Rethinking Our Annual Congress—Meeting the Needs of Specialist Physicians by Partnering With Provincial Simulation Centers

Sam J. Daniel, MD; Marie-Josée Bouchard, BSc; Martin Tremblay, PhD

Abstract: Canada’s maintenance of certification programs for physicians has evolved to emphasize assessment activities. Our organization recognized the importance of offering more practice assessment opportunities to our members to enhance their practice and help them comply with a regulation from our provincial professional body related to ongoing continuing education. This led us to rethink our annual congress and enrich the program with a curriculum of interdisciplinary simulation sessions tailored to meet the needs of a broad audience of specialists. Our challenges are similar to those of many national specialty societies having limited access to simulation facilities, instructors, and simulation teams that can cover the breadth and scope of perceived and unperceived simulation needs for their specialty. Our innovative solution was to partner with local experts to develop 22 simulation sessions over the past three years. The response was very positive, drawing 867 participants. Over 95% of participants either agreed or strongly agreed that their simulation session (1) met their learning objectives, (2) was relevant for their practice, and (3) encouraged them to modify their practice. Narrative comments from a survey sent to the 2018 participants four months after their activity indicated several self-reported changes in their practice or patient outcomes. We were able to centralize offers from organizations that had previously worked in silo to develop simulation sessions meeting the needs of our members. Proposing simulation sessions allowed our organization to establish long-term partnerships and to expend our “educational toolbox” to address skill gaps not usually addressed during annual meetings.

Keywords: CPD, annual meeting, simulations, partnership

DOI: 10.1097/CEH.0000000000000381

PROBLEM STATEMENT—LACK OF PRACTICE ASSESSMENT OPPORTUNITIES FOR QUEBEC SPECIALIST PHYSICIANS

Over the years, continuing professional development (CPD) requirements for specialist physicians in Canada have evolved to emphasize more assessment programs. The Maintenance of Certification Program of the Royal College of Physicians and Surgeons of Canada requires physicians to complete 25 credits (three credits per hour) of practice assessment activities over a cycle of 5 years.1 Furthermore, as of January 1, 2019, every physician in Quebec must accumulate 250 CPD hours over a period of five years as established by the provincial professional body. Of those, physicians are required to accumulate 10 hours of recognized practice assessment activities.2

As of 2016, our CPD office recognized the necessity to offer more practice assessment opportunities to our members to comply with this upcoming regulation, as well as to enhance the practice of our members. The Royal College of Physicians and Surgeons of Canada has grouped assessment activities3 under seven broad categories: chart audit and feedback,4–7 multisource feedback,8–7 annual performance reviews or appraisal,8 accredited simulation activities,9 accredited self-assessment programs10 direct observation,11 feedback on teaching,12 Among these categories, simulations present the distinct opportunity for learners to evaluate their performance from experimentation, errors, or potential suboptimal performance, without affecting patient care. Because our organization already offers various accredited self-assessment during our annual meeting and on our learning management system, we decided to enrich our congress program with a curriculum of interdisciplinary simulation sessions tailored to meet the needs of a broad audience of specialists.

Despite the challenges associated with attending annual meetings (such as limited time and cost), physicians often rely on these congresses to maintain and improve their clinical knowledge.16 It offers a unique attractiveness for participants to attend a variety of educational programs geared to their needs. Over the past decade, we have seen a constant increase in participation at our annual interdisciplinary congress. With over 1400 registrations in 2019, this congress is now the largest medical specialists’ event in Canada. Given the popularity and reach of our annual interdisciplinary congress, we hypothesized that participants might be inclined to attend simulation sessions if they were part of our official program. Indeed, medical specialists have limited opportunities to participate in simulation sessions. Quebec simulation centers’ offerings were not publicized outside their own sites and many programs were not developed to fit the needs of specialist physicians. Furthermore, specialist physicians practicing in rural regions did not have access to simulation facilities.
Many questions emerged when we proposed simulation programming to our board of directors.

