Royal Australasian
College of Surgeons

RACS Guide to Assessing Professional Skills

RACS ASSESSING PROFESSIONAL SKILLS WORKING GROUP

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Committed to Indigenous health

RACS Guide to Assessing Professional Skills (GAPS)

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Assessment

Systematic process(es) for collecting evidence and making judgements about learners' knowledge or skills. Assessment compares learners' performance to identified standards of knowledge and/or skill. Assessors make judgements about the extent to which learners' performance meets or exceeds the standards.

Assessment for learning

Evaluation of a learner's performance that provides constructive feedback to guide goal setting and ongoing learning and development. These 'formative' assessments look forward as well as back. Through ongoing observation and questioning, they inform Trainees' subsequent knowledge and skill attainment.

Assessment of learning

Provides evidence of achievement against defined standards and outcomes. As summative assessments, they define the standards that are required to progress to the next stage of training, or to complete a training program.

Assessment methods

Tools and protocols that provide evidence to assess knowledge, skills or behaviours. Assessments may be formal or informal, and assessment methods include discussion and questioning, simulation, observation, oral and written examinations, logbooks and portfolios.

Behavioural marker

Concise descriptions of behaviour that set out standards of performance in the workplace.

Competency based assessment

A fair and flexible method of assessment to support and facilitate professional practice and growth by assessing the standard demonstrated at the higher or lower level of expertise demonstrated and adjusting the outcome to the appropriate stage of training.

Competence

Demonstration of knowledge, skills and behaviours required to perform a task competently and safely.

Competency

Knowledge, skills or behaviours that set out standards of performance in the workplace. RACS has defined 10 essential competencies in the Surgical Competence and Performance Guide (2020).

Competency based

Flexible and varied approaches to education, structured around specific competencies and leading to graduate outcomes that have been identified in response to societal needs. It focusses on learners' demonstrations of competence and de-emphasizes time-based training.

Competency standards

Learning outcomes and assessment benchmarks required to demonstrate professional behaviour in the workplace.

Domain

Education involves three domains of learning: the cognitive domain (knowledge); the psychomotor domain (skills); and the affective domain (attitudes). These domains underpin the knowledge, practise, and engagement required to demonstrate competence.

Entrustable Professional Activity

Entrustable Professional Activities (EPAs) are units of professional practice that can be fully entrusted to a Trainee once they have demonstrated the necessary competence to execute the activity unsupervised.

Fairness

Impartial behaviour that emphasises equity and considers learners' needs.

Feedback

A dialogue between assessor and learner to exchange evaluative or constructive information about the learner's performance and motivations. Feedback may be written or verbal. Feedback can be used to facilitate reflection, learning and goal setting.

Graduate outcomes

Statement that describes the standard of performance expected by the end of a training program.

Healthcare systems

A complex mix of service providers and health professionals to meet the healthcare needs of populations and promote healthcare.

Integrated competencies

Holistic approach combines multiple competencies that can be taught, learned and assessed concurrently.

Learning

Assimilating, developing or extending knowledge, skills or behaviour. Learning can be achieved many ways – informally, through observation or conversation, or more formally through structured activities such as purposeful reading or deliberate practice.

Learning outcome

Statement that describes the standard of performance expected by the end of a stage of training.

Marking points

Marking points describe criteria for scoring assessments where behaviour is not observed (e.g. using rubrics to score essays).

Milestone

A marker established through a systematic process(es) of collecting evidence and making judgements, which signifies Trainee progress through a stage of training.

Multi Source Feedback (MSF)

An MSF provides doctors with a range of views from colleagues, healthcare professionals and patients on their performance. It is a work passed assessment in the form of a questionnaire that provides feedback on how others perceive their professional skills and attributes to stimulate self reflection on their practice and where change may be needed.

Observable behaviour

Overt actions, behaviours and achievements that can be seen and evaluated. Observed behaviours are based on task-specific activities that contribute to the learning outcomes and graduate outcomes. They provide evidence for assessing changes in performance.

Performance based assessment

Observation of learner performing a task in the workplace to evaluate the standard of performance for a defined stage of training.

Performance criteria or standard

Specific descriptions of what individuals must do to demonstrate proficiency to the required standard of performance at a defined stage of training.

Programmatic assessment

A cohesive program of interlinked, complementary assessments that work together to encompass the depth and breadth of knowledge and skills specified for all stages of a curriculum or training program. A program of assessment provides a profile of Trainee progress through the curriculum.

Reliability

The likelihood that an assessment would yield similar outcomes when reproduced in similar circumstances by different assessors.

Rubric

A framework of assessment making points of graduated performance indicators and proficiency levels to gauge the degree to which a task is performed. Rubrics ensure the reliability of the assessment, can validate the accuracy of the assessment, and can also be used to guide teaching and learning.

Scripts

A series of practice phrases that form a 'stem' to initiate verbal interactions. Scripts are usually developed by users to suit their own personality and style of speech.

Stages of training

Periods of learning on developmental continuum within a training program.

Standard of performance

Describe the competence and proficiency with which a task is performed.

Supervisors

For RACS, Supervisors of training are appointed positions. A Supervisor is a Fellow of RACS who is appointed by their Specialty Training Committee/Board to oversee a defined training program within a hospital or a region. Supervisors are responsible for assessing Trainee performance.

Teaching

Imparting or transmitting knowledge or skills to others. Teaching can be tacit, e.g. through modelling behaviour, or explicit, through structured activities such as demonstration or instruction.

Trainers

For RACS, a Trainer is any surgeon who has clinical oversight of a SET Trainee. Trainers have key roles in teaching and assessing Trainee performance.

Validity

The extent to which an assessment measures what it is designed to measure and that the results are used to make appropriate and accurate inferences.

Work-based assessment

Direct observation of an activity, or activities that are part of normal work routines, to assess performance in the workplace.

Executive summary

This Guide is a collaborative work of a multidisciplinary working party formed to provide guidance to the assessment of the newly developed RACS Professional Skills Curriculum (RACS PSC). It is intended to provide a resource for Specialty Training Committees/Boards, Supervisors of Training, and Trainers. Trainees and SIMGs may also find the Guide useful.

Its purpose is to outline the requirements of the RACS PSC, and to provide practical assessment tools to reflect the needs of the RACS PSC. We acknowledge that assessment must not be burdensome for the surgical training force, but an integrated process that supports the learning of our Trainees and SIMGs.

An explanation of the RACS PSC is provided, with suggested tools for its assessment. Specialties are encouraged to adapt these tools to their specific needs.

We acknowledge that not all interactions with Trainees will be documented, but Specialty Training Committees/Boards will require a suite of documentation of the Trainees' progress through SET. It is hoped that a culture of ad hoc feedback and debriefing will be developed. An outline of specific techniques to facilitate Trainee, Trainer interaction is provided in Appendix 1. Further information on purposes for assessment can be found in Appendix 2.

I wish to thank the working party and RACS staff for their support in the development of this Guide.

Associate Professor Philip Truskett, AM FRACS

Chair, Professional Skills Assessment Working Party

Introduction

Surgeons' professional skills are critical for patient safety, surgical practice and training. The concept of professionalism underpins the RACS Professional Skills Curriculum (PSC). Professionalism is demonstrated through a commitment to patient-centred care that is based on respectful and inclusive relationships with colleagues and empowers patients, families and carers to co-decide a course of treatment that is in the best interest of the patient.

Professional skills have come under many titles, including Non-Technical Skills, Human Factors, Behavioural Skills and even "soft skills". The most recognised descriptor has probably been "Non-Technical Skills" to contrast with procedural knowledge and manual dexterity of "Technical Skills". Many experts disagree with this title because they acknowledge that professional skills require a great deal of knowledge and experience.

These skills have been defined by Rhona Flin as *"the cognitive and social skills that underpin knowledge and technical expertise in high demand workplaces."* It is somewhat surprising that a recognition of the importance of these skills has only really been prominent since the 1970s. This was the result of investigation by the airline industry into several fatal commercial airline crashes where highly competent aircrew were involved. These crashes were found to be the result of cognitive and communication failure and not to lack of knowledge, equipment or mechanical failure. Surgery is also practised in a high-risk environment where effective cognitive and communication skills are critical for patient and team safety.

The Royal Australasian College of Surgeons (RACS) bases its education around 10 core competencies (see Figure 1). These Competencies are defined, taught, learned, and assessed. Two of these are technical competencies and eight are professional competencies. These behavioural skills underpin our community status as a profession.

RACS technical competencies are:

– Medical Expertise
– Technical Expertise

RACS professional competencies are:

– Collaboration and Teamwork
– Communication
– Cultural Competence and Cultural Safety
– Health Advocacy
– Judgement and Clinical Decision Making
– Leadership and Management
– Professionalism
– Scholarship and Teaching
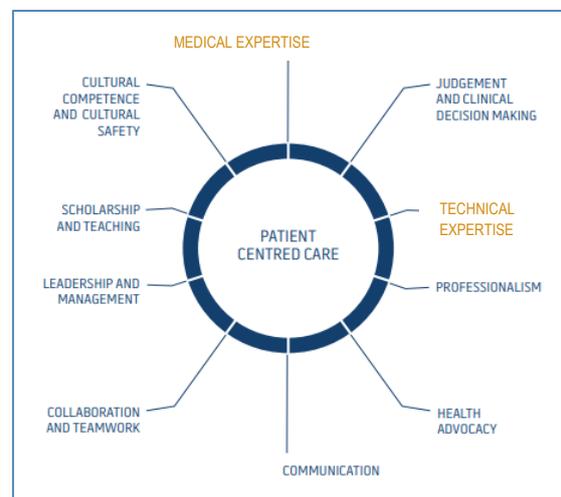
Figure 1 The 10 RACS competencies

Professional skills are recognised as an important part of surgical practice but have not been well defined and were often taught in an implicit way by example and not in an explicit manner. They were not assessed in a consistent fashion. Although Trainees were continually assessed globally in their overall competencies, there has been a lack of a structured curriculum or efficient educational tools to facilitate this process.

The principal of competency-based education is well established. All Specialty Training Committees/Boards have done considerable work in this space. Although the summative assessment of Trainees at the Fellowship Examination (FEX) has an important role, it is not the optimal method of assessing all 10 Competencies. It is part of a certification process whereby RACS acknowledges that a surgeon has reached a standard to allow independent practice.

