

# Workplace Based Assessment: A guide for implementation

In April 2010 the Postgraduate Medical Education and Training Board (PMETB) was merged with the General Medical Council (GMC).

There are significant benefits to be delivered through a more seamless and consistent approach to education and training throughout doctors' careers. A single point of responsibility from admission to medical school, through postgraduate training, to continued practice until retirement will help to ensure consistency of expectations and standards.

Through the merger, the GMC has acquired the legal functions formerly performed by PMETB in relation to the regulation of specialty including GP training. These functions include setting standards for specialty including GP training and providing quality assurance of the delivery of specialty including GP training against those standards.

Documents and webpages that continue to apply have been reviewed and where necessary updated to reflect the merger.

This paper was originally produced by PMETB in conjunction with the Academy of Medical Royal Colleges (AoMRC) prior to PMETB's merger with the GMC and has been updated in light of the merger.

## The purpose of Workplace Based Assessment Guidance

The aim of this document is to provide guidance on designing and implementing workplace based assessments (WPBAs). WPBA is an essential part of an assessment system, alongside traditional examinations. A comprehensive assessment system will collectively form an overall profile of an individual by testing their skills, knowledge and behaviours against those identified in a GMC-approved curriculum.

This guidance is designed to highlight the advantages of WPBA and provide an overview for overcoming the potential difficulties that might be faced when introducing new methodologies alongside more traditional practice.

This guidance will outline:

- the purpose of WPBA and its framework
- the role of WPBA in informing and driving an educational programme
- the ability of WPBA to provide ongoing assurance of patient safety
- the use of WPBA to monitor progression
- the use of WPBA in immediate feedback to help learning.

## Why do we need a guide and what does this guide aim to achieve?

Throughout medical training, particularly where there are large numbers of candidates for relatively small numbers of places in a particular training programme, a competitive culture exists. Competition can make people wary of assessment, and efforts to provide feedback on progress and attainment can unintentionally be seen as threatening. One aim of this guide is to emphasise that WPBA requires a change in that culture. It sets out principles by which WPBAs can be implemented in such a way that the environment of competition changes to one of nurture and of professional educational support.

Educational supervision must include regular feedback about how agreed learning targets are progressing and encourage the practice of reflection. It also means keeping a record of such interactions between trainer and trainee so that both parties can look back on how an individual

has been progressing. The inclusion of assessments of performance in the workplace, rather than relying on formal and infrequent high-stakes examinations alone, should foster an environment where assessment for learning (along with assessment of learning) is seen as normal.

However, it is absolutely essential, in the potentially high risk environment of clinical practice, to be able to identify those in need of additional support at an early stage. The record of on-going progress is used by educational supervisors in compiling evidence-based reports on the progress of a trainee and as evidence informing high stakes judgements on a trainee's future progression, as part of the annual review of competence progression (ARCP).

This duality of purpose in assessment – the need to help trainees learn and develop; and the need to provide evidence for judgements on their progression – needs to be understood by all parties. This document explains the need to balance the benefits of these two purposes. If trainers and trainees approach WPBA in an open and transparent manner, then a culture which nurtures trainees need not be deflected by the essential requirement to assure everyone, especially the public, that our doctors in training demonstrate appropriate levels of competence for their stage of development.

The following have been identified as strengths and limitations of WPBAs, which this guidance has been designed to address.

**Strengths of workplace based assessments include:**

- WPBA can explore all of the areas in Miller's pyramid (Miller 1990) which describes an overall assessment framework that is relevant to medicine both as a cognitive and skills-based discipline.
- Although in principle WPBA is learner-led (with the trainee identifying areas for observations and feedback), it is also important to appreciate that it can also be trainer-driven, depending on the circumstances. As the relationship between trainer and trainee develops, then both should feel free to plan WPBA. As with any potential learning experience, it should be routine that a debriefing takes place, as soon as possible after the assessment, to provide information to guide learning.
- WPBA tools provide a structure to inform debriefing through a series of carefully worked out descriptors that can be used consistently by different observers to map achievement across competency based curricula.
- These techniques reinforce an educational culture where feedback for learning is the norm.
- WPBAs help identify trainees who are struggling and are in need of extra support early in training. This creates a supportive environment for trainees in difficulty.

- The WPBA framework identifies areas for improvement that are based on supportable evidence. Everyone, even the most able, has areas in which they could still improve; in this way, WPBAs can encourage an aspiration to excellence.
- As part of an assessment system, WPBA can be used to sample widely across different workplace tasks relevant to the overall curriculum.
- Through the natural variety of a trainee doctor's work, WPBA instruments provide the opportunity to engage with a range of different assessors (Vleuten 2005) although some WPBAs are more likely to be undertaken mainly, if not exclusively, by the same assessor.
- A series of WPBAs inform assessments of learning, which are essential waypoints for the judgement on progress throughout training.
- WPBAs should be used together with more traditional summative assessments of learning. This is essential because the authenticity and validity of WPBA, which is assessing actual performance, can supplement the more reliable but typically less valid, traditional assessments of learning that assess knowledge and less contextualised clinical skills under formal examination conditions.
- The challenge is to improve utility of WPBAs to enhance the overall assessment programme. (Vleuten 2005).

