Use of the objective structured clinical examination for assessment of vocational trainees for general practice

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SUMMARY. General practice training schemes currently have no structured methods of assessment and most rely on a variety of subjective ratings of performance. In West Cumbria the 'objective structured clinical examination' has been used to assess training performance in areas covered by small group teaching during the preceding terms. Consultation skills, interpretation of clinical data and a number of aspects of practice management were tested. The examination was conducted in the local postgraduate centre and assessed 20 trainees. Each trainee received feedback of his performance on each problem set and also an overall comparison with his peers.

This method of assessment appeared to be well received by trainees and was practicable within the limited resources available. In addition, the variety of problems set allowed for a broad range of trainees' performances to be assessed.

Introduction

THE assessment of performance of general practitioner trainees during vocational training is currently under review. At present the statutory regulations governing training ask for only 'satisfactory completion' certificates signed by the clinical teachers to whom the trainee has been attached. This assessment of 'satisfactory completion' is a subjective one and doubts have been expressed about its validity.[1] Many vocational training schemes have designed their own packages for assessing trainees and these include Manchester rating scales, multiple choice question papers, modified essay questions and sometimes even traditional essay questions. Each of these methods of assessment has its strengths and weaknesses and may even be testing the same areas of competence over and over again.[2]

The objective structured clinical examination was originally developed to assess clinical competence at the bedside for undergraduate students[3] and has been used for general practitioner undergraduate assessment.[4] By this method clinical performance can be tested by breaking down its components into areas which can be objectively assessed, for example, taking a history, interpreting the findings, examining clinical data, selection of appropriate tests. In the examination each component is assessed in turn and marked according to an agreed check-list.

We decided to use a modified objective structured clinical examination as a method of assessment of vocational trainees during a three-year planned course in West Cumbria.

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Background

The West Cumbria vocational training scheme is based on the West Cumberland hospital, Whitehaven. Trainees are accepted for a three-year rotation involving an initial six months as a trainee in practice, four senior house officer posts in geriatric medicine, psychiatry, paediatrics and obstetrics and a final six months as a trainee in practice. Four places are available each year thus giving 12 trainees on the course. In addition there are up to eight other trainees attached to the scheme on self-constructed courses who may be in local teaching practices. A regular half-day release course run during the academic terms uses principally small group teaching methods. After an initial pilot study, an objective structured clinical examination was carried out at the end of each of two terms.

The examination

An objective structured clinical examination involves the candidate working round a series of 'stations'. At each station a problem is presented and the candidate asked to answer questions about the problem. The problem may take the form of a short case history, a clinical photograph, an item of data to interpret or even a simulated consultation using role play. A time limit is set for each station, usually five or 10 minutes, before the candidate moves on to the next. Marks can be awarded on the basis of written answers or an examiner at each station can assess the candidate's performance using a pre-agreed marking schedule.

The stations used in the West Cumbria examination were based on the topics discussed during the half-day release sessions for that term. The plan of a typical examination is shown in Figure 1. Patients at consultation stations were simulated, the role of the patient being played by a clinical psychologist and his students. Performance at the simulated consultations was marked by an observer. Records used in the record stations were borrowed from one of the practices as were examples of laboratory reports and clinical photographs.

After each examination the marks were collated and produced in the form of a histogram for the group. Each trainee received a copy of the histogram with his mark identified to enable peer comparison on a confidential basis. In addition each trainee was shown his marks for individual stations.

Discussion

Harden[3] offers three questions to be considered when looking at any examination technique — is it reliable, is it valid and is it practical?

In this examination reliability was improved by all trainees being assessed on the same evidence by the same examiners using prepared criteria lists. This reliability would be difficult to achieve using the present subjective assessments carried out by trainers. The check-list for marking the stations can be agreed by a group of trainers.

The validity of the examination, that is, whether it is testing what we want it to test is difficult to comment on yet. The objective structured clinical examination offers some advantages over other methods of assessment in that the examiners can

Station 1 (simulated consultation)

The depressed young girl: 'I'm not sleeping, Doctor.'
Cannot get on with boss (a principal psychologist) at work, he is always picking on her, making her do more work than he does, criticizing her all the time, she is not coping with workload.
Quarrels with husband; not sleeping (early morning waking); not eating; no libido; no interest. Family consists of her and husband (working at Marchon), no children.

