

Station Development Guide

Clinical Component: Physiotherapy Competency Examination

Introduction

This manual provides instructions for the development of stations for the Clinical Component of the Physiotherapy Competency Examination (PCE). A general description of an objective structured clinical examination is followed by an overview of the steps in the process of station development. Each step is then described in detail.

Background Information

A commonly accepted way of defining clinical competence is to identify its components: knowledge; psychomotor skills; problem-solving skills; attitudes; and communication skills (Hart 1987). Neufeld and Norman (1985) stated that written exams can reliably test knowledge and, to a certain extent, problem-solving skills. However, the validity of making inferences on clinical performance using a written, often multiple-choice question, exam is low, as written exams bear little resemblance to actual practice. A clinical exam is required to evaluate psychomotor skills, attitudes, communication skills, and clinical problem solving. Clinical exams assess not only what candidates know, but also their clinical skills and how they put their knowledge into practice.

Traditional clinical exams (wherein the candidate is presented with a single long case) have a history of unreliability due to the small sample of skills being assessed and the subjectivity/bias associated with the examiner's ratings. In the 1970s, the Objective Structured Clinical Exam (OSCE) was developed as a viable alternative to the traditional clinical exam (Harden, Stevenson, Downie, & Wilson, 1975).

The OSCE is a performance-based exam in which candidates are observed and scored as they rotate around a series of stations according to a set plan. Each station focuses on an element of clinical competence, and the candidate's interaction with a standardized patient is assessed by an examiner. Examples of clinical skills assessed in an OSCE include history taking, patient education, communication, physical examination, diagnostic procedure, interpretation, patient management, critical appraisal, and problem solving (Harden, 1988).

Factors contributing to the greater reliability of the OSCE over other types of performance-based assessments are as follows:

- a) it assesses multiple samples of competence;
- b) each candidate is assessed on the same competencies;
- c) each candidate is observed by several trained examiners (no one examiner determines a candidate's pass/fail status); and
- d) all candidates are scored against the same pre-defined criteria with examiners following a detailed scoring rubric.



Since first being introduced more than four decades ago, the OSCE has become increasingly popular both nationally and internationally as a reliable, valid, and practical approach for assessing clinical skills. Today, it is recognized as the "gold standard" for performance-based assessment (Harden, Lilley, & Patricio, 2016; Sloan, Donnelly, Schwartz, & Strodel, 1995). The reliability of the OSCE has been extensively studied¹ and is well established (Pell, Fuller, Homer, & Roberts, 2010; Walters, Osborn, & Raven, 2005).

General Description of the Clinical Component

The PCE Clinical Component is a performance-based OSCE comprising 16 stations. The candidate moves from station to station, encountering a new situation and task in each station. The Clinical Component uses Standardized Clients (SCs) to portray the clients (an SC is a healthy person, or a person with a chronic but stable condition, who is trained to present signs and symptoms and behaviours consistently).

The stations used in the Clinical Component of the PCE are either 10-minute client encounter stations or 5+5-minute couplet stations. In the 10-minute stations, the candidate encounters an SC and is asked to conduct a focused assessment or treatment session. In some 10-minute stations, there are questions asked by the examiner toward the end of the station. In the 5+5-minute couplet stations, the candidate encounters the SC during the first 5 minutes and responds to written questions related to the preceding encounter during the second 5 minutes. These questions may involve data interpretation, problem solving, or treatment planning.

Station authors need to provide the following for every station they develop (where applicable):

- The tasks to be performed in the station
- Examiner questions that will be asked toward the end of the station
- A checklist for assessing the candidates' performance
- Questions for the written portion of the 5+5-minute stations
- Equipment needs (props)
- Instructions for training the standardized client
- Instructions to the examiner (e.g. what exercises would or would not be appropriate)
- A list of what might constitute safety or professionalism critical incidents (flags)
- For the written portion of the 5+5-minute stations, a list of acceptable AND unacceptable answers / types of answers to ensure consistency in marking.
- The item summary sheet, including appropriate references from the Key Reference List.

 $^{^{1}}$ it is estimated that more than 1800 papers have been published on the OSCE (Harden et al., 2016).



Box.com - CAPR's Collaborative Authoring Tool

CAPR uses **Box.com** – the secure web-based platform – as part of the item writing process. As a member of a clinical item generation team, you will be provided with access to this tool. You will also be provided with specific instructions on how to use **Box.com** optimally to support your item writing work.

