ravulizumab.
  - Congenital complement, properdin, factor D or primary antibody deficiencies.
  - HIV infection, especially if it is congenitally acquired.
  - HSCT recipients see Standard for Immunization of Transplant Candidates and Recipients.

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	○ SOT candidates and recipients. ▪ To determine eligibility, appropriate vaccine and schedule see Standard for Immunization of Transplant Candidates and Recipients. • Laboratory workers routinely exposed to Neisseria meningitidis (N. meningitis), if they are involved in conducting subculture identification, susceptibility testing, serological and/or molecular characterization and deep freeze for storage. Laboratory workers performing only initial specimen plants are not eligible. **Note:** Consult attending physician/infectious-disease specialist regarding immunization of individuals who are immune compromised. Meningococcal vaccine is not routinely recommended for health care workers (HCW's). It is recommended that HCW's use barrier precautions to avoid direct contact with respiratory secretions from any patient.		
	Post-exposure:		
	Close contacts and/or outbreak control when serogroups A, Y, or W-135 are identified. **Note:** • Immunization for outbreak control may continue beyond the closure of an outbreak when recommended by the Chief Medical Officer of Health. • Results of index case serogroup should be known (generally within 2 to 5 days) before proceeding with immunization. • Contacts under 2 years of age should receive Menveo on the recommendation of National Advisory Committee on Immunization (NACI). • Contacts of meningococcal serogroup C who are eligible for meningococcal conjugate quadrivalent vaccine (MenC-ACYW) for example, students in Grade 9, 10, 11 or 12 who have not already received their adolescent dose of MenC-ACYW vaccine, should receive MenC-ACYW not meningococcal conjugate C vaccine (MenconC). • Other contacts of meningococcal serogroup C – see Meningococcal Conjugate (Group C) Vaccine Biological Page. • Contacts of meningococcal serogroup B - see Meningococcal B Multicomponent Recombinant Vaccine Biological Page. For disease information, contact assessment, chemoprophylaxis and reporting guidelines refer to Alberta public health disease management guidelines: meningococcal disease, invasive.		
Schedule	**For SOT Candidates and Recipients and HSCT Recipient schedule**, including number of doses and boosters recommended refer to Standard for Immunization of Transplant Candidates and Recipients.		
	Pre-exposure:		
	Individuals at high risk of IMD: • **2 months up to and including 11 months – use Menveo vaccine only**: ○ Dose 1: 2 months of age (first dose should not be administered before 8 weeks of age) ○ Dose 2: 4 months of age (and at least 4 weeks from dose 1) ○ Dose 3: 6 months of age (and at least 4 weeks from dose 2) ○ Dose 4: 12 months of age (and at least 8 weeks from dose 3) ○ Booster doses: 3 years after dose 4 and every 5 years as long as risk continues. **Note:**		

