

Alberta Public Laboratories 2018-19 Annual Report

Delivering the Transformative Power of Laboratory
Medicine to Improve Health for all Albertans

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Message from Board and Chief Executive Officer

It is with pleasure that we present the inaugural annual report for Alberta Public Laboratories (APL) and with pride that we report having made great strides towards the stabilization and strengthening of our entire, now provincial, organization.

Change and transformation are two words that aptly describe the past year and the reality of the laboratory sector in Alberta. Over the past 12 months, the Alberta laboratory system has moved through a seismic change with the formation of APL and the transition of laboratory staff from four legacy organizations into one organization — thereby setting the stage to transform laboratory medicine in Alberta.

The establishment of an integrated laboratory system speaks to the keystone function that laboratory medicine holds within the broader healthcare system. As much as 70 per cent of the total delivery cost of healthcare is driven by laboratory medicine even though the direct cost associated with diagnostic testing is less than four per cent of the total health system budget. It has been recognized that the laboratory sector is perhaps the most rapidly evolving and changing element of the health system, with significant demands and pressures.

The creation of APL is an innovative response to support the population health outcomes and financial viability of healthcare in Alberta.

At the heart of the laboratory system are engaged professionals who believe in the transformative power of laboratory medicine to improve health for Albertans. The rapid transition plans of the past year at times presented challenges for APL staff but they overcame them to remain engaged and committed to the patients, their communities, and all Albertans. The teamwork has been outstanding and, in collaboration, they're making a difference to patient care in Alberta. Thank you to our staff for their perseverance and support.

We believe in the transformative power of laboratory medicine to improve health for all Albertans. Together, we can look forward to the building of a world-class integrated laboratory system.

Dr. D. Lorne Tyrrell
Board Chair, Alberta Public Laboratories

Craig Ivany
Chief Executive Officer, Alberta Public Laboratories

This annual report covers the time period of Sept. 24, 2018 to March 31, 2019. It highlights transition activities, successes and the next steps for APL.

The Health System

Ministry of Health

The Ministry of Health sets policy and direction to achieve a sustainable and accountable health system to promote and protect the health of Albertans. It is the government department responsible for ensuring all health services in the province are properly conducted in the public interest.

Alberta Health Services (AHS)

AHS is the single health authority for the province of Alberta. It employs more than 102,700 employees and delivers health services, on behalf of the Ministry of Health, through more than 850 facilities and services. It is Canada's first and largest province-wide, fully-integrated healthcare system and is responsible for delivering health services to more than 4.3 million people living in Alberta.

Expected population growth sees Alberta's population reaching nearly five million in 2028, and nearly six million by 2042. Continuous efforts by the Ministry of Health, AHS and all its partners are required to ensure high-quality accessible services to all Albertans.

Alberta Public Laboratories (APL)

Diagnostic laboratory results inform patient care decisions across the health care continuum. It is estimated that 70 per cent of downstream medical decisions are based on laboratory tests results (Hallworth, 2011). APL and its predecessor organizations serve a critical role in supporting AHS through the delivery of high-quality, safe and timely services to Albertans.

Ongoing improvements are necessary to ensure health services in Alberta remain sustainable in the future. This means resources need to be optimized and directed to areas of need. The Ministry of Health and AHS are supporting strategies to improve efficiencies through clinical effectiveness, appropriateness of care and operational best practice.

In the fall of 2018, the Ministry of Health decided, following a report on laboratory services by the Health Quality Council of Alberta (HQCA) and support of AHS, to transition laboratory services into an integrated laboratory organization. The integrated organization, named Alberta Public Laboratories (APL), is a wholly-owned subsidiary of AHS, consolidating the services provided by Calgary Laboratory Services (CLS), Alberta Health Services (AHS), Covenant Health, and Lamont Health Care Centre.

An Integrated Model

This APL model brings together diagnostic services, reporting systems and research and improvement activities. It allows APL to be strategic in our efforts and streamline processes to provide patients and providers with more timely and consistent results. Integration will result in improved quality of services, improved patient and system outcomes, increased financial sustainability, improved research and innovation capacity and knowledge translation, and better value for every Albertan.

Who We Are

APL is responsible for laboratory tests across Alberta. We provide services including hospital and community laboratories, mobile collections, cardiac diagnostic services, on-call services, reference laboratories, public health laboratories, patient service centres and transportation services. The goal of laboratory medicine is to deliver information about the health of patients through specimen collection, testing and analysis to guide diagnosis and treatment. APL supports disease prevention and overall public health through monitoring and prevention programs. The expertise of multiple medical disciplines is required to meet the needs of testing.

As the largest provider of laboratory medicine and pathology services in the province of Alberta, APL supports research and development in specialized scientific areas that affect patient care, advance treatment and enable diagnosis of disease. APL has extensive clinical expertise in laboratory medicine and pathology, which is sought out by health industry partners and academic collaborators within Alberta, but also across the world, for translational research initiatives and in the development of novel diagnostics.

Mission, Vision and Values

Mission

We believe in the transformative power of laboratory medicine to improve health for all Albertans.

Vision

Health informed by world-class integrated laboratory diagnostics.

