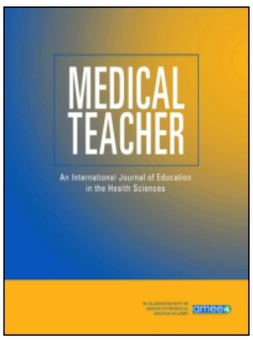

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A conceptual framework for planning and assessing learning in continuing education activities designed for clinicians in one profession and/or clinical teams

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ABSTRACT

Purpose: The purpose of this article is to provide a more actionable description of the components of the outcomes framework published in 2009.
Methods: Synthesis of recent research in the learning sciences.
Results: The authors propose a conceptual framework to be used planning learning activities and assessing learning in CPD.
Conclusions: CPD practitioners will have a more explicit approach to help clinicians provide the very best care to their patients.

Background

Despite continuous advances in biomedical and health service research, patients do not always benefit from them, resulting in a gap between the care that they receive and the care that they could and should receive. This article addresses one important contributing factor: the practice of continuing education (CE) for healthcare professionals and teams.

Because healthcare professionals want to provide the best possible care to their patients, they rely on CE to maintain competence in their areas of practice. But, CE in the health professions has not always incorporated research findings from the learning sciences and does not always help health professionals change their clinical behavior in a way that would lead to improved patient health (Ambrose et al. 2010; Dumont et al. 2010; Institute of Medicine 2010).

An outcomes framework that reflected some of the research findings was proposed in 2009 (Moore et al. 2009). The framework included seven outcome levels: participation; satisfaction; learning; competence; performance; patient health and community (population health; See Figure 1) These levels approximate stages of clinician learning and application of learning in the clinical setting with expected impact on patient health. The outcomes framework was an important contribution to the field of CE, but assessment of outcomes became the focus at the expense of planning learning activities that would produce desired outcomes. The purpose of this article is to describe an updated conceptual framework that incorporates an expanded approach to instructional design with the potential of producing improved clinical performance and enhanced patient health.

A conceptual framework is a system of concepts, assumptions, expectations, beliefs, evidence and theories and the presumed relationships among them that provide a comprehensive understanding of a phenomenon. In this article, the phenomenon is planning and assessing learning activities for clinicians in one profession and/or clinical teams to help them improve their performance that would lead to improved patient health. This updated and

Practice points

- Planning for CE should begin with determining the "end in mind," the desired health of patients, and the clinical performance necessary to achieve the desired health.
- Assessment should be used throughout a learning activity in CPD: needs assessment to determine what needs to be learned (desired results); formative assessment to determine if learners are progressing towards desired results; and summative assessment to determine if desired results have been achieved.
- Learning activities should be organized as predisposing, enabling, and reinforcing activities.
  - Predisposing activities should use needs assessment data to predispose clinicians to learn.
  - Enabling activities should provide clinicians with (1) information about what they need to learn, (2) a worked example to show them how what they will be learning is done correctly, (3) opportunities to deliberately practice what they are learning, and (4) receive knowledgeable feedback and coaching about their practice.
  - Reinforcing activities should provide clinicians with reminders in their work setting about what they have learned to facilitate recall and application.

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expanded conceptual framework has strong theoretical grounding in that it integrates a variety of perspectives from research in continuing medical education, interprofessional education and practice, and the learning sciences.

Because the vast majority of patient care is delivered by health professionals working as members of interprofessional teams, a second purpose of this article is to describe how the conceptual framework can be used to plan and assess learning for interprofessional clinical teams (interprofessional continuing education, IPCE). Practical examples will be used throughout the article to demonstrate how to use components of the framework to plan and assess IPCE learning activities.[1] The term CE will be used when the processes contained in the conceptual framework are used generically.

The updated conceptual framework places instructional design (area 3 on Figure 2) between the steps used for planning (areas 1 and 2 on Figure 2) and the steps used for assessment (areas 4 and 5 on Figure 2). Data are collected in areas 1 and 2 about population health, patient health status, performance, and learning needs of individuals or teams. These data are used to plan learning activities for learners in single professions or clinical teams in phase 3 (instructional design) and serve as baseline data for assessing learning, competence, and performance in phase 4 and patient and population health status in phase 5.

An important part of the conceptual framework is continuous assessment. Continuous assessment consists of three phases of assessment: needs assessment; formative assessment, and summative assessment. Needs assessment identifies the gap between what clinicians in one profession and/or clinical teams know and can do before a learning activity and what they should know and do after a learning activity in order to provide the best possible care to their patients. Formative assessment is monitoring what an individual clinician and/or clinical team is learning and can do during a learning activity as they progress towards reducing or elimination the gap identified by needs assessment. Helping an individual clinician and/or team reduce or eliminate the gap through practice and feedback is an important part of the conceptual framework. Summative assessment measures what an individual learner and/or a clinical team knows and can do after participating in a learning activity and compares it to what an individual clinician and/or clinical team should know and be able to do to provide the best possible care to patients. Details about each phase will be described in the following pages.

