Improving Assessment: Further Guidance and Recommendations

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1
Introduction

In 2009, the Academy of Medical Royal Colleges (the Academy) published *Improving Assessment*, which provided an authoritative and accurate overview of workplace-based assessments (WPBAs) in postgraduate medical education and a review of the relevant literature.[1] Furthermore, the report made recommendations on how WPBAs should be used. It has now been five years since the publication of that document and the role of WPBAs in postgraduate medical education in the UK has evolved. It is timely to review the position regarding WPBAs and their use in postgraduate medical education.

2
Philosophy of Workplace-based assessment

Assessments, both formative and summative, in medical education have evolved in recent years.[2,3] Currently, the two main aims for assessments in medical education are to:[2,3,4,5]

- **Enhance and facilitate learning**

- **Demonstrate regulation and maintenance of standard of practice to the public.**

Formative assessments with effective feedback facilitate and enhance learning,[6] particularly in competency-based training. There is therefore a need for longitudinal and continuous approach to assessments. Utilising these assessment tools appropriately and understanding their underlying principles are essential in ensuring training achieves excellence.

Traditional assessments in medical education, namely essays and long cases, were mostly assessments of factual knowledge.[2,3,7] It is however widely accepted that factual knowledge alone does not represent good clinical practice.[2,7] It is difficult to assess skills and behaviours with these traditional assessments. Thus there is a need for an assessment of skills and behaviours. It is also important to assess trainees in the clinical environment since clinical performance is contextual.[2,5,7,8] These traditional assessments are therefore unable to provide an accurate account of trainees' performance in the clinical environment.[2,7]

One solution to the problem above would be to assess trainees in a controlled environment. Performance in a controlled environment however, does not accurately predict performance in the clinical environment.[9,10] It is therefore important to assess trainees in the clinical environment while they are conducting their daily activities.[2,3,7,11] Workplace-based assessments are used across different specialties in the UK.[2,5,11] A variety of WPBA tools, including mini-CEX, CbD and ACAT [4,5,6] have been developed.

It is important to appreciate that performance is case-specific, thus an individual WPBA is only a snapshot representation of a trainee's performance.[5,7,12] These tools should therefore be utilised regularly over a period of time in the clinical workplace on a variety of cases.[5,13,14] This would enable the tools to collectively provide a longitudinal picture of trainees' performances.[8] Workplace-based assessments are therefore able to address the top level of Miller's pyramid[15] which provided a framework for assessment.

In 2011, the General Medial Council (GMC) recommended a series of changes to WPBAs in their discussion document, *Learning and assessment in the clinical environment: the way forward*.[16] They described two types of WPBAs, one which is formative and the other which is summative in nature. A formative assessment or assessment *for* learning aims to provide trainees and trainers with the appropriate information to facilitate and enhance further development.[3,6] A summative assessment or assessment *of* learning, on the other hand, makes a judgement on a trainee's level of performance at a given time against a set of standards.[3]

3
Terminology

3.1   Assessments

Learning and assessment in the clinical environment: the way forward recommended the introduction of separate formative and summative assessments.[16] Formative assessments, as described in the GMC discussion document, are known as supervised learning events (SLEs) while the summative assessments are described as Assessments of Performance (AoPs). As mentioned above, a summative assessment measures a trainee's level of proficiency or success at the end of a session or unit of training.[3] A formative assessment, on the other hand, provides trainers and trainees with any information to help guide improvements in the trainees and in the training.[3,6] Feedback plays an important role in formative assessments [6] (See Section 5). In practice, these two types of assessments would continue to utilise the methods of the existing WPBAs, including mini-CEX, CbD, DOPS and ACATs, since these tools have been previously demonstrated to be reliable and valid.[4,17,18,19,20,21]

3.1.1   Supervised learning events

Supervised learning events are trainee-led formative assessments which aim to promote and facilitate learning. Trainees are encouraged to identify learner-directed learning goals with their trainers prior to any SLEs. Both trainees and trainers should subsequently identify opportunities, which would facilitate the acquisition of these learning goals and are suitable for SLEs.

