



Post MD Education  
UNIVERSITY OF TORONTO

## **Best Practices in Evaluation and Assessment (BPEA)**

### **A look at the Issues and Implications of CBME for Learners**

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### **1. Executive Summary**

The implementation of competency-based education across all residency programs at the University of Toronto will necessitate some changes to programs' evaluation and assessment methods. Although the literature of assessment and evaluation in competency-based medical education is scarce with respect to the learners' roles and responsibilities, a review of existing literature, and two focus groups with learners who trained in a competency-based environment, have resulted in several key implications. First, the learner must take responsibility for his/her learning. Programs and faculty should communicate to the learner about which competencies will be evaluated at each point in the program and what is expected of the learner. In addition, faculty should be trained in the provision of feedback, usage of assessment tools, and how to empower learners to perform personal assessment.

### **2. Background**

Within the next decade, all residency programs at the University of Toronto will be following a competency-based curriculum, as mandated by the Royal College of Physicians and Surgeons of Canada (Royal College) and the College of Family Physicians of Canada (CFPC). In light of the change in the postgraduate programs' curricula, the Postgraduate Medical Education (PGME) office formed a working group (Best Practices in Evaluation and Assessment [BPEA]) to review best practices in evaluation and assessment within a competency-based environment. To help inform best practices, the group was divided into sub-groups to conduct literature searches on nine themes. This paper discusses the learner role within competency-based medical education evaluation and assessment. The literature search focused on defining who the learners are, their expectations and responsibilities within competency-based evaluation and assessment, and the faculty development required to support learners.

### **3. Methodology**

A literature search using MEDLINE and PubMed was conducted, using key terms such as feedback, assessment, evaluation, learner-centred assessment, self-directed learning AND competency-based education AND postgraduate medical education. In addition, articles referenced in the relevant articles were collected and reviewed. Lastly, various websites (Royal College, CFPC, Professional Association of Residents of Ontario [PARO], Resident Doctors of

Canada (RDOCs), and the College of Physicians and Surgeons of Ontario [CPSO]) were scanned for information pertaining to learners and assessment.

All relevant articles were read and summarized by the group members, with a specific focus on learners in postgraduate medical education assessment/evaluation. Although the literature on assessment and evaluation in postgraduate medical education is vast, it generally does not reflect the learner's perspective. To supplement the literature, a BPEA group member (SGT) conducted focus groups with faculty and learners who participated in the pilot competency-based programs at the University of Toronto. This report includes data gathered during the Orthopaedics Surgery and Palliative Medicine learner focus groups.

## 4. Results and Discussion

### 4.1. Definition and Description of Medical Learners

In this review, the term “learner” refers to all postgraduate residents registered in residency training programs at the University of Toronto. This includes learners who have completed medical school within or outside of Canada. It is important to acknowledge that resident learners have dual roles as both residents, whose objective is to train and learn, and as physicians, whose primary responsibility is to provide clinical care. CPSO defines Postgraduate Residents as physicians continuing in postgraduate medical education who cannot practice independently; they are only allowed to practice within their training program.<sup>1</sup> CPSO emphasizes that “safe and effective care of the patient takes priority over the training endeavour,” although appropriate training should facilitate both patient and educational interests.

Similarly, PARO acknowledges the dual role of residents as hospital employees and learners in training programs.<sup>2</sup> The Future of Medical Education in Canada Postgraduate (FMEC PG) Project also describes the “learner” and “worker” responsibilities inherent in residency training. It concludes that the workplace apprenticeship model can be leveraged to optimize learning if implemented in a learner-centred fashion.<sup>3</sup> One must keep these dual roles in mind when addressing the expectations of learners.

### 4.2. Expectations of Learners

Learners in the context of Competency-Based Medical education (CBME) should:

a) demonstrate active engagement in the assessment process; b) exhibit skills in self-directed learning; and c) demonstrate an openness and capacity for learning and improvement.

With respect to engagement in assessment, it is critical that programs actively involve and empower learners in the assessment process, for several reasons. Firstly, a competency-based program of assessment should ideally incorporate a continuous and rich collection of assessment information to accurately reflect a learner's competency and abilities.<sup>4</sup> This is only possible if learners consistently seek opportunities for assessment and improvement in the workplace, in a process of “self-directed assessment seeking.”<sup>5</sup> As practicing physicians, learners will be expected to maintain competence by seeking and collecting assessments of

their own performance; the need for these skills in the future provides an impetus for embedding these skills during training.<sup>6</sup>

It is also expected that learners will demonstrate motivation and skills in self-directed learning. As the traditional roles of learner and teacher change, postgraduate learners, in their status as adult learners, are expected to take increasing ownership in their learning, and make sure they are meeting their learning objectives.<sup>7</sup> While external inputs and feedback to the learner are important to guiding their learning activities, learners should also serve as drivers of their own learning. To this end, if residents lack confidence in their ability to manage their own learning, it will be important to provide them with the training and tools to succeed.<sup>8</sup>

In order for feedback to be effective, it will be necessary for learners to demonstrate willingness to incorporate feedback to facilitate self-improvement. This will involve the completion of portfolios that enable learners to monitor their own practice and develop learning plans.<sup>9</sup> These activities, which guide the process of self-reflection and improvement, should be expected of engaged learners. The ability to systematically reflect on work experiences, while also incorporating feedback through continuous learning, will be an important component of CBME.<sup>10</sup>

### **4.3. Responsibilities to Learners**

It will be important for residency training programs, in the context of CBME, to fulfil the following responsibilities to their learners: a) gradual entrustment of clinical duties; b) provision of effective feedback based on direct observation; and c) the development and communication of clear objectives and assessment methods.

