



**ALBERTA PRECISION
LABORATORIES**

Leaders in Laboratory Medicine

2023-2024

Annual Report

Continuing to transform

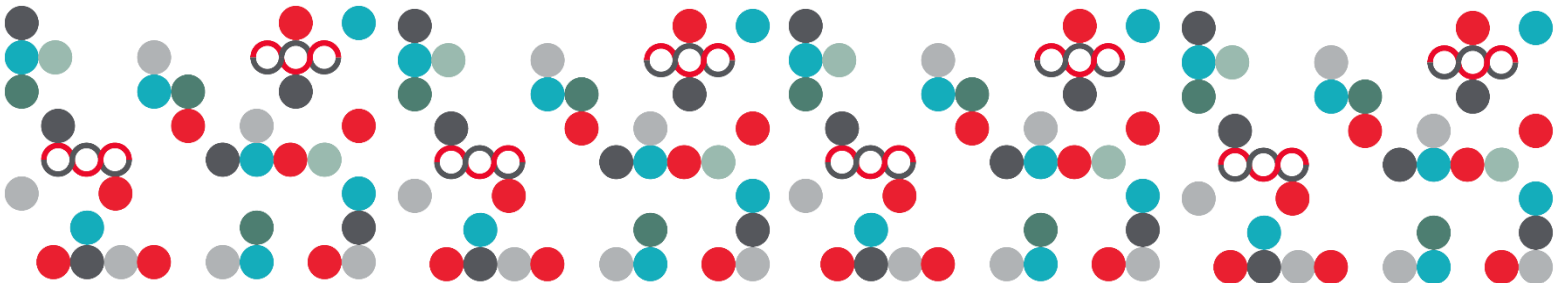


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Annual Report 2023-24

Continuing to transform



Message from Chief Operating Officer & Chief Medical Laboratory Officer

Alberta Precision Laboratories (APL) continues to transform as an integrated province-wide public laboratory system, and the achievements of our medical laboratory professionals over the last year have been remarkable. Their enthusiastic determination, coupled with dedication to finding the best ways to serve Albertans, is what makes the APL story unique.

The ongoing challenges related to significant staffing shortages across the lab system, and the integration of community lab service are sources of considerable uncertainty for APL and its stakeholders. However, these challenges also provide a unique opportunity to build APL's brand and organizational culture and highlight the critically important role lab services play across the healthcare spectrum. The integration of community lab services impacted nearly every APL and Alberta Health Services (AHS) location across the province; however, with the integration reaching substantial completion, the focus is now turning to stabilization and optimization of service delivery to ensure that we provide Albertans with efficient, quality service, now and into the future.

Building a stable and sustainable lab system while improving health outcomes for Albertans is the overarching focus of our Business Plan. Achieving this plan requires us to navigate ongoing change, the increasing demands on the healthcare system, and enable our people to deliver. It is inspiring to see how our over 7,200 staff remain committed to providing exceptional care and live our values of Kindness, Inclusion, Innovation, Agility, and Accuracy, every day. Their efforts play a critical role in ensuring that every dollar spent on healthcare is utilized efficiently and effectively, ultimately benefiting the well-being of all Albertans.

Reflecting on the achievements of everyone at APL over the past year is truly remarkable. The challenges we have faced along the way cannot be overlooked, and that makes our

accomplishments even more significant. We want to express our sincerest gratitude to our dedicated staff who have tirelessly served the people of Alberta. Without your unwavering commitment, we would not have reached the position we are in today. Your hard work and dedication to excellence are commendable, and they have undoubtedly made a positive impact on the lives of every Albertan. We value your contributions immensely.

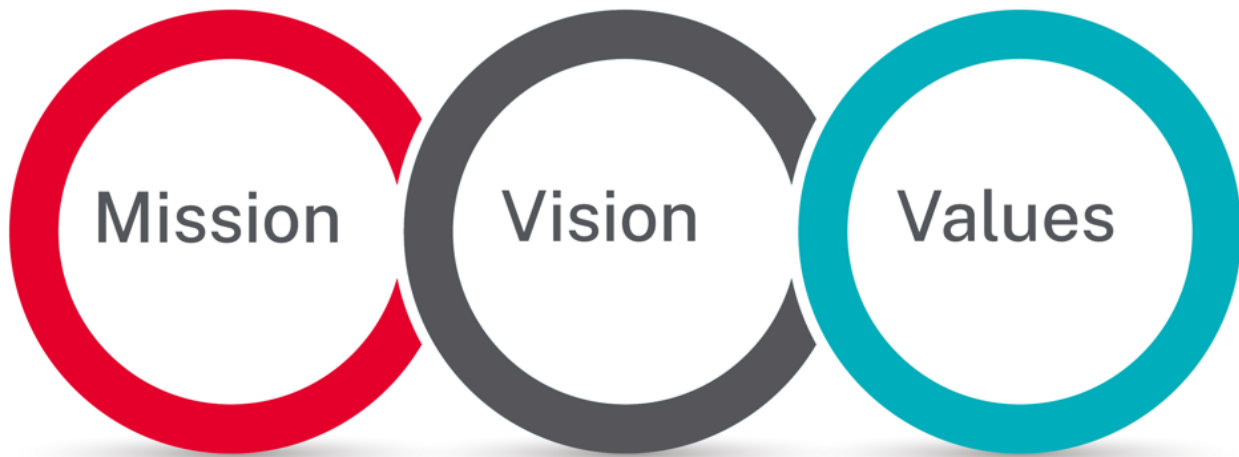
Who we are

APL is a wholly owned subsidiary of AHS and is the consolidation of all lab services into one organization previously provided by AHS, Calgary Lab Services (CLS), Covenant Health, Lamont Health Care Centre, and DynaLIFE Medical Labs. In September 2023, a joint agreement between AHS and DynaLIFE was made to integrate all laboratory services operations in Alberta under APL. Under the new agreement, all DynaLIFE assets, including equipment, facilities, leases, systems, and personnel, transferred to APL on September 1, 2023. This change resulted in the integration of all community lab services under APL.

APL employs more than 7,200 healthcare professionals and has performed 88 million laboratory tests over the past year. We are responsible for provision of all laboratory services for the entire province, including hospital and community laboratories; mobile collections; electrocardiogram tracing; on-call services; reference laboratories; public health laboratories; patient service centres; and transportation services.

The majority of downstream medical decisions across the continuum of care are based on diagnostic laboratory results, making laboratory medicine a key pillar of the healthcare system, and a service that impacts all Albertans.

Our integrated lab model allows APL to be more strategic in our efforts and to streamline our processes, which results in a multitude of benefits, including equitable access to high quality services for patients; timely and consistent results to patients and providers; and optimized resources for increased financial health.

