

CASE 8

Is it too Late to Re-evaluate? Creating Client-centered Changes within Canada's Medical Surveillance System

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Mia Baudin was beginning her day by scrolling through the news. Her routine of catching up on global matters was always the same when she headed to work, but today the news that she read on her morning commute resonated with her heavily. The headline “Drug-Resistant Tuberculosis: A Clear and Present Danger” caught her eye. Mia continued reading. A record number of drug-resistant tuberculosis (TB) cases were popping up in Southeast Asia and South Africa. The news article stated that, in 2017 alone, drug-resistant tuberculosis was estimated to have caused 230,000 global deaths (Pai, 2019). Mia let out a long sigh. It felt like tuberculosis was a relentless disease and the fight against it was constant.

Mia worked as a program officer in the Public Health Liaison Unit (PHLU) situated in the Migration Health Branch of Immigration, Refugees, and Citizenship Canada (IRCC). Her role was to communicate with provincial and territorial public health authorities (P/T PHAs) when foreign nationals enter Canada and record, when informed, that the foreign national had followed through with medical surveillance. Through her involvement with IRCC, Mia had been briefed on the tuberculosis situation in Canada. Although the incidence of TB here was relatively low, it was a large concern among the foreign-born population. Increasingly, the threat of multidrug-resistant tuberculosis and extensively drug-resistant tuberculosis within this population was also becoming a problem.

Just last week Mia had been briefed on the World Health Organization's (WHO) goal to eliminate tuberculosis. The objective of their End TB Strategy was to have a 95% reduction in global TB incidence and associated deaths by 2035 (World Health Organization, 2015). Mia knew that with immigration numbers on the rise, and the threat of drug-resistant TB being a greater concern than ever before, the medical surveillance system needed to be running effectively. She wanted to do whatever she could as a program officer to make this goal of eliminating tuberculosis tangible while keeping up with the increased demand on the medical surveillance system.

Mia's position required a balancing of roles. When informed of a likely case of active tuberculosis where the location of the client was currently uncertain, one of Mia's most critical responsibilities was to use information concerning the client in IRCC databases to determine the exact location of the client. This assisted in locating these individuals so that appropriate public health authorities could approach the client and provide appropriate treatment. In cases where an individual had remained untreated and was a potential public health risk, Mia had to work in collaboration with the P/T PHAs and the Public Health Agency of Canada (PHAC) to take

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appropriate measures to mitigate any public health risk. Mia also had the more distinct responsibility of acting as a liaison and facilitating communication among foreign nationals, P/T PHAs, and regional health units. If a migrant arrived in Canada and reported to a public health unit, this reporting was then passed on to IRCC.

Despite these responsibilities, Mia felt her most demanding role involved communicating with clients directly regarding their concerns about TB screening and surveillance. Many clients were not aware of the medical surveillance system and were fearful about the process. Mia guided these individuals through the system and alleviated their uncertainty by explaining the steps they had to take. This was often a lengthy and challenging process. Within the past few months, Mia had received a surge of emails from clients who had interpretation challenges, questions about reporting locations, and the cost of medical surveillance. She was finding it increasingly difficult to keep up with the volume of emails she was receiving. As Mia logged in to her email today, she was greeted with an inbox full of much of the same.

She began to wonder if there was a more permanent way to address the concerns repeatedly brought forward. Migrants needed answers immediately and Mia wanted to ensure she could guide them through their requirement for public health surveillance inside Canada, but Mia also knew that she couldn't keep up with this demand alone. Her capacity within her role was already being stretched. Something more needed to be done to meet the current and future demands caused by population growth related to immigration. What was it within the medical surveillance system that was acting as a barrier to clients? Was the medical surveillance system not sufficiently client friendly? Perhaps identifying this was the first step.

BACKGROUND

As a program officer working in the PHLU, Mia had gained an in-depth understanding of the medical screening and surveillance processes. She reflected on the knowledge she had accumulated along the way.

Medical Surveillance and Immigration, Refugees, and Citizenship Canada

IRCC is the branch of the federal government responsible for regulating the entry of foreign nationals to Canada. This includes assessing the health of immigrants and refugees to Canada in order to identify certain infectious diseases of public health concern. The identification of these diseases then allows for effective facilitation of treatment.