You will have access to the relevant 'Clinical Exam Committee' folder, along with other folders such as 'Resources'. The 'Resources' folder will house relevant documents such as templates, reference documents, and how-to guides.

Using Station Templates

CAPR uses station templates to ensure that all relevant information is presented in a systematic and consistent way. Templates are available electronically on **Box.com**. Please ensure that you are using the most recent version of the template, and that you are not overwriting the template. There are templates for 10-minute and for 5+5-minute stations.

To begin writing a new station, download the template from box.com. Once you have a new document open, you should save it using the temporary name of the client you are writing about. The name of the client may be changed before the station is used.

The template has fields for the information that you should fill in. Enter your information in the spaces provided. If a field is not required, leave it blank. Do not delete any sections of the template, as they may be required later.

Do NOT adjust margins or table borders.

Please Note: All Examiner Checklists must fit onto one page. It is NOT acceptable to have a checklist longer than one page.

Steps in Developing a Station

- 1. Determine the station type.
- 2. State the focus of the station.
- 3. Ensure focus represents current practice, is at the entry-to-practice level, and is represented in the examination blueprint.
- 4. Ensure all elements of the station reflect practice across Canada (e.g. controlled acts, legislative requirements, standards/theories of practice, etc.).
- 5. Determine the general presentation of the standardized client.
- 6. Write the Instructions to Candidate (A page).
- 7. Develop the checklist and scoring (F page).
- 8. Develop notes for examiner.
- 9. Develop detailed instructions for the standardized client (C pages).



- 10. Develop the written portion of the 5+5-minute stations (E page). For each question, provide a list of acceptable and unacceptable answers / types of answers.
- 11. Cross-check instructions for candidate with checklist and focus of the case.
- 12. Cross-check instructions for the standardized client with checklist, the focus of the case, and the written portion of the 5+5-minute station, where applicable.
- 13. Determine appropriate references. Wherever possible, indicate more than one reference that supports the elements of the station.
- 14. Outline required props, including a picture of the items for standardization purposes, where appropriate.
- 15. If the station involves exercises or specific test positions/manoeuvres, provide a picture or diagram for clarity (ideally, from the reference used for the station) for examiners and SC training purposes.
- 16. Review the station with another member of your subcommittee.
- 17. Dry run the station with another member of your subcommittee.
- 18. Post the station for Buddy Review.
- 19. Make revisions, where applicable.
- 20. Post station for national meeting.

FINAL FORMATTING WILL BE DONE BY CAPR STAFF ONCE THE STATION IS ACCEPTED AS READY FOR THE ITEM BANK AT THE NATIONAL MEETING.



STATION DEVELOPMENT STEP BY STEP:

1. DETERMINE THE STATION TYPE

Station assignments are determined by CAPR based on the examination blueprint and taking into consideration the needs of the item bank. You may be assigned a general area of practice or domain/competency, or a more specific diagnosis, task, or EtP milestone. If more general guidelines are given, a specific diagnosis must be chosen for the station. The examination blueprint lists the areas of practice that may be evaluated by the PCE. This list should be used in conjunction with CCPUP's 'Common Conditions in Physiotherapy' list (available as a supplementary document within the blueprint), developed as part of the most recent revisions to its National Curriculum Guidelines.

The station should present, as accurately as possible, a realistic encounter between a client and a physiotherapist. Some experts suggest that basing the station on an actual client you have seen may help to ensure that the case has realism. If you do this, you need to disguise the details to avoid violating client confidentiality.

Your assignment may specify either a 10-minute or a 5+5-minute station. If this is not indicated, you will need to make this decision. You may want to wait until you see how the station is developing before deciding.

Stations may have one or more standardized questions which the examiner or SC will ask the candidate. These should be developed as part of the checklist or SC instructions.

Many writers find that it is efficient to write two parallel stations. You can use the same (or nearly the same) instructions to the SC and write different tasks and checklists. For example, you can write one 10-minute station to do an assessment, and another 10-minute station for treatment of the "same" client. Or you can write a 10-minute station and a 5+5-minute station on the "same" client. Once written, these will be approved and used as separate stations, but the writing is faster because you can use most of the instructions to SC material for both stations.

2. STATE THE FOCUS OF THE STATION

State the focus of the station in a single sentence. You should specify which objectives and competencies the station will assess. Refer to the Competency Profile for Physiotherapists in Canada (2017) and the examination blueprint for appropriate objectives.