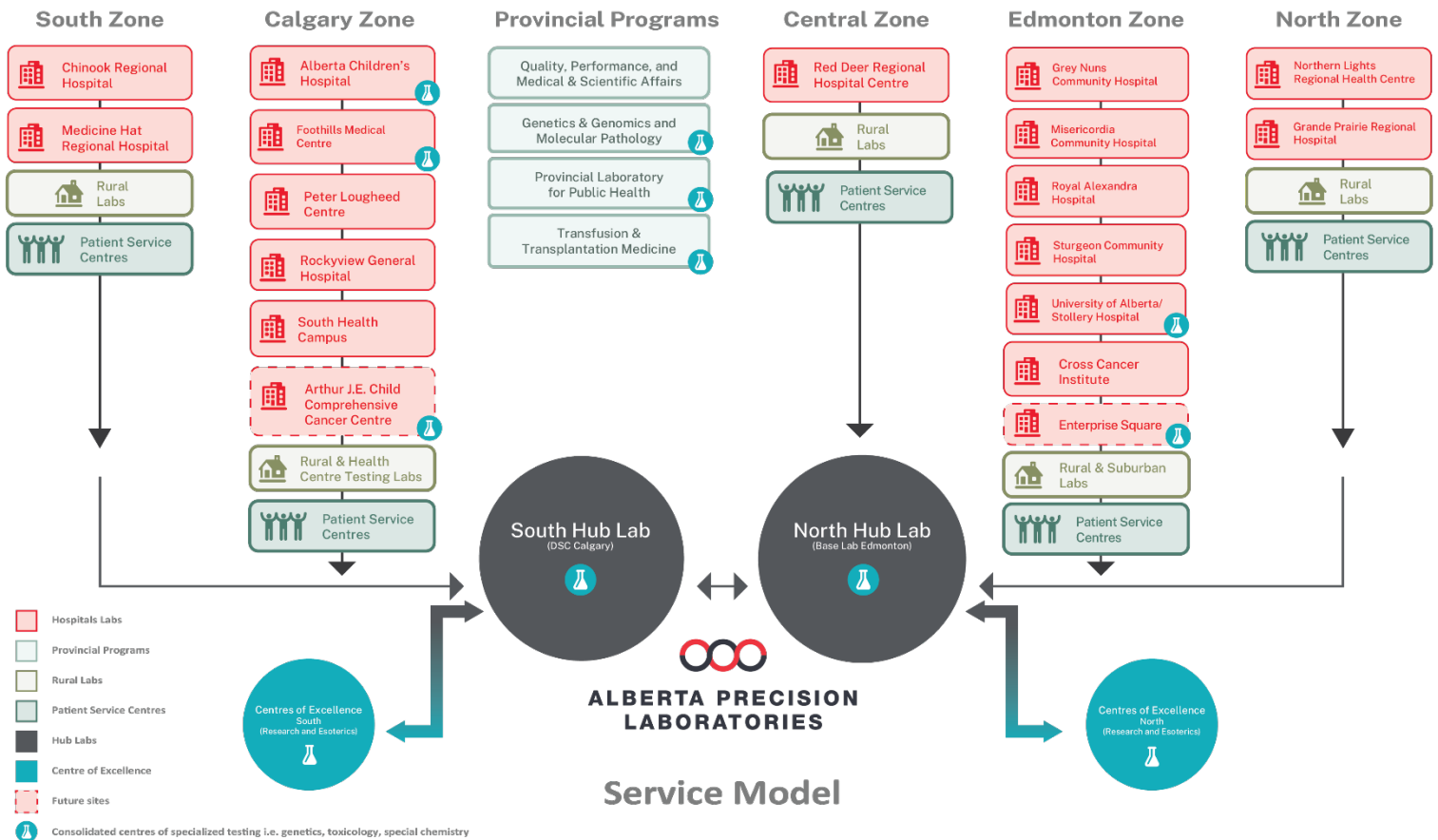


We believe in the transformative power of laboratory medicine to improve health for all Albertans.

Health informed by world-class integrated laboratory diagnostics.

- Kindness
- Inclusion
- Innovation
- Agility
- Accuracy

APL Organizational Structure



Changes to Alberta Health Services

In November 2023, the Government of Alberta announced it would refocus Alberta's health care system and implement several changes in the months which followed. Among the proposed changes, Alberta Health Services would be restructured into four delivery areas: Acute Care, Addiction and Mental Health, Continuing Care, and Primary Care. As of the writing of this annual report, APL remains a wholly owned subsidiary of Alberta Health Services and, as such, the sole provider of laboratory medicine for the province of Alberta. It is not yet known how these proposed changes will impact the status, scope or timelines of the initiatives identified below.

Governance

As a subsidiary of AHS, APL reports to the AHS President and CEO via a sole board chair, represented by AHS's Vice President of Cancer Care Alberta & Clinical Support Services. APL's governance structure ensures laboratory services are embedded into clinical decisions

and operations to improve the quality and appropriateness of care. APL executives work closely with AHS executives to ensure all Albertans have dependable, secure, access to high-quality laboratory services across the province. In early 2024, a comprehensive review was conducted on all active APL committees. This review focused on evaluating our purpose, critical responsibilities and accountabilities, decision-making authority, and membership realignment, where necessary, with the current APL organizational structure for operational and medical/scientific leadership.

Refer to Appendix A for more information about APL's Corporate Governance, Operational Governance, and Operational Committee structure.

APL Executive Leadership Team (ELT)

APL's Executive Leadership Team (ELT) is a long-standing Committee, whose purpose is to set the broad vision, strategic direction, and priorities for the organization, in collaboration with the board chair, AHS executives and the APL Provincial Medical and Operations Committee.

Membership

Chief Operating Officer, APL

Chief Medical Laboratory Officer, APL

Associate Chief Medical Laboratory Officer, Medical and Scientific Affairs and Workforce Planning, APL

Medical Director, North Sector, APL

Medical Director, South Sector, APL

Provincial Medical Lead, Quality and Performance, APL

Executive Director, Hospital Laboratory Services, APL

Executive Director, Community Services, APL

Executive Director, Quality, Performance, Medical & Scientific Affairs, APL

Executive Director, Hub Laboratories and Discipline Councils, APL

Executive Director, Business Advisory Services, AHS

Director, HR Business Partnerships, AHS

Director, Communications, AHS (ex officio non-voting)

Discipline Councils

Discipline Councils support the prioritization, coordination, standardization, and optimization of clinical diagnostic testing across the province. Experts lead these councils in their discipline areas, and they are comprised of medical, scientific, operational, and administrative stakeholders to ensure the appropriate ad hoc engagement of internal and external participants. Discipline Councils will continue to focus on standardization and finding opportunities to improve appropriate utilization of laboratory testing/service. These councils were also part of the committee review, which made sure they were current in their membership, practices, and scope especially when considering the changes that occurred with the DynaLIFE integration.

Shared Services

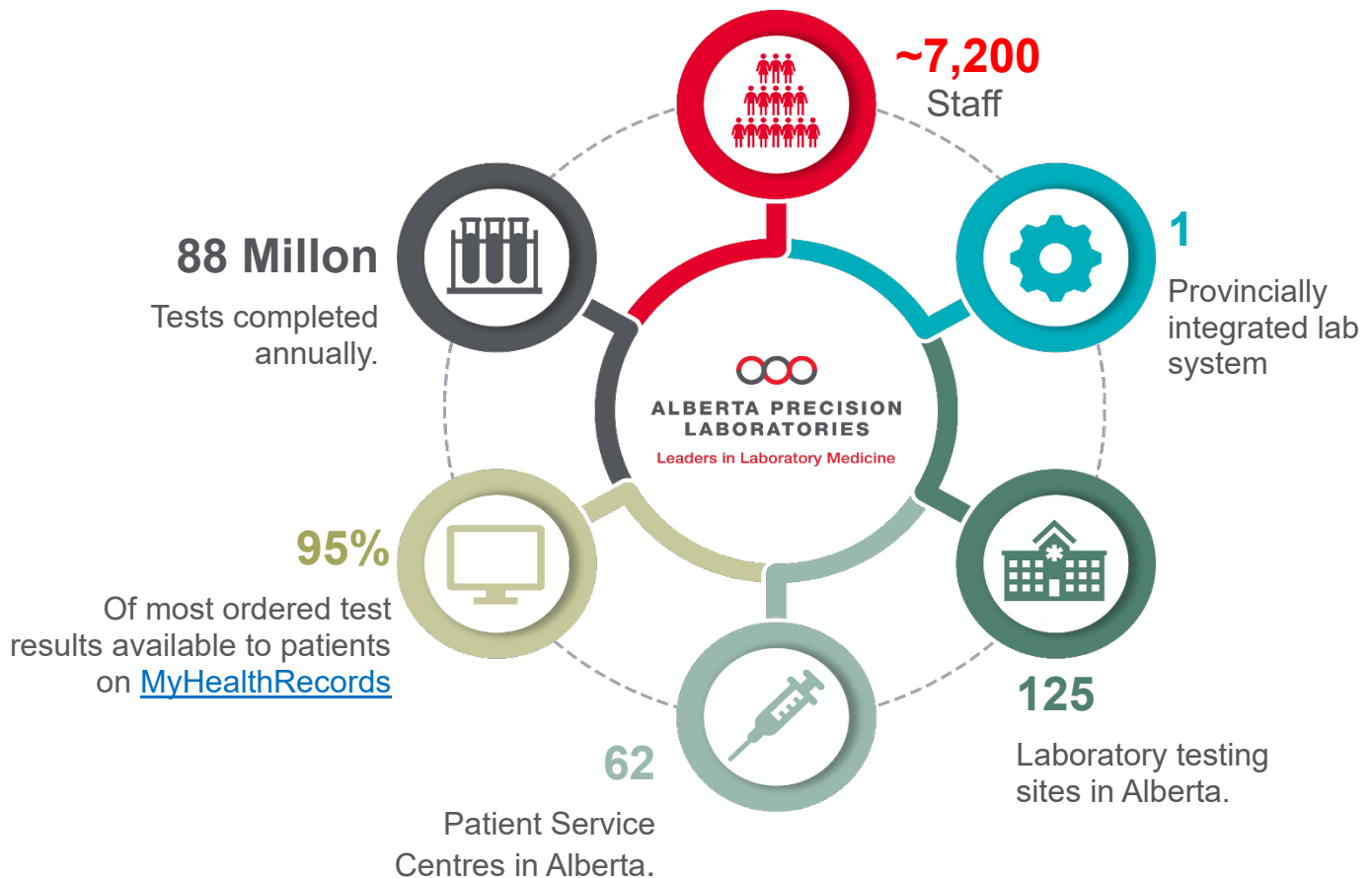
APL receives specific Corporate and administrative services from AHS and therefore is able to leverage existing systems and reduce duplication of processes and policies. A Shared Services Agreement (SSA) between APL and AHS is in place that sets out the scope of services, accountabilities, service delivery expectations, and key parameters for each of the service areas that AHS provides to APL. Service from 17 different areas in AHS, including Human Resources, Finance, Information Technology, Contracting Procurement and Supply Management (CPSM), and Capital Management, is provided to APL under the SSA, which is monitored through a defined contract governance structure.