It is clear from the points made that this guidance is not proposing that WPBA should exclude the ongoing need for quality assured and well-developed modern examinations. Indeed there are potential benefits for including both formal, high stakes assessments and WPBAs in an assessment system. WPBAs will act as a supportive learning tool to assess readiness for progression to summative tests.

**Limitations of workplace based assessments include:**

- In general, the current evidence (Wilkinson 2008) suggests that WPBA is not sufficiently reliable to stand alone and that it should be used together with endpoint high stakes 'know how' and 'show how' assessments of learning.
- It is important to avoid the danger that assessments in the workplace are seen as simply opportunistic. They need to be appropriately utilised by both trainee and trainer/assessor through dialogue and properly structured learning plans.
- Low scores tend to be seen as failure by trainees rather than assessment for learning opportunities. We need to emphasise to both trainees and assessors that less than perfect scores should

be seen as the norm early on and, through informed feedback, progressive improvement would be expected. WPBAs should be recognised as a series of essential educational events along a learning trajectory, not as ends in themselves in the way that traditional formal examinations can be seen.

- In medicine, including WPBA as part of a system of assessment is a novel concept. Trainees are by their nature competitive. They want to achieve high scores and may therefore be very likely to choose to be assessed only towards the end of the programme. However, following a target driven 'tick-boxing' approach defeats the purpose of WPBAs in encouraging reflection and development, monitoring progress and guiding learning.
- Achieving apparent success in a series of WPBAs early in training might impede the motivation to improve through more practice and experience. In other words, the trainee might be inclined to accept competency and adequacy as sufficient, rather than aspiring to excellence.
- There is clear evidence that weaker trainees are the least likely to seek feedback and therefore it is essential that there is close monitoring through the structured learning plan to ensure that WPBAs have been done regularly and repeatedly, particularly where there are concerns about performance. It is very important that trainees are not normally permitted to defer assessment because this might result in trainees in difficulty not being identified early enough, with implications for both patient safety and trainee remediation. It is also important to make it clear that trainees who are below the required standard at the beginning of a phase of training are not inevitably going to remain so if they receive appropriate support.
- WPBA is time consuming. Resources for educational supervision and feedback have not been clearly identified. The PMETB trainers' survey reports (2008) identified very significant pressures on educational supervisors who lack time within their clinical work plans to supervise and give feedback to trainees.
- Unfortunately, because senior staff are often very busy, there has been a tendency for trainees to seek less senior staff to act as their assessors. Emerging evidence (Wilkinson 2008) suggests, not surprisingly, that the more senior, expert staff, are more objective judges and give lower, but more accurate, ratings than less senior members of the team.
- Standardising judgements in WPBA is more difficult than for an end point assessment of learning, and this can be confusing. Some assessors judge in relation to where trainees should be, in their opinion, at that particular point in training. Others judge

against the endpoint of that stage of training. Most WPBA forms are designed to assess against the endpoint of a particular stage of training, so it is essential that the standard is explicit and clearly understood by trainees and assessors.

- Trainers and assessors must have a good understanding of the criteria against which judgements are being made; otherwise they might be less likely to make hard decisions in relation to the trainee's future, assuming that others further down the line will make the more difficult decisions. Making negative judgements is culturally difficult for trainers unless support is in place for them as well as trainees. As we will indicate, making such judgements is made easier if agreed behavioural descriptors are available on which to anchor them. These descriptors need to be transparent to both trainees and assessors.

In order for WPBAs to be valid and useful, trainees and assessors need to understand and value their role in the educational process. The assessment tools and findings from WPBAs must be used formatively and constructively. Without this understanding, WPBA tools will potentially become no more than a series of external requirements and hoops to be jumped through, and the educational validity of the process will be lost.

**Table 1: Strengths and limitations of WPBA**

Strengths	Limitations
Potentially highly valid. Can assess 'does' (what the doctor actually does in practice) and contribute to an understanding of whether the trainee can apply the skills and knowledge they have to a particular situation.	Not yet robust in terms of reliability. Other assessments of 'show how' and 'know how' are needed to provide reassurance in terms of reliability. WPBA does not assess knowledge directly.
Trainee-led.	Can be opportunistic, not needs driven, unless there is proper understanding between trainer and trainee. It must be acceptable for trainers to be also able to trigger WPBA.
Maps achievement in a competency framework.	Aspiration to excellence can be lost.
Identifies those who might need particular educational support early in training.	If educational supervision is not working appropriately, trainees are more likely to try to delay or avoid assessments, or ignore feedback.
Creates a nurturing culture.	Not properly understood in a competitive environment.
Provides feedback.	WPBA requires both time and training, which must be allowed for within the educational programme and properly resourced.
Samples widely in the workplace across the curriculum.	Unless there is excellence in educational supervision and unless it is taken seriously by both trainee and assessor, WPBA is learner dependent and vulnerable.
Utilises a range of judges and assessors.	Negative judgements can be 'deferred' to others and avoided. Expert assessors are proving to be more accurate than junior members of the team, who tend to overestimate competency.

