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Alberta Public Labs

A new lab services system for Alberta

- Diagnostic laboratory services are an integral part of the healthcare system. Lab results inform the majority of patient care decisions made every day by clinicians such as diagnosis, whether a patient should be hospitalized and what treatments are needed, including surgery.
- High-quality and responsive laboratory services are key to ensuring Albertans achieve the best health outcomes.
- AHS is building on the success of Calgary Lab Services in Calgary and creating an expanded provincial organization – Alberta Public Labs – which will deliver all laboratory services for Albertan patients. Alberta Public Labs will be a wholly-owned subsidiary of AHS and fully integrated to support patients receiving care in the community and through AHS programs and facilities.
- As part of the overall laboratory services strategy, AHS is working with the Government of Alberta to develop a reference diagnostic laboratory system unlike any other in Canada. The design of the system has benefited from input and advice from global laboratory leaders from the Mayo Clinic in Rochester, Minn.. Other Canadian provinces are also moving towards a provincialized model of lab services, including B.C., Newfoundland and Nova Scotia.
- In southern Alberta, laboratory space is also being developed as part of the new Calgary Cancer Centre.

Overview:

Modern and efficient laboratory services are critical to building a world-class healthcare system focused on patient-centred care.

Lab testing informs about 70 per cent of all medical decisions. More than 75 million lab tests are done each year in Alberta, using 4,600 pieces of equipment. It's not just blood tests either: Many new drugs require specialized lab testing to match the most appropriate drug to the patient and to measure its success.

Volumes and types of lab tests have grown significantly over the past decade. The need for new laboratory diagnostics to support patients receiving treatment for cancer and other chronic diseases, genetic diseases and infectious disease is outpacing the system's ability to respond.

To be successful and ensure high-quality care, modern laboratory services need to be able to adopt and integrate rapid technological improvements, intense innovation and new testing

methods while ensuring financial sustainability through automation and enabling information technology.

In its 2016 review of the laboratory services system, the Health Quality Council of Alberta (HQCA) made recommendations on optimal provincial laboratory services. This included a provincial plan for integrated laboratory services, one laboratory information system, new lab infrastructure to meet urgent needs in Edmonton and a robust stakeholder engagement process.

An improved lab services model

Historically, laboratory services in Alberta have been delivered by multiple entities. This fragmentation of services has struggled to find efficiencies and the ability to integrate new technology, ensuring benefit for all Albertans.

Today, a patient with a cancer diagnosis may be a candidate for a new designer drug that can significantly improve their chances of survival. The lab testing which supports these treatment decisions is a rapidly growing area of the lab sector and needs to be provincially streamlined and accessible for all patients across the province.

New technologies that can determine genetic conditions in children need to be adopted and implemented as part of standardized care pathways in Alberta. Currently millions of dollars of testing is done outside the province, partly due to a lack of technology but also due to uncoordinated efforts because of the fragmented lab system. The new provincial lab structure will address those shortfalls and provide new testing abilities.

AHS is building on the historical success of Calgary Laboratory Services and creating an expanded laboratory subsidiary, providing an unprecedented opportunity to improve the delivery, quality and financial sustainability of diagnostic lab services for patients across Alberta.

By improving integration of laboratory medical/scientific staff across the province under one organization, AHS can continue to drive laboratory best practice, quality and access to lab consultation, as well as ensure regional centres are receiving consistent support when required.

Along with the creation of Alberta Public Labs, AHS is also ensuring the new organization, which will bring together all the laboratories across the province, will have access to a new single laboratory information system through the Connect Care program. This will streamline processes, reduce variation and unnecessary duplication in testing, and improve healthcare provider and patient access to laboratory information.

Efficiency and innovation

Alberta Public Labs will bring together into one organization lab services currently provided by Alberta Health Services (which includes the Provincial Laboratory (ProvLab) for Public Health), Calgary Lab Services, Covenant Health, Lamont Health Care Centre and DynaLIFE (at the end of its current contract in 2022). Alberta Public Labs will have a single governance board that will oversee the provision of all lab services in Alberta.

Alberta Public Labs will improve patient care as well as streamline lab decisions and services, increase cost-savings and maximize economies of scale. Savings from efficiencies in the new subsidiary are expected to climb from \$2 million in 2018-19 to \$14 million in 2022-23.

Any savings or money raised through research and development, and third-party clinical contracts will go back into the system to improve patient care. The move to a new subsidiary will be cost neutral for Albertans. Due to efficiencies in testing, the cost per lab test will decrease within three to five years. This will offset the anticipated increase in test volumes over that time.

Improved outcomes for Albertans

A provincial lab system is a cost-effective, efficient model to ensure high-quality and effective services to all patients in Alberta.

Alberta Public Labs will be tightly integrated with clinicians throughout AHS as well as those practising in the community. Patients across Alberta will be assured the same access to lab diagnostics that plays a key role in informing their care.

Expanded ProvLab facilities will be part of the new Edmonton hub lab facility, and will ensure public health officials and the Chief Medical Officer of Health have the best data possible in managing the needs of our population.

Besides diagnostic testing, the organization will bring together the various corporate support functions (payroll, supply chain management, human resources to name a few) critical to success and be able to leverage the expertise in AHS, overall creating a more efficient use of resources. This plan will advance excellence in lab service delivery, create a sustainable model for labs, help diversify Alberta's economy and promote local research.

Quick Facts

- Laboratory services are provided by almost 6,300 lab staff across five organizations, which will consolidate to become Alberta Public Labs, a wholly-owned subsidiary of AHS.
- The five organizations are AHS, CLS, DynaLIFE, Covenant Health and Lamont Healthcare.
- 76 million lab tests were carried out last year.
- 2.3 million patients are served annually.
- About two-thirds of lab testing (about 1.9 million) is performed in the community – the rest are in healthcare facilities.
- There are 212 lab collection locations across the province (52 in the North Zone, 45 in Edmonton Zone, 46 in Central Zone, 39 in Calgary Zone and 30 in the South Zone). Specimens are transported as needed to a laboratory facility for processing.
- There are 133 laboratory facilities across the province (37 in the North Zone, 20 in the Edmonton Zone, 37 in the Central Zone, 21 in the Calgary Zone, 18 in the South Zone).
- The combined annual budget for all lab services is about \$758 million.
- Lab testing occurs within discipline-specific areas. The major areas, and some common test ordered are:
 - *Hematology*: hemoglobin, white blood cell and platelet counts.
 - *Coagulation*: a subspecialty area of hematology assessing patients for bleeding disorders.
 - *Chemistry*: liver and kidney function tests, hemoglobin A1C tests for diabetes patients.
 - *Microbiology and virology*: urine culture for bladder infection, swabs for influenza, testing for infectious outbreaks (i.e. food poisoning).
 - *Transfusion medicine*: Testing related to blood and blood product transfusion.
 - *HLA (human leukocyte antigen)*: testing for transplantation compatibility of donors and recipients.
 - *Anatomic pathology*: analysis of skin biopsies, or analysis of tumour growths.
 - *Cytopathology*: a subspecialty area of anatomic pathology that includes pap smears and small needle biopsies of tumours.
 - *Genetics*: testing high risk women for the presence of a hereditary breast cancer gene, and newborn metabolic screening.
 - *Toxicology*: tests for drugs.