Objective
Structured Clinical Exams (OSCEs)

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Overview

- OSCE set-up
- Workshop on writing cases for OSCE
- Mock-OSCE sessions
- TOSCE (Teaching OSCE)
The Association of Standardized Patient Educators' (ASPE) definition of an OSCE is "A station or series of stations designed to assess performance competency in individual clinical or other professional skills. Stations are carefully structured and designed to be easily reproducible. Learners are evaluated via direct observation, checklists, learner presentation or written follow-up exercises. The examinations are generally summative but may involve feedback."
OSCE

- Application of knowledge vs memory
- **Objective** = all students tested on same material/skill
- Rubric makes marking more standardized
- **Structured** = each station a specific task
- Test **Clinical** skill & judgment

Overview

- OSCE set-up
- Workshop on writing cases for OSCE
- Mock-OSCE sessions
- TOSCE (Teaching OSCE)
Set-up

- The players:
  - Student
  - Examiner (lecturer)
  - Standardized participants/patients (SP)
  - Technical team (set-up, timers, papers, quarantine, student-control)
  - Attendants outside OSCE room
Flow

Registration

Holding Room

Exam

Quarantine Room
Set-up

- Logistics
  - Counseling rooms
  - Recording device (ipads)
  - Quarantine room - washroom (notes), handphones, escort
  - Timers/announcements
  - Stop-watch (back-ups, student, examiner)
  - References (books, virtual)
  - Blank papers
  - Props: Prescription, eye drop bottle, inhaler etc.
Recording device
Consulting suite
Dr Charles Lew
300 St David St
Pharmville VIC 3052
Phone: 78635426
Prescriber no: 564879

Patient’s Medicare number
3 2 1 4 5 6 8 1 0 2 4

Patient’s full name
Jo Wong

Patient’s address
14 Mariborough Drive
Pharmville

PBS entitlement number

Safety Net entitlement card holder

PBS X

Brand substitution not permitted

Losec (omeprazole) 20 mg tablets M.30
Sig. 1 d mdu
No repeats

Privacy note on reverse

Doctor’s signature

Chew

today’s date

I certify that I have received this medication and the information relating to any entitlement to free or concessional pharmaceutical benefits is not false or misleading.

Patient’s or agent’s signature

Date of supply
/
/

Agent’s address

...
Stations

- Number - size, logistics
  - 2 stations
  - 3 stations
  - 4 stations (concurrently running)
2 stations

- Scenario A:
  - 1 for community
  - 1 for hospital

- Scenario B:
  - Station A and B different cases - level of difficulty
3 stations

- One after the other
- Builds up in complexity
  - Technical
  - Communication and clinical
  - Clinical, critical-thinking, motivational-interviewing
STATION 3

- Difficult patient
- Build up on skills from Stations 1 and 2
- Use motivational interviewing techniques to bring about change in patient
- More complicated medications
- Assessment of DRPs
- Adherence issues
4 stations

Counselling Room 2 → 1-2min ‘relocation and preparation’ → Counselling Room 3

Counselling Room 1 → 1-2min ‘relocation and preparation’ → Counselling Room 4

Counselling Room 1 → Counselling Room 2

Counselling Room 3 → Counselling Room 4
Stations

- Number - size, logistics
  - 2 stations
  - 3 stations
  - 4 stations (concurrently running)

- Depending on level
  - Communication skills
  - Technical skills
  - Clinical skills
  - Critical-thinking skills
Timing

- Stations tend to be short, typically 5-10 minutes, but can be longer
- Time between stations - 1 min
- Two commonly used models are:
  - Student preps for 10 minutes and has 10 minutes in the room for the encounter. A one minute warning is given for the prep and a 2 minute warning is given for the encounter.
  - Student is allowed 15 minutes for prep and encounter. It is the student's decision on how long he/she preps prior to entering the room. A 5-minute warning is given, followed by a 1 minute warning.
  - E.g.
    - 1-2 minutes between stations
    - 7 minutes for session
  - Or
    - 3 minutes to prepare case
    - 5 minutes for session
    - 1-2 minutes between stations
Running the OSCE

Pre-OSCE

- SP training
- Examiners’ training/view cases and checklist
- Role-play

Post-OSCE

- Examiners discuss
- SPs feedback
- Feedback from all staff involved
- Review recorded videos
- Feedback to students

During OSCE

- Break halfway
  - Examiners to discuss grading
  - SPs to discuss any issues
Overview

- OSCE set-up
- Workshop on writing cases for OSCE
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Workshop on case-writing: Overview

- Case development
- Checklist development
- Peer review
- Role-play
Course: Therapeutics III

Station/Case Name: Pediatric Acetaminophen

Task: Confirmation of appropriate dose and patient counseling regarding how to determine appropriate dose and administration of a liquid preparation to a child

Designed for: Community pharmacy, pediatric medicine, and/or family medicine

Course Objective:

Station Requirements: Prep station: Pediatric Dosage Handbook
Room: dosing devices for the administration of liquid medications, acetaminophen liquid products

Author: Toby Jackson

Standardized Participant Type:

Patient (male/female; age) Parent of a 7-month old baby
Physician ______

Exam Logistics:

Preparation for encounter: 10 minutes
Encounter: 10 minutes
Time between groups: 5 minutes
DIRECTIONS TO THE STUDENT
This is all the information the student needs to prepare for the encounter

- **Task:** *(what do you want the student to accomplish during the encounter)*
  Gather any additional information and counsel the parent on acetaminophen dosing for Daniel.

