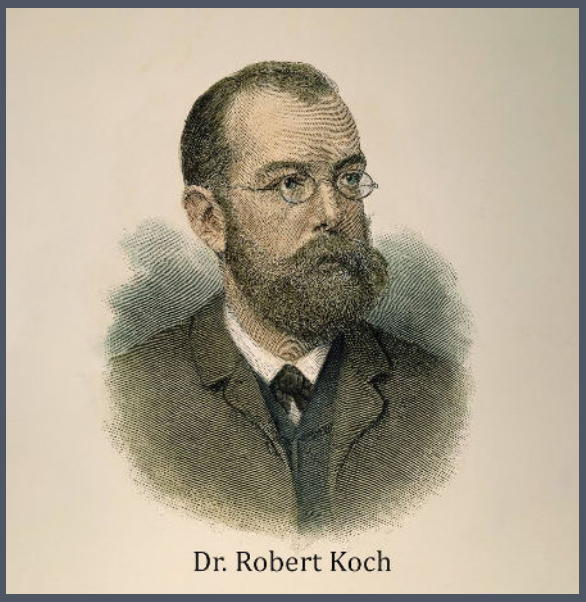


Dr. Robert Koch

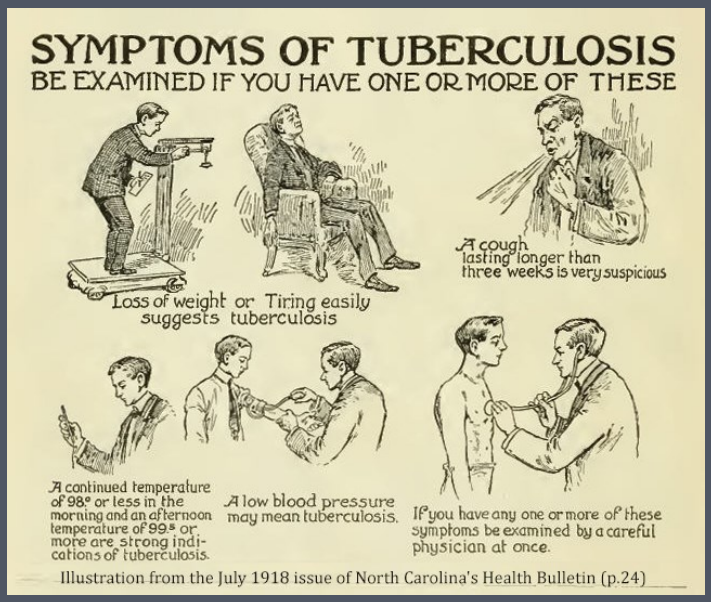


Illustration from the July 1918 issue of North Carolina's Health Bulletin (p.24)

WORLD TUBERCULOSIS DAY

On **24th of March** 1882, German physician Dr. Robert Koch announced the discovery of *Mycobacterium tuberculosis*, the bacterium that causes tuberculosis (TB). At the time, TB was responsible for the death of one out of every seven people living in the United States and Europe. The discovery of this pathogen was the most significant step taken towards the control and elimination of this deadly disease. A century later, the date was designated as the World TB Day and is commemorated every year to educate the public about the burden of TB around the world and take collective action to eliminate it.

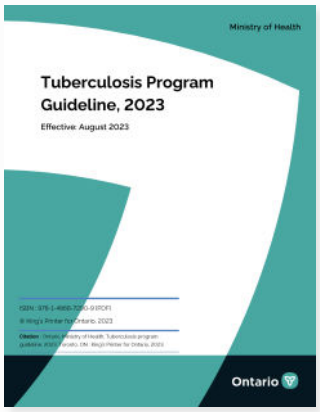
M. tuberculosis has been present in the human population since antiquity, with first historical records of TB dating back to a few thousand years ago, albeit with different names. In ancient Greece, the disease was referred to as “phthisis”, while in ancient Rome as “tabes”. In the 1700s, it was known as the “white plague” due to the paleness that was caused in the victims as they slowly wasted away in the pre-antibiotic era. In the 19th century, TB was epidemic in Europe and was the cause of more deaths than any other disease in industrialized countries. The term “tuberculosis” was coined in 1834 but the illness was more commonly known as disease of “consumption” during this period because the condition appeared to consume the affected person through substantial weight loss and thinning.

The disease and the symptoms were even romanticized for its “consumptive aesthetic” during the mid-1800s that was reflected in fashion, sculpture, literature and fine art at the time. Some, as the expressionist painter Edvard Munch, used it as a source of catharsis. A few years before painting *The Scream*, Munch painted *The Sick Child* (1885-1886), depicting the illness of his elder sister who died of TB when he was 14. His mother died too of the disease. Classification of TB has improved since then. Today, we refer to TB disease as either pulmonary TB, which is most common and affects the lungs, and extrapulmonary TB that affects other sites including lymph nodes, urogenital tract, bones & joints,

and the nervous system. A person could also have a TB infection or TBI (also referred to as latent TB infection or LTBI), which is when the bacteria present in the body are in dormant state and do not make you sick. People with TBI are not infectious and *cannot* spread TB to others. However, without treatment for TBI, about 5-10% of infected persons will develop TB disease at some time in their lives. According to the World Health Organization (WHO), nearly 10 million people worldwide fall ill with TB every year. Despite being a preventable and curable disease, a total of 1.3 million people died from TB in 2022, and was the world's second deadliest infectious disease after COVID-19 in that year.