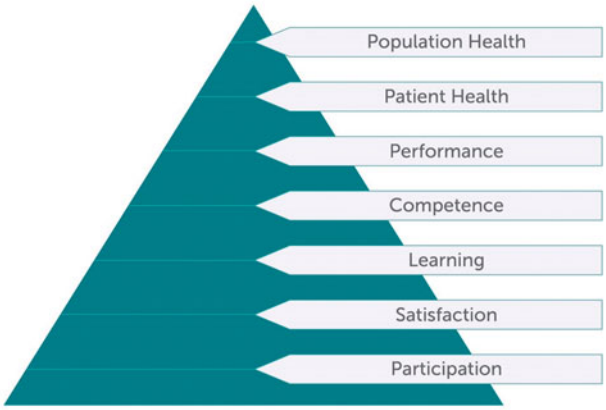

Figure 1. The original outcomes framework.

The conceptual model – needs assessment

The term needs assessment refers to a systematic process for identifying and analyzing needs. The term "need" refers to a "gap" between "what is" (current conditions) and "what should or could be" (desired conditions; Knox 1980; Fox 1983) To operationalize the need that an educational activity will address, the gap between "what is" and "what could or should be" must be measured. In the conceptual framework, needs assessment includes assessing

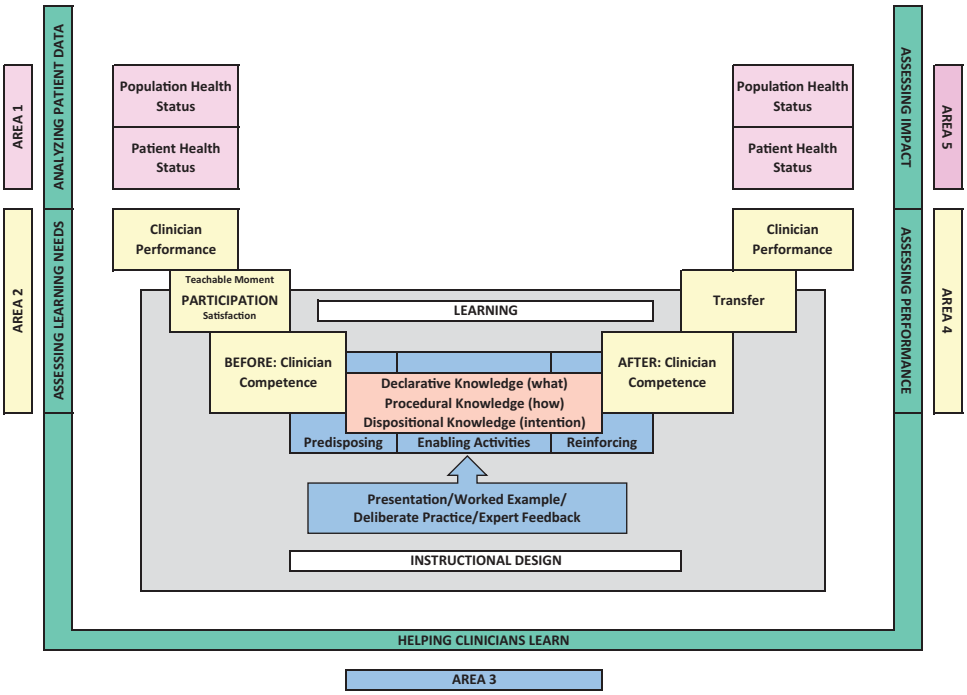

Figure 2. Conceptual framework for planning learning activities and assessing learner in IPCE.

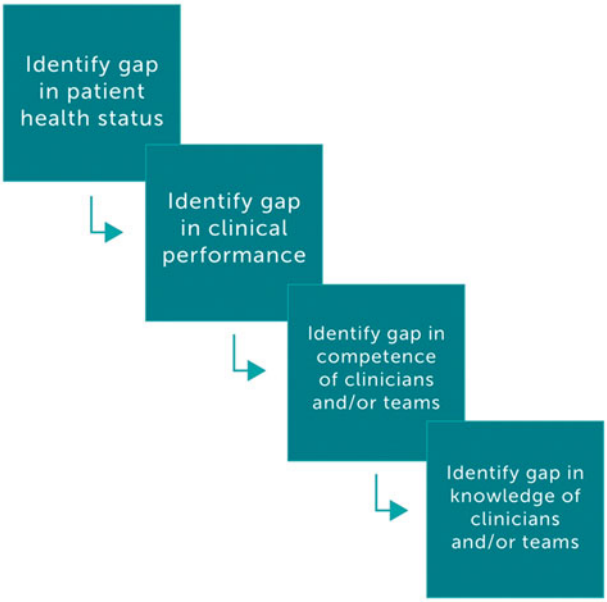

Figure 3. Needs assessment in the conceptual framework.

population health, patient health status, clinical performance, and the competence and knowledge of clinicians, individually or within teams (Moore and Cordes 1992; See Figure 3).

Identifying and analyzing a gap in health status

Because the health status of patients is a primary concern in CE, planning activities should begin by examining population or patient health. Health status refers to the level of health of an individual or group and is referred to in terms of mortality and morbidity, the presence or absence of disease, and/or the signs or symptoms of disease. Health status can be described using clinical or pathological measures.