### WPBA in practice: guidelines

The guidelines below describe how to design an assessment system for WPBA and help curriculum planners to fit them into an overall framework. The GMC and AoMRC believe, however, that by gaining insight into the overall process through this guidance, trainers and trainees will be better equipped to make the best use of WPBA. The GMC does not comment on individual instruments or techniques and for those requiring this information please go to the Academy of Medical Royal Colleges at [www.aomrc.org.uk](http://www.aomrc.org.uk).

#### Guideline A

**The purpose of WPBA must be clear. The framework needed to ensure this is achieved by mapping to an approved curriculum.**

The rationale and purpose of the WPBA programme must be transparent to both trainees and trainers. WPBA should be constructive and provide an environment to support assessment for learning.

The following aspects of purpose can be further explored:

#### **A1 The use of WPBA to support education and maximise learning impact**

**A1:1** WPBA should reflect the intended educational impact and outcomes of the curriculum at least to the minimum level of competency, but should also support and encourage performance beyond this.

**A1:2** The intention should be to foster an aspiration towards excellence: the accumulation of experience to encourage expertise after the achievement of competence. It should not be seen to be acceptable to be simply achieving the bare minimum. Trainees should demonstrate progress in their performance through on-going improvement in their WPBAs.

#### **A2 Assuring patient safety**

An understanding of the acceptable level of clinical competence required for a particular stage of learning is essential. This must always ensure that patients are safe during training through appropriate supervision and assessment.

**A2:1** The curriculum will set a standard of competence for completion of the training programme. The culture should not be of minimal levels of acceptable performance, but of using WPBA in a learning culture that aspires to excellence. Effective adult to adult feedback should become an essential part of this culture.

**A2:2** During a given training period within an overall training programme, there should be a clear standard to enable trainees needing remedial support for their given stage to be identified.

### **A3 Monitoring progression: Structured learning plans**

**A3:1** Structures should be in place for trainees to identify learning needs and plan assessments with their supervisor as they progress through training. Excellent educational supervision is essential to encourage reflective feedback, set goals and support trainee development over the short term, whilst keeping the long term, exit goals in mind.

**A3:2** Assessment of learning. There should be a purposeful framework to gather a body of evidence for the final progression decision, with points of judgement planned across training from beginning to end, to enable potential problems to be identified as early as possible. Since each judgement does not stand alone, its role in contributing to an overall decision about progression should be clear. A clear link must be made to the annual review of competence progression (ARCP).

### **A4 A transparent policy on assessment for learning and its relationship to assessment of learning**

**A4:1** The primary purpose of WPBAs is to provide constructive feedback – assessment for learning for the trainee. However the trainer is required to identify trainees not progressing along their structured learning plan so that early remedial action can be initiated. To this end, there should be adequate sampling, using WPBAs, across a range of workplace environments.

**A4:2** The final assessment of learning based on an evidence-based progression judgement should not be the responsibility of the individual supervisor or of the assessors that the trainee encounters, but that of an independent expert panel that assesses both the trainee's portfolio of achievement and the educational supervisor's written report. Both the supervisor's report and the subsequent progression judgement should be supported by evidence which includes, but is not exclusively dependent on, a series of WPBAs covering an appropriate range of different clinical contexts.

**A4:3** An explanation of the progression decision must be provided, based on the initial structured learning plans and their ongoing review (see guidance C2).

## **Guideline B**

### **Transparent and valid mapping of WPBA to the curriculum is essential.**

#### **B1 Blueprint**

There must be a clear blueprint against the GMC approved curriculum to identify which competencies and intended learning outcomes are to be assessed by WPBA. The responsibility for this blueprint lies with the Royal Colleges and Faculties.

#### **B2 Agenda setting**

The trainee should agree an appropriate plan of their learning for a given training period with their educational supervisor. There consequently should be a regular dialogue with the supervisor about what should be included as evidence in terms of WPBA for that training period. To address the pitfalls of context specificity, the content of all the WPBAs available to the trainer and trainee should be mapped against the blueprint. The responsibility lies with the educational supervisor in agreeing the elements to be met with an individual trainee.

#### **B3 Selection of tools**

**B3:1** The assessment tools should be designed and continuously refined to maximise their validity – in other words, to ensure they assess what they are intended to assess and have a positive impact on learning and performance. They must be based on observable performance and assessed against specific criteria.

**B3:2** The range of WPBA methods in the assessment system should assess skills (direct, procedural, clinical and communication), in contexts of community and hospital and, where at all possible, be holistic. This will address a particular skill in the context of realistic settings and as a component of professional practice with assessments of professional behaviour, rather than simply as the skill which is the prime focus of the assessment.

**B3:3** Both trainee and trainer should be clear about what is being assessed by each tool at each assessment, as well as the standard against which the assessment is being made.