Our people

APL employs over 7,200 healthcare professionals, including support staff, medical and scientific staff and contractors. Our employees have clinical and technical expertise in laboratory medicine and pathology and are sought after by health industry partners and academic collaborators for translational research initiatives and in the development of novel diagnostics.

From general lab service, to specialized diagnostics and public health research, our highly trained laboratory professionals play a critical role in patient care. They continue to demonstrate an unwavering commitment to protecting the health of Albertans while living our shared values of Kindness, Inclusion, Innovation, Agility and Accuracy.

The power of an integrated laboratory system



Standardization & Integration

Providing laboratory services in a standard fashion ensures our patients, physicians and other stakeholders experience a consistent level of service regardless of their location in the province. We are one organization and able to continue building a system where all patients have a similar experience with equal access to the same high-quality services.

Efforts to standardize key testing platforms continue. Recently, our large-scale chemistry analyzers were standardized across the province at our bigger hospital sites and centralized hub laboratories. In 2023-24 this standardization work spread to smaller locations throughout the province with the installation of new analyzers at many rural sites. As of October 2024, the project will see 61 Beckman Coulter Access 2 and 25 Quidel Ortho Vitros® XT3400 Immunoassay analyzers in place. Leveraging our integrated model, APL takes advantage of our buying power and economies of scale and continues to harmonize contracts, which will result in system savings. More importantly, this enables standard methodologies, enabling the same high-quality care and services closer to home for patients in rural settings.

Cost effectiveness

APL is responsible for ensuring healthcare dollars are spent effectively and front-line teams have the resources they need to provide safe, high-quality patient care. To ensure we are managing our budget allocation for this fiscal year most effectively, APL has put several initiatives in place to find opportunities for increased efficiencies across the system reducing costs in these areas. For example, leaders have been working with their teams to effectively manage overtime, vacancies, and discretionary spending. Furthermore, APL leadership is actively engaging with teams to identify additional opportunities for optimizing the use of resources – for example, consolidation of testing where clinically appropriate, enhanced automation, and improved test ordering utilization.

Testing & Operations

Laboratory testing is at the heart of APL's identity. Our diagnostic testing services cover all major lab disciplines; biochemistry, anatomic pathology, molecular pathology, hematopathology, genetics and genomics transfusion medicine, microbiology, point of care testing, and public health monitoring. Lab testing provides vital information that helps healthcare professionals make informed decisions. Our commitment to providing lab services is not just a job for us; it is our passion, and we are committed to delivering accurate and reliable results that positively impact patient care.

In the 2023-2024 fiscal year, APL experienced a remarkable increase in testing volumes, reaching a record-breaking annual total of 88 million tests resulted. This represents a notable 6.8% increase in volume when compared to the previous year and highlights the growing demand for our services.

To effectively manage this increase, APL developed and adopted several innovative solutions to streamline operational processes, which allowed for the necessary expansion of our testing capacity with minimal impact on the operational conditions at the time. It is a noteworthy accomplishment that deserves acknowledgment. The work we accomplished in the 2023-2024 serves as testament to the competence and efficiency of our staff and operational methods to have kept up with this substantial rise in the number of testing volumes.

However, this unprecedented increase also underscores the importance of continued strategic planning moving forward. It is expected the demand for medical lab services will only continue to rise, and it is imperative we monitor the allocation of our resources efficiently to meet the increasing needs of Albertans. It will require careful management and effective communication to ensure we have the necessary infrastructure, equipment, and skilled workforce in place to handle these continuing rising volumes.

Monitoring population growth as well as being aware of other factors such as age of population and communicable disease outbreaks is a priority. As our population expands, the demand for healthcare services, including lab services, will continue to increase.

“Current provincial population estimates [2023-2024]:

5. As of April 1, 2024, Alberta’s population was 4,849,906.
6. Alberta’s population growth continues to accelerate. In the 12 months preceding April 1, 2024, the province’s population expanded by 204,677 people, or 4.41%.
7. This represents a significant increase from the previous year (3.67% between 2022-23) and the highest April 1 year-over-year growth rate since 1981. Alberta’s population expanded by 49,138 residents over the first quarter of 2024, or 1.02%.”

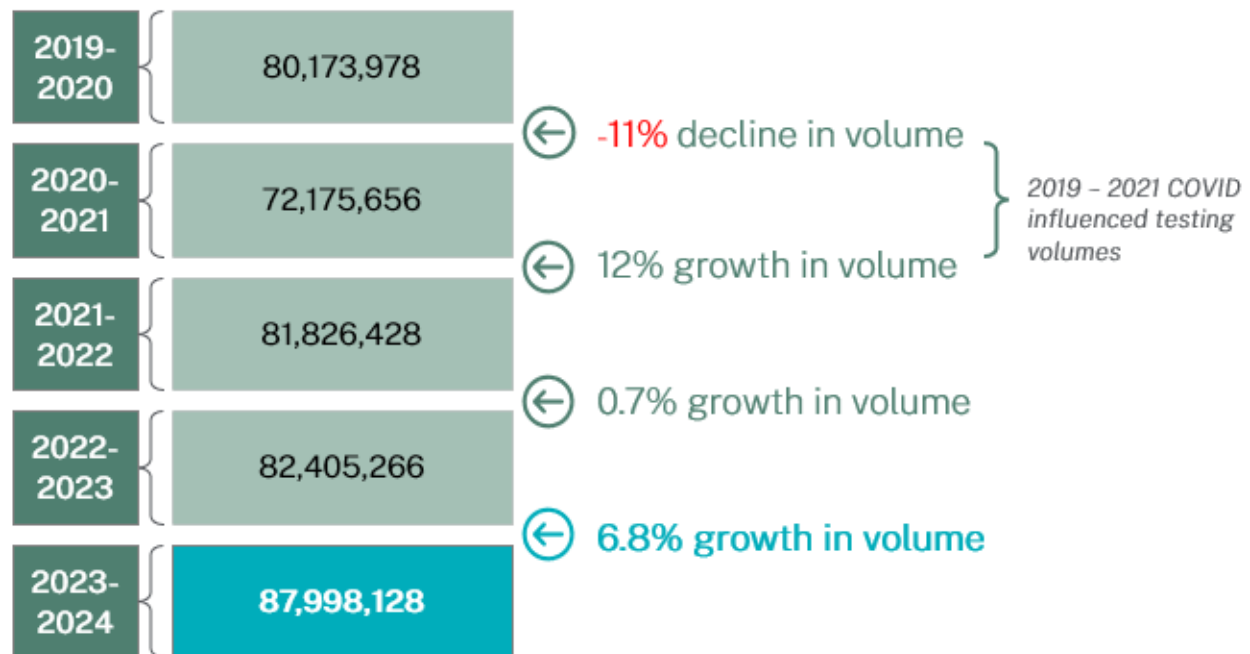
Reference: Government of Alberta, Population Statistics Website, July 26, 2024

<https://www.alberta.ca/population-statistics#:~:text=Alberta%27s%20population%20growth%20continues%20to,year%20growth%20rate%20since%201981>.

Testing Disciplines

To effectively manage our testing operations, it is important to have a clear understanding of the different testing disciplines and the specific testing volumes of each discipline. This information enables us to identify patterns or trends that impact our testing operations, allowing us to make informed decisions and allocate our resources more effectively. Furthermore, this understanding of the testing volumes helps us ensure we have sufficient capacity to meet demand or where shortfalls exist.

Total testing volumes over 5 years:



By the end of the 2024-2025 fiscal year Alberta Precision Laboratories will have completed a half a billion lab tests in just 6 years.

Clinical Biochemistry

APL maintains an extensive test menu within the clinical biochemistry discipline. Clinical biochemistry services include rapid response chemistry, urinalysis, endocrinology, immunology, maternal serum screening, therapeutic drug monitoring, clinical toxicology, trace elements, and point of care testing.

The clinical biochemistry lab discipline at APL is known for producing the highest testing volumes. Our analyzers efficiently and accurately processed nearly 67 million tests in 2023-2024, which equates to approximately 183,562 tests every 24 hours.

