

Guide to the Assessment of Competence and Performance in Practising Surgeons

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Key words

appraisal, competence, performance, remediation, support.

Abbreviations

FRACS, Fellowship of the Royal Australasian College of Surgeons; NOTSS, Non-Technical Skills for Surgeons; RACS, The Royal Australasian College of Surgeons.

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Abstract

Surgical performance is increasingly under public scrutiny and non-technical behavioural issues are more frequently the focus of complaints. Currently, there is a lack of a suitable framework or template to assist surgeons in the assessment of their own performance or that of their colleagues. A Royal Australasian College of Surgeons (RACS) Working Party considered the methods currently available to define and assess surgical performance. The scope included assessment tools, resources available, and support for surgeons. The Non-Technical Skills for Surgeons (NOTSS) programme developed by the Royal College of Surgeons, Edinburgh and the School of Psychology, University of Aberdeen was of particular interest. This programme was reviewed, adapted and expanded. The nine RACS competencies were used as the foundation for developing a set of three behavioural patterns within each competency domain. Each behavioural pattern was then described by a set of eight behavioural markers – describing four good and four poor behaviours. A variety of resources were identified to assist surgeons, including College and other similar courses and guidelines, publications covering professionalism and health issues and support through various agencies. It was recognized that the College has a role to support its Fellows and to ensure any review of performance is conducted impartially, competently and confidentially. The resulting guide was approved by College Council in June 2008 and later distributed to Fellows and hospitals throughout Australia and New Zealand. It is intended to be used for self-reflection and self-assessment, although it could equally be used as a template for the review of an individual surgeon's performance by a clinical director of surgery or other agency. Considerable progress has been made in the assessment of performance of practising surgeons. This guide has been published to address performance issues across all RACS competencies. It also outlines a variety of assessment methods and strategies to support surgeons.

Introduction

The Royal Australasian College of Surgeons (RACS) has defined nine core competencies that are required by a surgeon. These comprise Medical Expertise, Judgement and Decision-Making, Techni-

cal Expertise, Professionalism, Health Advocacy, Communication, Collaboration and Teamwork, Management and Leadership, and Scholarship and Teaching. During education and training, acquisition of these competencies is progressively assessed by surgical teachers, supervisors and examination boards. On award of the

Fellowship of the Royal Australasian College of Surgeons (FRACS) a trainee is deemed to be competent in each of these nine domains and considered to be qualified as a surgeon capable of practising independently.

The Australian and New Zealand public, hospitals, health departments and governments rely on the FRACS as being representative of a standard of competence required to practise unsupervised in the specialty in which the Fellowship diploma has been awarded. However, what happens during a lifetime of practice depends not only on the competencies acquired during training but also on new competencies or skills acquired during a professional career as well as a surgeon's performance in practice. If competence is defined as what a surgeon has been trained to do, performance can be defined as what he or she actually does day by day. Performance has been described as the product of competence and is influenced by a combination of individual-related (e.g. health, relationships) and system-related (e.g. facilities and practice time) factors.¹

Performance varies between surgeons and may also vary over the course of a surgical career. Although most surgeons perform well, there are some whose performance is less than the standard expected. Performance may come under scrutiny because of a series of adverse events, as a result of concerns expressed by patients or other health professionals, or through issues arising from routine audit or peer review activities. In some notable cases, the issue of performance of individual surgeons has only come to the attention of regulatory authorities, the legal system and the public after a series of catastrophic events that may be attributable to significant or prolonged underperformance of surgeons.^{2,3}

The RACS Council recognized the need for a review of the entire range of surgical performance, particularly as it affects surgeons in practice or after completing their training and obtaining the College fellowship diploma. The College has always been proactive in setting standards of performance and Council wished to extend this role to include the provision of mechanisms for the early identification of underperformance in surgeons, ensuring appropriate remediation and support, and including, if appropriate, limitation of scope of surgical practice.

