(Mis)perceptions of Continuing Education: Insights From Knowledge Translation, Quality Improvement, and Patient Safety Leaders

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Introduction: Minimal attention has been given to the intersection and potential collaboration among the domains of continuing education (CE), knowledge translation (KT), quality improvement (QI), and patient safety (PS), despite their overlapping objectives. A study was undertaken to examine leaders’ perspectives of these 4 domains and their relationships to each other. In this article, we report on a subset of the data that focuses on how leaders in KT, PS, and QI define and view the domain of CE and opportunities for collaboration.

Methods: This study is based on a qualitative interpretivist framework to guide the collection and analysis of data in semistructured interviews. Criterion-based, maximum variation, and snowball sampling were used to identify key opinion leaders in each domain. The sample consisted of 15 individuals from the domains KT, QI, and PS. The transcripts were coded using a directed content analysis approach.

Results: The findings are organized into 3 thematic subsections: (1) definition and interpretation of CE, (2) concerns about relevance and effectiveness of CE, and (3) opportunities for collaboration among CE and the other domains. While there were slight differences among the data from the leaders of each domain, common themes were generally reported.

Discussion: The findings provide CE leaders with information about KT, QI, and PS leaders’ (mis)perceptions about CE that can inform future strategic planning and activities. CE leaders can play an important role in building upon initial collaborations among the domains to enable their strengths to complement each other.

Key Words: continuing education, knowledge translation, quality improvement, patient safety, qualitative research

Introduction

Leaders in continuing education (CE) continue to debate the role, effectiveness, and sustainability of CE in improving health care delivery and outcomes. The domain of CE has evolved over time in response to these discussions, which are informed by factors such as research, funding, accreditation, technology, and policy. Examples of recent changes in the domain include the broadening of the conceptualization of continuing medical education (CME) to continuing education (CE) and/or continuing professional development (CPD); the requirement that educational theory be integrated into the planning and delivery of programs; and the incorporation of strategies to optimize learning within large group formats and extend beyond such traditional educational approaches. CE leaders are currently focused...
TABLE 1. Definition of 4 Domains: Continuing Education, Knowledge Translation, Quality Improvement, Patient Safety

<table>
<thead>
<tr>
<th>Domain</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Continuing education</td>
<td>Educational activities that serve to maintain, develop, or increase the knowledge, skills, and professional performance and relationships a physician uses to provide services for patients, the public, or the profession.</td>
</tr>
<tr>
<td>Knowledge translation</td>
<td>A dynamic and iterative process that includes the synthesis, dissemination, exchange, and ethically sound application of knowledge to improve health, provide more effective health services and products, and strengthen the health care system.</td>
</tr>
<tr>
<td>Quality improvement</td>
<td>Actions for improving the processes and outcomes of health care, including increasing value; improving responsiveness, timeliness, patient centeredness, equity, and efficiency; reducing variation in outcomes; and increasing organizational adoption and implementation of continuous improvement methods in ongoing operations.</td>
</tr>
<tr>
<td>Patient safety</td>
<td>A domain in the health care sector that applies safety science methods toward the goal of achieving a trustworthy system of health care delivery. Patient safety is also an attribute of health care systems; it minimizes the incidence and impact of, and maximizes the recovery from, adverse events.</td>
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on the role of education in improving health care providers’ practices, how to demonstrate the impact of CE interventions on health care outcomes, and the emerging area of interprofessional CE. As CE leaders continue to engage with multiple stakeholders around the role and activities of CE, the domains of knowledge translation (KT), quality improvement (QI), and patient safety (PS) continue to evolve with a shared common interest in improving patient care. As CE leaders continue to engage with multiple stakeholders around the role and activities of CE, the domains of knowledge translation (KT), quality improvement (QI), and patient safety (PS) continue to evolve with a shared common interest in improving patient care. As CE leaders continue to engage with multiple stakeholders around the role and activities of CE, the domains of knowledge translation (KT), quality improvement (QI), and patient safety (PS) continue to evolve with a shared common interest in improving patient care.

Methods

Study Design and Participants

An interpretivist framework was used to guide the collection and analysis of the semistructured interview data. This exploratory framework sensitizes the analysis toward participants’ understandings, perceptions, and experiences. Approval for the study was received from the University of Toronto Research Ethics Board.

