MLPAO APLMO
Medical Laboratory Professionals' Association of Ontario
L'Association des professionnels des laboratoires médicaux de l'Ontario

Medical Laboratory Technologist (MLT)
Human Resource Crisis - 2019

To: Stakeholders, Members, Educators
Date: July 19th, 2019
From: Michelle Hoad, CEO, Medical Laboratory Professionals' Association of Ontario

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As your provincial association, the projected shortage of MLTs in Ontario has been at the forefront of our priorities. It is our responsibility and mandate to inform and lobby the corresponding government groups regarding this shortage and discuss potential solutions.

Prior to speaking to the government, we knew that it would be critical that our data is accurate, and our ask is specific. In May, the MLPAO Board of Directors felt it was imperative that an unbiased perspective be provided with regards to the health human resource issue with MLTs in Ontario.

The MLPAO conducted a thorough RFP process and hired Kris Bailey, Principal Consultant with AiCon Inc. Kris was a certified MLT with many years of experience in the private and public laboratory sectors. Kris interviewed 22 stakeholders including urban and rural centers, private and public labs, government representatives, educators, and other key influencers.

One of the key messages from the report is that:

"students that graduate from Ontario MLT programs and then challenge the CSMLS exam are not meeting the workplace needs of Ontario employers."

Fixing this problem requires multiple stakeholder collaboration and is a long-term investment of time, resources and money.

The most immediate need is to add additional seats in MLT programs and lobby for an increase in clinical placements. The MLPAO is currently invested in this effort.

Addressing the long-term change will require much more work. The recommendations from the report include:

1. **Invest in an integrated career framework** with proposed education and career pathways with opt-in, opt-out and upgrade routes for all types of professionals—young and mature students and those internationally trained.
2. **Restructure and redesign content, competencies, and syllabus** to mirror the career framework.
3. **Add more academic seats** and increase retention rates.
4. **Redesign clinical placements**.
5. **Promote Medical Laboratory Science as a career option** to high school and university students.
6. **Create a recruitment strategy.**

Kris states in her report:

> "The profession faces challenges with recruitment, retention, and retirements. The objective is to improve the supply of laboratory professionals, build capacity, strengthen and modernize education and training pathways, promote faster learning, provide the requirements to work and to advance through a career ladder/pathway based on professional interest and industry need. A framework needs to be in place to advance foreign-trained persons and those with academic degrees into areas of interest."

The following is an overview of her recommendations.

RECOMMENDATION #1
Invest in an integrated career framework with proposed education and career pathways with opt-in, opt-out, and upgrade routes for all types of professionals—young and mature students and those internationally trained.

- Introduce an integrated career framework encompassing all disciplines and employment groups; the framework should encompass all types of intake students and bridging programs, that clearly identify pathways for progression and transfer, supported by learning and development. With a career ladder, everybody starts together and then streams.

- The career ladder needs to be fully designed including bridging, specialist, and management roles.

- Restructure the general MLT program as described in the Career Ladder for MLT- Clinical Science:
  - Core Lab Testing
  - Point of Care Testing
  - Basic Discipline Coverage for Hematology, Chemistry, Bacteriology, and Infectious Disease
  - Transfusion Services
  - QMS
  - Lab/Patient Safety
  - Information Management

RECOMMENDATION #2
Restructure and redesign content, competencies, and syllabus to mirror the career framework.

- Restructure and redesign content, competencies, and syllabus to match the career framework for MLAs, MLA/Ts, and MLT-General. It is not necessary to have all five disciplines; people should be either streamed early into a discipline/operating setting OR they use the core functions in a small/rural hospital setting.

RECOMMENDATION #3
Add more academic seats and increase retention rates.

- Increase the provincial academic program retention rate to at least 75% (academic programs).
- Ensure the right people are admitted to the program. Acquire or develop a provincial recruiting and qualification tool to increase the likelihood of a properly qualified applicant into the MLT program.
- Create a provincial description of what a successful MLT graduate looks like; create a relevant MLT profile.

RECOMMENDATION #4
Redesign clinical placements.

- Ontario educators need to harmonize their clinical programs and clinical placements.
- Placement strategy for all schools needs to be created and fully described to better orient the labs providing the clinical placement experience.
- Provide funding to students to support clinical placements in rural and remote areas (transportation, travel, and accommodation).
- Create opportunities for students to receive a clinical placement experience in more than one setting (e.g. highly urban, cities, towns, and rural areas in both hospitals and private labs).
- Each academic program should invest in a Placement Coordinator to work with other academic programs and labs to coordinate clinical placements.
- Clinical placements funding could be directed to the organization and/or the student for iPads, lab coats, transportation (if placing in 2 or more clinical placement-sites), accommodation (if placing in remote/rural site), and other supporting costs.
- Reduce wet lab clinical placement to a maximum of 12 weeks by cycling more students, staggering placements for shorter periods of time and/or sharing placements with another institution to extend the experience (e.g. academic health science center (AHSC), regional hospitals, medium-to-small hospitals, rural hospitals, outposts, community labs).
- The mindset of the trainers should be to demonstrate competency within the day-to-day of the living lab (e.g. competencies not trained in the dry lab) using experienced technical staff.