1. Would specialist physicians attend simulation sessions during our annual meeting?
2. Because our organization is the umbrella for 35 distinct affiliated medical associations representing 59 different medical specialties, could we propose an interdisciplinary simulation program that would meet the needs of a broad audience?
3. Considering this novel approach for our organization, could we partner with local experts to ensure the success of this simulation program?

**SOLUTION—ENRICHING OUR ANNUAL MEETING WITH SIMULATION SESSIONS**

**Partnering With Local Experts for Simulation Programming**

During our 2016 annual meeting, we surveyed our attendees regarding their interest in participating in simulation sessions the following year. Of the 951 respondents, 56% indicated interest in participating, and we received a strong commitment from our organization’s board to cover the time and costs associated with simulation programming. Throughout the first quarter of 2017, we conducted extensive consultations to identify perceived needs (through surveys of our members) and unperceived needs (through advisor committees with our provincial regulatory body, Canadian Medical Protective Association, Canadian Patient Safety Institute, representatives from our four medical schools, patients, etc.) to develop our 2017 simulation program. This exercise was then repeated each year to identify simulation sessions to develop for our upcoming annual meeting.

Because our organization had little experience in developing accredited simulation programs, we looked for simulation experts to establish partnerships. As a major city in Canada, Montreal is home to two medical schools and some of the largest hospitals in the country. In 2017 and 2018, therefore, we approached local medical schools (Université de Montreal and McGill), two major hospitals with simulation centers in Montreal (Académie CHUM and CHU Ste-Justine), University of Sherbrooke’s medical school simulation center located on the south shore of Montreal, and a private partner specialized in cardiopulmonary resuscitation training for partnership. In 2019, we extended our collaboration with Université Laval’s simulation center located in Quebec City. Over the course of our discussions and searches to partner with local experts, various barriers and challenges needed to be addressed (Table 1).

Given that our organization is the umbrella for 35 different affiliated medical associations, we prioritized the development of simulation sessions that took into account the needs of physicians from multiple specialties. Therefore, we ensured coverage of a broad range of CanMEDS competencies during simulation programming (Table 2). Ten, 12, and 12 simulation sessions were held in 2017, 2018, and 2019, respectively. Many pre-existing simulation sessions were adapted by simulation centers’ directors, and novel sessions were developed to address identified needs. This led to a direct cost increase for our CPD office. We decided to invest more for the first edition given that some of the costs associated with the first year (2017) could be spread over the next few years (2018 and 2019) because some simulation sessions would be reconducted. To avoid conflict in schedule, we allocated a second day to our annual meeting entirely dedicated to hands-on simulation sessions. Because these were held at the congress center and at various simulation centers, we had to closely coordinate with simulation personnel to monitor the deliverables and ensure a smooth experience for our members.

**Simulation Program Evaluation**

We used the Moore, Green, and Gilles’ Outcome-based Continuing Medical Education Framework (Table 3) to evaluate the outcomes of our simulation program in 2017, 2018, and 2019. For each year and each session, we kept a registry of participation (Moore’s level 1) and sent an electronic post-simulation session survey to all participants to determine to what extent the delivery of the session met its goal (Moore’s level 2). In an attempt to measure higher-level outcomes, an online survey was sent to the 2018 participants (N = 285) 4 months after their activity to assess any change in practice (Moore’s level 5) and/or in patient outcomes (Moore’s level 6).