The aim of the recruitment strategy was to obtain interviews with individuals identified as Canadian KOLs in the 4 domains of CE, KT, PS, and QI. A criterion-based sampling strategy was used where a leader was defined as a person who has made a significant contribution to the scientific literature in 1 domain through publication and grant capture or a person engaged in a domain area through active and sustained participation in organizations and activities. Other sampling strategies used were maximum variation sampling and snowball sampling. In maximum variation sampling, the aim is to recruit participants who represent a range in relation to particular characteristics relevant to the study. In this study, the aim was to recruit participants representing the 4 domains of CE, KT, PS, and QI, working in varied organizational contexts (eg, hospital, university, professional association), and located in varied provinces across Canada. The researchers’ work in each of the 4 domains enabled the identification of potential participants. Snowball sampling, a nonprobability sampling method whereby potential research participants are identified by existing research participants, was employed to incorporate research participants’ suggestions of people suitable to participate in the study. This
approach was also a strategy to confirm the research team’s identification of KOLs in each domain through the use of criterion-based sampling and maximum variation sampling. The number of research participants recruited for this study was determined by data saturation, defined as the point at which additional interviews cease to provide new insights into the questions being explored.\(^{18}\) The study proposal outlined an expected study sample of 25 to 30 participants in total, yet data saturation in every domain occurred by the fifth participant. In this article, we explore the perceptions of research participants in KT, PS, and QI of the domain area CE, and therefore data from the 15 participants from KT, QI, and PS are included.

Data Collection

Data were collected through individual in-depth semistructured interviews.\(^{19}\) The interviews were guided by an interview schedule with questions that addressed the following areas: definition of domains, methodology, stakeholders, current research or activities in domain area, limitations or areas for future research, and relationships between domains. In keeping with standards for in-depth semistructured interviews, the interviews were flexible enough to allow participants to reflect on the historical development of the domain, compare and contrast domains, and discuss contextual issues affecting the domains. Five interviews were conducted in person, and 10 interviews occurred over the telephone. Interviews were undertaken by 2 research team members (JP and JG) and lasted between 30 and 90 minutes. After informed consent was obtained, interviews were audio recorded and transcribed verbatim.

Data Analysis

Data analysis occurred iteratively throughout the data collection period. The interview transcripts were coded using a directed content approach.\(^{20}\) In this approach, analysis begins with a theory or relevant research findings that help focus the research question and guide the initial coding scheme or relationships between codes. The research questions that drove the initial scoping review completed for this project\(^4\) and the subsequent findings were used to structure the directed-content analysis of the interview data. More broadly, the purpose was to explore the participants’ understanding of the domains CE, KT, PS, and QI and the relationships among the domains. The data were analyzed with specific consideration of language and contextual meaning of the text.

Researcher triangulation was used throughout data collection and analysis to enhance research rigor.\(^{21,22}\) Two research associates (JP and JG) initially coded the same 4 transcripts. The codes and definitions were then reviewed together with the two principal investigators (SK and MB). Subsequently, one research associate (JG) coded the interviews and met with the other research associate (JP) and principal investigators (SK and MB) regularly to review the coded transcripts and discuss the coding process, codes, and scope of analysis.

Results

The sample consisted of 12 males and 3 females, with representation from 4 provinces in Canada: Ontario, Quebec, British Columbia, and Alberta. The participants worked in a range of organizations, including professional associations, hospitals, and academic institutions. Some of the participants worked as clinicians in addition to their academic and/or administrative responsibilities.

The results are organized into 3 main sections, reflecting the findings of each group of participants—KT, QI, and PS leaders (see TABLES 2, 3, and 4, respectively). Each section is further organized into 3 thematic subsections: (1) definition and interpretation, (2) concerns about relevance and effectiveness, and (3) opportunities for collaboration. Quotes representing the main findings in each of these subsections are provided.

Knowledge Translation Leaders’ Perspectives About Continuing Education

Definition and Interpretation. The KT leaders viewed CE as one tool within a broader range of interventions in the KT domain. According to these leaders, CE largely focuses on knowledge provision and skill acquisition for practitioners, and this approach is based on the assumption that practitioners are uninformed and if provided with information and evidence, then they will change their behavior. The leaders emphasized that while knowledge and skills may be important for KT, it is limiting to focus only on individual-level barriers when aiming to effect changes in the health care system. The leaders emphasized the need to attend to factors operating at different levels.

