Assessment in Medical Education
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Aims and Scope
The Academy of Medical Educators (AoME) was established in 2006. The main aspiration of the AoME is to improve clinical care through teaching excellence. Excellence in Medical Education has been designed with this aspiration in mind. The first five issues will focus on the AoME Professional Standards with invited expert reviews. Future issues will be based on specific educational themes with invitations to submit articles with a peer review process.

Excellence in Medical Education has been designed for the active and busy medical, dental and veterinary teacher. The aim is to highlight important educational topics, discuss challenging and controversial issues and stimulate debate. The series embraces 21st Century medical education with expert reviews, interviews and specialist articles. The series will provide an inspirational and thought provoking journey into the exciting field of medical education. We welcome articles and reviews for future issues so if you would like to contribute or comment please contact the Editor, Dr Vimmi Passi, at: vpassi@aol.com

Subscription Information
Excellence in Medical Education is available online to Associate Members, Members and Fellows of the AoME.

Despatch
Excellence in Medical Education will be produced six monthly.

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ISSN 2050-9588 (Print)
ISSN 2050-9596 (Online)
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Welcome from the Editor

Dr Vimmi Passi,
Editor of Excellence in Medical Education

Following the success of the first two issues, I am very pleased to welcome you to the third issue of Excellence in Medical Education, an exciting new educational product for the members of the Academy of Medical Educators (AoME). This series embraces 21st century medical education with expert reviews, interviews and specialist articles. It also provides an inspirational and thought provoking insight into the exciting field of medical education.

In this issue, we focus on AoME Professional Standards Domain Three, Assessment in Medical Education, highlighting important assessment themes written by experts in the field. I am delighted that this issue also includes three research articles.

Professor Dame Lesley Southgate has written an inspiring opening article on the Purpose and Content of Assessment Programmes. This fascinating piece sets the tone for the subsequent articles that explore important assessment methods: machine markable knowledge testing, workplace based assessment and assessing reflective learning. Following this, we look at ethical issues and diversity in assessment and conclude with an excellent piece on the Veterinary Trajectory of Learning and Its Assessment. Excellence in Medical Education has been an exciting new venture and I would like to thank all of our expert authors for their thought provoking and fascinating articles. It has been a privilege and a great pleasure to work with you all. We welcome articles and reviews for future issues so, if you would like to contribute or comment, please contact me at vpassi@aol.com
1. The AoME Professional Standards

The Academy of Medical Educators (AoME) is a charitable organisation developed to advance medical education for the benefit of the public through:

A. The development of a curriculum and qualification system;
B. Undertaking research for the continuing development of medical education; and
C. The promotion and dissemination of best practice in medical education.

In order to achieve these objectives, the AoME’s Professional Standards have been produced. These Standards have been designed to provide the basis upon which a curriculum for medical educators can be developed. They act as a framework against which professional progression as an educator can be planned and measured. The Standards are a tool designed to assist medical educators to work towards excellence.

To be engaged in effective and appropriate professional development is an integral part of Membership and Fellowship of the AoME. The Standards aim to help clarify the professional characteristics that should be maintained and built on for the variety of roles undertaken by medical educators. The Professional Standards are divided into themes and each theme provides details of the knowledge, understanding and practice that underpin the roles of those involved in medical education.

The Standards may be used by organisations to identify the skills and competencies required of those who undertake or fulfil an educational role. Organisations may also use the Standards to develop and offer a framework for training and continuing professional development in support of medical education. The Standards could be considered when setting objectives in performance and appraisal and used for assessing the performance of individuals within organisations.

The *Professional Standards* are divided into core values of medical educators and five domains.
## 2. Professional Standards – Domain Three: Assessment in Medical Education

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<tr>
<th>Element</th>
<th>Standard Level 1</th>
<th>Standard Level 2</th>
<th>Standard Level 3</th>
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</thead>
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<tr>
<td><strong>The purpose of the assessment</strong></td>
<td>3.1.1 Is aware of the general purpose of assessment</td>
<td>3.2.1 Relates the purposes of assessments to the context of the course or programme</td>
<td>3.3.1 Designs complex assessment strategies and blueprints</td>
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<tr>
<td><strong>The content of the assessment</strong></td>
<td>3.1.2 Is aware that assessment should align with the course learning outcomes</td>
<td>3.2.2 Demonstrates that the contribution of any assessment addresses the learning outcomes and the assessment blueprint</td>
<td>3.3.2 Maintains and manages assessment blueprints for one or more courses or levels</td>
</tr>
<tr>
<td><strong>The development of assessment</strong></td>
<td>3.1.3 Is aware that good assessment practices are integral to course development</td>
<td>3.2.3 Contributes to the construction of assessment items</td>
<td>3.3.3 Leads design and development of assessments utilising accepted good practice such as in the determination of reliability, validity, acceptability, cost effectiveness and educational impact.</td>
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<td><strong>Selecting appropriate assessment methods</strong></td>
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<td>3.3.5 Contributes under guidance to standard setting processes</td>
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<td></td>
<td>3.1.6 Is aware that assessment practices require continuous monitoring and improvement</td>
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<td>3.3.7 Interprets technical data about effectiveness of assessment practices</td>
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<td>3.3.8 Prepares assessment reports for learners, examination boards and external stakeholders</td>
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2.1 The Purpose and Content of Assessment Programmes

Professor Dame Lesley Southgate

Over the past 30 years there has been a sea-change in approaches to assessment for the UK medical profession and wider. From entry to medical school through postgraduate training and on to established practice, regular assessment has become a fact of life. The days are gone when progress to the next stage was determined largely by exit examinations comprising elements that were sometimes poorly constructed, unrelated to the taught curriculum and which could not be challenged.

During the period of change, the focus has principally been on improving the quality of methods of assessment and developing approaches to assessing performance in practice, in addition to tests of knowledge and skills in simulated settings. And more recently, it has become usual to combine various assessment instruments into a programme of assessment which may support a period of education or training over several years.1

However, there are important considerations before choosing an assessment method, or assembling an assessment programme to include several methods. They are consideration of the purpose and the content of the assessment. Unless attention is first given to why assess and what to assess, the validity of the outcome will be in doubt. The rush to choose a method, and then find something to assess with it, can produce evidence that may not be helpful in reaching decisions that are relevant to the stated purpose of the assessment. And it is very important to understand that methods in themselves are not inherently valid. Validity resides in the quality of the output/evidence which results from using an assessment method, or the combination of methods for a defined purpose or purposes in a particular context.

The literature on the validity of assessments in medicine and the health professions more widely, is extensive and builds on important concepts debated throughout the field of education.2 However, it is complex, and sometimes inaccessible to medical educators, who are interested in doing a good job as teachers, examiners, role models or mentors. One thing that is certain, some clinicians feel uneasy if they are asked to use assessment methods that do not fit with the rhythm of their clinical practice.3,4,5 The use of checklists is an example. They are useful in many settings, for defined purposes, but those who complete them may feel that they trivialise complex tasks and do not enable their expertise and judgment to be part of the evidence to be considered when the final outcome of the assessment is determined. This whole area is a minefield, but once this effect takes hold, widespread cynicism and opposition to change sets in.

Purposes of assessment

For any professional involved in assessment at any stage of medical education, training or continuing practice, the first consideration is that the purpose of each assessment be made clear and is understood both by those who deliver it and, most importantly, by those who are affected by the outcome. Particular difficulty can arise if an assessment has several purposes, especially if this is not made explicit at the outset. This, for example, is sometimes seen in the confusion between the words summative and formative when applied to an assessment, especially when one purpose migrates into another. Better described as assessment of learning and assessment for learning, it is not uncommon for evidence from assessments that were considered to be relatively low stakes (for learning) to be reviewed later if high stakes decisions about progress (of learning) have become difficult and the widest range of evidence from assessments is to be considered. It is always much better for this possibility to be made clear at the outset, accompanied by a plan to deal with it.

A working paper for the Board of the UK Postgraduate Medical Education and Training Board (PMETB), which subsequently informed PMETB and then General Medical Council (GMC) policy and standards on the design and approval of assessment programmes for UK postgraduate training, put the purpose of an assessment as the first consideration in assessment design.

The wide range of purposes within assessment programmes for postgraduate training, demonstrates the potential for problems if several are included in an unplanned way as part of the same assessment. During design it is important to combine different purposes, so that they are achieved in the optimal way with a clear hierarchy defined in terms of importance.6 A principal purpose should be stated and contain the function of the assessment programme and the domains to be assessed. Usually, different reasons for assessing are important at different stages of education and training and the choice of content and the selection of appropriate methods becomes easier within an assessment programme which extends over time.
Principal purpose: assessment of learning

The principal purpose of effective learning assessment is:

- to inform career selection and choice;
- to confirm suitability of choice at an early stage of chosen career path;
- to demonstrate readiness to progress to the next stage of training having met the required standard;
- to identify trainees who should change direction or leave medicine;
- to assure the public that the trainee is ready for unsupervised practice;
- to provide evidence for the award to certify the completion of training; and
- to gain membership or fellowship of a medical Royal College or specialist association/society.

Principal purpose: assessment for learning

The principal purpose of effective assessment for learning is:

- to provide feedback to the trainee about progress and learning needs;
- to support trainees to progress at their own pace by measuring progress in achieving competencies for their chosen career path.

The examples in Table I illustrate the connections between the purpose of an assessment and the validity of the outcome. Many pitfalls lie in wait, from the definition of the content of assessments, the resources available to deliver the programme, including training of examiners, assessors and judges, the selection of methods that together will produce a coherent body of evidence fit for purpose, and the way in which standards are set, including decisions about who sets them.

<table>
<thead>
<tr>
<th>Purpose of the assessment/assessment programme</th>
<th>Pitfalls</th>
<th>Threats to validity</th>
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| **To provide feedback to the trainee about progress and learning needs.**
This is usually feedback for learning. | Supervisor/Assessor may not be aware of, or value, the purpose. Supervisor/Assessor may not be trained or motivated. Supervisor/Assessor may find the high level terms e.g. professionalism used in some assessment instruments do not fit with their own way of judging a clinical performance. | Effective feedback is not provided. Cynicism and negative role models may result. Trainee/student recognises poor quality feedback. Poor feedback within an assessment of learning can undermine confidence in high stakes outcomes. |
| **To demonstrate readiness to progress to the next stage of training having met the required standard.**
This is usually feedback of learning. | This event requires review and judging of a wide range of evidence of performance carefully collected over time, via a range of assessment methods. The programme must be adequately resourced, and the standard for exit agreed and implemented by the judges. All of these components may be undermined by lack of training, time and resources for assessment and feedback. | Collection of evidence is not systematic. The standard for exit and progression to the next stage is not agreed between assessors in the workplace or judges in progress review committee. Criteria for failure to progress may be difficult to implement. |
Content of assessment

‘Increasingly, however, it has become clear that the content of an assessment plays a far more important role than its format.’

Lambert W T Schuwirth

It is a fact of life that most assessments in medicine take place because of the requirements of a regulator, a university, or an employer. Their purposes are set out in law and/or regulations. This does not necessarily make it easier to interpret a high level statement of purpose and distil from it all of the purposes it may subsume, assign some sort of priority and order for them and then get on with the task of designing and implementing an assessment programme. However, and at the beginning, the first task is to consider the content of the assessments and to define a blueprint for the assessment programme and its constituent parts.

One approach, described below, is to consider the requirements for content in two dimensions. One resides inside the individual to be assessed, the other is present in the world outside in which they function professionally. Hence the qualities and abilities that the student/trainee should demonstrate in order to resolve relevant problems from one dimension of the blueprint for the assessment programme. These qualities/abilities are frequently called competencies.

The second dimension considers the universe that is to be sampled for a particular assessment programme, and will include the clinical problems that the student/trainee/doctor in practice should be able to resolve to an appropriate standard. This can be considered to be the context, and if the assessment programme is constructed as an integral part of a well structured curriculum, it will provide the universe to be sampled. However, sometimes, assessment programmes have to be proposed without that advantage.

Competencies

Definitions of, and discussions about, competencies abound in medical education literature. These are important conversations, but will not be considered in depth here. However, the increasing role of regulatory authorities in the quality assurance of all aspects of curriculum design, including assessment, has led to the publication of high level statements which have had a profound effect on the content of curricula, and hence assessment programmes, for all stages of a medical career.

In the UK, the GMC document Good Medical Practice sets out ‘the principles and values on which good practice is founded; these principles together describe medical professionalism in action.’ These principles have now been elaborated by the GMC and form the basis of all UK postgraduate and undergraduate medical curriculum content, in that they mandate the qualities and abilities about which evidence must be gathered within the assessment programmes that are part of those curricula. A similar approach is now in place for revalidation of the UK medical profession. In Canada, the CanMEDS programme serves a similar function by setting out roles for physicians, with the Accreditation Council for Graduate Medical Education (ACGME) competences fulfilling a similar function in the US.
In every case, these high level statements have been elaborated and broken down into components such as key competencies, enabling competencies, milestones, and entrustable professional activities. But, in the attempt to bridge the gap between a high level statement and observable clinical practice, assessment programme blueprints may frame the qualities and abilities required of the candidate to reach the required standard, in a way that does not represent authentic clinical practice.

This is a major threat to the validity of the assessment, in particular it has an impact on the design of assessment instruments and on examiners, assessors and judges, who may have a different concept of how clinical practice is, or should be. Equally, the perceptions of other stakeholders are important. This applies especially to those who will be assessed, as they will lose confidence if they doubt the validity of the evidence provided by the assessment programme. This whole debate has profound implications for the design of assessment programmes. They are discussed in a recent paper which concludes: ‘because high-level assessment is a matter of judgement it works better if the right questions are asked, in the right way, about the right things, of the right people.’

In other words, get the content right!