**Main Outcomes**

From 2017 on, the simulation sessions attracted over 270 participants each year (Table 4). Most of these sessions were fully booked months before the annual meeting and waiting lists had to be implemented in the case of last-minute cancellations. Specialists from throughout the province participated in the simulation sessions (56% from regions other than Montreal and its neighborhoods). Most participants indicated that the simulation session they attended met their learning objectives and that the format was appropriate for the topic, as measured in the postintervention electronic surveys. Although these sessions were interdisciplinary, 83% of the respondents strongly agreed that they were pertinent to their practice. Most of the respondents (58%) strongly agreed that attendance at a simulation session encouraged them to modify their practice. Finally, comments collected in the narrative section of the

---

**TABLE 1.**

| Challenges and Barriers | Approaches and Solutions |
|-------------------------|--------------------------|
| Courses difficult to find on simulation centers’ websites | We listed each center’s resources and expertise to find possible synergies |
| Limited collaboration between simulation centers | We acted as a facilitator for provincial network to leverage center’s expertise |
| Skepticism from some simulation center directors about this initiative | We described our needs and objectives in detail |
| Most of the existing simulation sessions were not developed to meet the needs of specialist physicians | We adapted content with local experts to meet the identified needs |
postintervention electronic surveys were very complimentary (data not shown).

Our next step was an attempt to assess possible higher-level outcomes to participating in simulation sessions as part of our annual meeting. We surveyed the 2018 simulation session’s participants four months after they attended their activity to assess any performance change (Moore’s level 5) or patient outcomes (Moore’s level 6). Of the 87 respondents, 75% reported making a change to their practice after the simulation session they attended, but only few participants stated a specific example. Table 5 lists explicit examples provided in the narrative section. Some of the 2018 participants reported an improvement in patient safety (IDs: 4, 23, 60, and 70), change in practice (IDs: 35, 36, 65, 83, and 84), and patient outcomes (ID 53). Additional analyses would be required to assess the level of achievement of Moore’s Levels 5 and 6.

**Benefits for CPD Providers**

In a field of constant evolution, CPD providers have the obligation to develop programs beyond traditional didactic lectures, offering “hands-on” approaches, known to affect physicians’ practice and patient outcomes. It is well-established that CPD activities incorporating interactive methods (such as simulations) tend to be more effective in changing performance. Indeed, the ultimate goal of CPD is to enhance the quality and safety of patient care and to enhance health outcomes. Exposure to high-severity but low-frequency events and suboptimal interaction of the health care team in the clinical setting are potential patient safety issues and a possible source of incidents that simulations can address. Therefore, we believe that offering simulation sessions was a natural next step in enhancing our annual congress.

Before 2017, our annual meeting solely focused on didactic lectures coupled with various knowledge assessment strategies. Simulations can address complementary skills necessary for physician’s lifelong learning, such as clinical skills and crisis resource management skills, usually not addressed during congresses. Indeed, simulation provides learners with experiential learning opportunities in a safe environment and allows time for debriefing where deeper learning can occur.

**TABLE 2. Simulation Sessions Developed**

| Simulation Session                                    | Year(s)            | CanMEDS Competency(ies)* |
|-------------------------------------------------------|---------------------|--------------------------|
| Critical care and emergencies in obstetrics and pediatrics | 2017, 2018, and 2019 | ME and COL               |
| Ultrasound screening of a pathology of the cuff of the shoulder rotators | 2017               | ME                       |
| Management of terrorist acts and natural disasters    | 2017 and 2019       | COl and COM              |
| Advanced Imaging Life Support                         | 2017 and 2018       | ME and HA                |
| Adult and child anaphylaxis management                 | 2017 and 2018       | ME and COL               |
| Interprofessional collaboration in crisis management: ensuring the effectiveness of the team | 2017 and 2018       | COL                      |
| Psychological distress in the professional environment | 2017 and 2018       | P                        |
| Targeted ultrasound                                    | 2017               | ME                       |
| Communication with the “difficult” patient             | 2017, 2018, and 2019| COM                      |
| Crisis pacification workshop                           | 2017, 2018, and 2019| COM                      |
| Hip pathology ultrasound screening                      | 2018               | ME                       |
| Echo-Guided Life Support                               | 2018               | ME                       |
| Cardiopulmonary resuscitation                          | 2018 and 2019       | ME                       |
| Basic cardiopulmonary life support                     | 2018               | ME                       |
| Difficult airway management                            | 2018               | ME                       |
| Modern concepts in electroconvulsive therapy: clinical simulation learning | 2019               | ME                       |
| Targeted bedside ultrasound                             | 2019               | ME                       |
| Organizing in situ simulations in your clinical setting | 2019               | S                        |
| Adherence to treatment, bringing a change in our patients! | 2019               | COM                      |
| Keeping a cool head in the heat of the moment: An introduction to complex case management | 2019               | ME and COL               |
| Thoracic ultrasound workshop                           | 2019               | ME                       |
| Ensuring a safe patient transfer                       | 2019               | COM and HA               |