3. <u>ENSURE FOCUS REPRESENTS CURRENT PRACTICE, IS AT THE ENTRY-TO-PRACTICE LEVEL, AND IS REPRESENTED IN THE EXAMINATION BLUEPRINT</u>

Preference should be given to common conditions that physiotherapists at the entry-to-practice level might reasonably encounter in their work. Avoid conditions that are uncommon. Avoid, also, conditions that an entry-level physiotherapist would be unlikely to see without first consulting a more experienced physiotherapist or doing some research. Ensure that any condition chosen (if not decided ahead of time by CAPR having reviewed the needs of the item bank) is listed in the examination blueprint.



4. ENSURE ALL ELEMENTS OF THE STATION REFLECT PRACTICE ACROSS CANADA (E.G. CONTROLLED ACTS, LEGISLATIVE REQUIREMENTS, STANDARDS/THEORIES OF PRACTICE, ETC.)

Create / review all stations with a "national lens". Only elements that are standardized across all jurisdictions are allowed; for example, a "mandatory report" professionalism incident may only be part of a station if it is a mandatory report in *all* jurisdictions. If it is not a mandatory report in even one jurisdiction across Canada, then it cannot be an element of the station.

5. DETERMINE THE GENERAL PRESENTATION OF THE STANDARDIZED CLIENT

You should have in mind an overview of how the client will present. A detailed written description will be developed later, but, for now, you need to know the gender, approximate age, and abilities of the client. Point form notes are useful at this stage – you will develop them into the instructions for the standardized client later.

6. Write the Instructions for Candidate (A Page)

Instructions for the candidate must include the location of the interaction and a brief description of the circumstances. They should be similar to a synopsis you would give a colleague who was going to see a client for you. You should give your client a working name and age – these will be confirmed later (and may be changed in the preparation for an examination).

The task for the candidate should be clearly stated. If there are any assumptions the candidate should make in order not to be led astray or waste time, they should also be clearly stated. (See Appendix I for examples.) The task(s) should be appropriate to the length of the station and should be at the entry-to-practice level. Difficult stations (either because of content or because of length) are acceptable, as long as they are relevant and appropriate for entry level.

You may use acronyms, but they must be spelled out in full the first time they appear. Abbreviations should be avoided; they are difficult to translate and present a challenge to international candidates.

For a 10-minute station, candidates have 2 minutes to move to the next station and read the instructions. For a 5+5-minute station, candidates have 1 minute for this transition. Excessive wording or irrelevant information causes unnecessary stress to candidates, and, as such, should be avoided.

7. DEVELOP THE CHECKLIST AND SCORING (F PAGE)

Reminder - ensure all elements of the checklist reflect practice across Canada (e.g. controlled acts, legislative requirements, standards/theories of practice, etc.).

Checklists are used by the examiners to assess the candidates' skills. The degree of specificity should be appropriate to the station. For a 10-minute station, the checklist may include 12-30 items. For a 5+5-minute station, fewer items, generally 8-20, are appropriate. Recent research suggests that longer checklists objectify complex tasks and are less reliable.

Standard formats for some checklist items have been developed. Examples of these are listed in Appendix I.



Consider the organization of the checklist so that it provides a logical flow for examiners. The checklist should be close to the order in which most candidates are likely to complete the items. You may wish to group some items under headings for clarity.

Each item on the checklist should have a score. The literature on weighting checklist items suggests that a candidate who will omit or perform incorrectly an item with a score of (3) will also omit or perform incorrectly items with a score of (1). The ranking of candidates and the pass/fail decisions will be essentially the same if items are given equal or different weights. In other words, weighting items may not make a difference to the outcome for candidates. A score of (1) for each item is acceptable.

It may be appropriate to weight more important items, or to give a higher score to more complete answers/actions/responses.

Each line on the checklist should contain only one element, unless it is essential that elements be done together. You cannot use negative scores and there is no option for examiners to give partial marks. If you wish to give candidates partial credit for an item done partially correctly, you can use the following format:

Passive range of motion with overpressure at end of range	3
OR	
Passive range of motion with no end feel testing	1

The first item on all checklists is "Explains purpose of interaction". This should have a score of 1.

If there are a number of possible responses, you may wish to specify the number that you are looking for. For example, the instructions to candidate can ask the candidate to teach 3 exercises, and the checklist can provide scoring for 3 exercises.

Checklist items should be relevant to the assigned task. If the task for the candidate is to conduct a physical examination, checklist items for obtaining a history are inappropriate.