- **Scenario Information:** *(brief summary of case)*
  Daniel Smith is having some fussiness with a low-grade fever. His mom/dad comes to your pharmacy and asks for your help with the right dose of acetaminophen liquid for Daniel. The mom/dad has a bottle of acetaminophen drops and a bottle of suspension in his/her hands when he/she approaches you with a confused look.

- **Medical History:** not given to student
- **Social History:** not given to student
- **Medications:** not given to student
- **Vital Signs:** not given to student
- **Lab Results:** n/a
DIRECTIONS TO THE STANDARDIZED PARTICIPANT
This is all the information the SP needs to know for the encounter

- **Name:** Child-Daniel Smith
- **Age:** 7 months
- **Appearance, Weight, and Affect:** As the parent, you are confused on what to do.
- **Scenario Information:** (brief summary of case)
  Recently Daniel has had a low-grade fever and you do not know what dose of acetaminophen to give him. If asked, you have called the pediatrician’s office and the nurse told you it was ok to give Daniel acetaminophen. If you are asked if you have any acetaminophen at home you will say no. If you are asked if you have a dosing syringe or some special spoon that you use to give liquid medication you will say your mother always used a ‘tea’ spoon and you had figured you would just use that as well. If the student does not educate you that acetaminophen is the same thing as Tylenol® you will only use the term acetaminophen in your conversation. The student may have you demonstrate your ability to measure the right dose. If so measure it and replace the medication back in the bottle/cup.

- **Opening Statement:** (This is the first statement made by the SP after student enters the room)
  “I need some help in determining the right dose of acetaminophen for my child.”

- **Medical History:**
  Daniel was born premature (8-weeks early) and was in the hospital for 10 weeks. He is small for his age. You will only give his weight if specifically asked. Your response will be, “He weighed 12 pounds at his check-up last week.”

- **Medications:** None
- **Allergies:** None
- **Social History:** n/a
- **Family History:** n/a
- **Diet:** normal
- **Alcohol/Tobacco Use:** n/a
- **Exercise:** n/a
- **Immunizations:** up to date

**Answers to any questions the student might ask in addition to the checklist items:** n/a

**Prompts (Specific questions the SP must ask in each encounter if not covered by the student)**
1. What is the appropriate amount of acetaminophen for Daniel?
2. How often can acetaminophen be given?
3. What is the maximum dose of acetaminophen for Daniel?
## Checklist

<table>
<thead>
<tr>
<th>Skill Checklist</th>
<th>PASS</th>
<th>FAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Obtains Daniel’s weight</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>2. Obtains Daniel’s age</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>3. States that there are two different concentrations of acetaminophen</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>4. Gives the dose of acetaminophen in terms of ‘mg’ and ‘volume’</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>5. States the correct dose of acetaminophen for Daniel [50-80 mg and 0.5-0.8 ml-drops OR 1.5-2.5 ml-suspension]</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>6. States a specific dose, within the range above.</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>7. States the usual dosing frequency of acetaminophen is q4-6-8h</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>8. Uses an appropriate dosing device to measure the dose (dropper or 1 mL syringe – drops OR 3-5 mL syringe for suspension)</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>9. Demonstrates how to measure a dose</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>10. Has you demonstrate that you can accurately measure a dose</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>11. States that the appropriate maximum dose for acetaminophen (410-490 mg or 5 doses/24 hours)</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>12. Recommends to shake the suspension well</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

## Communication Checklist

<table>
<thead>
<tr>
<th>Communication Checklist</th>
<th>PASS</th>
<th>FAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Introduced him/herself</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>2. Used the appropriate terminology</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>3. Was sensitive to me (patient) OR to the situation (MD)</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>4. Was confident</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>5. Was respectful</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>6. Was dressed professionally</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>7. Came to a satisfactory closure</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>8. Asked me if I had any questions</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>9. Put me at ease</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

### Overall Student Performance

- O OUTSTANDING
- O CLEAR PASS
- O BORDERLINE
- O CLEAR FAILURE
Workshop (1): Case development