A Surgical Competence and Performance Working Party was established by Council under the chairmanship of one of the authors (I. D.). The working party examined both technical and non-technical aspects of competence and performance. Some of the early work focused on the process of how to manage questions relating to technical performance and the approach that should be taken with those perceived to be outliers or apparent outliers as identified through routine surgical audit. The Working Party initially produced the following four documents:

- Clinical Standards Review Policy⁴
- Reskilling and Re-entry Program Guidelines⁵
- Guidelines for Managing an Outlier through Structured Audit Processes⁶
- Complaints Process Policy⁷

However, the evidence from studies of complaints and litigation is that technical performance is not the most common reason for

surgical underperformance or for breakdown in the relationship between surgeon and patient.^{8,9} The areas of non-technical competencies such as communication and professionalism are frequently the subject of litigation because of perceived less-than-appropriate behaviour by doctors.¹⁰ Enquiries and reviews by hospitals and regulatory authorities often identify issues relating to communication, collaboration, teamwork, management or clinical leadership rather than clinical judgement or technical expertise.¹¹ However, when underperformance is confirmed, it often impinges on more than one of the RACS competencies.

The Working Party set out to review surgical performance in its entirety and proceeded on the basis that all nine RACS competencies were equally important for the delivery of safe and effective surgical care.

Methods

In 2007, the Working Party undertook a review of published work, consultation with local and international colleges and regulatory authorities and interviews with College Fellows. The nine RACS competencies were reviewed, along with the seven CanMEDS competencies, which underpinned their development.¹² The RACS competencies include two additional domains: judgement/clinical decision-making and technical expertise. As had occurred previously with the CanMEDS Roles Framework, all the domains were represented in a diagrammatic form, which emphasized the need for a balanced performance across all domains and the overlaps and interdependencies between the individual domains (Fig. 1).

The Working Party reviewed the Non-Technical Skills for Surgeons (NOTSS) programme developed by the Royal College of Surgeons of Edinburgh and the School of Psychology at the University of Aberdeen.^{13,14} The NOTSS programme built on work undertaken in the aviation and nuclear power industries and has been more recently applied to the assessment of the non-technical performance of anaesthetists.¹⁵ A set of 'behavioural markers' was developed to provide examples of 'good' and 'poor' non-technical performance of surgeons in the operating room. These behavioural markers could be used as a basis for assessment of surgeons by independent observers.^{13,14} They also proved to be useful for describing acceptable standards of surgical practice to both trainees and practising surgeons.

The Working Party expanded the NOTSS model to cover all nine RACS competencies and all aspects of surgical practice (including those that were ward based and ambulatory, public and private, clinical and academic).

To clearly show the distinction between competence and performance, the RACS competencies were each represented by three 'patterns of behaviour' (Fig. 1) and 'good' and 'poor' behavioural markers were derived under each of these headings. Markers were developed in consultation with working party members and also drawn or adapted from the NOTSS programme. Markers were then sent to the surgical specialty associations and societies and to the