Concerns About Relevance and Effectiveness. The leaders expressed 3 main concerns related to the effectiveness and relevance of CE: self-selection of CE programs, the focus of CE on attendance, and financial drivers. The first concern is that clinicians choose their own topics and events; this is problematic according to the leaders because of research that indicates that people tend to select topics that they are already knowledgeable about, demonstrating that practitioners do not seriously engage with their CE. The second concern is that the explicit focus in CE is on attendance rather than knowledge gained, change in skills, and improvement of patient outcomes. The leaders did acknowledge an increasing understanding of the need to focus on practice changes and patient care. The third concern is that CE
Concerns about relevance and effectiveness

This is a huge money maker for people, and so even if intellectually they know what they perhaps should be doing, the financial pull to be doing other types of continuing education is just so strong that it’s hard to imagine how we’ll ever get around that. (KT Interview #3) Continuing education would be an effective means for KT if it had any teeth, but in Canada, at least, it doesn’t. As a result of its not having any teeth, practitioners pretty well get off scot-free in having to show that they’ve learned anything since they graduated. There are no examinations. Most of the continuing education is recording attendance rather than knowledge gain rather than change in skills rather than actual improvement for patient outcomes. There’s almost a collusion of professional bodies to maintain the appearance of self-governance and continuing education while avoiding troubling practitioners to do anything serious about their own continuing education. (KT Interview #1)

Opportunities for collaboration

I think there’s a tremendous opportunity right now for those interested in research in continuing education because that is a potential strategy for knowledge translation. It’s a potential audience, and so I think that it’s an opportunity for people who are interested in that area to advance the science because there are lots of questions that could be tackled in this. For example, what’s the role of interprofessional education in improving quality of care? (KT Interview #4)

TABLE 2. Quotes From Knowledge Translation Leaders

| Definition and interpretation | I think continuing education traditionally largely focuses on knowledge provision and skill acquisition. It may focus a little bit on attitude change as well… It uses a relatively finite range of interventions to largely target knowledge and skills, and they may still be important for knowledge translation, but I frequently think, or I frequently find, that there are barriers at different levels and only focusing on those individual barriers are insufficient by itself to really achieve change. (KT Interview #2) |
| Concerns about relevance and effectiveness | I think continuing education traditionally largely focuses on knowledge provision and skill acquisition. It may focus a little bit on attitude change as well… It uses a relatively finite range of interventions to largely target knowledge and skills, and they may still be important for knowledge translation, but I frequently think, or I frequently find, that there are barriers at different levels and only focusing on those individual barriers are insufficient by itself to really achieve change. (KT Interview #2) |
| Opportunities for collaboration | This is a huge money maker for people, and so even if intellectually they know what they perhaps should be doing, the financial pull to be doing other types of continuing education is just so strong that it’s hard to imagine how we’ll ever get around that. (KT Interview #3) Continuing education would be an effective means for KT if it had any teeth, but in Canada, at least, it doesn’t. As a result of its not having any teeth, practitioners pretty well get off scot-free in having to show that they’ve learned anything since they graduated. There are no examinations. Most of the continuing education is recording attendance rather than knowledge gain rather than change in skills rather than actual improvement for patient outcomes. There’s almost a collusion of professional bodies to maintain the appearance of self-governance and continuing education while avoiding troubling practitioners to do anything serious about their own continuing education. (KT Interview #1) |

Programs are viewed as being influenced by financial incentives rather than being based on CE or KT research evidence. According to KT leaders, their concerns relate to the absence of mandatory recertification that would require clinicians to more seriously engage with their CE. In addition, professional organizations that direct CE programs were cognizant of maintaining good relations with their members. This consisted of balancing the perceived (what the members wanted) and actual (what they may actually require) needs of members, which are not always aligned. A further factor identified is the gap between research and practice. While KT leaders acknowledged efforts of CE leaders to broaden the focus of CE and use research evidence to inform their CE activities, they felt that this was rarely happening in practice. There were different opinions about the nature of this problem and whether it was due to a lack of collaboration among CE, KT, PS, and QI researchers or among CE researchers and program planners. The KT leaders felt that while CE leaders might have insights into research relevant to the domain, it is difficult for a few individuals to change the direction of the CE system.

Opportunities for Collaboration. All the KT leaders acknowledged CE as one type of knowledge translation tool. One participant indicated that CE is most relevant when it is focused on research evidence concerning clinical practice and less relevant when focused on issues other than clinical practice such as improving the organizational situation within a primary health care practice. The participants were enthusiastic about exploring new opportunities for research in CE as a strategy for knowledge translation as well as building on existing partnerships between KT and CE researchers. Potential topic areas for further examination identified were the role of interprofessional education in improving quality of care and increasing our understanding of health care professionals’ needs.

Quality Improvement Leaders’ Perspectives About Continuing Education

Definition and Interpretation. According to QI leaders, CE focuses on practitioners’ maintenance and acquisition of new knowledge and skills and has traditionally concentrated on strategies for delivering knowledge such as clinical practice guidelines. QI leaders described CE as a predisposing factor to change and as a subset of continuing professional development. The QI leaders acknowledged that some problems in health care may be due to lack of knowledge but noted that usually there are other factors contributing to practitioners’ practices such as learning culture, interprofessional boundaries, and system-level issues.