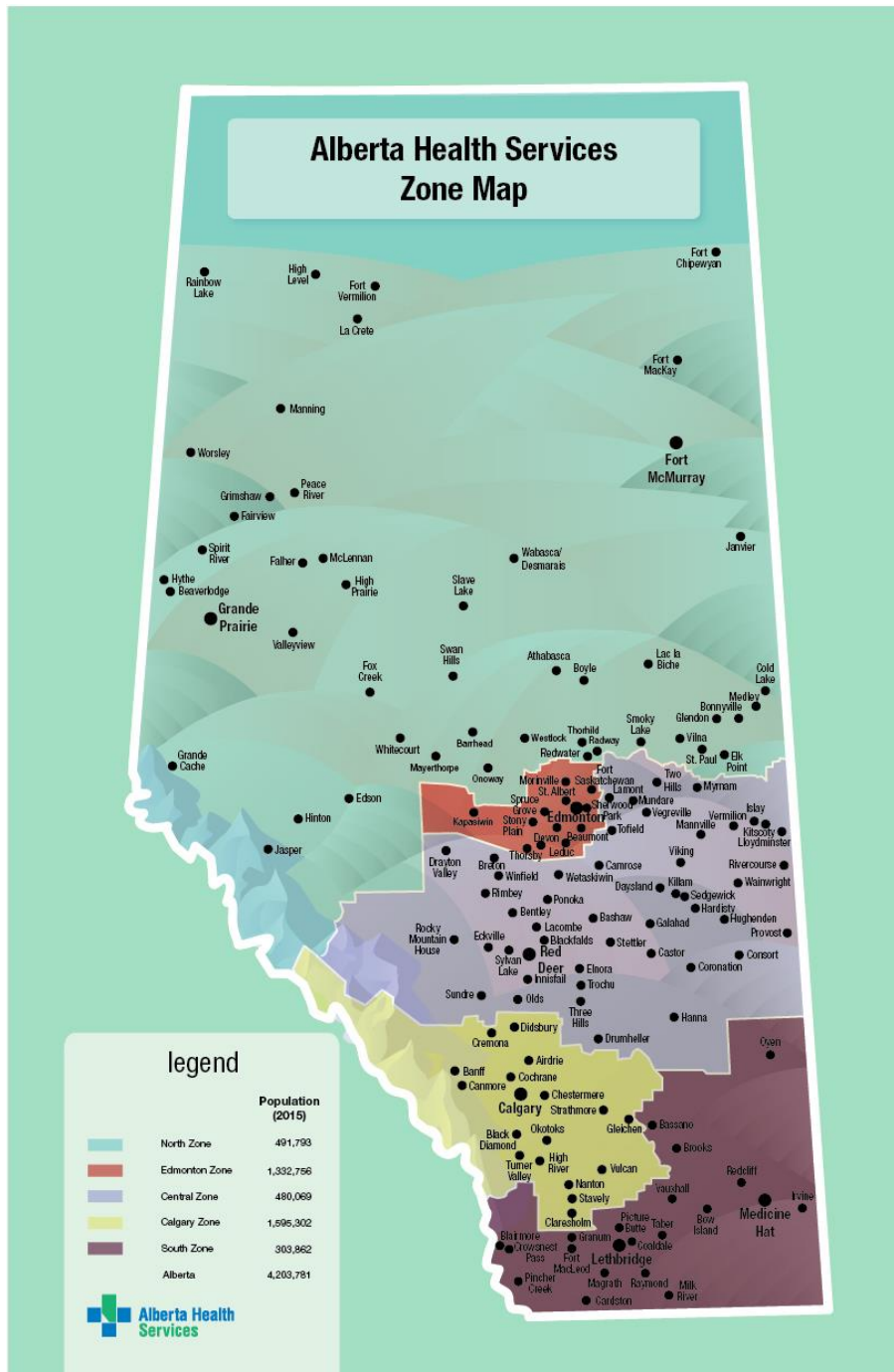
Values

Kindness
Inclusion
Innovation
Agility
Accuracy

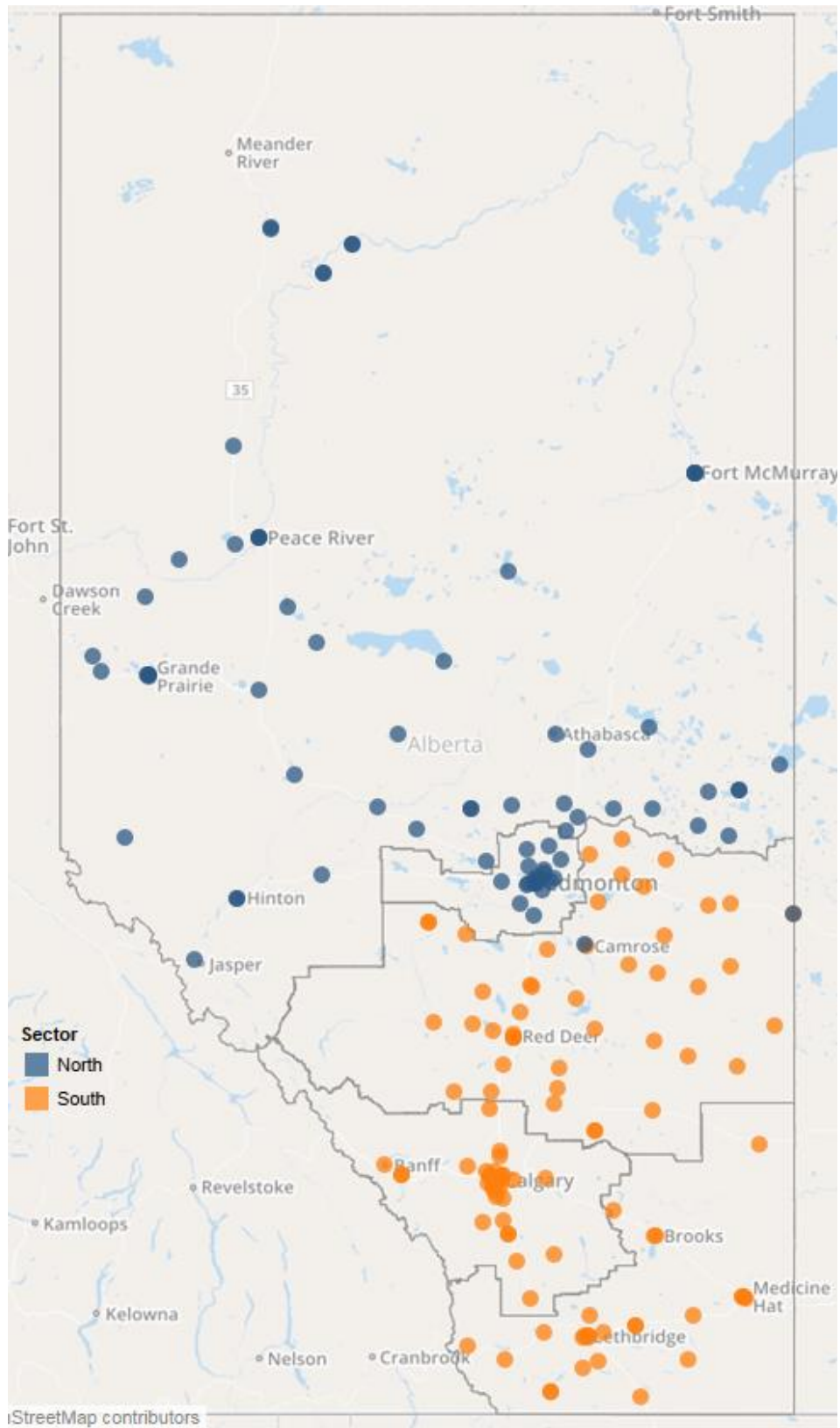
Laboratory Infrastructure

AHS is organized into five geographic zones: South, Calgary, Central, Edmonton and North. APL is composed of two sectors — North and South — with the further identification of city, urban and rural locations. There are currently 150 laboratory testing sites and 191 patient collection facilities across Alberta that include primary care clinics, physician offices, diagnostic centres, and patient service centres.

AHS Zone Map



APL Sector Map



Hub and Spoke

APL is structured as a hub-and-spoke model, with the North Hub in Edmonton and the South Hub in Calgary. The North and South Medical Directors, along with their operational administrative dyad partners, are responsible for the clinical diagnostic testing in their respective sectors. This responsibility includes oversight and support for satellite spoke laboratories. The laboratory system is designed to offer on-site laboratory testing to ensure urgent acute care needs are met. Smaller rural hospitals refer non-urgent and more complex testing to their regional hospitals or the referral laboratories located in Calgary or Edmonton.

Reference and Contract Laboratories

The complexity and scope of diagnostic testing required to support patient care continues to grow. Emerging technology and an increasing focus on precision health and companion diagnostics will further increase the complexity and diversity of testing. Despite APL being an integrated laboratory that performs a wide scope of testing in-house, it's neither feasible nor practical that all testing that may be requested by clinicians could be performed in-house. An extensive network of specialized reference laboratories across Canada and the United States is leveraged to ensure that testing required by clinicians will be available when not performed in-house.

