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**Epidemiology of Invasive *H. Influenzae* Infections in Greenland 1995–2013—a Nationwide Study.**

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**INTRODUCTION:** *H. influenzae* (Hi) serotype b (Hib) vaccine has had a major impact on invasive Hib disease worldwide. Hib vaccine was introduced in Greenland 1997. In the past decade the native population of Alaska and Canada has experienced a number of outbreaks of Hi serotype a (Hia) invasive disease. This has led to interest in the development of an Hia vaccine. Genetic background, living conditions, and infectious disease patterns for the Inuit population of Greenland are highly similar to those of the Inuit populations of Alaska and Canada. We carried out a nation-wide study of invasive Hi infections in Greenlanders 1995–2013 to determine whether similar outbreaks of Hia occur.

**METHODS:** Nation-wide cohort study using complete information on bacterial isolates from Greenland 1995–2013 and the total population of Greenland ( $n = 56,000$ ) identified through the unique personal identification number. Health information retrieved from medical files.

**RESULTS:** Invasive Hi was identified in 15 patients in total (1995–99  $n = 9$ ; 2000–04  $n = 4$ ; 2005–09  $n = 1$ ; 2010–13  $n = 1$ ); seven cases from blood, five from cerebrospinal fluid, one from both, and two from pleural fluid. Median age of cases was one year (range 0–71 years; 25 and 75% quartiles 0 and 33 years; 53%

females). Overall incidence 1995–2013 was 1.4/100,000 (2000–13 0.76/100,000); for children aged 0–4 years 10.2/100,000 (2000–13 3.3/100,000). Seven isolates were Hib (four before 1997 and three after); one was serotype f; one was non-capsular, two were not characterized by capsule, and for four there was no information on type. In comparison, the incidence of invasive pneumococcal disease increased in the period 1995–2013.

**CONCLUSIONS:** The incidence of invasive Hi infections is decreasing in Greenland, and no Hi outbreaks have been observed 1995–2013. Cases of non-b serotypes are very rare. A present need for introduction of non-Hib vaccines in the Greenlandic population is not supported.