*Medical expert (ME), communicator (COM), collaborator (COL), leader (L), health advocate (HA), scholar (S), and professional (P).

**TABLE 3. Moore et al Expanded Outcome-Based Continuing Medical Education Evaluation Framework**

| Level | Outcomes        | Definition of Outcomes                                                                 |
|-------|-----------------|---------------------------------------------------------------------------------------|
| 1     | Participation   | The number of participants who registered and attended                                 |
| 2     | Satisfaction    | The degree to which the expectations of the participants about the setting and delivery of the CPD activity were met |
| 3     | Learning        | Changes in declarative (level 3A) and procedural knowledge (level 3B) of the participants |
| 4     | Competence      | Demonstration of how to do something in the educational setting                        |
| 5     | Performance     | Changes in practice performance in the work setting as the result of the application of what was learned |
| 6     | Patient health  | Changes in the health status of patients due to changes in practice behavior            |
| 7     | Population health | Changes in the health status of a population of patients due to changes in practice behavior |
physicians had multiple opportunities to use simulation as part of their residency training, but not so the case with the older generation. Offering simulation sessions as part of our popular annual meeting helps physicians working in remote areas to access simulation facilities and expertise, offers senior physicians the possibility of assessing and refining their clinical skills, and recreates critical situations younger physicians have yet to face.

As CPD professionals, we are accountable for offering suitable programs to address the needs of our learners. Adding simulation sessions as part of their annual congress allows CPD providers to improve their “educational toolbox.” Some of the benefits noticed for our organization include the ability to

1. address care gaps that could have been difficult to undertake without simulations,
2. develop new and long-term partnerships with simulation professionals,
3. conceive interdisciplinary simulations tailored to the needs of our members and their teams, and
4. offer a revitalized program for our annual congress.

We believe that our approach is valid for other CPD providers. Proposing simulation sessions allowed our organization to establish long-term partnerships with local experts and to expend our “educational toolbox” to address skill gaps not usually addressed during traditional annual meetings.

**Lessons for Practice**

- Integrating interdisciplinary simulation sessions as part of a major annual meeting is feasible and very much appreciated by medical specialists.
- Partnering with local simulation experts could enhance CPD providers’ acumen, allowing them to design simulation sessions and integrate them in their annual meeting.
- Proposing simulation sessions during an annual meeting allows CPD providers to address care gaps that could have been difficult to undertake without simulations.

**REFERENCES**

1. Royal College of Surgeons and Physicians of Canada. Available at: http://www.royalcollege.ca/rcsite/cpd/moc-program/fellows/moc-regulations-policies-for-fellows-e. Accessed October 7, 2020.
2. Collège des médecins du Québec. Available at: http://www.cmq.org/page/fr/formation-continue-obligatoire-intra.aspx. Accessed October 16, 2020.
3. Lockyer J, DiMillo SM, Campbell C. An examination of self-reported assessment activities documented by specialist physicians for maintenance of certification. J Contin Educ Health Prof. 2020;40:19–26.
4. Ivers NM, Grimshaw JM, Jamtvedt G, et al. Growing literature, stagnant science? Systematic review, meta-regression and cumulative analysis of audit and feedback interventions in health care. *J Gen Intern Med.* 2014;29:1534–1541.

5. Colquhoun HL, Carroll K, Eva KW, et al. Advancing the literature on designing audit and feedback interventions: identifying theory-informed hypotheses. *Implement Sci.* 2017;12:117.