> IPCE EXAMPLE An example of a clinical measure is HbA1c in diabetes. HbA1c is a measure of the average glucose concentration in a patient's blood. If HbA1c is greater than 6.5%, a patient is considered to have diabetes. (American Association of Clinical Endocrinologists & American College of Endocrinology 2015; American Diabetes Association Professional Practice Committee 2018a)

Depending on their scope of responsibilities, individuals planning learning activities ("planners") could focus on the health status of patients in a population defined by political or geographical considerations by a health system, by a group practice, or by a disease. At the population level, national and international agencies typically collect outcome data that reflect the health status of their citizens (Frenk et al. 2010; Murray and Lopez 2017; Koh and Parekh 2018). Group practices and health systems typically maintain patient outcome data. Planners can use these data to identify gaps that could be addressed by CE activities.

Educational planning theory supports starting with population or patient health and refers to it as "backwards planning". "Backwards planning" starts with the "end-in-mind," also referred to as "desired results" (Wiggins and McTighe 2005). Desired results in health care include but are not limited to improved outcomes in a population or groups of patients in a practice or health system.

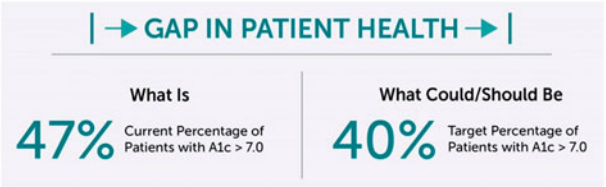

Figure 4. Identification of gap in HbA1c for patients in the healthcare system with diabetes.

> IPCE EXAMPLE. As part of an annual review, a health system collected and analyzed data on the health status of patients as part of its approach to continuous improvement. The result of the analysis showed there was a significant gap in HbA1c, a health status indicator for diabetes (See Figure 4). System leadership asked CE planners to participate in system-wide efforts to address the gap.

After identifying and describing the gap in health status, the next step is analyzing the gap to determine why it exists. A commonly used quality improvement technique, the fishbone diagram, can be used (Croteau 2010; Institute for Healthcare Improvement 2017). It is a cause and effect diagram portrayed as a fish skeleton. Each of the bones represents a category of causes. Typically, there are six categories of causes: equipment; process; people; materials; environment; and management. The categories change based on the problem and its circumstances.

To populate the diagram, representatives of clinical teams involved in the care of the target patient population should engage in discussion about the gap using the "5-why's" technique.[2] The "5 whys" is an iterative interrogative technique used to explore the cause-and-effect relationships underlying a particular problem. The primary goal of the technique is to unearth the root cause of a defect or problem by repeating the question "Why?" until no more causes are proposed. The "5-why's" technique has been shown to produce the right number of responses to get to the root cause.[3]

> IPCE EXAMPLE: Figure 5 shows the results of a fishbone exercise that identified four potential categories of causes of elevated HbA1c values in a diabetic patient population: the microsystem, staff, patients, and clinical teams. Further analysis of the four categories produced three possible causes of elevated HbA1c values: inconsistent use of current guidelines by diabetes clinical teams; poor team functioning; poor patient adherence. A planning committee was convened to address inconsistent use of guidelines.

Identifying and analyzing a gap in clinical performance

The next task is to identify, describe, and analyze the professional practice gap (PPG) in the area of concern that was identified in a fishbone exercise. Formal review of patient health records would provide useful metrics for identifying PPGs.[4] A clinical practice guideline or local consensus best practice statement are good criteria for record review.

> IPCE EXAMPLE: Figure 6 shows the results of an audit of patient health records in which the PPG was defined as the difference between the current performance of the diabetes clinical team (treatment plans include changes in anti-glycemic therapy from the 2018 ADA guidelines [American Diabetes Association Professional Practice Committee 2018b] – 43%) and what it

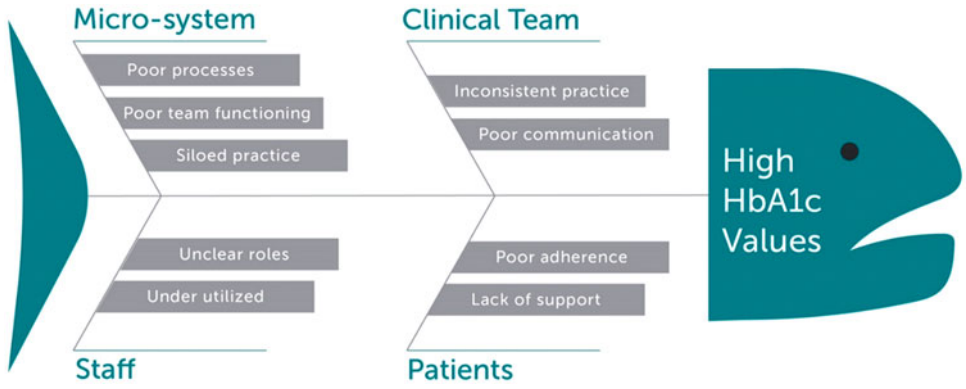

Figure 5. Fishbone diagram.

could or should be (95%). At this stage, it is important to engage a subject matter expert (SME) to help with assessment of competence and knowledge as well as developing the content of learning activities.

