CSMLS SCSLM

Canadian Society for Medical Laboratory Science
Société canadienne de science de laboratoire médical

Position Statement

Use of Simulation to Reduce Clinical Placement Hours

The Canadian Society for Medical Laboratory Science (CSMLS) acknowledges the importance of innovative learning environments and hands-on practice through clinical placement experiences to ensure the next generation's expertise in medical laboratory science (includes Medical Laboratory Technologists [MLTs] and Medical Laboratory Assistants/Technicians [MLAs]). CSMLS supports the use of simulation in the academic environment as an educational technique to assist students in achieving CSMLS-defined competence. The use of simulation to partially replace and/or enhance clinical placement training is acknowledged as a viable and contributing solution to increasing the medical laboratory workforce in Canada.

Workforce Shortages

Canada is facing a serious health human resource (HHR) shortage within the medical laboratory profession. In 2010, the Canadian Institute for Health Information (CIHI) identified that approximately half of all MLTs would be eligible to retire in 10 years, with the greatest impact felt in Canada's rural and remote communities. This staffing concern is currently affecting the professional community across all provinces and territories resulting in the decrease of workers, dramatically impacting organizations and their employees.

Medical Laboratory Professional academic programs are required to procure a clinical placement site and training spot for each student prior to entering into a program; the current scenario has created a bottleneck in the student-to-professional pathway. Ultimately, it decreases the nation's ability to grow the medical laboratory workforce. In order to positively impact change, new models of education and clinical placement training are required to increase student placement opportunities. Examples:[1]

- Reduction in the total number of clinical placement hours for students to expedite workforce entry.
- New models that accommodate a greater number of students in the clinical environment (e.g., buddy system training, multiple blocks of clinical hours vs. one block of hours).
- Efficient use of academic hours that complements clinical placement site needs (e.g. evaluation of curricula components taught in the didactic setting versus clinical setting).
- Greater incorporation of educational techniques that support student competency acquisition prior to clinical placement.

[1] Examples should be evaluated in regards to local needs in consultation with academic programs, clinical placement representatives and students.

Didactic to Clinical Learning Gaps

Fast-paced information and technological change paired with restrictive budgets and HHR shortages have limited the speed of knowledge adoption between academic programs and clinical laboratories. Evidence has shown that the disconnect between knowledge and practical application can affect competency potential and decrease a student's ability to develop as a novice entry-level professional. Currently, medical laboratory science programs are meeting accreditation needs and the requirements to produce competent graduates and medical laboratory professionals. Academic programs and employers across Canada have both acknowledged a decrease in quality clinical placement experiences and a lack of placement site options (e.g. lack of dedicated preceptor time, lack of training resources and/or budget to meet competency exposure in a clinical setting, staff workload burden). Balancing the needs of academic programs and clinical placement sites in regards to the identified limitations is difficult. Stakeholders have acknowledged the need to facilitate communication and collaborative projects to evaluate and realign student curricula training within the current system.

Simulation

In Larue's 2015 publication, a systematic review was conducted to examine the state of knowledge on the contribution of high- and intermediate-fidelity simulation within clinical nursing education. The authors concluded that the use of high- or intermediate-fidelity simulation as a clinical training approach is feasible and valuable, especially in preparation for clinical placement. Due to the multitude of benefits associated with simulation, the very concept of replacing clinical hours with simulation emerged from the academic disciplines. Simulation provides a positive impact on clinical competency, critical thinking, knowledge acquisition and self-confidence.

Within this review, the most noteworthy study was the largescale National Council of State Boards of Nursing (NCSBN) National Simulation Study which found that replacing 10%, 25% and 50% of clinical placement hours with simulation had no negative impact on students in any of the percentage groups. These findings, compiled with other peer-reviewed literature reviews have concluded that simulation is a valuable tool for training students, and have contributed to the trend for health science programs to integrate the technique into curricula.

Simulation Training

Rising in priority within the simulation literature, there is a need for appropriately skilled faculty as simulation-based education increases. Recent reviews cite the necessity of targeted training for simulation educators as they require unique didactic skills to effectively support student learning. Research has demonstrated modest empirical evidence to support simulation competency frameworks for educators.

CSMLS recommends that a formalized and structured training model be adopted for academic faculty and clinical instructors of simulation to improve the quality as well as sustain growth of this educational technique within medical laboratory science programs. The training model should be aligned with simulation competency frameworks and incorporate professional development for novice to expert educators currently using simulation in their training practice.

References

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**Reference includes medical laboratory profession definition of simulation.*

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