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	○ Meningococcal conjugate C vaccine (MenconC) is not recommended in addition to Menveo for infants and children at high risk of IMD. • **12 months up to and including 23 months of age – use Menveo vaccine only:** ○ 2 doses: administered at least 8 weeks apart ○ Booster dose: 3 years after dose 2 and every 5 years as long as risk continues. • **2 years of age and older – all vaccines:** ○ 2 doses: administered at least 8 weeks apart ○ Booster doses: ▪ 6 years of age and younger at time of initial immunization: administer a booster dose 3 years after the last dose, followed by a booster every 5 years. ▪ 7 years of age and older at time of initial immunization: administer a booster dose every 5 years. • Individuals 7 years of age and older on complement inhibitors may receive a booster dose every 3 years at the request of the specialist involved in their care. **Note:** • The interval between doses may be shortened to 4 weeks if accelerated immunization is indicated. • Individuals at high risk for IMD, who previously received 1 dose of MenC-ACYW should receive a second dose of MenC-ACYW vaccine and booster doses as outlined above. • Individuals at high risk for IMD, who previously received meningococcal polysaccharide vaccine and continue to be at high risk for IMD, should be re-immunized with the appropriate MenC-ACYW vaccine. The interval between the polysaccharide vaccine and the MenC-ACYW should be at least 6 months. Booster doses of MenC-ACYW should be administered as outlined above. • When meningococcal conjugate C vaccine (MenconC) has been administered previously, the minimum interval between MenC-ACYW and MenconC should be at least 4 weeks. • Give vaccine at least 14 days prior to splenectomy, if time permits. In the event of an emergency splenectomy, give vaccine 14 days after surgery. Give vaccine prior to discharge post-surgery if client may not be able to return for immunization. Consult Medical Officer of Health (MOH) if there will be less than 14 days between vaccine administration and splenectomy. • Individuals prescribed eculizumab (Soliris) or ravulizumab (Ultomiris) should receive meningococcal vaccine at least 2 weeks before receiving the first dose. **Grade 9 students:** • 1 dose • The need for reinforcing doses of MenC-ACYW has not been established at this time. **Note:** Students who have previously received MenC-ACYW: ○ If MenC-ACYW vaccine was received when younger than 12 years of age – offer a dose in grade 9. ○ If MenC-ACYW vaccine was received at 12 years of age or older – the vaccine is not indicated in grade 9. **Eligible Laboratory Workers:** • 1 dose • Booster doses every 5 years as long as risk continues. **Note:** • When meningococcal polysaccharide vaccine has been administered previously, there should be at least a 6 month interval before administering MenC-ACYW.		

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	• When meningococcal C conjugate vaccine (MenconC) has been administered previously, the minimum interval between MenC-ACYW and MenconC should be at least 4 weeks.		
	Post-Exposure or Outbreak Control (contacts of serogroups A, Y and W-135):		

	2 months up to and including 11 months of age – use Menveo vaccine only:
	• Unimmunized:
	  ○ 3 doses administered 8 weeks apart, with a 4th dose administered between 12 and 23 months of age and at least 8 weeks from the previous dose.
	• Previous immunization with MenconC:
	  ○ Administer Menveo series as for unimmunized, regardless of when the last dose was administered.
	• Previous immunization with MenC-ACYW:
	  ○ Administer 1 dose of Menveo (if at least 4 weeks after a previous dose) and complete the series.
	12 months up to and including 23 months of age - Menveo vaccine only:
	• Unimmunized:
	  ○ 2 doses of Menveo with an interval of at least 8 weeks between doses.
	• Previous immunization with MenconC:
	  ○ Administer 2 doses of Menveo with an interval of at least 8 weeks between the doses regardless of when the previous dose of MenconC was administered.
	• Previously immunized with MenC-ACYW:
	  ○ Individuals younger than 1 year of age or at high risk for IMD due to underlying medical condition, administer 1 dose of Menveo if at least 4 weeks since last dose.
	  ○ Otherwise, re-immunize if at least 1 year since the last dose of MenC-ACYW.
	2 years of age and older – all vaccines:
	• Unimmunized:
	  ○ 1 dose.
	• Previously immunized with MenconC:
	  ○ Administer 1 dose of MenC-ACYW regardless of when the last dose of MenconC was administered.
	• Previously immunized with MenC-ACYW:
	  ○ High risk of IMD due to underlying medical condition, administer 1 dose of MenC-ACYW if at least 4 weeks since the last dose.
	  ○ Individuals who are 1 year of age or older and are not at high risk of IMD due to an underlying medical condition, administer 1 dose of MenC-ACYW if at least 1 year since the last dose of MenC-ACYW.		

Preferred Use	Offer **Menveo vaccine only** to: • Individuals 2 months up to and including 23 months of age at high risk of IMD or, • Individuals 2 months up to and including 23 months or age who are eligible contacts of a case will be offered **Menveo vaccine only**. Individuals 2 years of age and older: • No preference indicated for the use of meningococcal conjugate groups A, C, Y, W-135 vaccine in specific age or risk groups. • All vaccines are safe and immunogenic in individuals 2 years of age and older. • Persons with medical contraindications to one product should be offered the alternate product if supply is available.		