## **Guideline C**

### **Setting up the WPBA process**

#### **C1 The environment**

**C1:1** The workplace should offer a constructive environment where a trainee understands that they are still developing. As such, within the primacy of ensuring patient safety, they may not always achieve high ratings. Indeed, it is inevitable that high

ratings will not be achieved in the early stages of particular phases of training.

**C1:2** Both trainees and trainers need a supportive culture receptive of WPBA assessment methodology.

**C1:3** Stakeholders (trainers, trainees, managers, patients) should actively be involved in the development and implementation of the programme to ensure transparency and understanding of the process.

## **C2 Gathering evidence**

**C2:1** There should be a framework to support the trainee in planning and gathering evidence from WPBAs to ensure that: (a) learning occurs; (b) progression is monitored from start to end of training; and (c) there are clear links with the ARCP process as laid out in the Gold Guide (MMC 2009). This should be encompassed in a structured learning plan that includes both educational and experiential objectives and their planned assessment.

**C2:2** There should be multiple assessments by a range of assessors covering a range of contexts that are blueprinted to the curriculum.

**C2:3** The methods of assessment chosen should be feasible and practicable in the workplace according to the concept of utility (Wilkinson 2008).

**C2:4** A mechanism must be in place to draw together evidence demonstrating the progress of the trainee, such as the ARCP process described in the Gold Guide 7 (MMC 2009). Such evidence will necessarily be diverse, and must include WPBA findings and outcomes. Educational supervisors will need training and support in making recommendations about the progression of trainees and possible requirements for additional training. WPBAs are not designed to stand alone. They form only a part of the body of evidence against which high stakes decisions are made at ARCP. This includes formal examinations and a toolbox of instruments that assess across the curriculum and across the domains of skills, knowledge and attitudes demonstrated through behaviours.

**C2:5** In the interests of patient safety, there should be a minimum number of assessments to appropriately assess the trainee across a range of clinical domains. There is no absolute number of WPBAs required and contemporary best practice requires a flexibility of approach.

A trainee who is performing excellently will not require the same frequency of assessment as one who is in difficulty. A poorly performing trainee will require more diagnostic assessments to identify the areas for remedial action. So, not only will the frequency of assessments vary from trainee to trainee, but so, sometimes, will the type and focus of

assessments undertaken. Trainees should be made aware of this.

Furthermore, some aspects of the curriculum will require more rigorous assessment than others, and this should be made clear in the blueprinting process. For example, in order to ensure that a trainee can perform a complex procedure and manage any complications without supervision, they may need to be observed and assessed carrying it out a considerable number of times. In contrast, the quality of their clinical records or teamwork might be reliably assessed on the basis of fewer samples planned to cover a broad spread of different clinical situations.

We therefore recommend that any given WPBA system provides sufficient sampling across the curriculum to clearly identify and confirm patient safety and satisfactory performance. We also strongly recommend that where performance below the required level is detected, additional assessments are made to identify the problem and then to monitor progress.

## **C3 Making judgements during a WPBA**

**C3:1** The principles of integrity, commitment, responsibility and honesty of judgement and process are essential and intrinsic.

**C3:2** We recommend that assessors should make judgements against word descriptors and not against numerical scores. There must be clear, performance-based written descriptors of what is being judged, and at what level. We advise against the use of numerical Likert-type scales, in recognition of emerging evidence that narrative information enriches the process (see PMETB guidance published in 2007) and that numerical scales are inappropriate for rating and expressing issues concerning clinical competence.

**C3:3** Judgements should be independent, made without collusion and should apply specifically to the assessment in hand. Training of assessors to ensure that they are familiar with the standard and process is essential. If possible, there should also be regular audit and review of judgements by, for example, Specialty Advisory Committee members, or local deanery representatives and feedback given to the assessors, with further training provided if necessary.

**C3:4** Evidence from WPBAs must be triangulated (see guidance C4). There should be multiple judgments from multiple assessors, structured within the WPBA programme. This should include comprehensive sampling across and within domains, using different assessment methods and assessors, to build a clear picture of performance.

**C3:5** There should be a clear standard against which these judgements are made. Confusion can arise if,

in the progression through training, it is not always clear where, on the stages from entry to exit from a programme, judgements relate. We strongly recommend that the predefined exit standard is used to inform **all** judgements and to formulate constructive feedback. The level of expected trainee performance for a given stage should be pre-defined against the exit standard in the structured learning plan. It should be made clear that the expectation is for judgements to improve as the trainee progresses.

#### C4 Gathering the evidence

**C4:1** The Gold Guide's (MMC 2009) ARCP process should be in place to make an overall assessment using WPBA judgements along with the results of other assessments.

**C4:2** During a learning period that is based on a transparent structured learning plan agreed between the clinical supervisor and trainee, the level of achievement at the end of this period relative to the plan will form the body of evidence by which the educational supervisor reaches a conclusion and makes a report to inform the decision of the ARCP panel.

