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PATIENT SAFETY AND QUALITY IMPROVEMENT EDUCATION FOR PARAMEDICS: PRACTICING WHAT WE PREACH

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Our patients expect, and deserve, safe, high-quality care. Patient safety and quality improvement competencies for paramedics are detailed in the National Occupational Competency Profiles (Canada) (1), the Education and Training Standards (Rep. of Ireland) (2), the Standards of Proficiency for Paramedics (UK) (3), and the Australasian Competency Standards for Paramedics (Aus & NZ) (4). Competencies aside, paramedics have a personal responsibility for providing safe care, regardless of previous education or regulatory framework. The onus is on us all to ensure that paramedics are adequately prepared to address this responsibility.

This need for improved patient safety education for paramedics has previously been proposed by one of the authors (AB).⁽⁵⁾ The Institute for Healthcare Improvement (IHI) Open School courses were proposed as a potential solution to this identified gap. These courses have been successfully integrated into various health professions education programs in other institutions (6–8); however, no literature was discovered which discussed the integration of these courses into paramedic education. In an effort to ensure that we practice what we preach, the authors will discuss their experience of integration of IHI Open School courses into a paramedic education curriculum in Ontario, Canada. This article will provide both student and faculty perspectives on this initiative, as well as advice for faculty who may be considering embedding courses into their curriculum.

The IHI Open School offers a series of online patient safety and quality improvement courses, which are free to students and faculty members of all health professions. The IHI Basic Certificate in Quality and Safety is an 18-hour online curriculum, with courses addressing improvement capability, patient safety, leadership, person- and family-centred care, and triple aim for populations.⁽⁹⁾ These courses are also approved for CME credits by various accredita-

tion bodies in nursing, medicine, pharmacy and healthcare quality.

One suggested method for integration is through identifying opportunities to weave the courses into existing teaching, known as ‘classroom integration’.⁽¹⁰⁾ The ‘Professional Issues in Paramedicine’ subject at Fanshawe College was selected as the setting for this integration exercise, and it is currently taught by one of the authors (AB). This subject is a 15-week, two hours per-week class, delivered in the third semester of the program. The subject focuses on issues surrounding quality patient care, professionalism, and others that are relevant to paramedics. It also encompasses the development of strategies to enable students to grow in their personal and professional roles as paramedics. Throughout the course of the subject, students explore diverse topics such as leadership, group dynamics, communications, work culture, patient safety, stress and burnout, advocacy, and ethical issues. The topics in this subject made for an ideal setting in which to embed IHI Open School courses. A number of courses were directly embedded as a component of the syllabus for the subject. These courses are outlined in Figure 1.

1. PS101: Introduction to Patient Safety
2. PS103: Human Factors and Safety
3. PS104: Teamwork and Communication in a Culture of Safety
4. PS105: Responding to Adverse Events
5. TA101: Introduction to Triple Aim for Populations
6. QI101: Introduction to Health Care Improvement
7. L101: Introduction to Health Care Leadership
8. PFC101: Introduction to Person- and Family-Centered Care

Figure 1. List of IHI Open School courses embedded in PARA3006: Professional Issues subject.

Courses are generally two to three lessons long, with each lesson taking between 15 and 45 minutes to complete. Almost every course includes a short assessment at the end of each lesson. Students must score at least 75 percent to complete a course, which provides educators with assurance that learning has been evaluated within the course.

The embedded courses within this subject were listed in the weekly class schedule, and students were provided with instructions on how to register for a personal account. A percentage of in-class activity marks for the subject were awarded to students for the completion of the embedded courses. On completion of these courses, only five courses remained in order to complete the Basic Certificate curriculum. These remaining courses were optional, and students could complete them in their own time to obtain the full certificate if they chose to. At the completion of the subject, students were instructed to provide a copy of individual certificates for the embedded courses, or alternatively a copy of the Basic Certificate if they completed all 13 courses.

To date, 41 paramedic students in the class (98%) have completed the 13 courses, and have been awarded the IHI Basic Certificate in Quality and Safety. In addition to the patient safety and quality education they have received, these students now have an additional certification listed on their résumé, which may be of benefit when seeking employment. Individual reflective assignments for this subject have also indicated that the modules were an effective component of the students’ learning.

The faculty perspective

Through my experience teaching paramedics in several countries, I have noticed a distinct lack of targeted, relevant educa-

tion surrounding patient safety and quality improvement. There are some major safety and quality challenges in paramedic care that have previously been identified in the literature such as medication dosing errors. In addition, paramedics face unique challenges in creating environments that are conducive to improved patient safety and quality care, given the unpredictable nature of their clinical work. Giving paramedics the tools to build safer patient care is essential, and though there are certainly challenges, the opportunities to improve care delivery are enormous.

