

FACTSHEET: MENINGOCOCCAL DISEASE

MENINGOCOCCAL DISEASE AND VACCINES

There are five main types of *Neisseria meningitidis* that cause invasive meningococcal disease: Meningococcal A, B, C, Y and W.¹

Incidence

Incidence varies from year to year, by type, and by age group. For example, in Canada between 2006 and 2011, incidence rates were highest among infants less than one year of age (average 6.98 cases per 100,000), followed by 1 to 4 year olds (1.89 per 100,000), and 15 to 19 year olds (1.18 per 100,000).¹

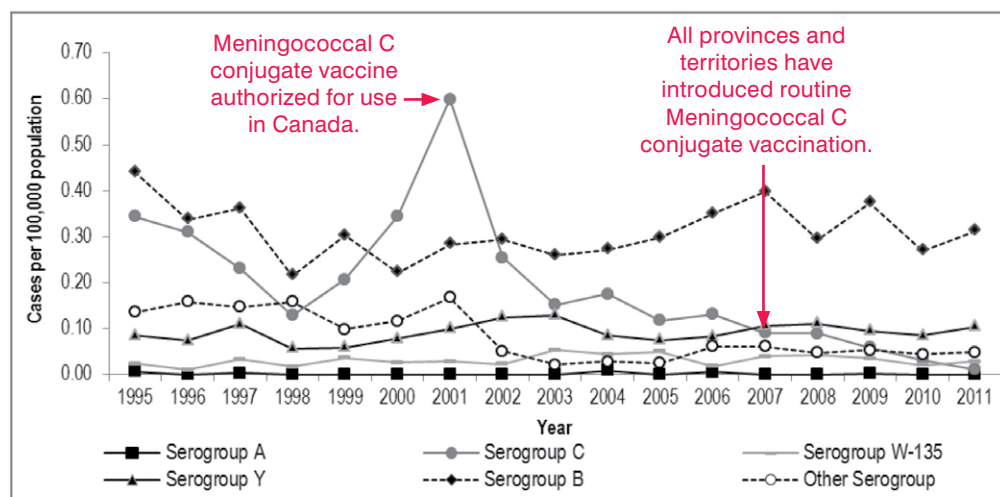
Disease

Although the risk of meningococcal disease is low relative to some other infectious diseases, fear caused by meningitis is high because of the speed of onset and severe morbidity.

- Invasive meningococcal disease is an acute and serious illness caused by the bacterium *Neisseria meningitidis*.¹
- Overall mortality is approximately 10%.²
- 10-20% of survivors have long term sequelae which include hearing loss, neurologic disabilities and amputations.²

See graph below for Canadian rates, 1995-2011.²

Incidence of IMD (per 100,000 population) in Canada by serogroup and year, 1995 to 2011



**“Other” is defined as all serogroups other than those listed, ungroupable and unknown serogroup.

Adapted from National Advisory Committee on Immunization ‘Update on Quadrivalent Conjugate Meningococcal Vaccines available in Canada’

Please note that the information in this document is provided for educational purposes only, is not intended to provide medical advice and should in no way replace clinical judgment of the healthcare professional.

¹ Public Health Agency of Canada. Immunization and Vaccines. Invasive Meningococcal Disease. Retrieved May 7, 2014 from: <http://www.phac-aspc.gc.ca/im/vpd-mev/meningococcal/professionals-professionnels-eng.php>

² Public Health Agency of Canada. Update on the use of quadrivalent conjugate vaccines available in Canada. Retrieved August 29, 2016 from: http://publications.gc.ca/collections/collection_2015/aspc-phac/HP40-125-2014-eng.pdf



Vaccines

Vaccines are effective in reducing the incidence of meningitis.