Anatomic Pathology

The discipline of anatomic pathology provides extensive services under several subspecialty pathology groups, including autopsy, bone, and soft tissue, bone marrow, breast, cytopathology, dermatopathology, endocrine, gastrointestinal, genitourinary, gynecologic, head and neck, neuropathology, ophthalmic, pediatric, thoracic, and transplant, renal and cardiac. Approximately 200 pathologists are contracted/employed by APL to provide expertise and consultation in these areas. Any patient material removed from the body during surgery or a day procedure — such as a tissue biopsy or cancerous tumour — will be analyzed within and APL Anatomic Pathology department. Our Anatomic Pathology department resulted a total of 1.6 million tests in 2023-2024.

Molecular Pathology

Molecular pathology is a provincial program focused on studying and diagnosing disease by examining molecules within organs, tissues, or bodily fluids. Molecular pathology performs testing of DNA and RNA specimens to provide diagnostic and predictive information to laboratory physicians and clinicians to help guide optimal care for patients with cancer and other diseases. The Molecular Pathology Lab performs complex testing of cancer genes, genomic alterations, and pathogens from tissue, blood, or fluid specimens.

Molecular Pathology is highly specialized and does not see extreme test volumes. Over the 2023-2024 this department completed 23,854 tests; however, this was a 13.7% increase in testing over the previous fiscal year.

Hematopathology

The discipline of hematopathology provides services in hematology — the study of disease conditions that affect blood and related organs. Sample types that are analyzed include 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. Our Hematopathology team resulted over 13 million tests in 2023-2024.

Genetics and Genomics

Genetics and Genomics, which includes the provincial Newborn Screening Program, is a provincial program operating at locations in Calgary and Edmonton. It provides testing for diseases caused by changes in the genetic makeup of patients and performs highly specialized testing for many hereditary genetic conditions. This testing is often seen as the future of laboratory medicine and involves examining the DNA of patients.

In the past year, our genetics and genomics department successfully conducted a total of 134,092 tests. Furthermore, there was a notable increase of 10.6% compared to the previous year. This rise is particularly significant considering this type of testing, necessitates

advanced technology, specialized equipment, and the expertise of highly skilled and technical professionals.

Transfusion and Transplantation Medicine

Transfusion and Transplantation Medicine (TTM) is APL's newest integrated provincial program, providing critical blood transfusion products and testing services, and supporting the largest Canadian solid organ and bone marrow transplant program outside Toronto. TTM manages all blood components and products distributed by Canadian Blood Services, ensuring appropriate use of scarce blood resources for in-patient transfusions and provides expert clinical support for bleeding and clotting disorders. TTM's Human Leukocyte Antigen Testing & Immunogenetics Laboratory plays a critical role in Alberta's transplant program, testing the match ability between donor and recipient as well as post-transplant monitoring for rejection. 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. APL processed nearly 500,000 lifesaving tests for transfusion and transplant patients in the last fiscal year.



Photo: Jessica and Heather Blain, Children's Stollery Hospital, Edmonton, AB

Heather Blain is an APL employee, who has dedicated over 20 years to coordinating blood donations. Heather is a part of APL's transfusion team and ensures a reliable blood supply for surgeries, cancer treatments, trauma care, and more.

But Heather's story isn't just professional — it's deeply personal. Her daughter, Jess, was diagnosed with leukemia at just 14. Blood donations are critical for Jess and countless others like her.

Microbiology

The discipline of Microbiology includes bacteriology, mycology, rapid virology, molecular diagnostics, and parasitology. Microbiology provides diagnosis of many types of conditions caused by microorganisms that may have infected tissues or bodily fluids. This section processes sample types such as urine, blood, and stool to detect microbes to provide

information and help guide therapies. Our Microbiology department performed over 5.2 million tests in the 2023-2024 year.

Other areas of Operations

Community Services

APL operates 62 standalone patient service centre (PSC) locations, and supports community collections at over 100 smaller rural hospitals and community health site-based locations. In order to provide lab services to patients throughout the province, APL has PSCs in areas where patient collections exceed 25,000 per year or more. Most PSCs are located in the Greater Edmonton and Greater Calgary areas; however, we also have PSCs in Brooks, Medicine Hat, Lethbridge, Red Deer, Camrose, Lloydminster, Fort McMurray, and Grand Prairie. In the 2023-2024 these locations combined supported 4.18 million patient collection visits providing accessible lab services to local communities throughout Alberta.

This network of collection sites across the province is largely supported by our in-house logistics team. This team of trained drivers ensures specimens from all corners of the province are securely transported to our laboratory locations, with most specimens primarily taken to our two main hub laboratories located in Edmonton and Calgary.

APL also recognizes the challenges faced by patients who are unable to access Patient Service Centers for blood collection due to significant health challenges. To address this issue, we have a dedicated team of coordinators and mobile phlebotomists who support a Mobile Collection Service (MCS). This service is specifically designed for patients who face challenges preventing them from visiting traditional collection sites. Our MCS team provides lab and electrocardiogram services to over 210,000 patients with continued annual growth expected.



Photo: Maria Rodriguez, Edmonton, AB

Maria Rodriguez - Mobile Lab Collector: Maria's role as a mobile lab collector brings healthcare directly to the doorsteps of Albertans. Her work is crucial in ensuring that individuals with limited mobility, seniors, and residents in rural areas can easily access lab services without leaving the comfort of their homes or continuing care centers. Maria emphasizes the importance of building relationships with patients, often visiting them on a weekly basis. She understands the significance of her work in bringing comfort and care to those who may otherwise feel isolated.

Authorized healthcare providers facilitate a mobile collection on behalf of their patient by using a special requisition and booking the appointment. It is important to note only authorized healthcare providers can request MCSs, and patients must meet certain criteria to qualify.

By bringing collection services directly to a patient's home, we can support individuals in the community to access the necessary lab services they require, regardless of their circumstances.

Point-of-Care Testing (POCT)

Diagnostic testing does not only reside within the clinical laboratory testing facilities of APL. Testing in AHS clinical environments is important, as high quality, supported Point of Care Testing (POCT) devices provide results quickly and this can enable providers to make decisions on the spot with the patient. POCT can provide healthcare providers and patients with a timely and convenient option of performing laboratory tests at or near the bedside in an acute care site, as well as in more novel care environments such as through paramedic programs (including mobile integrated health and stroke ambulance programs), mobile COVID-19 testing facilities, long-term care, and correctional facilities. Very few laboratory medicine providers in Canada, if any, can claim to actively support high quality POCT programs in such a diverse array of care environments as APL.

Provincial Laboratory for Public Health

APL's Provincial Laboratory for Public Health (Prov Lab) has existed for over 100 years. It operates from sites in Edmonton and Calgary: The Foothills Medical Centre, South Health Campus in Calgary and the University of Alberta Hospital in Edmonton.

Prov Lab provides public health and specialized infectious disease diagnostic testing covering a broad scope including food, water and wastewater testing, and clinical testing for viruses, parasites, bacteria and fungi. Prov Lab works closely with public health partners in the Government of Alberta and AHS for disease surveillance, outbreak responses, and emergency responses to emerging diseases. Prov Lab's role is critically linked to the legislated responsibilities of Alberta's Chief Medical Officer of Health and the duties of the Medical Officers of Health prescribed in the Public Health Act.

Prov Lab played a pivotal role in developing and implementing COVID-19 testing in Alberta, contending with significant supply management issues, ongoing validations of new reagents and supplies, and leading COVID-19 initiatives for serosurveys, rapid testing, variant testing, and viral genomics. Over the past several years, Prov Lab has successfully secured external grants to significantly build public health genomics and bioinformatics capacity and establish community COVID-19 wastewater testing to complement the clinical diagnostics and surveillance. Other notable emerging issues that have required Prov Lab to quickly prepare and respond include poliovirus screening in refugees, measles outbreak preparedness and the emergence of Mpox.

Quality, Safety, and Education

APL is committed to providing high-quality laboratory services to the patients and clients served by Alberta Health Services. We use the Quality Management System model as described by the Clinical and Laboratory Standards Institute to maintain a system that meets accreditation, legislation, and regulatory requirements for the sustainment and continual improvement of laboratory services. This integrated model coordinates activities that control and guide our organization's strict quality requirements throughout the entire workflow, including pre-examination, examination, and post-examination.

APL promotes a culture where patients, staff and physicians feel safe in reporting and discussing safety concerns and is the leading portfolio within AHS in detecting and reporting quality and safety concerns due to our data driven and integrated organizational structure. Quality assurance activities include evaluating patient safety concerns as well as investigating and reviewing reported adverse events with the goal of continual improvement of the quality of healthcare or services provided. We provide a safe, healthy, and secure work environment and manage laboratory operations and processes to protect the health and safety of all staff.

The health and safety of our workers is fundamental to the provision of safe and quality laboratory services and APL has a comprehensive suite of documents and tools to promote, educate and maintain staff safety within the workplace. All employees of APL are responsible for ensuring the health and safety of co-workers, patients, visitors, and themselves through understanding their roles and responsibilities and adherence to all pertinent legislation, standards, safe work practices, and industry best practices.