Assessments are the educational backbone of competency-based training that develops the Trainee for independent practice. The design and content of assessment tools are vitally important not only to evaluate the knowledge and skill of the Trainee but also to support constructive feedback for consolidation, learning, and improvement. An important element is the stimulation and expression of reflective self-appraisal by the Trainee to facilitate their debriefing and feedback by the Trainer. By the development of reflective practice, it is intended that the trained surgeon will continue with this skill to guide their self-directed lifelong learning.

The College now has a Professional Skills Curriculum to guide the education process in these eight competencies. To complement this Curriculum, the *Guide to Assessing Professional Skills (GAPS)* has been developed to assist in the design and utilisation of formative and summative assessment tools. An understanding of the purpose of these tools may develop a culture of continuous feedback and debriefing between Supervisors, Trainers and Trainees; an experience that has the potential to enhance the professional performance of us all.

The RACS PSC describes professional skills required of SET Trainees over three stages of surgical training – Stage 1 (Learning outcomes), Stage 2 (Learning outcomes), and Stage 3 (Graduate outcomes).

The *Guide to Assessing Professional Skills (GAPS)* supports the RACS PSC by defining principles for assessing professional skills and by providing suggestions for assessment activities and assessment tools. This Guide is intended to help Specialty Training Committees/Boards, Supervisors of training, and Trainers to comprehensively assess Trainees' and SIMGs' performance across the depth and breadth of the professional competencies (See Figure 1).

It is envisaged that Trainees' and SIMGs' performance in many of the professional skills may be assessed in workplaces while doctors perform normal tasks of patient care. Work-based assessments (WBAs) can provide assessors with authentic information about Trainees' and SIMGs' knowledge and skills in practice. WBAs also present opportunities for Trainees to reflect on the tasks they undertake and on their performance of those tasks. Assessments that integrate multiple competencies and developmental stages, minimise risks of superficial assessment or overburdening Trainees and Supervisors. In addition to WBAs, assessments that are conducted outside the workplace include but are not limited to exams, theses, presentations, tutorials, and reports.

Assessment principles

RACS' Professional Skills Working Party has defined a set of principles that describe priorities that underpin assessments. These principles present a practical approach to assessing the professional skills that are defined in the RACS Professional Skills Curriculum.

1. Assessment is fair, valid, reliable and has educational impact

Assessment methods, tools and personnel affect the reliability and validity of assessment outcomes. We want to ensure that we are measuring what we intend to measure and that results are as accurate and dependable as possible. We also want to be confident that assessment outcomes give direction for Trainees' future learning and progress. Selecting appropriate assessment tools and implementing them optimally is part of the process. How users engage with the tools also determines the quality and impact of assessments. Assessment tools, in combination with Supervisors' expertise, support Supervisors in making judgements.

2. Assessment relates to the framework of learning and graduate outcomes defined in the RACS Professional Skills Curriculum

The professional skills described in the RACS PSC have been endorsed by RACS as being applicable to all RACS surgical specialties. The learning and graduate outcomes provide a generic framework for observed behaviours that can be adapted to the requirements of each surgical specialty. Specialty Training Committees/Boards can develop learning and assessment activities and tools that reference the learning and graduate outcomes in the RACS PSC that relate to their specialty.

3. Assessment against stated standards of performance is integral to competency-based medical education

A fundamental purpose of assessing performance in the RACS PSC is to enable Trainees, SIMGs and assessors to make judgements about the extent to which Trainees' and SIMGs' behaviour meets the stated performance standards. These judgements of performance can confirm where Trainees' and SIMGs' behaviours meet standards and also to guide their ongoing learning.

4. Assessments integrate professional skill competencies with speciality medical and technical expertise competencies

Skills and competencies are not performed in isolation but combine in the performance of activities. Assessing professional skills in combination with technical skills in everyday clinical activities is appropriate in many circumstances.

5. Trainees are assessed through a program of multiple assessments, using a variety of assessment formats, and conducted by multiple assessors

A program of assessments co-ordinates assessment opportunities and methods to address the depth and breadth of the curriculum. Multiple forms of assessment conducted by multiple assessors provide information from diverse perspectives. Different forms of assessment are suited to assessing different aspects of knowledge or performance. Assessments by multiple assessors can mitigate individual bias and bring richness to feedback and debriefing for learners.

6. Peers, other healthcare professionals, patients, and community members contributions to assessments of Trainees' work-based performance are encouraged

Healthcare professionals' and patients' collaborative and complementary roles contribute to meaningful assessment evaluations that provide opportunities for feedback from diverse perspectives.

Patient safety and wellbeing are paramount in all interactions. Patients' understanding of the assessment activity must be established and their agreement to be involved must be obtained prior to the assessment.

7. Assessment programs include practical, work-based activities that are assessed in the workplace

Workplace based assessments provide hands-on opportunities for Trainees to engage with patients, colleagues and healthcare systems. Workplace based assessments provide authentic examples of Trainee behaviour in their professional roles. These experiences stimulate Trainee learning of new knowledge, behaviours, techniques or approaches. It is also recognised that professional skills which cannot be readily observed in the workplace must be assessed in other ways.

8. Assessments promote learning and engage Trainees and SIMGs in active reflection of their learning experiences and assessment performance

Assessments provide rich opportunities for Trainees to reflect on, analyse, evaluate, and explain decisions and actions and through guided discussion that extends their knowledge and identifies areas to be developed. Trainees can then plan for opportunities to incorporate new knowledge and to practise new skills. Normalising processes of self-reflection contribute to a culture of valuing insight to stimulate life-long learning in independent practice.

9. Assessments provide structure for timely and constructive feedback, planning and goal setting

Regular assessments *for learning*, that stimulate constructive feedback discussions between Supervisors and trainees provide opportunities to reinforce effective performance and to discuss strategies to improve performance. Supervisors and trainees are encouraged to work together to develop goals and learning plans that provide opportunities to practise the required knowledge and skills. Assessments *of learning* are also used to judge knowledge and provide a score. These are essential but are required less frequently; these assessments may be made more efficient and familiar, in programs with a culture of regular assessments "for learning".

10. Trainer, Trainee and SIMG financial and time commitments are considered when devising assessment programs and protocols

Programs of assessment within SET and for SIMGs are planned to minimise time requirements and costs for participants, without compromising effective evaluation of Trainee and SIMG performance. Programs that include brief, impromptu, informal assessments that fit into normal work routines demonstrate respect for participants' service commitments and can contribute to a culture of reflection and trust.

Structure of the RACS PSC

The RACS PSC defines the eight professional competencies. These are characterised by a number of Behavioural Markers. The Behavioural Markers are presented as three stages of development: Stage1 (learning outcomes) stage 2 (learning outcomes), and stage 3 (graduate outcomes). Each stage of learning is characterised by observable behaviours, which may not be linear. Observable behaviours may be modified to suit specialty requirements and provide elements for development of assessment tools and processes.

Figure 2 presents one Behavioural marker, with Learning and Graduate outcomes, for the RACS Competency of Health advocacy. Observed behaviours can be devised to focus assessments on key skills and activities that enable Trainees to demonstrate patient-centred care and patient-centred decision making.
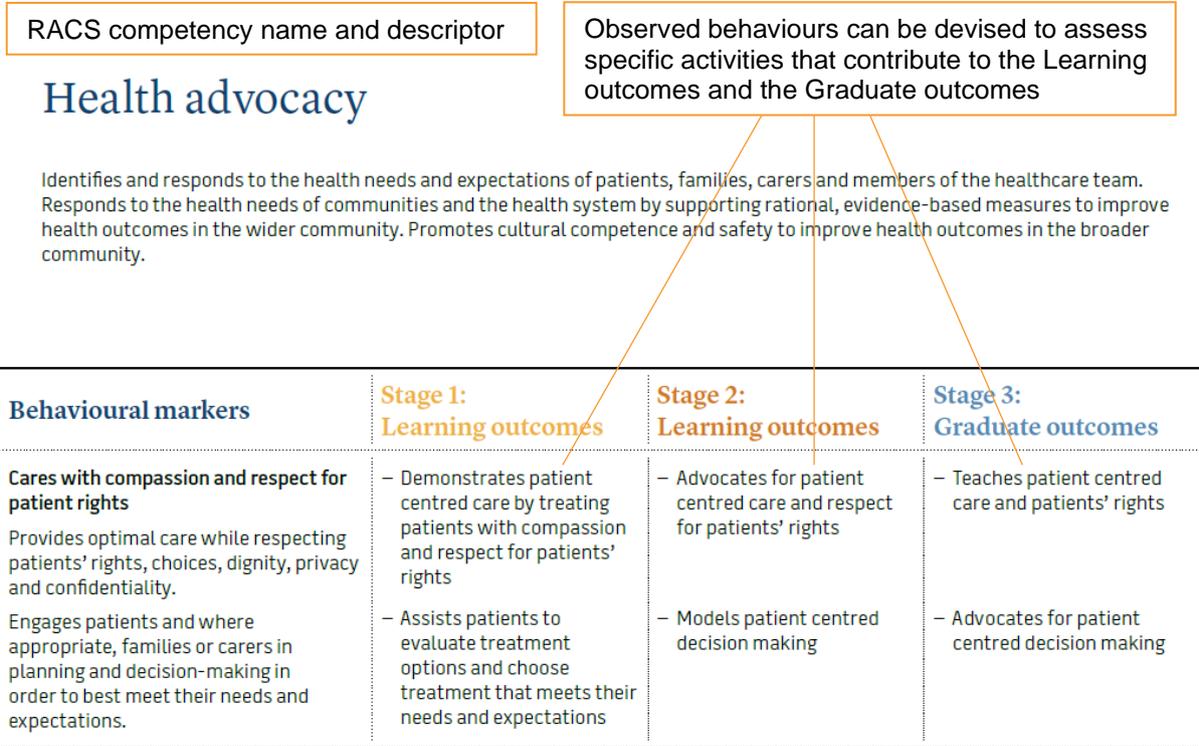

	RACS competency name and descriptor		Observed behaviours can be devised to assess specific activities that contribute to the Learning outcomes and the Graduate outcomes

Health advocacy

Identifies and responds to the health needs and expectations of patients, families, carers and members of the healthcare team. Responds to the health needs of communities and the health system by supporting rational, evidence-based measures to improve health outcomes in the wider community. Promotes cultural competence and safety to improve health outcomes in the broader community.