**C4:3** The overall judgement on a trainee's WPBA portfolio to ratify progression should be informed by a report from the educational supervisor but made by an independent panel. This panel should review all the evidence provided (see guidance C4:1) and make the final judgement.

#### C5 Providing feedback

**C5:1** A culture of assessment for learning while nurturing progression should be established within the workplace. This will ensure that trainees view the process as an opportunity to improve their performance through feedback, rather than a threat to their progression.

**C5:2** WPBA assessor training should include guidelines to ensure trainees are constructively informed in a way that is conducive to their progress.

### Guideline D

#### The roles and responsibilities of assessors.

##### D1 Training

**D1:1** The effectiveness of WPBA strongly depends on those undertaking the assessments. Assessors require training to help them to make robust, consistent, independent and defensible judgments. They must be clear about the (usually endpoint) standards against which their judgements will be made, the word descriptors and the mechanisms for recording assessment outcomes.

**D1:2** All assessors should make written records of feedback given and actions taken, to aid decisions on progress.

**D1:3** Consideration should be given to developing a national training and calibration process for assessors. Resources might include benchmarking materials, such as video recordings, that could be used locally for the cascade of training.

##### D2 Support

Professional advice and support for assessors is important in developing personal confidence, which will be particularly required when identifying and defending judgements of poor performance. Sources of support include colleagues in Royal Colleges, Faculties, deaneries, and NHS trusts, or other local education providers.

### Guideline E

#### The roles and responsibilities of trainees.

**E1** Trainees need encouragement to use the WPBA process to aid their development and to move on from the prevailing competitive 'high grade achievement' assessment culture. Trainees gaining grades below the specified endpoint standard should be accepted as the norm at the beginning of training and, as they gain feedback through assessment for learning, they will be able to focus on specific improvements which are then reflected in their overall performance. This process should encourage reflection and the development of self-directed and self-managed learning.

**E2** Trainees should learn to be insightful of judgements of self in order to nurture the 'learner led' philosophy of WPBA. The trainee's portfolio should be suitably constructed to ensure that the process is directed by the trainee but is supported by their supervisor. All assessments should be discussed with the educational supervisor to ensure appropriate feedback is given, acted on, and that the assessment cycle is completed.

### Guideline F

#### Quality management (QM)

Quality management (QM) should be in place to monitor implementation of the WPBA process according to the guidelines given above. Table 2 gives an example of a checklist that might be used when designing a QM system.

**Table 2: Quality management checklist**

WPBA programme	QM criteria
<b>1 The purpose</b>	Is there clarity and transparency of educational purpose? Does the WPBA reflect the philosophy of the curriculum and support the training appropriately?
<b>2 The overarching competency structure</b>	Do the learning outcomes assessed over the training period ensure patient safety?
<b>3 The blueprint</b>	How well do the competencies being tested map against the curriculum? Does the blueprint confirm a comprehensive design, allowing adequate sampling?
<b>4 Feedback for learning</b>	Is the assessment system 'learner-led' allowing individual trainee's needs to be met? Are 'struggling' trainees being identified?
<b>5 The assessment tools</b>	Is the choice of tool appropriate to the competency under test? Can you successfully apply the utility equation?
<b>6 The environment</b>	Is the assessment environment supportive? Is there explicit involvement of all stakeholders?
<b>7 Making judgements</b>	Has a robust 'exit' standard been set? Are the marking criteria clearly defined? Are constructive feedback mechanisms in place?
<b>8 Aggregation and triangulation</b>	Are judgments of overall performance based on aggregated multiple sources of information? Is there a framework for triangulation of findings?
<b>9 The assessors</b>	Are they appropriately selected, trained and supported? Is a monitoring process in place?
<b>10 The trainees</b>	Is there appropriate educational supervision? Are trainees using the system to reflect and improve their training and performance, or simply ticking boxes?
<b>11 Quality control of design and administration</b>	Is the WPBA system continuously monitored and adjusted to ensure constructive alignment with the curriculum and its impact on learning?

## Glossary of terms for WPBA guidance

### 360° feedback

See **Multi-source feedback**

### Annual Review of Competence Progression (ARCP)

ARCP is a Postgraduate deanery process which scrutinises each trainee's suitability to progress to the next stage of, or to complete, a training programme. It is usually held annually, but some specialties have more frequent reviews in the early years of training. Foundation Programmes have a similar annual review process. The review panel, which includes the **Programme Director**, bases its recommendations on evidence in the trainee's portfolio of experience and competencies gained, together with the reports of the Supervisor(s). The ARCP is not in itself an assessment exercise.

### Appraisal

Appraisal is an individual and private planned review of progress between **Trainee** and Supervisor that focuses on achievements, future learning and career guidance. Appraisal forms part of the initial, interim and final meetings that a Trainee has with their **Educational or Clinical Supervisor** during a **Placement**.