Identifying and analyzing gaps in competence and knowledge

The next step is to determine if there are gaps in competence and/or knowledge. To determine what clinical teams know and could do; planners should work with team members and SMEs to develop case scenarios to highlight specific issues in the PPG that could lead to the identification of gaps in knowledge and competence.[5]

A scenario is an authentic case that contains clinical management challenges that can highlight areas of strengths and weaknesses in competence and knowledge and team functioning (Alinier 2011). Asking members of a clinical team to work through scenarios before a learning activity and/or during the beginning sessions could identify gaps in competence and knowledge, providing data for developing content for learning activities. It would be important to develop a variety of scenarios that incorporate complex clinical situations that individual clinicians and clinical teams would experience in practice.

Competence is the combination of declarative, procedural, and dispositional knowledge that enables an individual to perform a task effectively. Declarative knowledge is the collection of facts, concepts, and propositions that a learner can express as a statement. Procedural knowledge is the variety of skills that people use to achieve goals through thinking and acting. Dispositional knowledge comprises attitudes, values, interests, and intentions that direct and guide an individual's conscious thinking and acting, as well as learning (Billett 2009).

Motivation and enrolling-participating-engaging

Even though a learning activity may be designed to address learning needs associated with a PPG, a major challenge in CE is attracting busy clinicians who may not realize or acknowledge that there is a gap in their practice performance. For most clinicians, motivation to enroll and participate in a learning activity is influenced by comparing opportunity cost (time away from practice and/or other personal and social responsibilities) and the likelihood of enhanced capability and improved patient care in an area important to them (Cervero 1981; Moore et al. 1994).

Creating or reinforcing teachable moments is one way to motivate potential learners to enroll in a formal learning activity. The theory behind a teachable moment is cognitive dissonance. Cognitive dissonance is defined as the mental discomfort experienced by an individual who believes that he or she is correctly doing something but is confronted with new information that contradicts that belief. Because a person who experiences cognitive dissonance tends to become psychologically uncomfortable, he or she is motivated to try to reduce the discomfort (Festinger 1957). Enrolling in a formal learning activity is a start. To encourage participation in a learning activity and engagement in learning, learners should be regularly reminded about the PPG that created the cognitive dissonance that initiated learning and the progress that they are making in reducing or eliminating the PPG.

IPCE EXAMPLE: Cognitive dissonance is also relevant to interprofessional teams. An interprofessional team may be presented with information demonstrating that collective team performance is not achieving desired patient outcome goals. This can create cognitive dissonance among team members, resulting in the decision of an individual team member or the collective decision of a team to address the discomfort. A diabetes clinical team may be motivated to pursue learning to reduce the discomfort of cognitive dissonance that emerges

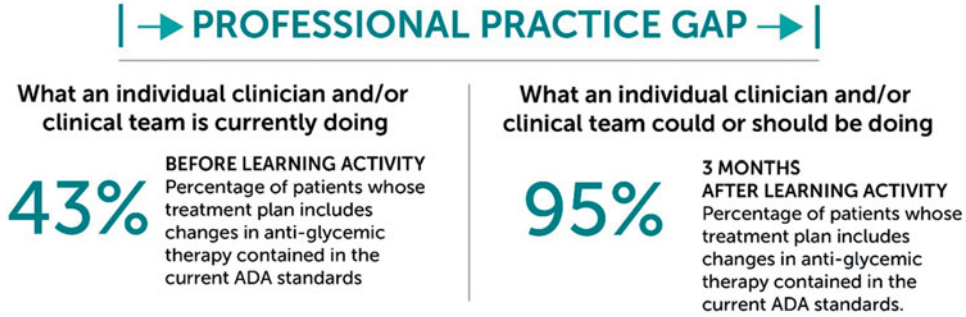

Figure 6. PPG before learning activity.

from a realization that they might not be doing what is necessary to provide the best possible care to their patients (Moore 2008). Such a situation may exist with team members who realize that some of their patients diagnosed with diabetes did not reach their HbA1c targets because they were not offered treatment consistent with ADA Standards (American Diabetes Association Professional Practice Committee 2018c).

There are two ways to create or reinforce a teachable moment to influence individual learners or the members of an interprofessional team to enroll in a learning activity. The first is to create recruitment materials (brochures, flyers, emails, etc.) that include data highlighting the existence of a PPG in team performance, potentially creating a teachable moment that will motivate clinical teams to enroll. The second is to offer clinical teams an opportunity to work through scenarios that address issues related to the PPG after they have enrolled.

IPCE EXAMPLE: The SME developed five scenarios that highlighted specific issues in the PPG. Two of the scenarios were sent to diabetes teams before the learning activity. Three would be used during the initial session of the learning activity.

