

# STOP TB CANADA

Summer 2017

UNITE TO  
→ END  
TB



home isolation for TB, Toronto 1912

## A sesquicentennial of TB

by Elizabeth Rea, with thanks to Chris Ruddy and the Saskatchewan Lung Association

People who read this newsletter usually focus their attention and efforts on the very real challenges that we still face in Canada and around the world to eliminate the suffering and deaths caused by TB. As we mark 150 years as a nation, it's good to remind ourselves how much progress has been made on TB in Canada. At the time of Confederation, "the white plague" was the leading cause of death. Now, TB is curable, and many Canadians are surprised TB still exists here. The history of tuberculosis in what's now Canada goes back much longer than 150 years, but here is a brief timeline starting at Confederation.

- 1867 - TB is the leading cause of death
- 1897- Muskoka Cottage Sanatorium opens in Gravenhurst, Ontario - first in Canada
- 1900 - founding of the Canadian Association for the Prevention of Consumption and other forms of Tuberculosis (now the Canadian Lung Association)
- 1907 - Dr Peter Bryce, Chief Medical Officer of Health for the Dept of Indian Affairs surveys Indian Residential Schools: "69% of ex-pupils are dead, and everywhere the almost invariable cause of death given is tuberculosis" - and was fired for his activism
- 1914 federal program for TB testing of dairy cattle introduced
- 1921 national death rate from TB 85.1/100,000; Saskatchewan carried out first TB survey - 56% of 170,000 school children infected
- 1923 - first travelling TB clinics with mobile chest x-rays, in Ontario and Saskatchewan
- 1929 Saskatchewan is first province to provide free TB treatment to all TB patients
- 1938 first production of BCG in Canada, by Dr Armand Frappes at the University of Montreal; Ferguson begins 12 year BCG trial in Saskatchewan indigenous children
- 1941 first community-wide chest X-ray screening for TB, in Melville, Saskatchewan
- 1943 streptomycin discovered, and PAS in 1944 - first effective TB drugs
- 1948 Federal Health Grants launched including provincial Tuberculosis Control Grants
- 1950-69 C.D Howe coast guard ship carries out TB screening in Inuit communities; thousands are transported to southern sanatoria for TB treatment.
- 1953 - 18,977 TB beds across Canada; isoniazid introduced
- 1963 - number of TB beds dropped by half to 9,722
- 1972 rifampin licensed in Canada (discovered 1958) shortens treatment by 50%, speeding transition to community care; 1st edition of the Canadian Tuberculosis Standards
- 1998 first Canadian TB elimination plan announced by Health Canada
- 2011 Canadian TB Committee disbanded by federal government
- 20?? first use of delamanid in Canada

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Newsletter edited by Elizabeth Rea  
design by Jen Gardy

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## CIHR Funding for TB Research in 2017: congratulations to all

compiled by Dina Fisher

Principal Investigator	Institution	Program	Project Title	Amount	Year
Ahmad Khan, Faiz	<a href="#">Research Institute of the McGill University Health Centre</a>	Project Grant	Computer-aided detection of pulmonary tuberculosis on digital chest x-rays: its role in the detection of active tuberculosis in a high burden setting of low HIV prevalence <a href="#">Details...</a>	\$283,183	2016-17 to 2017-18
Av-Gay, Yossef	<a href="#">Vancouver Coastal Health Research Institute</a>	Project Grant	Host-pathogen interaction directed therapies in Tuberculosis <a href="#">Details...</a>	\$201,960	2017-18
Av-Gay, Yossef	<a href="#">Vancouver Coastal Health Research Institute</a>	Project Grant	Intracellular growth of Mycobacterium tuberculosis: Prospects for drug discovery. <a href="#">Details...</a>	\$297,008	2016-17 to 2017-18
Behr, Marcel A.	<a href="#">Research Institute of the McGill University Health Centre</a>	Foundation Grant	Tuberculosis: From Genomics to Control <a href="#">Details...</a>	\$681,676	2016-17 to 2017-18
Brode, Sarah; Greenaway, Christina; Janjua, Naveed; Johnston, James; Schwartzman, Kevin	<a href="#">B.C. Centre for Disease Control (Vancouver)</a>	Project Grant	From Patient to Policy: Using data to drive TB elimination in Canada's foreign born population <a href="#">Details...</a>	\$402,900	2017-18
Divangahi, Maziar	<a href="#">Research Institute of the McGill University Health Centre</a>	Foundation Grant	Regulation of Anti-Microbial Macrophage Response to Pulmonary Infections <a href="#">Details...</a>	\$711,266	2015-16 to 2017-18
Gros, Philippe	<a href="#">McGill University</a>	Foundation Grant	Genetic analysis of susceptibility to infections and to inflammation <a href="#">Details...</a>	\$589,337	2016-17 to 2017-18
Kumar, Rakesh	<a href="#">University of Alberta</a>	Project Grant	Studies on novel anti-tuberculosis agents <a href="#">Details...</a>	\$247,508	2016-17 to 2017-18
Lester, Richard Todd	<a href="#">University of British Columbia</a>	Foundation Grant	Evidence to action for Canadian and global mobile health (mHealth) communication to promote patient engagement in care: a rigorous implementation science approach <a href="#">Details...</a>	\$402,966	2015-16 to 2017-18