Context
Locating and describing the universe of clinical problems that may be assessed in any given programme takes hard work and a thoughtful approach. Once the purpose of an assessment has been established, it is important to focus on whether it is for learning, which may relate to a subset of all possible relevant clinical problems, or assessment of learning, which in high stakes situations typically means demonstrating readiness to exit one stage and begin the next. Potentially, it could comprise a sample of all the clinical problems covered within the curriculum. The case study below illustrates one approach in a high stakes situation.

Case study: blueprinting the UK PLAB test
In 1998, the GMC initiated a wide-ranging and fundamental review of the Professional and Linguistic Assessments Board (PLAB) test. By 1999, the test was a high stakes examination which assessed the competence of doctors who qualify outside the UK and European Economic Area and who wished to gain limited registration. The GMC determined that the standard of the test would be the standard expected of doctors about to commence their first Senior House Officer (SHO) post. The test’s focus would be on common and important conditions seen by SHOs and the generic management of life-threatening situations, with an emphasis on clinical management and science as applied to clinical problems.

With the purpose of the test clearly defined, the first step in constructing the overall blueprint was to establish the problems and tasks that SHOs starting their first job could reasonably be expected to meet and undertake. Several databases were consulted:

- A survey of senior house officers (SHOs) who had passed the PLAB test to establish what problems they subsequently had to deal with in practice.
- A survey of Accident and Emergency (A&E) consultants to discover their views on essential knowledge and skills for SHOs in their first job.
- A review of admissions to a District General Hospital (DGH) via A&E over a six-month period.
- A survey of consecutive attendances at A&E in two DGHs over 48 hours.
- A list of common and non-rare important problems and commonest cancers presenting in general practice based on the Office of Population Censuses and Surveys’ (OPCS) Morbidity Statistics from General Practice.
- Core cases from the Liverpool and Manchester undergraduate curricula.

The common and important problems were derived by taking all of those mentioned by at least 40% of the respondents in the surveys, the top five conditions by diagnosis or by presentation from the DGH and admission data and all of the consecutive attendances at A&E. The commonest and important GP problems were selected...
against criteria and all of the undergraduate core cases were included. The problems were classified into body systems with an additional section for paediatrics.

These data were used to form one axis of the overall test blueprint from which the knowledge test and the OSCE content were sampled. It is important to note here, that recent international graduates were also included in the survey and they were asked to comment on the content of the unreformed test that they had recently taken. Their input increased the validity of the content selected for the new version. The context chosen for this blueprint was the emergency room (ER), acute admissions or the primary care setting. Others will be in different contexts depending on specialty. This is an important consideration, because the prior probabilities and epidemiology are different in different settings and affect the performance of symptoms, signs and test results in clinical diagnosis and management.

Next steps

Once the purpose and the content of an assessment programme have been decided, attention needs to turn to the methods. It has long been established that the performance of students/trainees/doctors in practice are not consistent across different clinical problems and that wide sampling is important before conclusions can be reached. But it is also becoming clear that each assessment method does not necessarily generate evidence about one aspect of clinical competence. Different ways of considering and combining the information from several or many sources to build a picture of clinical performance is the next big discussion we should be having.
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20. ten Cate O, Scheele F. Competency-based postgraduate training: can we bridge the gap between theory and clinical practice? Acad Med. 2007 Jun; 82 (6): 542-7
2.2 Assessing Postgraduate Trainees in the Workplace

Professor Jacky Haydn

History of workplace assessment

The medical profession has a longstanding history of learning through apprenticeship, which has always included assessment. When medical trainees worked closely with a small number of more senior doctors, it was possible for the senior doctor to make an assessment of the trainee's performance. However, without a structure, judgments could be made which did not truly reflect the trainee's ability and traditionally were not shared with the trainee; for even with a structure, trainers can find it difficult to articulate many of the more subtle qualities which may appear to be lacking in the trainee working with them. Good medical teachers have always been able, through observation and discussion, to make judgments about a trainee's knowledge and skills. This has informed the responsibilities afforded to the trainee and provided a basis for extending learning and ultimately providing a reference for the trainee to move to their next career post.

Formalised workplace based assessment was introduced almost two decades ago after considerable debate amongst the profession.\(^1,2\) With the advent of Modernising Medical Careers\(^3\), the change in the regulation of the profession and the need to ensure safer patient care, a structured approach to assessment was introduced. This was initially introduced for foundation trainees (the first two years after graduation) and followed by each medical royal college setting out its blueprint for assessment of the specialty curriculum.

Our enthusiasm for assessment of learning has overshadowed the need to combine this with assessment for learning, despite this being one of the fourteen recommendations by the Academy of Medical Royal Colleges (AoMRC)\(^4\), and the importance of our traditional approach of learning through discussion and debate with our seniors. Our focus on assessment of learning has the potential to alter the important relationship between trainee and trainer, encouraging trainees to minimise risk rather than learn in a coached environment and to cope beyond their competence rather than display their limitations. It also risks trainees presenting low challenge assessments, or choosing assessors who are unwilling or unable to explore with the trainee the complexities of clinical decision making.

This article is a personal reflection on the importance of workplace assessment and how we, as a profession, can make time in our training programmes and busy work schedules for debate and discussion, including feedback, with our trainees.

Assessment for learning and assessment of learning

Assessment for learning and assessment of learning are inextricably linked in an environment which espouses the values of the four UK health systems of commitment to quality of care and safety combined with compassion, respect and dignity. Assessment for learning is the formative continual interaction between the trainee and their workplace colleagues that can provide an ongoing process of feedback which, when combined with an opportunity to make sense of their experiences through regular dialogue with a trained senior colleague, provides an optimum opportunity for trainees to reflect on their learning needs. Assessment of learning is a summative process which determines whether or not a trainee has met predetermined learning goals or outcomes. The trainer who makes the judgment about the trainee's performance may be the same person who has been coaching them and reflecting on their progress with them and may use similar assessment methods. This can lead to confusion in trainees who have not understood the nuances of the different interactions.

Assessment of competence and assessment of performance

Miller's triangle of assessment is a familiar concept.\(^5\) Medical educators have always had a range of methods for assessing knowledge and its application. Developments in the middle of the last decade encouraged the use of four categories of workplace assessment. These consist of:

- case based discussion;
- direct observation of practice skills;
- multisource feedback; and
- a mini clinical evaluation exercise.

These four broad methods of assessment have been modified by each medical royal college, to provide a framework for workplace assessment of competence of medical trainees, throughout their postgraduate training. They are frequently supplemented by tests of knowledge and applied knowledge, such as those that occur in medical royal college
examinations. However, three of the four assessments are only able to determine how a trainee behaves in a single controlled situation.

Rethans et al\textsuperscript{6} proposed a modification of Miller’s triangle to bring into play the additional factors which impact on a doctor’s ability to perform consistently over a period of time and in a range of situations. This modification takes account of the external factors of the environment and internal factors such as the trainee’s health which might impact on performance. Traditionally, the trainer either worked directly with a trainee, or was able to seek the views of a small team who had worked closely with the trainee over a period of time and in a range of different situations and was therefore in a position to make judgments on sustained performance. Although multisource feedback is used across all trainee assessment frameworks and is considered a useful tool, those completing them may be unable to comment on an individual’s performance under a full range of conditions and therefore the profession is at risk of assessing competence rather than performance.

As a profession, we learn best when we are able to work at the upper limits of our competence with close supervision, and then practise our learning to develop confidence with supervision. The level of supervision becomes gradually more distant as we develop expertise.

Fish\textsuperscript{7} proposes much greater use of an educational dialogue in an explorative way with individual trainees. Having observed trainers working with trainees and discussing interactions, she proposes that by focusing on the assessment tools as defined in the curriculum, trainers no longer have the same amount of time to spend discussing situations and issues with their trainees and exploring with the trainee how they might respond in a different context. This theme is picked up by Rushforth et al.\textsuperscript{8} By altering one or more of the demographic features of a case brought by a trainee, a trainer is able to explore with a trainee the ways in which they could respond in more complex situations.

The Network has demonstrated the important role that trainees can play in service improvement.\textsuperscript{11} However, in many learning environments, service pressures allow little space for trainers to explore with their trainees why adverse situations arose (perhaps not serious enough to generate a formal report) and how they might develop and use their wider leadership and organisational skills to improve patient care.

Deanery quality assurance processes in the North West have identified how infrequently consultants are present at handover; the exceptional specialties are paediatrics, obstetrics, trauma and general practice. Valuable opportunities are lost, not only to explore a trainee’s clinical decision making, but also how to organise their work and manage the unexpected demands during on-call periods. Feedback from one member of the clinical team might be unfairly adverse, if the trainee has no forum in which they can describe the pressures that they have been under and the decisions that they have taken. If trainees are not able to explore in a safe environment how they felt about their decision making and prioritisation, then they risk either making similar mistakes, or failing to recognise that their leadership was outstanding.
Workplace assessment and culture

Work initiated in Medical Education England and followed through by Health Education England\(^2\), has identified the importance of the learning environment – particularly the culture and normalised behaviour, in determining the quality of learning.\(^3\) By focusing on two key areas (board level and engagement and safe supervision), the Education Outcomes Framework\(^3\) anticipated that there would be greater engagement by following a route that ensured the more effective education of future health professionals.

In addition, the GMC has established standards for trainers, giving greater responsibility for ensuring an effective learning environment.\(^5\) Despite the clear evidence that patient recovery and wellbeing is positively linked to high quality team working\(^6\), many senior doctors struggle to identify sufficient time in their working practices to explore decision making with their trainees in a safe but challenging environment. The trainee’s need to meet the requirements of their Annual Review of Competence Progression (ARCP),\(^4\) can drive the use of any time that is set aside with their trainer, to focus on assessments of learning, rather than use the time to help trainees explore complex situations.

The future for workplace assessment

As the medical profession has recognised the great strengths in a structured approach to workplace assessment, so we have begun to identify some of the unintended consequences of assessments that are only *summative*; particularly when they allow little scope for the assessor to make comments on the environment, challenge and/or expectations of the trainee. Whether assessments are *summative* or *formative*, they are most effective when combined with supportive but challenging feedback. In this way, the most effective assessments will leave the learner feeling good about what they have done and will also arm them with ideas of how they might develop further.

The use of supervised learning events to establish where trainees need to focus their experience and learning will encourage us to take a structured and professional approach to assessment, whilst maintaining the important dialogue that occurs between the trainee and their supervisors. Each specialty within medicine will need to take a slightly different approach to supervised learning events, in order to maximise the important learning of the specialty. However, all supervisors need scheduled time to work one to one with each trainee for whom they have responsibility. This will ensure that each trainee has an opportunity to explore their clinical and leadership decision-making and learn new ways of approaching the complex problems that we face in delivering the highest possible healthcare.
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2.3 Assessing Reflective Learning

Dr Andrew Grant

Introduction
Almost every healthcare student and clinical practitioner in the UK will have to demonstrate evidence of reflective learning in the forthcoming year and for the foreseeable future. This article describes reflective learning and clarifies what it can, and cannot tell us about a practitioner's learning practice and their knowledge and skills.

Based on theoretical perspectives, reflective learning appears to be a useful learning strategy in healthcare education for several reasons. It is considered necessary to maintain and develop a clinician’s competence in response to experience. To do this successfully a practitioner must accurately identify and act on his or her learning needs. Reflection also:

- offers students and experts an opportunity to build and re-shape new understanding from prior knowledge, recent experience and new learning;
- helps them to develop professional identity by providing an opportunity to consider one’s own attitudes, beliefs and values in relation to clinical experiences and other professionals; and finally it

Members of the public are entitled to know whether practitioners who treat them are keeping their knowledge up to date and how this has been encouraged and measured. We cannot know if a doctor practises thoughtfully or reflectively unless we can view evidence of those processes. Capturing a learner's reflective learning offers us insight into a person's processes of learning. However, if only the practitioner's evaluation of an experience is captured and assessed, the exercise will fail to demonstrate and encourage new learning from such reflections.

Implications for revalidation
In Ready for revalidation: The good medical practice framework for appraisal and revalidation the General Medical Council (GMC) sets out four domains which cover the spectrum of medical practice and then uses three attributes to describe each of these. For appraisal and revalidation, doctors will have to keep a portfolio of evidence that they continue to meet the attributes set out in the framework. As well as collecting this evidence, in order to be revalidated, doctors will be expected to reflect on the content of their portfolio and to demonstrate 'what [they] did with the information and [their] reflections on that information, not simply that [they] collected it and maintained it in a portfolio.'

So it is no longer enough for the learner to demonstrate that learning has taken place but they have to demonstrate the process of learning in a particular way, by reflection on events in practice.

What is reflective learning
When participating in reflective learning, a practitioner is guided to undertake some metacognitive activity; in other words, to think about his or her thinking and ongoing learning. The steps in the reflective learning process (see Box 1) prompt the practitioner to recall the personal experience in some detail along with the spontaneous emotional response and interpretation of the experience. This leads onto a thorough analysis of the experience to allow the practitioner to more fully understand the event and includes defining questions raised by the experience, identifying gaps in one's skills and knowledge and where possible bringing insights to the experience from further reading or discussion with others.

Reflective learning is therefore a disciplined and rigorous approach to thinking. It brings meaning from experience and fosters personal knowledge and theories that can be applied, or at least tried out, in future experiences. In medical education and training doctors and students may be asked to reflect on patient encounters or clinical performance data. Although reflective learning could be undertaken after a range of experiences (including the reading of a text), it is important to ensure the learner considers the event to be important. Reflective learning helps learners to become more self-directed because it prompts them to examine their own knowledge and skills and to identify gaps.