- Hib, pneumococcal and meningococcal C vaccines are examples of vaccines that have greatly reduced meningitis.³
- Meningococcal C vaccine has been publicly funded in BC for 12 month olds since 2003, and infants and grade 6 students since 2005.⁴ The grade 6 vaccine will be replaced with a quadrivalent vaccine offered to grade 9 students beginning in 2016/2017.⁵
- Meningococcal A, C, Y, W quadrivalent (MCV4) vaccines protect against 4 types of meningococcal bacteria. As of the 2016/2017 school year MCV4 is publicly funded for grade 9 students.⁵ Three MCV4 vaccines (Menveo[®], Menactra[®] and Nimenrix[™]) are available but not funded for individuals not eligible for the grade 9 program. The BC Pediatric Society recommends that physicians consider a Meningococcal A, C, Y, W vaccine any time after 2 months of age.⁶
- A meningococcal B vaccine is now available but not publicly funded in BC.⁷
- Non-publicly funded vaccines for meningococcal may be available in three locations: pharmacies, travel clinics or offices of physicians. Please refer parents to the BC Pediatric Society resource [NPF Vaccines: Access](#) for the steps to follow to obtain NPF vaccines from their pharmacist for you to administer in your office.

“Parental attitudes, perceptions of support from significant others, and perceptions of physician support strongly predict parent’s intentions to immunise their infants with a novel MenB vaccine.”⁹



TAKE-AWAY FOR PARENT DISCUSSION

There are five main types of *Neisseria meningitidis* that cause invasive meningococcal disease: Meningococcal A, B, C, Y and W.¹ There are now vaccines for each of these types:

- *Neisseria meningitidis* serogroup C is the **one** meningococcal vaccine that was funded (infants and Grade 6) in BC until 2016/2017. It is now offered to infants.
- Meningococcal quadrivalent vaccines (MCV4) protect against **four** types of meningococcal bacteria: types A, C, Y W. MCV4 immunization became publicly funded for BC Grade 9 students in the 2016/2017 school year.⁵ MCV4 vaccine is available for purchase (NPF) for those not eligible for the grade 9 immunization program.⁶
- A meningococcal B vaccine is now available as a NPF vaccine. Meningococcal group B causes most of the meningococcal disease in Canada. The high risk age groups for meningococcal B disease are healthy infants under 1 year, followed by toddlers 1–4 years and teenagers 15–19 years old. Parents who request further information can be referred to: [Meningococcal B Vaccine: What Parents Need to Know](#).⁸

³ Snape MD & Pollard AJ, *The beginning of the end for serogroup B meningococcus*, *The Lancet*. 2013 March 9; 381:9869. Retrieved November 23, 2014 from: [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(12\)62194-1/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(12)62194-1/fulltext)

⁴ Sui T, Tanq W, Dawar M, Patrick DM. *The Impact of Routine Immunization using Meningococcal C Conjugate Vaccine on Invasive Meningococcal Disease in British Columbia*. *Can J Public Health* 2008 Sept; 99(5):[380-382]. Retrieved September 10, 2013 from: www.ncbi.nlm.nih.gov/pubmed/19009920

⁵ BC Centre for Disease Control. *Communicable Disease Control Immunization Program Section VII – Biological Products*, August, 2016. Retrieved August 24, 2016 from: http://www.bccdc.ca/resource-gallery/Documents/Guidelines%20and%20Forms/Guidelines%20and%20Manuals/Epid/CD%20Manual/Chapter%20-%20-%20Imms/SectionVII_BiologicalProducts.pdf

⁶ BC Pediatric Society Immunization Schedule 2016. Retrieved September 19, 2016 from: http://www.bcpeds.ca/uploadfiles/documents/npfv/BCPS_2016_Immunization_Schedule.pdf

⁷ An Advisory Committee Statement (ACS) National Advisory Committee on Immunization (NACI). *Advice for the use of the Multicomponent Meningococcal Serogroup B (4CMenB) Vaccine*: http://publications.gc.ca/collections/collection_2014/aspc-phac/HP40-104-2014-eng.pdf

⁸ BC Pediatric Society Programs & Resources, *Non-Publicly Funded Vaccines*. Retrieved July 2014 from: <http://www.bcpeds.ca/Programs/npfv.aspx?MenuID=1763>

⁹ Fisher W, Bettinger J, Gilca V, Sampalalis J, Brown V, Yaremko J, Mansi JA, *Understanding parental acceptance of a novel meningococcal serogroup vaccine for infants*, 2013. Abstract presented at European Society for Infectious Diseases, Milan, 2013.