# The Canadian Medical Laboratory Profession’s Call to Action

*The Canadian Society for Medical Laboratory Science (CSMLS) is the*

*national and provincial certification leader for medical laboratory technologists (MLTs)*

*and medical laboratory assistants/technicians (MLAs), and the*

*national professional society for Canada's medical laboratory professionals (MLPs).*

*This document should be disseminated to educators, deans, administrators, clinical placement sites, regulators, accreditors, provincial health and education government representatives and other medical laboratory stakeholders as required. Please forward to your colleagues and help support the Call to Action.*

**Call to Action Purpose:**

The Call to Action addresses national, regional, immediate and long-term efforts required to change the health human resource (HHR) shortage of medical laboratory technologists (MLTs) within Canada.

**Background:**

The quality of and degree to which medical laboratory professionals (MLP) impact patient’s health decisions by performing laboratory tests, supporting the use of point-of-care devices and strengthening clinical conversations with evidence-based information, counts on you to help change the HHR shortage.

The government is not leading an initiative to help supplement the national HHR shortage for MLTs. Without a national effort to change our profession’s situation, MLPs will experience greater hardship in the workplace. Other health professionals, who are not qualified in medical laboratory science, will need to overtake some of our responsibilities (task shifting) in order to provide the best patient care possible. Alternatively, our patients will see a decline in laboratory testing services, with potentially negative impact on their health.

The public and CSMLS have strong expectations of the testing produced by Canada’s health care workforce. We believe MLPs are integral to this process and that informed and committed MLPs, laboratories and academic programs are central to taking action.

We have an opportunity to change the outcome of the HHR shortage. As a nation of medical laboratory stakeholders who contribute to patient care and health care team decisions, we need to fix this immediately unfolding, complex and negative scenario today.

**What the evidence tells us:**

1. MLPs are faced with workload burdens due to increased precarious employment positions and the associated health care system spending recession, even in the face of increased automation within laboratories and workforce shortages. MLAs are a vital resource is supporting the work of MLTs and vice versa.
   1. Precarious positions have been noted as a technique to supplement budgetary restraints in the lab according to stakeholder discussions.
   2. Workload measures continue to show an upward trend in the profession. Ontario had projected a 1.8% per year increase for lab tests between 2005 and 2010; however, an actual increase of almost 4% per year was experienced, resulting in the number of tests going up faster than workforce capacity.[[1]](#footnote-1)
   3. [Newly Certified Graduate Survey](https://www.csmls.org/csmls/media/documents/resources/CSMLS-New-Graduate-Employment-Survey-2017-Grads-2016-v1-1.pdf) data for 2017 reveals a consistently high number of precarious positions for MLTs who have entered the workforce within a year of CSMLS certification. Although 95% of MLTs held a position at the time, only 48% held a permanent full-time position; the remainder held part-time, temporary or casual positions. Note the situation is even worse for MLAs, who only held permanent full-time positions 16% of the time.
   4. Mental health issues in the workplace due to the work environment and workload burden for MLPs are at a critical state.
2. There is an MLT workforce shortage currently, and it will worsen as baby boomers retire. The current and future shortage is not supplemented by a corresponding increase in student seats within academic programs. Evidence examples:
   1. [Data released in 2015 showed](https://secure.cihi.ca/estore/productSeries.htm?pc=PCC513) that approximately 40% of MLTs in Canada were 50 years of age or older. In 2010, the Canadian Institute for Health Information (CIHI) identified that [approximately half of all MLTs would be eligible to retire in 10 years](http://www.servicecanada.gc.ca/eng/%20qc/job_futures/statistics/3212.shtml), with the **greatest impact felt in Canada’s rural and remote communities**. Data has shown that the greatest loss within the MLT workforce was associated with those who are 21 to 30 years post-graduation. There was not a corresponding increase in the number of MLTs obtaining certification in any age category.