Reflective learning tools
The first published model of reflection by John Dewey (cited by Carol Rodgers) clearly forms the basis of the many reflective learning tools we use today. One of the earliest templates was that used for the critical incident technique. Authors such as Schön, Kolb and Gibbs have designed additional templates for specific purposes and situations.
Reflective learning is often employed within a portfolio to encourage students and trainees to not only log their personal experiences through patient studies, essays and reports, but to analyse them to address gaps in their learning. In many cases, these portfolios are delivered in an electronic format where they have been found to be better at stimulating reflective learning and more acceptable to learners. E-portfolios have great advantages, in that they make it possible to write templates for specific learning tasks (eg, acquisition of a skill, knowledge in a particular domain, or dealing with an ethical dilemma), and they make it possible to provide marking and mentorship at a distance (eg, when the student is away on placement).

Box 1: Stages of reflective learning

1. Description of the event
2. Spontaneous emotional response and interpretation of event: how did my knowledge and skills match up?
3. What questions are brought up regarding explanations of the experience, gaps in my knowledge and skills, my attitudes, professional identity, etc
4. After further reading or discussion, what new understanding sense can I draw from the experience – can I answer the questions above, and what new theories can I try out in my next experience?
Scope and limits of reflective learning

So what can an assessment of reflective learning tell us? Depending on the model or template used for reflection, it can tell us that the learner can:

- describe a clinical scenario;
- examine their knowledge and skills in relation to it;
- identify their learning needs; and
- create a fuller understanding of the experience once these needs have been addressed.

It is important to take on board that we only know that reflective learning takes place where learners are required to produce prescribed evidence that it has taken place. Although learners may pick up good learning practice when they have to produce evidence of learning through reflection, we cannot assume that their learning practice has permanently changed because they have produced evidence of reflective learning when required.11

When introducing students to reflective learning it is equally as important to demonstrate that students are directing their learning from their own experience. Initial resistance to reflective learning when it is unfamiliar is common and learners need support to overcome this.12 When evidence of reflective learning is not a requirement, learners may go through some or all of the stages for their own benefit and they may or may not collect evidence of this activity.

Summative assessment

Assessment based on a portfolio of learning is part of the summative (licensing) examinations at several UK medical schools. This gives an authentic message to the students (and indeed to the public), that to be able to demonstrate learning through reflection on practice is a necessary skill in the next generation of doctors. Such portfolios are often a combination of a log of experiences, an analysis of the event and learning needs, and evidence of the learning arising from further reading in varying proportions.

Evidence to support the assessment of reflective learning for high-stakes summative hurdles is mixed. There is some evidence that assessors can discern different levels of reflection13 and that reasonable inter-rater reliability can be achieved with qualitative criteria for marking and requires only two to three raters.14 However, others recommend that where summative assessment of reflective learning is used, triangulation from other methods is recommended.8

Making assessment of reflective learning effective

It is essential that students and assessors are aware of the purpose of the reflective learning and have confidence that the format fits that purpose. Examiners should also understand what the students have been told about the reflective task and what is expected of them. It is very helpful if assessors use broad qualitative criteria and build up expertise by marking examples of work at various levels and benchmarking their decisions with other markers and the course leaders.15 As well as feeding back to the students on their reflective learning skills, the assessor needs to be able to recognise and correct any errors (clinical or otherwise) arising in the initial description and, wherever necessary, provide further explanation of the experience.

The hidden agenda

It behoves all of us working in education to think: ‘what effect is this assessment having on my students’ learning and on their actions in general?’ What is the word in the student common room about how to succeed at the assessed reflective learning task? Medical students and doctors are busy people and have got where they are today by being successful strategic learners. They are smart at detecting what you have to do to pass, often not what the original curriculum designers had in mind at all. Students may even succumb to manufacturing patients that suit the needs of their portfolio task, rather than writing about real ones, if they do not understand or embrace the value of the reflective learning task.

To achieve buy-in by students and staff, it is essential to:

- communicate clearly the purposes of reflective learning;
- limit the associated workload16;
- emphasise reflection on complex problems; and
- offer guidance on how to proceed through the stages of reflective thinking while avoiding a rigid formulaic approach.13
Conclusions

Rigorous reflective learning can encourage deep understanding when learners are faced with new, or complex, important professional experiences. However, to be successful, the purpose must be very clear and the workload contained, to ensure that students and staff accept and value it as a learning strategy. Assessment of reflective learning can encourage reflection and discern different levels of reflective ability reliably, if qualitative descriptors are applied and assessors are trained. It is possible, though not yet proven, that learners will continue to use these techniques when they are required to use reflection as part of their assessment.

Assessment of the first two or three steps in the reflective learning cycle above may give us a window into the working and learning practices of an individual. On the other hand, assessment of the evidence of learning in step four gives us a more accurate assessment of that individual’s resulting new knowledge and skills.

Assessment of all four steps together, gives the key message that ongoing reflective learning from personal experiences is critical to the maintenance of each and every clinician’s professional development and competences over a lifetime.

Acknowledgments

Screenshots of GP ePortfolio reproduced by kind permission of Wales Deanery Revalidation Support Unit, School of Postgraduate Medical and Dental Education, Cardiff University, 8th Floor, Neuadd Meirionnydd, Heath Park, Cardiff, CF14 4YS.
References


2.4 Machine Markable Knowledge Testing

Dr David Sales, Dr Alison Sturrock and Dr David Swanson

‘Examinations are formidable even to the best prepared, for the greatest fool may ask more than the wisest man can answer.’

Charles Caleb Colton

The aim of this article is to provide an overview of current best practice related to machine markable knowledge testing and to highlight:

• important research;
• our personal experiences; and
• future challenges for educators.

Introduction

Possession of a sound medical knowledge base, and more importantly its application in a wide range of clinical contexts, remains the foundation upon which clinical competence and expertise are built. The breadth and organisation of an individual’s knowledge is the most important component of the clinical reasoning process and is essential to the development of sound clinical decision-making skills and expertise.

In an integrated assessment programme, written examinations encourage trainees’ mastery of and confirm acquisition of these important learning objectives and are recognised as a core component, along with assessment of skills and performance.

Test designers need to optimise the design of their assessment programmes, striking the right balance of utility, reliability, validity, educational impact, cost efficiency and acceptability. Machine markable tests have proven utility as they are:

• feasible;
• time and cost efficient;
• reliable;
• acceptable to users;
• differentiate candidates’ medical knowledge and its application; and
• are non-discriminatory as regards age and gender.

In a world of infinite time and resources, many educators would prefer free response questions (traditional essay or short answer). These formats do, however, have flaws, such as:

• indeterminacy regarding the focus and detail required for each mark;
• subjectivity in marking;
• time required for marking; and
• (particularly for essays) limited content sampling across the content to be assessed compared to machine markable formats.

The General Medical Council (GMC) advice for undergraduate assessments is that ‘essays should also generally be avoided given their unreliability and content specificity although they may be used to test ability to sustain clear written argument.’ We acknowledge that the clinical reasoning process may be easier to judge in an essay, but suggest it is better to use formats that allow assessment of the outcomes of that reasoning process across a larger number of problems.

Due to these reasons, each of the UK Medical Royal Colleges and most undergraduate medical schools use some form of Multiple Choice Paper (MCP) in their assessment process.

Table 1: Advantages of MCPs

<table>
<thead>
<tr>
<th>Advantage</th>
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<tbody>
<tr>
<td>Allow wide breadth of content coverage.</td>
</tr>
<tr>
<td>Cost effective.</td>
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<tr>
<td>Provide high reliability from relatively short testing times.</td>
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<tr>
<td>Quality assurance of questions can be monitored statistically and modified accordingly.</td>
</tr>
<tr>
<td>Rapid marking possible using optical scanner is quick, efficient and not subject to transcription errors.</td>
</tr>
<tr>
<td>Can identify areas of strength or weakness and give diagnostic or formative feedback.</td>
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</tbody>
</table>
Evolution

The first large scale multiple choice assessment was the Army Alpha, used to assess intelligence of World War I military recruits in the US in 1917.9 Since then the Multiple True-False (MTF) question assumed many applications internationally and became fashionable in both undergraduate and postgraduate medical assessment. However, dichotomous choices are rare in medical practice and it is difficult to write questions that are both unambiguous and sufficiently challenging to discriminate between candidates. This means that many MTF questions tend to assess factual knowledge in isolation and encourage guessing among candidates.

Subsequently, dozens of item formats have been developed for use in written examinations.10,11 Extended matching questions (EMQs) were introduced to address a number of the shortcomings of some of the earlier formats.12 Many medical exams embraced EMQs, which are more reliable than MTF13, relatively easy to write and popular with candidates. They tend to work well for testing skills in diagnosis, where use of long option lists is natural and effective. It is however difficult to write good quality items with an option list that is appropriately homogeneous and relevant, so there are often redundant distracters.14

In the UK, the current machine markable format of choice is the Single Best Answer (SBA) or ‘best of five’, which lends itself to testing the following clinical problem solving skills that mirror how clinicians work.15

<table>
<thead>
<tr>
<th>Table 2: Clinical problem solving skills that can be tested using single best answer format</th>
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<tbody>
<tr>
<td>• Gathering and using data required for clinical judgment.</td>
</tr>
<tr>
<td>• Choosing examination, investigations and interpretation of the findings.</td>
</tr>
<tr>
<td>• Applying knowledge.</td>
</tr>
<tr>
<td>• Demonstrating diagnostic skills.</td>
</tr>
<tr>
<td>• Ability to evaluate undifferentiated material.</td>
</tr>
<tr>
<td>• Ability to prioritise.</td>
</tr>
<tr>
<td>• Making decisions and demonstrating a structured approach to decision making.</td>
</tr>
</tbody>
</table>

CPS item stems should be structured as patient vignettes that provide realistic, rich, fairly undigested descriptions of clinical situations.16

<table>
<thead>
<tr>
<th>Table 3: An example of a single best answer item</th>
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<tbody>
<tr>
<td>A non-English speaking patient attends clinic accompanied by a 10 year old child. It becomes apparent that a clinical history cannot be obtained from the patient because of the language barrier.</td>
</tr>
</tbody>
</table>

Which is the single most appropriate course of action?

A. Advise patient to seek a doctor who speaks their language.
B. Ask another patient of the same nationality to act as an interpreter.
C. Ask the accompanying child to act as an interpreter.
D. Refuse to see the patient on the grounds of clinical safety.
E. Request a professional interpreter even if this means rebooking.
This combination of stimulus and response formats provides, in effect, a low-fidelity simulation of a patient care situation that can challenge candidates to apply their knowledge to make clinical decisions. Tests consisting of collections of such items can rapidly sample a broad range of important clinical decision-making situations within a reasonable amount of testing time.

**EMQ versus SBA**

A lot of debate continues as to whether EMQs should be replaced by SBAs and there is no definitive answer. EMQs are in effect a cluster of SBAs around a common theme and SBAs are constructed using the same item writing principles.

The most compelling reason we favour SBAs over EMQs is the breadth of sampling that it affords. Using an EMQ format with each set comprising five scenarios, a 200 item paper will only cover 40 topics. Using the SBA format, the same length of paper could cover 200 different topics.

In a recent review, where candidates took both an SBA and EMQ paper on the same day, SBAs were generally more difficult, had a greater range of scores (inter quartile and minimum to maximum scores) and had higher overall internal consistency than EMQs. Because of these advantages, many exams that used EMQs exclusively are now introducing SBAs. These can often be created by converting existing EMQ items provided that the options are suitably selected.

**Reliability and validity**

Statistical indices such as Cronbach’s Coefficient Alpha provide information about the reproducibility or internal consistency of test scores. For a high stakes assessment, reliability index greater than 0.8 is desirable. The ability to achieve this level is dependent on having a sufficient number of discriminating items.

Reliability indices increase as test length increases (see Figure 1). It is therefore important to strike a balance between the need for more reproducible scores and the available testing time/resources that appropriately reflect the purpose of the test and the use of the scores.

One of the problems with all assessments is how to deal with the borderline candidate. This is increasingly troublesome as more failing students are appealing against this decision. It is therefore imperative to ensure that judgments are as reliable and evidence based as possible. The Standard Error of Measurement (SEM) is a useful index to consider in determining test length. Unlike reliability indices that vary from zero to one, regardless of the scale used for test scores, the SEM is expressed on the same scale as the scores, and can be used to calculate confidence intervals.

For example, if a 100 item test has a mean of 70% and standard deviation of 8%, the SEM is 3.5% (which corresponds to a reliability of roughly 0.8). If standard setting results in a pass mark of 60% and a candidate obtains a score of 58%, a 95% confidence interval around that score can be calculated by adding and subtracting twice the SEM from the obtained score. On retesting, we can expect that 95 times out of 100, the obtained score will fall between 51% (58% minus two times the SEM of 3.5%) and 65% (58% plus/minus two times the SEM of 3.5%).

Because the SEM and confidence interval are expressed on the same scale as test scores, it is easier to judge the adequacy of score precision in relation to the precision needed to make reproducible pass/fail decisions. In this instance, if a high-stakes decision depends on the test score, it is clear that retesting might very well result in a score that is well above the pass/fail standard of 60%, and use of a longer, more reliable test might be desirable. Continuing the above example, the graph below depicts the relationship between the SEM expressed on a proportion correct scale and test length.
length (number of items). For multiple-choice tests, the SEM varies inversely with the square root of the test length: in order to halve the SEM, it is necessary to quadruple the number of items on a test.

**Figure 2**

It should be remembered that whilst an acceptable reliability may be achieved with a test length of 100 items, there still may be compelling reasons to use longer tests. For example, it may require a longer test to achieve adequate content coverage in a broad domain of medicine, or more reproducible scores may be desirable for tests used to make high-stakes decisions like certification or graduation.

**Situational Judgment Tests (SJTs)**

Over the last 10 years a newer format of knowledge testing has been developed from written patient management problems called Situational Judgment Tests. SJTs are an increasingly popular selection method for assessing the attributes of professionals. In the UK they are being used across the spectrum of medical education and selection:

- in selection into medical school;
- for selection into specialist training programmes such as general practice; and
- from 2013, for entry into the UK Foundation Programme.

