Self-assessment in medical practice

A W Evans PhD FDSRCS C McKenna PhD[1] M Oliver PhD[1]

J R Soc Med 2002;**95**:511–513

Although assessment of performance will be central to revalidation, to clinical governance and to maintenance of quality in the National Health Service, formal appraisal by a third party will be no more than an annual event for most medical staff. To be fully effective doctors should assess their own clinical performance more frequently, but many lack training in how to do this. Self-assessment is also a valuable exercise in its own right. Benefits include increased morale and motivation as well as improvements in knowledge, communication and performance[1]. This paper sets out the case for devoting more time to the teaching of self-assessment skills.

WHAT IS SELF-ASSESSMENT?

According to Antonelli[2], 'self-assessment of knowledge and accuracy of skill performance is essential to the practice of medicine and self-directed life-long learning'. The emphasis on life-long learning is important. In medicine, as in many other professions, individuals are now responsible for determining their own continuing professional development (CPD); and a successful CPD programme demands awareness of remediable weaknesses through continual self-appraisal.

Boud[3] defines self-assessment as 'the act of judging ourselves and making decisions about the next step.' An important principle is that assessment must be followed by action (i.e. assessment is not an end in itself). Equally important is Boud's[3] assertion that assessment can be conducted only against benchmarks or criteria. Brown, Bull and Pendlebury[4] make a further distinction between different forms of self-assessment. On the one hand the process may be linked to competency and formal appraisal, with relevance to public issues of accountability, surveillance and control. On the other hand, the emphasis may be on personal development through reflection. Brown and co-workers suggest that these different emphases produce tensions and confusion both in the published work and in practice. The competency approach is useful for demonstrating particular skills, whereas the developmental approach aids understanding and knowledge and encourages personal and professional growth.

Department of Oral and Maxillofacial Surgery, Eastman Dental Institute for Oral Health Care Sciences, University College London, 256 Gray's Inn Road, London WC1X 8LD; [1]Department of Educational and Professional Development, University College London, 1–19 Torrington Place, London WC1E 6BT, UK

Correspondence to: Ann W Evans

THE AIMS OF SELF-ASSESSMENT

Introduction of self-assessment into a teaching programme requires a set of aims. Sullivan and Hall[5] suggest that a self-assessment programme can:

- Promote reflection on personal performance
- Identify reactions to self-assessment
- Evaluate the reliability of marking
- Identify reasons for discrepancies between scores of assessor and assessee.

All these are clearly valid objectives. In a medical assessment programme, however, the only true measure of success is a rise in the standard of practice.

ISSUES

Even when we are clear about the aims and meaning of self-assessment, certain key issues must be explored, including acceptance, accuracy, power, career progression and context.

Acceptance

Most trainees and students expect (and prefer) to be assessed by experts, rather than by themselves or their peers[4,6,7]. For self-assessment to be successful, a change in culture is required, such that students and professionals alike feel comfortable making judgments about their own performance. The ability to assess one's own work critically is often claimed as a goal of higher education even when self-assessment exercises are not part of the curriculum. Paradoxically, despite the attention given to assessment in higher education, many courses have been 'designed in ways which inhibit assessment skills'[8]. Preliminary research does indicate that self-assessment of clinical skills in medical schools improves the ability to self-assess[9]. Brown and Knight[6] suggest that self-assessment 'fosters a different, more powerful view of the student than does traditional assessment'. This points to changes in educational roles and relationships that are only now being explored.

Accuracy

Studies have shown that it is the weaker candidates who tend to overrate themselves, both generally and within medicine[2,5,10–14]. Arnold[15] and Woolliscroft[11] both noted more conservative self-evaluations by the brighter medical

students, and one interpretation is that high achievers hold themselves to more stringent standards and assess themselves against their own potential. Alternatively, lower performers might be less motivated because they already perceive themselves positively.

There are several other reasons for inaccuracy in self-assessment.

- Misapprehension: students do not understand what is expected of them[5,14]
- Self-deception; most medical students are people who have performed well at school and have received strong positive feedback from a young age, giving them a self-confidence that may be resistant to modification[11]
- Scoring of potential or ideal (rather than actual) performance[11,15]
- Scoring of effort rather than achievement[11]
- Impression management: whereas bright primary school children overestimate their abilities[16], the reverse (as we have found) is true in higher education. Brown *et al*.[4] suggest that this shift is associated with the development of self and self-presentation; we learn to distinguish between assessing oneself for oneself and assessing oneself for others
- Compensation for poor performance as a defence mechanism[11].

Accuracy in self-assessment of skills can be fostered by performance-based feedback[17] along with explicit criteria for students[1]. One might expect that, as a person gains experience in self-assessment, the evaluations will become more accurate and involve a deeper form of learning[6,18,19]. Arnold[15] found that, over time, medical students' self-assessments diverged increasingly from their faculty's ratings, but this was because students became more self-critical as they progressed through the course. Much of this work, of course, presupposes that the teacher's mark provides a reliable standard for comparison, which may not be so[6].

Power, perceptions, credibility

Traditional assessment is sometimes regarded as an exercise of power by the assessor/examiner over the assessee. In self-assessment the role of the lecturer or trainer can change to that of external examiner and moderator[4]. Assessment becomes not something done to students but an activity *with* students[8]. One question to explore is who should set the criteria against which the assessment is conducted. Though well-defined criteria are necessary, the development of such criteria and related marking schemes is bound up with issues of control and autonomy.