Stations where SCs have to provide information present a special challenge for writing the checklist. SCs are trained to provide only one piece of information at a time. If they are asked open-ended questions, (e.g., "Tell me about your problem"), they either ask for a more specific question ("What would you like to know about?") or they respond with one appropriate piece on information (e.g., I have a pain in my neck."). They do not tell their story the way "real" clients often do ("I have a sharp pain in my neck that hurts when I look up. It started 2 weeks ago after I painted the ceiling and it wakes me up 2 or 3 times every night and it's really limiting my tennis serve."). The reason for this is that the candidate must know enough to ask the questions that elicit the information – they cannot receive credit for information they are given without asking. This means that checklists for these stations must be specific and cover only one piece of information, so the examiner can give appropriate credit for items done correctly.



8. DEVELOP NOTES TO EXAMINER

It may be necessary to provide the examiner with additional information (including diagrams) to clarify points on the checklist. This is to ensure consistency in marking across sites. The Notes to Examiner should be referenced to the checklist items to which they apply.

Notes to Examiner may be used to clarify acceptable responses or actions, to indicate inappropriate responses or actions, or to identify safety or professionalism issues.

Examiners can (and do) identify safety and professionalism issues with and without notes directing them to do so. However, incidents likely to occur should be noted in the Notes to Examiner to ensure that they are consistently identified across sites.

9. DEVELOP DETAILED INSTRUCTIONS FOR THE STANDARDIZED CLIENT (C PAGES)

The instructions for the standardized client are used to train the SC for their role. SCs are also shown a video of the performance to help them understand what the physical portrayal should look like. The trainers may not be physiotherapists; however, if an SC is trained by a non-physiotherapist, there is a physiotherapist technical advisor available for consultation. Trainers can also contact CAPR's PT Advisor for assistance in interpreting cases. Ideally, however, the station would include sufficient details so that this is not necessary.

The challenge in writing the instructions for the SC is to provide enough information for accuracy and realism without overloading the SC with unnecessary detail. For all information, consider whether it is necessary to the case, and the consequences of not providing it. It is generally better to focus on getting the essential information clear and accurate. Trainers (especially non-physiotherapist trainers) rely on your clear writing.

Instructions should be in lay terminology. In cases where it is easier to teach the SCs the meaning of the physiotherapy jargon, definitions should be included. Trainers have information on joint range of motion and strength grading, so these do not need to be spelled out every time.

All pertinent information must be included. The SCs are trained to respond not just to the strong candidates, but also to the marginal and poor candidates. It is critical that instructions and training include responses to questions, tests, or instructions that might be used by weaker candidates in their approach to the client.

Too much information can overload the SCs and may cause them to forget important information. On the other hand, not enough information may cause them to guess when answering a question. This situation can seriously jeopardize candidate performance, as the SC's response may not be consistent with the portrayal of the case.

Standard categories of information are outlined below. You may not need all the categories on the template – if something is not required, leave it blank. You may also need to create additional categories for your case.



Category	Information to include in this category
Name	Name of your client. (This will probably change before the case is used.)
Age	Age you have assigned. (This may change before the case is used.)
Education	Complete if it is relevant to the occupation or situation.
Occupation	Your case may specify an occupation. Leave it blank if it is not important.
Diagnosis	State the actual diagnosis if it is something the SC would know. Use symptoms if the situation requires that the SC not know the diagnosis.
Type of case	Fill in the area of practice and the EtP milestones from the blueprint.
Type of case	For both, indicate the associated percentages.
Setting	Specify hospital room, out-patient clinic, private clinic, etc.
	Include all necessary furniture, equipment, and props. Provide pictures to improve standardization.
Furniture	If furniture or equipment must be a certain type, you should specify (e.g., chair with arms, bed with adjustable head section, stretcher with side rails, two-wheeled walker, 5 kg ankle weight, etc.)
	Very large or bulky equipment should be avoided, as some sites cannot get large pieces into the exam rooms (e.g., hospital beds). Alternatives include hi-lo beds, stretchers, or floor mats. Consider alternatives to ideal equipment and whether the station will work with these alternatives.
	ONLY equipment that is required for realism can be included. Redundant equipment should not be included.
	You may also need to specify equipment that should be available for training but should NOT be in the station on the exam day (e.g. goniometer for training).
Attire	Include any clothing the SC should be wearing, and clothing that should be removed (e.g., shorts and t-shirt, no shoes or socks). Include props and equipment that the SC will wear (e.g., hospital gown, nasal cannula, dressings, tensors).
NB! SC must	Continue this sentence, stating any specific physical features that the SC must or must not have (e.g., no scars on right knee, height requirements), and particular demands of the case (e.g., things the SC will need to be prepared for, things they will need to do between candidates). If there is nothing relevant to add, leave this section blank.
Presenting complaint, precipitating event	Indicate briefly why the SC is here, what the problem is, and for how long.
Initial position, general mobility and affect	Indicate the starting position for the SC – the position when the candidate walks in the door (e.g., sitting slouched in a chair with chin poking forward). Give a brief description of general mobility (e.g., you have normal mobility except for your neck) and a brief description of attitude and demeanour (e.g., you are