Behavioural markers	Stage 1: Learning outcomes	Stage 2: Learning outcomes	Stage 3: Graduate outcomes
Cares with compassion and respect for patient rights Provides optimal care while respecting patients' rights, choices, dignity, privacy and confidentiality. Engages patients and where appropriate, families or carers in planning and decision-making in order to best meet their needs and expectations.	− Demonstrates patient centred care by treating patients with compassion and respect for patients' rights − Assists patients to evaluate treatment options and choose treatment that meets their needs and expectations	− Advocates for patient centred care and respect for patients' rights − Models patient centred decision making	− Teaches patient centred care and patients' rights − Advocates for patient centred decision making

Figure 2 Example Behavioural markers, Learning outcomes and Graduate outcomes

As assessment activities commensurate with the competencies are identified, it can be helpful to describe levels of specificity for assessment criteria. From broadest to most detailed, a framework of assessment parameters for the RACS PSC is shown in Figure 3

Competencies	RACS has defined 10 competencies to reflect the standards we hold as a profession (see Figure 1).
Behavioural markers	3-5 high-level descriptions of appropriate behaviours have been defined for each competency. Behavioural markers are presented in the RACS Surgical competence and performance guide (2020) and in the RACS PSC (2023).

Learning outcomes and Graduate outcomes	Learning and graduate outcomes define performance standards in all Behavioural markers for three stages of SET. Graduate outcomes define performance standards at completion of SET. Learning and graduate outcomes are presented in the RACS PSC (2023).
Observed behaviours and Marking points	Observed behaviours are based on task-specific activities that contribute to the learning outcomes and graduate outcomes. Marking points describe criteria for scoring assessments where behaviour is not observed (e.g. using rubrics to score essays). Observed behaviours and marking points are task-specific and may also be specialty specific.

Figure 3 Assessment parameters

Assessing professional skills in SET

In surgical training, the predominant assessments are ongoing, low-stakes assessments conducted in the workplace, which provide feedback *for learning*. Some of these will be delivered formally, but most will be ad hoc, informal evaluations of Trainee performance, with guidance about that performance – what went well, or what needs attention. Formal assessments *of learning*, which provide evidence to inform judgements about Trainees' achievements or progress are less frequent. Frequent, informal assessments can inform and demystify the delivery of formal assessments. Documentation, type, and frequency of formal assessments is regulated by Specialty Training Committees/Boards.

The SET program is a fluid and constantly evolving environment. It is recognised that the RACS specialties have different curriculum and syllabus requirements and have varying perspectives on the relative significance of each of the professional competencies. For example, communication skills for the task of breaking bad news to patients might be common to all specialties, but the content might vary significantly. For example, a WBA involving an "Family End of Life discussion" for a Plastic and Reconstructive Surgery (PRS) Trainee would be extremely rare and would have no real role in the PRS program. It would be a common encounter for other Specialties such as General Surgery and Neurosurgery, where it would be an ideal scenario to assess. There are ample examples of difficult conversations for the PRS Trainee that will be equally challenging, such as, "counselling a patient for major head and neck reconstruction" that are relatively unique to that specialty. Such differences will impact specialty training and programs of assessment.

It is acknowledged that it may not be possible for Trainees to actively demonstrate their practical skills in all elements of the curriculum in clinical settings. A few elements included in the RACS PSC are more relevant to surgeons once they commence surgical practice than they are to Trainees. The curriculum, while accepting limitations to Trainees' experience and activities, anticipates independent surgical practice. It therefore includes elements for which Trainees' involvement (and assessment) is likely to be limited to 'knowledge' rather than 'demonstration'. For example, Trainees graduating from SET must know the principles of ethical billing practices, although they may have limited direct experience in this sphere.

Assessment methods

Assessment methods – *how* we assess – depend on *what* we are assessing and *why* we are assessing. Methods suited to assessing knowledge and skills of novices may differ from methods of assessing knowledge and skills of experts. For example, testing knowledge recall of anatomical structures via MCQs or short answer exams may be appropriate for Trainees in the early stages of SET, but later in training, it is more useful to test the application of that knowledge in practice via work-based assessments, discussions, or vivas.

Similarly, *why* we are assessing impacts our choice of assessment methods. A Supervisor might use a conversational series of questions and answers to confirm a Trainee's knowledge to decide the extent of the Trainee's participation in a subsequent family meeting. However, to establish that a Trainee has consolidated the knowledge and skills required to progress to the next level of training, then a more comprehensive, structured, and more formal approach, such as an End of Term assessment, is likely to be required.

Many assessment methods can support assessment of professional skills in SET. Suitable assessment methods include discussion and questioning, interviews, observations, portfolios, simulations, written exercises, presentations, theses, and clinical, oral and written examinations.

Exams and written assessments such as essays or reports are suited to testing the depth and breadth of Trainees' knowledge of activities that might be difficult or inconvenient to demonstrate in the workplace (e.g. knowledge of facets of the health system, or of uncommon conditions). Written assessments can also consider trainees' judgement (e.g. presenting a rationale for a hypothetical decision, or discussing ethical conundrums).

Practical exams, (e.g. OSCEs), focus on aspects of clinical performance that include professional skills such as communication, judgement, and health advocacy. Assessment under exam conditions minimises differences in the presentation of each scenario for all candidates.

WBAs focus on Trainee activities as they undertake their normal clinical work. WBAs predominantly evaluate Trainee behaviour in activities that concurrently synthesise knowledge and skill in multiple competencies. WBAs can bring authenticity, richness and breadth that are difficult to reproduce in other environments. However, the unpredictability and variety of patient presentations can make it hard to plan for WBAs and may make it challenging to assess Trainee performance in rare, or infrequently seen patient presentations.

Feedback and debriefing are essential components of competency-based medical education. Relevant techniques are described in Appendix 1.

1 Assessment tools

A wide range of assessment tools is available to support assessment processes and provide records of Trainee or SIMG performance. Specific assessment tools are suited to assessing particular performance criteria, (e.g. knowledge or skills) or activities (e.g. conducting a patient consult or undertaking a procedure). Assessment tools can be focussed, (e.g. on specific knowledge or individual competencies); or they can be holistic, (e.g. assessing multiple, integrated competencies). They can enable assessors to provide quantitative scores, or qualitative evaluations, or combinations of both these aspects of assessment.

Assessment tools that provide detailed analysis of components of a task are useful for providing structured feedback. Assessment tools that provide holistic, or global scores are useful to provide judgements about performance.

Most scoring documentation presents opportunities for Trainees to provide self-assessment of their performance. This can support structured debriefing and reinforces a culture of self-reflection that contributes to lifelong learning. In an MTA/ETA assessment Trainees rate their own performance. This self-assessment is to be encouraged but may be most effective in informal, low stakes assessments. In SET, MTAs and ETAs are usually viewed by Trainees as 'high stakes', which may compromise authenticity of interactions between Supervisors and Trainees.

When assessing professional skills, analytical and holistic assessments contribute to structured feedback and to decisions about Trainee entrustment or progression. Assessments that also include provision for open-ended comments enable assessors to comment on aspects of performance that are not formally scored, but which may provide valuable feedback for learners.

Assessments may occur in any witnessed encounter with patients, in environments, such as:

- Emergency Departments
- Consulting rooms
- Offices
- Operating rooms
- Outpatient departments
- Wards

Figure 4 shows suggestions for assessing Trainee or SIMG performance in common elements of patient care.
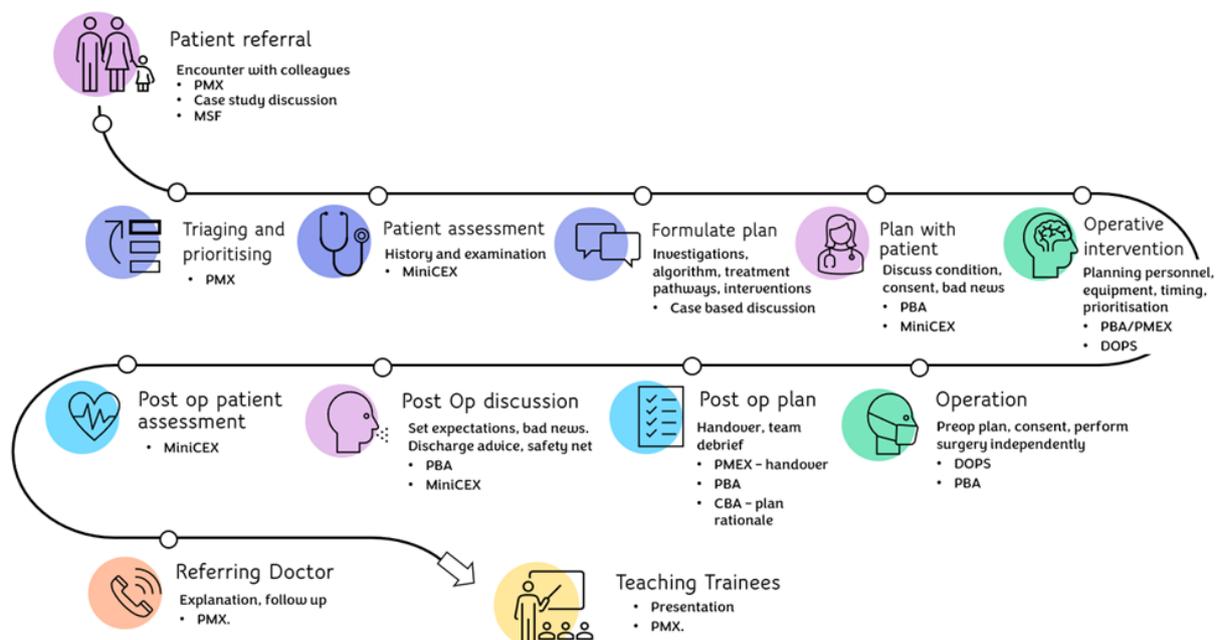

Figure 4 Professional skills assessment opportunities

RACS recognises that similar assessment tools may go by different names as they are modified for different contexts. Some assessment tools suitable for assessing professional skills in SET are presented here. This list is not prescriptive or comprehensive; other assessment tools may also be useful. A chart describing competencies that may be assessed by particular tools is provided in Appendix 3.

1.1 Case-Based Discussion (CBD)

Case-based Discussions (CBDs) are verbal presentations by Trainees, regarding clinical scenarios (or cases) in which a conundrum or learning moment was encountered. CBDs may also take the form of discussions between a Trainee and an assessor. If a CBD concerns an actual case, Trainees are

encouraged to reflect on their own or others' performance in the scenario. CBDs can include hypothetical scenarios, or postulations about variations to the original example. CBDs can be conducted online or face-to-face.

CBDs can vary in degrees of formality or structure in the discussion. Formal assessment of CBD presentations may contribute to a program of assessment while less formal discussions between trainees and their Supervisors or colleagues reinforce ongoing reflection and explore clinical reasoning.

