Defining competence through standards

Setting out degrees of competency will help in assessing Trainees and providing feedback. Your feedback on the standards set out here is welcomed.

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An important component of competency based training is to be able to differentiate between Trainees who are competent, and those who are not.

However, a clear definition of what it means to be competent, or not-competent, and how can we determine the difference is not so easy to find. It is also difficult to find clear definitions of a standard, or levels of performance that could potentially separate competent from not competent.

The College and specialty training boards have developed detailed statements of the knowledge, skills and attitudes, which Trainees are required to meet across each of the nine competencies at the end of training. The College, through the Surgical Competence and Performance Working Party has also published behavioural markers for Fellows. However, the decision of competent versus not competent still remains dependent on the professional judgement of the person, or people making the assessment.

This is not an issue that is unique to the College. Much has been written in medical education literature over the past two decades about competency based training (CBT).

One approach that has been used in some of the surgical specialties (in both Australasia and overseas) to define technical competence has been to make a detailed analysis of the skills required to successfully perform a specific procedure. The four main difficulties with this approach are that:

- not all surgeons perform the same procedure in exactly the same way;
- this analysis tends to become increasingly focused on smaller and smaller components;
- each procedure is defined separately, therefore;
- the process is quite time consuming and labour intensive.

A second approach, favoured by this College, is to develop global frameworks of 'standards', which define increasing levels of difficulty and complexity of knowledge, skills and attitudes associated with a competence, and the level of performance at which 'competence' is achieved.

These standards frameworks are based on extensive research of international literature and best practice, as well as consultation with the different groups within the College involved in education, training and professional development. Currently this approach is being used to identify standards:

- in medical and technical expertise that could be expected of medical graduates and PGY1 and 2 (i.e. prior to commencement in SET);
- in medical and technical expertise that could be expected of Trainees at different stages of their progression though SET; and
- in the seven non-technical or professional competencies.

The first of these is being overseen by the Skills Education Committee and the second is the responsibility of the specialty training boards. The initial definition of all the professional (non-technical) competencies is being done within the College and then promulgated through a range of different forums for consultation.

This paper, presenting the first of the professional standards is published to initiate discussion through the Fellowship and wider surgical community.

Judgement – Clinical Decision Making

Judgement-Clinical Decision Making is a competence that is central to both diagnosis and performance of all procedures.

In his latest book, The Checklist Manifesto, Atul Gawande (2009) makes a distinction between errors of ignorance

(mistakes we make because we don't know enough) and errors of ineptitude (mistakes we made because we don't make proper use of what we know). For surgeons, the latter kind of error, that of poor judgement, can have extreme consequences.

For the purposes of defining an acceptable standard of performance in the competence of Judgement – Clinical Decision Making for surgical Trainees, the following five components (knowledge, skills and attitudes) have been identified:

A. Perform a complete and appropriate assessment of a patient.
B. Recognise the symptoms of and accurately diagnose problems.
C. Organise diagnostic testing, imaging and consultation as appropriate.
D. Manage patients.
E. Monitor and evaluate own decision making processes.

The behavioural indicators in each of the five standards following correspond with each of the five components (A-E).

RACS – Five Stage Framework Showing the Development of Judgement – Clinical Decision Making

Characteristic behaviours

Stage 1
Base level

A. Identifies patterns in a list of evidence about a patient
B. Rigid adherence to taught rules or plans
   –Knows basic algorithms or decision trees - applies them rigidly
C. No discretionary judgement
D. Little situational perception or anticipation of potential issues

Stage 2
Novice

A. Takes a history, perform an examination, and arrive at a well-reasoned diagnosis
B. Explains relationships and rules applied among patterns
   –Hypothesises explanations for patterns, tests generalised explanations and eliminates alternatives
C. Choices and decision of most appropriate tests, etc based on knowledge that can be gained only after some prior experience of the condition(s)
D. May miss some critical details
E. Can synthesise and justify decisions

Stage 3
Advanced Beginner

A. Conduct an effective, efficient and focused examination of patients with common conditions
B. Recognise the most common disorders and differentiate those amenable to surgical treatment
C. Conscious deliberate planning and choices, focusing on key attributes
   –Critically evaluate the advantages and disadvantages of different investigative modalities
   –Can appraise and interpret radiographic investigations against patient's needs
D. Effectively manage complications of common conditions generating or applying solutions from standardised and routine procedures to other situations
E. Recognises own errors

Stage 4
Competent

A. Conduct an effective, efficient and focused examination of patients with complex conditions
B. Identifies what is most important in a situation
   –Sees situations holistically rather than in terms of single components
   –Deals with deviations according to the situation
   –Capable of conjecture and hypothesis testing to deal with exceptions to the general rule
C. Selects medically appropriate investigative tools and monitoring techniques in a cost-effective, and useful manner
   –Consults and calls for assistance appropriately
D. Manages all patients (including the critically ill) in ways that demonstrate sensitivity to their physical, social, cultural, and psychological needs
   –Manages complexity and uncertainty, anticipating and planning for potential problems
E. Recognises own errors and adapts to patient needs or changed circumstances

Stage 5
Proficient

A. Seeks second opinion when appropriate
B. Intuition, insight and creative approaches are used to solve problems
   –No longer consciously relies on rules, guidelines or maxims; operates from a deep understanding of the total situation and potential complexities
C. Plans ahead to ensure availability of all necessary resources
D. Initiates balanced discussion of pros and cons with care team
E. Analytical approaches are only used in novel situations or when a problem occurs

The base-level is indicative of a person who has studied the area, but has had little or no experience in applying their knowledge.

The novice, advanced beginner, and competent levels indicate that the person has both studied and had some experience in the area – the difference being in their ability to move more effectively through the process and to adapt their thinking to both changes and errors.

At the levels of proficiency, the person becomes so efficient in their judgement-clinical decision making that to a naïve person they may appear to be jumping to conclusions. What is not observable is the wealth of experience and previous similar clinical situations that are being drawn on.

It is important to recognise that in each clinical environment where they lack experience, a Trainee's performance can be expected to drop down one or two levels. However, over the period of training, even though they may have less knowledge in a certain clinical area, their skill and approach to clinical decision making ought to remain at least in the middle of the range (Advanced beginner – Competent).

If this standards framework is an accurate representation of the knowledge and skills of 'Judgement – Clinical Decision Making' then it will be a useful tool to enable a Trainee, a supervisor, or trainer to identify fairly quickly the level at which the Trainee is functioning and to use that as a basis for both feedback and assessment.

An important component of competency based training is to be able to differentiate between trainees who are competent, and those who are not. To guide those decisions a clear set of articulated and shared standards are necessary.

Your feedback on this, the first of the standards frameworks on the professional – nontechnical competencies, will be much appreciated. Please provide your feedback to the Dean of Education bruce.barraclough@surgeons.org