	pleasant and cooperative, or you are anxious and worried about your problem).
	Some cases may require the SC to ask a question. You should give the exact words you want the SC to use. SC "must ask" questions are asked at the warning buzzer unless there is natural place to ask earlier in the encounter.
Questions you may or must ask	In some cases, you may want to suggest questions for the SC to ask. You should give suggestions for "may ask" questions. These questions will be asked as needed during the encounter.
	If the case requires the SC to make comments rather than ask questions, change the wording to 'Comments you must/may make' and proceed as above.
Focus of case	Briefly outline the skills you want the candidate to demonstrate in the station. Start with "The candidate will" and write your sentence on the focus of the case here.
Timeline	It is sometimes helpful to outline events in a timeline. This helps the SC keep the flow of events in perspective when there is a lot of information to remember. Use a separate line for each part of the timeline: for example, 6 months ago – sustained injury (line 1), 3 months ago – attended an outpatient clinic (line 2), etc.
Medical history	Include the client's general medical history if it is relevant. Smoking and alcohol use should be included here if relevant. Do not repeat information that is in other areas.
Social history	Include any information necessary to the case.
Medications	Include the drug name in lay terms (e.g. blood thinner or water pill), dosage (once per day or as needed), route, frequency, how long it has been used, and the effect on signs and symptoms. Use generic names if possible (e.g., ASA instead of Aspirin).
Detailed history of present complaint	For a relatively uncomplicated case with only a few symptoms, only a few headings will be used. For a more complicated case involving altered movement patterns, more headings will be needed. You can create additional headings if necessary.
Activities and areas affected	Give specific examples of the activities affected and the areas (e.g., left leg and foot; unable to work, difficulty walking).
Sensation	Note any changes from normal sensation (e.g., numbness, tingling) or write "normal". Identify the distribution or site of abnormal findings.
Pain	The acronym SRNPDIQ may be useful (site, radiation, nature, periodicity, duration, intensity, quality) to describe pain completely. Consider the questions a candidate may ask about pain so that SCs can answer appropriately. Consider whether it is more appropriate for the SC to use the numeric scale or verbal



	pain descriptors.
	Try to make pain levels distinct and easy to remember (e.g., resting pain 3/10, pain on movement 6/10). All pain levels should be assigned either odd or even values. Avoid having more than 3 levels of pain.
Aggravating factors	Include all factors that make the pain or problem worse (e.g., walking more than 100 m, climbing more than 1 flight of stairs)
Alleviating factors	Include the factors that make the pain or problem better (e.g., sitting down for 5 minutes, ice)
Movement	Where appropriate, information should be provided for the different movements that SCs might be asked to perform. The meaning should be clear to lay people, so plain language must be used (e.g., say 'bending' instead of 'flexion'). At the same time, the meaning should be clear to a physiotherapist, so use goniometer measurements and strength grades as required. Provide definitions of terms if necessary.
	You may need additional lines to write descriptions of each movement. For example, for a wrist case, you might need a line for wrist flexion and extension (bending forward and back) and for wrist deviations (bending side to side).
	For neurological cases, you may need to write a description of the quality of the movement as well as, or instead of, the range. Use words like "floppy" or "stiff" to qualify the movement.
Strength	Strength should be written in numerical (Oxford) grades, or percentages (e.g., 4/5 or 50% of normal strength). The effect of gravity should be described if the grade is 3 or lower. If there is pain with strength testing or resisted movements, include it here as well.
	You also need to describe the effect of different positions on strength, as SCs will not automatically allow for the change in position.
	As with pain, keep the strength levels distinct and easy to remember. It is better to have 2 movements that are grade 2 and the rest all grade 4, than trying to have several movements grade 4, some grade 4-, and some grade 3. Consider what is most important and focus on that.
Responses to candidate	You may need to add information on how the SC should respond to specific comments, questions or actions by the candidate. Include things that the weaker candidates might do.
Notes for trainer	Suggestions or advice on training for the case can be included if they will assist with standardization.
Other lines	You may need to add lines for special tests. You may also need lines for activities e.g., to describe how the client gets up from a chair, walks, rolls, etc.
Impact of symptoms	Some stations may require more details for the headings outlined in the



	template. Include more information here if it is relevant to the case. Do not repeat information from earlier sections.
Diagrams	Include diagrams that show ranges of motion, areas of pain or sensory loss, etc. If you include diagrams, you should note this in the relevant section by saying "see diagram #x". You should find (ideally, from the reference used for the station) or create the diagram and send it with the station.