APL works closely with education institutions throughout the province to support the development of up-and-coming generations of laboratory professionals. This includes the Northern Alberta Institute of Technology, Southern Alberta Institute of Technology, University of Calgary, University of Edmonton and others. These institutions provide education for Medical Laboratory Technologists, Combined Medical Laboratory / X-Ray Technologists, Medical Laboratory Assistants and Laboratory medical staff.

Research, Development and Academic Partners

Research and development is a foundational underpinning to all laboratory services by supporting vital research directions used to improve healthcare delivery. Research initiatives take place in all major tertiary care centres in Alberta, and we maintain strong relationships locally and internationally to continue to advance our research agenda. Key collaborators include: the Canadian Institutes of Health Research (CIHR), Canadian Blood Services, United States National Institutes of Health (NIH), and the Centres for Disease Control and Prevention (CDC). APL has access to unique, invaluable laboratory datasets used to study the patterns, presentation, progression, and treatment outcomes of disease. APL is also a critical partner for local small- and medium-sized diagnostic companies, including innovations 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.

APL continues to strengthen several key partnerships to support our operations. APL is partnered with several of Alberta's major post-secondary institutions and other academic and research agencies, including the University of Alberta and the University of Calgary, the Southern Alberta Institute for Technology (SAIT), the Northern Alberta Institute for Technology (NAIT), Red Deer Polytechnic, funding agencies, foundations, pharmaceuticals, diagnostics companies, global vendors, small- to medium-sized local enterprises, and community partners. Through strong strategic partnerships, APL is working to leverage academic and research opportunities across Alberta to enable the effective delivery of service and execution of our strategic and business plan.

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 more than 1,700 active clinical scientific research protocols underway at various sites across Alberta. In 2023, APL participated in approximately 2000 clinical trials. We are also 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 laboratory services, in collaboration with the cancer centres and pediatric hospitals, for cancer clinical trials that involve providing the latest care and targeted cancer treatments available.

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 like 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.

Alberta Precision Laboratories Performance

Accreditation

As part of our commitment to ensure we deliver the very best services to our clients, partners and patients, APL maintains accreditation to prove we are qualified, competent and comply with international standards through periodic independent reviews. Laboratories are governed by various accreditation organizations and follow a stringent accreditation process.

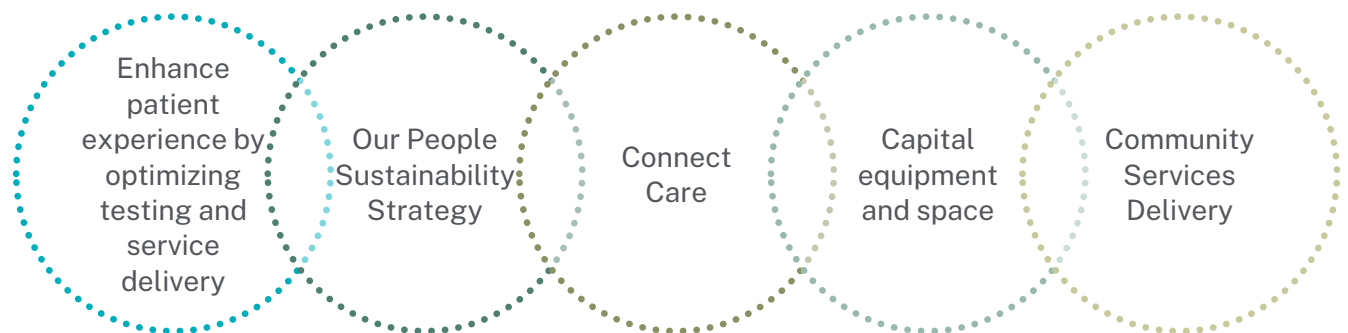
- Laboratories are accredited by the applicable accreditation organizations that may include:
- American Association of Blood Banks (AABB)

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

All APL laboratories are accredited by appropriate governance bodies. All sites assessed by the College of Physicians and Surgeons (CPSA) within the 2023-24 fiscal year successfully achieved accreditation with the CPSA. The Transplant Laboratory North and South received their accreditation from the American Society of Histocompatibility and Immunogenetics (ASHI) in 2023. Similarly, the Cellular Therapy Lab passed their accreditation from the Foundation for the Accreditation of Cellular Therapy (FACT). The Edmonton Prov Lab also passed the College of American Pathologists (CAP) inspection in October 2023.

Strategic areas of focus

The 2023-24 APL annual report represents a shift in how APL continues to transform as an organization. In recent years, significant resources have been directed toward the implementation of Connect Care and supporting the transition to and integration of DynaLIFE. As these efforts began to require less focus, APL has had more opportunities to refocus efforts towards operational areas requiring attention. Those areas of focus are listed below.

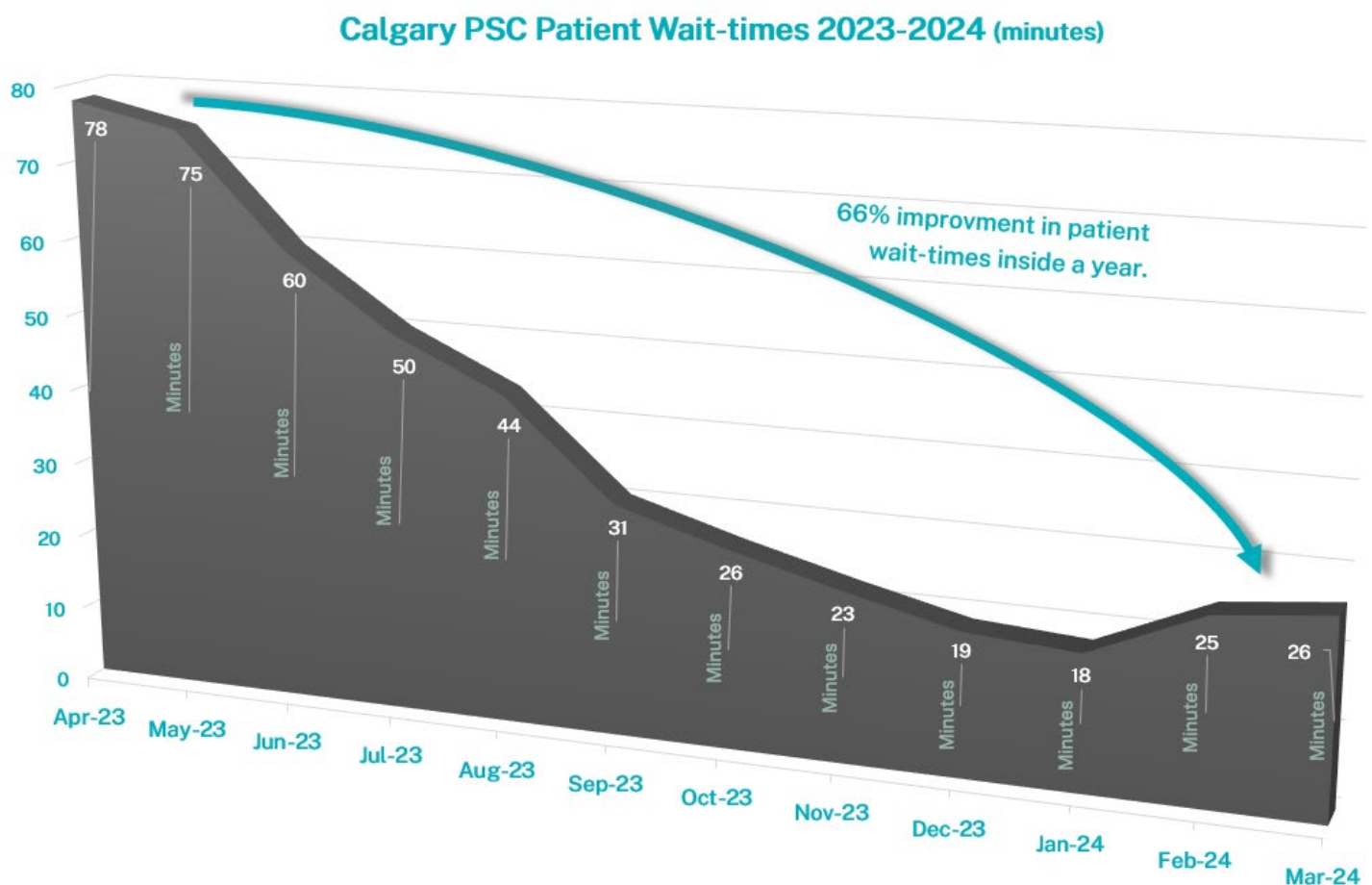


Notable accomplishments

Goal 1: Improve health outcomes and patient experience.