Within IRCC, the Migration Health Branch oversees the health screening process which includes the Immigration Medical Examination (IME) and assessment of the IME which determines which clients can enter as well as the subsequent Immigrant Medical Surveillance (IMS) processes. The primary focus of the IME is to detect active cases of tuberculosis in the foreign national population, as active pulmonary TB renders a person medically inadmissible to Canada (Immigration, Refugees and Citizenship Canada – IRCC, 2014) until they are successfully treated. The primary focus of the IMS is to have clients at a risk of developing active TB report to P/T PHAs so they can be monitored and offered treatment if they become an active TB case (IRCC, 2014).

Immigration Medical Examination

Any person applying for permanent residency must undergo the IME. In addition, foreign nationals must undergo an IME even if they are temporary residents but intend to work in an occupation that could bring them in close contact with people, and in which the protection of public health is essential (IRCCa, 2019). There are many other applicants who are required to

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undergo a medical exam, including some work permit candidates under International Experience Canada, certain health care students who are work-permit exempt, and people arriving as refugees (IRCCa, 2019). The IME must be conducted by a physician who is approved to conduct these types of exams. These physicians are known as panel physicians and they are located across the globe (IRCCb, 2019). The IME guidelines and components are outlined by IRCC. They include:

- Documentation of medical history
- Complete physical examination
- Chest x-ray and laboratory testing

Immigration Medical Surveillance

Foreign nationals found to have a condition that is a public health concern, such as inactive TB, must undergo IMS. Clients must proceed to a medical follow-up where further monitoring and appropriate treatment are determined. If a foreign national presents with inactive pulmonary tuberculosis, they must report to a public health authority within 90 days of entering Canada. However, if a client is identified as a more urgent case through the presentation of complex non-infectious active pulmonary tuberculosis, they must report within seven days (IRCC, 2014). Once this initial assessment is completed, a client is noted from an immigration point of view as being in compliance and the medical terms and conditions are lifted from their visa application.

Individuals who have active TB are inadmissible to Canada until they have undergone treatment for tuberculosis and have demonstrated proof of this. IRCC verifies this by collecting chest x-rays and other laboratory results from a respiratory specialist who confirms the client's diagnosis, the client's drug regimen/course of treatment, and their disease prognosis. Individuals who have active tuberculosis are also assessed for their antibiotic resistance to determine whether they present with multidrug-resistant or extremely drug-resistant TB.

The Medical Surveillance Pathway

Once a foreign national arrives at a Port of Entry in Canada, in many cases, a Canadian border security agent completes a medical surveillance undertaking form (IMM0535) and sends it to the PHLU. This form optimally contains the foreign national's Canadian address and contact information.

When the PHLU receives this information, they reference the province/territory indicated on the form and inform the designated jurisdiction of the individual's arrival to Canada. This starts the medical surveillance process. The province then initiates contact with a regional health unit or tuberculosis clinic that follows up with the client, does a risk assessment and directs them through the process of diagnostic testing and TB care if required. With this initial contact, the province/territory informs PHLU that a client is in compliance.

The British North America Act of 1867 (Health Canada, 2019) dictates that provinces/territories are responsible for healthcare provision. This means that implementation of TB control programs takes place at the provincial/territorial level and there are variations of these control programs depending on the responsible jurisdiction. Although there is a single published Canadian TB standard, each P/T determines how medical surveillance is carried out in their jurisdiction, including which IME documentation is required. These jurisdictional authorities are also able to establish how TB care is set up, with certain provinces having designated tuberculosis clinics and others relying on community health centers and public health units to facilitate care for the migrant population.

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This lack of uniformity can create challenges for foreign nationals undergoing medical surveillance. Many migrants who move to different provinces might have to repeat their medical surveillance in order to meet compliance requirements in their new province. Clients are barraged with different types of insurance coverages, multiple costs associated with diagnostic tests, and disparate wait times for surveillance appointments depending on the province in which they reside. This makes creating a seamless and uniform country-wide medical surveillance system an even greater challenge.