SLEs provide opportunities for trainees and trainers to interact. Furthermore, SLEs intend to promote deeper learning through effective feedback and self-reflection.[3,22] Trainees and trainers should formulate action plans with further learning goals following SLEs.[16,23,24]

Supervised Learning Events should be performed over a period of time with a variety of scenarios to allow them to collectively provide information on a trainee's development.

There is a lack of evidence at this time that SLEs improve the performance of doctors but they do provide an opportunity for an assessor to observe a trainee and to provide feedback.[25]

3.1.2   Assessments of performance

Assessments of Performance (AoPs) are summative assessments which make judgements on trainees' level of development and performance at a given time. Assessments of Performance are intended to be planned events, which sample the relevant curricula, throughout a given training period.[16] The relevant Faculties or Royal Colleges should provide guidance on the sampling required.[16]

4
Common difficulties in the use of WPBAs

Experiences in recent years, reinforced by a review of the literature, have identified some common difficulties in the use of WPBAs. These issues are discussed below and need to be addressed for WPBAs to be successful.

4.1   Assessor behaviour

It has been demonstrated that assessors tend to indiscriminately provide positive outcomes in WPBAs.[5,26,27] Assessors also find it difficult to give negative feedback.[20] This has led to a relatively large number of WPBAs required to achieve sufficient reliability.[5,26] To address this issue, any judgement scale in a WPBA should have a good alignment between the trainees' developing knowledge, skills and attitudes with the assessors' expertise.[5] Furthermore, Crossley and Jolly (2012) suggested that WPBAs should only be utilised to assess competencies which are relevant to the clinical scenario.[11]

4.2   Poor understanding of purpose and methods of WPBAs

Workplace-based assessments provide opportunities for trainees to be directly observed by their trainers.[2,4,6] The literature however, suggests that direct observation does not take place regularly regardless of the purposes or methods of the WPBAs.[6,22,27] One potential cause for these issues is a poor understanding or confusion over the methods of WPBAs, which has been reported in the literature.[5]

4.3   Engagement of trainers

The literature suggests that WPBAs have not been universally welcomed and there has been poor trainee and trainer engagement with WPBAs.[6,26,27,28,29] This would have contributed towards the issues which have been discussed in sections 4.1 and 4.2. Disengagement would have impeded trainees and trainers in identifying trainee-directed learning goals and planning of learning events. This has likely contributed to WPBAs being performed in batches, which impedes WPBAs in providing a longitudinal picture of trainees' development.[29] Furthermore, disengagement would have prevented trainers from encouraging trainees to actively seek feedback.

4.4   Summative assessments

Trainees are stressed and apprehensive about summative WPBAs.[26,27,30] Al-Kadri et al.[30] identified that trainees prefer WPBAs to be utilised as formative assessments. Meanwhile, a recent pilot of SLEs and AoPs identified that both trainees and trainers were apprehensive about the summative AoPs as there was not clearly defined standards for the summative assessments.[27] These findings were not isolated as Mamelok[31] reported that there was also apprehension in using WPBAs as high-stakes summative assessments in general practice training. Regardless of the discussion above, a single summative assessment would not be sufficiently reliable to provide a judgement on a trainees' performance.[4,5,8,26,31] A number of different assessment tools over a period of time with a variety of scenarios would instead be required to produce a longitudinal picture of a trainee's development.[8,13,31,32] Furthermore, it has been suggested that trainees are less likely to actively seek feedback if the assessments and feedback are perceived to be summative.[26] It is however, important to bear in mind that current research on the impact of formative and summative assessments on trainees' learning is inconclusive.[30] This document therefore will only suggest that a sufficient number of different WPBA tools should be utilised to provide a longitudinal picture of trainees' development.[8,13,29,32] These WPBAs should be undertaken over a period of time with a variety of scenarios.[8,13,29,32]

