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Work Based Assessment Implementation Guide:

formative tips for medical teaching practice



Competence
by Design

Using this guide

As CBD rolls out across Canada, program directors, competency-based medical education (CBME) leads and professionals in postgraduate medical education offices will introduce important new educational concepts to residents and clinical teachers. If you wear one of these educational leadership hats, you will need a deeper exposure and understanding of these new concepts compared to some of your colleagues. The truth is that not every front-line physician needs to know the intricate ins and outs of the CBD work-based assessment (WBA) strategy. However, those of you with a “back office” role (e.g., program directors, CBME leads) require a deeper understanding of WBA so that you can make essential program changes and build resident and clinical teacher capacity to implement CBD. This guide aims to provide you with information and guidance to support implementation of CBD assessment.

The sections of this guide are each designed to establish concrete links between core CBD assessment components, practice observations-teaching, and WBA. Practical examples and tips are provided as entry points for operationalizing WBA, including advice on how these assessments could feasibly be integrated into your program’s local context. You may also find it helpful to review the WBA PowerPoint slide deck that is available [here](#). This slide deck and the accompanying summary handout are designed for you to use in support of your local faculty development efforts.



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Introduction

Competence by Design (CBD) involves familiar, but also evolving, views of resident learning, teaching, and assessment. In contrast to traditional approaches, CBD emphasizes that many formative assessment opportunities take place throughout residency training. Frequent assessment “for learning” aims to effectively promote the gradual development of a trainee’s ability to safely and independently perform the clinical and professional tasks required in specialty practice. An accumulation of low-stakes assessment encounters also provides a more comprehensive image of competence across a continuum. The teaching, learning and assessment of these competencies are undeniably linked and also grounded in the daily practice environment of specialty physicians (Figure 1).

Competence involves more than “know how”; it requires that trainees also “show how” and demonstrate their ability to “do” independently. Building and assessing resident competence requires many practice opportunities and also sufficient and specific information about trainee performance in the workplace^{1,2,3}.

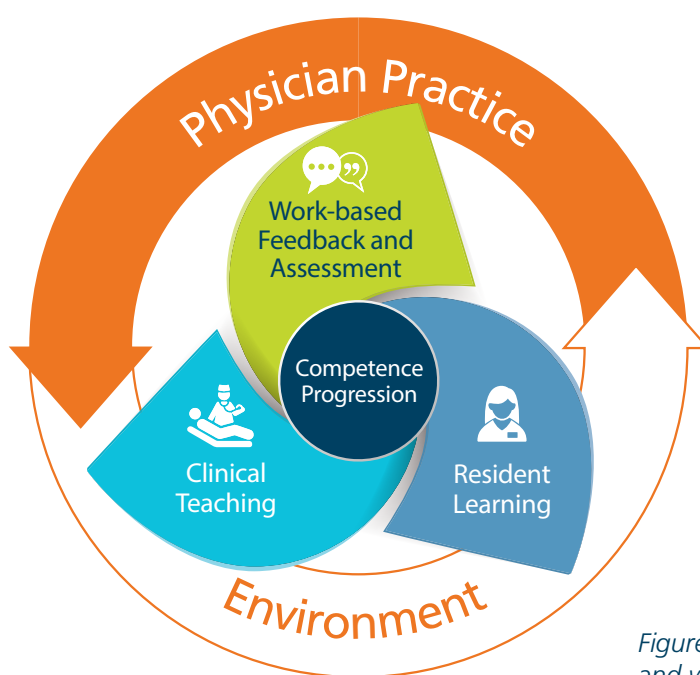


Figure 1. Integrating teaching, learning, and work-based assessment in practice

Key messages:

- Competence by Design (CBD) requires that trainees demonstrate ability at all development stages along the competence continuum.
- Frequent formative written and verbal feedback for learners is essential to CBD assessment.
- Work-based assessment (WBA) informed by direct and indirect observation is a cornerstone of the CBD assessment strategy.
- Entrustability scales are a more valid and reliable way of measuring practice performance within WBA tools.
- Narrative comments within WBA tools are important for providing trainees with detailed guidance for improvement and competence committees with rich context for the performance ratings assigned.

EPAs and milestones: Foundations of the CBD assessment framework

CBD uses entrustable professional activities (EPAs) as the organizing framework for assessment. EPAs integrate the various CanMEDS Roles; this term is used to group and describe the core work-related tasks of a discipline. Each EPA contains observable milestone elements. EPAs and their associated milestones are developmentally progressive and aligned with each stage of residency training (i.e., transition to discipline, foundations of discipline, core of discipline, transition to practice). EPAs and milestones provide explicit learning direction for residents and also clear teaching and assessment goals for educators.