Concerns About Relevance and Effectiveness. QI leaders discussed 2 key issues related to relevance and effectiveness of CE: a lack of systematic assessment of one’s CE needs and gaps between CE research and practice. The QI leaders
expressed concern that physicians adopt a passive approach to CE since they rarely undertake a systematic review of their practices to identify areas requiring improvement and make voluntary choices according to their perceived needs. Accordingly, QI leaders felt that practitioners are more likely to partake in an activity in an area in which they feel comfortable and competent. QI leaders identified 3 other major factors impacting effective translation of research into practice in CE programming. One challenge is that CE is perceived as being based on a business model. For example, one of the QI leaders explained that although communication is an important CE topic, it is difficult to produce such a program due to the added expenses associated with highly interactive educational activities and the typically low number of participants. Another perceived challenge is the feasibility of implementing CE research into practice. For example, CE leaders have knowledge of continuing education theory such as the value of practitioner reflection and follow-up, yet QI leaders were concerned that this knowledge is not consistently implemented in practice. A third perceived challenge is that CE usually occurs away from the workplace, and therefore, QI leaders explained, it is challenging for participants to implement changes back in their clinical setting.

Opportunities for Collaboration. The QI leaders felt that CE or continuing professional development could be of value in addressing a broad range of quality and safety skills of relevance to practitioners. These could include education about QI in relation to a relevant clinical area, tools for QI and how to audit their clinical practice. They also suggested that CE could be incorporated into workplace routines such as adding an education component to morbidity and mortality rounds. The QI leaders emphasized the importance of monitoring professionals, clinical service programs, hospitals, and community health settings to provide comparative feedback. This feedback would purportedly enable practitioners to organize their learning in order to acquire the skills, knowledge, and mentorship required to address identified gaps and/or to modify their practices accordingly.

Patient Safety Leaders’ Perspectives About Continuing Education

Definition and Interpretation. The PS leaders defined CE in terms of its focus on maintaining and improving practitioners’ knowledge and skills after achieving a professional designation. These leaders acknowledged the importance of CE to practitioners’ skills, knowledge, and competence, and to QI, PS, and KT, but there was also a concern that CE reflects the “traditional” and “outdated” view that quality of patient care is dependent on individual expertise.

Concerns About Relevance and Effectiveness. The PS leaders’ comments included concerns that CE activities often occur outside of the health care delivery context and do not always address relevant problems. The leaders attributed these limitations to the absence of systematic strategies for identifying CE needs. The data included comments about the
years of training and continue throughout years in practice to important to educate people about patient safety in the early methods, and approaches into practice. It was noted that it is rection of their practices and then integrating new ideas, fl

In this regard, practitioners would gain insight into how to identify problems through undertaking an audit or thoughtful assessment that are often flawed. PS leaders expressed concern about financial factors shaping CE such as pharmaceutical industry involvement. There were also concerns that short courses have minimal impact on individuals’ health care–related practices.

Opportunities for Collaboration. PS leaders proposed that the practice of CE be modified to be more effective. For example, CE could be broadened from reporting on the latest drugs and technology to being designed in a way that would be more conducive to PS, QI, or KT. The PS leaders also noted that CE could facilitate attitudinal shifts among practitioners to encourage them to view QI as their responsibility. In this regard, practitioners would gain insight into how to identify problems through undertaking an audit or thoughtful reflection of their practices and then integrating new ideas, methods, and approaches into practice. It was noted that it is important to educate people about patient safety in the early years of training and continue throughout years in practice to develop patient safety–informed clinical practices. According to the PS leaders, education about patient safety should occur together with knowledge translation to provide practitioners with an understanding of key issues and their role as practitioners in the system and to enable them to practice accordingly.

Discussion

The findings from this study provide insights into PS, QI, and KT leaders’ perceptions of the domain of CE including its limitations and opportunities for collaboration between CE and the other domains. While there were slight differences among the findings in each domain, overall common themes were reported. For example, CE was viewed as one strategy in changing health care providers’ practices, and while leaders acknowledged the importance of CE, many also expressed concern about the limitations of education in effecting change. Other common issues were concerns about the lack of accountability in individual selection of topics and events, financial drivers in CE, gaps between CE research and practice, and the lack of relevance of CE programming. However, there was a shared enthusiasm about opportunities for collaboration among CE, and KT, QI, and PS. For instance,