- Break into groups

- Groups
  - According to specialty
  - Mix

- Each group to design a case

- Completed case will be peer-reviewed by a different group

- Role play
Workshop (1): Case development

Case objectives

- The first thing to be done prior to developing a case is to set objectives.
- Identify an objective and explore possible case scenarios that would allow the measurement of the objective.
- Examples of objectives:
  - Drug-related problems
  - Device technique
  - Adherence issues
- Develop the case/checklist around the specific objective and be as specific as possible working within the given time constraints. Stay focused on the simple skill!
Workshop (1): Case development

Case development

- Develop the case/checklist around the specific objective and be as specific as possible working within the given time constraints.
- Work with content experts and clinicians to develop realistic scenario.
- Use template provided
  - Start with chief complaint (what brought the patient to the pharmacy, clinic, hospital etc)
  - History of present illness - description of the event (broader description of signs and symptoms, duration, what done so far etc)
  - Medical/medication history
  - Allergies
  - Adherence
  - Social history
  - Diet/exercise
OSCE CASE TEMPLATE

Admin/Logistics:
- Course:
- Station/Case Name:
- Designed for:
- Objectives:
- Station Requirements (props, references, recording material, writing material, online ref etc):
- Author:
- Standardized Participant Type: Patient (male/female; age) or Physician or other healthcare provider
- Activities and Time Required:
  - Preparation for encounter:
  - Encounter:
Task/task to be completed:

- History taking
- Adherence issue
- Communication problem
- Drug-related problems
- Monitoring plan
- Patient education
- Patient counseling
OCSE CASE TEMPLATE

Case
- Type of encounter (new patient, refill medicine etc)
- Setting (community pharmacy, hospital, clinic etc)
- Patient demographics:
- Chief complaint/issue:
- History of present illness/description of encounter:
- Vital Signs:
- Medical History (past and present):
- Medications (past and present):
- Adherence:
- Allergies:
- Social History:
- Exercise/Diet:
- Lab Results:
Workshop (1): Case development

Directions to the Student

- Task to be completed, scenario, patient medical and social history, medications, vital signs, lab results

Directions to the Standardized Participant

- Name, age, gender, appearance, affect, scenario, opening statement, medical history/problems, medications (to include when/how they are taken), allergies, social history, family history, diet, alcohol/tobacco use, exercise, immunization history, prompted questions

- How to behave

- Specific things to say
DIRECTIONS TO THE STUDENT

This is all the information the student needs to prepare for the encounter

- **Task:** (what do you want the student to accomplish during the encounter)
- **Scenario Information:** (brief summary of case)
- **Patient details:**
- **Vital Signs:**
- **Medical History:**
- **Medications:**
- **Social History** (marital status, living arrangements, occupation, family history, social drug use, smoking, tobacco etc):
- **Exercise/Diet:**
- **Lab Results:**
DIRECTIONS TO THE STANDARDIZED PARTICIPANT

This is all the information the SP needs to prepare for the encounter

- Name:
- Age:
- Appearance, Weight, and Affect:
- Scenario Information:
- Attitude of SP (verbal, non-verbal):
- Opening Statement: (This is the first statement made by the SP after student enters the room)
- History of present illness/details on encounter:
- Vital signs:
- Medical History:
- Medications:
- Allergies:
DIRECTIONS TO THE STANDARDIZED PARTICIPANT

This is all the information the SP needs to prepare for the encounter

- Adherence:
- Social History:
- Family History:
- Alcohol/Tobacco Use:
- Diet/exercise:
- Immunizations:
- Specific questions to be asked:
- Specific verbal prompts that must be delivered (Specific questions the SP must ask in each encounter if not covered by the student):
- Answers to any questions the student might ask in addition to the checklist items:
Workshop (2): Checklist development

Skill Checklist
- You will need to determine how many checklist items are reasonable to assure its validity. Try not to include too many pieces of information in one checklist item as this can affect reliability. Initial case development & testing should use checklists with items that measure one discrete skill.

Communication Checklist
- This assesses communication skills only, regardless of accuracy on skills checklist.
- Make this a universal checklist.