In the CBD assessment framework, EPAs are viewed not only as high-value tools for learning but also as summative benchmarks of the learning that has taken place. This formative teaching and assessment emphasis primarily unfolds in physician practice settings and involves multiple workplace observations with frequent, timely feedback for trainees. This feedback not only guides a resident's learning progression; it also provides essential information that competence committee members use to form their recommendation on whether trainees advance or require remediation at different training stages.

For each EPA, the specialty committee recommends the number of successful observations that are required to support a determination of competence. Multiple practice observations are needed to inform this determination and should provide a comprehensive image of a trainee's practice ability. High-quality assessment approaches are rich in constructive written and verbal feedback².

EPA assessment tips:

- Assist learners and colleagues to see how entrustable professional activities (EPAs) reflect the authentic work of physicians in your discipline.
- Use EPAs to plan and structure all teaching and assessment activities.
- Use the EPA appropriate to the learners' training stage to tailor instruction and assessment.

EPA	Milestones
Stage-specific core activity of a discipline that can be learned, taught, performed and assessed in real and simulated practice environments	Specific measurable and observable components required to fully and successfully demonstrate EPA achievement
Example: Managing cardiac arrest may be a specialty-specific EPA.	Example: Trainees demonstrate partial competency in the CanMEDS Medical Expert and Collaborator Roles by performing milestone elements of cardiac rhythm interpretation, initiating high-quality CPR and coordinating prompt arrest cart retrieval with an available colleague.

Figure 2. Distinguishing between EPAs and milestones

Work-based assessment: Observe, provide feedback, and document

In CBD, supervisors make use of authentic clinical oversight to engage in the work-based assessment (WBA) of each resident's performance. WBA should be feasible; put simply, it involves documenting the verbal feedback that many supervisors already give to their residents. The goals of WBA are to provide specific feedback for trainee development as well as sufficient practice performance data to inform the EPA achievement decisions of the competence committee (Figure 3).

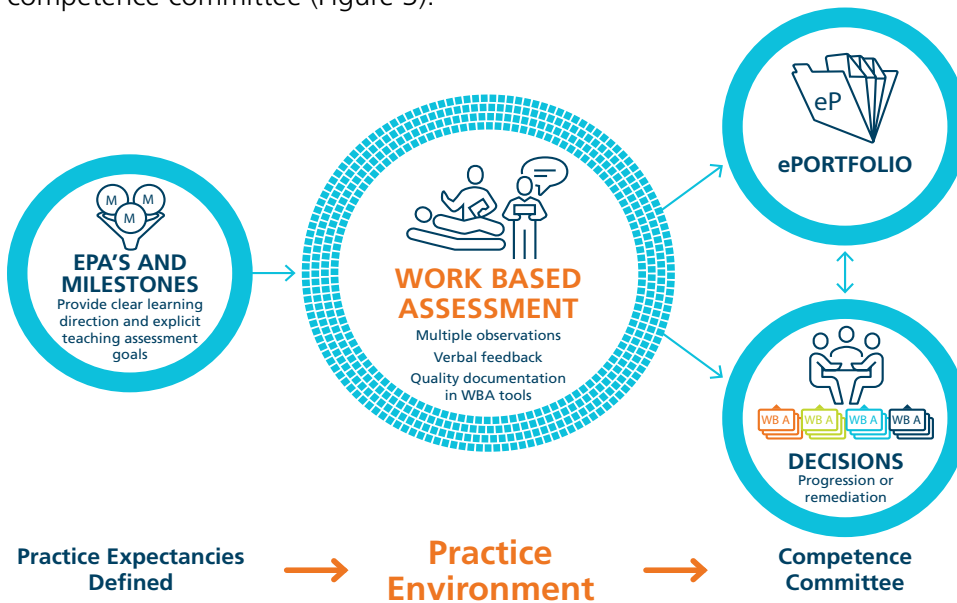


Figure 3. Situating WBA in CBD assessment framework

Observation: With CBD, the role of clinical teacher is evolving from supervisor to frequent observer and coach. When clinical teachers directly or indirectly observe the work residents do more often, their observations provide greater learning opportunities and a more comprehensive image of trainees' competence.

Feedback-Coaching: Just like an athletics coach, in each practice observation the clinical teacher should give timely, constructive, specific feedback to guide resident learning and advancement towards mastery. Documenting and providing honest and encouraging verbal feedback focused on observed behaviour provides opportunity for competency growth. Feedback focuses not only on practice aspects needing improvement but also on areas deserving praise and continued reinforcement. Residents at all stages and levels of competence also need to know specifically what they are doing well, and in CBD this is recognized too.