In higher education, the most radical self-assessment programmes allow students to generate their own criteria for marking self-selected tasks[20]. When trainees or students are allowed to participate in standard-setting they gain a better comprehension of the standards and are more likely to be motivated to adhere to them. This in turn leads to improved reliability, addressing one of the issues for self-assessment identified above. The increasing use of formal guidelines, such as those being developed by the National Institute for Clinical Excellence (NICE), will restrict the scope for such a participative approach—at least in certain areas of medical practice. The joint agreement (as opposed to imposition) of standards and benchmarks has much to commend it.

Career progression

The more senior we become the less likely we are to receive honest criticism from our colleagues. The rigorous reviews that we receive as trainees come to a stop when we become consultants. For senior doctors and managers, therefore, self-assessment becomes even more important.

All senior doctors, dentists and managers should be capable of:

- Defining the objectives of the post
- Defining the skills necessary to achieve the objectives
- Auditing their own skills to see how far they meet the requirements
- Assessing the training and development they need in order to meet the standards.

Context/culture

The context in which an assessment is undertaken can influence the outcome. For example, a person being appraised for performance-related pay is likely to emphasize strengths rather than weaknesses. Self-assessment will be most effective in a supportive no-blame culture. In the current atmosphere of accountability, such safe spaces for reflection may well become increasingly hard to find. As the report of the Bristol Inquiry states, 'the culture of blame is a major barrier to the openness required if sentinel events are to be reported, lessons learnt and safety improved'[21]. This will apply equally to appraisal and self-assessment.

CONCLUSION

Medical teaching has traditionally asked students to master large amounts of factual information. This didactic approach means there is little opportunity to contest the medical curriculum, only some of which is tested in high-stakes examinations. Conversely most clinical or surgical skills have been taught in an apprentice style with little or no formal assessment. Although both of these approaches have

their place, there is clearly an alternative that combines the best elements of the two by fostering a critical approach to learning; such an approach is the preserve of both higher education and continuing professional development.

Doctors are moving, or being moved, to a position where they must set themselves targets and goals and regularly assess their own performance. The arguments for training in self-assessment are not dissimilar to those once put forward for communication skills. Self-assessment is a fundamental skill that should be introduced into both undergraduate and postgraduate education.

Acknowledgment A W Evans is supported by The PPP Foundation.

REFERENCES

1 Gordon MJ. A review of the validity and accuracy of self-assessments in health professions training. *Acad Med* 1991;**66**:762–9

2 Antonelli MA. Accuracy of second-year medical students' self-assessment of clinical skills. *Acad Med* 1997;**72**:563–5

3 Boud D. *Enhancing Learning through Self-assessment*. London: Kogan Page, 1995

4 Brown G, Bull J, Pendlebury M. *Assessing Student Learning in Higher Education*. London: Routledge, 1997

5 Sullivan K, Hall C. Introducing students to self-assessment. *Assess Eval Higher Ed* 1997;**22**:289–303

6 Brown S, Knight P. *Assessing Learners in Higher Education*. London: Kogan Page, 1994

7 Evans AW, McKenna C, Oliver M. Towards better understanding of self-assessment in oral and maxillofacial surgery. *Med Ed* 2001; **35**:1–20

8 Brew A. Towards autonomous assessment: using self-assessment and peer assessment. In: Brown S, Glasner A, eds. *Assessment Matters in Higher Education*. Buckingham: Open University Press, 1999

9 Chur-Hansen A. The self-evaluation of medical communication skills. *Higher Ed Res Devel* 2001;**20**:71–9

10 Boud D, Falchikov N. What does research tell us about self-assessment? In: Boud D, ed. *Enhancing Learning through Self-assessment*. London: Kogan Page, 1995

11 Woolliscroft JO, TenHaken J, Smith J, Calhoun JG. Medical students' clinical self-assessments: comparisons with external measures of performance and the students' self-assessments of overall performance and effort. *Acad Med* 1993;**68**:285–94

12 Orsmond P, Merry S, Reiling K. A study in self-assessment: tutor and students perceptions of performance criteria. *Assess Eval Higher Ed* 1997;**24**:357–69

13 Randall R, Ferguson E, Patterson F. Self-assessment accuracy and assessment centre decisions. *J Occup Organis Psychol* 2000;**73**:443–59

14 Evans AW, Aghabeigi B, Leeson R, O'Sullivan C, Eliahoo J. Are we really as good as we think we are? *Ann R Coll Surg Engl* 2002;**84**:54–6

15 Arnold L, Willoughby TL, Calkins EV. Self evaluation in undergraduate medical education: the longitudinal perspective. *Med Ed* 1985;**60**:21–8

16 Wittrock MC. Students' thought processes. *Handbook of Research on Teaching*. London: Macmillan, 1986

17 Shunk DH. Goal and self-evaluation influences during children's cognitive skill learning. *Am Ed Res J* 1996;**33**:359–82

18 Entwistle N. The impact of teaching on learning outcomes in higher education: a literature review. Sheffield: Committee of Vice-Chancellors and Principals of the Universities of the United Kingdom, Universities' Staff Development Unit, 1992

19 Ramsden P, ed. *Improving Learning: New Perspectives*. London: Kogan Page, 1988

20 Biggs J. *Teaching for Quality Learning at University*. Buckingham: SRHE, 1999

21 *Learning from Bristol. The Report of the Public Inquiry into Children's Heart Surgery at the Bristol Royal Infirmary 1984–1995*. London: Stationery Office, 2001