how to

ASSESS DOCTORS AND HEALTH PROFESSIONALS

Mike Davis, Kirsty Forrest
and Judy McKimm

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How to Assess Doctors and Health Professionals

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Foreword

Well done for picking up this small tome. Keep reading, you will find its contents important.

First, ask yourself why you should be interested in assessment? After all, it is going to be another drain on your time and may result in first hand experience of conflict resolution with examinees and other examiners.

One reason is something you know from your own personal experience: all tests need to ensure they are fair and up-to-date. Abdicating responsibility increases the chance that they will dumb down to the lowest common denominator. This may achieve a target of some central committee but it is unlikely to help the patient who is being cared for by a medical practitioner with substandard abilities.

Although the medical profession is replete with assessments, they are not a panacea for other educational problems. It is therefore important to understand what they can and cannot do. Properly constructed and used, assessments can provide a powerful, positive educational experience which motivates the learner to move on to higher levels of competence. In contrast, a poorly constructed or applied assessment can produce practitioners with little confidence and highly developed avoidance strategies for the subject.

After many years as examinees, we typically find our initial involvement with assessment may be as instructors on courses or examiners of medical students in formative assessments. Later on, we may become involved with high stakes examinations such as university finals and college diplomas. Subsequently, some of us become part of a team devising and developing assessments. Running alongside

this is our own professional need to keep taking further assessments, either as part of a chosen speciality training programme or to complete revalidation. This book provides you with the key information needed to carry out these various roles. The authors have taken a pragmatic approach, covering the educational theory in as much detail as is required to understand the strengths and weaknesses of the various assessment tools that you will come across.

There is no ideal single tool in existence that can adequately assess the range of cognitive, psychomotor and affective competences that are required to practice as a medical student, trainee or specialist. Inevitably, those abilities that are easiest to measure are not necessarily the most important – especially as the training evolves and deeper learning occurs. The authors therefore describe how to use a collection of tests, with each component targeted at specific competencies listed in the curriculum. They also show that having the tests linked to the educational outcome enables the examination and teaching to reinforce one another. When assessment develops as an afterthought, it invariably fails to meet the range and depth required to ensure the appropriate level of skill has been achieved.

The important role assessment has in learning is often forgotten and powerful learning opportunities are missed. The authors address this by discussing the educational potential in both formative and summative assessments. This obviously brings up the issue of feedback and how this can be best carried out. Failing an assessment is never pleasant, particularly when it is a high stakes exam. These examinees will therefore present a range of needs and emotions. In some cases this can result in people resorting to litigation when they feel incorrect decisions have been made. Examiners, and their boards, therefore need to be absolutely sure that the competences assessed were suitable and carried out in an approved way using the

optimal tools. In this way appropriate feedback and advice can be given. Furthermore, those involved in the assessment can be confident when questioned, sometimes in a court of law, as to the decisions they made.

The holy grail of any medical educational programme is to produce an improvement in patient care. Consequently, assessments should ideally be carried out in the workplace. This book provides advice on balancing the often conflicting desires of validity, reliability, specificity, feasibility and fidelity. Such a strategy also involves the use of learning technologies as they can help with assessment development, its administration, marking and analysis. e-Portfolios are another manifestation of computer-assisted learning and assessment that examiners need to be familiar with. How learning technologies can be best used, and errors to avoid, are addressed by the authors.

Therefore I hope you continue to read this book as it will make the process of assessment more transparent, relevant and comprehensible. You will then be able to bring these same qualities to the next assessment you carry out.

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Preface

This book is designed to complement an earlier volume in the *How to . . .* series, *How to Teach Continuing Medical Education* by Mike Davis and Kirsty Forrest, and is intended to fill the very obvious gap in that edition. This is not to suggest, however, that assessment is an afterthought. As Harden wrote:

> *Assessment should be seen as integral to any course or training programme and not merely an add-on* [1].

There is a tendency to take assessment for granted in the early years of a career in medical education and not to question why assessments are structured in the way that they are. Medical education is fairly idiosyncratic in the way that it assesses learners. In addition to more conventional assessments such as essays, multiple choice questions or presentations, assessment methods such as Objective Structured Clinical Examinations (OSCEs), long cases, Extended Matching Questions (EMQs) and Mini Clinical Evaluation Exercises (mini-CEXs) are primarily used only in medical education. Students and trainees on the whole are usually on the receiving end of assessment rather than acting as assessors themselves and, in the same way that fish are not conscious of the water, trainees are submerged in the assessment environment and it only impinges on them when there is some kind of cathartic event, usually associated with not achieving a desired standard.

All of us have been involved in assessment at one time or another. We have certainly all had important decisions made about our careers on the basis of assessments. Many of us have also been involved in the assessment of students or trainees at some point in our career; however, not all of us have considered the evidence base that surrounds

assessment. We would not consider making life-changing decisions about a patient without having an understanding of the condition they are suffering from and the same is true about assessment. When we assess students in high stakes exams we are making decisions about them that could have life-changing potential.

What this book is designed to do is make explicit some of the characteristics of different types of assessments from the point of view of assessors and clinical teachers. It explores some of the theories associated with assessment and examines how these are manifested in what assessors do and why and in a variety of settings, ranging from the informal to the most formal. Each chapter includes some activities and considers the issues around the experiences of the reader.