CBDs can take multiple forms such as:

- A defined series of topics, or scenarios, that Trainees formally reflect on (e.g. regular tutorial presentations)
- Reflections on actual experiences, such as clinical encounters
- Presentations at multidisciplinary team (MDT) meetings or morbidity and mortality (M and M) meetings
- Conversations with Supervisors or colleagues

Trainees can be assessed on the content of the presentation or discussion and/or on their presentation technique, and structure of their arguments. CBDs can be used at any stage of training, being applied to increasingly complex actual or hypothetical cases.

CBDs can be implemented to encourage deep thinking about ethical challenges, to broaden Trainees' exposure to unusual or rare encounters or conditions, and to build skills in presentation. CBDs can extend Trainees' knowledge so that if they encounter similar cases in the future, they have a larger repertoire of experience to draw from.

Scoring could involve a rubric, as well as opportunities for observational comments. Assessments could focus on particular competencies. Supervisors can probe Trainees' knowledge and build complexity into cases.

1.2 Direct Observation of Procedural Skills (DOPS)

The Direct Observation of Procedural Skills (DOPS) is commonly used in clinical settings to assess Trainees' performance of diagnostic and interventional procedures, or components of surgical procedures. As well as assessing medical knowledge and technical expertise, DOPS can be adapted to include assessment of professional skills (e.g. communication, collaboration and teamwork). Assessors directly observe the Trainees undertake the procedures that provide the platforms for assessment.

DOPS is appropriate for assessment of Trainees in early stages of SET. DOPS often include fairly generic tasks such as performing a physical examination, inserting a urinary catheter, a venous canula or a nasogastric tube. They are therefore more suited to the assessment of a novice but can be more complex in the assessment of a senior trainee. Core procedures can be designated for DOPS assessments. Components and scoring can be specific to particular conditions or procedures and correlate to the Trainee's stage of training.

DOPS provide structured indicators for teaching and feedback. DOPS provide component scores, written feedback comments, and a global (overall) rating. DOPS tend to offer a 'broad brush' approach to assessment and may lack sufficient detail for nuanced assessments of complex skills.

1.3 Entrustable Professional Activities (EPAs)

Entrustable Professional Activities (EPAs) are units of professional practice that can be fully entrusted to a Trainee once they have demonstrated the necessary competence to execute the activity unsupervised. EPAs can be used to assess performance of many activities that are undertaken by Trainees as essential components of practice.

Assessors make decisions about the level of supervision (or independence) with which they trust the Trainee or SIMG to carry out an activity. This can also be thought of as the extent to which an assessor delegates responsibility to the Trainee or SIMG.

Supervisors, when making decisions about 'entrustment', consider Trainees' demonstrated knowledge and skills in the activity, and weigh these against potential risks to patient wellbeing and safety on future occasions. Supervisors are *trusting* the Trainees to adapt to new situations, to recognise situations that may exceed their skills, and to seek support if needed.

EPAs provide opportunities for concurrent assessment of multiple RACS competencies. EPAs have commonly prioritised assessment of procedural or technical activities, but they are also well suited to assessing professional skills in clinical tasks.

EPAs supporting the RACS PSC are activities that:

– are integral to patient care and/or to Trainee/SIMG interactions with people or systems and/or to Trainee/SIMG conduct of administrative tasks
– are relevant to SET
– can be observed and assessed
– allow Trainees/SIMGs to demonstrate multiple competencies concurrently

Two main models are used for EPAs:

1. EPA as a stand-alone assessment of observed behaviour in an activity – an assessor observes a Trainee or SIMG undertake a designated activity.

2. EPA comprising a review of a portfolio of evidence (e.g. assessments) – an assessor, or panel of assessors, review collated assessments that are relevant to the activity.

EPAs are usually formal, structured assessments, which may be conducted in a wide range of clinical settings.

EPAs provide structured indicators for teaching and feedback. EPAs may use rubrics, or provide component scores, and a global rating that describes levels of entrustment (e.g. ranging from 'I had to do it' to 'Trainee did it; I did not need be there'). EPAs will usually include written feedback comments.

1.4 Essays

Essays test Trainees' skills in presenting knowledge and the interpretation and critical appraisal of a subject, based on this knowledge. Essays can vary from short form (e.g. <1,000 words) to much longer forms (e.g. >2,000 words). Shorter essays require Trainees to present concise information; longer essays, including theses, are more discursive, providing opportunities to more thoroughly consider and evaluate concepts, or present original research questions, methodology, analysis, discussion and recommendations.

Trainees can be assessed on the content of the essay and/or on their technique, and structure of their arguments. Essays can be used at any stage of training, being applied to increasingly complex or nuanced subject matter.

Essays can be implemented to encourage deep thinking about ethical challenges, to broaden Trainees' exposure to unusual or rare encounters or conditions, and to build skills in written presentation of arguments or weighing evidence to form opinions. Essays can also be used to extend Trainees' knowledge about topics that they might have limited exposure to during training.

Essays are usually formal assessments. Rubrics can be used to provide scoring parameters with clear indications of what is being assessed.

1.5 Examinations

Exams are formal assessments of knowledge and/or skill. RACS implements a number of exams of varying formats: MCQs, OSCEs, Vivas, Written. It is beyond the scope of this paper to elaborate on these forms of assessment.

1.6 Mid-Term assessments (MTAs) and End-of-Term assessments (ETAs)

Mid and End-of-Term assessments (MTAs and ETAs) assess all ten RACS competencies to provide Trainees with feedback on their performance and to determine Trainees' progress to meeting expectations for their stage of training.

MTAs are formative assessments *for* learning, conducted partway through a rotation, to provide opportunities to reinforce performance that is meeting the required standards and to develop structured learning plans for Trainees to address any identified areas of concern during the current rotation.

ETAs are summative assessments *of* learning, conducted at the conclusion of a rotation, to provide Trainees with feedback on their performance in all the RACS competencies. ETAs may consider MTA findings, and provide further opportunities to reinforce satisfactory performance and to develop structured learning plans for Trainees to address any identified areas of concern. ETAs may provide evidence of whether Trainees have met the standards required to progress to the next stage of training.

MTAs and ETAs are usually conducted by Supervisors of training and must take into account feedback from Trainers and allied staff who reflect on their observations of Trainee behaviour throughout a rotation. MTAS and ETAs are formal, structured assessments, that are conducted in a private environment.

MTAS and ETAs provide structured indicators for feedback and teaching. ETAs usually use rubrics to provide component scores for observable behaviours, and a global rating (e.g. 'Meets expectations' or 'Does not meet expectations') that summarises the outcome of the assessment. ETAs will usually provide opportunities for Trainees to self-assess and include Supervisors' written feedback comments.

1.7 Mini Clinical Evaluation (MiniCEX)

Mini Clinical Evaluations (MiniCEX) are commonly used in clinical settings to assess Trainees' interactions with patients during clinical encounters. MiniCEXs typically focus on activities such as history taking, physical examination and consent. Assessors directly observe the Trainees undertake the consultations that provide the platforms for assessment.

MiniCEX is appropriate for assessment of Trainees in all stages of SET. The assessment can be adapted to assess skills within the professional competencies required to interact with patients with complex clinical issues. Core presentations or conditions can be designated for MiniCEX assessments. Components and scoring can be specific to particular conditions and correlate to the Trainee's stage of training.

MiniCEX provide structured indicators for teaching and feedback. MiniCEX provide component scores, written feedback comments, and a global (overall) rating.

1.8 Multi-source feedback (MSF)

MSF is a structured process to gather feedback about someone's performance from colleagues. The feedback is collated into a report and discussed with the Trainee or SIMG. Aspects of MSF can be challenging – gathering feedback requires co-operation from many people; delivering collated feedback can be demanding. Protocols have been developed to support MSF, addressing issues such as the number of colleagues involved, methods to preserve the anonymity of respondents and strategies to minimise potential for psychological harm to recipients. MSF are usually formal, structured assessments that are conducted in a secluded environment such as an office.

MSF provides indicators for structured feedback to invite self-reflection and guide learning.

1.9 Presentations

Presentations are verbal presentations by Trainees, reporting on clinical scenarios (or cases), or patient conditions or management, or research topics. Presentations can vary in degrees of 'formality' or structure in the discussion, and can take multiple forms such as:

- – A defined series of topics, or scenarios (e.g. regular tutorial presentations)
- – Conversations with Supervisors or colleagues
- – Reflections on actual experiences, such as presenting patient information
- – Presentations at multidisciplinary team (MDT) meetings or morbidity and mortality (M and M) meetings
- – Presenting on patient conditions or management during ward rounds

Trainees can be assessed on the content of the presentation and/or on their presentation technique, and structure of their presentation. Presentations can be used at any stage of training.

Presentation can be implemented to encourage deep thinking about clinical situations, to broaden Trainees' exposure to unusual or rare encounters or conditions, and to build skills in presentation.

Scoring could involve a rubric, as well as opportunities for observational comments. Assessments could focus on particular competencies.

1.10 Procedure Based Assessments (PBAs)

Procedure Based Assessments (PBA) assess Trainees in the knowledge and skills required to successfully perform key, or 'index' procedures. PBAs are similar to DOPS, however, specific PBAs are likely to be devised for individual procedures. As such PBAs would be more suited for the assessment of senior Trainees.

Procedures may be selected because they:

- Represent a progression of skill development
- Contribute to the knowledge and skills required to safely perform most procedures in a discipline
- Are procedures that are available for training

PBAs assess Trainees' technical, operative and professional skills in procedures, or parts of procedures throughout training. PBAs provide a framework to assess practice and facilitate feedback to direct learning. Completion of a single PBA will not 'licence' a Trainee to perform that procedure unsupervised. Independent practice requires evidence from multiple PBAs. The evidence from PBAs may also inform end of term assessments.

PBAs can include assessment of professional skills (e.g. communication, collaboration and teamwork):

- Pre-operative discussions, or consent
- Pre-operative planning
- Pre-operative preparation
- Intraoperative communication, teamwork, professionalism
- Post-operative management

PBAs provide structured indicators for teaching and feedback. PBAs provide component scores, written feedback comments, and a global (overall) rating that relates to the extent of supervision required by the Trainee.

1.11 Professionalism Mini-Evaluation Exercise (P-MEX)

The Professionalism Mini-Evaluation Exercise (P-MEX) focus on professional skills that Trainees demonstrate in their daily activities. P-MEX are modelled on the MiniCEX format. Assessors observe Trainees in interactions with others that are relatively short and occur frequently. P-MEX typically focus on doctor-patient relationship skills, reflective skills, time management, and interprofessional relationship skills. Assessors directly observe the Trainees undertake consultations that provide the platforms for assessment. P-MEX may be conducted for clinical encounters with patients, or small group sessions, or interactions with other health professionals. P-MEX are context-specific – it may not be practicable to assess all aspects in any single instance.