The conceptual framework – helping clinicians learn

The preceding section focused on identifying gaps in health status and clinical performance as well as initial efforts to identify gaps in competence and knowledge. The next section will focus on refining the gaps in competence and knowledge and using that information to design learning activities to address suboptimal performance and health status (See area 3 on Figure 2). Planners should consider offering three types of learning activities to help individual clinicians and clinical teams learn: predisposing; enabling; and reinforcing (Green and Kreuter 2005).

Predisposing activities cause an individual to be more likely to behave in a particular way. Predisposing activities can be considered to be a continuation of efforts to create and reinforce teachable moments as well as to assess the competence and knowledge of learners that started before the learning activity. For example, planners could ask clinical team members to work on scenarios in small groups that address clinical challenges related to the PPG.[6]

IPCE EXAMPLE: Figure 7 combines the results of scenario exercises conducted before and during the predisposing session in which team members responded to multiple choice items embedded in the clinical scenarios. If individual team scenario data and/or actual practice data is available, the data should be shown in a blinded format during a predisposing activity to reinforce the teachable moment, making it more likely that clinician learners will become engaged in enabling activities (Eisenberg 1986; Greco and Eisenberg 1993).

Enabling sessions help learners do something that they previously were not able to do and/or improve something that they were not doing well. Working with SMEs, planners should take advantage of teachable moments and design enabling sessions that focus on what team members need to learn to eliminate or reduce PPGs. Enabling activities provide learners with opportunities to address teachable moments by learning what to do (declarative knowledge), how and when to do it (procedural knowledge), and develop the disposition to do what they have learned when it is appropriate (dispositional knowledge).

Enabling sessions have four components: presentation; worked example; deliberate practice; and expert feedback and coaching (Salas and Cannon-Bowers 2001; Merrill 2013). First, presentation methods should articulate the PPG, the difference between what is being done and what could or should be done, so learners will be able to visualize the desired results ("what-they-should–be-doing") as a guide for learning throughout the enabling sessions (Fox et al. 1989). There should be opportunities for questions and discussion for clarification. Next, a *worked example*, a case that serves as a model of what should be done, usually in a step-by-step demonstration, is presented (Renkl et al. 1998; Clark et al. 2006). Discussions then include strategies for implementation and impact of barriers to implementation. A format similar to that used for scenarios should be employed.

Providing an opportunity for members of clinical teams to experience a combination of *deliberate practice* and *expert feedback* is an essential component of an enabling session. Deliberate practice refers to a specific type of practice that is purposeful and systematic. Typically, practice involves unorganized repetitions. Deliberate practice requires focused attention on a specific task with the goal of improving performance (Ericsson and Pool 2016). Deliberate practice provides members of clinical teams and individual learners opportunities to try out what they are learning in authentic clinical scenarios.

Because clinical tasks can be complex, scaffolding should be used (Reiser and Tabak 2014). Scaffolding moves learners progressively toward stronger understanding and, ultimately, greater independence in the learning process. Faculty model or demonstrate what is to be learned, usually breaking up learning into subtasks organized according to increasing difficulty and complexity, and then stepping back and offering support only as needed. A learner progresses by accomplishing each subtask, integrating it with

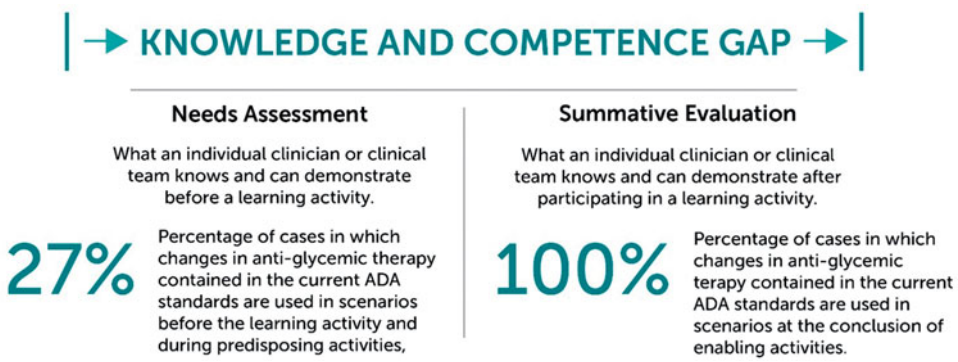

Figure 7. Gap I competence and knowledge before learning activity.

previous subtasks. The shared bar on Figure 8 represent each opportunity to practice a subtask and receive feedback from an expert observer or other learners.

A core component of enabling activities is continually practicing clinical skills at more challenging levels with *expert feedback and coaching* (Ericsson and Pool 2016) Clinician learners receive appropriate expert feedback when an appropriately trained faculty expert observes and comments on their performance, addressing what they did well; what they have not done so well; what they might have omitted; and/or what they can do to advance to the next level. See Sargeant et al. for an example of feedback and coaching (Sargeant et al. 2015). In addition, peer feedback should be considered as an opportunity to assist the developing expertise of other learners (Pillay and McCrindle 2005).