| Definition and interpretation | So if you’re not delivering high-quality care, CE is a way of addressing that, it’s the traditional way, but the traditional way is part of a now outdated view. The outdated view is that the quality of patient care is dependent on the individual expertise or skill [for instance] if you’re talking about surgeons, let’s just say expertise as shorthand for knowledge or skill. (PS Interview #1) |
| Concerns about relevance and effectiveness | CME is a way of maintaining your professional competence, [it] is certainly important for quality of care and quality of improvement, patient safety and knowledge translation. Oftentimes the CME activities happen outside of the context of the care delivery system and to a certain extent are not always solving the problem of the day. Often that’s a function that providers have very limited objective evidence of their performance, and how their own individual performance is impacting, is perhaps not optimal. And therefore they’re left to design their own CME based on their own impressions of how good they are, or how not good they are, which is often a flawed approach. (PS Interview #3) |
| Opportunities for collaboration | So I think CE is a huge opportunity of peer-to-peer engagement in quality improvement or knowledge translation or patient safety. If you embedded it within traditional CE it would be particularly well received. The reality is, even though we always think about these doctors who are billing and totally out of date and crappy doctors and stuff, still the average doctor likes to be up-to-date and it’s part of their professional identity. So if you harness that opportunity and have them show up at a meeting where they will learn about the latest treatment for heart failure or diabetes, but they’ll also get some basic quality improvement stuff, that could be a really good thing. (PS Interview #1) So I think there’s a huge overlap between using continuing education to actually make people aware of, so what are the theories if I actually make a system safer and what’s your role in making that system safer, as opposed to, what’s your role in becoming the best provider you can be? And then what’s your role in actually taking best evidence and turning it into best practice and then actually doing it consistently and reliably? And again we’re never taught, I don’t think, in any of our schools how you actually do that. (PS Interview #2) |
CE can be studied as one type of KT tool, and CE can be a strategy for changing practitioners’ attitudes, knowledge, and skills around PS and QI principles and activities.

These findings have a number of implications for CE leaders. In relation to the critiques offered of CE, it is useful to reflect on whether these are misperceptions requiring attention and discussion or whether they are limitations requiring further research and action. In many cases it is likely a combination of both. Issues identified in this study such as a narrow focus on participant attendance and limitations of self-perceived needs in CE are not new and have been addressed by CE leaders (See International Association for Medical Education [AMEE] Guide No. 35). For example, Davis et al highlight that the emphasis of CME is shifting from just improving knowledge to improving physicians’ performance and CME should be developed and based on actual and perceived needs. While these statements are in the research literature, we need to ensure that they are also in CE practice. CE leaders also need to work simultaneously on changing KT, QI, and PS leaders’ attitudes about CE and to reflect on their own activities in CE to ensure that they follow objectives as outlined in documents such as the AMEE Guide. Leaders in CE can seize upon current opportunities to position CE as an innovative and relevant domain, and there are initial examples of this happening that reflect the recommendations of leaders in this study. These initiatives range from editorials to partnerships to programs being implemented. For example, in a commentary paper, Shojaania et al provide 4 approaches for integrating CME and QI in an effort to improve health care quality and address the calls for changes in CME. Légaré et al. report on a partnership between KT researchers and CPD knowledge users and the initial outcomes of this partnership. A new Association of American Medical Colleges (AAMC) program called Aligning and Education for Quality is being implemented to help medical schools and teaching hospitals align their clinical quality improvement with their CME programs and activities.

We believe the main message embedded in the findings of this study is that CE leaders need to be mindful of the (mis)perceptions about CE by representatives of other intervention approaches when engaging in new strategic collaborations. Simultaneously, CE leaders should continue to build on existing collaborations between the CE and KT, QI, and PS domains, as described above, to enable the strengths of each domain to complement each other.

The limitations of this study are that the findings are based on a sample that does not represent all leaders in the domains of CE, KT, QI, and PS in Canada. In addition, it is limited to KOLs in Canada. Further studies are needed to examine the relationships among these domains in other countries. In addition, as an interview-based study the data give insights into attitudes, experiences, understandings, and what people say about their behavior not their actual actions. This study provides insight into leaders’ perceptions of activities in relation to their domain and collaboration with CE rather than research-based observations of actual behaviors and practices within and across the four domains. Nonetheless, it serves as a valuable foundation in identifying key themes about the character of the relationships between KT, QI, PS, and CE. Therefore, the findings from this study are important from a conceptual generalizability standpoint, rather than being empirically generalizable.

In conclusion, this study has identified key themes relating to the relationships between CE and KT, QI, and PS, which can inform CE leaders’ current and future strategic collaborations. The findings also provide a platform for future research on the processes and practices associated with integrated interventions involving 2 or more of the 4 domains.

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