P-MEX is appropriate for assessment of Trainees in all stages of SET. The assessment can be adapted to assess skills required to interact with patients with complex clinical issues. Core presentations or conditions can be designated for P-MEX assessments. Components and scoring can be specific to particular contexts and correlate to the Trainee's stage of training. P-MEX provide structured indicators for teaching and feedback.

1.12 Reflective journals

Reflective journals are written or verbal comments by Trainees about interactions between themselves and Trainees, and/or regarding clinical scenarios (or cases) in which a conundrum or learning moment

was encountered. Trainees are encouraged to reflect on their own or others' performance in the scenario. Reflective diaries are primarily intended as a private self-assessment and self-learning tool, although some programs have required Trainees to discuss their comments with Supervisors. Considerations about legal discoverability must be considered with this tool.

Reflective journals, like Trainee Progress Notes, provide an ongoing record of activities and observations, similar to patient case notes. Like CBDs, diaries can assist Trainees to reflect on challenging situations and consider what they have learned or may need to learn.

Reflective journals can be written or utilise apps such as training management platforms to facilitate verbal recording. These platforms can also hold recordings with consideration for the security of the content.

Reflective journals are informal in structure, offering a quick means of recording a range of activities and observations. Reflective diaries can be used at any stage of training.

Reflective diaries can be implemented to encourage personal reflection about professional challenges, to assist planning for future learning activities, and to build skills in notetaking and record-keeping. Trainees can diarise recommendations (e.g. from a Trainer or Supervisor) and what the Trainee has done and thought about them.

1.13 Reports

Reports, like essays, test Trainees' skills in presenting knowledge and ideas. Usually reports have a business, or management focus, or present findings from a study or research project.   Reports are usually structured in logical and organised ways. At a minimum, reports require Trainees to present concise information, evaluation of concepts or analysis of a situation, and recommendations.

Trainees can be assessed on the content of the report and/or on their technique, and structure of their arguments and recommendations. Reports can be used at any stage of training.

Reports are usually formal assessments. Rubrics can be used to provide scoring parameters with clear indications of what is being assessed.

1.14 Trainee progress notes (TPNs)

Trainee progress notes (TPNs) are brief written or verbal comments by Supervisors or Trainers about interactions between themselves and Trainees. TPNs provide an ongoing record of activities and observations, similar to patient case notes. TPNs can include statements about, or reflections on, for example:

- conversations between Trainees and Supervisors
- planning Trainee activities
- discussions about patient management
- observations of Trainee interactions with patients or colleagues.

TPNs are continually, or regularly available to Trainees (e.g. at 2-weekly intervals) and Trainees are encouraged to reflect on their own or others' performance and activities. TPNs can utilise apps such as training management platforms to facilitate verbal recording. These platforms can also hold records with consideration for the security of the content.

TPNs are informal in structure, offering a quick means of recording a range of activities (data points) and providing a rich source of feedback for Trainees. TPNs can be used at any stage of training.

TPNs can be implemented to encourage reflection about professional challenges, to provide evidence for other assessments, to assist planning for future learning activities, and to build skills in note-taking and record-keeping. Supervisors can use TPNs as a stimulus for discussions or other activities to probe or extend Trainees' knowledge or skills. TPNs may inform MTAs and ETAs.

2 Scoring systems, rating scales and assessment rubrics

2.1 Scoring systems

Scoring systems provide ways to standardise and record judgements about Trainees' performance in assessments. *Analytical scoring* rates performance of individual elements of a task (e.g. component scores or checklists), and *holistic scoring* reflects an overall impression of performance (e.g. global scores or entrustment ratings).

Many assessment tools combine analytical and holistic approaches. Analytical scoring can provide feedback on Trainees' performance in elements of a task, helping learners to plan where to focus their learning activities. Holistic scoring can provide a single rating, or comment as feedback on the whole activity, and can also be used as an overall score, particularly for assessments *of* learning or for entrustment decisions. Scoring EPAs is discussed in more detail below.

2.2 Rating scales

Rating scales provide systematic methods to record judgements about learners' performance; they reflect performance standards, scoring criteria and what is being assessed. Rating scales may refer to standards (e.g. below standard, meets standard, above standard) or to levels of supervision (e.g. fully supervised, some supervision, entrusted). They may tally 'correct' responses, or may comprise numbers (ratings, scores) aligned to descriptions of performance criteria (e.g. statements in rubrics, or Likert scales). Binary ratings (e.g. 'yes/no', 'meets standard/does not meet standard', 'achieved/not achieved') are less nuanced than rating scales that have multiple options.

2.3 Assessment rubrics

Assessment rubrics set out organising frameworks for assessment. Rubrics specify standards of performance by describing the characteristics of behaviour or marking points that meet, exceed, or do not meet required standards. The standards set out in rubrics can also define stages of development or levels of complexity. Rubrics can take different approaches, but all rubrics clearly and concisely communicate performance expectations.

Scoring is based on judgements about Trainees' performance compared to the performance standards defined in the rubric. This is consistent with competency based medical education. Scoring criteria might include three or four ratings such as those in the example below (Figure 5); task-specific criteria statements of Observed behaviour clarify performance expectations for each standard. This example suggests descriptions for an Observed behaviour relevant to communication and decision-making.

RATING	STANDARD	DESCRIPTION OF STANDARD	OBSERVED BEHAVIOUR OR MARKING POINT
Level 4:	Standard of excellence.	All aspects of work exceed expectations and show exemplary performance or understanding.	Consistently uses active listening to demonstrate empathy, respect and establish rapport with patients. Always gathers appropriate information and provides optimal patient-centred care.
Level 3:	Approaching standard of excellence.	Some aspects of work exceed expectations and demonstrate solid performance or understanding.	Mostly uses active listening techniques, demonstrates empathy, respect and usually establishes rapport with patients. Usually gathers appropriate information and provides effective patient-centred care.

| Level 2: | Meets minimum standard. | Performance is acceptable to meet expectations. Some errors. | Mostly uses active listening techniques, demonstrates respect and usually establishes rapport with patients. Seeks appropriate information and Involves patient in decision-making. |
| Level 1: | Does not yet meet minimum standard. | Does not meet expectations. Serious errors, omissions or misconceptions. | Rarely uses open-ended questions. Compromises empathy and information gathering. Regularly misconstrues information. Rigidly pushes own agenda, or has ineffective plan for patient management |

Figure 5 Common elements of a rubric

The next example, in Figure 6, illustrates a different style of rubric, derived from the RACS PSC to assess a behavioural marker in the Collaboration and teamwork competency. In this example, learning outcomes and graduate outcomes define the required standards of performance, aligned to stages of training. Supervisors and Trainees check the rating boxes to indicate the level of competence (Stage 1, 2, or 3) that a Trainee has achieved for the Behavioural marker "Plays an active role in clinical teams". The rubric provides clear assessment criteria and facilitates structured feedback discussions. Task-specific rubrics can also be developed.

Collaboration and teamwork

Behavioural makers	Stage 1 Learning outcomes	Stage 2 Learning outcomes	Stage 3 Graduate outcomes	Rating scale Trainee S1	S2	S3	Supervisor S1	S2	S3	N/A
Plays an active role in clinical teams	Engages in timely shared decision making	Facilitates agreement on a shared decision making	Leads an inclusive team for shared decision making	☐	☒	☐	☒	☐	☐	☐
	Completes tasks accurately and promptly	Ensures patient management issues are promptly addressed	Delegates management issues to appropriate team member	☐	☒	☐	☐	☒	☐	☐
	Engages with the team to learn from others	Facilitates team members to learn from each other	Teaches junior members of the team	☐	☐	☒	☐	☒	☐	☐

Figure 6 Rubric of assessment criteria for scoring Collaboration and Teamwork

The language in rubrics describes behaviour in relation to standards. Assessment criteria such as "Seeks and considers advice and feedback from colleagues" supports constructive dialogue, whereas "Responds constructively to criticism" is more subjective, implying that assessment involves 'criticism' rather than promoting learning.

Rubrics provide platforms for formative feedback, as well as supporting summative decisions. they are suited to mid-term and end of term assessments. In mid-term assessments rubrics can clarify expectations and guide learning, in end of term assessments rubrics support assessment *of* learning.

2.4 Entrustable Professional Activity (EPA) scoring

EPA scoring points describe Supervisors' level of supervision or trust in Trainees' knowledge and skill in undertaking an activity. Supervisors' judgements consider ongoing patient safety together with assessment of Trainees' increasing skill and independence.

Scoring systems for EPAs usually include descriptions of levels of 'entrustment' from a Supervisor's perspective. One recognised scoring scale for assessing Trainees' level of independence when

performing a procedure is the Ottawa Surgical Competency Operating Room Evaluation (O-SCORE). Others have been developed to suit particular training programs as defined units of work with entrustment milestones, which can be described by behaviours that are observed or inferred from discussions, or for use by an assessor, or panel of assessors to review collated assessments relevant to the activity

Although originally developed for use with surgical procedures, the O-SCORE has been evaluated for generalisability to other clinical activities and may be suitable for assessing performance of professional skills. The O-SCORE and an alternative, Modified supervision scale are presented in Figure 7.

EPA scoring scales of entrustment provide an overall holistic, or global score for the activity. Component scores for key parts of the activity can contribute to EPA decisions.

SCORE	OTTAWA SURGICAL COMPETENCY OPERATING ROOM EVALUATION – O-SCORE	MODIFIED SUPERVISION SCALE
1	'I had to do' − Requires complete hands on guidance by the Supervisor, the Trainee did not do, or was not given the opportunity to perform the task)	Direct guidance − Trainee requires close supervision − Supervisor leads the activity
2	'I had to talk them through' − The Trainee performs the task but requires constant direction	Monitor and supervise − Trainee requires frequent supervision − Supervisor present, monitors and guides as required
3	'I had to prompt from time to time' − Trainee demonstrates some independence but requires intermittent direction	Minimal supervision − Trainee requires infrequent or distant supervision − Supervisor available at critical times
4	'I need to be in the room just in case' − Independence but Trainee has limited awareness of the range risks and/or limited exposure to uncommon aspects of this activity and still requires supervision for safe practice	No active supervision − Trainee is competent − Supervisor is confident that Trainee can perform task safely and independently
5	'I did not need to be there' − Complete independence, the Trainee understands the risks and performs safely, practice ready	Supervise others − Trainee can supervise others − Supervisor not required

Figure 7 Ottawa scale and Modified supervision scale

3 Examples of using assessment tools

To assess the breadth and depth of a surgical curriculum, a program of assessments must ensure that performance in all 10 RACS competencies is assessed.   Programs of assessment specify multiple types of assessment and assessment tools to evaluate and record performance across a curriculum.

