

### Practice makes perfect: simulation in rural emergency medicine

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**M**y (A.N.'s) first code was unpleasant — I doubt that they should ever be an enjoyable experience. However, it would have been highly useful to have had a degree of training to prepare me for what to expect and to afford me some degree of usefulness. Thrust into the emergency room within weeks of my arrival at Slave Lake Healthcare Centre, I embarked on a 9-month journey through the Rural Integrated Community Clerkship Program, an experience that brought me closer to the staff and granted me an intimate glimpse into the realities of rural medicine. In discussion with nursing staff, I noticed a palpable desire to prepare for the inevitable. In the rural hospital there is no luxury of having a trauma team or code squad. We were it.

Rural emergency medicine has always featured a host of challenges, from the sheer diversity and unpredictability of patient presentations to the constant balancing of limited resources. Whereas urban centres benefit from high degrees of specialization, rural practitioners are often required to rely heavily on limited experiences, and health care workers are frequently stretched beyond their job description. A strong team dynamic is essential for enhancing communication, maintaining composure and ensuring good patient outcomes.<sup>1,2</sup> Research has demonstrated that simulation can lead to improved team communication, more efficient services and enhanced operator skills.<sup>3-6</sup> Importantly, the relative infrequency of these events and the immediacy of

treatment needs require teams that are adept at triaging, assessing, treating and arranging for transfer.

My preceptor, Dr. Sadiq, and I drafted mock scenarios and acquired the Anesoft advanced cardiac life support (ACLS) computer-based simulator to host 8 mock cardiac code sessions for nurses, doctors and paramedics. In the course of the sessions, we assigned code leaders, reviewed roles and responsibilities and played through constantly evolving scenarios. Where necessary, we paused, discussed options or pharmacology, or offered feedback on how to proceed. We acquainted ourselves with the trauma room and new advances in technology, including the King LT (King Systems) or the laryngeal mask airway, to ensure confidence with these devices if the need arose.

As a facilitator for the sessions, I did considerable research into ACLS algorithms, which led to an increased level of comfort in the code environment. Although I'm not capable of running a code, in future scenarios I could at least play a meaningful role. More importantly, staff became proficient with the equipment in the trauma room, gained added confidence in their clinical abilities and fostered further trust within the team. We had a substantial contingent of paramedics participate; as experts in stabilizing patients and preparing them for transfer, their in-field and real-time experience proved invaluable.

The sessions were well received by staff because of their interdisciplinary nature. Building rapport among health care professionals is essential in team-

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based environments, in which we constantly rely on each other for support and guidance. Furthermore, they became informal debriefing sessions for past resuscitations, an opportunity to learn from missteps and share feedback without blame. As many rural areas do not regularly partake in morbidity and mortality rounds, these simulation sessions could easily serve as vehicles to audit past encounters, with a heavy emphasis on preparing for the next.

There were some notable limitations, especially because of the optional and “extracurricular” nature of this activity; individuals frequently participated after a shift or came in during their time off. The scheduling challenge hampered continuity from week to week, resetting the group dynamic. Making sessions such as these a mandatory and essential component of the hospital culture could boost staff confidence, enhance team rapport and open up opportunities for feedback. As rural medicine continues to evolve, drawing on a wider range of professions, it is integral to maintain cohesion in the acute environment and create opportunities to draw on our strengths so that we can maximize patient outcomes and continue to provide high-calibre care.

When the fires hit Slave Lake, it was remarkable to bear witness to the calamity that ensued. However, the level of destruction, as severe as it was, would have been unfathomably worse had it not been for the rapid, cohesive response of firefighters, RCMP officers, and medical and other emergency personnel. Disasters demonstrate a multitude of similarities with medical codes: their unpredictability can catch us unprepared, the sequelae can be devastating and the challenge can be overwhelming. Practising codes, much like rehearsing fire drills, transcends the cerebral rumination of process into muscle memory; when the alarm rings, you head for the door. Similarly, harnessing the power of simulation to conduct interdisciplinary training has a plethora of opportunities, both inside and outside the hospital.

As vicegerents for the health of our patients, we work intensely with our teams to provide a high level of care with limited resources. Quite simply, we fashion bastions from dedication and ramparts of cohesion to defend the health of our communities. Without continuing to hone our skills and creating opportunities for knowledge translation among professions, we would be bereft of growth and be left outdated, leaving our towns exposed to a host of new problems. Continuing medical education encompasses continuing medical practice, an essential component on the never-ending road to perfection.

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