

LETTERS

Strengthening tuberculosis surveillance in Canada

March 24 was World Tuberculosis Day and Canada still has much to do to fulfil recent commitments¹ to eliminate tuberculosis (TB), a disease that has long required collaboration and coherence to address effectively its multiple determinants.^{2,3} As suggested by Essue and colleagues in their *CMAJ* commentary,⁴ one way to do this is to work toward a consistent approach to surveillance to understand fully the portrait of tuberculosis (TB) in Canada, inform public health actions, and monitor the progress to reach pre-elimination of TB (defined by the World Health Organization [WHO] as less than 10 cases per million per year⁵). That approach should include aspiring to present and report disaggregated TB surveillance indicators routinely, including for latent TB infections.⁴

As the cases of multidrug-resistant TB increase, nation states and the WHO have reinforced their emphasis on reducing and eliminating TB. The WHO *Framework Toward Tuberculosis Elimination in Low-Incidence Countries* includes specific recommendations for surveillance and monitoring, especially for men and women with latent TB infections, stating that “due consideration should be given to extending the range of variables beyond those usually collected in TB surveillance,” including demographic, clinical, geopositioning, vital statistics and socioeconomic data.⁵ Some countries and regions have incorporated this approach in their most recent TB reports (e.g., Australia and England).^{6,7}

Health system and related indicators for diagnosis, treatment and outcomes should be presented by sex, age, province, rural or urban residence, and other stratifiers. Presenting disaggregated data encourages population health researchers and public health planners to consider the intersections of determinants that create or ameliorate inequities for good health and inequalities in health outcomes.⁸

The recent release of 2017 TB surveillance data for Canada⁹ goes part way to meet

these goals but falls short in consistently disaggregating data when reporting on treatment outcomes for patients with TB. The epidemiologic report and supplementary tables provide some stratified data; case counts and incidence rates are disaggregated by sex, province or territory, sex and age, country of origin and Indigenous group (First Nations, Métis or Inuit). These stratified data illustrate the greatest burdens of disease: 71.8% of cases involve patients who were born outside of Canada and the 17.4% of cases involving patients who are Indigenous and born in Canada are disproportionate to the size of the subpopulations. For example, the incidence rate of TB in First Nations patients was 34 times higher (17.1 per 100 000 population in 2017) than in non-Indigenous patients who were born in Canada (0.5 per 100 000 population). Patients who were Inuit had an incidence rate more than 400 times higher (205.8 per 100 000 population). It would be valuable to disaggregate these data further to know more about the sex and age compositions of patients with TB within the foreign-born and Indigenous populations.

Critically, the data presented in the 2017 TB surveillance report for treatment outcomes (i.e., how Canada is doing in treating and curing TB in populations with the high burden of disease) are not disaggregated by age and sex or population.⁹ Essential information about public health and clinical responses for these high-burden populations is buried in the data across all cases in Canada. National-level TB surveillance in Canada depends on the provinces and territories providing data to the federal government voluntarily. Although not required to provide their data under the *Public Health Act of Canada*, provinces and territories can, however, contribute to a more comprehensive approach to TB elimination by sharing stratified data on screening, treatment and outcomes among foreign-born, First Nations, Inuit and Métis populations in Canada, as well as collecting information on drug resistance and comorbidity. Information on drug resistance and comorbidity with HIV are also needed. For

provinces and territories where case numbers are high, it would be possible to present these data for each of the 2 main subpopulations affected by sex, and by sex and age, without compromising confidentiality; where numbers are too small, aggregates by province or territory may be necessary for national reporting.

Researchers, clinicians and public health personnel in Canada continue to call for a set of national-level TB indicators for high-risk populations.¹⁰ In November 2018, experts gathered to propose an initial list of indicators of program performance for consideration (National Collaborating Centre for Infectious Diseases: unpublished data, 2018). Further consultation will be needed to reach agreements with all jurisdictions in the federation to determine a core set of indicators and recommendations for consistent data reporting at the national level to monitor progress towards eliminating TB.

With coordination and consistency across the provinces and territories, national-level TB surveillance reports could illustrate the value of consistent disaggregation of indicator data. This would inform directed and effective interventions where they are needed most to reduce inequalities. There are initiatives already underway to establish localized indicators. Community involvement in determining meaningful indicators is essential to these deliberations for different First Nations, Métis, Inuit — and potentially foreign-born — communities. For example, population-specific TB determinants were recently published by Dehghani and colleagues,¹¹ and the findings show where the greatest improvements have been made in annual reduced incidence of TB.

Without a common aspiration for improved, meaningful data to inform public health action, monitoring and evaluation, Canada is likely to fall short of its goal of eliminating TB.

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