6. Lockyer J. Multisource feedback: can it meet criteria for good assessment? *J Contin Educ Health Prof.* 2013;33:89–98.

7. Ferguson J, Wakeling J, Bowie P. Factors influencing the effectiveness of multisource feedback in improving the professional practice of medical doctors: a systematic review. *BMC Med Educ.* 2014;14:76.

8. Wakeling J, Holmes S, Boyd A, et al. Reflective practice for patient benefit: an analysis of doctors’ appraisal portfolios in Scotland. *J Contin Educ Health Prof.* 2019;39:13–20.

9. Griswold-Theodorson S, Ponnuru S, Dong C, et al. Beyond the simulation laboratory: a realist synthesis review of clinical outcomes of simulation-based mastery learning. *Acad Med.* 2015;90:1553–1560.

10. Pluye P, Grad R, Granikov V, et al. Feasibility of a knowledge translation CME program: courriels cochrane. *J Contin Educ Health Prof.* 2012;32:134–141.

11. Tang B, Cuschieri A. Objective assessment of surgical operative performance by observational clinical human reliability analysis (OCHRA): a systematic review. *Surg Endosc.* 2020;34:1492–1508.

12. Fine E, Reid MC, Shengelia R, et al. Directly observed patient-physician discussions in palliative and end-of-life care: a systematic review of the literature. *J Palliat Med.* 2010;13:595–603.

13. van der Meulen MW, Smirnova A, Heeneman S, et al. Exploring validity evidence associated with questionnaire-based tools for assessing the professional performance of physicians: a systematic review. *Acad Med.* 2019;94:1384–1397.

14. van der Leeuw RM, Boerebach BC, Lombarts KM, et al. Clinical teaching performance improvement of faculty in residency training: a prospective cohort study. *Med Teach.* 2016;38:464–470.

15. van der Leeuw RM, Overeem K, Arah OA, et al. Frequency and determinants of residents narrative feedback on the teaching performance of faculty: narratives in numbers. *Acad Med.* 2013;88:1324–1331.

16. Zamir N, Gholami A, Jafarmad Y, et al. Assessing the quality of evidence presented at annual general meetings: a 5-year retrospective study. *J Contin Educ Health Prof.* 2019;39:152–157.

17. Royal College of Surgeons and Physicians of Canada. Available at: http://www.royalcollege.ca/rcsite/canmeds/canmeds-framework-e. Accessed October 16, 2020.

18. Moore DE, Green JS, Gallis HA. Achieving desired outcomes and improved outcomes: integrating planning and assessment throughout learning activities. *J Contin Educ Health Prof.* 2009;29:1–15.

19. Cox T, Seymour N, Stefanidis D. Moving the needle: simulation’s impact on patient outcomes. *Surg Clin North Am.* 2015;95:827–838.

20. McGahue WC, Draycott TJ, Dunn WF, et al. Evaluating the impact of simulation on translational patient outcomes. *Simul Healthc.* 2011;6:S42–S47.

21. Cervero RM, Gains JK. The impact of CME on physician performance and patient health outcomes: an updated synthesis of systematic reviews. *J Contin Educ Health Prof.* 2015;35:131–138.

22. Sargeant J, Bruce D, Campbell CM. Practicing physicians’ needs for assessment and feedback as part of professional development. *J Contin Educ Health Prof.* 2013;33:54–62.

23. It Has Been Recently Reported That 1 Out 18 Hospital Stays in Canada Involves at Least 1 Harmful Event. Canadian Patient Safety Institute. Available at: https://www.patientsafetyinstitute.ca/en/toolsResources/Hospital-Harm-Measure/pages/default.aspx. Accessed October 16, 2020.

24. Oriot D, Boureau-Voultaury A, Ghazali A, et al. Value of simulation in pediatrics. *Arch de pédiatrie.* 2013;20:667–672.