### Assessment

Assessment is process of measuring a trainee's knowledge, skills, judgement or professional behaviour against defined standards. Assessment should be as objective and reproducible as possible. A test with high **reliability** should produce the same or similar score on two occasions or by two **assessors**. The **validity** of a test is determined by the extent to which it measures what it sets out to measure and its educational impact. Assessments can be referenced in two ways:

- **Criterion-referenced** refers to an absolute standard: the trainee's performance against a benchmark. Such a benchmark might be the ability to perform a procedure competently without help from the assessor.
- **Norm-referenced** ranks a trainee's performance against all the others in the same cohort as satisfactory for that level of training. Norm referenced assessments are inherently more difficult to determine, and whenever possible should not be used.

Assessment can have different and multiple purposes including determining a level of competence, aiding learning through constructive feedback, measuring progress over time, or to certify competence. Assessments can be categorised as for or of learning, although there is a continuum between these two poles.

### Assessment for learning

Assessment *for* learning is primarily aimed at aiding learning through constructive feedback that identifies areas for development. Alternative terms are Formative or Low-stakes assessment. Lower reliability is acceptable

for individual assessments as they can and should be repeated frequently. This increases their reliability and helps to document progress. Such assessments are ideally undertaken in the workplace.

### Assessment of learning

Assessment of learning is primarily aimed at determining a level of competence to permit progression of training or certification. Such assessments are undertaken infrequently (for example, examinations) and must have high reliability as they often form the basis of pass/fail decisions. Alternative terms are Summative or High-stakes assessment.

### Assessment system

An Assessment System is designed to ensure that trainees learn the knowledge, skills, judgement and professional behaviour required and set out in a curriculum. Contemporary best practice favours assessment systems that are multi-faceted and assess an appropriate spectrum of a syllabus in a reliable way. This is done through a **Blueprint**.

### Assessor

An assessor is an experienced health care professional (HCP) who undertakes an assessment. Assessors should have training in the relevant assessment methodology and should normally be competent (preferably expert) in the knowledge, skill, judgement or professional behaviour that is being assessed. Training is not required for HCPs who providing ratings for **Multi-source feedback**.

### Blueprint

This is a template used to define the content of a curriculum or an assessment, in terms of key **Competencies**. This can help to ensure that the assessments used in the assessment system cover all the competencies required by the curriculum.

### Certification

This is the process by which governmental, non-governmental or professional organisations or other statutory bodies grant recognition to a trainee who has met certain predetermined standards specified by the organisation and who applies seeks such recognition.

### Clinical Supervisor

A Clinical Supervisor is a **trainer**, who is selected and appropriately trained, to be responsible for overseeing a specified trainee's clinical work and providing constructive feedback during a training placement. Some training schemes appoint an **Educational Supervisor** for each placement. The roles of **Clinical** and **Educational Supervisor** may then be merged.

### Competence

Competence is a **trainee's** ability to perform a particular activity to the required standard (such as that required for patient safety), whilst being observed in the workplace or in a controlled representation of the workplace (for example, in simulation). Competence comes from experience combined with constructive feedback

and **Reflective practice** (self-assessment/insight).

Competence is a prerequisite for satisfactory performance in real life, although many doctors progress to a higher level of excellence during their career. A competent doctor may perform poorly for many reasons including tiredness, stress, illness or a lack of resources.

### Competencies

A set of abilities that includes knowledge, skills, judgement and professional behaviours.

### Curriculum

A curriculum is a statement of the aims and intended learning outcomes of an educational programme. It states the rationale, content, organisation, processes and methods of teaching, learning, assessment, supervision and feedback. If appropriate, it will also stipulate the entry criteria and duration of the programme.

### Educational Agreement

A mutually acceptable educational development plan drawn up jointly by the **Trainee** and their **Educational Supervisor**. The content of the Educational Agreement will depend upon the aspirations of the **Trainee** (as laid out in their **Personal development plan**), the **Learning outcomes** required by Curriculum and the opportunities available during the placement. A Structured Learning Plan is an alternative term. The Learning outcomes that have been achieved should be signed off by the Educational or **Clinical Supervisor** at the end of each placement.

### Educational impact

See consequential validity (under **Validity**).

### Educational Supervisor

An Educational Supervisor is a **trainer**, who is selected and appropriately trained, to be responsible for the overall supervision and management of a specified **trainee's** educational progress during a training placement or series of placements. The Educational Supervisor is responsible for the trainee's Educational Agreement.

### Experience

This is exposure to a range of medical practice and clinical activity.

### Formative assessment

See **Assessment for learning**

### Generalizability Theory

This is an extension of classical reliability theory and methodology that is now becoming the preferred option. A multiple analysis of variance is used to indicate the magnitude of errors from various specified sources, such as number of items in the assessment, the number of assessors etc. The analysis is used both to indicate the reliability of the test and to evaluate the generalizability beyond the specific sample of items, persons and observational conditions that were studied.

### High-stakes assessment

See **Assessment of learning**

### Learning outcomes

These are the competencies to be acquired by the end of a period of training.

