

# Poisoned perfection

## Welling concerns about arsenic, drinking water, and public health in rural Newfoundland

Story by Sarah de Leeuw

Apples, those most delicious of delicious fruits, the ones that if eaten once a day are said to help “keep the doctor away,” hold in their hearts tiny seeds with miniscule traces of cyanide.

Maybe that’s why they’re associated, for some, with temptation and a fall from perfection.

Rural Newfoundland, with its craggily gray stone cliffs and endless ocean, its idyllic brightly coloured hamlets, sparkling icebergs, and pastoral hills, is perfection reformed, a kind of new Eden on earth.

Like the perfect apple, the geological heart of rural Newfoundland also holds a poison: arsenic.

“Arsenic,” observes Dr Dan Hewitt, a family physician who worked for more than 12 years on New World Island on the far eastern shores of Newfoundland and who now locums in the province’s rural central region, “is a class 1 carcinogen. It’s like tobacco, like smoking. And the provincial government doesn’t just say, ‘Oh, you want to smoke, so go ahead.’ No. Tobacco and cigarettes are treated like the carcinogens they are. We need that kind of logic about arsenic in Newfoundland. We need to treat it as a very significant public health issue affecting rural Newfoundland and other rural areas in Canada. Thirty percent of Canadians are dependent on groundwater.”

The family physician Dr Hewitt took over from—a smiling-voiced, smiling-faced Dr John Sheldon—was New World Island’s doctor for more than 35 years. His friends and colleagues summarize him an “acutely calm person; a man who can deal with a psychotic crisis with his voice better than most drugs.”

Dr Sheldon had inklings about the kinds of evidence and observations Dan Hewitt is now making public.

“Dr Sheldon,” says Dan, “is my mentor. It almost makes me tear up, thinking of everything he has done. He knew what ‘community engagement’ was before the term was even invented.”

La traduction en français de cet article se trouve à [www.cfp.ca](http://www.cfp.ca) dans la table des matières du numéro d’août 2017 à la page e394.

“A few years after I started practising,” recalls Dr Sheldon of his clinic in the late 1970s, “I was given some papers about arsenic in the water, about problems with the purity of water in the area. But I was really overcome back then. I was the only doctor. There were huge numbers of undiagnosed illnesses, and a part of me was also overwhelmed by the knowledge in those papers. Before I retired, I vowed to clear my mind, my conscience, and I handed the papers over to Dan. I have been amazed at his work ever since.”

Dan Hewitt doesn't blame John Sheldon in the least, knowing how overwhelmed Dr Sheldon was, observing how little education and training around arsenic poisoning is made available in medical school. What Dan did do with the knowledge John shared was begin to put together pieces of a puzzle.

Pieces that existed in museum archives. Pieces that existed in water testing records. Pieces that existed as community knowledge. Pieces that existed as geological records. Pieces that public health nurses were talking about. “It was like multiple birds were coming to my window. Chirping in my ear. Those birds, that chirping, it was community people. The knowledge and information was always there,” says Dan. “It just needed to come together. And once the community got going on the issue, it did a lot for itself. The arsenic story got known.”

What is known, without question, is that most areas in rural Newfoundland will have some artesian wells with levels of arsenic in well water exceeding 10 parts per billion. Ten parts per billion (or less) is the Canadian and the World Health Organization safety standard for drinking water.



PHOTO: Dr Dan Hewitt, Glennis Rideout, and Dr John Sheldon at Valley Pond (formerly called Whale's Gulch) a community on New World Island located on the northeast coast of Newfoundland.

BACKGROUND PHOTO CREDIT: Simon Dawson, New World Island, NL



COVER STORY



"We in fact had 2 wells on New World Island that tested at slightly higher than 1000 parts per billion," says Dan. "What is known without question is that it is not uncommon for the arsenic levels in well water in rural Newfoundland to exceed recommended safe levels. In some communities in New World Island, over 50% of the wells were above the 10 parts per billion safe level."

What to do about that, and who should be doing it, is where the troubles now rest.

Community water supplies that are monitored by the provincial government are not available in many parts of rural Newfoundland. Between 15% and 20% of people in rural Newfoundland depend on well water, on artesian well water. The problem is, the province says that the responsibility for checking the quality of that water falls on the well owners. But individual well owners don't ever know all the parts of the equation. And sometimes they don't know the questions to ask.