   2. In 2015, there were 19, 840 MLTs in the Canadian workforce according to CIHI and 586 reaching certification per year (five-year average). Using these values as an approximate measure to demonstrate potential HHR shortage impact, if half of the population were eligible to retire, that would result in 9, 920 MLT positions needing to be replaced. **Using a ten-year replacement plan with all data remaining consistent across time, Canada requires 992 newly CSMLS-certified MLT graduates per year.** The country only has 59% of the graduates required, meaning that **approximately 400 additional student seats need to be created.** The majority of these seats should be created early within the 10-year plan.
   3. Based on a five-year average using CIHI data, 10% of MLTs work in rural or remote areas in Canada. Thus, approximately 100 of the 992 student seats should be focused on rural or remote position expectations.Given the HHR shortage impact being felt most in these areas and the general difficulties to fulfill such positions, **CSMLS recommends at least 20% of the student seats (200) should have expectations of rural or remote positions**, **including long-distance relocation for work, regardless of the province in which they are trained.**
   4. At the time of the environmental scan of academic programs in 2016, only two MLT programs had plans to increase student seats in the future.
3. Student training is impacted by the HHR shortage, and there is a recognized change in training quality.
   1. A [survey of recent graduates](https://csmls.org/csmls/media/documents/resources/RecentGraduate-sClinicalPlacementExperiencewithinMedicalLaboratoryScienceProgramsacrossCanada(August2016).pdf) identified a qualitative theme of HHR shortage as impacting student training during clinical placement as well as the safety domain as their main concern for dissatisfaction.
   2. Verification from educators and employer representatives across Canada on this topic was obtained at the Forums (2016 and 2017).
4. The number of laboratory sites receiving clinical placement students is decreasing. This is increasing the burden on the remaining clinical sites to uphold the high standard of quality training required by medical laboratory students to achieve competency (MLA and MLT). Academic programs require a clinical placement site and reserved spot prior to admitting a student, creating a system bottleneck.
   1. A [major theme](https://csmls.org/Research/Research-Reports/Simulation-Clinical-Placement-Initiative.aspx) through the environmental scan of academic programs, national discussions at the Educator and Employer Forums (2016 and 2017) and recent graduate survey (see CSMLS website for report) revealed a consistent message of burden by major stakeholder groups.
5. Academic programs and clinical sites are willing to investigate and create new education and clinical placement models to accommodate clinical needs.
   1. Verification from educators and employer representatives across Canada on this topic was obtained at the Forums (2016 and 2017) as well as through the Simulation Knowledge Exchange – Research Network.
   2. **During the 2015/2016 academic year, approximately half of Canadian MLT accredited programs utilized less than 1, 225 student hours for clinical placement training,** offering half of MLT programs a chance to evaluateclinical hour reductions against a norm while challenging the remaining programs to look for further optimization. Considerations for balancing program prerequisites and didactic hours against clinical placement hours are vital in the evaluation process.
6. Support for academic programs and clinical sites to create the necessary change requires infrastructure and resources from staff and administration. This is difficult given the current financial recession within many education and health sectors.
   1. Verification from educators and employer representatives across Canada on this topic was obtained at the Forums (2016 and 2017) as well as through the Simulation Knowledge Exchange – Research Network.

