



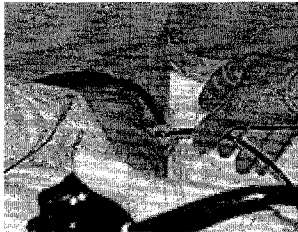
## Medical team targeting stomach cancer in North

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Feb 11, 2008

*A NWT hamlet is the testing ground for innovative treatment of a disease that is twice as common in Arctic natives*

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Source: PUBLIC HEALTH REPORTER  
The Globe And Mail



As the doctor slid the long narrow plastic tube in her nose, down her esophagus and into her stomach, the tears welled up in Annie Buckle's eyes.

The procedure - an esophagogastroduodenoscopy - is not painful, but the memories it evokes are vivid and raw. Just two months ago, Ms. Buckle's mother died of stomach cancer. In recent years, she has lost two other close family members to the rare, deadly disease.

Now doctors are trying to figure out if Ms. Buckle, a 54-year-old childcare worker in Aklavik, NWT, is also at risk.

Virtually everyone in the tiny Arctic hamlet, which hugs the shores of the Mackenzie River Delta, knows someone who has succumbed to stomach cancer. No one knows exactly why, but the likely culprit is the bacterium *Helicobacter pylori*, which is endemic in the North.

To unravel the mystery, a team of nurses and physicians from Edmonton and Yellowknife descended on Aklavik last week.

The first step is to "scope" the 300-plus adult residents - to take samples from their stomach lining to look for *H. pylori*. This has transformed the health centre into a hub of activity.

Once the testing and laboratory analysis is done, researchers plan to return to Aklavik with a treatment plan, one that will virtually eradicate *H. pylori* and should sharply reduce future cases of stomach cancer.

"Nothing like this has been done anywhere in the world before. It's very exciting," said Bob Bailey, a gastroenterologist and medical officer for the Northern Health Services Network at Capital Health in Edmonton. "This is world-class medical care being delivered in a remote community."

John Morse, the medical director of Stanton Territorial Health Authority in Yellowknife, said the stomach-cancer project is important in itself, but "it will also serve as a model for dealing with other health issues in the North."

He said public-health officials across the circumpolar region - in Alaska, Russia and Greenland - are monitoring the project closely to see what they can learn.

*Helicobacter pylori* is a spiral-shaped bacterium that lives in the stomach and duodenum (a section of intestine just below the stomach). It is the source of one of the most common bacterial infections in the world, the principal cause of peptic ulcers and stomach cancer.

In Canada, stomach cancer is not that common. There are about 2,850 new cases diagnosed each year and 1,850 deaths, according to the Canadian Cancer Society.

But when NWT Health and Social Services compiled the territory's first cancer statistics in 2002, they showed that the rate of stomach cancer - particularly among First Nations and Inuit people - was double that of the rest of Canada. (The population of Aklavik is made up principally of Inuvialuit and Gwich'in people.)

Worse yet, while cancer is generally an affliction of the elderly, stomach cancer tends to kill young adults. "When I started, it bowled me over to see all these young people with stomach cancer," Dr. Morse said.



Biologically, H. pylori is the underlying cause of stomach cancer, but there are socioeconomic factors that play an important role too, such as poverty and poor housing.

A study published last month in the medical journal Public Library of Science showed that the more siblings a person has, the higher the risk of stomach cancer. Having seven or more siblings - not uncommon in the North - doubles the risk.

"Epidemiologically, it happens in families where kids share the same bed," Dr. Bailey said. H. pylori is transmitted from person to person through exposure to saliva and feces.

About half the world is believed to have H. pylori bacteria living in their gut, so it is not the sole factor in stomach cancer.

Diet also plays a role, notably a diet heavy in salted and smoked foods and red meat, which describes the traditional aboriginal diet. (Japan and Korea, where the diet is dominated by smoked, salted and pickled foods, have rates of stomach cancer similar to Canada's North.)

In conducting the tests, Dr. Bailey said, researchers are looking to see what strain of H. pylori is circulating in Aklavik. The cagA strain is more likely to cause stomach cancer. Knowing the strain will also allow researchers to tailor treatment plans for those who are infected.

"The good news is that H. pylori is easy to treat," Dr. Bailey said. "Two antibiotics and a proton pump inhibitor for 90 days and you're cured."

Aklavik Mayor Knute Hansen was one of the first in line to be tested. He underwent a preliminary breath test and was shocked to learn that he tested positive for H. pylori. So last week Mr. Hansen went to be scoped.

"I'm glad I got it done. I have no stomach problems myself but I'm going to take the treatment," he said.

Mr. Hansen said the arrival of the research team is a watershed moment for the community and for the delivery of health care in the North.

"We've been talking about this for 20 years. Everybody knows that stomach cancer is a real problem here - it hits the young, the elders, whole families," Mr. Hansen said.

"Finally, we're dealing with this problem and that's great."

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