They are a test of aptitude, designed to assess the presence (or indeed absence) of the appropriate professional attributes and orientations. Research into the roles of health professionals, the jobs they do and how they do them well, suggests that a wide range of non-cognitive or professional skills and attributes are essential for daily practice. These skills or attributes are often tacit and complex in nature. They rely on the rapid synthesis of a number of contextual factors in complex situations, which mean that professionals can come to appropriate decisions about what is the best thing to do, *all things considered*.

SJTs are designed to assess the professional attributes that include:

- commitment to professionalism;
- coping with pressure;
- effective communication;
- learning and professional development;
- organisation and planning;
- patient focus;
- problem solving and decision-making;
- self-awareness and insight; and
- working effectively as part of a multidisciplinary team.

SJTs have been shown to have good validity in predicting role performance across a range of professions. They are based on scenarios that are typical of the everyday experiences and challenges faced by those in the role for which the candidate is applying. SJTs are always in a multiple choice format. Whilst there are a number of varieties, the two most popular types used in the UK are ‘ranking items’ and ‘select the three best option’ items.

**Computer Based Assessment (CBA)**

Over the last 20 years, especially within licensing or certification programs for health professions, there has been widespread international progression from traditional ‘pencil and paper’ MCP formats, to delivery of the same tests via a candidate’s computer. CBA is widely used in the UK for *formative* and self-testing purposes, but its use in high-stakes *summative* examinations in medicine has lagged behind that of other countries in Europe and the US.

**Uses of CBA**

CBA can be used at several points in a course depending on the purpose of the assessment. These include:
• **Diagnostic assessment:** Early in a course teachers can assess students’ prior knowledge;

• **Self assessment:** During a course, students can assess their skills to identify their own learning needs;

• **Formative assessment:** Students receive computer generated feedback on their performance, and teachers can measure the effectiveness of their teaching; and

• **Summative assessment:** Candidates have to pass the test to progress in a course or gain a particular qualification or accreditation.

CBA is also being used in the UK as a short listing component for selection into postgraduate specialty training and delivery of postgraduate diplomas such as the Member of the Royal College of General Practitioners’ (MRCGP) Applied Knowledge Test (AKT) and Royal College of Physicians’ (RCP) specialty certificate examinations. Both of these tests are delivered by a network of 150 Pearson Vue test centres spread across the UK, that are already used to deliver the theory component of the national driving test. Candidates are able to take an assessment close to their home, rather than having to undertake tiring and expensive travel to a major regional centre.

With the advent of computer-based testing, the number of item formats has continued to grow.

**Advantages of CBA**

### Test security

Delivery agencies go to considerable lengths to ensure security for high stakes assessments and provide candidate identity verification, constant invigilation, and CCTV surveillance. Moreover, they also guarantee the security of question items and candidate responses. CBA question order can be randomised to minimize the risk of cheating, though continuously available tests still require very large item pools to prevent examinees from sharing test material over time.

### Reasonable adjustments/accommodations

CBA can be readily adapted for candidates with special needs, for example screen magnification, alternative pointing devices, or even an assistant to read questions or input candidate answers.

### Digital images

CBA can easily deliver digital images, for example, in radiology or histopathology, and sound or multimedia clips such as heart sounds, patient interviews and physical signs.

### Free response questions

CBA can be used to deliver a scenario with no options, so the candidate has to generate a correct response as free text. The marking algorithms are challenging to write, but currently all responses are manually checked and additional correct responses can be included.

### Summary of CBA

- Computers are increasingly being used to deliver summative and high stakes examinations.
- CBA offers advantages over traditional paper based tests including automated marking and rapid feedback, multimedia question types, and efficient test assembly.
- CBAs can be delivered in many geographic locations via a secure computer network and are increasingly invigilated in dedicated, computer based, assessment centres at some distance from the test source.
Using computers for high stakes assessment is expensive and usually requires considerable attention to assessment design and test security.

Concerns remain in relation to the capacity for facilities large enough to test using CBA. Exam security is also an issue, particularly for tests offered throughout the year.

Future challenges for CBA

- Development of reliable algorithms for marking of free response CBA.
- Developing simulations including holograms and unfolding scenarios which allow more realistic testing, addressing the higher levels of medical knowledge; analysis, synthesis and evaluation.
- Developing CBA situational judgment tests that take advantage of the enhanced stimulus and response authenticity made possible through computer administration.
- Developing adaptive testing. Most current CBAs use a standard linear testing method in which each candidate attempts every item in the test. A score is simply the number of correct items achieved. An alternative and more sophisticated technique involves the use of a computer algorithm to select individual questions from a large item bank based on the performance of each candidate. For example, a candidate who is scoring highly will be presented with more difficult questions than those performing less well. Such Computer Adaptive Tests (CAT) offer very high reliability over short testing times for a wide range of different abilities, but they are technically demanding to set, and have a range of inherent challenges – mainly relating to maintaining content validity of the examination. Even an introduction to the issues involved in adaptive testing is beyond the scope of this paper. For a practical introduction to adaptive testing and computer-based testing the interested reader should consult Luecht (2006).30

Personal experience and practical considerations for developing a written test

Although knowledge tests can be delivered using a number of different formats, the most important aspect to success of the assessment is the content of the items. The following practical points are based on our cumulative experience. We suggest that item writers follow them to the letter.

- Be carefully selected and trained.
- Ensure that all questions are clinically important and pitched at the right level.
- Focus on problems that examinees are likely to encounter in real life and pose challenges that are consistent with the role they will play in patient care if they are successful in the assessment.
- Apply the cover test: the stem of the item must pose a clear question and it should be possible to arrive at an answer with the options covered.
- Ensure that stems are no longer than they need to be to realistically describe a clinical situation – in general the candidate should be able to answer them after one reading.
- Stick to an agreed house style.
- Avoid negatively phrased (eg, ‘not’, ‘except’) lead-ins which are considered less likely to measure important learning outcomes and may be confusing to candidates if their first language is not English.
- Ensure that all options come from the same category (eg, diagnoses, mechanisms, treatments, investigations).
- Make sure that most options are plausible and that there is a single most correct response to each scenario: ‘shades of grey’ not ‘black or white’.  
- Verify that the answer is correct and fact or evidence-based and not simply reflecting local practice – use national guidelines where possible.
- Ensure that no answer stands out by either being longer or being the only double option.
- Avoid convergence of options: if three of the five options include the same element, one of these options is likely to be correct.31
• Avoid word repeats in the stem and the correct option.
• Consider the cloning of items eg, a diagnosis item might readily morph into an investigation form but don’t use in the same paper.
• Construct the test using a blueprint to ensure consistency of content over time.\textsuperscript{32}
• Avoid including more items in the test than can be answered by most candidates in the time allowed. Typically allow about one to two minutes per item.
• Do not use negative marking.
• Always check operational data including key validation\textsuperscript{33} and flawed items (eg, when there are two plausible correct responses).

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2.5 Gaps in Achievement: Standardisation at the Expense of Diversity?

Professor Val Wass and Suzanne Vaughan

‘Sun destroys the interest of what’s happening in the shade.’

Philip Larkin

Many of us, as members of the Academy of Medical Educators, will be aware that one of the prime unsolved enigmas of current assessment practice remains unaddressed. A recent systemic review and meta-analysis by Woolf et al\(^\text{2}\) reaffirmed the dilemma which has dogged those of us active in UK medical education for many years; an apparent ‘achievement gap’ between ‘White’ and ‘Ethnic Minority’ candidates. Psychometric analysis of all methods of undergraduate and postgraduate summative assessment consistently reveals that ‘White’ students tend to outperform their ‘Ethnic Minority’ peers, whether the latter are UK born and educated or have trained abroad. Yet, as examination processes become more transparent, and as colleges openly publish their results\(^3\) and students increasingly challenge them, we still have a long way to go in understanding, let alone solving, the problem.

Over the years, various explanations have been considered. Racial discrimination or examiner bias both spring immediately to mind. Fortunately, on scrutinising the literature, there is little to support this within the examination process itself. Ethnic performance differences exist in machine marked multiple choice examinations.\(^4\) A further study analysing performance on the multi choice and practical clinical assessments of a cohort of UK clinical medical students confirmed that differences in ethnic performance on the Objective Structured Clinical Examination (OSCE) were unlikely to be due to examiner bias; the unadjusted machine marked results also showed significant ethnic differences.\(^5\) In addition, a study analysing final year medical student performance undergoing a final year OSCE\(^6\), showed no overt examiner bias when videos of selected OSCE communication stations were analysed using discourse analysis. Some of the observed discourse seen within the candidate and simulated patient interaction, intimated that more subtle cultural, linguistic and institutional influences were at play.

Gradually, these less transparent or overt influences, relating to ethnicity and race, are beginning to emerge in the international literature. The evolving evidence, we believe, argues that we should look beyond the direct challenge of discrimination within the assessment processes themselves (‘the sun’) and explore ‘the shade’. The sensitive impact of racial stereotyping is being highlighted through various studies.\(^7,8\) Within a UK medical school, Woolf et al\(^7\) demonstrated a well developed negative stereotype of a ‘typical’ Asian medical student, shared by both students and tutors. A Higher Education report suggests that beliefs relating to ethnicity, religion and gender may contribute to a negative female Muslim stereotype, which impacts on teachers’ views of their achievement potential. Such stereotypes may influence their learning within the medical environment, and consequently their achievement, independent of any direct influence on the subsequent assessment of their performance.\(^9\)

The hidden curriculum within our institutions risks reinforcing this. Interestingly, UK and North American studies suggest that ‘Ethnic Minority’ students may feel marginalised or segregated within the medical school.\(^10,11\) This, we will argue, has the potential to impact on their learning and achievement. There is now evidence from both sides of the Atlantic that ‘White’ students tend to be reluctant to discuss cultural issues\(^11\); a phenomenon Roberts et al\(^10\) termed ‘white fear’. Opportunities for cross cultural learning are inhibited. This reluctance to engage may further impact on the difficulties that ‘Ethnic Minority’ students experience, as they attempt to integrate into the medical school milieu and understand the institutional values and discourse within which learning and achievement are framed.\(^12\) The tendency to resist overt, explicit discussion of ethnic difference, places the very factors which may be key to successful integration and achievement ‘in the shade’.

Developing an understanding of personal identity and thus gaining insight into the impact of cultural background on learning in medicine, may have considerably more significance than is currently realised.\(^13\) There is some research evidence within the context of an undergraduate OSCE to support concerns that this may well be relevant.\(^14\) Important differences in communicative styles between candidates who scored highly and those who did poorly emerged from the detailed discourse analysis of videos of undergraduate communication OSCE stations. This could be attributed to the failure of those poorly marked to have become sufficiently institutionalised with the empathic patient centred approach required.
Patient centeredness places the patient as the key participant in our Western model of communication. There is little emphasis on the ‘doctor’ side of the interaction to encompass the shades of difference in doctor identity. Framing the learning and assessment of the clinical interaction within a fixed empathic patient centred framework, arguably disadvantages those (students and doctors) from different ethnic backgrounds who are not yet sufficiently institutionalised. Indeed, we know that within the context of primary healthcare, there may be many misunderstandings within day to day consultations which are best addressed by those doctors who have the flexibility and personal awareness to alter their style of communication within the cultural context of the interaction.

Our assessments, on the whole, adhere to fixed ‘White British’ frameworks. These may well contain subtle difficulties which ‘Ethnic Minority’ candidates have not learnt to navigate. Indeed, we may have lost sight of part of the art of medicine as highlighted by Albert Schweitzer: ‘Medicine is not only a science, but also the art of letting our own individuality interact with the individuality of the patient.’ Standardisation of assessments almost inevitably risks sanctioning those whose personal style of communication mirrors the ‘accepted’ model, while penalising those not fully integrated into the relatively fixed linguistic and cultural context in which the tests are set. Indeed, Schweitzer argues for a diversity that may well be lost.

How might this be addressed? We argue for moving away from the more obvious ‘direct sunlight’ of the assessments themselves, where both candidates and educators seek to lay the responsibility, and indeed blame, for poor achievement. Instead, it seems essential to focus on understanding how students form their personal identities within both undergraduate and postgraduate institutions. We need to understand the influence this has on their learning and revision within the emerging subtle, yet consistent, cultural constraints of the formal and hidden curriculum. If we accept that the medical world has a tightly prescribed, yet often untaught, set of legitimate dispositions; students must learn to embody these norms, values and behaviours in order to succeed. Deeper exploration of an individual’s trajectory and socialisation as they learn within the medical environment is also needed.

Socio-cultural theory, we believe, enables us to do this. The model of Communities of Practice provides theoretical tools to allow us to consider learning along a trajectory. Lave and Wenger conceptualised the learning of newcomers to a domain as a journey of increasing competence. This begins with Legitimate Peripheral Participation (eg, where students are granted access to the world of clinical practice by qualified members and engage in low risk activities such as taking a patient history), and moves on to the more specialised practices of the medical community. Wenger explored this further by considering how learning trajectories may differ from this model and describing how membership in certain communities (such as a student or trainee’s family or cultural group) shapes participation in other communities (such as clinical practice).

In Higher Education, cultural capital, or the markers of a particular social history or culture that are valued in this field, affects participation. Students with lower cultural capital are less likely to apply to HE and, once there, are less likely to have the confidence to interact with teaching staff or live on campus. This is particularly important in the apprenticeship-style learning that occurs in medicine. Students or trainees who miss out on socialisation or role modelling opportunities are less likely to learn the ‘hidden curriculum’ and may find coping with the negative aspects of their role more challenging. It is important to understand how learners can be supported to develop the cultural capital necessary to pass our assessments as they currently stand and, at the same time, retain the diversity of their personal identities. As we strive to widen access to medicine and broaden the diversity of our workforce, this gains increasing importance.

