What is an OSCE?

R. M. HARDEN, Centre for Medical Education, The University, Dundee

Introduction

The objective structured clinical examination, or the OSCE for short, is an approach to the assessment of clinical competence in which the components of competence are assessed in a planned or structured way with attention being paid to the objectivity of the examination.

Stations

The student is assessed at a series of stations with one or two aspects of competence being tested at each station. The examination can be described as a 'focused' examination with each station focusing on one or two aspects of competence. In a typical examination there may be 20 such stations and students rotate round the stations at a predetermined time interval. A 20-stations examination with 5 minutes at each station will occupy 100 minutes.

One circuit of 20 stations will allow 20 students to be examined simultaneously. If the number of students is greater than 20, this can be accommodated by running parallel circuits of stations or by repeating the single circuit with another group of students.

Although the concept of an examination with stations round which students rotate represents an important aspect of the OSCE, the examination is more than just a 'multi-station' examination.

Clinical

The OSCE is a clinical or practical examination. (In a non-clinical area, a similar approach may be adopted and in this context is usually referred to as an OSPE or objective structured practical examination). The OSCE is a performance assessment and is concerned with what students can do rather than with what they know. Here are some examples of competencies assessed at stations in an OSCE.
● History taking from a patient who presents with a problem, e.g. abdominal pain.
● History taking to elucidate a diagnosis, e.g. hypothyroidism.
● Educating a patient about management, e.g. use of inhaler for asthma.
● General advice to a patient, e.g. on discharge from hospital with a myocardial infarction.
● Explanation to patient about tests and procedures, e.g. endoscopy.
● Communication with other members of health care teams, e.g. brief to nurse with regard to a terminally ill patient.
● Communication with relatives, e.g. informing a wife that her husband has bronchial carcinomas.
● Physical examination of system or part of body, e.g. examination of hands.
● Physical examination to follow up a problem, e.g. CCF.
● Physical examination to help confirm or refute a diagnosis, e.g. thyrotoxicosis.
● A diagnostic procedure, e.g. ophthalmoscopy.
● Written communication, e.g. writing referral letter or discharge letter.
● Interpretation of findings, e.g. charts, laboratory reports or findings documented in patient's records.
● Management, e.g. writing a prescription.
● Critical appraisal, e.g. review of published article or pharmaceutical advertisement.
● Problem-solving, e.g. approach adopted in a case where a patient complains that her weight as recorded in out-patients was not her correct weight.

In the examination it is what the examinee does, when confronted with a patient or a situation, that is assessed not what he knows and the answers he writes to a theoretical question on the subject. A range of techniques can be employed in the OSCE to emphasise the practical nature of the examination. These include simulated patients, videotape and simulators: of these, simulated patients have the greatest to contribute to the OSCE. In traditional clinical examinations all too often history-taking ability is assessed by the examiner scoring the candidate's written or verbal report of the history and no attempt is made to watch the candidate taking the history. In the OSCE the process as well as the product, is measured in the examination. The technique he uses taking the history and the questions he asks are assessed as well as his findings and his conclusions based on the findings.

Objective

Traditional clinical examinations have been criticised on the grounds that they lack objectivity. In the OSCE, subjective bias is removed as far as possible. (The notion of objectivity is a relative one. Even multiple choice questions and other so-called 'objective' tests are not as truly objective as their designers claim.)

In any clinical examination there are three variables. The patient, the examiners and the candidate. In the OSCE attempts are made to minimise any examiner subjective bias and to minimise any bias introduced by candidates seeing different patients. The following contribute to the objectivity of the examination.

● Candidates see a number of examiners in the course of the examination, usually eight or more.
● What is to be assessed at each station is agreed in advance and a marking schedule is produced which lists what is expected of the candidate at each station.
What is an OSCE?

Examiners use a check-list which reflects what is to be tested at the station. This is agreed in advance by the examiners.

The aim in the examination is to produce a profile for each candidate rather than a single composite mark. A candidate, for example, may be competent in physical examination techniques, but have an unsatisfactory attitude and may be lacking in interpersonal skills.

The standard or criteria for pass, distinction (if appropriate), fail, and dangerous fail can be agreed.

Examiners can be trained for the task expected of them and their performance can be assessed in advance on practice videotapes.

The examination tests a wide range of skills thus greatly reducing the sampling error. This very significantly improves the reliability of the examination.

Students all face the same tasks.

Simulated patients help to ensure that all students are presented with a similar challenge.

Structured

The examination is structured in such a way that the content of the examination and the competences to be tested are planned carefully in advance. Thus the examination can sample different subject areas, e.g. cardiovascular system, dermatology, accident and emergency medicine, geriatrics, etc. and different skills, e.g. history-taking, physical examination, problem-solving, patient education including attitudes. The content of the examination as represented at each station can be plotted on a grid as shown in Table I.

| Competence           | CVS | RS | CNS | AS | Renal | etc.
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<tbody>
<tr>
<td>History-taking</td>
<td>1</td>
<td>11</td>
<td>2</td>
<td></td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Physical examination</td>
<td>11</td>
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<tr>
<td>Problem-solving</td>
<td>12</td>
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<td>3, 4</td>
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<td>Patient education</td>
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In this way the examination is designed to reflect adequately the objectives of the course and to make the maximum use of the time available for the exam. It is structured so that competencies in history-taking, physical examination, patient education, problem-solving, etc. are tested in a range of areas and not just in one or two areas of medicine, e.g. a patient with a myocardial infarction or a patient with chronic bronchitis.

Flexibility

The OSCE is not a rigid prescription for examining. It is an approach, as described above, which can be adapted to suit the needs of:
a particular discipline or specialty whether this is general practice, surgery or psychiatry;
- a phase of education, i.e. undergraduate, postgraduate or continuing education;
- the function of the examination, e.g. pre-test, in course assessment, or qualifying examination;
- resources available, e.g. number of examiners, patients and accommodation. Some exams are held in clinical settings, others in examination halls of various descriptions.

Seldom will one see two OSCEs which are identical in the types of skills tested, and the ways in which they are tested. The examinations will be similar however, in so far as they will be structured with each station focusing on one or more aspects of competence and attention paid to the objectivity of the examination. Last, but not least, the emphasis will be on assessing what students can do rather than what they know.

Correspondence: Professor R. M. Harden, Centre for Medical Education, Level 8, Ninewells Hospital and Medical School, Dundee DD1 9SY, Scotland, United Kingdom.

REFERENCES