If small groups are not possible, practice and feedback activities could begin with discussions of worked examples in a large group, incorporating audience polling at key decision points followed by small group discussion of increasingly challenging scenarios with feedback from faculty experts. If resources permit, deliberate practice with standardized patients and expert faculty feedback and coaching is optimal.

> IPCE EXAMPLE: See Figure 8. Scenarios that require participants to address increasingly complex aspects of prescribing anti-glycemic therapy should be used throughout a learning activity to identify a gap in knowledge and competence (needs assessment) to monitor and guide progress on closing the knowledge and competence gap during the learning activity (formative assessment) and to determine if learners on interprofessional clinical teams have closed the identified gap (summative assessment). Figure 8 shows that learners worked through five scenarios and they incorporated the changes in anti-glycemic therapy in 100% of treatment plans.

Reinforcing activities are the third type of enabling activities. Reinforcing activities can help learners recall what they have learned when they need to use it in a clinical setting. Course materials in the form of handouts have traditionally been thought to accomplish this very important function as practice aids, but they rarely have been consulted in that way. Other examples of reinforcing activities and materials are reminders in electronic health records or on mobile devices, or paper reminders clipped on patient charts (Bennett et al. 2003).

To a certain degree, reinforcing activities can also extend deliberate practice and expert feedback beyond the learning activity. To accomplish this, planners can use a more active approach to reinforcing activities: a commitment-to-change exercise with follow-up scenarios certified for credit (Mazmanian et al. 2001; Wakefield et al. 2003). There is some evidence that commitment to change exercises can lead to clinical behavior change (Eccles et al. 2006).

The conceptual framework – assessing learning and its impact

The final areas of the conceptual framework focus on determining the effectiveness of a learning activity and are depicted as areas 4 and 5 on Figure 2. There are three related tasks in assessing the impact of a learning activity: assessing learning (summative assessment); assessing change in performance of the learners (performance assessment); and assessing change in health status of patients cared for by the learners (impact assessment). Planners should recognize that transfer is an important consideration in instructional design, because incorporation of design features in a learning activity that support transfer can facilitate the use of what is learned into practice. Transfer will be discussed after summative assessment.

Summative assessment

Summative assessment occurs at the conclusion of a learning experience to determine if individual clinicians and clinical teams have developed capabilities that can contribute to improved performance in the clinical setting. Some learners and teams may reach the goals of a learning activity after as few as three practice and feedback sessions, while others may not reach proficiency until after the fourth or fifth practice and feedback sessions.

> IPCE EXAMPLE: Figure 9 shows the results of a summative assessment of a learning activity in which 10 clinical teams participated in up to 5 scenarios. At the conclusion of the

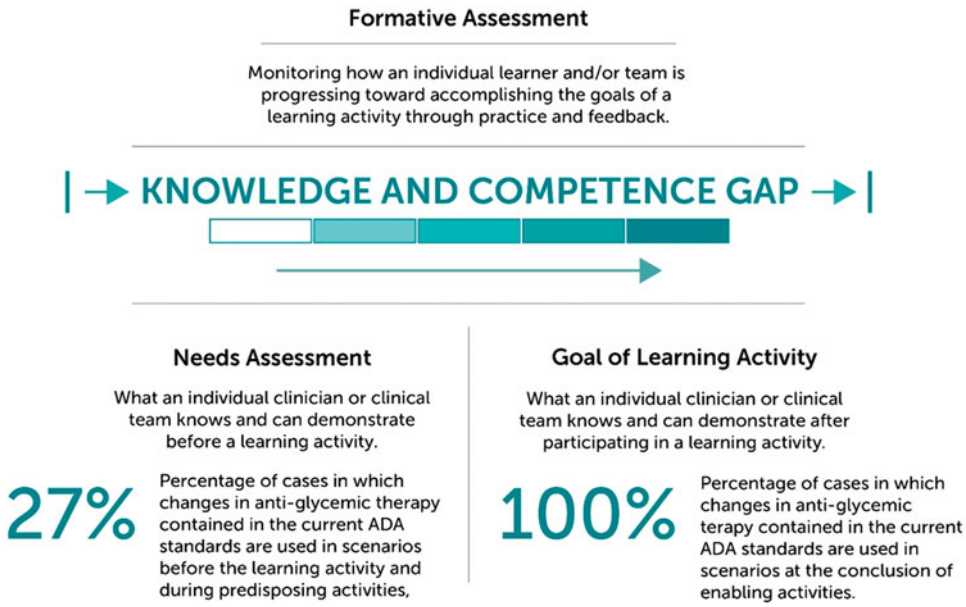

Figure 8. Formative assessment during learning activity.

enabling activities, the changes in anti-glycemic therapy from the current ADA standards were used to develop treatment plans for patients with T2D in 100% of the scenario cases; 100% is the desired result of the learning activity, but will that level of learning be enough to impact clinical performance and patient health status? Figure 10 suggests that it will not be enough. Even though the desired results of the learning activity were accomplished, the challenge becomes using what was learned effectively in practice. If what was learned prepared clinician learners for future learning, they should be able to address routine and challenging patient encounters.