RECOMMENDATION #5
Promote Medical Laboratory Science as a career option to high school and university students.

- Advocate on behalf of the profession to promote med lab sciences as an early career option.

RECOMMENDATION #6
Create a recruitment strategy.

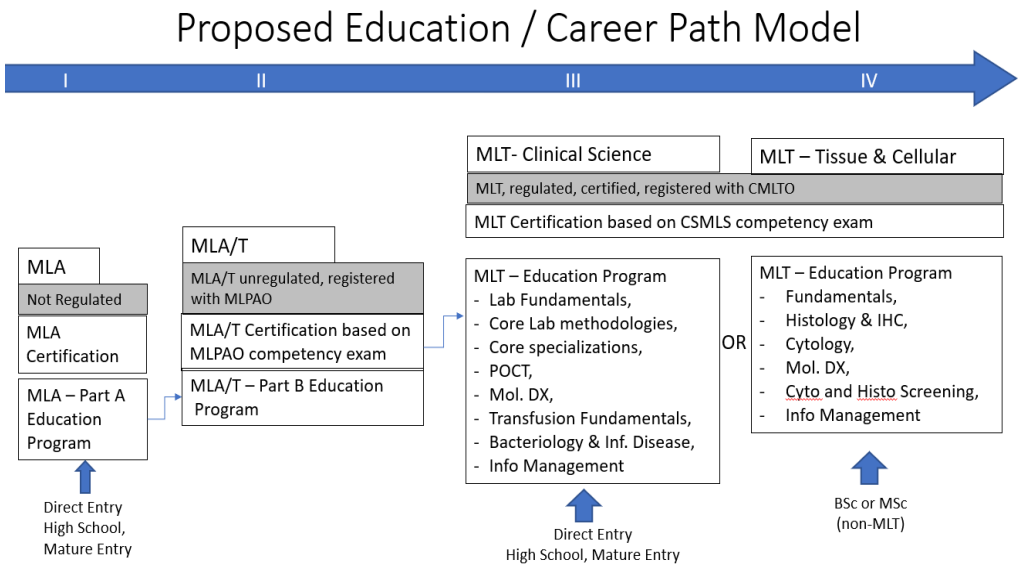
- Market the relevance of the northern experience. There are many opportunities such as seeing patients, QMS, e-QA, Point of Care testing administration, across the full spectrum of core testing without streaming and interaction with doctors, nurses, and clinics. Without marketing and clinical placements in the northern and rural area, there is no appetite for students to go to these smaller/remote/isolated sites when they enter their careers as medical laboratory professionals.

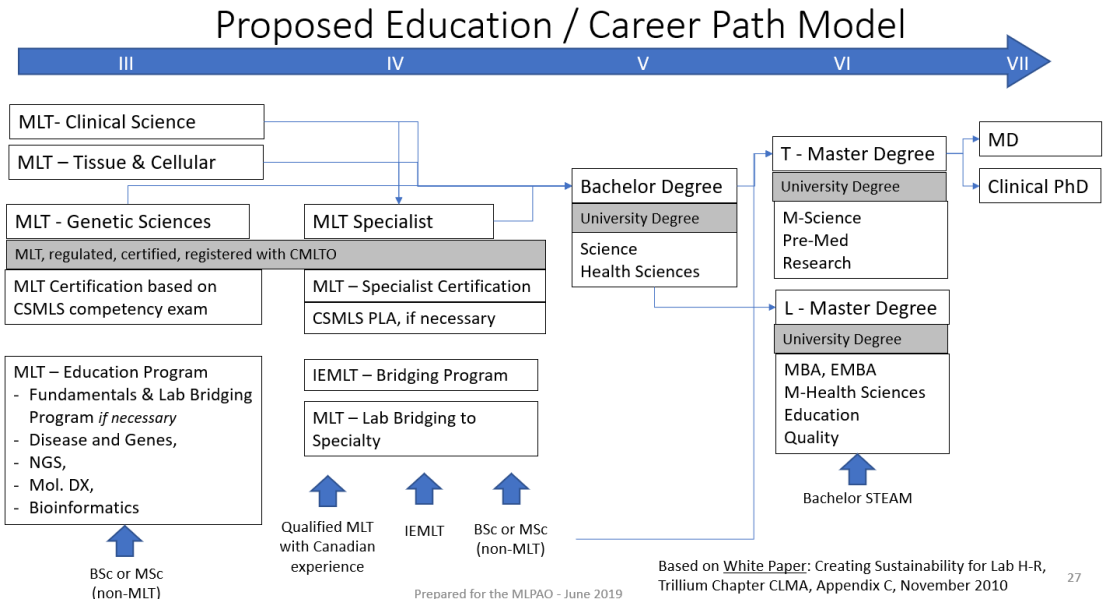
- Re-balance the workforce, as it may not be necessary to replace MLTs on a 1:1 basis. Use MLA/T:MLT ratios appropriate for the geography and workload requirements while maximizing scope of practice and understanding professional and medical risk.