The first chapter takes the reader through the purpose of assessment. The reasons why assessment is so important in the education of students and doctors are examined with parallels drawn with non-clinical examples. The chapter goes on to describe the different aspects or dimensions of what we are actually aiming to assess with the assessments we use. It ends with a discussion around the meaning and implications of the terms ‘competence’, ‘performance’ and ‘expert’.

The second chapter concentrates on the key principles of assessment and covers terms that you are probably more familiar with such as validity and reliability. Again, we offer some medical as well as non-medical examples which we think will help with your understanding of these principles in practice.

Chapter 3 considers the use of learning technologies which are moving at a great pace in all fields of medical education, assessment is no different. New forms of technology are not only helping with the administration of formative and summative assessments, but are also used in the

construction of specific individual tests tailored to students' needs and abilities.

Feedback is consistently mentioned by students and trainees as a problem. Many learners do not recognise that feedback is given and often when feedback is provided, it is poorly structured with no relationship to the learning context. Feedback motivates improved performance, whether this is from others or from yourself (through reflection). Opportunities to provide feedback are often wasted and many medical education assessors are particularly guilty of this. Chapter 4 explores the reasons behind these issues and how teachers can develop ways of improving the giving and receiving of feedback.

In Chapter 5, we look at portfolio assessments which are becoming more commonplace within medical education. This is probably one area of assessment that is viewed with the most cynicism by mature colleagues. Like all forms of assessment it is only as good as its design and clarity of purpose and structure. While little evidence exists around the impact on learning of the tool, research has suggested that those trainees who are unable or unwilling to complete portfolios have subsequent training issues around professionalism.

Revalidation is a hot topic for all doctors. After passing our college exams doctors of a certain age certainly did not expect to be 'examined' again. We took part in our yearly appraisal, diligently presenting our gathered internal and external CPD points. Many doctors are worried about what revalidation is going to look like and the impact it will have on our practice. The final chapter sets out the GMC's current plans which to date do not look too much different from existing practices. However, for those of us in technical specialties, the spectre of simulation-based assessments is probably on the horizon.

Many different types of assessment are used in medical education in clinical and non-clinical settings and these are discussed in more detail in Chapters 7 and 8. In these chapters, the reader is guided through a discussion of each of these types, exploring how they are administered and their strengths and weaknesses. Chapter 9 discusses how these assessments are best combined into a coherent assessment programme.

For many educators, assessment brings one of the greatest challenges in teaching practice. It is when we are called to make judgements, not only on our learners but on the courses we teach and how we teach them. In writing this book, we are looking for ways this process can be made more enjoyable, effective, easier and more transparent.

We have purposefully not included a full bibliography with this text as there are many already in circulation and freely available to the reader, although we have provided some relevant references within each chapter. We believe that the glossary offered by the General Medical Council is a useful and thorough guide:

General Medical Council. *Glossary for the Regulation of Medical Education and Training*. Available from http://www.gmc-uk.org/GMC_glossary_for_medical_education_and_training.pdf_47998840.pdf (last accessed 3 October 2012)

Reference

1 Harden, R. Ten questions to ask when planning a course or curriculum. *Med Educ* 1986;20:356–65.

Chapter 1

Purpose of assessment

Learning outcomes

By the end of this chapter, you will be able to:

- Demonstrate an understanding of the purposes of assessment and why assessment is important
- Explain what we assess
- Demonstrate understanding of criterion and norm referencing
- Explain the terms competence, performance and expert

Assessment is often a source of considerable anxiety within the educational community as a whole, and the medical community is no exception. The aim of this chapter is to explore the rationale for and some of the key principles of assessment in the context of undergraduate, postgraduate and continuing medical education.

Assessment especially benefits from the coupling of theory with practice and the opportunity to develop ‘an academic dialogue’ [1]. However, it presents some challenges. As Cleland *et al*. [2] write:

> *[assessors need to] explore their (sometimes conflicting) roles as educators and assessors, and how they manage these roles, which are often conducted simultaneously in assessment situations.*

These tensions have increased with research and developments within educational assessment. Consequently, assessment has become more rigorous, systematic and objective. However, there is a potential gap between these developments and the role of clinicians,

many of whom still think of their role in assessment as giving a subjective judgement of a one-to-one encounter.

Why do we assess?

The first question to ask is ‘Why do we assess?’ Before we go any further, consider the following scenarios:

- A cohort of first year undergraduates coming to the end of their first module in their degree programme.
- A cohort of final year undergraduates doing their finals (last exams).
- Students on a postgraduate distance learning programme who have completed all their taught modules and have to submit their dissertations before they graduate.
- Anaesthetic trainees attending a simulator centre who need to be signed off on their initial tests of competences prior to going on call.
- A group of doctors and nurses on a 3-day residential advance life support (ALS) resuscitation course.
- A group of physicians undertaking the membership examination.
- A surgeon submitting an MD thesis.

Why, in each of these scenarios, do you think there is need for assessment?

You might consider some or all of the following:

- Ensuring patient safety
- Predicting future behaviour
- Satisfying university requirements
- Judging level of learner achievement
- Monitoring learners’ progress
- Motivating learners
- Measuring effectiveness of teaching
- Because they have pass to progress
- Professional/regulatory requirements

- Professional development
- Public expectations

There may be more than one reason for each scenario. On the other hand, not all reasons apply to all cases: for instance, the surgeon’s MD would have little in common with an ALS course.