As evidenced by several student's reflective accounts for this subject, they are now aware that they need to have the skills and knowledge to identify patient safety and quality issues, and going forward in their careers, they need to be able to lead change effectively. Batalden and Davidoff (2007) have previously asserted that "healthcare will not realise its full potential unless change making becomes an intrinsic part of everyone's job, every day, in all parts of the system".(11) Students now appear to recognise that this is the most effective way to change the healthcare system for the better of the patient, as evidenced by their reflective accounts.

Looking to the future, it is my goal to vertically integrate the IHI Open School Basic Certificate (all 13 courses) across the two-year program with the assistance of my colleagues. Embedding the courses across pre-clinical, clinical and professional subjects within the curriculum will hopefully lead to a more integrated learning process. This will lay a foundation for professional practice that is based on safe, high-quality care provision.

The students' perspective

The issues of patient safety, quality improvement, and advocacy do not receive as much attention in the paramedic curriculum as they should. The integration of the IHI Open School courses allowed for these topics to be explored, through both independent learning, and in-class discussions and activities. This allowed for further discussion and debate among our peers, leading to some interesting conversations.

Entering this developing profession as new paramedics, the IHI courses helped us to understand how we can approach quality and safety in our own clinical practice, and within the paramedic community. Although the courses focus on the in-hospital environment, many of the take home messages are highly applicable to paramedicine and pre-hospital care.

Completing these courses really helped us to understand the bigger picture of how the whole patient care process works in paramed-

icine. The courses brought awareness to the implications of adverse events, provided the skills to communicate effectively within a team, the tools to identify the root cause of an adverse event, and advice on how to implement changes within a system to prevent the same adverse events from reoccurring.

Through our collective experiences in the paramedic program at Fanshawe College, we have gained an interest in making improvements to the entire system in Ontario. However, we were unaware of the means by which to effect change. These courses have shown us the means by which change can be enacted. The courses have provided us with education on the leadership skills required to effect change, including the characteristics of a leader, the importance of leadership, and how to sustain healthcare leadership.

It is our opinion that the IHI Open School courses are an ideal solution for any health care professional looking to gain a brief, concise education on quality and patient safety. The completion of all 13 courses to gain the 'Basic Certificate in Quality and Safety' was not a burden, as each course took approximately 1 – 1.5 hours, across the 15-weeks of the subject. We plan to complete further IHI Open School courses in addition to the Basic Certificate, as many of the courses will be beneficial for our future careers.

Advice for faculty

- Complete the certificate program yourself. This will allow you, as an educator, time to become acquainted with the content of the courses, and will help to inform the best method to integrate courses with the existing curriculum. Remember – the IHI Open School courses are free for all faculty and students.
- Consider starting small. The integration of one course for example, may help to keep things manageable, and may be useful to evaluate the potential for further integration. The IHI Open School offers a faculty guide that gives practical advice on embedding courses within education programs. (10)
- Embed courses that add to the learning in a subject. This ensures that students do not see these courses as an additional burden, but rather an exercise that can help them to become better health care professionals.
- Provide clear instructions. A clear guide should be provided to students and other faculty members to ensure they will be able to easily register an account. Some students may not be familiar with online schooling, so it is important for educators to take the time to explain how to access the specific courses on IHI Open School.

- Registrations for student and faculty accounts should use an official institutional email address.
- Solicit feedback. Students can offer unique perspectives on how to improve future offerings of the embedded course(s). This allows faculty to improve the curriculum going forward – truly showing that you practice what you preach when it comes to quality improvement.
- Educators should consider integrating some of the lessons into the classroom, and put the online learning into practice, using the real world issues being discussed in the subject.
- Consider establishing an IHI Open School Chapter. This will be discussed in further detail in an upcoming article.
- At the time of writing, the Primary Care Paramedic Program at Fanshawe College is the only paramedic education program to have integrated the IHI Open School Courses into the curriculum.(8) The authors hope to see this change in the very near future. 

Resources

- IHI Open School Course Catalog: <http://bit.ly/2AEDWBh>
- IHI Open School Course Summaries: <http://bit.ly/2mcHKW1>
- IHI Open School Faculty Guide: <http://bit.ly/2ADNU5T>
- List of Academic Institutions using the IHI Open School courses: <http://bit.ly/2Ekw-cGS>

Disclaimer: The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of any employer or organisation. AB is an IHI Open School Chapter faculty advisor (unpaid, voluntary position).

Keywords: paramedic, safety, quality, patient, education, IHI



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