Delivering high-quality community lab service

Despite the ongoing challenges related to staffing shortages and other significant organizational initiatives, including Connect Care, APL staff met or exceeded key targets for delivering high-quality community laboratory service in 2023-24. Initiatives to support increases in patient volumes as well as, collaborating with physicians to provide coaching and training, which generated a reduction in non-essential test ordering, resulted in improvements across the lab system.



Laboratory Integration

APL and DynaLIFE had long been committed to providing exceptional lab services to the people of Alberta. Both organizations recognized the strain created by consolidating

community services solely to DynaLIFE and the resulting necessity to collaborate and consolidate resources. On August 31st, 2023, Alberta Health Services (AHS) signed an agreement with the owners of DynaLIFE. The agreement stipulated DynaLIFE, a private provider of lab services, would transfer all its, assets, staff, operations, and physical locations to Alberta Precision Laboratories by the end of 2023.

The decision to integrate DynaLIFE into APL was made with careful consideration by all parties involved. The intention was to optimize lab services to better serve the people of Alberta. By consolidating operations under APL, a greater level of efficiency and coordination could be achieved, leading to improved patient experiences and outcomes.

The agreement also demonstrated the dedication of the organization to meeting the ever-transforming healthcare needs of Albertans. By becoming one entity, APL is able to leverage an extensive collective expertise as well as the resources to drive innovation, improve access to care, and enhance the overall lab services in Alberta.

The integration required completing a complex transformation in an exceptionally short timeframe of just 16 weeks. To make the integration successful it necessitated considerable support from AHS through their shared service agreement with APL, as well as bringing on board consultants from Ernst and Young (E&Y) to provide daily project management support and contract due diligence.

Key project leaders from APL, AHS, and DynaLIFE came together within the first week the agreement was signed. This team were early adopters of the future vision for lab services under a provincial scope and together, with E&Y's support, made decisions quickly and efficiently. This was especially important when it came to establishing project milestones and developing the roadmap for the project's rapid progression.

People Integration

Over the next 16 weeks, one of the most critical initiatives to achieve was the integration of 2,818 DynaLIFE staff into APL, and, in some cases, AHS. These employees were responsible for running operations at 62 patient services centres across Alberta, as well as the two main hub labs and all the necessary supporting departments and logistics required for these existing operations.

The integration of approximately 2,694 lab staff (largely composed of unionized employees) and 124 NUEE staff who would transition to AHS, demanded a well-executed plan that went into effect on December 18, 2023. The people integration needed to tackle several issues with the most significant being the integration of two different HSAA bargaining units into a single unit, and the addition of the CUPE bargaining unit under APL. It also required the APL organizational structure to be modified and resourced in support of the changes. As highlighted throughout this report, laboratory professionals are in high demand. A primary

objective of the integration was to ensure there would be no job loss resulting from transition. To achieve this, it was essential we provided effective communication, any necessary training or preparation and addressed potential challenges or concerns with a solid change management strategy.

Additionally, the underlying priority of the entire integration was the seamless continuation of operations at the patient services centres and hub labs, ensuring no disruption in service delivery to patients. Part of the success was creating a unified workforce where employees from both organizations could collaborate and work together towards a shared vision.

Key Integration Highlights:



~700 corporate contracts were assessed reviewed and reassigned to APL. The contracting team is actively harmonizing where possible.



APL increased their capital infrastructure across the province adding, 2 hub lab testing facilities (located in Edmonton and Calgary) as well as 62 Patient Service Centres which included the reassignment of leases.



Completed a massive IT integration, moving 35 applications, and thousands of files of data from DynaLIFE IT infrastructure onto APL infrastructure.



Three significant public facing rebrand projects began and included replacing external public facing signage at 43 PSC locations, 210 decade fleet vehicles, and courier and mobile collections employee apparel.



Through optimization opportunities under the new provincial scope, APL reduced turnaround times for blood cultures and other cultures in the South, Central, and North Zone by utilizing the regional APL lab centers.



Through optimization opportunities under the new provincial scope, Anatomic Pathology samples from rural acute care sites and local specialty clinics were redirected to regional labs, alleviating volume pressures on the hub laboratories and improving turnaround times for physicians and patients.



A community stat test list was standardized across the province providing greater clarity and consistency for both staff and healthcare providers on the parameters and process for ordering a stat test.



A provincial logistics working group was able to address immediate transport route concerns by rearranging stops or adding new routes as appropriate while also strategizing to create an improved system long term.

Newborn Metabolic Screening

The newborn metabolic screening program is a critical public health program and partnership between Alberta Precision Laboratories and Alberta Health Services to screen newborns in Alberta shortly after birth for 22 different treatable genetic, metabolic, and congenital disorders. Designed to detect and prevent severe health problems, disabilities, or even death to ensure better health outcomes, the screenings usually involve taking a few drops of blood from an infant's heel within the first 24-48 hours after birth. If a positive result is found, the parents are contacted by a healthcare professional who will guide them through the next steps, which may include further testing or treatment. Out of approximately 48,922 samples received in 2023, the program identified 72 babies with treatable, potentially life-threatening disorders.

Addressing Laboratory Equipment/Infrastructure

A review of existing leased spaces for laboratory and administrative staff continues to identify any areas of consolidation or potential cost savings. Along with the implementation of a high-volume Roche chemistry analyzer in 2022, APL continues to address its infrastructure and capital needs. For example, the Microbiology department at the Calgary Hub Lab expanded to install two full BD Kiestra™ Lab automation lines that continue APLs drive toward more cost-effective testing solutions. In addition to additional equipment, Space expansion and renovations for the Atellica™ automation system also took place in the Anatomical Pathology department at the Calgary Hub Lab to accommodate a consolidation of services which is underway this coming fiscal year.

Recent updates to the Edmonton Hub Lab space include completed new administrative and clinical chemist offices, ongoing Hematology expansion, and new equipment installations in Chemistry, Hematology, Anatomic Pathology processing and staining,

Anatomic Pathology also saw the relocation of their non-gynecological testing, slide filing, and send-out benches, with Cytology moving to the second floor. Microbiology offices were completed, and preparations were underway for the arrival of two new BD Kiestra™ Automation lines, requiring 1,000 sq ft of space, with Vitek® microbial identification systems being relocated. These expansions and upgrades ensure that both Calgary and Edmonton Hub Labs are equipped to handle increased volumes and complexities in medical diagnostics and enhance healthcare services across the province.

Histocompatibility and Immunogenetics (HIL) Integration

In 2023, the Histocompatibility and Immunogenetics (HIL) lab in Calgary and the Human Leukocyte Antigens (HLA) Lab in Edmonton underwent some changes as part of being included in the provincial Transfusion and Transplantation Medicine (TTM) program. These changes, designed to enhance their collaboration and operational efficiency, are set to bring about a positive transformation. Following several planning sessions, the teams identified key strengths and critical success factors, which they believe set a clear path for future success.

As a result, they have rebranded themselves as the Transplant Laboratory North and Transplant Laboratory South, signaling a new era of collaboration and purpose that holds great promise for program alignment. This name change became effective April 2024. Moreover, they have committed to completing crucial updates, such as the quality report, developing a common histocompatibility requisition, and ensuring easy access to resources for stakeholders, all of which are scheduled for completion in mid-2024.

Lab appointment capacity increases in Calgary

With the transition of DynaLIFE community laboratory services to APL, addressing patient wait time issues across Calgary became one of APL's highest priorities. The wait-time issue was a two-pronged problem, with the first being long wait times for Calgarians upon arriving at the Patient Service Centre (PSC) for a collection. The second issue was getting an appointment. Patients waited for extended periods before securing an appointment, which exacerbated the overall wait time problem.

To address each issue, APL implemented several strategies. First, we extended the hours of operation at some of our PSC locations to weekend and evening hours and added community appointment availability at our hospital outpatient laboratories. This allowed us to open more appointment times and accommodate a larger number of walk-in patients, thereby reducing waiting-room wait times.

Additionally, we added more phlebotomy collection chairs at specific PSC sites. Adding these chairs increased the number of appointments available and enabled us to see more patients at a time. At some sites, this capacity was further supplemented with temporary support from an external partner using trailer and van-based specimen collection spaces. This not only improved efficiency in waiting-room wait times but also helped to alleviate some of the appointment backlogs.

Furthermore, we identified an area in Southeast Calgary where there was a high demand for lab services. To address this issue, an additional PSC was opened in the Chaparral community of Calgary. This new facility helped to distribute the patient load and reduce the pressure on our busiest sites.

Our strategic interventions, such as extending hours, adding phlebotomy collections chairs, and opening a new appointment-only PSC, have significantly improved the issues of limited appointment availability, and overcrowding at certain sites. These measures have not only enhanced access to care but also reduced wait times, thereby improving the overall patient experience.