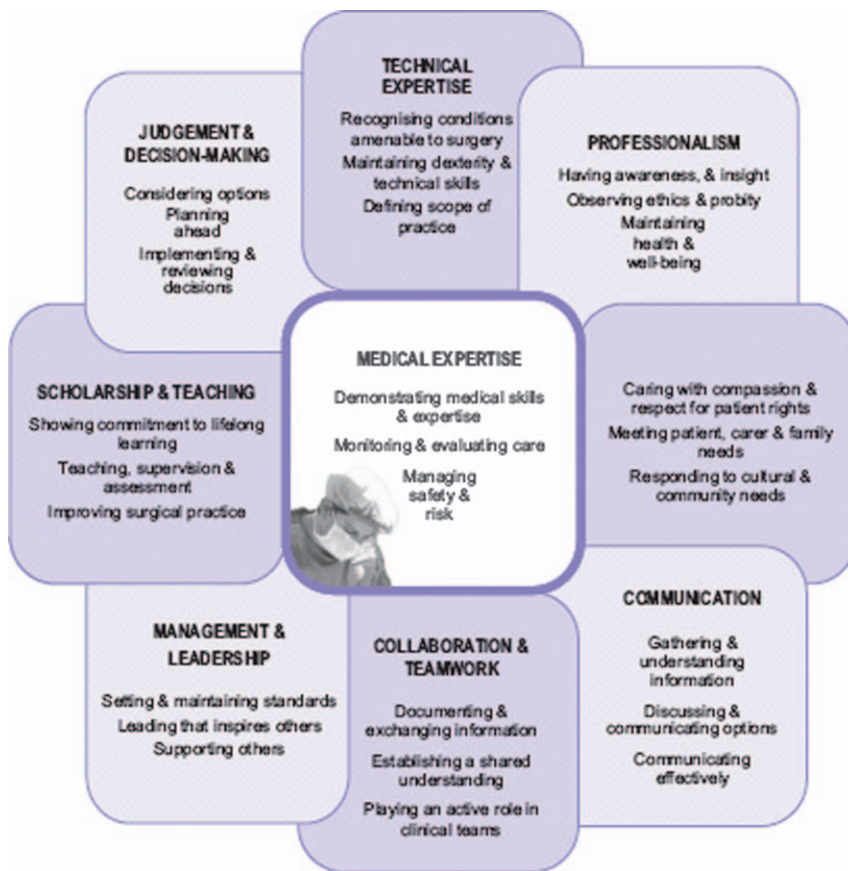


Fig. 1. Royal Australian College of Surgeons competencies and patterns of behaviour.

college regional boards for evaluation and feedback. Eventually eight behavioural markers – four ‘good’ and four ‘poor’ – were chosen for each of the three patterns of behaviour under each of the nine RACS competencies.

Furthermore searches of published work and the Web were conducted to identify relevant and proven assessment tools, resources and avenues available to support underperforming surgeons. This information was reviewed by the working party and included in the final document.

The *Surgical Competence and Performance* guide was approved by the Professional Development and Standards Board and the RACS Council in June 2008 and distributed to all active Fellows in September 2008.¹⁶

Results

Performance framework and behavioural markers

A performance framework was established, based on the nine RACS competencies. Three patterns of behaviour that helped to describe each aspect of surgical competence and performance were chosen, accepting that there was some overlap between the identified patterns of behaviour. For each pattern of behaviour four good/positive and four bad/negative behavioural markers were agreed through

consultation and consensus among members of the working party, surgical specialty societies and regional boards.

Examples of the patterns of behaviour and behavioural markers for judgement and decision-making and management and leadership are shown in Table 1. The reader is referred to the *Surgical Competence and Performance* guide for a full description of all markers.¹⁶

Measurement of performance

The review of methods of measuring performance yielded several options, some applicable across more than one competency. Table 2 shows 13 different methods considered to be surgically relevant and applicable to the assessment of performance.

Resources

A wide variety of resources are available to assist surgeons with improvement of their performance, including courses and publications^{4-7,18,31,32} and peer-reviewed publications covering professionalism^{12,33} and doctors’ health issues.¹⁶

Table 3 shows the range of RACS courses and workshops available to Fellows across the nine RACS competencies. The uptake and popularity of such courses provides evidence that Fellows are motivated to improve their skills and performance in these areas.

Table 1 Patterns of behaviour and behavioural markers: example for two of the nine Royal Australian College of Surgeons competencies

<i>Judgement and decision-making</i>	
Making informed and timely decisions regarding assessment, diagnosis, surgical management, follow up, health maintenance and promotion	
Considering options	
Generating alternative possibilities or courses of action to solve a problem. Assessing the hazards and weighing up the threats and benefits of potential options	
Good behaviours	Poor behaviours
Recognizes and articulates problems to be addressed	Does not consider or discuss options
Initiates balanced discussion of options, pros and cons with relevant team members	Does not solicit views of other team members
Seeks second opinion when appropriate for surgeons or patients	Fails to adequately discuss and ensure documentation on the options and the basis of decision-making
Respects the patient’s right for self determination	Unwilling to alter decision as other information/alternatives become available
<i>Management and leadership</i>	
Leading the team and providing direction, demonstrating high standards of clinical practice and care, and being considerate about the needs of team members	
Setting and maintaining standards	
Supporting safety and quality by adhering to acceptable principles of surgery, following codes of good clinical practice, and following hospital and theatre protocols	
Good behaviours	Poor behaviours
Introduces self to new or unfamiliar members of surgical or practice team	Fails to observe standards or protocols (e.g. continues although equipment may be contaminated)
Clearly follows hospital, operating theatre and ward and practice protocols	Shows disrespect to patients or staff
Requires all team members to observe standards (e.g. sterile field, professionalism of staff in clinic or practice)	Dismisses the opinions of colleagues from other clinical disciplines
Always prepared to give a considered opinion on medical aspects of a management issues	Shows disorganization and chronic lateness

Support for surgeons

Surgeons who are struggling with their performance require insight to recognize there is a problem. It is essential that underperformers are supported sympathetically and, wherever possible, confidentially, with a view to safeguarding the reputation of the individual surgeon. Many reasons for underperformance can be dealt with in a positive manner, achieving satisfactory outcomes and restoration of confidence and performance.