DynaLIFE is the primary laboratory system partner engaged by AHS to deliver services to the health system. DynaLIFE provides community and high-volume, low-complexity laboratory services to Edmonton, North Zone and Central Zone.

Public Health Laboratory

The role of the Public Health Laboratory in public health surveillance and the identification and confirmation of disease outbreaks is critically linked to the legislated responsibilities of Alberta's Chief Medical Officer of Health and duties of the Medical Officers of Health prescribed in the Public Health Act. Information provided by Public Health Laboratory informs public health policy and activates responses to protect Albertans against the spread of communicable diseases (such as measles, influenza and syphilis) and other health hazards (including food borne illnesses like salmonella or E.coli, Ebola and agents of bioterrorism).

The following distinct public health core functions of Public Health Laboratory are described herein:

- Environmental Microbiology and Food Microbiology
- Public Health Surveillance
- Communicable Disease Outbreak Detection and Investigation
- Public Health Emergency Response
- Biosafety, Bio-hazard Containment and Response
- Reference Laboratory for Specialized Testing
- Quality Assurance

Public Health Laboratory is an essential component within APL. While continuing its mission to deliver public health and specialized microbiology for Alberta, Public Health Laboratory facilitates a robust public health surveillance program for the province through standardization and real-time flow of information from different sections within the APL.

It also has a key role in facilitating deeper integration of other Alberta laboratories into the public health sphere, such as by providing standardized testing methods and public health expertise, training, human resources, facilitating communicable disease data management and public health research and maintaining collaborative relationships with national and international public health partners.

Genetics and Genomics (G&G)

G&G (formerly Genetic Laboratory Services) is a provincial program operating at locations in Calgary and Edmonton. It offers highly specialized testing for a significant number of hereditary genetic conditions, including the provincial Newborn Metabolic Screening Program. This testing is often seen as the future of laboratory medicine and involves examining the DNA of patients.

Accountability

APL is mandated to provide laboratory services for AHS, Covenant Health, and Lamont Health Care Centre across the province. A services agreement between AHS and APL provides the authority to APL to deliver laboratory services and outlines the expectations for overall service delivery. An annual accountability letter is issued by AHS as the shareholder to the Board Chair and Chief Executive Officer (CEO) to provide guidance for shorter-term strategic and business plans, budget, and performance measures and reporting that are to align with AHS and the Ministry of Health objectives.

For this fiscal year (September 2018 to March 2019), APL's focus has been the development of its strategy and infrastructure to support the transition to a provincial delivery model while continuing to deliver high-quality services.

Shared Services

AHS and APL have worked collaboratively to identify key support services that could be provided by AHS, with APL benefiting from AHS' systems, processes and economies of scale.

A Shared Services Agreement (SSA) between APL and AHS became effective Jan. 1, 2019 and sets out the scope of services, accountabilities, service delivery expectations and key parameters for each of the service areas that AHS will provide to APL. Delivery of the services provided to APL under the SSA is monitored through a joint AHS and APL Contract Management Committee.

The established AHS-APL shared service delivery model aligns with and supports the objectives for a well-functioning shared service model:

- Considers the key principles of cost effectiveness, nimbleness, sustainability, quality, and outcomes-driven results.
- Allows APL to be autonomous, but also partner with AHS to harness the scale and scope of its infrastructure, intellectual property and economic capacity.
- Well-defined agreements with clear organizational accountability related to any shared service arrangement.

- Contributes to sustaining low overhead administrative costs. This includes obtaining neutral or improved ongoing costs by eliminating unnecessary duplication and redundancies of services.

Similar provisions of support services at Covenant Health and Lamont Health Care Centre are also in development.

Strategic Partners

APL has, and continues to develop, a number of key partnerships to support our operations. These include strong connections with Alberta's academic research institutions, including the University of Alberta and the University of Calgary, technical institutions including SAIT and NAIT, funding agencies, foundations, pharmaceuticals, diagnostics companies including global vendors and small to medium-sized local enterprises, and community partners. Through strong strategic partners, APL will be able to continue to leverage the support across Alberta to enable effective delivery of service and execution of its strategic plan.

Governance

Board and CEO

The new APL governance structure ensures representation from across the province and supports local decision making for both North and South sectors, while also allowing for a provincial response to continuous improvement and alignment with AHS priorities. A new CEO, Board Chair and Board Members commenced duties in September 2018.

Board Membership

Dr. D. Lorne Tyrrell
Dr. Phillip Gordon
Ida J. Goodreau
Barb Hambly
Dr. Deena Hinshaw (Ex-Officio)
Deb Rhodes (Ex-Officio)
Mauro Chies (Ex-Officio)
Andre Tremblay (Ex-Officio)

CEO

Craig Ivany

The APL Board is responsible for the governance of APL, working in partnership with the Ministry of Health, to ensure all Albertans have access to high-quality laboratory services across the province. The Board is directly accountable to AHS, which in turn is accountable to the Ministry of Health. Since September 2018, the Board has established a number of subcommittees and councils to assist in governing APL provincially.

Executive Leadership Team (ELT)

ELT is a standing committee composed of the senior executive leadership of APL. The purpose of this committee is to set the broad vision and strategic direction for the organization. The committee works closely with the APL Board, APL Executive Leadership Council and AHS leadership. To ensure the provision of high-quality, innovative and sustainable laboratory services, academics and research are aligned with our parent corporation, Alberta Health Services, to meet the needs of all Albertans.

Membership

President and Chief Executive Officer
Chief Medical Laboratory Officer
Chief Operating Officer
Chief Administrative Officer
Executive Director, People and Transformation

Executive Leadership Council (ELC)

ELC is a standing committee composed of the Executive Leadership Team and the Academic Chairs/Sector Medical Directors, Sector Associate Medical Directors and Executive Directors of the North and South Sectors. The purpose of this committee is to guide the delivery of laboratory services and make decisions on strategic and operational matters related to medical and technical operations of the laboratory.

Membership

Chief Executive Officer
Chief Medical Laboratory Officer
Chief Operating Officer
Chief Administrative Officer
Executive Director, People and Transformation
Executive Director, Operations, South Sector
Executive Director, Operations, North Sector
Medical Director/Academic Chair, South Sector
Medical Director/Academic Chair, North Sector
Associate Medical Directors

Discipline Councils

Discipline Councils were created to support the prioritization, coordination, standardization and optimization of clinical diagnostic testing across the province. These councils are led by experts in their discipline area and comprise medical, scientific, operational, and administrative stakeholders to ensure the appropriate ad hoc engagement of both internal and external stakeholders.

Discipline Councils

Anatomical Pathology
Biochemistry
Genetics | Genomics | Molecular Pathology
Hematopathology
Histocompatibility
Microbiology
Point of Care Testing (POCT)
Pre-Analytics
Transfusion Medicine (TM)

Our People

APL employs nearly 5,500 employees across Alberta. There are over 250 medical/scientific staff at APL, including employees, contractors or Geographic Full-Time (GFT) staff in partnership with the University of Alberta and the University of Calgary.