### Low-Stakes Assessment

See **Assessment for learning**

### Multi-source feedback

This is an important tool for obtaining evidence about interpersonal and communication skills, judgement, professional behaviour and clinical practice. All those working with a trainee (including trainers, fellow trainees and senior nurses/allied health professionals) are asked to rate the trainee's performance in various domains such as teamwork, communication and decision-making towards the end of a training placement. These ratings are collated and fed back to the trainee by their Supervisor. This forms an important part of the **appraisal** process. Alternative terms are peer-review or **360° feedback** (often incorrectly called 360° appraisal).

### Peer- Review

See **Multi-source feedback**

### Performance

Performance is the application of competence in real life. In the case of medicine, it denotes what a trainee actually does in his/her encounter with patients, their relatives and carers, colleagues, team members, other members of staff etc. Performance is not the same as knowing or being able to do everything. On the contrary, it may well be about knowing what you do not or even cannot know – in other words, knowing your own limitations.

### Personal Development Plan (PDP)

A PDP is a prioritised list of educational needs and intended learning outcomes compiled by a trainee prior to meeting with the **Educational Supervisor**. The PDP is an integral part of **Reflective practice** and **Self-directed learning**.

### Placement

This is the period of postgraduate medical training in one specialty at one training institution. In the early years of training there is often more than one placement per year (for example, 3 x 4 month placements in the Foundation Programme). There may be a different **Educational Supervisor** for each placement or one for the whole year. In the latter case, day-to-day supervision will be overseen by a **Clinical Supervisor**.

### Portfolio

This is a collection of evidence documenting a **trainee's** learning and achievements during their training. The **trainee** takes responsibility for the portfolio's creation and maintenance. Portfolios have traditionally been paper-based but many training programmes are moving to electronic (web-based) portfolios. In the UK, portfolios are used routinely as a Record of In-Training Assessment (**RITA**), which forms the basis for the annual review of progress. This process is now termed the **Annual Review of Competence Progression (ARCP)**.

### Professionalism

Professionalism denotes a set of values comprising statutory professional obligations, formally agreed codes of conduct, and the informal expectations of patients and colleagues. Key values include acting in the patients' best interest and maintaining the standards of competence and knowledge expected of members of highly trained professions. These standards will include ethical elements such as integrity, probity, accountability, duty and honour. In addition to medical knowledge and skills, medical professionals should present psychosocial and humanistic qualities such as caring, empathy, humility and compassion, social responsibility and sensitivity to people's culture and beliefs. Professionalism is demonstrated by Professional Behaviour.

### Programme Director

A Programme Director (usually an experienced consultant or GP) who is selected and resourced to manage a postgraduate Foundation or Specialty including GP training programme, which includes a number of Trainees and their respective Trainers, on behalf of the Deanery.

### Reflective practice

This is a means by which **trainees** can develop a greater self-awareness about the nature and impact of their performance. This creates opportunities for professional growth and development. Maximum benefit from reflection are said to occur when the process involves interaction with others (for example, the **Educational Supervisor**) and when trainees value their own personal and intellectual growth. Adequate time for reflective thinking and writing aids the process. Evidence of Reflective Practice is a requirement of many portfolios.

### Reliability

Reliability expresses a trust in the accuracy or provision of the correct results. In the case of assessments, it is an expression of internal consistency and reproducibility (precision). This quality is usually calculated statistically and reported as coefficient alpha (also known as Cronbach's alpha), which is a measure of a test's internal consistency. **Generalizability Theory** is becoming the preferred alternative because, although it is considerably more complicated to calculate, it provides much richer information. Since it measures more dimensions, reliability coefficients resulting from **Generalizability Theory** tend to be lower than those calculated using Cronbach's method.

The lowest acceptable value of Cronbach's alpha for **Assessments of learning** is generally agreed to be 0.8. High-stakes examinations should aim for an alpha of 0.9. Alphas of less than 0.8 can be accepted for individual Assessments for Learning, provided that they are repeated on more than one occasion by more than one assessor.

There are some other important dimensions of reliability. These include:

- *equivalence* or alternate-form reliability is the degree to which alternate forms of the kind of assessment produce congruent results
- *homogeneity* is the extent to which various items in an assessment legitimately link together to measure a single characteristic
- *inter-rater* reliability refers to the extent to which different assessors give similar ratings for similar performances
- *intra-rater* reliability is concerned with the extent to which a single assessor would give similar marks for almost identical performance.

### Review

Consideration of past events, achievements and performance. This may be either a formal or informal process and can be an integral part of appraisal, assessment and feedback.

### Record of In-Training Assessment (RITA)

This is a portfolio of assessments that are carried out during training, which is used throughout UK postgraduate medical education. It is important to note that the RITA is not an assessment in its own right, nor is it a review of progress, although it is likely to be used as a source of evidence, gained through assessment, that informs the Annual Review of Competence Progression.

### Self-directed learning

This is the method of learning used by successful adult learners who take responsibility for their own learning. Such learning is usually goal-motivated and relevant, such as applicable to their work or other responsibilities. Adult learners may not be interested in knowledge for its own sake.

### Skill

Skill is the ability to perform a task to at least a competent level. A skill is best (most efficiently) gained through regular practice (experience) combined with reflective practice (self assessment/insight) and constructive feedback.