Overall Student Performance
- This is based on the student's performance of the skills checklist and communication checklist.
<table>
<thead>
<tr>
<th>Item</th>
<th>Meets Expectations 100%</th>
<th>Needs Improvement 50%</th>
<th>Unsatisfactory 0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attending Behaviors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eye Contact</td>
<td>Maintained appropriate eye contact.</td>
<td>Initial eye contact, more time reading notes.</td>
<td>Little eye contact.</td>
</tr>
<tr>
<td>Vocal Qualities</td>
<td>Appropriate tone, pace and volume.</td>
<td>At times inappropriate volume/pace/tone.</td>
<td>Tone, pace or volume was inappropriate.</td>
</tr>
<tr>
<td>Verbal Tracking</td>
<td>Listened to patient and smoothly changed from one topic to the next.</td>
<td>Listened to patient, consistently changed topics ineffectively, occasionally interrupted.</td>
<td>Did not seem to listen to patient or interrupted patient story.</td>
</tr>
<tr>
<td>Body Language</td>
<td>Faced patient squarely, open body posture, expressive face, no distracting gestures</td>
<td>Mostly appropriate body language inappropriate facial expressions.</td>
<td>Mostly inappropriate body language.</td>
</tr>
<tr>
<td>Distance from Patient</td>
<td>Maintained comfortable/appropriate distance.</td>
<td>At times too close or distant posture.</td>
<td>Consistently too close or distant posture.</td>
</tr>
<tr>
<td>Verbal Skills</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appropriate Language</td>
<td>Appropriate language and no inappropriate medical jargon.</td>
<td>Mostly appropriate language or used inappropriate medical jargon.</td>
<td>Replied extensively on medical jargons or displayed consistent inappropriate language.</td>
</tr>
<tr>
<td>Use of Questions</td>
<td>Facilitative open-ended questions.</td>
<td>Some closed-ended or restrictive questions.</td>
<td>Mostly closed-ended and restrictive questions.</td>
</tr>
<tr>
<td>Facilitated Conversation</td>
<td>Appropriate verbal gestures.</td>
<td>Some facilitating verbal gestures.</td>
<td>Few, if any, verbal gestures.</td>
</tr>
<tr>
<td>Counseling Structure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Introduction</td>
<td>Introduced self and title, appropriately acknowledged individual.</td>
<td>Failed either to give name, title or determine to whom speaking (patient or patient agent).</td>
<td>Skipped intro or intro ineffective.</td>
</tr>
<tr>
<td>Determine Patient Knowledge</td>
<td>Asked patient about what physician told them about med and if patient has taken before.</td>
<td>Did not fully explore patient’s knowledge of medication or disease state.</td>
<td>Failed to explore patient’s knowledge of med/disease or ineffective in doing so.</td>
</tr>
<tr>
<td>Medication Regimen</td>
<td>Said med name, indication, dosing frequency and route of administration.</td>
<td>Skipped 1 of the following: name, indication, dosing frequency or route.</td>
<td>Did not discuss any of the following: name, indication, dosing frequency or route.</td>
</tr>
<tr>
<td>Med Benefit/ADRs</td>
<td>Thoroughly described benefits of medication prior to discussing major side effects.</td>
<td>Described benefits/side effects but failed to describe in correct order.</td>
<td>Failed to describe benefits or side effects.</td>
</tr>
<tr>
<td>Patient-specific Med Issues</td>
<td>Discussed onset of action, duration of therapy, missed doses.</td>
<td>Failed to discuss one or two major issues related to the specific medication.</td>
<td>Failed to discuss or gave incorrect patient specific medication issues.</td>
</tr>
<tr>
<td>Medication Issues</td>
<td>Discussed safe storage, refills and discussed interactions.</td>
<td>Failed to discuss one or two major issues related to the specific medication.</td>
<td>Failed to address storage, refills, or interactions or provided superficial information.</td>
</tr>
<tr>
<td>Verifying Patient Knowledge</td>
<td>Verified patient understanding: asked patient to repeat key aspect of information presented.</td>
<td>Used closed ended questions to verify understanding.</td>
<td>Failed to verify patient understanding.</td>
</tr>
<tr>
<td>Closing</td>
<td>Referred to written information and repeated name/contact information.</td>
<td>Failed to address written information or provide contact information.</td>
<td>Superficially closed did not point out written information or provide contact information.</td>
</tr>
</tbody>
</table>

Length of Counseling Session: Appropriate 4-5 minutes, under 3 or over 6 minutes 5 point deduction.
Peer Review
Overview

- OSCE set-up
- Workshop on writing cases for OSCE
- Mock-OSCE sessions
- TOSCE (Teaching OSCE)
Mock-OSCE

- Role-playing
- Test-out
  - Timing
  - If case is logical
  - SP - what should be said
  - Examiner - checklist
- Look back at cases
Overview

- OSCE set-up
- Workshop on writing cases for OSCE
- Mock-OSCE sessions
- TOSCE (Teaching OSCE)
Briefing on OSCE
Format
Timing
Do’s and don’ts
What is provided - references
What to bring
Marking rubrics
TOSCE

- Online resources: [https://www.youtube.com/watch?v=mgEwf4T53MU&list=PLHgM9DbTQZOQ4OzBW6oRFsX_J0TrKJ7Lt&index=4](https://www.youtube.com/watch?v=mgEwf4T53MU&list=PLHgM9DbTQZOQ4OzBW6oRFsX_J0TrKJ7Lt&index=4)
- Pharmacist OSCE Preparation Videos (Youtube)
- Videos/vignettes
- Role-playing
  - Communication skills
  - Counseling skills