Many of the assessment tools described in this Guide are extremely flexible and can be used to assess performance in several of the RACS competencies. It is usually convenient and efficient to assess two or more competencies concurrently. However, it can be counterproductive to include all the competencies in every assessment – this can lead to overly long and detailed assessments and/or to superficial implementation of assessments. It can be beneficial to target fewer competencies per assessment.

Some activities are highly suited to assessments of particular competencies (e.g. a discussion on fee-setting might focus on aspects of professionalism and/or health advocacy). Other activities are more diverse (e.g. a patient interview might support assessment of communication, cultural competence, health advocacy, judgement and clinical decision making, medical expertise, or professionalism). Assessments are unlikely to include all these competencies. These types of assessments can be implemented flexibly to focus on competencies that are not assessed elsewhere. Assessments can also be tailored to focus on activities and skills that are appropriate for different stages of training.

When devising programs of assessment, it is essential to consider the mix of activities and competencies being assessed. Assessment activities can be prioritised and reviewed to ensure that they reflect specialty-specific requirements as well as the 10 RACS competencies, and the Learning outcomes and Graduate outcomes from the RACS PSC. Professional skills which cannot be readily observed in the workplace must be assessed in other ways. It can be helpful to 'map' the assessments to specialty curricula, to the RACS competencies and to the RACS PSC. Assessment activities can then be modified to reduce duplication ('over assessment') of competencies and to address any shortfalls or omissions.

The examples of assessment tools in the next section are intended as examples to show different ways that the tools could be modified to suit particular purposes. They are not intended to be exhaustive. Some of the examples include many of the RACS competencies to illustrate potential synergies between the activity and the RACS competencies. In SET, selection of which competencies to assess would be context-specific depending on the requirements of a training program.

3.1 Example MiniCEX

Using an interpreter: the focus for this assessment is on communication. An assessment like this one may be suitable for Trainees in early stage/s of SET

MiniCEX assessment
Topic: Taking a patient history with an interpreter

Trainee name:	*Assessor name:*
Stage of training:	

Feedback – verbal and written feedback is mandatory for this assessment

General
Strengths
Development needs
Recommended actions

Trainee reflection on activity

What I learnt from the activity
What I did well
What I need to develop and how I will achieve it

Observable behaviour

Assessment relates to the learning outcomes and graduate outcomes in the Professional Skills Curriculum with additional observed task specific behaviours.

N – Not observed   **B** – Below standard   **M** – Meets Standard   **E** - Exceeds standard

Rating criteria	Trainee self-rating	Supervisor rating	Supervisor comments
Medical expertise			
Demonstrates adequate knowledge of medical condition			
Formulates management plan based on the patient and knowledge of basic science and clinical information			
Communication			
Discussed the patient's medical condition, (e.g. referring GP)			
Records name and qualifications of assigned interpreter (e.g. NAATI number)			
Briefs interpreter on the patient and the medical condition, and an overview of what you are trying to achieve.			
Demonstrates culturally specific respect and empathy, verbally and non-verbally with interpreter and patient.			
Establish with the patient their preferred method of interaction with the interpreter, e.g. all questions through the interpreter, or only to clarify identified points/statements.			
Speaks directly to the patient using clear language and appropriate medical terms. Maintains eye contact with the patient, rather than with the interpreter.			
Allows time for patient to speak with the interpreter, process information and ask questions through the interpreter.			
Checks the patient's history is accurate and the patient (and family) understands diagnosis and management plan through the interpreter.			
Debriefs with the interpreter to discuss any issues experienced in the consultation that may lead to misinformation.			
Cultural competence and cultural safety			
Incorporates cultural considerations into all aspects of the consultation			
Demonstrates understands and respect cultural differences and requirements			
Demonstrates equitable and culturally safe healthcare			

Global Rating	Tick	Comment
Supervisor needed to take over	☐	
Trainee required frequent intervention or guidance by Supervisor	☐	
Trainee required Supervisor presence	☐	
No active supervision required	☐	
Trainee can supervise others	☐	
Assessor comments:		
Trainee signature:	*Assessor signature:*	
Date:	*Date:*	

3.2 Example DOPs

This assessment focuses on leading an operative team and on patient care and safety.

This example assessment is more suitable for Trainees in late stage/s of SET.

DOPs assessment			
Topic: Leading the operative team			
Trainee name:		*Assessor name:*	
Stage of training:			
Feedback – verbal and written feedback is mandatory for this assessment			
General			
Strengths			
Development needs			
Recommended actions			
Trainee reflection on activity			
What I learnt from the activity			
What I did well			
What I need to develop and how I will achieve it			

Observable behaviour

Assessment relates to the learning outcomes and graduate outcomes in the Professional Skills Curriculum with additional observed task specific behaviours.

N – Not observed **B** – Below standard **M** – Meets Standard **E** - Exceeds standard

Rating criteria	Trainee self-rating	Supervisor rating	Supervisor comments
Planning and preparation			
Ensures equipment is correct			
Checks patient record, investigations and confirms operative procedure with the team			
Demonstrates asepsis and correct patient safe positioning			
Operative technique			
Uses instruments correctly, demonstrating manual dexterity			
Follows appropriate surgical technique and procedural steps in a timely manner			
Handles tissue samples respectfully, ensuring correct labelling			
Situational awareness			
Delegates tasks to appropriate team members			
Ensures continuity of patient care is the team's responsibility			
Evaluates the patient and communicates any variations to the team			
Anticipates differences or conflict in the team and manages promptly			
Post operative management			
Communicates patient post operative care instructions			
Debriefs the team			
Records thorough written documentation			

Global Rating	Tick	Comment
Supervisor needed to take over	☐	
Trainee required frequent intervention or guidance by supervisor	☐	
Trainee required supervisor presence	☐	
No active supervision required	☐	
Trainee can supervise others	☐	

Assessor comments:	
Trainee signature:	*Assessor signature:*
Date:	*Date:*

3.3 Example Case-based discussion (CBD)

The aim of this Case-based discussion (CBD) is to assess Trainee professional skills and clinical reasoning in relation to decisions made regarding patient treatment and follow-up. CBDs can be customised to integrate other competencies.

This example presents observed behaviours for multiple competencies. In practice, assessors may choose to focus on one or two competencies.

Case based discussion			
Topic: *Diagnosis of cancer in a rural patient.* *(e.g. The case could present cultural and geographic equity aspects.)*			
Trainee name:		**Assessor name:**	
Stage of training:			
Feedback – verbal and written feedback is mandatory for this assessment			
General			
Strengths			
Development needs			
Recommended actions			
Trainee reflection on activity			
What I learnt from the activity			
What I did well			
What I need to develop and how I will achieve it			
Observed behaviour			
Assessment relates to the learning outcomes and graduate outcomes in the Professional Skills Curriculum with additional observed task specific behaviours. **N** – Not observed **B** – Below standard **M** – Meets Standard **E** - Exceeds standard			

Rating criteria	Trainee self-rating	Supervisor rating	Supervisor comments
Collaboration and teamwork			
Describes engagement with team and allied health staff to discuss options and pathways			
Discusses using culturally specific allied health, interpreters or community leaders			
Communication			
Discusses key concepts logically and coherently			
Presents accurate and systematic evaluation of data pertinent to patient treatment and management plan			
Describes importance of giving the patient and relatives time to speak and ask questions			
Cultural competence and cultural safety			
Discusses incorporating cultural considerations into all aspects of the case			
Promotes strategies to improve equitable and culturally safe healthcare			
Health advocacy			
Describes engagement with patient and family in planning and decision making			
Discusses strategies to mitigate obstacles to patient care			
Recommends family for assistance from allied health and community services			

Judgement and clinical decision making			
Discusses treatment options with patient and family and rationale for decision-making			
Presents new evidence and rationale for reviewing decisions and options when applicable			
Professionalism			
Presents strategies to improve patient care and professional practice			
Discusses ethical implications of maintaining patient centred decisions			
Scholarship and teaching			
Topic was well researched			
Presentation was structured, coherent, informative			
Responds to questions in a considered and informative manner			
Reflects on performance to learn and modify practice			

Global score
B – Below standard ☐   **M** – Meets Standard ☐   **E** – Exceeds standard ☐

Assessor comments:

Trainee signature:	*Assessor signature:*
Date:	*Date:*

3.4 Example EPA

This example presents observed behaviours for multiple competencies, however in practice assessors may choose to focus on one or two competencies. Observable behaviours may be modified or added.

EPA assessment			
Topic: Difficult conversation - end of life			
Trainee name:		*Assessor name:*	
Stage of training:			
Feedback – verbal and written feedback is mandatory for this assessment			
General			
Strengths			
Development needs			
Recommended actions			
Trainee reflection on activity			
What I learnt from the activity			
What I did well			
What I need to develop and how I will achieve it			
Observed behaviour			
Assessment relates to the learning outcomes and graduate outcomes in the Professional Skills Curriculum with additional observed task specific behaviours. **N** – Not observed **B** – Below standard **M** – Meets Standard **E** - Exceeds standard			

Rating criteria	Trainee self-rating	Supervisor rating	Supervisor comments
Collaboration and teamwork			
Engages with team and allied health to discuss options and pathways			
Ensures team and allied health meet at a time that suits patient and family			
Communication			
Demonstrates respect for patient dignity and is attentive to family needs			
Ensures allied health, interpreters or community leaders meet the specific needs of the patient			
Gives patient and relatives time to speak, process information and ask questions			
Demonstrates accurate and clear verbal language and empathetic body language			
Cultural competence and cultural safety			
Incorporates cultural considerations into all aspects of the conversation			
Addresses cultural influences that may affect decision making and ongoing care			
Health advocacy			
Engages patient and family in planning and patient centred decision making			
Discusses futility of care and limitations of technology with the patient and family			
Discusses with family about assistance from allied health and community services			
Demonstrates concern for wellbeing of colleagues, e.g. undertakes team debrief			

Judgement and clinical decision making			
Discusses preferred options and considerations for decision making with patient and family			
Reviews decisions in light of new evidence or family input			
Leadership and management			
Delegates appropriate responsibilities to team and allied health			
Leads a safe work environment and encourages speaking up			
Debriefs healthcare team on effectiveness of the conversation and next steps			
Professionalism			
Implements strategies to improve professional practice			
Seeks support to maintain personal wellbeing			
Scholarship and teaching			
Incorporates teaching junior staff into the process			
Demonstrates ability to access relevant information to prepare for the meeting or for further learning			

Supervision scale	**Tick**	**Comment**
Supervisor needed to take over	☐	
Trainee required frequent intervention or guidance by Supervisor	☐	
Trainee required Supervisor presence	☐	
No active supervision required	☐	
Trainee can supervise others	☐	
Assessor Comments:		

Trainee signature:	*Assessor signature:*
Date:	*Date:*

3.5 Example Essay assessment using a rubric

Essays test Trainees' skills in presenting knowledge and ideas about a topic or question. Essays can also be used to extend Trainees' knowledge about topics that they might have limited exposure to during training.

