

# Assessing Competence

## Learning from our medical colleagues



Ian Davies  
Senior Lecturer in  
Biomedical Science  
Staffordshire University

### Assessing Competence

The continual demonstration of professional competence is at the cornerstone of the effective, safe and reliable delivery of care by all medical, nursing and allied health professions. High profile adverse incidents have rightly raised public expectations that healthcare professionals are accountable for their professional conduct and competence and the wide scale adoption of clinical negligence schemes further increase the importance of documented competency assessments.

As registered practitioners Biomedical Scientists have a professional, regulatory and ethical responsibility to practise to their level of competence and within their defined professional framework. Registrants are accountable to the Health Professions Council (HPC) for maintaining this competence and their employers have responsibilities under standards set by regulatory and accreditation agencies for ensuring this.

In practical application however competence is difficult to define and harder to assess completely (figure 1); it is not just the proficiency in which a test is performed nor the successful demonstration of a task against a standard operating procedure. Instead it is a mixture of skills and knowledge (including for example quality, attitude and probity) the whole of which being greater than the sum of its parts. Whilst an examination audit or 'tick-sheet' assessment may demonstrate the ability to perform a test to the required standard do they accurately reflect the wider professional competencies required for practice for example ensuring appropriate specimen integrity, test selection, prioritisation and appropriate turn-around-time, quality, troubleshooting, confidentiality, decision-making, professional relationships and demonstration of appropriate communication skills? These latter qualities form principle tenets of the HPC Standards of Proficiency, the Institute of Biomedical Science professional practice guidelines and are the very values that define a registered professional yet in practice are infrequently formally assessed.



Figure 1: Competence – What does it mean to you?

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### Medical Education

Medical Education is a well defined sub-speciality concentrating principally upon the undergraduate, foundation and postgraduate education and training of medical students and junior doctors. Medical schools have active educational research groups supported by dedicated peer-reviewed journals and professional bodies all aiming to develop robust methods of teaching and assessment to ensure that junior doctors are competent for the high-stakes pressures faced by medical practitioners.

Whilst there are notable differences in the training and output of medical and biomedical educational programmes there are also direct parallels that can be made between these two professions. The practical, accurate and meticulous application of biomedical science in often fast-paced, pressurised environments where lives can be at risk is common to both professions together with the wider responsibilities to act within appropriate professional, legal and ethical boundaries. It is appropriate therefore that biomedical scientists should look towards the evidence-based assessment regimes devised by medical educationalists as a basis to demonstrate their own competency to practise.

In 1990 the psychologist George Miller defined a framework for assessing clinical competence that differentiated between the attainment of knowledge through to the demonstration of the application of that knowledge in practice. Miller's Pyramid (figure 2) forms the basis for medical assessment design, ensuring the validity of an assessments to actually assess the skills, knowledge and behaviour that is intended. Throughout their registration, specialist and continuing training junior doctors will use a variety of assessment tools that assess all domains of Miller's Pyramid to ensure that they have the correct knowledge, that they can apply that knowledge in context and in so doing that they demonstrate the behavioural and professional qualities necessary to be a safe and effective practitioner.

