Simulation curricular content in postgraduate emergency medicine: a multicenter delphi study

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Introduction: There is increasing evidence to support the integration of simulation into medical training; however, no national emergency medicine (EM) simulation curriculum currently exists. Using Delphi methodology, we aimed to identify and establish content validity evidence for EM curricular content best suited for simulation-based training to inform national postgraduate EM training. Methods: A national panel of experts in EM simulation-related education iteratively rated potential curricular topics, on a 4-point scale, to determine those best suited for simulation-based training. After each round, responses were analyzed and topics scoring <2/4 were removed. Remaining topics were resent to the panel for further ratings until consensus was achieved, defined as Cronbach’s α ≥ 0.95. At conclusion of the Delphi process, topics that were rated ≥ 3.5/4 were considered core curricular topics, while those rated 3.0–3.5 were considered extended curricular topics. Results: Forty-four experts from 13 Canadian centres participated. Two hundred and eighty potential curricular topics, in 29 domains, were generated from a systematic review of the literature, analysis of relevant educational documents and a survey of Delphi panelists. Three rounds of Delphi surveys were completed before consensus was achieved, with response rates ranging from 93-100%. Twenty-eight topics, in 8 domains, reached consensus as core curricular topics. An additional 35 topics, in 14 domains, reached consensus as extended curricular topics. Conclusion: Delphi methodology allowed for achievement of expert consensus and content validation of EM curricular content best suited for simulation-based training. These results provide a foundation for improved integration of simulation into postgraduate EM training and can be used to inform a national simulation curriculum to supplement clinical training and optimize learning.

Keywords: curriculum development, postgraduate education, simulation

Simulation in the continuing professional development of Canadian academic emergency medicine: a national survey

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Introduction: Capitalizing on the success of Simulation-Based Education (SBE) in residency-training programs, simulation has been gradually integrated into Continued Professional Development (CPD) programs for Emergency Physicians (EPs) in Canada. This study sought to characterize how Canadian academic emergency medicine (EM) departments have implemented SBE for CPD.

Methods: We conducted two national surveys: 1) the National Faculty Simulation Status Assessment Survey, administered by telephone to the simulation directors (or equivalent) at 20 Canadian academic EM sites and 2) the Faculty Simulation Needs Assessment Survey administered online to all full-time EPs across 9 Canadian academic EM sites. Results: The response rates for the National Status and Needs Assessment Surveys were 100% (20/20), and 40% (252/635), respectively. The majority (60%) of Canadian academic EM sites reported utilizing SBE for CPD, though only 30% reported dedicated funding support. EPs reported participating in a median of 3 hours per year of SBE (IQR 1–6 hours). Reported incentivization offered in the form of continued medical education credits varied between simulation directors (67%) and EPs (44%). Simulation directors identified several significant barriers to SBE including a lack of faculty time, fear of peer judgment, and faculty inexperience. In contrast, EP-identified barriers included time commitments outside of shift, lack of opportunities, and lack of departmental. The three most common topics of interest for SBE by EPs were performance of rare procedures, pediatric resuscitation, and neonatal resuscitation. Interprofessional involvement in SBE CPD was valued by both simulation directors and EPs, with most EPs (79%) indicating it is useful.

Conclusion: Most Canadian EPs and simulation directors recognize the value of SBE for CPD, yet it is only utilized, infrequently, by 67% of Canadian academic EM departments for this purpose. This may be explained, in part, by poor incentivization for participation. Simulation directors and EPs noted different barriers to SBE implementation for CPD suggesting the need for dialogue to improve utilization. As SBE for CPD is incorporated more frequently, and at more sites, content should be guided by local needs assessments with an emphasis on interprofessional participation.

Keywords: continuing professional development, emergency medicine, simulation

Simulation-based research in emergency medicine in Canada: priorities and perspectives

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Introduction: Simulation has assumed an integral role in the Canadian healthcare system with applications in quality improvement, systems development, and medical education. High quality simulation-based research (SBR) is required to ensure the effective and efficient use of this tool. This study sought to establish national SBR priorities and describe the barriers and facilitators of SBR in Emergency Medicine (EM) in Canada.

Methods: Simulation leads (SLs) from all fourteen Canadian Departments or Divisions of EM associated with an adult FRCP-EM training program were invited to participate in three surveys and a final consensus meeting. The first survey documented active EM SBR projects. Rounds two and three established and ranked priorities for SBR and identified the perceived barriers and facilitators to SBR at each site. Surveys were completed by SLs at each participating institution, and priority research themes were reviewed by senior faculty for broad input and review.

Results: Twenty SLs representing all 14 invited institutions...