Trainees can be assessed on the content of the essay and/or on their technique, and structure of their arguments. This is an example of an abridged scoring rubric suitable for scoring short essays in the competencies of Scholar and teacher, Professionalism, Medical expertise.

A model answer and marking points would be established by a Specialty Training Committee/Board or assessment committee. The scoring rubric would be adapted for particular jurisdictions and procedures.

Essay assessment			
Topic: *Discuss processes in ethical fee setting for a complex procedure that is reflective of jurisdictional fee schedule requirements. The case could involve an initial complex procedure, with complications requiring take backs to theatre in a private hospital, involving an insured patient.*			
Rating criteria	**Marking points**		
	Below standard	**Meets standard**	**Exceeds standard**
Scholar and Teacher			
Clarity of presentation/setting out (e.g. introduction, discussion, conclusions, recommendations)	Organisation difficult to follow Limited, disorganised, or illogical presentation of key concepts Many spelling errors Many and/or major referencing errors	Generally well organised so that reader can follow Key concepts adequately developed and presented Few spelling errors Referencing with minor errors	Well organised and sequenced Clear, logical presentation of key concepts Accurate spelling Accurately referenced
Review of Literature (Breadth, depth and relevance) (Relevant government documentation)	Few or no key references identified across breadth of topic Evidence presented from references is superficial or cursory in key areas. Presents irrelevant references	Adequate range of relevant references identified and presented across breadth of topic Evidence presented from references covers most of the key areas Presents relevant references	Comprehensive range of relevant references identified and presented across breadth of topic Evidence presented from references covers depth required in all key areas. Includes prime relevant references
Evaluation and critique of literature or hypothesis	Superficial or irrelevant critical analysis Minimal or misguided identification and analysis of areas of uncertainty	Critical analysis demonstrates reasonable interpretation of literature Evaluates and critiques the evidence in key areas of uncertainty	Critical analysis demonstrates sophisticated, accurate interpretation of the literature Evaluates and critiques most areas of uncertainty
Focus and relevance to the topic or question	Minimal coverage of important issues Contentious and/or current issues not addressed	Adequate coverage of important issues Acknowledges contentious and/or current issues	Comprehensive coverage of important issues Investigates and addresses contentious and/or current issues

Rating criteria	Marking points		
	Below standard	**Meets standard**	**Exceeds standard**
Medical Expertise Demonstrates application of knowledge to clinical situation	Incorrect or minimal clinical interpretation of the case or situation	Adequate clinical interpretation appropriate to the case or situation	Accurate and comprehensive clinical interpretation appropriate to the case or situation
	Inaccurate or minimal clinical application of the case or situation	Adequate clinical application appropriate to the case or situation	Accurate and comprehensive clinical application appropriate to the case or situation
	One or more of the significant areas are misinterpreted or omitted	Most of the significant areas are addressed	All of the significant areas are addressed
Professionalism Demonstrates ethical billing practices and evaluates the importance of honest, open agreement of informed financial consent between the treating team and the patient or family	Limited or illogical presentation on the importance of ethical billing practices and financial consent for the team and the patient	Adequate interpretation on the importance of ethical billing practices and financial consent for the team and the patient	Comprehensive and accurate interpretation of importance of ethical billing practices and financial consent
	Inaccurate use of the Medical Benefit Schedule Item Numbers or local equivalent when itemising a complex procedure	Appropriate use of the Medical Benefit Schedule Item Numbers or local equivalent when itemising a complex procedure	Accurate and comprehensive use of Medical Benefit Schedule Item Numbers or local equivalent when itemising a complex procedure
Assessment result parameters	**Unsatisfactory** The work has 5 or more 'Below standard' scores X points	**Borderline** The work has 3 or more 'Below standard' scores. X points	**Satisfactory** The work has at least 12 'Meets standard' scores X points

Appendix 1

Feedback and debriefing

Constructive feedback is a key component of assessment for learning. The purpose of this feedback is to identify knowledge and skill gaps, to reinforce learning and to improve performance in similar circumstances in the future.

Debriefing includes the elements of feedback but has a greater emphasis on a facilitated reflective conversation between the Trainer and the Trainee about an observed activity.

It is important that respectful and trusting relationships are fostered within healthcare teams. Trainees are most receptive to feedback as an opportunity to learn when it is given by those whom they trust and respect.

Supervisors and Trainers can structure feedback based on their observations of Trainees' performance or from discussions with colleagues. Observations and discussions give Supervisors and Trainers insight into gaps in Trainees' knowledge or skills and can highlight what might be required to foster Trainees' learning.

'Scripts' provide a structure for framing feedback that connect what a Trainee knows or does, with what they need to know or do. Use of a structured approach allows consistent feedback to be given, even if the Trainee's performance was unsatisfactory.

Giving feedback when a Trainee has not performed well can pose dilemmas for Supervisors, who may be apprehensive that the feedback could be construed as bullying. When Supervisors demonstrate they have the Trainees' best interests at heart and the feedback is genuine, not personal, and is treated as a learning opportunity, it is less likely to be perceived as bullying or punitive. This can take practice and protocols exist.

Approaches to framing feedback and for debriefing include the Pendleton and the Advocacy-Inquiry models. The Pendleton model of feedback is useful in many situations. The Rudolph model of debriefing using Advocacy-Inquiry can assist Supervisors and Trainers to 'dig deeper' into Trainees' motivations.

Pendleton model

The main approach that RACS recommends for framing feedback is the Pendleton model. This approach facilitates dialogue with Trainees and is useful for both affirmative and corrective feedback. The Pendleton model encourages Trainees to reflect on performance and plan for ongoing learning. Figure 8 illustrates the six-step Pendleton model. To be most effective, this model requires focussed practice, as it has been challenged for its potential for assessors to avoid describing aspects of learners' performance that could be improved, for fear of being seen as overly judgemental.

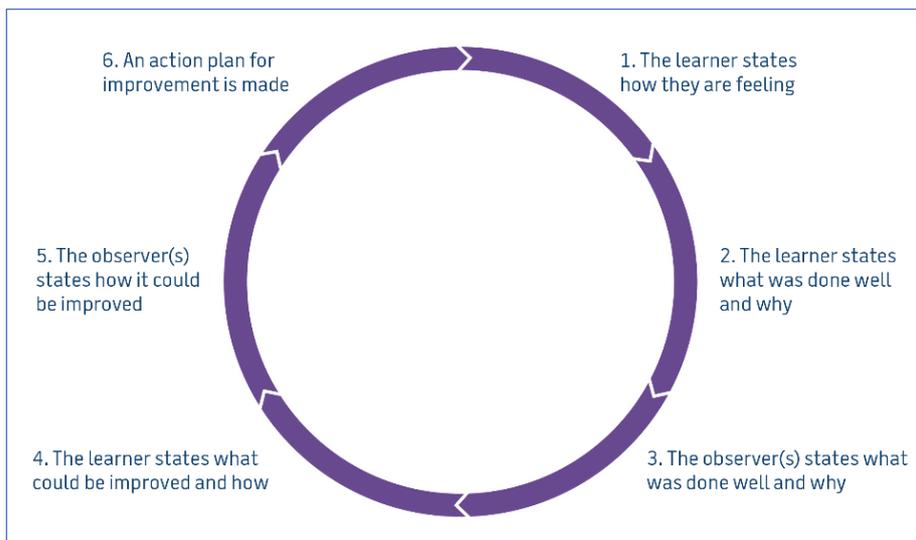More information on using this model of feedback is available through the RACS Professional Development program.

Figure 8 The Pendleton Model of feedback

Advocacy-inquiry model

The Advocacy-Inquiry model for debriefing is useful to generate insight into motivations that drive actions. Rudolph asserts that Trainees' assumptions and beliefs underpin, or 'frame', their behaviour. When discussing behaviour that they have observed, Supervisors can express curiosity by asking questions to gain insights into Trainees' frames (thought processes). Such insights enable Supervisors to modify their feedback accordingly.

An example 'script' that Supervisors could use to express curiosity comprises three leading questions: "I saw/heard …, I thought …, I wondered …". For example, a Trainer may observe a Trainee perform an action that may not reflect their (the Trainer's) practice: "I saw …". The Trainer then expresses an advocacy statement: "I thought that there might be alternative ways to …". This shares the Trainer's own experience. The Trainer then 'wonders' and provides a 'curiosity' statement: "I'm curious about how you were seeing the situation." The Trainee's responses may provide insight into their motivations and assumptions (frame) which give the Trainer a better understanding and provide a platform for rich discussion.

In this approach the Supervisor is not being critical of the action. By sharing their own frame, and being curious, they are trying to get into the Trainee's 'frame' to understand their assumptions, attitudes, values and prior learning. To simply comment on the action without expressing one's own 'frame' (advocacy) and curiosity (inquiry) may not stimulate the Trainee to reflect on the action or support ongoing change.

Figure 9 illustrates Rudolph's Advocacy-Inquiry approach. Frames are invisible but inferable; they are in the minds of Trainees and Supervisors.
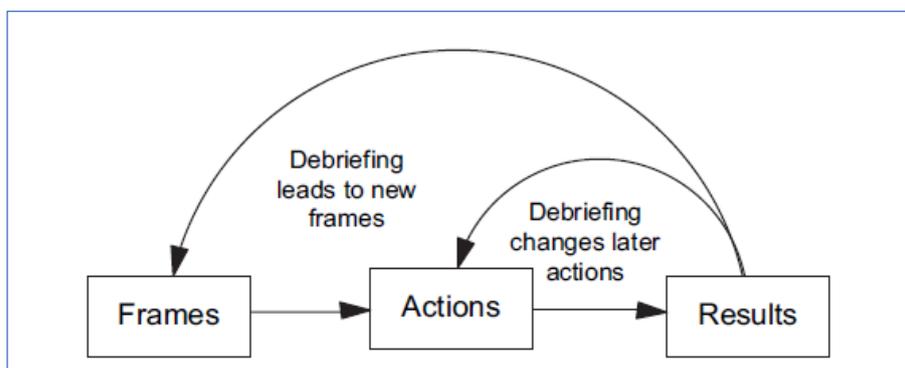

Figure 9 Advocacy-Inquiry model

Appendix 2

Purposes of assessment

Assessments are implemented for many reasons – some common purposes for assessment are: to confirm that standards have been met, to guide future learning and behaviour, to verify that training requirements have been achieved, and to provide evidence for regulators. In surgical training, assessments can provide the healthcare team and patients with reassurance of Trainees' readiness to provide appropriate standards of care to patients, and that their performance complies with safe surgical practice.