The study of social networks offers a new and exciting way to explore these hypotheses and gain a better perspective of a learner's trajectory. Social Networks Analysis allows us to analyse the impact of relationships on success with both theory and empirical data, suggesting that individuals who have access to a wider range of resources and have more control over the flow of those resources, are more likely to succeed. A recent study suggests that medical students who achieve less well are isolated from their problem based learning group and are less likely to have senior students or clinicians in their network. As a result of different cultural practices, such as not drinking alcohol or holding deeply ingrained attitudes to hierarchy and patriarchy which
impede interaction with seniors, many ‘Ethnic Minority’ students struggle to form relationships with peers and clinicians. These factors interact to cut ‘Ethnic Minority’ students off from potential and actual resources that facilitate learning and achievement.

So what is the way forward? A deeper understanding of the learner experience and the more subtle ‘shady’ influences of our curricula and training processes is essential if we are to address the inequities within our current system and facilitate integration and shared cultural experience. Mixed study groups alone aren’t enough. The power of the hidden curriculum and the social networks which develop within it overcome these relatively superficial attempts to integrate. Awareness of the difficulties experienced by both ‘White’ and ‘Ethnic Minority’ students and doctors in developing the cultural capital required by their learning environment may, in part, explain the gaps seen in achievement.

Social manipulation may not be the answer, but surely we have the mechanisms to avoid stereotyping, marginalisation and the ability to overcome the barriers to open and secure cross-cultural discussion? At the same time, educators should ask themselves if their assessment frameworks are too fixed in models which fail to mirror the current diversity of our patient populations and increasing globally mobile doctors. Undoubtedly, the subtle complexities of the training environment may well mirror the experiences of patients themselves. Permitting a better understanding of our own ‘doctor identity’, valuing the individuality within this and offering the support necessary to reach a deeper level of cultural awareness, may help close the achievement gap. If Albert Schweitzer is right, enhancing the value of diversity within our workforce will place true value on the art of medicine and enrich patient care.
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2.6 The Veterinary ‘Trajectory of Learning’ and its Assessment

Professor Stephen A May

The basic veterinary qualification

As in medicine, the clinical veterinary programme, delivered by the seven veterinary schools in the UK, is of five years’ duration for school-leavers, with a four-year accelerated course available in most schools for graduates. Intercalation, usually taken after the second year of study, is an option that the schools encourage, but as this has no specific career-associated benefits, only a minority of students choose this route. The exception is the six-year programme at Cambridge where the Part II taken in the third year is essentially a compulsory intercalated element.

The clinical veterinary programme remains a broad comparative medicine course, focused particularly on the main domestic species of cat, dog, horse and major food-producing species in the UK. It is aimed at producing graduates who have the potential to take up a range of opportunities, including, but not limited to, clinical practice, industry, research and the State Veterinary Service. This means that the development of research alongside clinical skills is a prominent component of all programmes and is realised in some schools, such as the Royal Veterinary College and Nottingham, by the completion of a substantial individual student research project.

Membership of the Royal College of Veterinary Surgeons (the licence to practise) is automatically granted to graduates of recognised schools (UK and English-speaking Commonwealth), and new graduates can immediately enter general practice and are expected to be able to manage their own client consultations and undertake basic surgery from day one. This has led to considerable discussion of what constitutes ‘day one skills’ and how these are achieved and verified during the undergraduate period. The Royal College of Veterinary Surgeons (RCVS) first created a high level set of professional and clinical outcomes expectations in 2001, and these were embraced within the Quality Assurance Agency (QAA) Subject Benchmark and are subject to interpretation by individual schools in terms of the specific tasks that can provide evidence of the RCVS outcomes.

Historically, veterinary medicine was assessed through short and extended written responses, long-case practical and free-form ‘viva voce’ (oral) examinations. However, in the last 15 years, specific attention to knowledge and various professional and clinical skills has led to a search for more valid methods for the assessment of each of these and the use of a greater range of assessment tools. Written formats now additionally include multiple choice questions, extended matching questions, and, in at least one school, script concordance tests, and practical formats include Objective Structured Clinical Examinations (OSCEs) as well as structured, direct observations of procedural skills. Some schools continue to use long-case practical and viva voce examinations, but others have completely replaced these with the newer formats and only use oral examinations in a structured way when communication skills form a component of the assessed task. In schools where a research project is a part of their research skills theme, this is a separately assessed component and must be passed for students to complete their clinical programmes.

The first postgraduate year

For many years, the universities appointed new graduates as ‘house surgeons and physicians’, for one to two years, to help in their teaching hospitals, with such individuals either subsequently embarking on academic careers or entering general practice with a greater level of clinical skill and experience. Since the late 1980s, this has become more structured around the education of RCVS and European Specialists through a one-year internship, followed by a three to four year residency. However, these opportunities are only available to a minority of veterinarians, with most graduates still entering private practice directly.

In order to ease the transition, and emphasise the responsibility of employers in private practice for new graduates, the RCVS introduced its one year Professional Development Programme (PDP) as a pilot (all graduates encouraged to volunteer) in 2006, and made this compulsory in 2007. The PDP is focused on RCVS ‘Year One Competences’ (RCVS1,6), and involves new graduates recording procedures undertaken, with reflective comments monitoring their progress, and ultimately self-assessing their achievement of competence in each case. They are encouraged to discuss their progress with senior members of their practice, and can also contact one of the four Postgraduate Deans who oversee the PDP. Once a new graduate signs themselves off in all areas of competency, one of the Deans will review the complete record before certifying the PDP as having been successfully completed, if they judge it so.
Towards specialisation

The RCVS introduced its first formal specialist Diplomas in Veterinary Anaesthesia and Veterinary Radiology in 1967. These catered for a tiny minority of the profession, largely based in university teaching hospitals, and by 1980 there were still only 23 specialists in Veterinary Anaesthesia and 37 in Veterinary Radiology. In order to encourage more private practitioners to embark on advanced clinical qualifications, in the early 1980s the RCVS restructured its Specialist Diplomas to include a subspecialist Certificate qualification with a linked Specialist Diploma. There was one exception for which there was no add-on Diploma – a Certificate in Equine Practice.

The RCVS Certificates achieved the goal of expanding the number of those involved in assessed postgraduate study, but there were noticeable differences, particularly in recent years, for completion rates between those in universities and those based in private practice. The casebook, that involved considerable work, was much more likely to be failed by those in private practice, and this frequently meant such individuals never retook that section or completed the rest of the assessment. Another controversial area was the nature of the qualification. In some disciplines in particular, this has come to be seen as a ‘quasi-specialist’ qualification, with some examination boards feeling pressed to move standards closer to the specialist level to acknowledge this, undermining the intended breadth of appeal and the relevance of the qualification.

In 2007, the RCVS took the decision to replace its ‘old-style’ Certificates with a new Certificate of Advanced Veterinary Practice (CertAVP) that, for the first time, introduced professional and clinical key skills components that were common to all, alongside elective species and discipline components. The old Certificate represented a considerable hurdle, in terms of an ‘all or nothing’ assessment (a pass in the casebook could be carried forward for one year), and it was felt that a modular format, that could be completed over a period as long as 10 years, would mean that it could be accommodated around career breaks and part-time working more easily for a profession that now produced 75-80% female graduates and whose practising arm became predominantly female in 2006.

The decision to design a new Certificate also allowed a major review of the assessment and quality assurance aspects of the qualification. The RCVS moved from being the assessor to accrediting universities as providers of modules that conformed to RCVS outlines, the assessments for which were thus quality assured within university frameworks. The flexibility has not only allowed individual phasing of the modules undertaken, but also the opportunity to mix modules from different providers, including some universities that do not have their own veterinary schools who have joined the scheme.

As in the case of the first degree, this redesign has led to a review of assessment methods, with some universities choosing to verify progress and advancement of learning outcomes through:

- reflective essays (in the case of professional skills);
- structured observations and case reporting (in the case of clinical skills); and
- the innovative use of online learning groups and assessed discussions.

The one area for which the RCVS still coordinates examinations relates to synoptic assessments for disciplines that still require these, where the modules have been split between different universities or the university chooses only to assess individual modules.

Specialist disciplines

In the mid-1980s, with the development of its Certificates, the RCVS expanded the number of Diplomas, embracing both species and new discipline specialisms. Independently, this was followed, in the early 1990s, by the establishment of Specialist European Colleges based largely on the US veterinary specialist model. Collectively, the earliest Colleges set up a European Board of Veterinary Specialisation (EBVS) which has recognised, and continues to recognise, new discipline-based and species-based Specialist Colleges as they are established. Both types of Diploma are awarded for life, but RCVS and EBVS recertify specialists every five years. In the case of RCVS, an individual must demonstrate that they are still active and productive in their specialty, for at least 50% of their time, to remain on the RCVS Specialist Register. In the case of EBVS, an individual must return a certain number of lifelong learning credits within each five-year period to remain an ‘active’ diplomate.
The RCVS has taken the decision that as a new European College becomes fully recognised by EBVS, it will withdraw its equivalent diploma, so, with 23 fully recognised Colleges, these are becoming a major force in accrediting specialists in the UK as well as continental Europe. Admission to the final examination for a European Diploma requires a minimum of four years’ structured training, usually completed in a university teaching hospital or large private referral practice, during which annual case logs must be completed by residents and signed off by those in charge of training programmes in each organisation. There is some variation in assessment methods between Colleges, but written assessments are predominantly in a multiple choice question-type or short answer format (long answers being avoided because all assessments are conducted in English) and practical skills assessed through, in addition to the annual logs, various case-based formats, including structured clinical reasoning schemes and oral discussions.

Neither of these specialist structures is recognised in law. The current UK veterinary legislation, the Veterinary Surgeons Act 1966, did not anticipate lifelong learning, specialisation or revalidation of practitioners, and this has not yet been superseded. The RCVS has established its structure of Certificates and Diplomas using its Charter powers, and therefore does not have absolute control over the title ‘Veterinary Specialist’, only RCVS Specialist. Similarly, only the first clinical qualification is recognised in the relevant EU directives.

Public recognition of veterinary qualifications

The designation, Member of the Royal College of Veterinary Surgeons (MRCVS), indicates that an individual has a lifetime licence to practise ‘acts of veterinary surgery’ (unless removed from the Register by the Disciplinary Committee). The Code of Professional Conduct now indicates that veterinarians ‘must ... comply with RCVS requirements in the Professional Development Phase (PDP) and Continuing Professional Development (CPD)’ – currently a minimum of an average of 105 hours over a three-year period.9

Beyond this, it has been suggested that there is considerable confusion over veterinary qualifications, particularly the distinction between Certificates and Diplomas, and that the profession could do more to clarify the situation.10 This led to a working party, chaired by Sir Kenneth Calman, that suggested that a ‘middle tier’, involving Certificate holders and others with equivalent qualifications, should be formally recognised.11 A possible, though seen by many as unsatisfactory, title for individuals in this group could be ‘Advanced Practitioner’. A parallel group in Europe, the European Board of Veterinary Professional Development, proposed the title ‘Acknowledged Practitioner’, but this has since been dropped. As with specialists, it would then be possible to relicense individuals by making their continued listing on a middle-tier register subject to evidence of maintenance of professional competence.

Active European Specialists are listed on the EBVS website (currently 2,677 in total), together with their Specialist College, and the RCVS has a list of currently Recognised Specialists available to download. In addition, the RCVS also publishes appendices to the Veterinary Register that include lists of Certificate and Diploma holders with the dates of their awards.12

Concluding remarks

Informal lifelong learning has always been a part of a veterinary career, driven by individual and practice needs and opportunities. The small animal veterinary specialism started to emerge pre-war, and this accelerated post-war with the decline of the horse in agriculture and a greater focus on pet ownership and concern for these species.13 However, it is only in the last 20 years that the veterinary profession has started to formalise its approach to the certification of postgraduate clinical achievement and the registration of specialists, together with more formal documentation of CPD.

In parallel, the skills agenda and public focus on greater accountability of professional groups have led to the need to:

• define the capability of an individual with each level of qualification, together with the competences expected;
• demonstrate the appropriateness of the assessment processes involved; and
• verify the achievement of the full range of relevant skills by each veterinarian.

This has involved a combination of transfer and adaptation of best practice from our larger sister clinical profession and the evolution of our own practice focused always on animal welfare and the support and protection of owners, keepers and the general public.
References


2.7 Education for Clinical Teachers; Does it Make a Difference? A Year in an Acute Healthcare Trust

Professor Linda de Cossart, Professor Della Fish and Miss Renate Thomé

‘But there can be no educational development without teacher development; and the best means of development is not by clarifying ends but by criticizing practice.’

This paper describes the new understandings about, and resultant practices in, postgraduate teaching in clinical settings reported by the first cohort of senior clinicians (and those whom they teach). It focuses on one Acute Trust and the senior clinicians’ progression through the first year of a new Master’s programme entitled Education for Postgraduate Medical Practice. It draws on data taken from the evaluation report of the first year of the programme.

It begins by contextualising the need for better postgraduate medical teaching and learning, giving a short description of the programme and reports some of the key insights experienced by the clinicians and their learners in regard to teaching and learning in clinical practice. It concludes with a comment on how these findings should influence medical educators and those who are responsible for developing them.

The context

The beginning of the 21st century heralded major changes in the UK to both the provision of healthcare and the evolution of postgraduate medical education. These changes, along with the European Working Time Regulations (EWTR), continue to pose significant threats to the quality of teaching, learning and assessment for postgraduate doctors in their everyday clinical practice. The General Medical Council (GMC) has now inherited the regulatory responsibility for standards of teaching and learning in postgraduate clinical practice. Healthcare Trusts, as part of their National Health Service Litigation Authority (NHSLA) regulation, are rated on their quality of provision of education and their supervision of doctors in training.