Our people are the heart of what we do. Our People strategy is fully integrated into APL's overarching business strategy and executed under the leadership of our People & Transformation team. We fundamentally believe that our people do work that matters, that they will continue to rise to an exceptional standard in laboratory medicine, and that for everyone to be able to contribute to the health of Albertans to their fullest potential, we must focus on building a culture in which we all feel safe, healthy, included and valued. We execute on this vision by attracting the best qualified candidates, supporting them through their careers with APL and providing ongoing personal development opportunities so that everyone is empowered to excel. At its heart, our People strategy focuses on ensuring proper human resources strategies and programs are in place to support our people as they deliver a world-class laboratory service for Albertans.

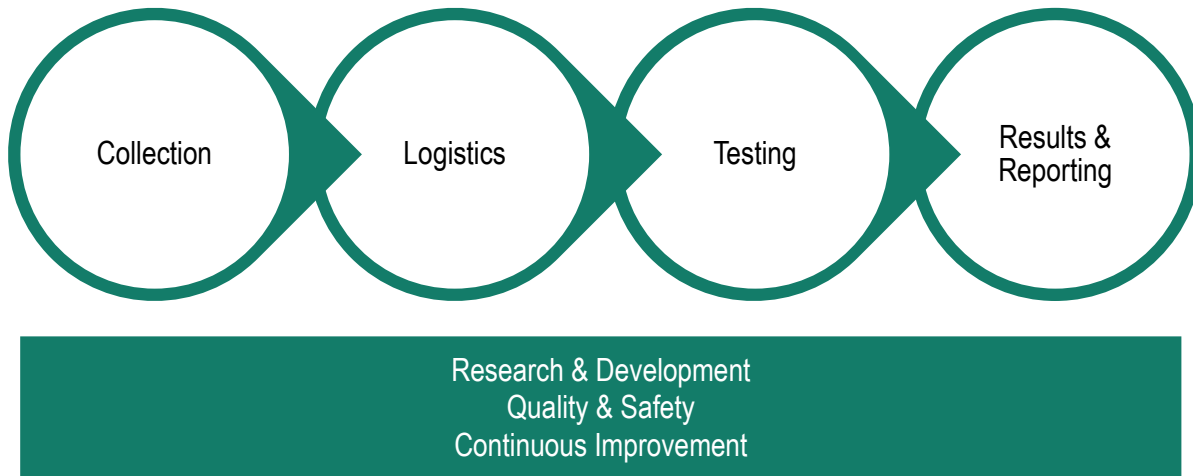
Our People focus in 2018 was largely on integrating and streamlining the numerous disparate workforce practices that came together in the creation of APL, identifying areas where best practices could be introduced to engage our people in our common goal of delivering appropriate health and healthcare across Alberta, and forging relationships with our various union, strategic, shared service and government partners.

What We Do

At APL, we lead healthcare innovation in laboratory medicine by continually seeking improvements in preventing, detecting and diagnosing, treating, and managing diseases or medical conditions. We research, develop, test and implement new personalized treatments and interventions supporting the provision of advanced health and healthcare to Albertans.

APL interfaces directly with patients by providing patient blood collection, logistics, testing and diagnostic services across Alberta. It includes all hospital laboratory services, community laboratory services, mobile collection services, electrocardiogram services, on-call services, and transportation services.

In addition, APL plays an increasing role in the appropriate stewardship of healthcare resource utilization, big data analysis, and quality improvement as a critical component of the learning health system.



Research and Development

Research and development is a foundational underpinning to all laboratory services by supporting vital research directions used to improve healthcare delivery to those patients that need it most. We provide support to the United States National Institutes of Health (NIH), Centre for Disease Control (CDC), and Canadian Institutes of Health (CIHR) research initiatives taking place in all major tertiary care centres in the province of Alberta. APL possesses unique, invaluable laboratory datasets that are used to study the patterns, presentation, progression and treatment outcomes of disease.

Clinical trials, research in basic laboratory sciences, and epidemiological studies are used to identify, refine and explore laboratory diagnostic scientific questions and support the translation of today's research into tomorrow's treatments.

Every year, APL has in excess of 1,700 active clinical scientific research protocols underway at various sites across the province of Alberta. We are a key partner in the development of future research initiatives in cancer care, and are a central critical component in the new Cancer Care Centre in Calgary. Not only do laboratory services touch all cancer-care diagnostic decisions, APL provides services, in collaboration with the cancer centres and pediatric hospitals, for cancer clinical trials that involve providing the latest care and targeted cancer treatments for Albertans.

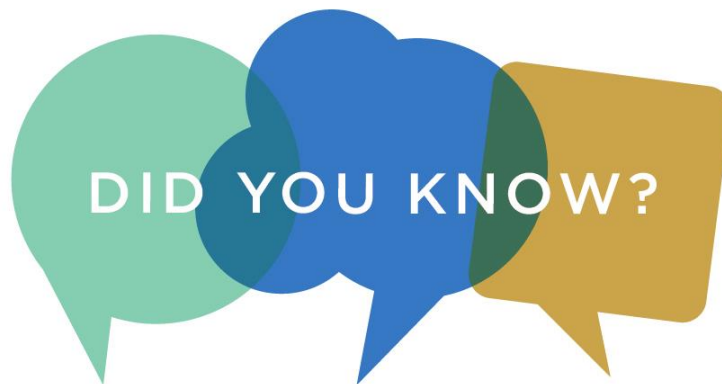
We are a key player in local, national and international research related to, but not limited to, non-communicable diseases such as hypertension, diabetes and vascular diseases such as stroke; the pathological progression of crippling conditions such as Alzheimer's, irritable bowel and chronic kidney disease; organ transplantation, identification of organisms at a genetic level that informs treatment for critically ill patients, mapping the appearance and prevalence of disease causing pathogens in the community, and identification of genetic markers playing a role in rare diseases in adults and children.

All of this research and knowledge is used to develop and refine diagnostics and detection methods that aid clinicians in making effective patient-treatment decisions. APL is committed to the development of novel diagnostic devices, laboratory biomarkers and next-generation technologies in pathology and laboratory medicine that will allow us to continue to deliver cutting-edge healthcare and advance Precision Medicine healthcare to Albertans.

Frequently, these developments happen through partnerships with pharmaceuticals and/or diagnostics companies as part the companion diagnostic development and regulatory approval pathway. In addition, APL is a critical partner for local small and medium-sized diagnostic companies, including those spun out from the University of Alberta and the University of Calgary. APL plays an increasing role in developing a diagnostic biotech industry in Alberta, thus contributing to economic diversification in Alberta.