Station 2

List five features of the patient's history that have helped you to decide if she is clinically depressed or not — and is she?

Station 3

Your practice is considering buying a computer. You have arranged to see a representative from the company whose advertisement is in front of you. What features would you question him about concerning his company's system to help you to decide whether or not to buy it? List five.

Station 4

In front of you there is a medical record. List five features of the record that you consider to be good and five features that you consider to be bad.

Station 5 (simulated consultation)

At the next station you will find a 'patient' that you have been asked to see by your practice manager because he wishes to change his doctor. You have five minutes in which to deal with the situation.

Station 6

Look at the exhibit *(RCGP age-sex register card)*. What is it? List five possible uses of the system of which this is a part.

Station 7

Paddy is 32 years old and works as an assistant scientific officer at Sellafield. You have been 'phoned up by one of the medical officers at Sellafield a week or two ago because the management have noticed that he has been having a more than acceptable number of days off work, especially Mondays, and his time-keeping is erratic. You see from his notes that he has been turning up with recurrent bouts of epigastric pain and/or diarrhoea. He is single, living in a flat. List five questions you might ask him which could helpfully identify whether he was an alcohol abuser.

Station 8

A 19-year-old girl comes to see you requesting a prescription for oral contraceptives. List five ways in which this consultation could be used for health promotion (prevention).

Station 9 (multiple choice questionnaire; true/false choice for each option)

1. The health visitor:
   a) May be a state enrolled nurse (SEN).
   b) Undergoes a three-year training course.
   c) Has a statutory duty to visit under-five-year-olds.
   d) Is always employed by the general practitioner.
   e) Must have obstetric experience.
2. Recognized risk factors for carcinoma of the cervix include:
   a) Prostitution.
   b) Uncircumcized male partners.
   c) Lower social class.
   d) Early age of first coitus.
   e) Use of the sheath for contraception.

Station 10

Read the continuation card and look at the clinical photograph. Write an appropriate prescription.

Figure 1. *An example of an objective structured clinical examination for assessing vocational trainees.*

decide in advance what components of medical knowledge and behaviour they wish to test and then devise a specific station to test those components. Each station was selected as an example of an everyday situation in general practice. The number and variety of stations were chosen to be representative of overall competency in the selected areas.

By using 10 five-minute stations, all 20 trainees can be examined over a two-hour period so that it becomes a practical proposition for vocational training schemes. Our trainees find the present feedback method useful and non-threatening. Black and Harden[5] have described a method of giving feedback during an objective structured clinical examination and feel that this can also serve a useful educational function. This could be incorporated as an additional method of learning for vocational trainees. Trainees have also commented that they found the structure of the examination — moving from station to station within time constraints — felt very similar to the experience of a busy surgery.

If the objective structured clinical examination were used regularly over the three-year training period, performance could be sampled in a large number of different areas of general practice. One of the problems in assessment in general practice is the breadth of the subject. We believe that this technique offers better and fairer assessment of a doctor's progress within the discipline than either a trainer's report or one final endpoint assessment. It could form part of the evidence to be evaluated in a broader assessment of a trainee's abilities prior to granting the certificates of satisfactory completion of training. In addition, by basing the examination on a specific term's work in the day release course, the trainers receive some feedback about the effectiveness of their teaching.

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Limited benefits of reducing cigarettes

Doctors often advise their patients who cannot give up smoking to smoke fewer cigarettes. In this study the intake of tar (estimated as mutagenic activity of the urine), nicotine and carbon monoxide during short-term cigarette restriction was measured. With a reduction from an average of 37 cigarettes to an average of five cigarettes per day, the intake of tobacco toxins per cigarette increased roughly threefold and daily exposure to tar and carbon monoxide declined only 50%.

It was concluded that smoking fewer cigarettes may reduce exposure to toxins and related adverse health consequences. However, with the tendency to take in more smoke per cigarette, the magnitude of the benefit is much less than expected.

Source: Benowitz NL, Jacob P, Kozlowski LT, Yu L. Influence of smoking fewer cigarettes on exposure to tar, nicotine and carbon monoxide. *N Engl J Med* 1986; **315:** 1310-1313.