Transfer

Transfer is the capability of clinicians to use what they have learned in formal learning activities to learn and adapt in their practice settings. Originally, transfer was conceptualized as occurring when an individual took what he or she learned in one setting and applied it in another similar setting. In this older conceptualization, transfer of learning depended on the similarity of the learning task and the task in the new setting (Thorndike and Woodworth 1901; Perkins and Salomon 1992). More recently, transfer is conceived as a process in which past learning influence learning and performance in new situations. A level of abstraction that goes beyond the context of the learning activity is necessary to enable this newer understanding of transfer. Multiple exposures with differing contextual features, an important part of the approach described in the previous section, will help learners begin to recognize principles that facilitate learning and transfer in new situations. It is increasingly recognized that highlighting the basic science underpinnings in clinical decision-making helps clinicians learn what to do during novel situations (Bransford and Schwartz 1999; Schwartz et al. 2005; Mylopoulos et al. 2016) In health professions CE, connecting clinical decision-making content with underlying basic science principles provides a conceptual foundation that facilitates recall of content that is helpful in clinical encounters when there is a novel patient presentation.

IPCE EXAMPLE: In the previous ICPE example, there may have been diabetes patients with novel clinical presentations. If clinician learners had been prepared for future learning, they would have been able to adapt what they knew to the novel situation and increase the percentage of patients whose treatment plans include the changes in anti-glycemic therapies contained in the current ADA standards (Cutrer et al. 2017). The conceptual foundation of what they learned working through multiple scenarios would help them recall the basic science principles underlying clinical decision making for even the most challenging patients.

Assessing performance

It is necessary to assess the performance of learners in their clinical setting to determine if the newly developed

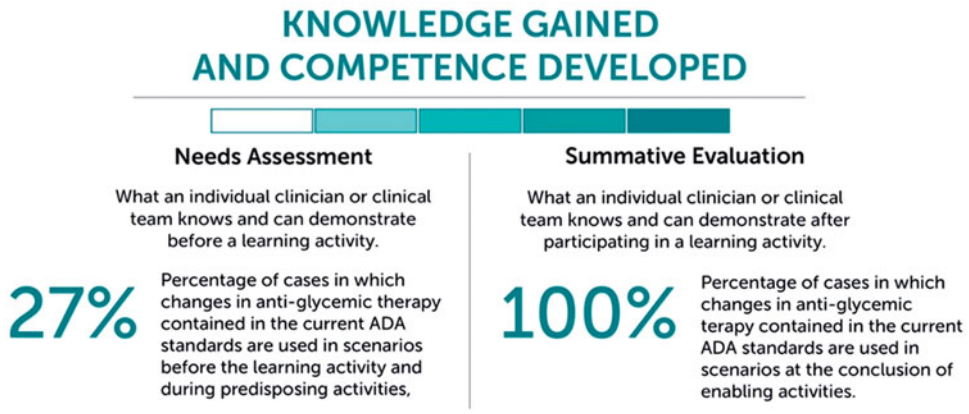

Figure 9. Gap in competence and knowledge before learning activity.

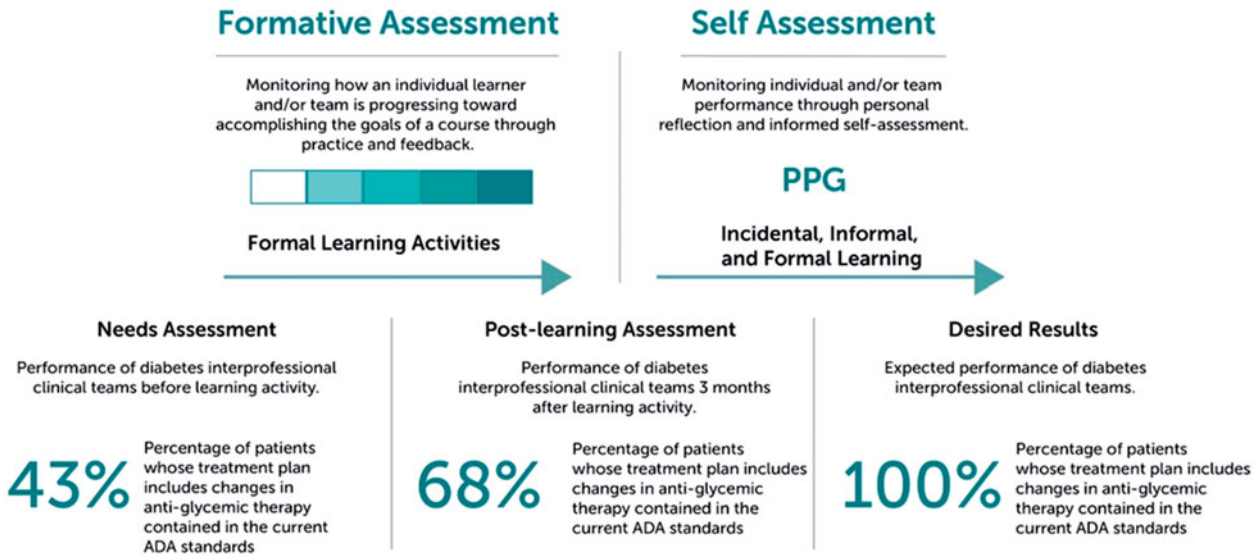

Figure 10. Addressing remaining Ppg After formal learning.