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## End TB: Towards Bold Innovations in the North - Manitoba Planning Meeting, March 2017

by Soliman Guirgas

On Friday, March 24, 2017, the Public Health and Primary Health Care Branch, Manitoba Health, Seniors and Active Living (MHSAL) partnered with the National Collaborating Centre for Infectious Diseases (NCCID) to mark World TB Day, 2017.

More than 30 representatives from MHSAL, NCCID as well as from other departments and sectors -- Justice, Community Safety, Correction, Cadham Labs, Northern Housing, from Northern Health Region, the WRHA, FNIHB and PHAC, and from NGOs – FNHSSN, Diagnostic Service Manitoba, Canadian Red Cross and the Lung Association participated in this event to generate innovative ideas to reduce TB in northern Manitoba where TB affects many people, families and communities.



This event arose from on-going discussions over the winter about the need to focus on concrete, innovative actions that can be taken to reduce TB and its effects in northern Manitoba.

Besides marking World TB Day, the objectives were to introduce whole-of-government-and-beyond approaches and consider their relevance for addressing TB in northern Manitoba; to discuss the parameters for a meeting on Bold Innovative approaches to TB for northern Manitoba, northern Saskatchewan and the territories to be held in the fall of 2017; and to determine immediate, innovative actions/initiatives that can be taken in Manitoba on TB.

Using the WHO 3 pillars approach from the global “End TB Strategy” (2016-2020), participants determined a number of new directions for Manitoba to work together across sectors to reduce stigma and improve health outcomes. Housing, better access to screening, identifying and treating persons with Latent TB Infection (LTBI), improved treatment, outreach and collaboration were just some of the ideas put forward. MHSAL is committed to bringing the group together in 12 months to present the progress that has been made since this half day workshop.

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## One Month in the Canadian North: a TB nurse's experience

by Diane Rasmusson

The land of the midnight sun, of polar bears and northern lights. Frozen waters and tundra.... No trees. This is where I went last summer – to Igloolik, a hamlet of almost 2000 people, north of the Arctic Circle in Nunavut, Canada.

What would the TB program be like in such a remote area? In Toronto, we're used to a sort of "instant gratification" when it comes to TB. We collect sputum, a courier brings it to the provincial lab within hours; the next day we have the smear results, and PCR results a day or two day later. A doctor reads the Chest x-ray on the spot and the radiologist's report is ready the next day. It's the same with bloodwork. There is lots of support from colleagues, both in our public health TB program and in the community.

In Igloolik, I was the only TB nurse in town. My one TB colleague was a 2 hour plane ride and 855 km away in the capital city of Iqaluit. The first thing she told me was, "Get used to waiting. Nothing happens quickly here!" All reports, questions, client issues and advice had to go through her. In Iqaluit, she would speak directly to the physician and pass on any advice or orders to me. I was not as independent here as in Toronto.

In Igloolik, sputum was also collected and blood drawn. Both were put into the fridge until a plane arrived to bring them to the lab. Chest x-rays were done by janitorial staff, some bloodwork was collected by our clerk. If the weather was bad, nothing went out or came in. And so I waited. And when the results were finally in and the orders written, I acted.

The Canadian TB Standards were upheld. All eligible LTBI cases were put on prophylaxis and offered DOPT. In Toronto, we can only provide DOPT for very high risk patients, if we have available staff. And with decentralized TB care in Ontario, many LTBI cases are not offered prophylaxis by their individual physicians.

People on DOT were seen for every dose in Igloolik. Incentives were given and I had a chance to get to know my clients and their families a little better and learn about their daily struggles and the quiet courage they possessed. Back home, we have DOT staff who see our clients every weekday. As a case manager, I don't always get a chance to get to know my clients as well.

And then the month was over and I had to leave. Like most nurses here, we come from the South and go back home after a short period of time. My clients would be followed-up up by the nurses from the Health Centre. Whoever had a minute during their busy day would provide DOT.

I was there just long enough to be appalled by the many difficulties the Inuit people experienced. Affordable housing and nursing shortages, problems with daycare and school, mental health concerns, overcrowding, unemployment, food expenses and the effects of climate change and pollution on hunting and fishing.