10. <u>DEVELOP THE WRITTEN PORTION OF THE 5+5-MINUTE STATIONS (E PAGE)</u>. FOR EACH QUESTION, PROVIDE A LIST OF ACCEPTABLE AND UNACCEPTABLE ANSWERS / TYPES OF ANSWERS.

For 5+5-minute stations, a written station follows each clinical encounter. The template includes pages for the written station questions and scoring. You should complete the E page only.

Equal weighting is assigned to the client encounter and the written station (i.e., each part of the couplet accounts for 50% of the final score for the station). The written station assesses areas directly related to the client encounter. Questions could include data interpretation (e.g. from x-rays, lab results, or the evaluation just completed), problem solving, formulating treatment plans, documenting the assessment, or indicating understanding of contraindications or precautions.

Questions should be in short answer format and should be able to be answered in point form. Simple yes/no questions are generally not appropriate, as there is a 50% chance of guessing correctly. If you must use a yes/no type of question, you should include a follow up question that asks for a rationale for the answer provided.

Questions must be clear, at the entry-to-practice level, and possible to finish within 5 minutes. Whenever possible, questions should focus on higher order thinking, rather than recall of facts. If a question asks for factual recall, follow up questions should deal with rationale or justification.

All possible correct/acceptable answers should be included in the answer key and scored. As with checklists, better answers can be weighted. Provide a maximum score possible for each question and a maximum total score for the written station.

You should also include a Note to Marker to indicate answers that are not acceptable (e.g. unacceptable answers include.... (provide list)) or to indicate the parameters of an acceptable answer (e.g., acceptable answers must include whether the movement is active or passive).

11. CROSS-CHECK INSTRUCTIONS FOR CANDIDATE WITH CHECKLIST AND FOCUS OF THE CASE

You should wait a few days before doing the cross-checks. When you are ready, go back to the instructions to the candidate and ask the following questions:

- Do the instructions to candidate reflect the focus I intended?
- Does the checklist relate to the instructions to candidate and the focus?



- Have I included items on the checklist that are not part of the focus or are not clearly indicated in the instructions to candidate?
- Is there information missing from the instructions to candidate that is necessary to complete the task?
- Have I given away information in the instructions to candidate that will cue the candidate to checklist items, or that makes the station easier than intended?
- Is there a strong correlation (connection) between what is asked of the candidate and what is expected on the checklist?
- 12. <u>CROSS-CHECK INSTRUCTIONS FOR STANDARDIZED CLIENT WITH CHECKLIST, THE FOCUS OF THE CASE, AND THE WRITTEN PORTION OF THE 5+5-MINUTE STATION, WHERE APPLICABLE</u>

Go back to the instructions for the standardized client and review them. Ask the following questions:

- Do the instructions for the SC cover everything that is intended in the focus of the case and the checklist?
- Are there checklist items that the SC cannot answer, or that the SC does not have information about?
- Does the written station reflect the focus of the case?
- Do the SC instructions cover all the information necessary for the candidate to be able to answer the written questions? If the written questions are closely tied to the SC's portrayal (e.g., recording findings), do the instructions for the SC clearly indicate this?
- 13. <u>DETERMINE APPROPRIATE REFERENCES. WHEREVER POSSIBLE, INDICATE MORE THAN ONE REFERENCE THAT SUPPORTS THE ELEMENTS OF THE STATION.</u>

References used in developing the station must be included with the finished station. References must be selected from the Key Reference list.

14. <u>OUTLINE REQUIRED PROPS, INCLUDING A PICTURE OF THE ITEMS FOR STANDARDIZATION PURPOSES, WHERE APPROPRIATE.</u>

Secure props that will be used in the station must be included. This includes x-rays, client notes, or other materials that are needed for the station. These materials must be included with your station when it is buddy reviewed by another committee and when it is sent to CAPR.