### Standards

In medical education standards may be defined as 'a model design or formulation related to different aspects of medical education, and presented in such way to make possible assessment of graduates' performance in compliance with generally accepted professional requirements'. Thus a standard is both a goal (what should be done) and a measure of progress toward that goal (how well it was done).

### Summative Assessment

See **Assessment of learning**

### Syllabus

A syllabus is a list, or some other kind of summary description, of course contents; or topics that might be tested in examinations. In modern medical education, a detailed curriculum is the document of choice and **the syllabus would not be regarded as an adequate substitute for a curriculum**, although one might be included as an appendix.

### Trainee

A trainee is any doctor participating in an educationally approved postgraduate medical training programme (Foundation or specialty including GP training).

### Trainer

A trainer is a more experienced clinician who provides training and educational support for a more junior doctor (Trainee). Trainers include **Clinical** and **Educational Supervisors**. It is a requirement that all trainers should be prepared for their role and understand teaching and assessment methods and giving constructive feedback.

### Training

This is the ongoing, workplace based process by which experience is obtained, constructive feedback provided and learning outcomes achieved.

### Triangulation

Triangulation is the principle, particularly important in WPBA, that whenever possible evidence of progress, attainment or difficulties should be obtained from more than one assessor, on more than one occasion, and if possible using more than one assessment method.

### Utility

Utility refers to an evaluation, often in cost-benefit form, of the relative value of using an assessment, or using one kind of assessment rather than another. An assessment with good Utility must have high **reliability**, **validity** and **educational impact**. It must also be acceptable to **assessors** and **trainees** (covert surveillance may be reliable but it is probably unacceptable in most cases) and Feasible (there is no point in developing a 'perfect' assessment that is too difficult or expensive to use).

### Validity

In the case of assessment, validity refers to the degree to which a measurement instrument truly measures what it is supposed to measure. It is concerned with whether the right things are being assessed, in the right way, and with a positive influence of learning. There are many different dimensions of validity including:

- *Content validity*. An assessment has content validity if the components reflect the abilities (knowledge, skills or behaviours) it is designed to measure.
- *Face validity*. This is related to content validity. Face validity can be described from the perspective of an interested lay observer. If they feel that the right things are being assessed in the right way, then the assessment has good face validity.

- **Construct validity.** The extent to which the assessment, and the individual components of the assessment, tests the professional constructs on which they are based. For instance, an assessment has construct validity if senior trainees achieve higher scores than junior trainees.
- **Predictive validity.** This refers to the degree to which an assessment predicts expected outcomes. For example, a measure of attitudes (behaviour) toward preventive care should correlate significantly with preventive care behaviours.
- **Consequential validity. (Educational impact).** This is an important aspect of the validity of assessment. It refers to the effect that an assessment has on learning, and in particular on what **trainees** learn and how they learn it. For example, they might omit certain aspects of a Syllabus because they do not expect to be assessed on them, or they might commit large bodies of factual knowledge to memory without really understanding it in order to pass a test of factual recall, and then forget it soon afterwards. Both these behaviours would indicate that the **assessment** has poor **Educational impact** because both lead to poor learning behaviours.

### Workplace Based Assessment (WPBA)

WPBA is the assessment of competence based on what a trainee actually does in the workplace. The main aim of WPBA is to aid learning (**Assessment for learning**) by providing trainees with constructive feedback. **Trainees** can use the same methodology to assess themselves (**Reflective practice**). The assessments help the Supervisor to chart a Trainee's progress during a **placement**. Although the principal role of each assessment is for learning, the entire collection can be used to inform the **ARCP**.

WPBA is trainee-led; the trainee choosing the method, timing, activity and assessor under the guidance of the **Supervisor** according to the **Learning outcomes** laid out in the **Educational Agreement**. **Trainees** are encouraged to use as many different assessments and assessors as possible, as this improves reliability.

Most WPBAs are designed to help the **Assessor** provide objective, constructive feedback immediately after the activity. Although many WPBAs are web-based, the forms can be downloaded and a paper copy used for the assessment and feedback. The trainee can then upload the results onto the website for authorisation by the **Assessor**.

**Multi-source feedback** is a unique form of WPBA in that it uses a collection of untrained raters, and the feedback based on the collated ratings is subsequently fed back to the **Trainee** by the **Supervisor**. Thus it has aspects of **Assessment of** and **for learning**.

## Editors

Professor David Rowley, Professor Val Wass and Dr Keith Myerson - Consulting Editor- Professor Cees Van der Vleuten

## Workplace Based Assessment Working Group

Dr Amit Malik ; Dr Andrew Long ; Dr Catherine Fletcher; Dr Chris Clough ; Dr Hasumukh Joshi ; Dr Liz Spencer; Dr Philip Cachia; Dr Gareth Holsgrove ; Professor Jonathan D Beard; Professor C P M Van der Vleuten ; Professor D I Rowley ; Professor Valerie Wass; Mrs Winnie Wade.

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