Documentation: Once information is gathered, observation specifics and performance ratings are documented using an assessment template (observation form).



Figure 4. Teaching observation

Teaching observation

Individual teaching observations should be linked to EPAs that align with a resident's current training stage and also to the routine practice activities of a clinical rotation. Frequent low-stakes observations provide discrete performance data specific to the context and moment in time when an activity was observed. It is worth noting that you may find some EPAs are too "large" to assess completely in one particular encounter. In these cases, specific feedback on any EPA portion is still important for the resident's overall learning and for the recommendation decisions made by the competence committee.

By maintaining teaching observations as low-stakes, high-frequency assessment events, front-line clinicians are more likely to record honest assessments of resident performance and to provide concrete feedback on how the resident can improve⁴. Over time, multiple observations by varied observers are required to build a comprehensive image of a trainee's ability.

Both residents and their teaching supervisors can initiate practice observations. This dual approach encourages learners to take additional responsibility for directing their learning and assessment.

Observations may be direct (e.g., observation of a trainee performing a knee exam) or indirect (e.g., discussion with a patient about a resident's communicated treatment plan). While optimal feedback results from direct teaching observations, these are not always feasible given workflow demands and/or a desire for increasing trainee independence. Valuable performance ratings and specific constructive feedback can also be provided using indirect observations. Below you will find two examples of indirect observations.



Teaching observation

Indirect observation examples:

In the clinic, a trainee independently completes a history and physical and presents the case to you. You can often infer their understanding and performance of the skill or activity by how they present the information, their ability to answer pertinent probing questions about the case, how the information they present to you aligns with test results or available imaging, and their management plan.

Nurses and other allied health professionals can also provide information to the assessor about a trainee's collaborative team interactions or management of a patient, thus informing an EPA observation. Such information is extremely useful as we also need to know how trainees perform when we are not there watching.

While a clinical teaching supervisor's performance rating judgments for isolated practice activities are important, under CBD supervisors do not make summative decisions about overall trainee competence. Instead their focus is on frequent but thoughtful teaching observations and formative WBAs in practice settings.

Resources:

The following resources provide additional faculty development information related to WBA teaching observations:

- [How do I choose which EPAS to use?](#)
- [Do I initiate an observation?](#)
- [Can a resident complete an observation?](#)
- [Every EPA has a set number of observations. Are we held to that?](#)
- [How do I fit in observations of my resident in my busy practice?](#)
- [What is an observer vs. an assessor?](#)
- [\[133\] The Observer Effect in MedEd: The Learners' View from KeyLIME in Podcasts.](#)

WBA Teaching Observation Tips:

- When observing, define exactly what you need to watch.
- Provide a clear purpose for your observation and orient your trainees (and patient) to being observed. This promotes a safe and effective learning environment.
- Make yourself a regular observation schedule that includes resident-initiated requests. There is no expectation that you are watching all of the time, but without planning you may miss key aspects of performance that you do need to observe.

Documentation and work-based assessment

WBA involves front-line clinical supervisors documenting authentic observations in the workplace on a regular basis. These observations are often framed around entrustment decisions (i.e., the degree to which the observer trusts the trainee to complete the same skill/activity independently) and focus on quality narrative feedback about how trainees can improve.

The Royal College has developed four evidence-informed [National Assessment Templates](#) to assist front-line clinical supervisors to document WBA. The goal of these templates is to optimize the collection of diverse WBA data, streamline workflow and help minimize the burden of assessment documentation on medical teaching staff.

Specialty committees, as part of their [CBD transition workshops](#), discuss which assessment templates (i.e., observation forms) are best suited to capturing performance data specific to each EPA. Similarly, individual programs in conjunction with their CBME leads and postgraduate medical education offices may choose to adopt different assessment tools to fit their local practice context.

National Assessment Templates integrated into the Royal College's ePortfolio system include:

- EPA observation (form 1), which is used to document resident performance on any total EPA or portion of it,
- Procedural competences (form 2), which is used to document a resident's ability to perform a specific procedure,
- Multiple-source feedback (form 3), which may be completed by physicians, off-service physicians or allied care team members as directed by the program or discipline and
- Narrative observation (form 4), which is used to document any observation of a trainee's performance. This form can be used in any setting to provide useful information linked to an EPA post-hoc if relevant.

Note: Not all schools use the Royal College's ePortfolio system, and as mentioned above some schools will be incorporating variations of these WBA tools. Regardless of the WBA software application or template being used, collecting and documenting rich observation and feedback data are paramount to obtaining both the formative and summative benefits for which all WBA tools are intended.