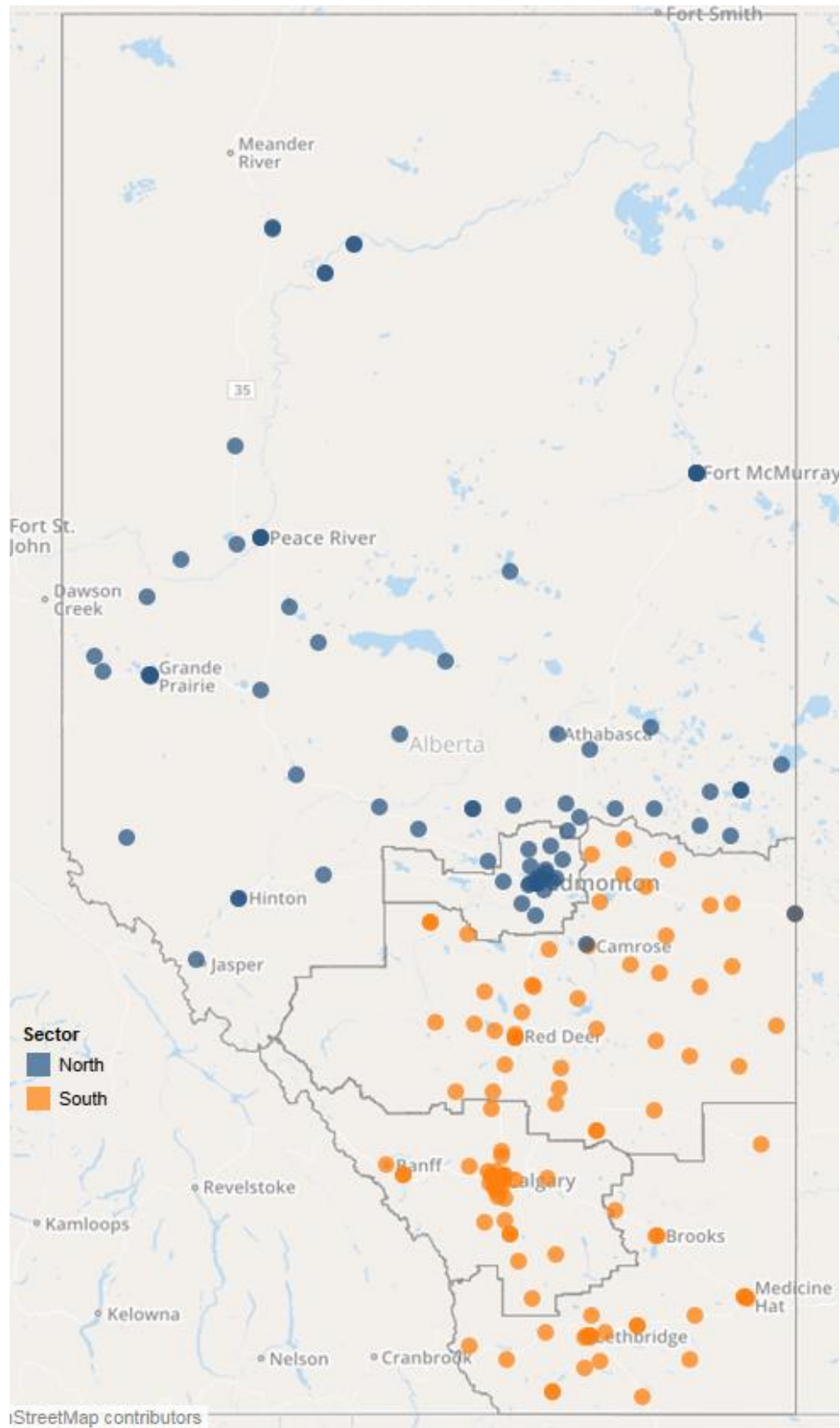
Collection

APL has 191 collection sites covering the province to ensure Albertans have access to laboratory testing. Specimens are collected and transported back to a laboratory for testing and analysis. APL has a strong logistics network to facilitate timely transport of specimens to ensure a patient-first service model.



**MORE THAN 78 MILLION LABORATORY
TESTS ARE PERFORMED IN ALBERTA
EACH YEAR.**

Laboratory Collection Sites



Logistics

Logistics is responsible for the efficient transfer of specimens, reports and supplies for APL. An internally operated courier system helps facilitate accurate test results by maintaining high-quality standards in specimen integrity during transport.

Prior to the formation of APL, specimens moved across the province in an uncoordinated and disjointed system. First steps in optimization included the expansion of courier services to all of South Zone, which improved the cost effectiveness of the courier system.

Testing

Anatomic Pathology and Cytopathology

The discipline of anatomic pathology and cytopathology provides extensive services, including surgical pathology, cytopathology, fine-needle aspiration, autopsy pathology, neuropathology, dermatopathology, molecular pathology and cancer cytogenetics expertise and consultation. Any patient material removed from the body during surgery or a day procedure — such as a tissue biopsy or cancerous tumour — will be analyzed by this area. This testing area processes all the tissue or fluid samples from biopsies to autopsies, and all cancer diagnosis requires a pathology report.

Biochemistry

The majority of diagnostic tests performed at APL are within the discipline of biochemistry. This area provides extensive support to clinicians who use the results provided to make patient-treatment decisions. These services include clinical chemistry, endocrinology, therapeutic drug monitoring and clinical toxicology. This division includes our “high volume” laboratory, where we have analyzers able to process many patient samples at once.

Microbiology

The discipline of microbiological testing includes bacteriology, mycology, rapid virology, molecular diagnostics and parasitology. Microbiology provides diagnosis on many types of microorganisms that may have infected tissues or bodily fluids. This sector processes the swabs and blood for microbes to provide information such as antibiotic resistant bacteria out in the public.

Transfusion Medicine

Transfusion medicine provides all blood components and products distributed by Canadian Blood Services. They are involved with providing critical blood-transfusion products and testing services for patients requiring blood transfusions to support trauma, transplant, surgery, congenital disorder and oncology patients. They provide expert clinical support for bleeding and clotting disorders, ensure appropriate utilization of this scarce resource and play a vital role during catastrophes with mass casualties.

Hematopathology

The discipline of hematopathology provides services in hematology — the study of disease conditions that affect blood and related organs. Samples analyzed can be from blood or other blood components such as bone marrow, lymph nodes, spleen, thymus and other lymphoid tissues. This area supports the diagnosis of anemia, blood cancers, and inflammatory conditions.

Cellular Therapy Laboratory

The cellular therapy laboratory is involved in transplant medicine and making tailored treatments using patients' own blood to treat and fight diseases such as cancer and other immune system disorders.

Human Leukocyte Antigen (HLA) Testing & Immunogenetics Laboratory

Alberta has the largest Canadian solid organ and bone marrow transplant program outside Toronto. Testing for the matchability between donor and recipient as well as post-transplant monitoring for rejection is a critical component of the Alberta transplant program. Together with our sub-specialized transplantation pathologists, the HLA Testing & Immunogenetics Laboratories in Edmonton and Calgary are crucial to the Alberta transplant program.

Genetics and Genomics (G&G)

This sector provides testing for diseases that are caused by changes in the genetic makeup of patients. In addition to informing patient treatment decisions, G&G provides screening for prevention and to support future care.

Point of Care Testing (POCT)

Diagnostic testing doesn't only reside within the testing facilities of APL. POCT devices provide healthcare providers and patients with a timely and convenient option of performing laboratory tests at the bedside or within the physician's office. These devices provide quick feedback to allow providers to make decisions on the spot.