The Global Tuberculosis Burden

Although Mia had been briefed on the purpose of medical screening and surveillance when she joined the Migration Health Branch, she initially had a limited understanding about tuberculosis itself. Dr. Greg Walkins, the Migration Health Branch's medical officer, had delivered a lecture on tuberculosis within Mia's first few weeks at the job, and this had helped her learn more about the disease.

Tuberculosis is a disease that has impacted humanity for thousands of years. It was only on March 24, 1882 when Dr. Robert Koch isolated *Mycobacterium tuberculosis* and determined it was the causal bacteria behind the disease (Floyd et al., 2018). At the time of this discovery, TB was responsible for devastating Europe, with mortality rates exceeding 100 per 100,000 people per year (Floyd et al., 2018). Although large strides have been made in tackling TB through effective drug treatment research, TB remains the top global cause of death from an infectious agent (Floyd et al., 2018). It is found in every country in the world, with drug-resistant TB being found in every country in which it has been measured (Floyd et al., 2018).

Tuberculosis is first treated via a six-month combination regimen of first-line drugs. These drugs include isoniazid, rifampicin, ethambutol, and pyrazinamide (Floyd et al., 2018). If an individual has multi-drug resistant TB (both rifampicin and multidrug resistant), they typically undergo treatment with second-line drugs that are more toxic and expensive. This regimen can last anywhere from nine to twenty-four months in duration. To date, the only licensed vaccine available to decrease the likelihood of developing certain severe forms of TB is the bacille Calmette-Guerin vaccine. This vaccine is most effective at preventing tuberculosis in infants and young children, with its protection in older children and adults ranging from 0% to 80% (Floyd et al., 2018).

With tuberculosis being responsible for 1.5 million deaths globally in 2018 (World Health Organization, 2019), it is critical that there are structures in place to limit the public health risk of TB transmission in Canada. Although the foreign-born population represents approximately one fifth of the total Canadian population, it constitutes a large majority of those enduring the greatest disease burden (PHAC, 2019). In 2017, the foreign-born population accounted for 71.8% of active TB cases in Canada (LaFreniere et al., 2019), demonstrating a disproportionate impact of the disease on this population. Furthermore, people who become permanent residents and may also have latent (inactive) TB are at a greater risk of developing active TB due to previous exposure, difficulty in accessing health services, and food and housing insecurity (LaFreniere et al., 2019). Appropriately directing individuals through treatment and surveillance is meant as an introduction to health care within Canada and as a method to ensure the health and safety of people arriving to the country as well as the local population.

The World Health Organization has implemented the *End TB Strategy* to reduce the global incidence of tuberculosis. The goal is to reduce the global incidence of the disease from the rate

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of 110 per 100,000 in 2015 to 100 per 100,000 or less by 2035 (WHO, 2019). Data from 2017 demonstrated that there were 1,796 cases of active TB in Canada, amounting to an incidence of 4.9/100,000 (LaFreniere et al., 2019).

SPECIFIC AREA OF INTEREST

Ensuring Compliance with Medical Surveillance

The proportion of the foreign-born population in Canada is continuing to rise, with immigration rates slowly approaching levels last seen in 1913. The 2016 Canadian census indicated that 7,540,830 people had come to Canada through the immigration process, which represented 21.9% of Canada's population at the time (Statistics Canada, 2017). Ensuring the positive health status of these is an important objective for IRCC.

Although the incidence of TB in Canada is low within the general population, this contrasts with the incidence in nations from which foreign nationals arrive. The World Health Organization's *Global Tuberculosis Report* (2019) states that most TB cases occur in Southeast Asia (44%) and Africa (25%). The report also reveals that the 30 highest TB burden countries constitute 87% of all estimated incident cases worldwide (World Health Organization, 2019). India, China, Indonesia, the Philippines, Pakistan, Nigeria, Bangladesh, and South Africa have the largest TB burden (Exhibit 1). Asia continues to remain the top source continent from which recent immigrants arrive to Canada, with 2016 data revealing that 61.8% of newcomers arriving here between 2011 and 2016 were from this geographic location.

The challenge that exists for IRCC, and particularly for the Migration Health Branch in improving the prevention and management of tuberculosis within the foreign national population in Canada is the appropriate integration of the IMS procedures with provincial/territorial TB control programs. The other challenge is, although immigration numbers are increasing, the resources allocated to effectively guide foreign nationals through the medical screening and surveillance processes are not. This creates an additional burden on the key stakeholders and the current medical surveillance system in ensuring screening and surveillance programs are effective. Transition to more effective and efficient IME and IMS procedures will be challenging.