Rural Immunoassay Implementation

To enhance laboratory services in rural areas, and leverage new rural chemistry analyzers, APL launched a provincial rural immunoassay strategy to standardize reporting of Human Chorionic Gonadotrophin (serum hCG), B-type natriuretic peptide (BNP) and troponin testing in 2023. The first phase of this initiative involved the implementation of the Beckman Coulter Access 2 across larger rural sites in the North and Edmonton Zones with a number of smaller sites implementing the QuidelOrtho Triage Meter. The implementation of this approach is a significant step forward in improving laboratory services in Alberta's rural communities. By standardizing testing and protocols, APL is providing consistency in our testing platforms, their instrumentation, and standard operating procedures, that will ease staff transition during times of shortage but also work to ensure that all patients in Alberta will receive high quality care, regardless of their location.

Connect Care – Launch 6 and 7

Connect Care is a single provincial clinical information system (CIS) that allows healthcare providers a central access point to patient information, shared clinical standards and best healthcare practices.

Thousands of APL staff have been involved in building, testing and implementation of the laboratory component of the Connect Care system - a transformative step towards achieving integrated laboratory services where healthcare providers can order lab, diagnostic imaging and other tests, with results appearing in the patient's electronic medical record.

In 2023, launch 6 of Connect Care was completed successfully in May 2023 across all zones, adding an additional 208 sites onto the system. In November 2023, launch 7 added 79 additional sites and 12, 000 staff primarily located in the North and South zones. Beyond the organizational integration, and continued standardization of equipment, APL completed the final Laboratory Information System (LIS) launches of Connect Care this year. The Epic Beaker LIS is now standard across the province. All patient results are housed within this single system, and all our staff work in the same computer application environment. Never before has it been possible for staff members to easily move between locations to provide coverage at other sites, and for patients and clinicians to realize the benefit of a single LIS. This means most APL laboratories are now on Connect Care.

Goal 2: Improve the experience and safety of our people.

Workforce Strategy to Address Staffing Challenges

Workforce challenges present a significant and ongoing risk to APL. With the development of our comprehensive strategy to approach workforce opportunities in 2021-22, APL has taken some important steps to address this ongoing challenge in the last year. In particular, significant progress to the strategy governance, reporting, and the onboarding process have been completed, all which contribute to fostering a supportive environment for both our new

and existing employees. In addition, our recruitment strategy was launched in 2023 which aims to identify and attract qualified candidates to APL. As part of this, several regular campaigns, initiatives, and events are also in place with our system partners that emphasize student recruitment at Alberta post-secondary and high schools, as well as seeking to attract and retain our rural staff.

This strategy has also created opportunities for our staff to provide temporary coverage at rural sites which are experiencing high vacancy rates. Many of these sites are staffed by Combined Laboratory/ X-Ray Technologists, roles that have a vacancy rate that is more than double other lab roles. The temporary coverage initiative affords opportunity for interested staff to build relationships, APL culture, and better understand the variability in locations we operate within.

Measuring Staff Engagement

APL undertook its first Our People Survey through Gallup in late 2021. As part of our efforts to measure activities related to our employee engagement, APL developed the APL Engagement Plan in 2022 and has continued to action it during this past year. The Engagement Plan is one of the plans within APL's Our People Sustainability Strategy (OPSS) framework. This year, APL leaders created action plans that identify 1 or 2 specific tactics that are realistic and relevant to their business area to promote staff engagement. Measurement and reporting will occur through the Gallup and Pulse surveys, which are aligned to the administration and distribution of the AHS People Survey, which occurs every other year. Opportunities for staff engagement are also shared with APL leadership to promote the generation of new ideas across the organization.

Employee Orientation

In 2023, APL established a working group to review and refresh the New Employee Onboarding and Orientation program. The primary goal was to simplify and streamline processes, ensure information was relevant and easy to find, and create updated, user-friendly resources for new employees and hiring managers. The program aims to familiarize new employees with their responsibilities, required learnings, relevant policies, and our Mission, Vision, and Values. Onboarding and orientation are essential in welcoming new employees while helping them settle into their roles and teams. We want to emphasize our unwavering commitment to continuously reviewing and refining the program with our HR partners, as we believe this ongoing effort is crucial in maintaining the program's effectiveness and relevance.

Enhancing Recognition of Staff Achievements

Acknowledging the outstanding work of our people is an important part of building a culture of excellence, which is why we developed new tools and resources to recognize the accomplishments and important milestones of our employees and medical-scientific staff.

APL continues to acknowledge the important work of our people by using the APL Critical Value Award to recognize individuals or groups within APL who, through their actions, work to foster and strengthen APL's values-driven culture, leadership, performance excellence, teamwork, quality & safety, customer service, and innovation. In 2023-24, 131 staff received a Critical Value Award by APL's leadership team. In addition to the Critical Value Awards, APL also introduced a series of new certificates for giving staff accolades and recognizing achievements was introduced for use of APL leaders and supervisors as part of the ongoing management of their teams.

National Medical Laboratory week took place from April 9-15, 2023, and throughout that week, APL held several contests to give away T shirts, buttons, and gift cards for the APL store to recognize their work. Representation from APL at the LABCON annual national conference hosted by the Canadian Society for Medical Laboratory Science, was a highlight of the week.

With over 4,000 laboratory professionals providing services to Albertans and their families, National Medical Laboratory Week is a time to ensure these important professionals receive recognition for their dedication to patient care at APL. The purpose of this annual event is to celebrate medical laboratory professionals across Canada, and to honour our work and commitment to patient care.



Photo: Arianna Ling, Wainwright, AB

Arianna Ling - Medical Laboratory Technologist: Arianna works at the Wainright Health Centre and says, "the best thing I like about my job is the variety."

Goal 3: Improve financial health and value for money.

Appropriate lab testing

In line with APL's commitment to continuous improvement, APL maintains support for multiple initiatives promoting appropriate utilization of laboratory testing. In collaboration with Improving Health Outcomes Together (IHOT) and new AHS Learn, Improve, Together (LIT) model to advance quality, research and innovation, APL is continually working to prioritize, action, and support these initiatives, which are at various stages of planning and implementation. This has resulted in Choosing Wisely Canada Level 1 status being achieved at two hospitals in Edmonton, five in Calgary hospitals, and the Red Deer Regional Hospital. In addition, several historical and outdated tests have been discontinued. For instance, APL has stopped using the xylose tolerance test, anti-reticulin antibodies, and apo E genotyping for Alzheimer's Disease. This decision is in line with APL's commitment to promoting appropriate test utilization.

As an extension to this important ongoing work, APL also developed an Appropriateness Strategy in early 2024. Over the past five years, APL has seen an upward trend in testing volumes with volumes peaking in 2023 and expected to continue growing.

This strategy, developed in collaboration with Medical and Operational leadership, provides clear guidance on how to structure and prioritize test utilization appropriately and effectively. Given the substantial growth in volumes, ongoing cost pressures, and our workforce deficit, the strategy will be implemented in two phases: immediate to short-term initiatives and medium to long-term initiatives. By implementing the strategy sequentially, we can optimize our services and create opportunities for cost savings and capacity building simultaneously.

Leveraging our integrated provincial approach, APL has identified opportunities to consolidate testing, send specific testing to referral laboratories where they are not internally economically viable, and repatriate testing where it is financially and clinically appropriate to do so. This year a major repatriation occurred bringing in house testing that largely supports Gastroenterology, both achieving better value and providing results directly to the patient record.

Strategic Model Development

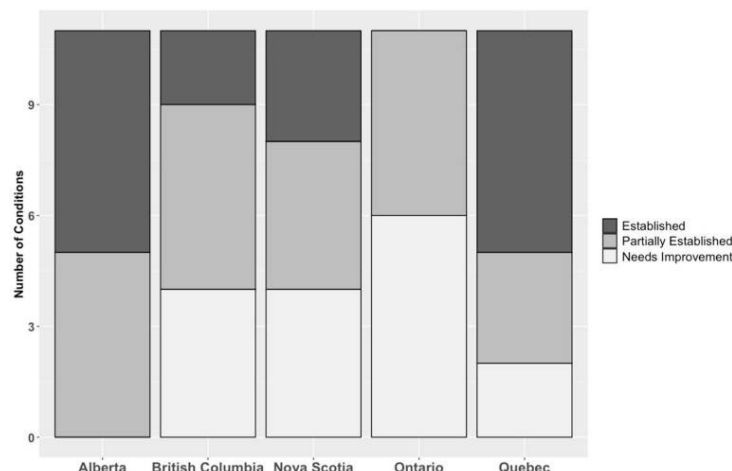
Financial stewardship is no doubt a recurring theme within APL's annual report and business plan. This past year, APL worked with the support of Ernst and Young to develop a thorough understanding of the growing demands on laboratory services, increased expectations from patients and clinicians and the challenges the organization will face in meeting these. The result is a dynamic model that APL teams can use to quantify impacts of population growth, demand growth, technological changes and so forth on our operations. It also allows illustration of the impacts of various interventions. This work also drove a strategic direction

and key areas and concepts the organization will drive toward. This work is also a key input to the ongoing changes to health delivery in the province.