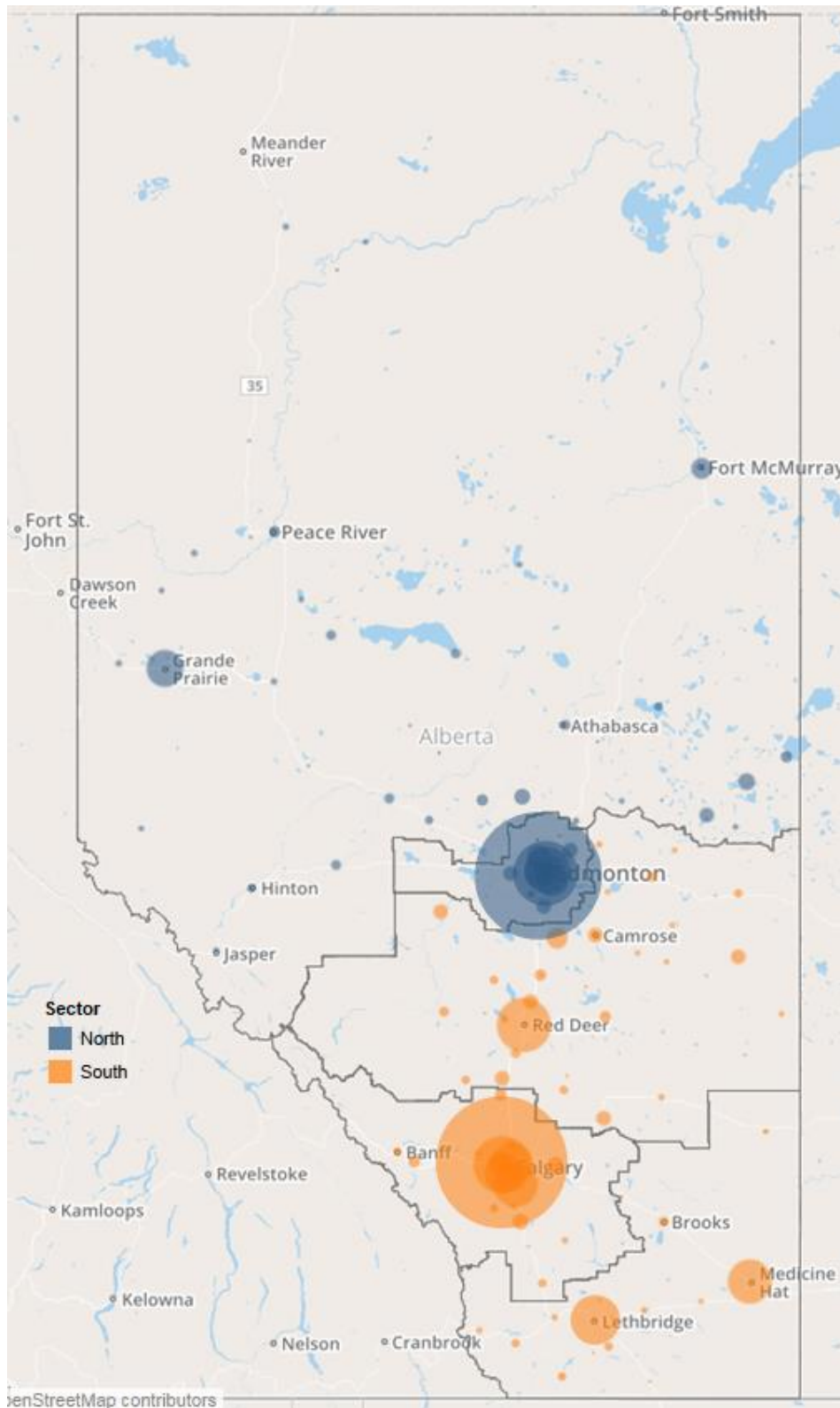
Reporting Results

Test results are reported to clinicians either electronically to the clinical information system or physician electronic medical record system, fax or paper report. Results are also uploaded to Alberta Netcare, an electronic system accessible to health professionals to retrieve patient health information. Patients can now also access over 50 of their most common laboratory results through the Personal Health Portal.

Total Provincial Test Volumes

More than 78 million laboratory tests are performed in Alberta each year. From September 2018 to March 2019, APL completed nearly 46.5 million laboratory tests, with 75 per cent done in our two main city centres (Calgary and Edmonton), 13 per cent in our urban centres (Red Deer, Lethbridge, Medicine Hat, Grand Prairie, and Fort McMurray) and the remaining 12 per cent in all the other rural sites.

Laboratory Testing Sites



Note: Testing volumes are represented by circle size.

How Do We Know We Are Succeeding

AHS is a public body accountable for the provision of healthcare services and the expenditure of public funds. Performance mechanisms are in place in order to establish performance standards, ensure they are met, and support decision-making when remedies are required to improve performance.

As the strategic plan and business plan emerge, aligned measurements will be determined for key activities and reported regularly. Review of existing discrepancies in regional reporting and data quality, ensuring provincially understood definitions and reporting practices, and implementation will be key to APL's ability to establish a high-functioning decision support, measurement and reporting system.

In its truest form, a decision support system (DSS) is an information system, with supporting infrastructure and processes, to support all business and organizational decision-making activities. Our commitment to this will result in a high-functioning, performance-driven, fiscally-sustainable, provincial laboratory that's both strategic and responsive in its planning and operations.

Preliminary key performance indicators (KPI) for the next fiscal year have been developed and cover three main areas of focus: turnaround times, access standards and user and patient satisfaction. Turnaround time KPIs set standards for reporting test results within acceptable timeframes to allow clinicians to make informed patient diagnosis in a timely manner. Access standards KPIs measure accessibility of community collection sites and patient wait times to ensure frontline laboratory services are operating efficiently and available to patients across the province. User- and patient-satisfaction KPIs monitor patient satisfaction through surveys to assess the quality of laboratory services. They are aligned with AHS' Six Dimensions of Quality for Health Framework and service-provision satisfaction targets.

Accreditation

Laboratories are governed by various accreditation organizations. APL has up-to-date full accreditation with the following organizations:

- American Association of Blood Banks (AABB)
- American Society of Histocompatibility & Immunogenetics (ASHI)
- Canadian Association of Accreditation (CALA)
- Canadian College of Medical Genetics (CCMG)
- College of American Pathologists (CAP)
- College of Physicians & Surgeons (CPSA)
- Foundation for the Accreditation of Cellular Therapy (FACT)

Notable Accomplishments

Systems Optimization

Connect Care

Connect Care is a collaborative effort between the Ministry of Health and AHS staff, clinicians and patients to improve patient experiences and the quality and safety of patient care by creating common clinical standards and processes to manage and share information across the healthcare continuum. For laboratory, it means test results will be available faster to providers and become accessible to all Albertans.

The laboratory information system (LIS) is the foundation for laboratory operations and the information highway to and from ordering physicians, their patients and other providers. A single enterprise-wide LIS is a foundational step toward integrated laboratory services in the province.

Significant progress was made in 2018-19 on design, application testing, data conversion, staff training, and establishment of a provincial data centre. The first wave of Connect Care implementation is scheduled to go-live in the fall of 2019, affecting APL and laboratory sites in Edmonton (including pathology), DynaLIFE and the Cross Cancer Institute. APL implementation of Connect Care is on track for Wave 1 implementation in November 2019.