The PHLU is a critical point of contact for many newcomers to Canada who must undergo medical surveillance. The PHLU is responsible for creating a supportive environment for foreign nationals who may have recently been diagnosed with active or latent TB. Because many individuals are unaware of their health status until they undergo the IME, it is essential that the PHLU be involved in creating lines of communication that is not stigmatizing to immigrants. Medical screening and surveillance should be viewed as a stepping stone in achieving integration into Canada and its health care system with the eventual step of taking on citizenship. Negative attitudes and fear about the surveillance process can further impact the number of people who are able or willing to comply with this requirement. This is why the messaging around medical surveillance and the manner in which surveillance is conducted are critical to its success.

Back to the Tasks at Hand

Mia stared at her computer feeling slightly dejected. It was only the middle of the afternoon and the emails flooding her inbox showed no signs of slowing down. There were many client concerns and varied inquiries related to a variety of stressors. Many new immigrants were not sure if they required medical surveillance or if they were responsible for contacting their local public health units. Some clients wondered what the examinations would cost. Others did not

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know what to do when they relocated to different provinces, and many immigrants had difficulties understanding the terminology used by IRCC.

Mia was concerned that, at this rate, the PHLU would not be able to manage the task of guiding clients through their concerns while fulfilling its other roles and responsibilities. She realized that if the volume of migrants continued to increase, there would be even more client concerns to address in the near future. Mia also recognized that as challenging as it was keeping up with client correspondence, behind these emails were people who had valid concerns about the medical requirements pertaining to their visa applications. Mia needed to find a solution to the repeat client concerns that required her attention. She wanted to identify a way to change certain barriers within the medical surveillance system to make it more client centric, but she didn't know where to start. She first had to analyze at what points stressors were occurring for clients. Only after understanding this could changes then be proposed.

SPECIFIC PROBLEM OF DECISION

In the upcoming weeks, the Migration Health Branch's strategic plan was going to be discussed. This strategic plan focused on targets and goals for the next four years. If proposing to make the medical screening and surveillance system more client-centric was a priority, this was the opportune time to add this proposal to the agenda. Mia flipped open her calendar to next week's team meeting.

The weekly meeting held on Thursdays would be the ideal time to propose the notion of tackling client challenges within the medical surveillance system. With her colleagues' support, Mia felt she could take the first essential step to evaluating the barriers to client compliance. Without doing this, program changes could not be proposed and implemented. Mia knew she needed more people on board. Taking on an initiative of this scale with limited resources would be challenging but possible if it was well structured. Mia did not want to start this project without being able to truly assess client needs and deficiencies within the program. Without doing her due diligence, this evaluation would not lead to any long-term change.

Mia wondered how, as a mid-level employee of the PHLU, she could best take on this initiative. How could she perform an effective evaluation that incorporated the perspectives of the various stakeholders involved? This would mean taking note of perspectives from the Migration Health Branch, the PHLU, the P/T PHAs, and those working regionally at the frontline of client care. She began jotting down all the stakeholders involved along the client's journey through medical surveillance. To understand the deficiencies in the surveillance program, she needed the stakeholders' perspectives as well as the clients' testimonials about their experiences.

Mia knew that the team did not have additional funds to spend on hiring someone to put together an evaluation of client challenges within the medical surveillance system. This was her shot at creating a valuable resource that could then be used to implement positive change at the client level. She reminded herself that behind every file was a story. This was an opportunity to capture it and make an impact by representing it fairly.