However, despite the many educational systems and processes that have been put in place over the last 10 years, educational and clinical benefits are not being reported. In fact, reports are emerging that these systems are creating an uncritical adherence to protocols and a fear culture amongst young doctors.

‘Recently, whilst discussing the overtreatment of older people towards the end of life with a group of GP specialist trainees, I was disturbed to be told by no fewer than three young doctors that they were frightened that if they did not follow the guidelines they would end up in the newspapers.’

The twelve senior clinicians, at the outset of their postgraduate certificate year in 2010, did not see themselves as part of the force that might make education a central focus of the Trust Executive. Table I captures their thoughts on these matters. What was evident to the evaluator and of great concern to the course directors, was that they expressed feelings of disempowerment, both from their roles within management, as well as with their relationships with doctors in training. Their understandings about themselves as teachers at the beginning of the course are presented in Table II.

The particular characteristics of this Postgraduate Certificate (PGCert) in Education

This PGCert course has been designed to develop the understanding of participants about what is worthwhile postgraduate education and to demonstrate how this can influence practice. In this paper we use the term ‘participants’ to indicate the clinicians on the PGCert and ‘learners’ to indicate those doctors in training that these participants teach. Healthcare organisations seeking to develop quality education arguably require a critical mass of people (an educational faculty), with similar understandings and commitment to delivering worthwhile clinical education.

Therefore, with strong support from the senior executives at the Countess of Chester Hospital NHS Foundation Trust and the University of Chester, this programme set out, uniquely, to develop two cohorts of the PGCert from one Trust before opening it to wider recruitment. Table III lists the course modules and Table IV the key aims of this educational endeavour. Costings were designed within the Trust’s Medical Education budget.

Twelve clinicians, selected by interview from seventeen, began the course. The group consisted of nine consultants, one Associate Specialist, one Specialty and Associate Specialist (SAS) grade and one senior nurse. Eleven successfully completed the PGCert year, whilst one consultant had to drop out due to health reasons. Eight chose to continue with the diploma and all are now planning to complete the Master’s.
The reasons for participants joining the course varied. For some, it was a career choice informed by their interest in teaching, whilst others felt dissatisfied with their teaching and wanted to improve how they carried out this part of their role. Some wanted to have a formal qualification to meet the standards of the GMC, which would allow them to be key players in clinical teaching. All were committed and interested in teaching and saw it as a key part of their professional work. At this point, none had quite realised what a life changing experience the course would be.

**Emerging themes**

A great amount of rich data was collected, within the hospital setting, during the contemporaneous evaluation of the first year of this Master’s pathway. The findings here resonate with others. The following section concentrates on the changes in the course participants’ insights and the experiences of their learners. In particular, it reports on their experiences with two resources that were new to them:

- **Clinical Reflective Writing (CRW)** using the Invisibles (which has become known as ‘rainbow writing’); and
- **CbD Plus©**

See Figures I and II for a summary of these.

Early in the course, clinicians expressed their fear that learners would not engage with these new ideas, that they would not have time and would only be interested in their particular college’s curriculum. Some feared that making new demands on learners might be seen as bullying! Later data showed that this was unfounded. Perhaps most surprisingly, several noted that the new insights that they had gained into education had also changed their own clinical practice. The way in which they documented their clinical decisions in their practice setting had improved, becoming clearer and more explicit. They felt better able to articulate their own clinical thinking processes as clinicians and this was helpful not only for teaching, but also for communicating with other teams and colleagues.

At first, the new resources created some anxiety:

‘For me at the moment it seems very theoretical. It seems like a big leap to actually implement. What I am getting at is, are we just doing it for the purposes of the course at the moment?’

With growing understanding, a new confidence was seen to emerge:

‘Yes, it has made an enormous difference. I feel that there are times that the teaching I did before is still relevant, but you feel so much more self-conscious about it.’

‘Almost like a light has been switched on.’

‘It is a huge difference in the way I talk and think and deal with the learner.’

‘I have gone from “what are you doing?” to “Why, Why, Why?”’

The following quote demonstrates how the course encouraged the teaching of everyday practice.

‘I think accepting that you can actually teach “the ordinary” is a big thing. Normally it is about teaching about what goes wrong.’

Some even noted that they had now incorporated teaching, as a more important element, into their clinical practice.

‘The system hasn’t changed but I have worked out how to manipulate the system to make it a better teaching experience.’

They made use of existing assessment systems to serve the teaching rather than the other way around.

‘I also think making the CbD fit into what we are doing rather than the other way around, is useful. You have a teaching event and as a consequence you fill in a CbD rather than it just being the focus for an assessment.’
Overall, participants were confident that their teaching practice was much more educationally worthwhile and was now more defensible as such. There also seemed to be a greater belief than before that these individual changes would be sustainable in practice and would not disappear once the course assignments were completed.

The shared insights and recognition by learners of new styles of teaching

The 11 doctors in training that willingly took part in the new teaching, revealed interesting insights into the new quality of education that they were being offered. These learners:

• noted the usefulness of the preparation demanded of them by CbDPlus©;
• clearly articulated the shift from knowledge testing to a deeper exploration of their thinking processes; and
• appreciated the growing relationship between teacher and learner (see below).

They were pleased to be able to use ‘rainbow writing’ in their portfolios as evidence of their developing capabilities. One trainee published a paper illustrating this.12 Trainees who were not involved in this teaching expressed disappointment at not being asked to work in these ways.

Learners found CbDPlus© interesting and useful:

‘It was really good. We do CbD but I have never done it in that fashion before.’

‘CbD varies depending on who you do them with. I did one with him before but this was different. The first one focused on procedural issues, went through the background, history and management plan. This time we looked more on the thinking pathway which was good, it got you thinking: why did I do that?’

‘It was interesting to debate the reasons behind my decisions. I changed my mind about what I wanted this case to focus on. Thinking it through and exploring with CRW was really helpful.’

‘I think it was also more in depth and there was more basis to my thinking because I had written the initial draft.’

‘It was interesting and you realise how you take it [your implicit decision making] for granted. A lot of what we do is just subconscious and you don’t talk about it.’

‘Normally in a CbD you would be talking about what you did, whereas we were actually discussing what was going on in my head.’

Learners noted that this new way of being taught had altered the relationship between them and their supervisor. They felt more comfortable in what they described as a more open relationship with more ‘equal debate’. In particular, they liked the way in which their own questions became part of the normal discourse.

‘We still had the basic discussion of the history and examination, but we definitely explored the more ethical, wider issues than we had done previously.’

‘Previously, it was more of a question and answer situation, whereas now it is more of a discussion with more of an equal debate going on.’

‘And it wasn’t just [the teacher] asking questions, it was ME bringing up questions!’

‘We were actually discussing what was going on in my head when I made this decision or that decision. I think he was more interested in what was underlying my decisions, rather than what the decisions were.’

All 11 learners completed their ‘rainbow drafts’. This in itself is interesting, as most participants initially feared that learners would not engage or take part in the writing process. All learners handed in several drafts as requested and some wrote additional pieces beyond the requirements as they became more engaged. Some felt that the reflective writing should be done more regularly and that the structure of the ‘Invisibles’ was helpful in this. They all felt that they could use the written part in their portfolio as evidence of that which they had learnt.

‘It took a longer time than I was expecting to write, about two and a half hours worth of writing, but by having to do it I think I picked up a lot more points than I would have by doing it off pat orally.’

‘It is important that it is done regularly [the writing]. If you do it once in six months maybe it will not be much good, but if you do it once a month and talk about this case with the consultant, I think it would be more useful.’
'Usually if you ask a question you get an answer, this time he made me do the thinking and answering, and only then helped me when I got stuck.'

Conclusion and ways forward

In addition to the technicalities of teaching, this multidisciplinary PGCert has focused on:

- educational values;
- the development of each participant’s educational philosophy;
- personal qualities; and
- their understanding of what is educationally worthwhile.

Participants have said that the experience of completing the programme, in respect of both their clinical treatment and their own practice, has profoundly changed their capability, courage, commitment and confidence, for the better. The critical mass developed in one institution has encouraged mutual support and led to new ideas for educational projects that extend well beyond the course. The institution is now beginning to benefit from this evolving faculty collaboration. There are surely some valuable new insights here for those responsible for the development of national strategies for postgraduate medical education.

References

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Table I:
Statements by participants at the beginning of the course

‘We leave these meetings believing in the importance of clinical teacher development in the context of postgraduate medical education. My concern would be that the organisation would have to support this [clinical teacher development] and I don’t think that it lies at the heart of this organisation (that postgraduate medical education is as important).’

‘It is the service line managers. They want more and more productivity, they don’t have any interest at all in teaching, they don’t care what the quality of the doctors is. All they care about is productivity.’

‘Doctors in Training are seen as workhorses, they are there to improve the flow of patients through and [receive] payment by results.’

‘… the Trust places low value on postgraduate education. Education rarely appears on the meeting agendas for the Trust. Cost imperatives override other seemingly less pressing concerns such as education.’

‘I can tell you, I have been clinical director of xxx for three years now and in any single management meeting in the xxx division, I cannot remember any discussion about education of trainees featured at all.’

‘… the Trust relies on the income. A half day list is £ xxxx, so it is a lot of lost income. So they would say, if you want to go teaching, we want you to do a list at a different time. However much lip service is paid, the most important thing is the book balancing and after that achieving so called quality targets and reducing waiting times. The fact that actually good education will help a lot of that is lost.’

Table II:
Typical comments from participants recorded at the beginning of the programme about how they saw themselves as teachers

‘I teach “skills”, how to do it and then sign them off.’

‘There is no time in the clinical setting to teach. I just help to solve problems.’

‘My teaching is ad hoc and short term, minutes really, unplanned and informed by clinical imperatives.’

‘I have never really thought about what makes a teacher, good or bad. There are many reasons for this lack of thought, not least that I have focused upon becoming a clinician.’

‘Previously I was preoccupied with ensuring that handouts were clearly presented or that my PowerPoint animations worked seamlessly. I was wholly consumed by the presumption that quality of performance correlated directly with quality of teaching.’
The programme is a validated University programme run in partnership with the University of Chester and the Countess of Chester Hospital NHS Foundation Trust.

As QAA requires for any postgraduate certificate, each module is worth 200 hours of learning which, in this course, includes 15 face to face teaching days for each module.

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<td>Year 1</td>
<td>Introduction to postgraduate medical education</td>
<td>How doctors think; teaching and assessing clinical reasoning.</td>
<td>Medical Curricula on paper and in action</td>
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**Table III:**
The Master’s pathway in Education for Postgraduate Medical Practice

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*Assessment in Medical Education*
Figure I: A brief overview of Clinical Reflective Writing and the Invisibles8,9

Clinical reflective writing
(using The Invisibles’ Framework as a prompt)

This is a rigorous and disciplined approach to exploring the quality of a clinician’s care of a specific patient and is designed specifically for doctors.

The Invisibles
Are the explicit driving forces of clinical practice and provide a language and a framework for teacher and learner to use together for talking and writing about their clinical care of individual patients. They are:

- Context  (how doctors ‘read’ the contextual clues which are the most powerful influence on all their subsequent decision making in the particular case);
- the kind of person you were in that case (your personality, your character and your values which played a profound part in what you did);
- the kind of professional you were on this occasion;
- the knowledge you called on during this practice;
- your clinical reasoning and deliberation; and
- the quality of your resulting professional judgments in this particular case.

They also aid the exploration of wider perspectives on practice and the therapeutic relationship developed with that patient.

Some key points
- Write about concrete and current cases or situations familiar to supervisor and learner, aim to encompass the whole event and not just a part.
- Begin by creating bullet points of the key event or case and build these up using ‘the invisibles’ one at a time.
- Write in the first person and include evidence of learning (you can use figurative language such as similes and metaphors to emphasise points).
- Use the writing to demonstrate commitment to professional ideals and use these as a touchstone to critique practice as well as relating it to wider theory and general principles.
- Identify factors contributing to the situation which may be historical, political, economic, social, ethical, autobiographical, psychological.

Most importantly, seek to understand more deeply an action/event/case which has been personally experienced, by unpacking the thinking and knowing beneath the surface of the event.

Consider using it as a teaching resource.

For ways of responding to CRW see: www.ed4medprac.co.uk
Figure II: Some principles for getting started with CbD Plus©: an educational approach to CbD®

Before the meeting
- The case chosen by your learner should be familiar to both teacher and learner and be one that yields well to detailed reflection.
- The learner should construct a set of bullet points that tells the story of the case on one side of A4 and should either send these ahead to the teacher, or take two copies with them to the meeting with the teacher.
- The learner should have a clear understanding of the educational reasons for choosing this case and be ready to share this with the teacher (the learner should remember that they should be learning BOTH at the level of DETAIL and the level of PRINCIPLE).
- The learner should book a session of 30 to 45 minutes with their teacher in an appropriate educational environment.

Introduction at the meeting
- At the meeting the teacher should firstly read the bullet points and construct an agenda in their head of key issues they wish to explore.
- Both the learner’s and the teacher’s agendas should be shared and a way forward should then be agreed.
- The teacher should begin by inviting the learner to ‘tell me about your decision-making about this patient’ — NOT ‘Tell me about this patient’!
- Structured talking (this is a professional conversation, not a presentation).
- The learner should make a succinct and concise statement at the start about what this case is a case of for THEM, THE LEARNING DOCTOR.
- The teacher should then focus in on whichever of the Invisibles is appropriate for the learner and their curriculum, and the case and its context.
- If the teacher finds an element of importance in depth, they do not need to consider the entire case on that occasion, but may be prepared to come back to the case at a later date, looking at other elements.
- Discuss the patient’s notes and how the learner has annotated their involvement in the case.

Structured clinical reflective writing
- Whatever has been the central focus of the discussion then needs to become the topic on which the learner is asked to extend their writing, first in bullet points and then in flowing prose.
- It will be the judgment of the teacher how much help is given with this task at this meeting.
- A deadline for receiving the writing needs to be agreed.
- The normal CbD form should be filled in by both (independent of each other and then compared).
- Teacher's response to Clinical Reflective Writing.
- The teacher needs to respond in writing to the learner's draft.

