

MEDIA FACT SHEET - TUBERCULOSIS

What is Tuberculosis (TB)?

- TB is an infectious disease caused by a germ called the *Tubercle Bacillus*.

What are the symptoms and signs of TB?

- Important symptoms include: coughing for more than 2-3 weeks; producing sputum (phlegm) when you cough; weight loss.
- Other symptoms can include chest pain, bloodstained sputum (phlegm), fever and night-sweats.

TB Statistics

- In 2005, there were 8.8 million new cases of tuberculosis (TB) and 1.6 million people died from TB, equal to an estimated 4,400 deaths a day.
- Someone in the world is newly infected with TB bacilli every second.
- Overall, one-third of the world's population is currently infected with the TB bacillus.
- 5-10% of people who are infected with TB bacilli (but who are not infected with HIV) become sick or infectious at some time during their life. People with HIV and TB infection are much more likely to develop TB.

TB in Canada

- To date, incidence of TB in Canada is low at 1,600 new cases reported every year.
- Several cases of **extensively drug-resistant TB (XDR-TB)** cases were reported in Toronto in January 2007. The cases reported arose in people who contracted the disease while travelling outside the country.
- The Public Health Agency of Canada currently doesn't know the scope of the problem in this country. The last time Canadian TB statistics were gathered, the provinces and territories were not asked to report XDR TB cases. The TB statistics for 2006 -- which will be reported sometime in 2007 -- will include XDR-TB figures.

Multi-drug-resistant TB (MDR-TB) and NEW **extensively drug-resistant TB (XDR-TB)**

- 1 in 10 cases of TB are resistant to some first-line drugs and are labelled multi-drug resistant or MDR-TB. The treatment for multi-drug resistant or MDR-TB cases uses second-line drugs, which are not as effective and must be taken for a year or more. Second-line drugs have more toxic side effects than first-line drugs and are much more expensive.
- In October 2006, the World Health Organisation established a definition of XDR-TB based on levels of drug resistance. TB which is resistant to both first- and second-line drugs, is called extensively drug resistant or XDR-TB. There are few treatment options for such cases.
- The world first heard about extensively drug-resistant TB, or XDR-TB, at the International AIDS Symposium in Toronto in August 2006 where a report on 52 such cases was given. 51 died within a month of being tested, including health care workers who were infected while treating XDR-TB patients.
- At the February 2007 Conference on Retroviruses and Opportunistic Infections in Los Angeles, Dr. Paul Nunn of the World Health Organisation estimated that the spread of XDR-TB is currently 27,000 new cases per year, resulting in 16,000 deaths. Most cases are in people who also have HIV infection.

- XDR-TB does not appear to spread easily, but it does represent a threat to both patients and health care workers who are HIV positive.
- XDR-TB cases are already being found in Canada. 2006 will be the first year for which Canada will be reporting statistics related to XDR-TB.

Who develops extensively drug-resistant TB

- There are two ways for a person to develop MDR-TB or XDR-TB.
 - a. One way is by poor treatment. If a case of ordinary TB is treated inappropriately or if the full course of antibiotics is not completed, TB can develop a resistance to the drugs that were used.
 - b. A second way is by being infected by someone who has an active case of MDR-TB or XDR-TB.
- The TB germ does not respect national or provincial borders. TB travels into Canada as people travel back and forth to high incidence countries. In 2005, 63% of all new TB cases in Canada occurred in people born outside of Canada.

How does it spread?

- Someone with infectious TB can spread the disease by coughing, sneezing, or simply talking, as this propels TB germs into the air. A person only needs to breathe in a small number of these germs to become infected (although only a small proportion of people will develop TB disease). Sometimes the bacteria are already drug resistant if they come from a person who already has drug-resistant TB.
- Left untreated, each person with active TB disease will infect on average between 10 and 15 people every year. However, people infected with TB bacilli will not necessarily become sick with the disease. The immune system "walls off" the TB bacilli which, protected by a thick waxy coat, can lie dormant for years. When someone's immune system is weakened, the chances of becoming sick are greater.

Standard TB Treatment and Cure

- According to Kevin Elwood, Director of TB Control for BC, and Lung Association Medical Advisory Board member, "Half of TB patients worldwide do not have access to proper treatments."
- Taking a combination of drugs for six months can cure most of the cases of TB in the world. These drugs are called the first-line drugs and there are only four of them.
- The average treatment cost for a case of drug-responsive TB in Canada is about \$20,000. Just one case of drug resistant TB could cost the province between \$500,000 and \$1 million, which is roughly an entire year's budget for the TB control program.

TB Control and Prevention in Canada

- Scott McDonald, Executive Director of the BC Lung Association says, "TB resistance to drugs results largely from poorly managed care and control of the disease. The best defence is a first-class program, which provides high quality detection, treatment and prevention of ordinary TB. This includes identifying and testing all persons who are at risk because of their contact with an active case of TB. Luckily, in British Columbia, we are very fortunate to have one of the best programs in Canada operating right here."
- "The only prevention of MDR- and XDR-TB is a better drug delivery program, one that ensures patients take every dose of all the prescribed drugs so that they complete prescribed treatment," added Dr. Elwood.

TB Control and Prevention - Globally

- March 24, 2007 marks World TB Day. This year's theme is TB Anywhere is TB Everywhere. Internationally, Canada must continue its support of the global fund for AIDS, TB and Malaria, and must continue to support research into the development of new tools to fight TB, since our current treatment options are no match for XDR-TB. Canada must also help other countries to control TB. Canada has a wealth of TB experts.
- We need funding to keep Canadian TB experts engaged in global TB control, because TB anywhere is TB everywhere!