	Nimenrix	Menveo	Menactra
Dose	0.5 mL		
Route	IM		
Contraindications/ Precautions	**Contraindications:** • Known severe hypersensitivity to any component of the vaccine. • Anaphylactic or other allergic reactions to a previous dose of a vaccine containing similar components. **Precautions:** • Will not protect against infections caused by organisms other than serogroups A, C, Y and W-135 N. meningitidis. **Note:** A previous history of GBS is not a contraindication to receiving Nimenrix. • NACI recommends that Menactra or Menveo be administered to people with a previous history of Guillain-Barré Syndrome (GBS).		
Possible Reactions	**Common:** • Pain, redness, swelling, induration, or hematoma at the injection site. • Fever, chills • Irritability, fatigue, drowsiness, persistent crying, malaise • Headache, myalgia, arthralgia • Vomiting, nausea, diarrhea, decreased appetite, • Rash, hives. **Uncommon:** • Anesthesia/ hypoesthesia at the injection site • Insomnia. **Rare:** • Anaphylaxis, allergic reaction. As with any immunization, unexpected or unusual side effects can occur. Refer to the product monograph for more detailed information.		
Pregnancy	Consult with the MOH/designate. • There is not enough data available for use during pregnancy. • Not routinely recommended for people who are pregnant. • MOH/designate will make an individual recommendation based on risk of disease versus benefit of vaccine.		
Lactation	May use for people who are lactating and feeding their milk to infants or children.		

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Composition	Provided as one vial (powder) of lyophilized Men ACYW-135 Conjugate Component and diluent (sodium chloride and sterile water) in a pre-filled syringe. **Each 0.5 mL dose of vaccine after reconstitution contains:** • 5 mcg N. meningitidis serogroup A polysaccharide • 5 mcg N. meningitidis serogroup C polysaccharide • 5 mcg N. meningitidis serogroup W-135 polysaccharide • 5mcg N. meningitidis serogroup Y polysaccharide • 28 mg sucrose • 97 mcg trometamol • 4.5 mg sodium chloride • QS to 0.5 mL water for injections. Preservative free and no adjuvants. **Note:** The N. meningitidis serogroups A and C polysaccharides are conjugated with an adipic dihydrazide (AH) spacer and indirectly conjugated to the tetanus toxoid whereas the W-135 and Y polysaccharides are conjugated directly to tetanus toxoid.	Provided as one vial (powder) of lyophilized Men A Conjugate Component and one vial (liquid) of Men CWY Conjugate Component. **Each 0.5 mL dose of vaccine after reconstitution contains:** • 10 mcg Men A oligosaccharide 5 mcg Men C oligosaccharide • 5 mcg Men W-135 oligosaccharide • 5 mcg Men Y • 5 (mM) potassium dihydrogen phosphate • 4.5 mg sodium chloride • 12.5 mg sucrose • 10 mM sodium phosphate buffer • 7.5 mM di-sodium hydrogen phosphate bihydrate • 2.5 mM sodium dihydrogen phosphate monohydrate • Water for injection q.s. 0.5 mL. Preservative-free and no adjuvant. **Note:** The meningococcal oligosaccharides are each conjugated to the C. diphtheriae CRM197 protein.	**Each 0.5 mL dose of vaccine contains:** • 4 mcg group A meningococcal polysaccharide • 4 mcg group C meningococcal polysaccharide • 4 mcg group Y meningococcal polysaccharide • 4 mcg group W-135 meningococcal polysaccharide • 4.25 mg sodium chloride • QS phosphate 10 mM (sodium phosphate, dibasic, anhydrous; and sodium phosphate, monobasic) • QS 0.5 mL water (for injection). Preservative-free and no adjuvant. **Note:** The polysaccharide antigens are individually conjugated to diphtheria toxoid protein.
Blood/Blood Products	Does not contain human blood/blood products.		
Bovine/Porcine Products	**Bovine Products:** • None **Porcine Products:** • None	The manufacturing process involves some animal derivative.	**Bovine Products:** • Components of bovine origin are used early in the manufacturing process. **Porcine Products:** • Components of porcine origin are used early in the manufacturing process.