Glennis Rideout, the community licensed practical nurse whom Dan and John both say they worked alongside, because she was the true community leader, has been working on the arsenic issue for years. She agrees, adding that cost and confusion are 2 other key factors standing in the way of people really understanding the issue, getting the right facts, or even dealing with the knowledge if they do get their hands on it.

"If you're out testing your well water, you have to realize the rates of arsenic can change from week to week," states Rideout matter-of-factly. "It'll depend on water levels. You have to conduct multiple samplings. But sometimes the samples aren't tested for days; the arsenic disappears. How are people going to know that? Or if we do know, what do we do? Filter systems are so expensive. So many people out here can't afford to dish out the money. They end up saying 'I just can't do that.'"

Glennis and her family live the issue. "We got tested. All 3 of us. Urine, hair, and nails. My husband, my son, and me. My levels of arsenic were very, very high. My husband's and my son's were too. We stopped drinking our well water right away. We put in a filtration system. But it's really hard to know what the right system is. It requires knowing what's in your well water, and that can be tricky. The wrong system can be useless."

**TWO WELLS ON NEW WORLD ISLAND TESTED AT SLIGHTLY HIGHER THAN 1000 PARTS PER BILLION: 10 PARTS PER BILLION IS CONSIDERED THE UPPER LIMIT FOR SAFE DRINKING WATER**





That, argues Dr Hewitt, is exactly the problem.

"We are just putting all the burden of this issue on well owners. The scientific evidence is out there. The long-term carcinogenic impact of arsenic persists even if the arsenic goes away. We have to understand it's a public health issue. Either pay up front and deal with arsenic, filter it out and pay for that, or pay for it later with higher rates of cancer, metabolic disorders. Arsenic is a bad thing. There's no getting around that."


Still, raising community awareness, lobbying the province, getting the word out *does* constitute meaningful work that people living on veins of arsenic and drawing water from poisoned ground can undertake, can feel proud about.

Reverend Arthur Elliott is one such person, a concerned and committed citizen well loved by the group of health care professionals he works alongside. "What's been going on here for years is a disgrace. I say that as an observer with a genuine interest in the health of people in this area. I know this area. I know these people. My interest is a human interest. Arsenic affects the health of people in this region. I believe we can convince the government. We need a tremendous amount of community engagement, but if I were to put my 2 cents in, I'd say we're getting there."

Dr Dan Hewitt, Glennis Rideout, and Dr John Sheldon agree with Reverend Elliott.

"We've taken a lot of blunt," reflects Glennis, "but we're not shying away from the issue. People can't be afraid of the water they drink."

The somewhat unlikely group of arsenic-fighting friends circle back to what keeps the issue alive and sharp for them: the communities they live in, the people they love. Dan summarizes with a metaphor suggestive of the apple, hinting in all he says that no one is going to keep the doctor away when it comes to ensuring the perfection of rural Newfoundland isn't poisoned.

"It's the personal stories, the narratives of people in rural communities," observes Dan, "that are going to keep the ball rolling. Yes, there are academic articles on the issue, but those have certain constraints. What's really needed is public education. More could and should be done. We want more good things to happen. Our work is just starting to bear fruit." 

**Dr Hewitt** is a family doctor who has practised in rural Newfoundland for more than 30 years. He was part of a community engagement effort to deal with the elevated levels of arsenic in well water on New World Island.

**The Cover Project** The Faces of Family Medicine project has evolved from individual faces of family medicine in Canada to portraits of physicians and communities across the country grappling with some of the inequities and challenges pervading society. It is our hope that over time this collection of covers and stories will help us to enhance our relationships with our patients in our own communities.

**PHOTOS TOP (left to right)** Images of the smiling land—"We love thee, smiling land" from the *Ode to Newfoundland* composed by Governor Sir Cavendish Boyle in 1902: Bridgeport, New World Island (NWI); many houses on NWI depend on water sources such as the artesian well pictured second from the left (well photo by Simon Dawson); Cottlesville, NWI; Summerford, NWI; lighthouse in Cottlesville; docked in the harbour at Summerford. **(Bottom)** Photo of an iceberg taken in Twillingate looking back at NWI.

**PHOTOGRAPHER:** Ned Pratt, St John's, NL