AHS Laboratory Formulary

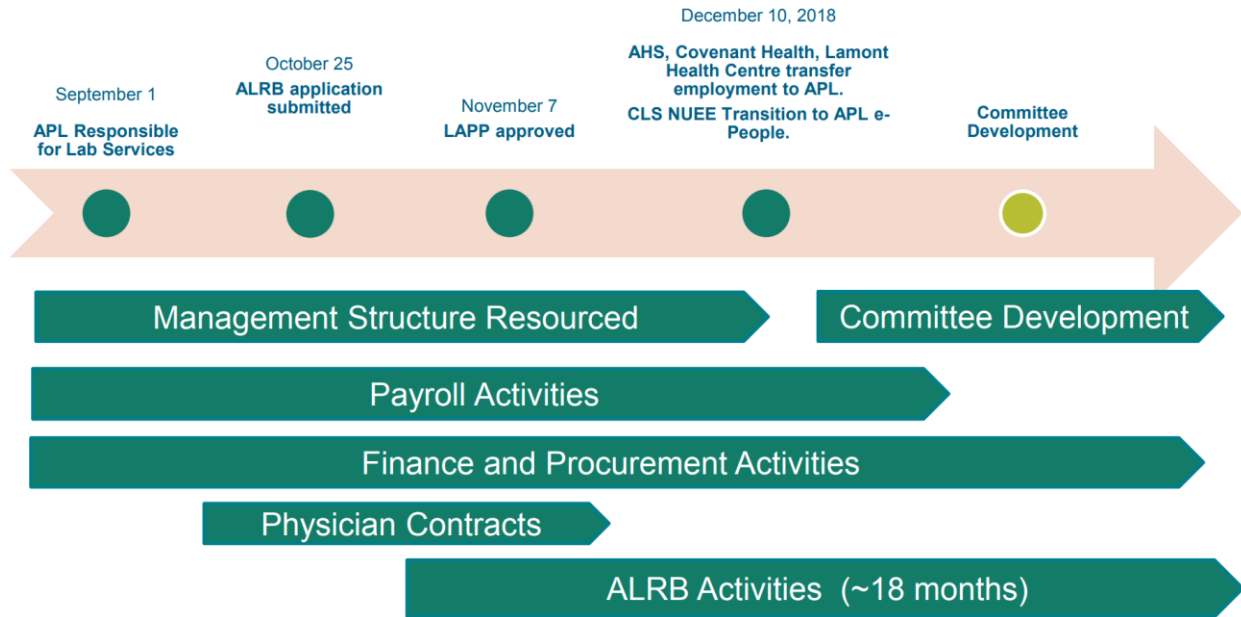
A new laboratory test formulary has been designed and implemented to streamline processes by reducing variation in testing and improving healthcare provider and patient access to appropriate, equitable and sustainable laboratory test information — all of which contribute to improved patient outcomes, optimal patient care and financial sustainability in Alberta. The Committee has established an intake request form for new test requests and created an inventory of all laboratory tests currently performed or paid for by AHS/APL.

Provincial Request for Proposals (RFP)

The consolidation of laboratory services offers the opportunity to seek provincial RFPs for standardized and cost-effective solutions. Provincial RFPs were initiated for chemistry equipment, consumables and pre- and post-analytic automation and referred-out testing.

Human Resources

Key human resources milestones during the laboratory transition were met, with the official transfer of employees to APL having successfully occurred as anticipated in December.



Transformation and Change

There is no question that 2018 was a transformational year for APL people, or that our transition activities will continue into the next reporting period. Change of this magnitude can be unsettling, and our People & Transformation team has been resolute in developing and implementing mechanisms to support our employees through turbulent times, while also continuing to deliver critical specialist service in the areas of Human Resources, Labour Relations, Occupational Health and Safety, and Privacy.

A core focus for this reporting period has been on building the foundations from which we are able to build a sustainable organization. A standardized total compensation program for APL non-union exempt employees (NUEEs) was implemented effective from the start of 2019. This included consolidating and standardizing compensation programs using the AHS Total Compensation Programs as the base in the areas of Compensation Structure and Job Evaluation Framework, Employee Benefits Plans, Pension/Retirement Plans, and Terms and Conditions of Employment. APL became a Local Authority Pension Plan (LAPP) employer participant on Dec. 10, 2018. All eligible APL NUEE employees hired after Dec. 10, 2018 are required to participate in LAPP.

Former CLS NUEEs were given an irrevocable choice to move to LAPP, remain in the Defined Contribution Pension Plan (DCPP) administered by Sun Life, or join the Group Registered Retirement Savings Plan (RRSP) administered by Sun Life. 42 per cent of legacy CLS employees opted to remain with the DCPP, six per cent chose the Group RRSP and 48 per cent have joined LAPP. The 9 former Covenant NUEEs were grandfathered in a Manulife additional RRSP.

An application to the Alberta Labour Relation Board was submitted by APL to become a successor employer. Significant transition work remains to be done to consolidate the multiple collective bargaining units that were integrated into APL.

Work has started on standardizing and optimizing the various “people” programs and practices that are in place across the organization. Working with our medical leaders, we have revisited how we respond to and manage the occupational health and safety needs of our workforce to ensure that we are both legally compliant and proactive in our approaches, processes and health and safety management systems. Alignment is occurring in all areas of the function — from policies that govern the way we manage our people, to the programs that we implement to help our people do their best work, to revisiting administrative processes to ensure areas that can be optimized are identified with a view to implementing cost-effective solutions and best practices, to navigation through multiple disparate information systems to provide relevant and timely information to our managers to help them manage their teams effectively.

Human Resources Systems

A new human resources information system was implemented for APL employees which facilitated the transition of the majority of APL non-union employees onto standardized conditions of employment and uniform benefit programs effective from the start of the 2019 calendar year. A key milestone for our people was the implementation of LAPP for former CLS employees and the recognition that all new employees will participate in this valued plan.

Culture is Critical

Corporate culture is the implicit, unwritten rules that create expectations for how people choose to behave. It is reflected by what people actually do every day, by what is celebrated, emphasized and overlooked. It is also how companies create and protect value through people. High-performing cultures can impact all corners of the organization — increased engagement, higher productivity and greater employee retention are all outcomes. Given the infancy of APL as an organization, and because of the importance of culture in delivering our strategic vision, we are uniquely poised to be purposeful in creating a powerful culture for the future APL. Much work has therefore gone into engagement with employees to identify and create a workplace culture where everyone is empowered to do their best work every day. The results of this engagement will become more evident in the next reporting period as we execute the results of this effort.

Organization Design and Team Effectiveness

A key area of focus has been on supporting the effectiveness of our new organization: organization and team structures have been defined and clarified with a specific view to building effective working relationships between our various internal teams including medical/scientific, operations and corporate services. Decision-making authorities have been identified to address inconsistencies arising from the four legacy employers and will continue to be refined as APL evolves.

Operational Standardization and Improvement

Urine Human Chorionic Gonadotropin (hCG) Test Conversion

All existing qualitative urine hCG test devices at APL and AHS POCT were replaced, thus standardizing provincial urine testing and leading to economies of scale. In addition, a formal supported POCT program was created that included training and education of APL staff and healthcare professionals performing qualitative urine hCG testing.