Self-care is an important principle and one that is embedded in the competency of professionalism. The behavioural markers that were identified emphasize the value of having a personal general practitioner, attending appropriately, and the need for rest, relaxation and a balanced life. Surgeons are at risk of stress and

burn-out and frequently have ineffective methods for coping with such issues.

All surgeons should be alert to the possibility of problems affecting the performance of their colleagues and respond professionally.³⁴ In many cases this may be an aberration or a temporary phase in a surgeon’s career. In practice, a balanced and supportive approach and an offer to examine the issues affecting performance is required. If this is rejected and concerns persist relating to performance, then this must be taken further. Society and regulatory authorities expect this and in some cases jurisdictions require it. It is essential that surgeons have colleagues who are ‘friends-in-need, friends indeed’. In New Zealand, the Support for Surgeons Group consists of several surgeons from a range of specialties who are trained in counselling and have made themselves available to support colleagues feeling stressed, isolated or in need.¹⁶ The

Table 2 Measuring performance across the nine Royal Australian College of Surgeons (RACS) competencies

Method	Competency	Reference
Surgical audit and peer review	Medical expertise, technical expertise	Watters <i>et al.</i> (2006) ¹⁷ RACS (2008) ¹⁸ RACS (2006) ⁶
CUSUM analysis	Medical expertise	Yap <i>et al.</i> (2007) ¹⁹
Multisource feedback	Judgement and decision-making, professionalism, communication, collaboration and teamwork, management and leadership, scholarship and teaching (student and trainee feedback)	Violato <i>et al.</i> (2003) ²⁰
High-fidelity simulation exercises	Judgement and decision-making, technical expertise, collaboration and teamwork	Maran and Glavin (2003) ²¹ Powers <i>et al.</i> (2008) ²²
Video or independent observation/recording and review	Technical expertise, judgement and decision-making, communication, collaboration and teamwork, management and leadership	Healey <i>et al.</i> (2006) ²³
Script concordance analysis	Judgement and decision-making	Sibert <i>et al.</i> ²⁴ Meterissian <i>et al.</i> ²⁵
Belbin team roles	Teamwork	Belbin ²⁶
Patient satisfaction surveys	Communication, professionalism	RACS ²⁷
Review of records, letters and discharge summaries	Communication	ANZCA ²⁸
Calgary–Cambridge observation guide	Communication	Kurtz ²⁹
Kalamazoo essential elements	Communication	Makoul ³⁰
Professional development logbook/portfolio of courses, conferences and learning activities	Scholarship and teaching	RACS ³¹
CPD points	Scholarship and teaching	RACS ³¹

ANZCA, Australian and New Zealand College of Anaesthetists; CPD, continuing professional development; CUSUM, Cumulative Sum Chart.

Urological Society of Australia and New Zealand has its own members-at-risk programme¹⁶ and there is also a professional peer support group that is coordinated by the Royal Australian College of General Practitioners.¹⁶ Support for surgeons is also available through the Executive Directors of Surgical Affairs of the College or the relevant Regional Committee.

Where underperformance is related to clinical or technical skills, reskilling and re-entry programmes are available.⁵

Discussion

How should the guide be used and by whom?

The Surgical Competence and Performance Working Party set out to produce a guide to assess surgical competence and performance that was not restricted to technical performance. It was recognized that

all aspects of surgical practice needed to be included and that there is inevitably some overlap between the three patterns of behaviour identified under each of the RACS competencies. The Working Party's discussions focused on these areas of overlap and duplication and aimed to achieve 'best fit' between the identified behavioural markers and each of the RACS competencies.