Structured talking
- Teachers and learners should meet at least 3 times during an attachment for CbD.
- Plus discussions. This may be to focus further on the same case, or to work on a different one ... and so on

Placing this on record
- The learner should place each final version of their CRW in the reflective section of their portfolio, index-linked to the relevant CbD form.
Research Article

2.8 Learning from the Implementation of a Programme of Comparable Metrics between Local Education Providers

Professor David Black

Introduction

Since the 1980s, performance indicator techniques and performance measurements have been used more and more frequently. They are now seen as one of the tools of performance measurement particularly in the public sector (including the NHS). Recently, there has been growing interest in the use of metrics in the education and training of postgraduate doctors. The possible rationale for using metrics has been described as:

- a mechanism to improve unit performance;
- a device to improve the whole system;
- data to be used in real or ‘pseudo’ competition;
- a way of upholding accountability to customers; and
- as part of internal management controls.

However, a review of the literature suggests that those implementing metrics are often not explicit about their aims, and reviews in the public sector and in US healthcare find very little evidence for effectiveness. There are also well described dysfunctional consequences of publishing performance data, including gaming, tunnel vision, sub-optimisation, convergence (movement to the lowest acceptable practice rather than excellence), misrepresentation or fraud.

Recently, interest in comparable metrics has been pursued with an apparent aim to improve quality performance in education across the UK. This move has led to considerable debate, including a working group between the Academy of the Medical Royal Colleges (AMRC) and the Conference of Postgraduate Medical Education Deans (COPMeD). It has also been driven by a recent White Paper on Education which states the Department of Health’s (DH) wish to improve quality by giving people better information on which to make decisions. The expectation being that resource will follow quality, based on comparable metrics.

In designing and piloting comparable metrics, an AMRC/COPMeD Working Party reviewed the education literature. It concluded that much of the evidence was undergraduate focused and that it was a particularly diverse body of literature with limited work on key performance indicators (KPIs).

Methodology

The implementation of the metrics programme was driven by a set of internal discussions with Associate Deans and Heads of School within the deanery, and a wider discussion with Directors of Medical Education and Clinical Tutors in the LEPs. The overall stated aims were to:

- provide all LEPs with the ability to demonstrate improvement in objective measures of process and outcomes for postgraduate medical education;
- enable LEPs to be able to compare themselves and their processes with other LEPs;
- put information about LEPs, which is objective, in the public domain;
- assist LEPs’ reporting of their quality of patient care;
- act as one source of information for the deanery in deciding on future investment or disinvestment strategy.

Following a series of internal discussions and then with the Directors of Medical Education, one-to-one consultations were held with every LEP Chief Executive as part of the Dean Director’s annual round of meetings. All Chief Executives had agreed to be involved in the pilot before it started. The final pilot indicators chosen and the rationale for each are shown in Table I. Overall, for the first year of the pilot, there were nine indicators, all of which were measurable.
indicators of process, except for one which was entirely a subjective judgment.

The final set of metrics was sent to each LEP (both acute trusts and mental health trusts) for self assessment. The final sign-off was achieved through contract review. This is an annual process where each LEP’s educational environment is assessed independently through a process of peer review. Following this, next year’s action plan is agreed at an annual meeting with the Chief Executive. At the same time, the annual contract with the deanery is signed. The final metric for that Trust is routinely agreed at the meeting with the Chief Executive. This also included informing them of the rationale behind the decision on the one subjective metric.

The pilot metrics were then formally sent to each trust, and were discussed at the annual meeting between the Postgraduate Dean and the Chief Executive.

For year two, there was a second round of intensive discussion with the Director of Medical Education and a second set of metrics were produced. The final indicators for year 2 are shown in Table II.

**Results**

Year one, 13 acute and three mental health trusts participated. A number of operational problems emerged:

- For year one, PMETB were unable to provide data trainers’ completion of the PMETB Survey by LEP. This measure had to be abandoned.
- Mental health trusts did not have enough Foundation trainees to complete item four. For comparative purposes all scored green.
- Programmed Activities (PAs) for job plans was difficult to validate with different Trusts taking different approaches, with often very variable approaches by department. Although the responses suggested that Trusts took this question seriously.

The overall results for year one are presented in an anonymous format in Table III. Two points were given for green and one for amber and zero for red. Each Trust was then fed back the results together with the key to which Trust they were.

For year two, there were only 15 Trusts, as two acute Trusts had merged. One indicator was removed (the subjective ‘value added in education’) and four new ones added:

- Overall sickness absence for trainees (as a marker of support for trainees).
- Overall trainee satisfaction with the LEP (subjective, but the nearest we found to an outcome measure).
- Data for specialty programmes (to help attract high quality trainees with good information).
- Board level engagement (to try and get board focus on education).

The results for the 15 organisations are set out in Table IV. This enlarged set of indicators seemed to have a greater discriminatory effect than the first pilot set. The data set will now remain unchanged for year three of the project and will become public at that stage.

**Discussion**

I believe that this is the first reported programme for implementing a set of comparable generic metrics between LEPs in the UK. It has been based on generic indicators and is specifically not about programmes across a deanery or specialties within a single organisation. Detailed comparative work about programmes within an organisation has been undertaken in the US, which is a very different focus.

The first learning point was the difficulty in being able to decide exactly what the intention was for the process. Were we trying to improve the individual unit, to enhance the whole system, to be part of accountability to customers (but who is the customer, the deanery, the trainee, the patient or the NHS?), or to help the LEP undertake quality control? Or was it about deanery or national commissioning bodies making decisions on matters including investment or disinvestment?

In reality, they were all factors. However, the one that caused most difficulty with our stakeholders was any intention that this process should be used for investment or disinvestment decisions. There was considerable antagonism towards this suggestion and a real expectation that we would see considerable game playing (deception or manipulation of data to meet high stakes targets) if this ever became a local or national reality.
The constant frustration when implementing the programme was the wish of all participants to have outcome measures and the apparently great difficulty of doing this in practice. Possibilities suggested included academic publications, but these are much more likely to be from academic units than from District General Hospitals. Examination results were also proposed. However, relatively speaking, the numbers are small for each Trust and very often depend on the level and experience of the trainee rotating in the post in that Trust in that particular year. Annual Review of Competency Progression (ARCP) outcomes were also put forward. However, a very high performing team might be offered more trainees in difficulty to attempt to remediate and a low performing team may do inadequate assessments and allow too many borderline cases to progress. This would particularly be the case, if they thought that they would be measured on that performance.

In year two, we added both ‘overall LEP satisfaction’ and trainee sickness absence as ‘surrogate’ but not ‘true’ outcome measures. So we were not able to identify an easy way of measuring outcome or ‘value added’ by organisation. It is more likely that across a particular school in a deanery, you could look at outcomes compared with other national schools. Also, within a single LEP, a department might look at their overall performance year-on-year, which does not summate to a generic performance of the whole organisation.

Further learning points included the realisation that this is simply a snapshot ‘in time’. Data is always retrospective, which means that it cannot necessarily predict what the situation is like now. In addition to this, many of the indicators we chose were highly deanery specific. So, although they all relate to national standards and drivers, how we interpret and deliver that effectively at a local level tends to be deanery specific. This is unlikely to be reversed as the whole direction of the various White Papers on ‘Liberating the NHS’ are toward a more locally driven and delivered agenda. For although (for example) there may be a national standard that all educational supervisors are trained to, local deaneries may set a standard that is potentially higher than the national minimal standard. Trusts would feel very disadvantaged if they struggled, but just missed, the higher local standard, when they would have easily passed the apparent national standard, that is defined differently.

The change management to deliver this in a collaborative fashion was considerable. Directors of Medical Education (DME) were very anxious about the process, but their Chief Executives and Medical Directors were significantly less anxious, perhaps because they are used to other DH performance management tools. Possibly the anxieties of the DMEs were that they would then be performance managed themselves within their organisation to meet those targets. Getting as much local agreement and buy-in as possible, as opposed to simply imposing metrics without discussion, is an important learning point for any national programme. The GMC Survey is still considered a weak quality management tool and there is considerable concern about using the same data in another form because of the risk of ‘double jeopardy’.

Locally, we have a detailed and fully embedded programme of quality management, which includes peer review of the education environment called ‘Contract Review’. This goes back almost 15 years. The ‘Contract Review’ provides a fairly robust mechanism that ensures data collection and reliability when external scrutiny is involved. If such a programme is to be rolled out nationally, then there would be an expectation for all organisations to have equally robust scrutiny, in order to prevent the unintended or dysfunctional consequences referred to earlier. This would be critically important if any investment or disinvestment decisions were to be based on the data.

In summary, this paper describes the implementation of a programme of comparable generic metrics between LEPs. We have found that this is a complex process which offers an opportunity to improve unit performance and, by extension, the whole system’s performance. It is also important to remember that it is unlikely to help in competition or resource distribution. We believe that this can best be developed further on a regional basis in terms of generic metrics, but is likely to have serious limitations if attempted nationally. Particularly, given the ever-present concern that ‘gaming’ could reduce, not enhance, educational management credibility.

The view locally is that this is an addition to other quality management processes. However, the process, which still holds by far and away the greatest validity and support locally, is external detailed visiting by the deanery schools. We would also advise that any national programme should be subject to prospective external academic evaluation.
References


4. Joint Academy of Medical Royal Colleges and Conference of Postgraduate Medical Deans Training Advisory Group, Quality Metrics Group, *Training and Quality Report.* July 2010 (DRAFT)


Table I – LEP Pilot Metrics 2010. Definitions And Rationale

<table>
<thead>
<tr>
<th>Standard</th>
<th>Milestone</th>
<th>Red</th>
<th>Amber</th>
<th>Green</th>
<th>Rationale</th>
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<tr>
<td>1) Qualified Educational Supervisor Programme</td>
<td>The proportion of Trust identified Educational Supervisors who have completed both parts of QESP or successfully completed the Grandparent Clause.</td>
<td>&lt; 60%</td>
<td>61-90%</td>
<td>&gt; 90%</td>
<td>The GMC standards for training require that all educational supervisors are trained. Locally we have fully funded a comprehensive programme of educational supervisor training over three years. We expect by April 2011, 90% to be fully accredited in both parts of QESP.</td>
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<tr>
<td>2) GMC Survey (trainers)</td>
<td>Percentage of Trust identified Educational Supervisors who have completed the PMETB Survey.</td>
<td>&gt; 50%</td>
<td>51-75%</td>
<td>&gt; 75%</td>
<td>Reliable information can only be obtained with high levels of completion and the Survey is one significant source of quality management information.</td>
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<td>3) GMC Survey (trainees)</td>
<td>Percentage of trainees who have completed the annual PMETB Survey.</td>
<td>&gt; 80%</td>
<td>81-90%</td>
<td>&gt; 90%</td>
<td>The GMC requires that all trainees contribute to the assessment of their training. High completion rates are required for this to be a useful tool for quality management purposes.</td>
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<td>4) Foundation training</td>
<td>Number of red flag indicators found by the end of the most recent Foundation visiting process (consent, site marking, immunosuppressants).</td>
<td>3</td>
<td>1-2</td>
<td>0</td>
<td>We have three ‘never events’ that we call red flags during Foundation visits. For example, Foundation trainees must not site mark.</td>
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<td>5) Less than full time training</td>
<td>Trust should encourage and support LTFT. Nationally the DH wish to see 20% of all training filled by LTFT trainees. The measure is the number of trainees actually in post in the Trust.</td>
<td>0</td>
<td>1-2</td>
<td>3 or more</td>
<td>Less than full time training is an important provision but some Trusts are more helpful than others in implementing programmes especially slot shares. This indicator was to ensure that all LEPs were contributing.</td>
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<tr>
<td>6) PAs for education in job plan</td>
<td>All consultants should have clearly designated SPAs/PA time in their job plan for their educational activities to the published standards agreed in NHS SEC. The percentage of consultants undertaking education with identified educational PAs/SPA time in job plan.</td>
<td>0-50%</td>
<td>51-90%</td>
<td>&gt; 90%</td>
<td>KSS Deanery has previously negotiated a ‘tariff’ with the agreement of all Trusts in South East Coast. Provable information remains patchy.</td>
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Assessment in Medical Education

Excellence in Medical Education
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<th>Standard</th>
<th>Milestone</th>
<th>Red</th>
<th>Amber</th>
<th>Green</th>
<th>Rationale</th>
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<tr>
<td>7) Local Faculty Groups meetings</td>
<td>LFGs that have not had their minimum three mandatory times a year meeting and produced minutes and Annual Audit and Review.</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>KSS manages all training through a structure involving Local Academic Boards and Local Faculty Groups (LFGs). This was to ensure that all LFGs meet regularly to the standards set by KSS and provided minutes of those meetings.</td>
</tr>
<tr>
<td>8) Adequate tracking of trainer data</td>
<td>Percentage of Trust identified Educational Supervisors where the Trust has in a database their up-to-date position on QESP, their equality and diversity training status and their status in being fully trained for workplace based assessment.</td>
<td>&lt; 75%</td>
<td>76-90%</td>
<td>&gt; 90%</td>
<td>This was to ensure that Trusts maintained basic accurate data set to ensure compliance of the GMC standards.</td>
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<tr>
<td>9) Value added in education</td>
<td>Evidence of significant value added in PGME including: implemented educational innovation, particular help and expertise in remediation, commitment to the use of simulation, innovative use of information technology, learning sets between primary and secondary care. The assessment of overall progress with some or all of these will be agreed with the lead visitor at the end of the Deanery Contract Review process.</td>
<td>Little evidence or significant innovation or excellence</td>
<td>Some evidence of significant innovation or excellence</td>
<td>Good evidence and significant innovation</td>
<td>This was entirely subjective and an attempt to reward those organisations who had made the greatest educational progress.</td>
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</table>
### Table II – LEP Metrics 2011 – Definitions