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Latex	Does not contain latex.		
Interchangeability	• Use the same vaccine to complete a series. • Vaccines may be used interchangeably for individuals 2 years of age and older, when the same vaccine is not available for the entire series. Either vaccine may be used for booster doses. • Use Menveo only for individuals under 2 years of age.		
Administration with Other Products	May be given at the same time as other inactivated and live vaccines. • Use a separate needle and syringe for each vaccine. • The same limb may be used, if necessary, but use different sites on the limb.		
Preparation	• Reconstitute by adding entire contents of the pre-filled syringe of diluent to the vial containing the powder. • Mixture should be well shaken until powder is completely dissolved. • Once reconstituted withdraw the contents from the vial and administer.	• Withdraw the entire contents of the diluent (liquid MenCWY) and inject into the vial containing the powder (MenA). • Shake vigorously to mix. • Once reconstituted withdraw 0.5 mL from the vial and administer.	• Shake vaccine well until a uniform, clear to slightly turbid liquid is obtained. • Withdraw total volume of 0.5 mL and administer.
Appearance	Vaccine is a clear, colourless solution after reconstitution.	Vaccine is a clear, colourless solution after reconstitution.	Menactra is a sterile, clear to slightly turbid liquid.
Storage	• Store at 2°C to 8°C • Do not freeze • Do not use past expiration date • Protect from light • Diluent may be stored at room temperature • Use reconstituted vaccine as soon as possible.		
Vaccine Code	MenC-ACYW		
Antigen Code	MENING-C		
Licensed for	• Individuals 6 weeks to 55 years of age. • Alberta Health (AH) has approved the use of this vaccine for eligible persons aged 56 years of age and older (off-license).	• Individuals 2 months up to and including 55 years of age. • AH has approved the use of this vaccine for eligible persons aged 56 years and older (off-license).	• Individuals 9 months to 55 years of age. Although licensed for children nine months of age and older, NACI does not recommend this vaccine for children younger than two years of age. • AH has approved the use of this vaccine for eligible persons aged 56 years and older (off-license).

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Notes	Documentation of Menveo vaccine: • Record the lot number and expiry date from the secondary package (carton). **Historical Notes:** • 1983 May 4 to 2012 January 18: Meningococcal polysaccharide quadrivalent A, C, Y, W-135 vaccine (Menomune) for high risk groups. • 2000 February 15 to 2002 March 1: Meningococcal Polysaccharide (A, C, Y, W-135) – Outbreak campaign. • 2001 February 6 to 2002 March 1: Meningococcal Polysaccharide Bivalent A, C (Outbreak campaign for individuals 2-24 years of age). **Program Notes:** • 2007 February 1: Meningococcal Conjugate (A, C, Y, W-135) Menactra introduced into program for high risk groups 2-55 years of age. • 2011 February: Meningococcal Conjugate (A, C, Y, W-135) routine school immunization program for Grade 9 students. • 2012 January 26: Meningococcal Conjugate (A, C, Y, W-135) for individuals at high risk 56 years of age and older. • 2015 February 2: Menveo Meningococcal Conjugate (A, C, Y, W-135) for children 2 months to 23 months of age at high risk for IMD. • 2015 February 10: Menactra/Menveo updated indication for individuals with acquired complement deficiency who are on Soliris. • 2017 September: Nimenrix Meningococcal Conjugate (A, C, Y, W-135) was introduced into immunization program. • 2022 August 10: Outbreak Control added to Post-Exposure Schedule section. • 2023 August 16: Updated to clarify that immunization for outbreak control may continue beyond the closure of an outbreak when recommended by the Chief Medical Officer of Health. • 2025 January 31: Updated to clarify that meningococcal vaccine is not routinely provided to health care workers, added ravulizumab (Ultomiris) to complement inhibitors and updated booster dose recommendation for individuals 7 years of age and older on complement inhibitors.		
Related Resources	• Meningococcal (Groups A, C, W-135 and Y) Conjugate Vaccine Information Sheet		

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