

Report: Ontario Based Steering Committee Examines the Changing Needs of the Lab Profession

The health human resources shortage experienced in Ontario laboratories over the past several years was exacerbated by the pandemic and had reached a critical state. With the closure of seven Medical Laboratory Technologist (MLT) programs in the 1990s, the growing population of Ontario, and an increase in laboratory testing, the number of MLTs does not meet the testing demand.¹ Currently, there are over 300+ MLT vacancies throughout our public and community laboratories². 38% of this group are approaching retirement.³ Due to the shortage of lab professionals, 58% of labs are experiencing delays in providing test results.⁴

The strategic direction of the MLPAO's Board of Directors includes finding solutions to the HHR shortage. The Ontario Based Steering Committee (OBSC) was developed to discuss the current landscape in labs across Ontario with a focus on the changing needs and the long-term vision of the profession.

Overview:

In January 2023, the MLPAO Board of Directors formed the Ontario Based Steering Committee (OBSC) comprised of stakeholders across Ontario including lab leaders from public and community laboratories, educators, and industry representatives, to provide input on the human health resource shortage that is prevalent in Ontario laboratories.

There are currently 7 MLT programs across the province: Michener Institute, Ontario Tech University, Cambrian College, St. Clair College, St. Lawrence College, Anderson College, and Conestoga College which just accepted its first cohort in 2023. The diploma programs vary in length from 2.5 to 3 years, except for Ontario Tech University which is a 4-year degree program. Each program includes a one-year clinical placement.

Students entering these programs come from a variety of backgrounds: high school, postgraduate, and internationally educated.

¹ [Clinical Placements and the Shortage of MLTs](#)

² [MLPAO Report – Shortage of Lab Professionals Continues Post Pandemic](#)

³ [2022 CMLTO Annual Report](#)

⁴ [MLPAO Report – Shortage of Lab Professionals Continues Post Pandemic](#)

The MLT program includes education in five disciplines: Histology, Microbiology, Chemistry, Hematology and Transfusion Medicine. Students are required to complete didactic and clinical placement in all 5 disciplines to be eligible to challenge the national exam and register for license to practice with the College of Medical Laboratory Technologists of Ontario in Ontario.

The Michener Institute also has 2 advanced diploma programs for certified MLTs or BSc graduates: Diagnostic Cytology and Genetics Technology. These programs are 2 years in length and include a clinical placement. These 2 programs are the only programs in Ontario for Diagnostic Cytology and Genetics MLTs, and each program graduates less than 20 MLTs per year.

The OBSC reviewed the current pathway for entry to practice for Medical Laboratory Technologists (MLT) in Ontario. This included a review of the admission requirements for MLT programs, their capacity/enrollment, the availability of MLT programs across Ontario, and the requirements for certification and registration for license to practice.

Challenges with the current system were identified, which create barriers to having sufficient qualified MLTs practice in Ontario.

The OBSC provided recommendations for consideration of potential solutions to address the dire shortage of MLTs.

Challenges and Barriers

- The pathway to MLT certification is long. Although most programs have admission requirements to accept students directly from high school, many students entering the MLT programs have university degrees (e.g., BSc) making it a 7-year journey to become an MLT.
- Changes in lab practice and consolidation of lab services across Ontario have resulted in many labs no longer having all 5 disciplines on site. This raises the question of the necessity for all MLTs to be certified in 5 disciplines.
- Since many labs no longer have Microbiology and/or Histology on site, the requirement for a 5-discipline clinical placement prevents many labs from being able to accept students for clinical placement. This also creates challenges for students to go to multiple sites in order to complete all of the requirements for placement.
- The pathway for Internationally Educated MLTs (IEMLTs) to become certified in Canada is arduous and costly. Many IEMLTs are not trained to practice in 5 disciplines in their homeland. The certification exam requires IEMLTs to be competent in all 5 disciplines. IEMLTs are often required to take courses in these disciplines to qualify to challenge the certification exam, even though they will likely never practice in those disciplines.



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- The current national certification exam is a single exam testing for all 5-disciplines that exam candidates either pass or fail. There is no process for candidates who may have strength and proficiency in some disciplines to be able to be certified and be licensed in specific disciplines, but not all.
- Genetic and cancer testing and technology are expanding rapidly. With only one training program in Ontario, there are insufficient Genetics and Diagnostic Cytology MLT graduates to meet the growing testing demands in Ontario.

Recommendations

- Consider a certification model where students would write a certification exam separated by discipline. Certification would be granted only in the discipline(s) they successfully pass on the CSMLS certification exam. This would allow exam candidates who are successful in some disciplines to be certified and practice in select disciplines. Students would not be required to pass all 5 disciplines in order to practice as an MLT.
- Consider single discipline certification exams which would facilitate certification and registration of licensure for some MLT students and for IEMLTs.
- Support the CMLTO in utilizing the pathway to MLT with qualifications that can be deemed equivalent to practice as an MLT. This regulatory flexibility will facilitate getting potential MLTs into the workforce when and where they are most needed.
- Consider a general lab foundation certification (Core – Chemistry, Hematology and Transfusion Medicine) upon which MLTs could then specialize into disciplines like Microbiology, Pathology, IHC, Flow Cytometry, etc.

These recommendations will be shared with the Canadian Society of Medical Laboratory Sciences (CSMLS), the College of Medical Laboratory Technologists (CMLTO) and other stakeholders with the intent of encouraging them to consider these recommendations which may expedite the certification and licensure of MLTs.

Committee Members

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