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SUMMARY OF NATIONAL ADVISORY COMMITTEE ON IMMUNIZATION (NACI) CANADIAN COMMUNICABLE DISEASE REPORT (CCDR) UPDATE OF SEPTEMBER 25, 2023

A NACI update on invasive meningococcal disease (IMD) epidemiology and program-relevant considerations for preventing IMD in individuals at high risk of exposure

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Résumé de la mise à jour du comité consultatif national de l'immunisation (ccni) dans le relevé des maladies transmissibles au canada (rmtc) du 25 septembre 2023

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Cat.: HP5-162/2023E-PDF
ISBN: 978-0-660-67731-6
Pub.: 230346

OVERVIEW

- On September 25, 2023, a National Advisory Committee on Immunization (NACI) update on invasive meningococcal disease (IMD) epidemiology and risk considerations was published in the Canadian Communicable Disease Report (CCDR) Rapid Communications.

- IMD is a rare but very serious disease with a relatively high case fatality rate and significant long-term outcomes including limb amputations and permanent central nervous system injury.

- Following recent cases of IMD on university campuses in Canada and updates to provincial immunization policies NACI was asked to conduct a targeted review of evidence with a focus on disease risk in adolescents and young adults.

- NACI reviewed national and international immunization recommendations for populations at high risk of IMD, national IMD epidemiology, and assessment of program-relevant considerations, and concluded that:

    - **Due to differences in circulating strains and epidemiology across Canadian jurisdictions, recommending a pan-Canadian program to target additional population groups at high risk of exposure would be challenging. Regional programs may be better suited to address currently circulating serogroups and prevent IMD in population groups considered at high-risk of exposure.**

    - **To prevent outbreaks and reduce the regional burden of IMD, jurisdictions with higher incidence in specific population groups may consider introducing targeted programs (e.g. offering a serogroup-appropriate meningococcal vaccine to an age group with a higher incidence of IMD), which may also include populations that are believed to be at higher risk of exposure (e.g., students residing in congregate settings or children and adolescents living in regions with circulating hypervirulent clones).**

    - **When planning targeted programs, consideration should be given to the specific regional epidemiology (e.g., circulating IMD strains/serogroups).**

For details on NACI's update, please see the CCDR article: *A National Advisory Committee on Immunization (NACI) update on invasive meningococcal disease (IMD) epidemiology and program-relevant considerations for preventing IMD in individuals at high risk of exposure*.

For more information on NACI's recommendations on the use of meningococcal vaccines, please refer to the chapter on Meningococcal Vaccines in the Canadian Immunization Guide (CIG), as well as additional statements on the NACI web page.

WHAT YOU NEED TO KNOW

- Different types of meningococcal bacteria (e.g. serogroups A, B, C, W, Y) can cause IMD and various vaccines are used to prevent each type (e.g. Men-C-ACYW vaccine, Men-C-C vaccine, or MenB vaccine).

- Following the introduction of immunization programs in Canada, the incidence of IMD has significantly decreased. In 2021, 89% of 17-year-old adolescents in Canada had received at least one dose of Men-C-containing vaccine, which aligns with the national goal of achieving 90% vaccine coverage at this age.

- With current immunization programs, Canada has successfully achieved its disease reduction goal of less than 5 IMD cases per year caused by serogroup C in children under 18 years of age.

- In Canada, the majority of IMD cases are sporadic, but outbreaks have occurred. Between 2012 and 2022, IMD epidemiology, including the number of casesand circulating strains,varied between Canadian jurisdictions.

- The highest incidence of IMD was observed in individuals aged less than 5 years of age followed by those in the 15- to 24-year-old age group. Provinces and territories also appear to exhibit a distinct mix of meningococcal bacteria types.

- Given differences in provincial and territorial health care systems and disease burden across Canada, it is important for jurisdictions to have flexibility to determine populations to prioritize for immunization.

- Although there is existing knowledge about IMD, additional data is needed to enhance current understandings of risk factors.

- NACI will conduct further reviews of the evidence and vaccines available to prevent IMD across age groups and will update recommendations as needed.

For details on NACI's update, please see the CCDR article: *A National Advisory Committee on Immunization (NACI) update on invasive meningococcal disease (IMD) epidemiology and program-relevant considerations for preventing IMD in individuals at high risk of exposure*.

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