Goal 4: Improve the influence of laboratory medicine in the health system.

Transformed and integrated organization

With completion of integration and, APL becomes the largest integrated laboratory service provider in Canada. We are increasingly recognized as a leading innovator and trailblazer for adopting novel ways of service delivery. Built on the backbone of one integrated laboratory information system and governed through a lean, coordinated organizational dyad leadership structure at all levels, APL is able to nationally lead the way in evidence based and data driven adoption of emerging standards of care. Recently APL has been identified as leading the country in systems readiness for adoption of novel molecular and genetics diagnostics as standard of care, either partially meeting or meeting the relevant conditions. This is a crucial prerequisite for all our clinical areas to practice precision medicine and uniquely positions APL to be a leader in the adoption of this testing.



Number of necessary conditions for health system readiness for genome-based medicine established by province. Lightest shade indicates the condition does not exist or needs significant improvement ('needs improvement'). Intermediate shade indicates some aspects of the condition were established ('partially established'), while the darkest colour indicates most or all aspects of the necessary condition were established ('established').

Husereau D, Villalba E, Muthu V, Mengel M, Ivany C, Steuten L, Spinner DS, Sheffield B, Yip S, Jacobs P, et al. Progress toward Health System Readiness for Genome-Based Testing in Canada. *Current Oncology*. 2023; 30(6):5379-5394.

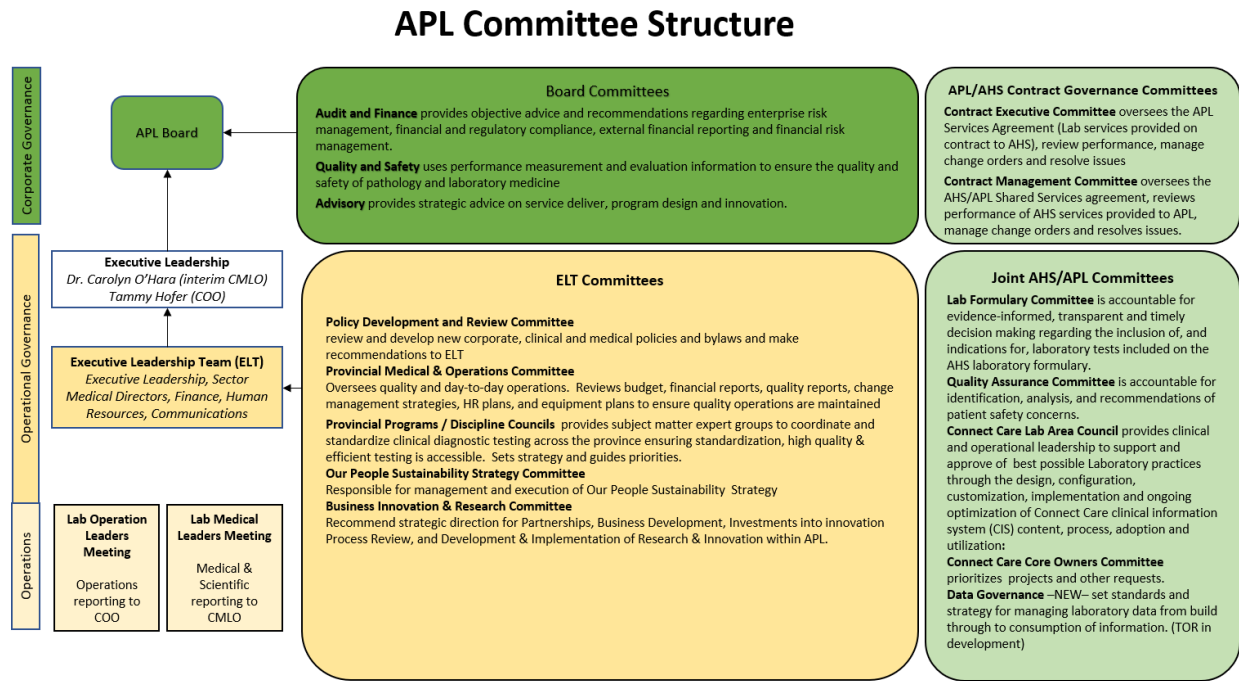
Sustainability

As we look forward to 2024-25, we will be rolling out the remaining launches of Connect Care and continuing to standardize, optimize and innovate to provide the high-quality laboratory services Albertans expect. APL will continue to mature as an organization, with a clear focus on services in the acute care, community, public health, and genetic testing realms. APL continues to work with AHS to identify, design, and validate transformational opportunities for laboratory medicine. These opportunities will drive decision-making and the strategic management of the Business Plan, which houses the priority initiatives and strategic objectives aligned with our four Strategic Goals.

Under our appropriateness and utilization scope we focus on high return and high impact initiatives that are not only financially healthier, but also driven by innovation towards improved patient care. This includes standardized practice approaches reducing variance in care, as well as Alberta made solutions to deliver diagnostic testing more effective and cost efficient.

While instability and potential for significant change still exist for laboratory services in Alberta, APL knows Albertans continue to expect the very best from their healthcare system, and our people are ready to deliver. To ensure the path towards recovery stays the course, APL will refresh its strategic plan during the 2024-25 fiscal year, laying the groundwork for APL's direction for the next several years. Similarly, there will also be an increased focus on ensuring the viability of our services. Our main strategies for sustaining high quality lab services include our work ensuring appropriate utilization of laboratory resources and through the Our People Sustainability Strategy, which has a vision of 'Enabling Alberta's Clinical Laboratory Services Now and Into the Future.

Appendix A: APLs Corporate Governance, Operational Governance and Operational Committee Structures



Appendix B: APL Key Performance Indicators

Metric	Measure	Target	2023-24	Actual vs. Target
Goal 1: Improve Health Outcomes and Patient Experience				
Blood Culture Contamination Rate	% of contaminated blood vials vs. the total number of blood culture collections.	<3%	1.3%	✓
Critical Value Reporting*. Time to communicate critical results to a physician that require clinical action.	% within 15 minutes	90%	N/A	✓
Patient Wait Times (PWT) for patients having specimens collected at outpatient or community sites.	Time from patient arrival to initiation of phlebotomy for 80% of patients.	30 minutes	28.2	✓
	Time from patient arrival to initiation of phlebotomy for 90% of patients.	60 minutes	47.8	✓
Turnaround Time (TAT): Anatomical Pathology level IV surgicals.	Time from receipt in laboratory to report being issued for 90% of level IV surgical pathology samples.	4 working days	8.1	
Turnaround Times (TAT) Intra- operative Consult Results.	% within 20 minutes for single block intra-operative consult results/ diagnoses reported to the clinician.	90%	93.1	✓
Turnaround Time (TAT) for urgent general chemistry and hematology tests for emergency department or urgent care patients.	Time from sample collection to result available for 90% of samples.	90 minutes	62	✓
Turnaround Time (TAT) for urgent general chemistry and hematology tests for admitted patients.	Time from sample collection to result available for 90% of samples.	120 minutes	73	✓
Turnaround Time (TAT) for urgent general chemistry and hematology tests for outpatients. **	Time from sample collection to result available for 90% of samples.	720 mins	249	✓
Turnaround Time (TAT) for non-urgent general chemistry and hematology tests for outpatients **	Time from sample collection to result available for 90% of samples.	1,440 mins	717	✓

Metric	Measure	Target	2023-24	Actual vs. Target
Goal 2: Improve the Experience and Safety of Our People				
Disabling Injury Count	Total # of claims for disabling injury.	n/a		
Hand Hygiene Compliance	% compliance of hand hygiene during the course of patient care	90%	94.1%	✓
Proficiency Testing	% of acceptable external proficiency testing results	95%	98.6%	✓
Sick Rate	Average # of paid sick days per FTE in a year.	n/a	13.2	
Vacancy Rate	Total number of unique vacant positions relative to the unique active positions expressed as a %.	n/a	16.6%	
Voluntary termination	Count of employees who have voluntarily terminated as a % of the headcount.	n/a	3.6%	
Goal 3: Improve Financial Health and Value for Money				
Administrative cost	% of administrative costs as part of total expenses	3.3%	1.68	✓
Goal 4: Improve the Influence of Laboratory Medicine in Health System				
Clinical trials	Count of clinical trials lab has participated in.	n/a	To Be Updated	

** Metric has been adjusted to account for changes in community services delivery as of Dec 4, 2022.