And, I was there too short of a time to be able to do much about it. What would I as a "Southerner" have to offer someone who has lived their life in such a harsh, but beautiful land? I gave what I had and my clients, as always and everywhere, lived their life the best way they could: with courage, perseverance, resilience and hope.

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## TB Publications by Canadian Researchers - a sampler

compiled by Dina Fisher

Sign up for **email news from the global Stop TB Partnership** here <http://www.stoptb.org/maillinglist.asp>

JOIN THE STOP TB CANADA INITIATIVE <https://stoptbcanada.org/>  
Annual dues are \$20. For more information or to join, mail Dr. Menn Biagtan at [biagtan@bc.lung.ca](mailto:biagtan@bc.lung.ca).

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## TB Survivors give us a much needed perspective

by Dr Madhu Pai - originally published in the Huffington Post Blog 06/29/2017

As a tuberculosis researcher, I have conducted research that shows that [quality of TB care leaves much to be desired](#), especially in high TB burden countries such as India. Our research has shown that patients are often diagnosed after a long delay, and doctors rarely test for TB (or refer patients for testing), even when patients present with classic symptoms. But understanding the science did not prepare me for the gut wrenching experience of hearing the stories of two brave young women who survived TB, beating all odds. We hosted [Deepti Chavan](#) and [Nandita Venkatesan](#) from India, at our [McGill Summer Institute in Infectious Diseases and Global Health](#). We opened our Advanced TB Diagnostics course by asking Nandita and Deepti to speak on why good diagnosis matters to patients. And what an impact they had!

Deepti Chavan was diagnosed with TB at the age of 16, after weeks of experiencing symptoms. In all, she endured six years of toxic drug therapy, including 400 painful injections, and had much of her affected lung removed to recover from a severe form of drug-resistant TB. Deepti spoke

about how she visited several doctors, and about how most physicians changed her antibiotics without doing any drug-susceptibility testing. Deepti. "We cannot risk the lives of TB patients by delaying diagnosis and putting them on wrong treatment," Deepti argued. "Perhaps if my doctors had done drug resistance tests earlier, my lung could have been saved."



MADHUPAI 194

Nandita Venkatesan (left) and Deepti Chavan (right), TB survivors and patient advocates from India, spent two weeks at McGill University, Montreal, and spoke in three courses in the Summer Institute in Infectious Diseases & Global Health.

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Nandita Venkatesan [recounted her struggle that began at the age of 17](#) when she was diagnosed with abdominal TB three months after developing symptoms. After a prolonged course of anti-TB therapy, she was declared cured, only for the disease to resurface at the age of 23. This time around, she needed multiple surgeries to stay alive. The unkindest cut of all was waking up, two days after her 24<sup>th</sup> birthday, to total silence. Nandita lost her hearing because of the toxic effects of Kanamycin, a second-line TB drug that is used for drug-resistant strains. In a TEDx talk entitled "[From Sound to Silence - Lessons from my journey into hearing loss](#)," Nandita gives us a peek into her world of silence, the challenges she faces in a society that is not friendly to persons with disabilities, her determination to get back to work, and how she [started dancing again](#).

Nandita challenged us to come up with better diagnostics for extrapulmonary TB, and made a passionate plea for developing better TB drugs with fewer adverse effects. She asked why all patients on second-line drugs do not get routine audiometry (hearing tests) to screen for hearing loss? Patients don't just need correct diagnosis, but they also need adequate follow-up and monitoring during the long therapy, she said.

[Women in India are stigmatized when they have TB](#). But Deepti and Nandita are powerful TB advocates, championing the fight against TB in India, and engaging with scientists and policy makers to improve the situation for patients in the country. They constantly remind us that the fight against TB cannot be [won without empowered patients](#). The [seriously under-funded Indian TB program](#) will do well to harness the passion and energy of these TB champions. Deepti and Nandita's contributions were the highlight of this year's Institute! They spoke the truth, won our hearts, and reminded us that we need to create a space for patients in our scientific conferences, courses, and events. Thank you, Nandita and Deepti, for two inspiring weeks. More power to you!

*Note: Photograph and quotes used with permission from Nandita Venkatesan and Deepti Chavan.*

## SAVE THE DATE: UPCOMING CONFERENCES

48th Union World Conference on Lung Health  
11-14 October 2017, Guadalajara, Mexico

Chest 2017  
28 October - 1 November, Toronto, Canada

Union North American Region Conference  
27 February - 3 March 2018, Chicago, USA

## WHO Releases New Ethical Guidance for TB Care, including MDR-/XDR-TB

The WHO released updated guidelines on the ethical issues intrinsic to prevention and care of TB. Several Canadians were involved in the development of the guidelines, including Dr Deigo Silva (Simon Fraser University) and Dr Ross Upshur (University of Toronto). You can find the guidelines [HERE](#).