



## ZOONOTIC AND GASTROINTESTINAL DISEASES

### QANUILIRPITAA? 2017

Nunavik Inuit Health Survey

This Qanuillirpitaa? 2017 thematic report covers specific pathogens that are transmitted by animals (also called zoonosis) present in Nunavik or that cause gastrointestinal illnesses. The Qanuillirpitaa? 2017 Steering Committee prioritized three zoonotic diseases (rabies, trichinellosis and toxoplasmosis) and two gastrointestinal diseases (cryptosporidiosis and helicobacteriosis) as well as some related issues (animal bites, acute gastrointestinal illness, blood in stools) based on current knowledge and regional needs.

Rabies is a fatal disease caused by a *Lyssavirus* transmitted to humans mainly by bites or contacts with saliva from infected animals. No human cases have ever been reported in Nunavik. Naturally acquired immunity was not observed in a sample of the Qanuippitaa? 2004 non-vaccinated participants that hunted terrestrial mammals. Therefore, the seroprevalence was not investigated again in 2017. While bites and scratches by dogs were more frequently reported (6%) than those caused by wild carnivores (< 1%), the risk of being rabid is lower for dogs. Avoiding animal bites remains the cornerstone of rabies prevention in the region.

*Trichinella* sp. is a small parasite found in the muscles of wild carnivores and to a lesser extent in those of walrus. It can cause severe gastrointestinal and/or muscular disease. The survey revealed that the presence of antibodies against *Trichinella* sp. is approximately 3% in the population, which reflects the exposure to this parasite.

*Cryptosporidium* is a parasite that can cause gastrointestinal symptoms mainly affecting children, immunocompromised individuals and older people. The seroprevalence documented in 2017 is 6%. The first reported outbreak of cryptosporidiosis in Nunavik occurred in 2013-2014 with *Cryptosporidium hominis*.

*Toxoplasma gondii* is a parasite that is particularly harmful when new infections are transmitted from mothers to their fetus and when people have compromised immune systems. The presence of antibodies against *T. gondii* declined between 2004 (60%) and 2017 (42%), suggesting a decrease in the risk of exposure to the parasite.

*Helicobacter pylori* is a bacterium that multiplies in the mucous overlying the mucosa of the stomach and occasionally the small intestine. This causes various degrees of inflammation and, less frequently, ulcers or other complications. *H. pylori* active infection (bacteria in stools) was present in 70% of the population. The high percentage of Nunavimmiut with antibodies against *H. pylori* seems to have remained stable since 2004 and it is similar to that observed among other Indigenous and Inuit populations in the Arctic.

In 2017, acute gastrointestinal illnesses in the 30 days prior to the survey were reported by 12% of the Nunavik population, a rate comparable to that observed in 2004 (10%). The average duration was 1.4 days while prolonged episodes of 3 days and more occurred in 35% of those reporting an episode.

Besides discussing the above-mentioned results, the present report provides a glimpse at the risk factors and protective factors for each disease, which should be confirmed through multivariate analysis. Documenting zoonotic and gastrointestinal diseases in Nunavik is essential in the context of climate change as well as changes in lifestyle.



Qanuillirpitaa? 2017 is a population health survey carried out in Nunavik from August to October 2017. A total of 1 326 Nunavimmiut aged 16 and over from all 14 villages participated to this survey.

**Nakurmiik to all Nunavimmiut who contributed to this important health survey!**

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