Assessment and teaching activities interact to guide Trainees' and SIMG's learning. Figure 10 describes interrelationships between teaching, learning and assessment. Trainees and SIMGs are the focus of these activities.
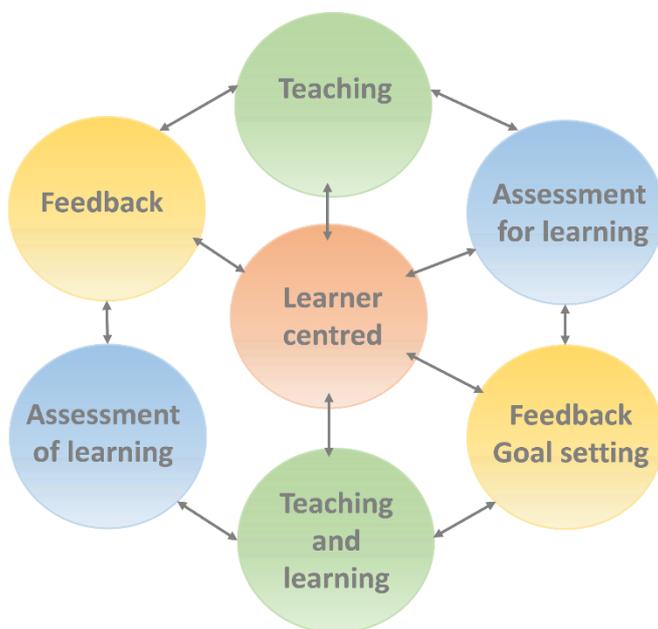

Figure 10 Learner-centred teaching, learning, and assessment cycle

Assessments compare learners' performance to identified standards of knowledge and/or skill. Assessors, and learners themselves, make judgements about the extent to which learners' performance meets or exceeds the standards. Feedback on performance can be used to guide Trainees' or SIMGs' future learning activities.

Assessments enable Trainees to demonstrate that they have attained the required knowledge and skills; multiple assessments enable them to demonstrate they have embedded these into daily practice.

Given the variable, unpredictable, and high-stakes nature of surgical health care, multiple satisfactory samples of behaviour are required before a Trainee can be deemed 'competent' or 'entrusted' with an activity.

In practice, it is neither feasible nor desirable to assess every Trainee on every minute aspect of the curriculum. Assessments, like biopsies, seek to present targeted samples of Trainees' knowledge and behaviour. Well-constructed and well-delivered assessments optimise significant activities to efficiently and synchronously evaluate multiple facets of Trainee performance.

In constructing programs of assessment, developers identify and address representative components of the curriculum. Assessment tools are selected to suit the content to be assessed and the purposes

of the assessments (e.g. assessment *for* learning or assessment *of* learning). Drawing on a range of complementary assessment tools, the depth and breadth of the curriculum can be assessed, including aspects that cannot be demonstrated in the workplace.

For Supervisors and Trainers, developing the skills to construct and deliver meaningful assessments requires purposeful effort and practice. However, effective assessments contribute to efficient training – authentic evaluations, with pertinent feedback provide valuable evidence of Trainee performance and provide clear guidance for ongoing learning. Superficial assessments that emphasise 'performative', or 'checklist' aspects of an activity may be completed quickly but are unlikely to result in relevant learning.

Formative assessments and summative assessments both evaluate performance against defined standards. Formative assessments are implemented to provide feedback, and guidance for subsequent targeted learning. Assessment results can enrich and anchor feedback discussions that guide Trainees to take the next steps in their development. Formative assessments are assessments *for* learning.

Summative assessments often are often used as 'hurdles' that mark completion of a stage of training, a course, or an entire training program. They can be thought of as assessments *of* learning. Summative assessments may mark transition between one training post and another, or progression to the next stage of training. Knowledge of areas for improvement as well as of competence, will allow subsequent Supervisors to focus on Trainees' needs. The process of handover must take into consideration issues of privacy and potential for bias.

Formative assessments tend to provide qualitative information about Trainees' performance, summative assessments are more likely to provide quantitative information, often in the form of a score, or grade. In some training programs, formative assessments can contribute to summative judgements.

Assessment data can be used for ongoing education and administrative purposes such as:

– Guidance for planning new goals or learning objectives
– Compiling portfolios of achievements
– Confirming that learners have completed requirements for progression or completion of training.

Assessments can also inform training providers about conditions not directly related to the curriculum. For example, suboptimal assessment results could raise questions about whether content was not taught, whether the assessor/s were overly harsh, whether a Trainee requires additional guidance, or whether a Trainee's personal or professional circumstances may have distracted them from learning.

In summary, some key reasons for RACS to assess Trainees and SIMGs are:

– To evaluate Trainee or SIMG knowledge and skills against standards
– To provide evidence of Trainee or SIMG performance
– To provide feedback about performance
– To mark Trainee or SIMG progress
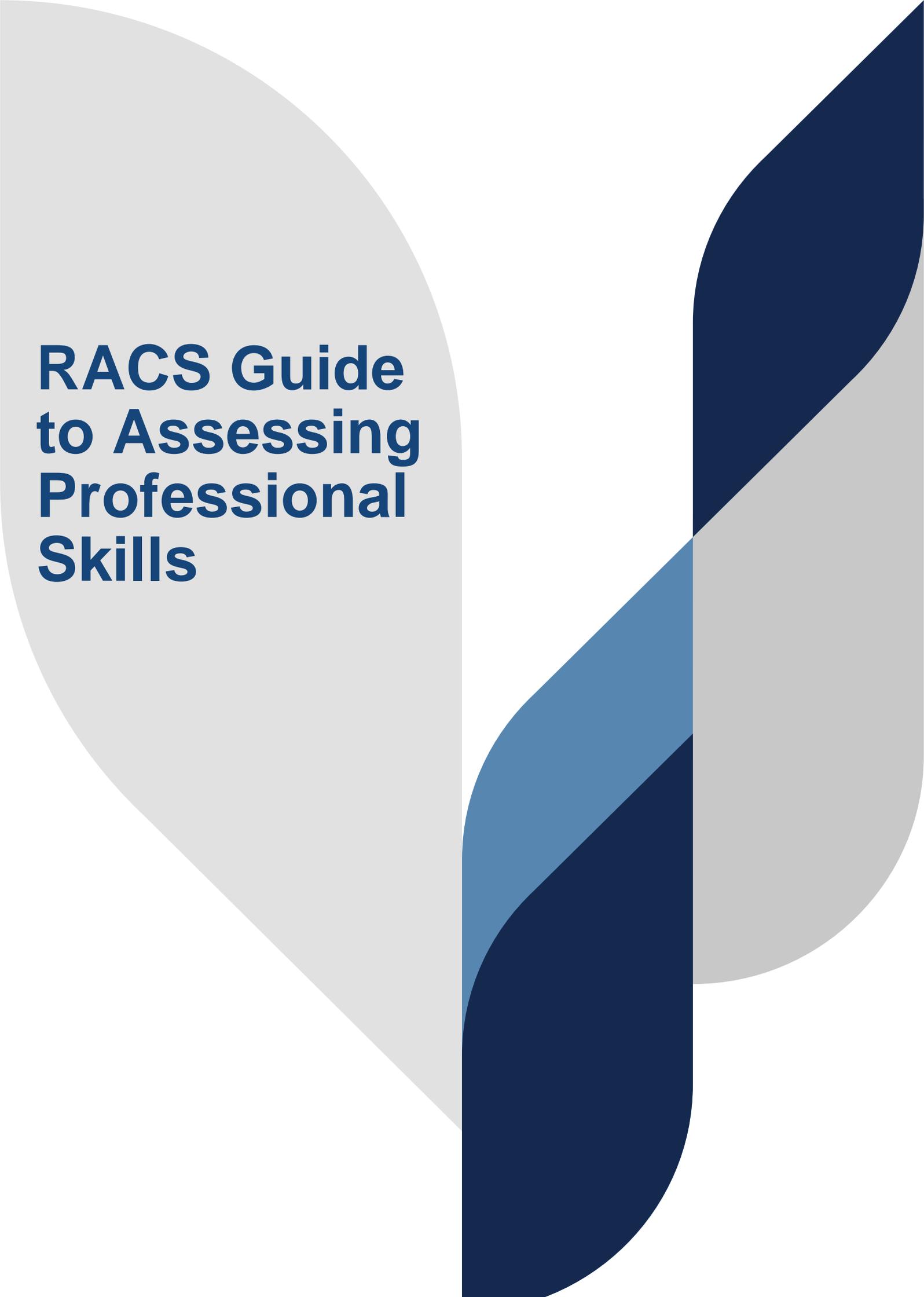– To support and guide Trainee and SIMG learning

Appendix 3

Assessing RACS competencies – suggestions for assessment tools

	Collaboration and teamwork	Communication	Cultural competence and cultural safety	Health advocacy	Judgement and clinical decision making	Leadership and management	Medical expertise	Professionalism	Scholarship and teaching	Technical expertise
CBD	✓	✓	✓	✓	✓	✓	✓	✓	✓	
DOPS	✓	✓			✓	✓	✓	✓		✓
EPAs	✓	✓	✓	✓	✓	✓	✓	✓		✓
Essays	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Exams		✓	✓	✓	✓		✓	✓	✓	✓
MTA + ETA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MiniCEX		✓	✓	✓	✓	✓	✓	✓		
Presentations	✓	✓	✓	✓	✓	✓	✓	✓	✓	
PBAs	✓	✓	✓	✓	✓	✓	✓	✓		✓
P-MEX	✓	✓	✓	✓	✓	✓		✓		
Reflective journals	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Reports		✓	✓	✓	✓	✓	✓	✓	✓	
TPNs	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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