CONCLUSION

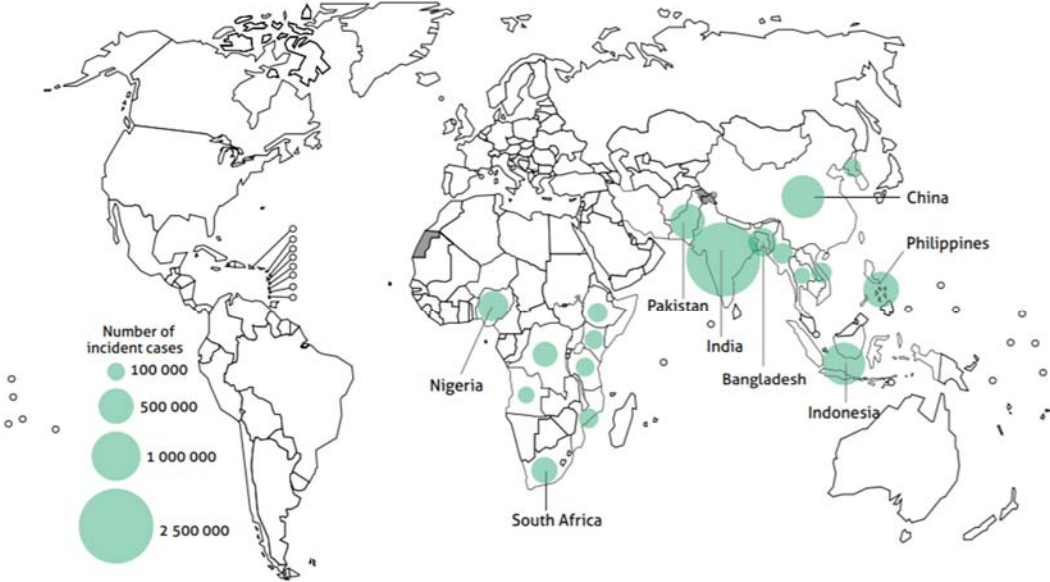
Mia began thinking about the process. She had just under a week to develop an outline of what was needed to create a comprehensive evaluation of the medical surveillance system in regard to client-centred deficiencies. She began by writing down the input she required from stakeholders, the resources needed, and her timeline to make this assessment happen. Next week when she walked into the weekly team meeting, she would bring forward her plan to begin

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addressing client challenges within the medical surveillance system. The process would not be easy, but she knew her Master of Public Health education, public health training, and experience would help her draw on appropriate resources and create an initiative grounded in its structure. This would hopefully be enough to demonstrate the importance of this idea and have it incorporated into the strategic plan. Mia let out another deep breath and eagerly got to work. She knew she was adding one larger task to her list, but she couldn't wait to see the results of her ambition.

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EXHIBIT 1
Estimated TB Incidence in 2018 for Countries with at Least 100,000 Incident Cases



Source: World Health Organization, 2019.

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INSTRUCTOR GUIDANCE

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BACKGROUND

Mia is a program officer in the Public Health Liaison Unit at Immigration, Refugees, and Citizenship Canada's Migration Health Branch. Mia works with her team to oversee medical surveillance notifications related to tuberculosis. Mia and her team identify migrants arriving to Canada who require tuberculosis testing and care, and connect them with the appropriate Provincial/Territorial Public Health Authority in the province or territory they want to reside in. Lately, Mia has noticed that the number and type of client concerns filling up her email inbox are increasing. These client concerns range from knowledge, language, and interpretation barriers, to difficulties understanding where to report for medical surveillance. Mia wants to conduct a program evaluation to determine exactly where client barriers exist within the medical surveillance system. She wants to use this information to suggest transformation to areas that require change.

OBJECTIVES

1. Use an understanding of disease incidence, prevalence, and surveillance to influence the development of programs or interventions for targeting and eliminating disease transmission.
2. Select quantitative and qualitative data collection methods that are appropriate for conducting a program evaluation. Determine which stakeholders and resources are required to do this.
3. Discuss the means to achieve health equity for foreign nationals by specifically looking at how immigrants undergo medical surveillance in Canada.
4. Design a population-based policy, program, project, or intervention that keeps the end user in mind.

DISCUSSION QUESTIONS

1. How does the Public Health Liaison Unit help facilitate medical surveillance?
2. What is the main challenge identified by the protagonist Mia in the case?
3. What are the challenges endured by immigrants who arrive in a new country? How might this impact their ability to complete medical surveillance?
4. What factors need to be considered when conducting a program evaluation?
5. How can successful program evaluations be used to transform programs and interventions?

KEYWORDS

Client-centered program evaluation; foreign nationals; medical surveillance; tuberculosis.