A National Registry for Tuberculosis Surveillance and Treatment.

Summary
The resurgence of Tuberculosis (TB) in Canada is a major concern to Public Health. The number of Canadians screened annually for TB is increasing dramatically. Correct assessment of possible TB cases requires individualized consideration of complex patient factors and time-based analysis of sequential TB skin tests. A National TB registry, accessible over the internet, is essential to accumulate all TB-related patient data and apply best practice standards to produce accurate treatment decisions.

Description
Tuberculosis still kills millions worldwide. Once thought to have been under control in Canada, it is now showing resurgence. New Canadians from countries where TB is endemic may be screened on immigration but then acquire the disease when visiting relatives in their homeland, and come back to Canada without being tested. TB has particular prevalence in northern and aboriginal communities, but public health departments across Canada are stepping up their TB surveillance programs. An increasing number of Canadians are requiring TB skin tests for employment reasons, entry into education facilities, or to comply with new legislation.

The correct interpretation of TB skin tests is problematic.

For some patients, the result and date of previous TB skin tests is important. But the results of previous tests, if any, are invariably inaccessible. With the increased volume of TB skin tests, there is an increase in the number of people administering and interpreting the tests. Many of these are poorly trained in the complexities of TB surveillance. In certain clinical situations, the application of published guidelines for test interpretation and treatment are often too complex to be correctly implemented. This is a particular problem in remote areas, understaffed health facilities, or where skin tests are administered in non-health facilities. In Ontario, the MoHLTC Tuberculosis Protocol (2006) comprises 285 pages, far too complex for most nurses and doctors to assimilate. Treatment of TB with antibiotics is prolonged, often has significant side-effects, and should not be undertaken lightly.

If TB skin tests are incorrectly interpreted, some TB cases will be missed, some patients will be treated unnecessarily. TB surveillance programs will become a huge waste of health care resources . . . and the general public is still at risk.

A National TB Registry is needed to ensure all necessary information is gathered and correctly factored into TB treatment decisions.
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The Registry would maintain a “TB profile” for each patient comprising:
- age, gender, country of origin,
- all previous TB skin test results,
- known exposure to active TB,
- previous BCG vaccination,
- previous treatment for TB,
- relevant concurrent disease such as diabetes, malnutrition, alcoholism,
- risk factors such as HIV/AIDS or other immunocompromization, etc.

When a TB skin test is performed, the size of the reaction would be entered into the Registry. The Registry would automatically analyse this data according to latest treatment guidelines, with consideration of the patient’s TB profile, and formulate a plan for the patient. This plan would include one or more of:
- the need to distinguish active TB vs. re-activated TB vs. latent TB,
- further investigations such as a two-step skin test, chest x-ray, or sputum culture,
- further assessment by a specialist physician,
- the need for treatment with antibiotics.

If treatment was recommended, the Registry would anticipate side effects, again considering the individual patient’s TB profile, and recommend specific monitoring tests and the frequency of these tests.

The Registry could be accessed by any authorized public health official, or a patient’s physician or nurse, directly over the internet. If necessary, patients could register with the Registry anonymously, and obtain a username to be used when interacting with public health and their health care providers.

The Registry would be an invaluable tool to the increasing number of health care providers involved in TB surveillance, particularly public health officials and nurse practitioner led clinics in remote and northern communities, and to RNs/RPNs working in long term care and retirement residences.

The Registry would provide data needed to analyse trends in incidence and prevalence of TB, and provide measures of the efficacy of TB surveillance programs. Failure to control the TB resurgence could place all Canadians at risk, and impose a significant strain on the resources of our health care system.