

## Medical Laboratory Technologist - Standard Setting for Entry-to-Practice Examinations

### Participation

Standard-setters are experts in the field(s) of practice in which they are helping to set pass/fail standards on entry-to-practice examinations. This standard setting process will be guided by *Directions* Evidence and Policy Research Group who will support standard setters in their work. Two standard setting exercises will take place, one in French and one in English, open to all participating provinces and territories. Bilingual experts can participate in both exercises.

### Method

Standard setting for the entry-to-practice examinations will be conducted using the Angoff method. This is a robust and legally defensible method that has been used for standard setting for decades. The method requires the standard-setters to rate the difficulty of every item on the examination and to think about how a minimally competent candidate would perform on the item. Through this process, the standard setters will come to a consensus on a passing score (called a 'cut score') on the examination. Standard-setters will be asked to complete the items (i.e., provide responses to items as they would in a test) because this gives some insights into the test-takers' experience. With approximately 90 items included in the pilot test for each field of practice, this task will require about a two-hour commitment (discussed in the next section).

### Structure

This standard-setting exercise for each field of practice will include the following for each test (French and English):

- **prior to the standard-setting meeting** – an estimated 2 hours of independent work;
- **a standard-setting meeting** – approximately 4 hours of panel work led by *Directions* Evidence and Policy Research divided into a 3-hour session and a 1-hour session separated by a one-hour break.

### Procedure prior to the standard setting meeting

Standard-setters are provided with a link to the online survey platform where they attempt to answer all the examination items in a survey environment. [The survey will be constructed so the standard-setters can quit and return multiple times, rather than having to complete the

work in one sitting.] After each question is answered, the standard setter will be asked to estimate the percentage of minimally competent test-takers would answer that question correctly. In other words, if 100 minimally competent test takers completed this item, how many do you think would get the right answer?

A "minimally competent test taker" refers to an individual who possesses the essential knowledge, skills, and abilities required to perform safely and effectively in a professional role. Key characteristics of a minimally competent test taker include:

- The individual demonstrates a foundational level of understanding and capability in the core areas of knowledge pertinent to the profession. This includes theoretical knowledge and practical skills necessary for safe and effective practice.
- The individual can perform tasks and make decisions that ensure safe practice to themselves and to the public whom they serve, albeit indirectly. This means they can avoid major errors that could harm.
- The individual can apply their knowledge in making appropriate and sound decisions within the scope of their practice. This includes recognizing their limitations and seeking guidance or supervision when necessary.

*In essence, a minimally competent test taker is someone who has just enough competence to perform their professional duties at an acceptable level without posing undue risk to the public. The minimally competent test taker is a beginner and not an expert in the field. Imagine someone who is just starting their career.*

All estimates must be completed independently by [date] to allow *Directions* to collate results and prepare for the on-line standard setting session.

### **Procedure at the standard setting meeting**

1. The estimate produced independently by standard-setters are discussed.
  - Results are shared and areas of disagreement are highlighted by *Directions*.
  - Standard-setters are reminded that they need to think of minimally competent candidates when setting cut-scores, not average or competent candidates.
  - Standard-setters can adjust their item ratings based on discussions during the standard setting meeting, but there is no requirement to adjust score nor any requirement that standard setters be in complete agreement.
3. Cut scores are calculated:

- For each test item, the average of the standard setters' ratings is calculated. This average represents the estimated probability that a minimally competent candidate would answer the item correctly.
- The average ratings for all items are summed to determine the overall cut-off score for the exam. This score represents the number of items a minimally competent candidate is expected to answer correctly.
- The cut-off score is reviewed to ensure it aligns with the expectations for entry-level competence.