<table>
<thead>
<tr>
<th>LEP</th>
<th>Milestone</th>
<th>Red (≤ 60%)</th>
<th>Amber (61–90%)</th>
<th>Green (≥ 90%)</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Qualified Educational Supervisor Programme</td>
<td>The proportion of Trust identified Educational Supervisors who have completed both parts of QESP or successfully completed the Grandparent Clause.</td>
<td>Less than 60%</td>
<td>61–90%</td>
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<tr>
<td>2</td>
<td>GMC Survey (trainers)</td>
<td>Percentage of Trust identified Educational Supervisors who have completed the GMC Survey.</td>
<td>Less than 50%</td>
<td>51–75%</td>
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<tr>
<td>3</td>
<td>GMCSurvey (trainees)</td>
<td>Percentage of Trainees who have completed the annual GMC Survey.</td>
<td>Less than 80%</td>
<td>81–90%</td>
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<tr>
<td>4</td>
<td>Foundation Quality</td>
<td>Number of red flag indicators found by the end of the most recent Foundation visiting process (consent, site marking, immunosuppressants) or annual STFS survey.</td>
<td>3 indicators</td>
<td>1-2 indicators</td>
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<td>5</td>
<td>Less Than Full Time Training (LTFT)</td>
<td>Trust should encourage and support LTFT. Nationally the DH wish to see all trainees who want to do LTFT to have access to it. The measure is the number of trainees that the Trust has been offered but unable to accommodate in the past year.</td>
<td>2 or more</td>
<td>1</td>
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<td>6</td>
<td>PAs for education in job plan</td>
<td>All consultants should have clearly designated SPAs/PA time in their job plan for their educational activities to the published standards agreed in NHS SEC. The percentage of consultants undertaking education with identified educational PAs/SPA time in job plan.</td>
<td>0–50%</td>
<td>51–90%</td>
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<td>7</td>
<td>Local Faculty Group (LFG) Meetings</td>
<td>LFGs that have not had their minimum 3 mandatory times a year meeting and produced minutes and Annual Audit and Review.</td>
<td>2 or more</td>
<td>1</td>
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### LEP Milestone

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<th>LEP</th>
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<td>8</td>
<td>Adequate tracking of trainer data</td>
<td>Percentage of Trust identified Educational Supervisors where the Trust has in a database their up-to-date position on QESP, their equality and diversity training status and their status in being fully trained for workplace based assessment.</td>
<td>Less than 75% or failure to capture any of the 3 data sets</td>
<td>76-90%</td>
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<td>9</td>
<td>Support for trainees</td>
<td>Overall sickness absence for trainees in the preceding six months.</td>
<td>5% or over</td>
<td>2.1-4.9%</td>
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<td>10</td>
<td>Trainee satisfaction with the LEP</td>
<td>Overall trainee satisfaction taken from the most recent GMC Survey.</td>
<td>Less than 75%</td>
<td>75-79.9%</td>
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<td>11</td>
<td>Appointing high quality trainees in SEC Trusts</td>
<td>Adequate data for specialty programmes in the KSS prospectus to meet (a) the requirements of the national code of practice and (b) to attract trainees to the programme. (Assessed by Head of Specialty Workforce)</td>
<td>Inadequate details of data to meet requirements of (a) and (b)</td>
<td>Inadequate data for either (a) or (b) or generally poor information</td>
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<td>12</td>
<td>Board-level Engagement in Education and Training</td>
<td>There must be full Board-level engagement in education and training, including a named individual and evidence that Board engagement is active.</td>
<td>There is no Board member and education and training has not been discussed at Board level in the preceding year.</td>
<td>There is a named Board member, education and training has been discussed at least once on the Board during that year; and the named Board member has attended the LAB on at least one occasion during the year.</td>
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**NOTE:** The numbers on the chart have been added to allow the LEPs to be ranked by score. RED = 0, AMBER = 1, GREEN = 2. (The grey areas indicate where a standard is non-applicable. These have been scored as 2.)
### TABLE III – LEP Metrics 2010 – All LEPS Rank with Scores

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### TABLE IV – LEP Metrics 2011 – All LEPs Rank with Scores

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NOTE: The numbers on the chart have been added to allow the LEPs to be ranked by score. RED = 0, AMBER = 1, GREEN = 2.

(The grey areas indicate where a standard is non-applicable. These have been scored as 2.)
2.9 Supporting Students Attending a Fitness to Practise Committee by Ensuring Procedural Fairness

Professor Timothy J David, Sarah Ellson and Dr Hannah Quirk

Introduction

The ordeal of facing a Fitness to Practise (FTP) Committee that might decide to end a career in medicine is probably the most difficult situation a medical student is likely to face. There are many ways that a student can and should be helped to prepare for, and respond to, such an event, including permitting students to obtain legal advice and representation.

Regardless of what is done to help a student cope with such a hearing, this article expresses the view that ensuring procedural fairness at the meeting is the greatest priority of all. This piece sets out the important principles to be followed by a committee to make sure that the procedure is fair, and it offers some practical advice on how to ensure that the outcome is also fair. It concludes by considering two particularly difficult areas:

- students with mental health problems; and
- students who, despite warnings, repeatedly exhibit low level forms of unprofessional behaviour.

Most student problems can be dealt with by support and guidance

Most student problems are dealt with on the basis of advice, support, warnings, and input from the occupational health, disability or other support services. FTP committees consider only the tiny proportion of particularly serious or complex cases that cannot be dealt with in this way. The General Medical Council (GMC) has given advice about the thresholds for deciding to refer a student to a FTP committee, and in 2011 this was required in 381 of 41,268 UK medical students.

Principles to be followed when making decisions

The case should be dealt with in a timely fashion. If possible, a student should not have to wait for a prolonged period (for example nine to 12 months) for a hearing and a decision.

The student must know exactly what he or she has allegedly done wrong. Allegations must be provided in writing and in sufficient detail to enable a student to respond. Examples of allegations (without further information) that lack sufficient detail are ‘academic malpractice’, ‘unprofessional behaviour’ or ‘dishonesty’. In the case of dishonesty, it is important that the precise details of each allegation are provided and that the word ‘dishonesty’ is used in the allegation, because fairness requires that when serious allegations such as dishonesty or sexually motivated conduct are alleged, a student might be placed on notice. The student should know who has made the allegation, due to the fact that it may be hard to defend oneself against anonymous allegations.

The FTP Committee must be, and must be seen to be, independent and neutral. This means that the members of the committee must not have had significant previous involvement with the student. A person must not be an FTP Committee member if he or she has:

- made a complaint against the student;
- been directly involved with the student (for eg, as a personal tutor or academic advisor, or who has already been involved in making decisions relating to the student, eg, as Dean of the Medical School).

Remote contact (eg, having given some lectures attended by the student), is unlikely to be a problem.

The student, the Committee, and the representative of the medical school, must all be supplied with the same papers concerning the case. It would be unfair if members of the Committee had access to any papers that had not already been made available to the student. It would be unfair for the medical school representative to have available the student’s record file from which, during the meeting, are plucked new and unfavourable items of information.

Papers must be circulated sufficiently in advance to give the student adequate time to prepare a written response which can be pre-circulated to the Committee and the medical school. It would be unfair to allow the student to see the allegations and the other papers only a few minutes before the meeting commences.

Both sides (medical school and student) should have equal access to the Committee and have an equal entitlement to be listened to, and to advance evidence. It would be unfair, for example, if a medical school but not the student was allowed to produce witnesses, or if one party was excluded whilst the other party made submissions. Care should
be given before, during and after a hearing, to ensure that neither side is alone in the committee room when the other side is not present, in case this gives an impression of undue influence or access.

Neither side (medical school or student) should be allowed to take the other by surprise – if they do, an adjournment may be required. Information and documents should have been exchanged in advance, and the late arrival of documents should be discouraged. It is unfair for a student to be faced with documents at the last minute, and it is equally unfair if those representing a student suddenly produce significant new material during or at the conclusion of a hearing. Each side must be allowed sufficient time to put its case. For example, it would be unreasonable if several hours were given to a medical school to present its case against a student, leaving a student only a few minutes to put across his or her case and answer questions. A simple method to prevent such problems is to have an agenda which includes allocated times for the School representative and the student to explain their positions and answer questions. This enables everyone involved to be aware in advance of exactly when the Committee will retire to make its decision.

A student must be allowed to be accompanied at the committee meeting. The regulations should explain who, if anyone, can accompany a student (eg, another student, a tutor or other member of staff). Some universities have a rule which does not allow a student to be accompanied by a lawyer, whereas others (including Manchester) allow a student to be accompanied by a lawyer (or someone else external to the institution such as a British Medical Association representative). Our view, set out elsewhere, is that there are a number of reasons why students should be permitted legal representation.

The Committee needs to be satisfied that it has been provided with as much information as is required for a proper decision. This may go beyond what is offered by either side if, for instance, the committee has concerns about a student’s mental health that were not previously appreciated. In such cases it may be necessary to defer making a decision until the student has been assessed by an independent psychiatrist.

The decision must be that of the committee alone. If specialist advice is needed, for example on a health condition or a legal point, such advice should be given verbally in front of both of the parties (ie, the student and the medical school representative), or shared in writing, so that if necessary each side can comment or disagree. Such advice should be confined to the question asked. A prompt decision is highly desirable, but the decision should in any case not be delayed unduly.

Fairness requires that decisions ought to be accompanied by written reasons, sufficient to make it clear to the losing party why it is that he or she has lost. The principle is that it should be possible to tell from the outcome letter not only what the findings of fact and the decision were, but why they were made.

A student should have the right of appeal against a Committee decision, and the possible grounds for appeal and any specific regulations concerning appeals should be set out in the FTP regulations. The usual possible grounds for an appeal are:

- new evidence that could not have been available at the time of the Committee;
- a procedural error; or
- an unduly harsh outcome.

Appeals must be dealt with by people who have no connection with the student or the original FTP Committee meeting. Once the appeal process has been completed, a student in the UK can complain to the national Office of the Independent Adjudicator.

Ensuring fair outcomes

It is not uncommon for those dealing with student FTP cases, particularly those involving misconduct, to be taken aback at the seriousness of the misconduct, with the risk that an unduly harsh outcome will result. Set out below are a number of approaches that may help to ensure fairness.

When writing or revising FTP regulations, it is vital to avoid mandating outcomes in specific circumstances (eg, mandating expulsion in dishonesty cases). No two cases are ever the same, and each should be dealt with on the merits of the individual case.

It is useful to remember that it should not be the intention to punish; whilst a sanction may have a punitive effect,
that should not be the aim. In addition to supporting and guiding the student, wherever possible, the purpose of sanctions should be to protect the public interest. This includes safeguarding any patient or member of the public who may come into contact with the medical student and maintaining the reputation of the profession.

When contemplating sanctions, it is helpful to consider the least possible sanction at first, and to articulate in the written determination the reasons why that would be insufficient to deal with the problem. One should only proceed to the next level if it is possible to give sound reasons for doing so. This is known as the principle of parsimony. This is particularly applicable to the ultimate sanction of expulsion, which it is generally agreed should only occur if there is no other way to protect patients and maintain public confidence in the profession. The GMC guidance has given examples of behaviour that are fundamentally incompatible with continuing on a course or practising as a doctor.

Any sanctions should reflect the previous history and character of the student. Any mitigation which has been accepted should also, given the public interest imperative, look at the likelihood of misconduct recurring. In addition to this, sanctions should be proportionate, balancing the need to protect the public and maintain public confidence in the profession, against the needs and interests of the student.

Finally, it is helpful to bear in mind the kind of sanctions that are applied to practising doctors by the GMC, and try to avoid a harsh outcome that is totally out of keeping with the range of outcomes seen in registered doctors.

Conclusions

FTP Committees have great powers. It is recognised that in an ordeal of this sort, the process itself may be seen by the student as a punishment. The task of the Chair is to try to minimise this effect as far as possible, a task which will be made easier if the procedures are fair and transparent.

Two particular types of cases pose considerable challenges. One category, comprising approximately one third of all FTP cases, is those that involve mental health, drugs and alcohol. The difficulties one may have to deal with include:

- poor co-operation with occupational health and other services (including refusing assessment or treatment);
- a mixture of conduct and health problems which can sometimes be hard to disentangle;
- the challenge is to try to provide appropriate support (to help the student) and supervision (to protect the public) simultaneously.

It is important that all students with mental health problems of six months’ duration or longer are referred to each university’s disability support service, to ensure that reasonable adjustments have been identified and put in place.

The second problem category is that of longstanding concerns about attendance, work habits and unprofessional behaviour. The individual problem episodes are insufficiently severe to justify calling a halt to a student’s studies, and despite advice and warnings, problems drag on for many years – sometimes accompanied by the need to repeat one or more years because of examination failure. A number of mitigating circumstances (such as mental health problems, relationship problems, bereavement and so on) are often a feature. Unlike pre-registration nursing education, where regardless of the circumstances, studies are strictly limited to five years by the Nursing and Midwifery Council, there is no nationally agreed time limit for medical studies. In extreme cases, students have been allowed to remain on the programme for 10 years or more. Whilst this is a matter for the GMC to address, having abandoned the recommendation to limit studies to seven years (in its guidance Student Health and Conduct), excluding a pre-medical year, intercalation or PhD or other research programmes), the key advice for medical schools is to ensure that there is impeccable documentation for each and every problem episode. The absence of such documentation is likely to lead to an insufficient factual baseline upon which to justify a significant intervention.

It is a curious fact that doctors, who are accustomed to making very careful records of clinical encounters, sometimes fail to be meticulous in recording details of their professional interactions with students.
References


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