Graded responsibility is a critical component of medical education, requiring a balance of providing adequate supervision while granting increasing learner independence. Defining and operationalizing Entrustable Professional Activities (EPA) is an important part of this mandate, as EPAs bridge clinical care and medical education.<sup>11</sup> The structure and curricula of residency programs should also be designed to facilitate gradual autonomy with increasing competence.<sup>7</sup> EPAs should be integrated into the program's curriculum and evaluation plans and not implemented as additional work or assessments.<sup>12</sup> It is also important to differentiate EPAs from skills that do not need to be observed or developed over time (e.g., learning how to bill).

One of the most important obligations to learners is the need to provide effective feedback. Learners require frequent and timely formative assessment in order to facilitate improvement.<sup>13</sup> In order for this feedback to occur consistently, programs should promote a safe and appropriate learning climate, while encouraging the learner role and responsibility in obtaining feedback.<sup>14</sup> For these assessments to be helpful, authentic, and credible, they must be based on direct observation of learners, while providing a mix of quantitative, and more rich qualitative, comments.<sup>6,13</sup>

Another key expectation for residency programs will be the effective development and communication of expected competencies. Experience from early adopters of CBME has suggested that learners often lack clarity on why specific competencies are chosen, and may not appreciate their relevance.<sup>15</sup> Similarly, fostering learner participation in assessment, such as

completion of a portfolio, is key to their success.<sup>16</sup> For these reasons, clear communication around the expected competencies and their assessment will be important to the implementation of CBME.

Finally, the change to CBME may create some logistical challenges for programs and learners. The balance between scheduling and allowing learners to progress at their own individual pace may be a difficult one to strike, especially at the beginning of the transition. Learners should have access to evaluators to prevent unnecessary roadblocks to advancing through the EPAs.<sup>17</sup> Simultaneously, their expectations need to be managed regarding the speed of advancement.

#### **4.4. Building Faculty Development**

As they pertain to learners, faculty development efforts aimed at a) strengthening faculty ability to provide effective feedback, and b) developing skills in facilitating graded responsibility, will be important to the implementation of CBME.

Faculty development efforts aimed at developing faculty feedback skills are critical to ensuring that residents obtain useful and credible information that they can utilize to improve. While validated assessment tools can be helpful, there is no substitute for skilled faculty who can appraise residents in clinical situations and provide timely feedback.<sup>13</sup> The provision of feedback has traditionally been teacher-focused (e.g. how the teacher should behave when providing feedback), but feedback requires the integration of learner-centred principles (e.g. attention to environment, respect for emotional response) to be effective.<sup>18</sup>

Similarly, faculty development efforts aimed at helping determine how to “watch closely at a distance” and entrust learners while providing adequate supervision will be important.<sup>11</sup> While a portfolio may be helpful in determining what competencies a learner has developed to date, faculty may not be experienced at incorporating this information to determine when learners can progress to more clinical responsibility. Faculty will also require guidance in how to use EPAs in learner assessment when making entrustment decisions.

## 5. Summary

Three key implications for BPEA are:

1. The learner will be expected to take responsibility for her/his own learning. Residents should be prepared to actively engage in their assessments and to understand the goals and expectations of each rotation. (e.g., Creating a checklist of “to dos” at the beginning of each rotation may help.)
2. Competencies that will be evaluated and expectations of the learner must be developed and communicated to the learner.
3. Faculty should be trained in the provision of feedback, usage of assessment tools, and how to empower learners to perform personal assessment. Examples of faculty development that will support learners in a competency-based environment are:
  - How to give constructive feedback
  - Appropriate use of assessment tools
  - What constitutes satisfactory performance across competencies
  - How to empower learners in assessment (gain skills in seeking and performing reliable and valid assessments of their own practice performance)

## 6. References

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## 7. Appendix 1: Annotated Bibliography

**Holmboe, E., D. Ward, R. Reznick, P. Katsufakis, K. Leslie, V. Patel, D. Ray and E. Nelson (2011). "Faculty development in assessment: the missing link in competency-based education." Academic Medicine 86(4): 460-467.**

The ability of learners to fulfil their responsibilities within CBME depends in part on the ability of faculty to effectively assess learners, provide feedback, and mentor them in self-directed learning and reflection. This manuscript highlights the need for faculty development programs to facilitate their engagement and success in these roles within CBME.

**Schuwirth, L. and J. Ash (2013). "Assessing tomorrow's learners: in competency-based education only a radically different holistic method of assessment will work. Six things we could forget." Medical Teacher 35(7): 555-559.**

The authors of this manuscript argue that the design of assessment programs within CBME should be increasingly integrated and holistic, rather than focused primarily on standardization and reductionism. For programs whose role is to both facilitate assessment and learning (or assessment *for* learning), this paper emphasizes the importance of combining a variety of assessment methods while focusing on the "improvement of competence," as opposed to merely detecting incompetence.

**Carracio, C. and R. Englander (2013). "From Flexner to competencies: reflections on a decade and the journey ahead." Academic Medicine 88(8): 1067-1073.**

This article provides a historical context for the shift to competency-based education, while highlighting key issues in implementing CBME effectively. The authors focus on several important areas pertinent to learners, including issues around assessment (accurate self-assessment and reflection, direct observation, performance measures), curriculum development (outcomes-based), and learning environment. The article also emphasizes the need to develop and understand a common language around CBME.