

Demographics of *Helicobacter pylori* infection in a Canadian Arctic hamlet

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Abstract:

In the predominantly aboriginal hamlet of Aklavik, Northwest Territories (population ≈600), residents identified *H.pylori* infection and its link to gastric cancer as a priority concern and advocated for research focused on solutions. The resulting Aklavik *H.pylori* Project is the start of a broad collaboration aimed at investigating *H.pylori* infection in northern Canadian populations where gastric cancer rates are elevated and *H.pylori* infection is difficult to treat. Project goals are to describe sociodemographic patterns of *H.pylori* infection and the associated disease burden, identify effective treatments, inform local health care policy, and address community concerns. This report describes *H.pylori* prevalence in demographic subgroups. In January 2008 all Aklavik residents were invited to have a urea breath test (UBT) at the local health center. Of 368 residents who enrolled in the project, 313 were tested by UBT and 58% were positive. *H.pylori* prevalence was 61% in males (n=140) and 56% in females (n=173). In age groups 0-14, 15-24, 25-39, 40-59, and 60-79, prevalence was 53%, 70%, 69%, 51%, 54% (n=59, 53, 61, 105, 35), respectively. By ethnicity, prevalence was 65% in Inuvialuit (Inuit) (n=157), 56% in Gwich'in Dene First Nation (n=80), 67% in mixed/other aboriginal (n=12), and 25% in non-aboriginals (n=36) (missing ethnicity =28). UBT screening showed that *H.pylori* prevalence in this Canadian Arctic hamlet is high across aboriginal subgroups from an early age. This project will seek effective strategies for addressing community concerns about health risks from *H.pylori* infection in northern Canada.