- Provide for isolation pay for placements in remote regions as well as funding for recruitment and/or extended learning and/or conferences.

- Educators should provide virtual networks, reciprocal training programs between urban and rural systems, and mentorship, with larger labs (preferably referral labs with geographic similarities) providing support to rural labs.

- CLXTs needs to be further reviewed in Ontario.





Next Steps

1. **Clinical Placements:** Lobby the government to increase clinical placements.

2. **More Seats in MLT Programs:** Work with MLT training programs to advocate the need for more seats in their programs (Program Advisory Committee).

3. **Education and Ownership:** Educate stakeholders to understand ownership, responsibility and accountability in order to bring forth change. For example, the CSMLS and CMLTO are often referenced but stakeholders require further education about roles and responsibilities from both groups.

4. **Develop a Plan**: Build a plan to address the recommendations in this report.

As our consultant noted *"change has been discussed for over 10 years, but no meaningful change or modernization has occurred."* If something doesn't change, then the laboratory industry will keep facing challenges.

The MLPAO would like to thank all participants for their time, input, and energy. Addressing this issue needs to be a team effort. If you are interested in being part of this solution or providing your input, please contact me directly at mhoad@mlpao.org.

Appendix: A Sampling of Quotes from Participants

"There is no accelerated programming for an MLT Specialist in any field. Consequently, all labs that need specialists are trained in-house, with no formal academic programming. These "students" are not transferrable to other organizations. Homegrown technical specialities include: Clinical Science: Chemistry / Immunoassay, Haematology, Coagulation, Toxicology, Mass Spectrophotometry, Transfusion Services, Molecular Diagnostics , Tissue & Cellular: IHC – immunohistochemistry, flow cytometry, electron microscopy, histo and cyto screening."

"Too much is vested in the rear-view mirror. The CSMLS is preserving the past and tradition of lab medicine. Need to be far nimbler to affect change."

"BCIT and the UHN/Michener are the only two genetics academic programs (molecular genetics PCR, DNA sequencing etc.) representing 100% of Canadian teaching. CSMLS did agree to a harmonized program with an updated competency profile, supported by asynchronous review. However, the exam, has yet to reflect the new realities as the question bank needs to be updated and mechanism of scoring revised. Genomics is extremely difficult to recruit to new or replacement positions. Organizations need to work closely with the educators."

"MLA/T scope of practice has changed but is not fully utilized even in larger labs."

"Redesign the content and the competencies. Ontario educators need to harmonize their clinical programs – this should stop the bottleneck for clinical placements, then all students would be placed."

"*The curriculum and the CSMLS competency profile are perpetually outdated. It is updated every five (5) years, with 2015 being the most recent, which is to be implemented in June 2019. It is based on the lowest common denominator across Canada. It is believed that the competency profile, as it exists, does NOT meet the needs of todays laboratory. There is far too much entry-level, basic information and theoretical knowledge no longer used. Minimal attention is paid to information management, quality management, risk analysis, soft skills and disease/diagnostic correlation."*

"Career Ladder is absolutely necessary from high-school, university degrees, and IEMLT with opt-in and opt-out areas. With a career ladder, everybody starts together and then streams. It is not necessary to have all five disciplines with a General degree, as people don't work in all discipline areas, but they do need some exposure prior to deciding."

"*CSMLS competencies are the starting point for change. The CSMLS needs an operational overhaul. They are too slow. The operating labs do not live 'under a stone.'"*

"In Canada's West, the CXLT is a combined Laboratory and X-Ray Technology program. It is unique in that students are trained in both medical laboratory and X-ray disciplines, so that they are able to serve in rural community hospitals or health care centres. On completion of their training, graduates are able to perform medical laboratory procedures, diagnostic radiographic procedures, and electrocardiograms. Students

also receive training on computers and information systems in the medical laboratory and diagnostic imaging departments. In Ontario, they are not regulated or registered with the CMLTO."

"Incentivize for 'shared clinical placements' in the North/rural (accommodations, signing bonus for future jobs, bursaries, apprentice-based programs, internship-based programs). This may include MLT-Technical Specialists (who have advanced diplomas, or advanced practice roles – DI is doing this)."

"MLTs do not need to be replaced (through attrition and retirement on a 1:1 basis). MLA/T utilization should be encouraged to full scope of practice for all disciplines including Anatomic Pathology and Genetics."

"Rural hospitals have scaled core labs, some with POCT, with linkages to larger labs for training, IT integration and interpretation etc. (e.g. LIS, Sysmex Cellavision/scanner for haematology consults with MLT, digital pathology for frozen sections, and urgent tissue review requests)."

"Small labs also provide support for other health care environments (e.g. clinics) using POC technologies and virtual learning."

"The competencies require more clarity. The colleges/institutions must teach to the competency profile and assess the students in those skills as per the competency creator (CSMLS), the education accreditor (Accreditation Canada) and the regulatory body (the CMLTO)."

"North and rural needs MLTs, who are independent thinkers, work with patients and often alone – this is different than in large labs where MLTs work in teams and may never see patients."

"North and rural take few to no clinical placements since they cannot provide the 5-discipline experience."