5
Feedback

Feedback plays an important role in facilitating learning in WPBAs.[22,26,30,33] Hattie and Timperley [34] suggested that learning goals should be devised prior to any WPBAs. This would facilitate trainees and trainers in identifying any gap between current and intended performance. Furthermore, trainees are more likely to seek feedback when there are relevant learning goals.[6] Feedback should be provided during or immediately after WPBAs.[12,35] Feedback should be descriptive, non-judgemental and focused on trainees' behaviours.[36,37,38] Furthermore, it should be specific and related to the learning goals.[35,38] Trainees and trainers should then formulate action plans with future learning goals following a confirmation of the trainees' understanding of the feedback.[23,24]

The literature suggests that there is often a lack of or ineffective feedback in WPBAs.[12,22,26,27] Feedback should be considered as part of every WPBA since it plays an important role in facilitating self-reflection and learning as discussed previously.[22,26,30,33] Furthermore, trainees value feedback from WPBAs and consider feedback as one of the most important elements of WPBAs.[12,25] Feedback should be specific and relevant since trainees are less likely to value non-specific feedback.[39]

Pelgrim et al.[22] suggested that effective feedback requires deliberate planning for WPBAs. Bindal et al.[12] had however, demonstrated that deliberate arrangement for WPBAs is not common practice. Furthermore, it has been demonstrated that the inclusion of a feedback tool alone is insufficient in promoting effective feedback.[22,27] The trainees and trainers need to be made aware of the benefits and value of feedback in order to promote them to actively seek and provide feedback respectively.[6,12,22,30,32]

Trainees may be apprehensive in seeking and receiving feedback.[22,27] As discussed previously, it is important to devise learning goals prior to any WPBAs since trainees are more likely to seek feedback with relevant learning goals.[34] Furthermore, trainers play an important role in addressing this issue. Trainers who actively encourage and promote trainees to actively seek feedback may be able to overcome avoidance of feedback.[22]

6
The roles and responsibilities of trainers and trainees

6.1 Trainers

The GMC has defined the responsibilities of trainers in their document, *Recognition and approval of trainers*.[40] The document clearly states that named educational and clinical supervisors should be appropriately trained for their roles.

Educational supervisors (ES) are named trainers who oversee the 'supervision and management' of specific trainees during a specific training period of one of more placements.[40] Educational supervisors are "*responsible [for] trainees' educational agreement*".[40]

Clinical supervisors (CS) are named trainers who oversee the clinical work of specific trainees during a specific placement.[40] They should also facilitate trainees' learning and development through feedback.[40] It is possible for the roles of ES and CS to be merged if an ES were to be appointed for each placement.[40]

Educational and clinical supervisors will need to be formally recognised by the GMC. Furthermore, the GMC aims to acquire the necessary legal power to approve trainers as they do with GP trainers.[40] Trainers are therefore required to be formally trained to the standards set out in the GMC discussion paper for them to be formally recognised and carry out the roles of ES and CS.[40] The GMC states that formal recognition of trainers will be fully implemented by 31 July 2016.[40]

6.2 Trainees

Trainees should make the safety of patients their first priority.[41] Furthermore, trainees should not be practising in clinical scenarios which are beyond their experiences and competences without supervision.[41]

Trainees should actively devise individual learning goals in discussion with their trainers and should subsequently identify the appropriate opportunities to achieve said learning goals.[16,34] Trainees would need to plan their WPBAs accordingly to enable their WPBAs to collectively provide a picture of their development during a training period.[16] Trainees should actively seek guidance from their trainers in order to identify the appropriate learning opportunities and plan the appropriate frequencies and types of WPBAs according to their individual learning needs.[16]

It is the responsibility of trainees to seek feedback following learning opportunities and WPBAs.[16,22] Trainees should self-reflect and self-evaluate regularly with the aid of feedback.[3,16,22] Furthermore, trainees should formulate action plans with further learning goals in discussion with their trainers.[16,23,24]

6.3   Training trainers and trainees

It is essential that training in assessment is provided for trainers and trainees in order to ensure that there is complete understanding of the assessment system, assessment methods, their purposes and use.[6,11,22,26,32,42] Training will ensure a shared understanding and a consistency in the use of the WPBAs and the application of standards.

