MedicalXpress

The BCG World Atlas: a world first in the fight against tuberculosis

March 22 2011

Tuberculosis (TB) continues to pose a major global health threat. Someone in the world is newly infected with TB bacteria every second. Every year, more than 9 million people develop active TB and it claims about 2 million lives. In Canada, the overall incidence of TB has declined, but rates remain high among immigrants from endemic countries and among Aboriginal populations. Currently, Nunavut is facing the largest TB outbreak in the territory's 10- year history.

In the days leading up to World TB Day 2011 on March 24, a team of researchers from McGill University and the Research Institute of the McGill University Health Centre (RI MUHC) is officially launching the BCG World Atlas: a first-of-its-kind, easy-to-use, searchable website that provides free detailed information on current and past TB vaccination policies and practices for more than 180 countries.

"The Atlas is designed to be a useful resource for clinicians, policymakers and researchers alike," said co-author Dr. Madhukar Pai, who is an assistant professor at McGill's Dept. of Epidemiology, Biostatistics & Occupational Health and a researcher in the Respiratory Epidemiology and Clinical Research Unit at the Montreal Chest Institute and the RI MUHC. "It has important implications on diagnosing and treating TB and on the research that's being done on developing a new TB vaccine."

Pai is a senior author on a paper about the BCG World Atlas that will be published in the March edition of the journal *PLoS Medicine*.

The Bacille Calmette-Guérin (BCG) vaccine was introduced in 1921 and continues to be the only vaccine used to prevent TB. Despite nearly a century of use, the vaccine remains controversial, with known variations in efficacy, strains, policies and practices across the world. Clinicians need to be aware of the various BCG policies in different parts of the world, as well as changes to those policies over time, especially when dealing with foreign-born adults who were vaccinated as children and who are unlikely to have retained their childhood vaccination records.

Ms. Alice Zwerling, BCG Atlas project leader and PhD candidate in epidemiology at McGill, explained that BCG vaccination can cause false positives in the skin test that's routinely used to screen for latent TB. "As a clinician, if you're trying to interpret the skin test in a foreign-born person, you're going to want to know when the BCG vaccination was given back home and how many times it has been given. The Atlas provides this information and can help doctors decide on when to use the newly available blood tests for TB that are not affected by BCG vaccination," she added.

"I am pleased that the Public Health Agency of Canada (PHAC) could play a part in such an important project," said Dr. David Butler-Jones, Canada's Chief Public Health Officer and the head of PHAC, which provided funding for this project. "The BCG World Atlas will be a vital resource for practitioners across Canada, one that will help us prevent and control the spread of TB here at home."

The Atlas project began in 2007 with the compilation of detailed information on past and present BCG vaccination policies on as many countries as possible. The data were assembled through respondent-completed questionnaires, published papers, reports, government policy documents and data available from the World Health Organization Vaccine Preventable Diseases Monitoring System. The beta version of the site went live in 2008 and over the past year more than 6,000 visits

have been recorded with a steady increase in traffic over time. The Atlas is constantly being updated and its authors welcome input from countries that are currently not covered.

More information: www.plosmedicine.org/article/info%3Adoi%2F10.1371%2Fjournal.pmed.1001012

Provided by McGill University