Concern was raised regarding the most appropriate use of this guide. Every effort was made to produce a document, which would be relevant and easy to read by an individual surgeon to promote self-reflection. No member of the working party avoided being individually challenged by some of the behavioural markers. The intention was not to produce a checklist that could be used to promote a culture of blame or retribution, but rather a tool for positive and constructive use by a clinical director of surgery or senior colleague who would be able to work through the markers with any surgeon whose performance was under review.

Table 3 Attendance at Royal Australian College of Surgeons (RACS) courses across the nine RACS competencies 2005–2008†

Competency	2005	2006	2007	2008 (To end of August)	Total
Medical expertise	—	—	—	—	—
Judgement and decision-making	—	44	5	49	—
Technical expertise	—	—	13	19	32
Professionalism	65	155	108	52	380
Health advocacy	—	—	—	—	—
Communication	265	88	49	26	428
Collaboration and teamwork	—	27	34	61	—
Management and leadership	107	27	31	27	192
Scholarship and teaching	248	138	423	391	1200
Total	685	408	695	554	2342

†Continuing education in the specific medical and technical competencies is largely provided by surgical specialty and sub-specialty groups. Courses are not offered by the College in all areas every year.

Medical Administrations and Health Service Human Resources Departments may opt to use it as a statement of the standards set down by the College and develop it into a set of questions to support the assessment of performance through peer review and/or multi-source (360°) feedback.²⁰

Tools to measure performance

The measurement of surgical performance is a complex and sensitive issue. Few of the methods outlined in Table 2 have been formally evaluated by surgeons working in Australia and New Zealand. Undoubtedly, further research is required to validate some of the proposed tools, particularly in the non-technical areas of surgical performance. However, other methods, such as surgical audit and peer review, high-level national or craft group audits, simulation programmes and video-recording review have been shown to be valid to assess technical areas of surgical practice.^{17,18,21–23} Multi-source feedback and patient/client satisfaction surveys are increasingly being used in health care, including surgery.²⁰ Patient feedback and the study of patient perceptions already attracts College Continuing Professional Development Program points.³¹ Patient satisfaction surveys and reviews of patient complaints and compliments also assist with the appraisal of non-technical competencies.²⁷ The importance of teams in health care and the role of the surgeon as a leader or team member has been the subject of a Royal College of Surgeons of England report.¹¹ Nine team member characteristics essential for successful outcomes have been defined by one author.²⁶ Self-assessment of an individual's strengths and weaknesses and the ability to perform certain roles within a team can be determined using this team role tool. It can also be used as a valuable team development exercise.³⁵

Tools have also been developed to assess undergraduates or surgical trainees and some may be modified for consultant surgical practice.¹² With the introduction of the new RACS competency-based surgical education and training programme, the selection pro-

cess and criteria, curricula and assessment have each been aligned to the nine RACS competencies.³⁶ The new template and the behavioural markers described here provide a new opportunity to outline the competencies in a more measurable format that will be further examined by the College.

An approach to underperformance

Audit and peer review provide a high-level technical review of behaviour.^{12,17} A guideline for the management of outliers identified through audit has been produced.⁶ Outliers are frequently apparent rather than real and it is important that there are data to offer an apparent outlier a robust defence. Casemix must be considered and outcomes controlled for risk factors. The most influential risk factors are urgency of treatment, age, comorbidities and stage of pathology, although there is some variation from specialty to specialty. Sometimes, surgeons will need to be 'performance managed' or have complaints or adverse incidents investigated. Individual case reviews will need to be carried out if there are serious concerns about performance. This becomes all the more important when issues involving 'the public interest' are raised.

Complaints about surgical performance may be made to a hospital authority, a health department, a complaints commissioner, a medical board or council or directly to RACS. A surgeon may consider they are being unjustly treated and have a right to appeal against the review process. The College has a role to play on behalf of its Fellows to ensure that they are fairly and impartially assessed. The public, the Hospital, the State, and the surgeon all have a right to approach RACS with concerns about surgical performance.⁴

One approach for a surgeon under review or a concerned hospital executive, manager or department head would be to contact the person delegated by the College to respond to such concerns, such as the Executive Director of Surgical Affairs. The complaint and the supporting information and documentation must be fully reviewed,