**Call to Action:**

The HHR shortage associated with MLTs is at a transformative tipping point. At CSMLS, we believe that an intensified effort by Canada’s medical laboratory stakeholders can push the agenda forward into real and meaningful change.

Meeting the laboratory testing needs of Canadians while fixing the MLT shortage is a challenge. The Call to Action focuses on ways medical laboratory stakeholders can contribute and how MLPs can be employed more effectively. The Call to Action recognizes the hard work and collaboration conducted by many individuals to date and asks for extended efforts as we forge into a critical period over the next 10 years.

The impact of the proposed change will be felt not only by our profession but also by each Canadian who enters the health system and requires a laboratory test. Your child, your relative, your friend, your colleague—all Canadians across the entirety of their lives.

In addition to the information presented in the background section and views expressed within the CSMLS position statement titled, “[Use of Simulation to Reduce Clinical Placement Hours](https://www.csmls.org/csmls/media/documents/position_statements/Simulation-and-Clinical-Placement-Position-Statement-FINAL.pdf),” the following Call to Action is required:

1. **Public and private laboratories should recognize the negative impact precarious positions and workload burden**s **have on** the **employment of current and future workforces and work towards a brighter future for their organizations and MLP**s**.** 
   1. Recognizing the problem of fiscal constraint in today’s health care system, CSMLS asks that you evaluate your human health resource and infrastructure budgets under a long-term lens and continue to advocate for permanent full-time positions, create new collaborations with academic partners for clinical placement student spots, reserve positions for new graduates using formalized buddy-system models with experienced MLPs and address the mental health issues in the workplace that are plaguing our profession.
2. **We need to increase the number of students received by quality clinical placement sites to support and enrich competency obtainment. This includes building a financial and resource infrastructure to allocate dedicated training time for clinical instructors and preceptors.** 
   1. CSMLS recognizes the importance of hands-on experience for students and appreciates the work by laboratories and academic programs to achieve this. We acknowledge that new clinical placement models are required and welcome evaluated innovation to meet student competency needs for CSMLS certification.
   2. Laboratories not previously accepting students should evaluate their ability to contribute to the Call to Action and determine their ability in collaboration with academic programs.
   3. Academic programs have reported evidence that specific competency sign-off can be obtained within a simulated environment. In alignment with accreditation requirements, academic programs should explore the possibility of models that involve such sign-off and network with other programs to identify steps and evidence to accomplish this. Such efforts would facilitate new models for clinical placements and a potential reduction in clinical hour requirements.
3. **Starting immediately, we need an unparalleled increase in MLT academic student seats to combat the current and future HHR shortage. Academic programs, clinical placement sites and non-clinical placement site laboratories need to formally evaluate their programs with administration and determine how to enhance student clinical placement training and increase student throughput.**
   1. CSMLS recognizes the shortage is regionally, provincially and nationally relevant, ranging from remote to urban locations, and we recommend that academic programs collaborate, collect and share evidence for seat increase allowances under a multifocal lens.
   2. The use of system models that include enhanced or new collaborations between programs and laboratories, including pan-Canadian considerations (e.g., inter- and intra-provincial partnerships), shorter clinical placement hours and/or alternative models of and within clinical training (e.g., simulation, standardized OSCEs, buddy system and student-to-student exercises), should be considered to meet clinical placement site needs.
   3. The use of simulation to support hands-on practice in order to complement clinical placement training is encouraged and should be incorporated into academic programs where expertise and infrastructure have been or will be dedicated.
   4. In line with the [*Truth and Reconciliation Commission of Canada: Calls to Action*](http://www.trc.ca/websites/trcinstitution/File/2015/Findings/Calls_to_Action_English2.pdf), attention should be paid for the inclusion of Aboriginal students in all medical laboratory programs, including designated seats, clinical placement options in Aboriginal communities and collaborations to create guaranteed employment after CSMLS certification. Consideration for other underrepresented populations of students should be considered locally.
   5. The integration of internationally educated health professionals (IEHPs) into the workforce has been identified as a promising strategy for addressing HHR shortages in many countries. [Using best-practice information](http://www.ingentaconnect.com/contentone/asahp/jah/2018/00000047/00000001/art00015) for the creation and enhancement of medical laboratory bridging programs as well as for other recruitment and retention strategies is vital.
   6. Academic programs have reported evidence that specific competency sign-off can be obtained within a simulated environment. In alignment with accreditation requirements, academic programs should explore the possibility of models that involve such sign-off and network with other programs to identify steps and evidence to accomplish this. Such efforts would facilitate new models for clinical placements and a potential reduction in clinical hour requirements.
4. **MLAs and MLTs working in the clinical environment with students help shape the professional pride and practice of the future workforce. Efforts to create a working environment that is supportive of this and the Call to Action are imperative to the change process. CSMLS asks that you continue to support each other locally during this critical period, identify areas for change and communicate innovative projects/solutions to your peers nationally.** 
   1. When notified, CSMLS will support the dissemination of efforts to members in accordance with CSMLS policy.
   2. Ensure best-practice methods are used when training students in the clinical environment. When this cannot be achieved, notify your supervisor/manager (in accordance with local policies) as soon as possible to seek solutions that support your work as well as the training of students. Provide the supervisor/manager with a copy of this Call to Action to support your case for change.
   3. As conducted by MLPs, it is the professional’s responsibility to uphold their actions to the [Standards of Practice](https://www.csmls.org/About-Us/Our-Members/Standards-of-Practice.aspx), [Code of Professional Conduct](https://www.csmls.org/About-Us/Our-Members/Code-of-Conduct.aspx) and [Code of Ethics](https://www.csmls.org/About-Us/Our-Members/Code-of-Ethics.aspx).

CSMLS firmly stands by the need for large-scale transformation to combat the HHR shortage and the impact it has on MLTs, MLAs, patients and other laboratory stakeholders. Above all, CSMLS is focused on supporting its members and the profession to meet the needs of Canadians, ensuring high functioning laboratory teams and the proactive, safe, effective and affordable promotion of laboratory services that are informed by evidence and delivered in a timely manner across the nation.

1. Sweetman A (2015). LABCON lunch plenary (Canadian Society for Medical Laboratory Science, CSMLS, Montreal), “Exploring the predicted increase in lab testing and the impending shortage of lab professionals” [↑](#footnote-ref-1)