Documentation and work-based assessment

Ideally, after completing a teaching observation, trainees are provided with specific face-to-face verbal feedback about their performance, and this information is also well documented. Brief but well-written narrative comments are highly valuable information within any WBA tool. At the most basic level, narratives provide essential assessment information that performance rating numbers cannot. These narratives provide trainees with specific behavioural guidance to improve their future practice performance and also give competence committees the rich context that justifies performance ratings so that progression or remediation decisions can be made. See Figure 5 for an example of rich narrative feedback.

Narrative comment example

Responds positively to teaching feedback as evidenced by a change in practice. Noted that you missed a quads lag by not first checking passive ROM of the knee. Reviewed proper steps and technique for quads testing. On observation at a later point during the clinic you had altered your physical exam appropriately.

The following resources provide additional faculty development information related to WBA and entrustment:

- [Why is trust so important?](#)
- [Am I trusting my resident for all time?](#)

Tips for narrative documentation in CBD work-based assessment tools:

- Write high-quality WBA narratives by:
- providing your performance improvement recommendations in a supportive manner,
- giving specific examples of behaviour,
- providing the supportive rationale for the WBA performance ratings you assigned and
- giving “enough” detail for an independent reviewer to understand the issues.

Entrustability scales: Work-based assessment ratings made meaningful and easier

WBA of resident trainees should strive to minimize bias and also reflect the priorities and clinical expertise of the rating observers^{5,6,7}. Using traditional WBA instruments, the performance of trainees is rated according to stated expectations for performance, using anchors (e.g., 1 [rarely meets expectations] through to 5 [consistently exceeds expectations]); the quality of the performance can similarly be rated using anchors (e.g., 1 [poor] through to 5 [excellent]). There are well-documented reliability and validity concerns with these rating scales^{8,9,10,11}.

In contrast, entrustment performance ratings (anchors) are meaningfully structured around the way physician supervisors already make day-to-day decisions about trainee performance. These decisions are rooted in the rater's "trust" in a resident's safe and independent practice ability. Entrustment anchors have been demonstrated to be more reliable than traditional anchors^{5,13}. Experience with entrustment anchors has also demonstrated that trainees are willing to accept lower scores if they also receive the concrete feedback required to improve performance^{5,6,13,14}.

As part of CBD, entrustability scales¹⁴ are incorporated into several Royal College assessment templates and use these entrustment anchors (Figure 5).

Level	Descriptor
1	"I had to do" i.e., requires complete hands on guidance, did not do, or was not given the opportunity to do
2	"I had to talk them through" i.e., able to perform tasks but requires constant direction
3	"I had to prompt them" i.e., demonstrates some independence, but requires intermittent direction
4	"I needed to be there just in case" i.e., independence but unaware of risks and still requires supervision for safe practice
5	"I did not need to be there" i.e., complete independence, understands risks and performs safely, practice ready

Figure 5. Entrustability scale

Entrustability scales: Work-based assessment ratings made meaningful and easier

Entrustment anchors such as “I had to talk them through” and “I did not need to be there” are used to rate a trainee’s ability to safely and independently perform practice activities without supervision. As indicated, at the high end of this performance scale, the observer’s “trust” in a trainee’s ability to independently and safely practise is closely linked with the trainee’s understanding of any real or potential risks involved in the activity. To demonstrate “understanding” versus “awareness” of a risk involves not only verbalizing it but also taking the anticipatory actions required to mitigate or manage the event should it occur. For example, a resident might demonstrate that they understand the added risk in a patient with challenging anatomy by preparing backup equipment on the sterile procedure tray or first consulting another speciality, which seasoned experts do all the time.

As you implement CBD in your program, it is important that observers appreciate that if they rate a trainee at a “5” level it does not mean the resident has achieved the EPA and is authorized to do this clinical task independently going forward (e.g., intubation). This rating reflects how the observer feels the resident managed this instance of the EPA or piece of the EPA and provides information to the competency committee, which will make the final determination of the resident’s EPA success.

Entrustment anchor ratings align well with physician expert judgments of trainee performance and have been shown to be valid and highly reliable compared with the traditional WBA rating anchors mentioned earlier [5.7](#). Although entrustability scales seemingly favour procedural-type teaching observations, these anchors can also be an effective means by which to assess non-technical skills, such as performance in an outpatient clinic [7](#). For this reason, many of the Royal College’s ePortfolio assessment forms and newer assessment tools use them.

Tips for entrustment ratings in CBD work-based assessment tools:

- Remember that entrustment ratings involve judging a resident’s safe and independent practice ability on the basis of what you observed today. These ratings are not about predicting future performance.
- Measure observed performance against the standard of safe and independent practice, not to the stage of training the learner is at.
- Rating residents as independent does not mean that they are now allowed to always independently perform that task. It means that they were independent on this occasion.

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