



History of the Saskatchewan Disease Control Laboratory

The Beginning

In the late 19th century, the population of the North West Territories (NWT), particularly in the area that would become Saskatchewan, began to grow rapidly. Because of the primitive, unsanitary conditions of the “shack towns” – a feature of rapid settlement – and railway construction camps, contagious diseases (typhoid fever, tuberculosis, diphtheria, smallpox, pneumonia, scarlet fever) were also on the rise. By 1904, the “members of the College of Physicians and Surgeons of the NWT were so concerned about epidemics that they petitioned the government to appoint a bacteriologist and pathologist to establish a diagnostic laboratory. This pressure, coupled with the recognized need of technical laboratory services for such things as seed testing, soil analysis, plant diseases and the identification of minerals, resulted in a prompt response from the Territorial Government.”

From 80 Years of Service: A History of the Provincial Laboratories, June 1986

Dr. George A. Charlton was appointed on January 1, 1905 to establish and equip a laboratory in a wing of the Dewdney Avenue Legislative Building in Regina.

On August 1, 1905, Dr. Charlton and the lab were transferred from the Territorial Government to the newly formed Government of Saskatchewan.

Lab Locations

- NWT/Saskatchewan Legislative Building, Dewdney Avenue, 1905 -1911
- Top floor, Saskatchewan Legislative Building, Legislative Drive, 1911 - 1948
- Second Floor, Grey Nuns Hospital, 1948 - 1958
- 3211 Albert Street, 1958 - 2010
- New Lab Building, Innovation Place, adjacent to the University of Regina, 2010

Historical Facts

- In 1906, Dr. Charlton began securing a safe drinking water supply for Saskatoon where there had been numerous cases of typhoid fever. He recommended the drilling of a well some distance from the river bank where the water could be purified by a natural filtration system. The number of water samples submitted to the Lab increased year after year as other cities, towns, villages and farmsteads sought to improve the quality of their drinking water.
- In 1918, Dr. Frances McGill was appointed Bacteriologist and set up the first Wassermann tests for syphilis to aid in venereal disease control. Dr. McGill was one of the first women pathologists in Canada, and she was called on by the R.C.M.P. to perform autopsies in hundreds of suspected criminal cases. On one trip to the far North where a trapper had died in his cabin, Dr. McGill travelled with a mountie and coroner by train, plane and dog team to reach the isolated spot. Once there, they removed the cabin door so Dr. McGill could use it as an autopsy table.
- Also in 1918, at the height of the great influenza pandemic, the Lab rose to the challenge, and remarkably produced sufficient vaccine for 64,000 people, even though, at this early stage of microbiology, the influenza virus had not been discovered. Of the 16,174 vaccine recipients tracked by physicians, only 18 died; where cases did develop, they were much milder and of shorter duration.
- Enteric fever (i.e. typhoid fever) became an increasing concern during WWII, with new strains being introduced as a result of troop movements around the world. To address this, in 1943 the Lab introduced the Widal agglutination test for enteric fever to help with diagnosis and control.
- Also during WWII, hydrogen-filled balloons were sent to North America in the high altitude, high speed air currents. Many landed in Saskatchewan. The Department of National Defense required the Lab to investigate any Saskatchewan landings because it was feared the balloons might be armed with epidemic-producing organisms. (The balloons actually carried baskets with shells in them – the intention was that these would explode and cause random chaos. The National War Museum in Ottawa houses for public display one found in Saskatchewan).
- In 1962, the first universal Medical Care Insurance Plan in North America was introduced in Saskatchewan. The significance to the Lab was an increase in demand for tests as patients were no longer deterred by costs from going to see their doctor.
- In 1982, Canada recognized a new disease called Acquired Immune Deficiency Syndrome (AIDS). Initially, very few laboratories had the expertise to carry out serological screen tests or confirmatory tests, so Saskatchewan specimens were sent to Ottawa. In the fall of 1985, however, the Lab's chief microbiologist took a special screen and confirmatory testing course so that AIDS testing at the Lab could become routine.
- In 2003, Saskatchewan experienced human cases of a mosquito-borne disease, West Nile Virus. The Lab implemented specimen testing to aid in the timely tracking of, and response to, this new disease.
- In 2009, during the H1N1 influenza pandemic, Saskatchewan undertook the largest provincial immunization campaign ever. The lab rose to the challenge and was key to the initial identification and ongoing testing and surveillance of the virus.