Development of Objective Structured Clinical Examinations (OSCEs) for assessment of clinical competence

Innovation in Occupational and Physical Therapy Education Summit 2019
Nancy Kruzen & Nicole Martino

OSCE Development
- Objective Structured Clinical Examination (OSCE)
- Learning objectives
  1. distinguish between formative and summative use of OSCE
  2. create an OSCE item to fit into a blueprint
  3. locate additional resources for OSCE development and implementation

What is an OSCE?
- An objective method to measure a student’s clinical competence in which the areas tested are carefully planned by the examiners (Harden & Gleeson, 1979)
- Students rotate through 2 types of stations
  - Procedure stations (attended; rater present)
  - Question stations (unattended)
- Research suggests 4-5 minutes each station,
  - 30-60 seconds between
  - Clinical competence being evaluated reduced into component parts
  - Components become focus of each station
What is an OSCE?

- An objective method to measure a student's clinical competence in which the areas tested are carefully planned by the examiners (Harden & Gleeson, 1979)

**Miller's Pyramid**

**Gleener's Taxonomy**

Modified Delphi (messy, fun)

How do I develop an OSCE?

- Identify competencies: narrow, profession-specific
- OT Fieldwork Performance Evaluation (FWPE)
- FUNDamentals
- BASIC
- EVALuation
- INTERvention
- MANAgement
- COMMUNICATION
- PROFessional
**Sample blueprint item**

<table>
<thead>
<tr>
<th>Station</th>
<th>Item type</th>
<th>Setting</th>
<th>Age</th>
<th>Scenario description</th>
<th>Bloom's Domain</th>
<th>Rater/Scorer</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>INTERV</td>
<td>Outpt</td>
<td>Pedes, Youth</td>
<td>Locate mobile/computer app for client (meds, bus schedule, alarm)</td>
<td>PM - mid</td>
<td>Log met</td>
<td>Computer, mobile</td>
</tr>
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Locate mobile/computer app for client (meds, bus schedule, alarm) (24 modifies task approach, occupation, and the environment)

**Sample blueprint**

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<tr>
<td>1</td>
<td>COMM</td>
<td>Any</td>
<td>Any</td>
<td>Teach family/guardian to locate, install, use a mobile or computer app</td>
<td>PM - mid</td>
<td>Log met</td>
<td>Computer</td>
</tr>
<tr>
<td>2</td>
<td>COMM</td>
<td>SNF</td>
<td>Elder</td>
<td>Client with aphasia</td>
<td>PM - high</td>
<td>Log met</td>
<td>Rater</td>
</tr>
<tr>
<td>3</td>
<td>MGMT</td>
<td>SNF</td>
<td>Elder</td>
<td>SNF RUG levels</td>
<td>PM - low</td>
<td>Log met</td>
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**Sample rotation**

- Stations labeled
- Alphabetically
- Last refer to connected stations
- 5 min stations
- 1 min rotation
- 3 rounds

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Sample item – student view

Assessment objective of OSCE station: D/C environment post-CVA

Candidate instructions: Patient post (L) CVA in skilled nursing setting. Discharge planned in the next few days. You are providing weekend coverage. You and patient are not known to each other. Chart review and PT relate UE & LE movement out of synergy. Patient has expressive aphasia.

Task: Clarify home environment with patient regarding plans for discharge.

- What skills would you expect to see in entry-level performance?
- What skills would you consider essential?

Sample checklist

<table>
<thead>
<tr>
<th>Checklist Score</th>
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<tbody>
<tr>
<td>Introduces self</td>
<td></td>
</tr>
<tr>
<td>Greets patient</td>
<td></td>
</tr>
<tr>
<td>Identifies purpose of the session</td>
<td></td>
</tr>
<tr>
<td>Asks questions pertaining to home environment</td>
<td></td>
</tr>
<tr>
<td>Recognizes patient’s growing concern; attends to body language</td>
<td></td>
</tr>
<tr>
<td>Seeks alternative means of communication</td>
<td></td>
</tr>
<tr>
<td>Seeks reliability of response</td>
<td></td>
</tr>
<tr>
<td>Stops questions pertaining to home environment</td>
<td></td>
</tr>
<tr>
<td>Attempts to uncover source of patient’s distress</td>
<td></td>
</tr>
<tr>
<td>Discovers source of patient’s distress</td>
<td></td>
</tr>
<tr>
<td>Attends to safety: ascertains swallowing capability, mobility</td>
<td></td>
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<tr>
<td>Gets water for client</td>
<td></td>
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Accolades: Recommendations:

Sample rater scoresheet

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Accolades: Recommendations:
Global Score

- Queen's University, Belfast
- [https://www.med.qub.ac.uk/osce/background_Scores.html](https://www.med.qub.ac.uk/osce/background_Scores.html)

LO1: formative v summative

- **Formative**: Student opportunity to use information to self-direct needed improvement before going to fieldwork.
- **Summative**: Student receive feedback about what went well, what went poorly. Areas related to FWPE competencies. Additional accolades/recommendations (presence, language, eye contact, etc.)
- **Formative**: Faculty opportunity for curricular revision and program evaluation.
- **Summative**: Faculty receive feedback about process and content-related competencies.

LO2: create an OSCE item

- Create an OSCE item to fit into a blueprint
  1. Pair up. Select age, setting, competency, level
  2. Create an item. Domain, task, checklist
  3. Volunteers to demo their scenario? (Brave souls!)
LO3: locate add’l resources

- Literature across professions, websites, and other resources for development and implementation

References


Questions? Comments?

- Thank you, kind colleagues.
  - Nancy E. Krusen  nancy.krusen@unmc.edu
  - M. Nicole Martino  mnicolemartino@gwu.edu