TB is a highly contagious **airborne** infectious disease that spreads through air from person to person. It spreads when someone with the illness coughs, sneezes, or speaks, and another person breathes in the aerosolized droplets with the germs, entering the lungs and becoming infected. TB can be infectious when the bacteria are present in the lungs and the throat but is usually not when present in other sites. It spreads through prolonged close contact, and family members or individuals in the same household sharing the same airspace with a TB patient are at greatest risk.

A vaccine called Bacille Calmette-Guérin (BCG) vaccine was developed against TB in 1921 and is still given to infants and young children in many low and middle-income countries where TB is prevalent. However, due to the low risk of infection in the region and limited vaccine efficacy, BCG is generally not recommended in North America as part of routine immunization. In Canada, the vaccine is provided only to selected groups of people who may have high rates of TB such as newborns and infants living in Indigenous communities.



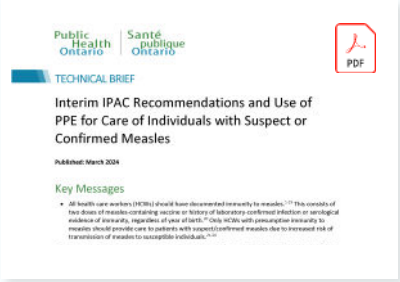
Effective treatment for TB wasn't available until the discovery of antibiotics, specifically streptomycin in 1943, which was a major breakthrough in treating TB. Therapeutics are available to treat both active TB disease and latent TB infection, and have been around for decades now, although the treatment regimen for them slightly differ. TB can also be multi-drug resistant (MDR-TB) when the bacteria are resistant to at least isoniazid and rifampin, the two most potent TB drugs available. Resistance to the anti-TB drugs can occur when the drugs are misused or mismanaged, such as when patients do not complete their full course of treatment.

WHO, in collaboration with multiple other agencies around the globe, initiated the "End TB Strategy" in 2014 that aims to reduce the burden of TB on the world's most vulnerable populations. The program aims for, among other things, early diagnosis and screening of high-risk groups, treatment of all patients with TB, preventative treatment and vaccination, and intensified research and innovation of novel therapeutics. As we acknowledge World TB Day, let us unite our efforts to raise awareness of the social determinants of tuberculosis, promote prevention measures, and advocate for equitable access to TB diagnosis and treatment to help eradicate this ancient but preventable disease.

Sources: www.cdc.gov[1] | www.cdc.gov[2] | www.who.int[1] | www.who.int[2] | www.simcoemuskokahealth.org[1] | www.simcoemuskokahealth.org[2] | www.canada.ca | www.statista.com | asm.org | blog.sciencemuseum.org.uk

NEW MEASLES RESOURCES FROM PHO

Public Health Ontario released two new resources on measles, and updated a previous document on information for health care providers in mid-March. The two new resources include epidemiological summary of measles in Ontario as of March 14, 2024, and interim IPAC recommendations and use of personal protective equipment (PPE) when providing care to a patient/resident/client who is a suspect or confirmed case of measles. One of the key messages in the interim guidance is that all health care workers (HCWs) should wear a fit-tested, seal-checked **N95 respirator** when entering the room and/or caring for an individual with suspect or confirmed case of measles, *regardless* of their presumptive immunity against measles. For complete information and context, please refer to these resources posted on PHO's website, or by clicking on the links below.



SECTOR-SPECIFIC IPAC HUB NETWORKING MEETINGS

Apart from our monthly Community of Practice (CoP) virtual meetings that are scheduled on every third Thursday of the month, the RVH IPAC Hub also hosts sector-specific, networking meetings every month for long-term care homes (LTCHs), retirement homes (RHs), and other congregate living settings (CLS). These meetings provide a platform for the IPAC leads to connect with their colleagues in the same sector, exchange ideas, share insights, and bring up questions related to IPAC best practices and recommendations specific for their sector. There is no formal agenda for these meetings and it runs for 30 mins or less. The networking meeting for IPAC leads in **LTCHs** is scheduled for every first Thursday of the month at **2:30 pm EST**, while the meeting for other **CLS and RHs** is scheduled for every second Thursday of the month at **11:00 am and 12:00 pm EST respectively**. To receive the series meeting invite for your sector, please provide your contact information using this Google form.

THOUGHTS ON THIS MONTH'S NEWSLETTER?