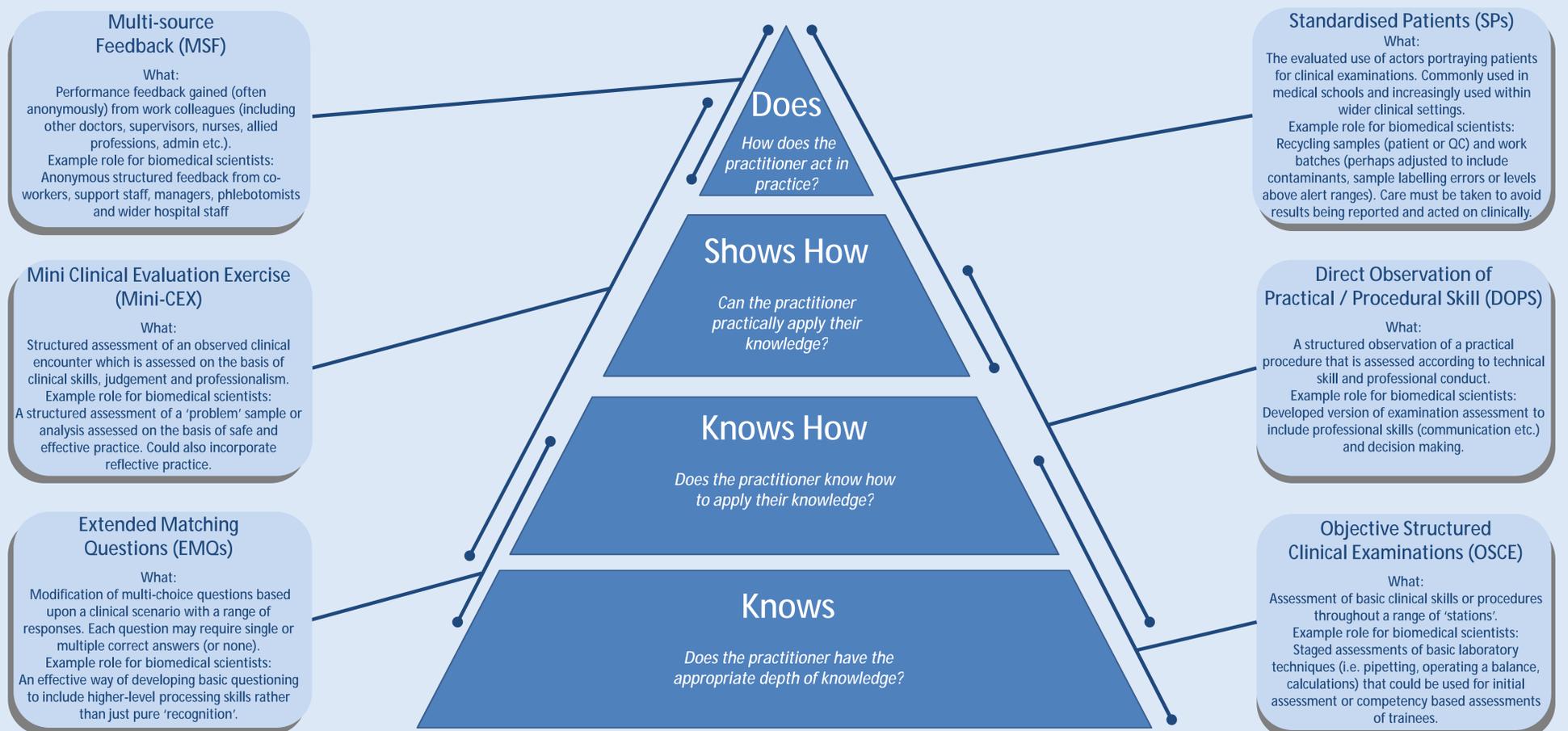


Figure 2: Miller's Pyramid for Assessing Clinical Competence

Miller GE. (1990) "The assessment of clinical skills / competence / performance." *Academic Medicine* S63-67

## Top tips for Competence Assessment Design:

- 1 Make it valid**  
Think about what you are trying to assess; which aspects of Miller's Pyramid are you aiming to evidence (knowledge, skill, behaviour or a combination)? Does your assessment reflect what happens in practice?
- 2 Make it reliable**  
Would your assessment give the same results with different staff? Could the result be challenged as being unfair or biased (especially important in the case of employment or fitness to practice hearings)?
- 3 Make it practical**  
Can your assessment be easily achieved using the resources available (including staff and assessor time)?
- 4 Make it acceptable**  
Confidentiality or appropriate anonymity will provide a safe environment for staff to attempt assessments without the fear of peer pressure or ridicule.
- 5 Make it part of a wider educational culture**  
'Tick-box' assessments performed just to comply with laboratory accreditation hold little value. Assessments should be part of a wider educational culture that includes personal development plans and continuing professional development. Using a range of assessment tools across all of Miller's domains will not only provide evidence of Integrated knowledge and competence but can also foster learning and development. Problem-based scenarios that develop upon current practice are particularly effective at stimulating adult education.

For references or more information please contact:

Ian Davies PGCMC MSc CSci FIBMS  
Senior Lecturer in Biomedical Science  
Staffordshire University  
ian.davies@staffs.ac.uk