The purpose and methods of different assessment tools should be clearly explained to both trainers and trainees. This would facilitate these tools to be utilised appropriately and promote direct observation (See section 4). Part of this training should promote the value of deliberate organisation and arrangement of WPBAs to both trainers and trainees [12,22] (See Sections 4 and 5). The trainers and trainees should be provided with the appropriate guidance to enable them to devise appropriate learning goals prior to any WPBAs. The benefits and value of devising learning goals prior to any WPBAs should also be clearly demonstrated to the trainers and trainees.[34]

Trainers and trainees should be provided with the appropriate guidance and training in providing and responding to effective feedback and producing action plans (See Section 5). Furthermore, the benefits of direct observation, effective feedback and action plans should be clearly demonstrated and reinforced.[6,22,26] Meanwhile, the trainees should be encouraged to actively seek feedback from their trainers while the trainers should be advised to encourage trainees to do so.[22]

7
Planning and implementing training programmes and WPBAs

It is vital for any training programme to ensure the appropriate assessment tools are utilised to assess the knowledge, skills and attitudes of interest.[11] This would enable WPBAs to have good construct alignment with the trainees' developing performance. Furthermore, assessors must have the necessary expertise to make judgements on trainees' performances.[5,6] It is also important to structure a training programme appropriately and select the appropriate WPBAs to enable direct observation of trainees to become a routine element of the training programme.[2] This would promote direct observation in WPBAs. The above can be achieved by involving trainers and trainees in the planning and implementation of WPBAs as part of any training programme. Involvement of trainers and trainees in the planning of training programmes and the use of WPBAs is also likely to improve engagement.[6]

8
Assessment – what's on the horizon?

There is a move within postgraduate medical education towards the assessment of educational outcomes. The outcomes of a training programme are to produce doctors who are able to demonstrate that they are competent across a range of activities. The concept of Entrustable Professional Activities (EPAs) is gaining momentum across the globe as a means of determining whether trainees are ready for unsupervised practice.

EPAs are units of professional practice defined as tasks or responsibilities that trainees are entrusted to perform unsupervised once they have attained sufficient specific competence. They were originally described by ten Cate [43] and further developed and refined by ten Cate and Scheele.[44] An EPA is a description of a clinical task that frames competencies within the context of clinical practice.[45] The implementation of EPAs in a training programme requires the identification of appropriate professional activities as EPAs.[44,46]

Identification of EPAs in a range of postgraduate training programmes in different specialties and geographical locations are being reported in the medical education literature. Further research and piloting will be needed but it is likely that these will inform the future direction of assessment in the workplace.

9
Recommendations

The successful implementation of WPBAs requires involvement of the trainers and trainees and the provision of the appropriate resources.[6,11,26] The following recommendations have been made to facilitate the successful implementation of WPBAs in the clinical environment.

Feedback and Learning Development

1. Emphasis on reflective feedback within use of WPBAS

2. Assessment and feedback should relate to individual learning needs and objectives, in the context of the approved curriculum being followed. There should be deliberate structured planning for this between the trainee and trainer

3. WPBAs should include a developmental outcome for trainees through effective feedback and action planning

4. Specific goals, identified during feedback, should be handed on to the trainee's next Educational Supervisor to ensure a consistent training programme that is as far as possible tailored to the trainee's learning needs

5. Assessments should have a shared approach by the trainer and trainee with shared responsibility by both partners.

Training of Assessors

6. The need for training for trainees and trainers on the use of all WPBAs including training on the skills of giving effective feedback. Face-to-face training should be used for giving feedback

7. As part of meeting GMC requirements for Recognition of Trainers, trainers must have attended appropriate training to cover the standards as identified by the GMC. Any training will require to be role specific including for any specialty specific requirements

8. The correct use and purpose of WPBAs needs to be successfully communicated trainers and trainees.

Number of Assessments and Role of Assessors

9. Recognition that an expert trainer using informed judgements should contribute to a summative assessment is important

10. One WBPA is insufficient, but stating a minimum number tends to encourage targeting that number rather than concentrating on development and feedback. It is important that multiple assessors are used

11. A collection of similar formative WPBAs can be used to make a summative judgement about competency progression.

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