15. IF THE STATION INVOLVES EXERCISES OR SPECIFIC TEST POSITIONS/MANOEUVRES, PROVIDE A PICTURE OR DIAGRAM FOR CLARITY (IDEALLY, FROM THE REFERENCE USED FOR THE STATION) FOR EXAMINER AND SC TRAINING PURPOSES.

All appropriate variations of the test/manoeuvre should also be listed or represented by diagrams/images, or with appropriate description. These pictures/diagrams are important for ensuring that exercises or specific test positions/manoeuvres are performed by SCs and evaluated by Examiners in a standardized way across all exam sites.



16. REVIEW THE STATION WITH ANOTHER MEMBER OF YOUR SUBCOMMITTEE

Often you will have a clear idea of what you are trying to say — this doesn't always translate into understandable text. Having another member of your committee read the text will help to identify areas that are not clear. It may be helpful to try to explain verbally what you are trying to write.

The reviewer should consider three kinds of issues during the review:

- **Content issues** Is the content based on current practice and properly referenced? For example, is one theory of treatment required by the station where another theory might be common practice in another part of the country?
- **Testing practice issues** Is the station fair and clear?
- Training and logistical issues Are there training, equipment, or other logistical issues that need to be addressed? Is the task valid and feasible (practical), and can it be reproduced in a reliable manner across sites?

Expect to make changes following this review.

17. DRY RUN THE STATION WITH ANOTHER MEMBER OF YOUR SUBCOMMITTEE

When you believe your station is substantially complete, you need to do a dry run. You should act as the SC, as you know the station best. Two other committee members (preferably two people who have not yet seen the station) should be the examiner and the candidate. You should time the interaction.

Some things to look for:

- Was the candidate on the right track? If the candidate got most of the checklist items or was
 working toward them, the instructions to candidate are probably working. If, however, the
 candidate was on the wrong track or was doing unexpected things, you may need to revise the
 instructions to candidate.
- Did you (as the SC) have to make up any answers or responses to the candidate? This suggests that there may be information missing from the instructions to the SC.
- Did the examiner find the checklist covered what the candidate was doing? There may be some checklist items missing or some extra items that are not needed.
- Was the checklist easy to use and logical? You may need to reorder the checklist.
- Did the examiner have trouble interpreting checklist items? You may need to clarify the items or provide notes.
- Was the candidate able to complete the station in the intended time? If the candidate was
 close to finished, the length is probably right. If the candidate was on the right track but was
 nowhere near finished, you may need to consider revising the task or you can change a 5+5minute station to a 10-minute station.

You may need to revise your station based on the feedback from the dry run.



18. POST THE STATION FOR BUDDY REVIEW

The next step is to send your station to another committee for review (as per the groupings assigned by CAPR). Your Chair will do this by posting it in the relevant folder on box.com. This review provides a fresh perspective on the work you have done, as well as input from another region.

Performing a Buddy Review:

The review should be done as you would a dry run of your own station. One person should read the whole case and learn the SC role. One person should read the A and F pages and act as the examiner. One person should see only the A page and should be the candidate. Ask the same questions as under a dry run.

After you have done a dry run, you can all review the entire station and make suggestions for improvements. These suggestions should be added using "track changes" and the reviewed stations with comments will be posted back to the originating Chair by the Chair of the Buddy Review team.

19. MAKE REVISIONS, WHERE APPLICABLE

When the station comes back from the buddy, you will need to consider their suggestions. You should make revisions if they seem appropriate, or justify why you are not making a change. The person representing your committee (typically, the Chair) at the national meeting should be aware of the rationale for not making suggested changes.

20. POST STATION FOR NATIONAL MEETING

When all the revisions are done, send the completed station to your Chair for posting into the relevant folder on box.com. Please ensure that you have deleted all copies on your hard-drive. The Chair of your group will have the final say as to whether a particular station is ready for national meeting review.



References

Cunnington, J.P.W., Neville, A.J. & Norman, G.R. (1997). The risks of thoroughness: Reliability and validity of global ratings and checklists in an OSCE. *Advances in Health Sciences Education* 1, 227-233.

Harden (1988). What is an OSCE? Medical Teacher, 10 (1), 19-22.

Harden, R.M., Lilley, P., and Patricio, M. (2016). *The definitive guide to the OSCE: The Objective Structured Clinical Examination as a Performance Assessment*. Elsevier.

Harden, R.M., Stevenson, M., Downie, W.W., and Wilson, G.M. (1975). Assessment of clinical competence using an Objective Structured Clinical Examination. *British Medical Journal*, *1* (5955), 447-451.

