Achieving Better Patient Outcomes in Supporting Ontario's Community Medical Laboratories

Each year Ontario's community medical laboratories provide 17 million Ontarians* with over 120 million tests that support health care decisions made by their primary care providers. This demand is expected to rise as the population ages.

Laboratory test results – obtained from blood, urine, or saliva samples – are the foundation for clinicians to provide care to their patients. With over 70 per cent of health care decisions based on diagnostic results, the importance of high-quality, safe testing and timely results are key to maintaining optimum health for patients.

In this spirit, Ontario's Ministry of Health works with community laboratories across the province, and the Ontario Centre of Innovation (OCI), to continuously improve patient outcomes and enhance the patient experience. This work occurs through an initiative called the New Tests and Technology Fund (NTTF).

The NTTF is an \$18.9 million initiative made possible through funding from the Ministry of Health to identify efficiency opportunities within the laboratory sector for 2020- 21 that benefits labs across the province. OCI, through its work in the area of health innovation procurement, supports the implementation of new technologies within Ontario's community laboratory sector. For example, this initiative supports the purchase of new technologies and solutions that have yet to exist in the market or are not currently available locally in Ontario, such as improving access to in-home lab testing for homebound individuals. Enhancements like this enable labs to support better patient outcomes.

The NTTF program provides the opportunity for community labs to run pilot programs, to purchase specialized lab equipment or technologies with the ability to run tests in new ways, or provide additional options in delivering tests to patients, particularly in situations where an individual is unable to visit a community lab directly.

Current funding has enabled 11 projects from large and small community labs across the province to look at new workflows, processes, and technologies to improve patient access and care and will ultimately provide innovative opportunities to better serve Ontario's health care needs far into the future.

"As we have seen more than ever over the past year, community medical laboratories play a critical role in our health system by administering and processing tests that help Ontarians stay healthy," said Christine Elliott, Deputy Premier and Minister of Health. "Our government is proud to partner with our community lab partners to ensure they have access to innovative technologies and supports to deliver timely diagnostic results to Ontarians and ensure patients receive the care they need, when they need it."

Community medical laboratories play a critical role in our health system

The initiative encourages innovation and supports community medical labs to explore new areas for improvements, including leveraging technology advancements to create better patient outcomes. Labs may then have an opportunity to identify areas for improvement that can be scaled to improve the larger laboratory system in the future and improve access to laboratory services across the province.

Exciting potential avenues of improvements include accelerating digitization that may enable efficiencies, allowing the labs to support the community in safer ways through faster results and ease of contact. If a test result can be obtained in one day, instead of five, the resulting benefits to the patient and the entire community are immeasurable, particularly in the case of highly transmissible infections.

> The current pandemic has resulted in focused innovation by front-line health services

Once the projects are completed, it is anticipated that the results will identify significant workflow efficiencies and further implementation of innovative laboratory solutions that support community labs and their clients in progressively new ways.

The current pandemic has resulted in focused innovation by front-line health services," says **Claudia Krywiak**, President and CEO of OCI. "We are working to support the identification of novel technology solutions to existing service needs, with the ultimate goal of improving patient experience and health."

Innovating to improve the quality of the patient experience and efficiency of laboratory services

"Ontario's community laboratories are continually innovating to improve the quality of the patient experience and efficiency of laboratory services. With the support of OCI, the New Tests and Technology Fund has furthered this innovation, to the benefit of Ontarians receiving community laboratory services," says **Paul Gould**, Chief Executive Officer, Ontario Association of Medical Laboratories. NTTF is helping equip Ontario's Community Labs with next-generation innovations, designed to improve patient experiences and health outcomes, including:

- Reduced time to diagnosis for certain Sexually Transmitted Infections (STIs) from 4 days to 90 minutes
- Improved mobile laboratory services for safety and convenience of at-home sample collection
- Purchase of specialized machinery to automate workup of urine samples – saving time and personnel
- Improved patient [testing] experience through mobile-friendly dynamic appointment scheduling, providing a platform for end to end process from mobile service requisition to resource scheduling and deployment