Pilot: Rapid Influenza (Flu) and Rapid Respiratory Syncytial Virus (RSV) Testing

In the midst of flu season, APL introduced a rapid Flu and rapid RSV pilot in Medicine Hat Regional Hospital and Chinook Regional Hospital. Historically, respiratory virus testing in Alberta, outside of Calgary and Edmonton, involved a patchwork of low-sensitivity assays and a centralized respiratory pathogen panel performed by Public Health Laboratory. The turnaround time for flu results had taken upwards of 48 hours, impacting APL's ability to prevent, rapidly detect and respond to outbreaks. With the implementation of a rapid Flu and rapid RSV pilot, turnaround times were reduced by 90 per cent in regional and rural locations.

Standardization of Drug Screening — Enhanced Turnaround Times

In response to the opioid crisis in Alberta, significant investment was made in the Edmonton and Calgary Drug Screening Programs to expand capacity and move from a standard screening approach to precision analytics by LCMS/MS (mass spectrometer) technology. The new process has shown a dramatic decrease in result turnaround times of 85 per cent.

Standardization of Immunohistochemical (IHC) Staining

APL has moved forward with standardized equipment and consumable contracts for IHC staining. Since its formation, APL has selected standardized equipment platforms for routine and specialty IHC staining across the province, allowing for competitive procurement negotiations and a state-of-the-art test menu for IHC, including companion diagnostics for precision oncology therapies. IHC staining is also often used for cancer diagnosis and treatment (i.e. breast cancer biomarker testing).

Genetics & Genomics Strategy

G&G is one of the most rapidly evolving and growing areas of APL. Previously, AHS Genetic Laboratory Services (GLS) and CLS — each with molecular pathology, cytogenetics and bioinformatics capabilities — maintained very insular operations. APL has transitioned the legacy GLS provincial program to G&G that includes the operations at the University of Alberta Hospital, Stollery Children's Hospital, Alberta Children's Hospital, Diagnostic Scientific Centre and the future Calgary Cancer Centre (2023). An integrated governance allows for standardized expansion of the test menu in this critical area.

Amalgamation of Pharmacokinetics (PK) with the Section of Biochemistry in Calgary

APL merged the PK testing performed at the Tom Baker Cancer Clinic in Calgary with the toxicology testing located at the Diagnostic Scientific Centre. This amalgamation has improved coordination of testing and research, and introduced additional subject matter expertise to move the program forward.

Consolidation of Sexually Transmitted Infection (STI) — Chlamydia and Gonorrhea (CT/NG)

Testing for CT/NG has historically been performed at CLS and DynaLIFE (for testing coming from primary care physicians) and Public Health Laboratory (for testing coming from STI clinics in Edmonton and Calgary). APL has consolidated testing in Calgary, while taking advantage of better contract pricing available through the CLS pricing agreement.

Point of Care Testing (POCT) Service Framework

The POCT Service Framework was published in July 2018 to provide a comprehensive guideline describing the elements required to ensure that POCT programs throughout the province deliver accurate, clinically appropriate, and actionable results that support and improve patient care. Topics outlined within the framework include governance framework, service framework (e.g. program request and intake, instrument and device selection, funding model, instrument connectivity), quality assurance plan, vendor engagement, and POCT innovation.

Best Practice and Patient Experience

Primary Care Laboratory Utilization (Physician Report Cards)

Providing laboratory test audit and feedback for all primary care physicians in Alberta is a goal of laboratory services to help manage and raise awareness in testing practices. With the support of AHS' Improving Health Outcomes Together (IHOT), and in collaboration with the Health Quality Council of Alberta (HQCA) and the Physician Learning Program (PLP), all primary care physicians in Alberta are projected to receive audit and feedback information by the end of the 2019 calendar year.

Framingham Risk Scores (FRS)

Cardiovascular disease is the leading cause of death globally ("Cardiovascular diseases (CVDs)," n.d.). The aim of the FRS project is to capture the information required to calculate a FRS during phlebotomy to provide a laboratory-reported FRS to physicians with statin treatment recommendations on the reported results. This is to encourage Alberta physicians to use this cardiovascular risk-assessment tool and the use of statin prescriptions, particularly in high risk patients. APL is working in collaboration with AHS' IHOT for the implementation of this project.

Blood Utilization Management Plan (BUMP)

BUMP is an initiative to appropriate blood utilization based on novel risk stratification strategies and application of dynamic saving plans to minimize adverse impacts of blood shortage on patient care.

Often, healthcare facilities are overstocked with red blood cells — and this does not necessarily equate to protection against shortage. On the contrary, using aged red cells may increase blood utilization in chronically transfused patients in the long-term by transfusing old blood. To maximize efficiency and minimize risk, it's ideal to stock the optimal amount. The success of this best-practice intervention has led to other jurisdictions following suit with the same application, resulting in substantial savings as well as improved patient care.

Red Cell Order Screening Algorithm

This is an initiative for screening red cell transfusions for stable adult inpatients and Emergency Room patients. Implementation has reduced approximately 200 unnecessary red-cell transfusions per month.

Outpatient Subcutaneous Immunoglobulin Clinic

This is an initiative to improve patient care and experience by reducing the required dosing of immunoglobulin products for patients to achieve the same clinical response. This project is currently being expanded to support an AHS clinic.

Community Home Paramedic Transfusion Program

This program helps stable patients transfuse at home to reduce the number of patients required to go to hospital day medicine for transfusion of blood product. This program is being expanded provincially.

Newborn Metabolic Screening Expansion

The Newborn Metabolic Screening Program uses a population-based screening approach to screen newborns for 21 treatable conditions. Its primary goal is to reduce morbidity and mortality among infants through timely screening and diagnosis. The program was successfully expanded this year to include four additional inherited conditions: Galactosemia Type 1 (AALT), Tyrosinemia Type 1 (TYR1), Sickle Cell Disease (SCD) and Severe Combined Immunodeficiency (SCID).

Pilot: Commitment to Comfort at the Alberta Children's Hospital

A team of APL staff has been working with the Family Advisory Council and Child and Youth Advisory Council at the Alberta Children's Hospital (ACH) to implement a site-wide adoption of the Commitment to Comfort program. This program aims to improve the experience of the patients and their families when they come for outpatient blood work at the ACH. When patients check in, they can now complete a Comfort Care Plan. This care plan helps the Medical Laboratory Assistant facilitate the best experience for the patient.

Financial Summary

APL's financial results have been included in the consolidated results for AHS. For more information about AHS, please refer to the AHS Annual Report which is available at www.albertahealthservices.ca.

Next Steps

APL will continue to support exceptional care and improved health across Alberta. This will be achieved through empowering our people, ensuring our laboratory expertise is connected into the broader health system, and leading the direction of the laboratory of the future — all while being fiscally responsible.

As a new organization, APL will ensure our governance structure is functioning, our business systems are in place, and our laboratory infrastructure can continue to support our operations. We will continue to find innovative practices to improve patient experiences as well as patient and population health. Continuing to support the Connect Care project led by AHS will be a significant effort for APL as this will transform and integrate our practices across the province.

A key focus for APL's future will be collaboration with our academic, industry and scientific partners to support research efforts and translate the research into improved health and economic benefit for Albertans.

References

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