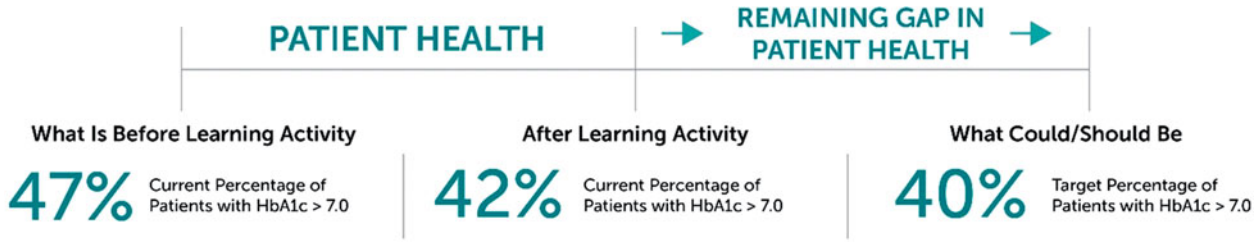

Figure 11. Remaining gap in patients health after learning intervention.

capabilities contribute to improved performance, that is, if the PPG identified during needs assessment has been reduced or eliminated (See Figure 6). To determine if the gap has been reduced or eliminated, it would be necessary to conduct a review of a sample of patient health records similar to the sample used in needs assessment.

> IPCE EXAMPLE: Figure 10 shows the results of the review of patient health records in the box labeled "post-learning assessment." The number of patients whose treatment plan includes changes in anti-glycemic therapy contained in the current ADA standards increased from 43% to 68%. As you can see in the box labeled "desired results" on Figure 10, however, there is still a gap between the results of the post-learning activity assessment and the desired results.

Assessing the impact on patients

This article started with a description of a backwards planning process and a focus on patient health. Figure 4 shows that the initial percentage of patients with HbA1c values over 7.0% was 47%. This percentage was considered unacceptable to clinicians and health system leaders. A goal of 40% of patients with HbA1c values over 7.0% was set as the desired result, to be achieved over several years.

> IPCE EXAMPLE: Figure 11 shows that the percentage dropped to 42% after the learning intervention, which was still greater than the desired result of 40%. This means that the gap in patient health status was not completely reduced. While the learning activity provided opportunities for learners to learn how to manage a majority of the patients with T2D that they encountered, clinicians were not able to manage the full range of patients that they encountered after the learning activity. To sustain an ongoing decrease in the percentage of patients whose HbA1c is below 7.0, planners should consider a quarterly assessment of the performance of diabetes teams combined with feedback and coaching.

The conceptual framework – concluding comments

This article has two purposes. The first purpose is to describe a conceptual framework for planning and assessing CE in the health professions. The second purpose is to describe how the framework could be used to plan and assess learning activities in both CE for single professions and clinical teams in IPCE.

The conceptual model has several important characteristics. First, by using a backwards planning approach, it is patient-centered. Second, it is data-driven; data are central in assessment and planning. Third, it draws on a variety of studies in the learning sciences to suggest an evidence-based approach to designing learning activities. Fourth, a centerpiece of the model is continuous assessment that guides learners from an existing level of expertise to a more desirable level of expertise. Fifth, it is flexible. CE planners can decide to start at a level for which there is resources and interest. Sixth, it follows and, to a certain degree is inspired by, the work of Cervero and coworkers who studied the effectiveness of CE in the health professions through systematic reviews since the early 1990s (Umble and Cervero 1996; Robertson et al. 2003; Cervero and Gaines 2015). Some of the features of learning activities that are associated with effectiveness include: needs assessment for performance change; varying learning experiences; the majority of which should be interactive; multiple exposures to content in which patient characteristics and/or context change; longer activities that provide opportunities for interaction and multiple exposures to content; and focus on outcomes that interest clinicians, those that help them provide the very best possible care to their patients.

A third purpose of this article is that the conceptual framework could serve as the framework for the development of rigorous empirical evidence demonstrating the effectiveness of IPCE and CE for single professions. Connections will have to be made in this research with other fields, such as implementation science and dissemination research to address the complexity of health care (Brownson et al. 2012).

Notes

1. While the examples will be focused on planning IPCE, planners of CE for single professions should be able to adapt the approaches to their work.
2. This is one of several examples of a collaborative effort between IPCE planners and other groups in a health system that are crucial for the conceptual framework to be effective.
3. The fishbone diagram is one of many QI techniques to use. Consult the IHI toolkit for more techniques. (Reference 5).
4. Review of patient health records is another IPCE example of how important collaborative working relationships are with other functional units within a health system.
5. Another IPCE example of collaboration that facilitates the effectiveness of using the conceptual framework.
6. There are a variety of other pre-disposing learning activities; planners should use the format that best highlights the gap that the learning activity will address.

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