Hart, I.R. (1987). The 5MS approach to assessing clinical competence. In *Further developments in assessing clinical competence*. Hart, I.R., Harden, R.M., Eds. Montreal: Can-Heal Publishing Inc. pp. 114-135.

Neufeld, V.R. & Normal, G.R., Eds. (1985). *Assessing clinical competence*. New York: Springer Publishing Co.

Pell, G., Fuller, R., Homer, M., Roberts, T. (2010). How to measure the quality of the OSCE: a review of metrics. AMEE Guide 49. *Medical Teacher*, *32* (10), 802-811.

Sloan, D.A., Donnelly, M.H., Schwartz, R.W., and Strodel, W.E. (1995). The Objective Structured Clinical Examination: the new gold standard for evaluating postgraduate clinical performance. *Annals of Surgery*, 222, 735-742.

van der Vleuten, C.P.M. & Swanson, D.B. (1990). Assessment of clinical skills with standardized patients: State of the art. *Teaching and Learning in Medicine* 2(2): 58-76.

Walters, K., Osborn, D., and Raven, P. (2005). The development, validity and reliability of a multimodality Objective Structured Clinical Examination in psychiatry. *Medical Education*, *39*, 292-298.



Appendix I

Conventions for Station Development

The following tables outline the conventions used by the Clinical Test Development Group in approving station content. These conventions are intended as a guide for station writers to ensure consistency between stations. Not all items are applicable to all stations, so writers should use judgment in selecting the most appropriate words and phrases for the situation.

INSTRUCTIONS TO CANDIDATE

Topic	Approved Format	
Approved verbs for use in instructions to candidates.	Apply, Ask, Assess, Assist, Assume, Complete, Confirm, Correct, Demonstrate, Describe, Determine, Educate, Establish, Explain, Identify, Include, Observe, Obtain, Perform, Provide, Report, Review, Specify, Take (as in history), Teach, Tell, Use.	
History	Complete a history.	
пізсої у	Complete a history and a subjective assessment.	
Examiner questions	"At the 8-minute mark, the examiner will stop you	
The number of questions should be indicated.	and ask x questions about this client."	
Diagnosis Asking the candidate to come up with or confirm a diagnosis	Use the words "clinical impression"	
A child as the client	"Tommy is in the playroom"	
Make it clear that the child is not present if this is	"Teach Tommy's mother/father about xxx"	
the case	"You will not be seeing Tommy today."	
Where the candidate must describe actions to the examiner to receive credit	"Describe to the examiner what you are doing."	
For activities the candidate should NOT perform	"Do NOT take/assess"	
Electrotherapy modalities	"There are no contraindications to [treatment] for	
If the candidate is not expected to check for	this client."	
contraindications, outline that none exist.	and cherre.	
Electrotherapy modalities	"Do NOT turn on the [] machine."	
If the machine should not be turned on		
Station with no client	"There will be no client in this station."	



CHECKLIST

Торіс	Approved Format
Done correctly It is implicit that an item on the checklist must be done correctly in order to receive credit for the item. In some situations, a note to the examiner may be used to highlight aspects of the performance that must be demonstrated in order to be considered correct.	This will vary with the situation
Pain assessment	SRNPDIQ: Site, radiation, nature, periodicity, duration, intensity, quality. Also include aggravating and alleviating factors.
Exercise instruction List the appropriate (and inappropriate) categories of exercise or specific exercises in the notes to examiner You can add items as needed. You can break up repetitions and duration if necessary. You may want to use this once rather than with each exercise.	"First exercise" "Selects appropriate exercise" "Instructs client in exercise" "Has client demonstrate exercise" – this means repeat once or until correct "Has client practice exercise" – this means repeatedly "Instructs in repetition and duration" Repeat for second exercise, third exercise
Exercise instruction You can list the exercises in the checklist if there are no options. In this case you omit 'selects appropriate exercise', and the candidate gets no points for the selection of the exercise. Giving positive feedback to client	"Exercise for knee extension" 'Instructs client in exercise" Etc. "Exercise for knee flexion" "Instructs client in exercise" Etc. "Confirms positive aspects of client's performance."
Behavioural issues with client	"Uses effective behavioural management approach."
Examiner questions Clinical impression	"What is your clinical impression of this client's problem?"



WRITTEN STATION

Topic	Approved Format
Approved verbs for use in written questions.	Describe, Identify, List, Provide, Specify.
For clinical impression	"What is your clinical impression of this client's problem?"