



# Advanced Specialised Training Rural Generalist Surgery

Curriculum



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# 1. Background

Completion of Advanced Specialised Training (AST) is an essential component of training towards ACRRM Fellowship. Candidates can select from a number of training areas which reflect rural and remote clinical practice needs. Candidates who choose to undertake an AST in surgery must undertake a minimum of 24 months training in this area.

Surgery has been selected as one of the priority areas due to limited availability of specialist surgeons in rural and remote locations. ACRRM aims to improve access to surgical services in rural and remote communities through increased access to rural doctors with advanced training in surgery and endoscopy.

This Advanced Specialised Training Curriculum outlines the expected outcomes and assessment for candidates undertaking Advanced Specialised Training in Rural Generalist Surgery. It builds on the basic surgical abilities, knowledge and skills of the ACRRM Primary Curriculum. This advanced curriculum focuses on additional surgical and endoscopy skills required above and beyond those stated in the Primary Curriculum.

## 2. Purpose and Requirements

### 2.1 Purpose

The curriculum sets national standards for training Rural Generalists with advanced skills in surgery. It describes the surgical presentations that a candidate may be required to be involved with and the surgical skills a Rural Generalist who has completed Advanced Specialised Training in Surgery can perform under minimal or distant supervision from, or consultation with, regional specialist surgeons.

A Rural Generalist with advanced surgical skills will generally be employed in a senior medical officer role in a rural hospital, working with the support of specialist surgeons either on or off-site. A Rural Generalist with advanced surgical skills plays an important role in facilitating and co-ordinating care of the surgical patient in a rural context. The Rural Generalist with advanced surgical skills generally provides surgical care for low to medium complexity surgical cases. If more complex surgical work is required to be performed, the Rural Generalist will perform the surgery in consultation with a specialist surgeon or refer on.

A Rural Generalist with advanced surgical skills also works as part of an on-site team with other skilled medical, nursing and allied health practitioners delivering anaesthetics, emergency medicine, and obstetrics & gynaecology services. In addition, Rural Generalists with advanced surgical skills provide an advisory resource in surgery to other Rural Generalists and optimize the effectiveness and purpose of specialist outreach and telemedicine services in their communities.

### 2.2 Training requirements

#### Clinical training

Advanced Specialised Training in surgery requires a minimum 24 months full time or equivalent part time training. Candidates must be employed no less than 0.5 FTE as a registrar or in a position that provides access to the registrar education program and an equivalent volume and acuity of clinical experience as that of a surgical registrar.

The training program will consider other professional, personal and family needs and will offer flexibility for individuals to undertake their training on a part time basis or in two or more blocks. Candidates who choose these options will not be disadvantaged.

## Education

Candidates are required to complete Gastroscopy & Colonoscopy training that meets the requirements of the Conjoint Committee for Recognition of Training in Gastrointestinal Endoscopy (CCRTGE).

Candidates are required to demonstrate satisfactory completion of the following courses. The candidate should aim to complete the courses prior to commencing training. Where this is not possible they should be completed as soon as possible after training commences. As some courses have a long waiting list, it is expected that candidates will enroll in the courses prior to commencing training.

- RACS Australian and New Zealand Surgical Skills Education and Training (ASSET) course or RANZCOG Basic Surgical Skills Workshop
- EMST (Early Management of Severe Trauma)
- CCrISP (Care of the Critically Ill Patient)

## 2.3 Potential posts

Advanced Specialised Training in surgery must be undertaken in teaching posts accredited by ACRRM. Training needs to provide a balance of volume and scope of surgical practice in addition to preparing the Rural Generalist for work in a district hospital. Training in composite teaching posts involving a combination of a regional 'base' hospital and one or more district hospitals is therefore desirable.

Regional hospitals with posts accredited for RACS surgical training will generally be suitable but any posts will need to gain accreditation with ACRRM for AST Surgery. Institutions with established educational links to other institutions and involvement with undergraduate teaching (Rural Clinical Schools) and other vocational training would be highly desirable.

Regional hospitals providing ACRRM surgical training will generally have the following features:

- be a secondary or tertiary referral hospital
- have general surgery services
- have obstetrics and gynaecology services
- have orthopaedic services
- have specialist surgical staff with sufficient expertise to supervise candidates – including general surgeons, orthopaedic surgeons and obstetric and gynaecology specialists
- demonstrate commitment and ability to provide the required level of experience and teaching
- provide access to an adequate number of suitable procedures to enable candidates to fulfill the surgical and endoscopy requirements of this curriculum
- focus on training in secondary rather than tertiary surgical procedures.

To achieve the curriculum, it may also be desirable for a candidate to train in more than one unit or undertake one or more short-term secondments to learn specific skills, for example working in one or more of the following units:

- orthopaedic trauma
- obstetrics and gynaecology
- burns
- vascular
- plastics (skin cancer)

See [Advanced Specialised Training Standards for Supervisors and Teaching posts](#) for further information.

## 2.4 Prerequisites/co-requisites

Prior to undertaking this post, candidates must meet the following criteria:

- satisfactory completion of 12 months Core Clinical Training component of ACRRM Fellowship training or
- completion of post graduate year two for those doctors who are not in Fellowship training and
- have completed a minimum of one term in surgery, anaesthetics and emergency medicine
- or have a Fellowship of ACRRM.

It is expected that the candidate can perform the following generic elementary surgical skills (as defined by Royal Australasian College of Surgeons (RACS)):

- standard precautions
- instrumentation
- diathermy
- using sutures, surgical knots, and needles
- surgical wounds and tissue handling
- insertion and care of tubes and drains
- splinting and immobilisation
- local anaesthetic
- peri-operative life support.

## 3. Rationale

Rural and remote communities have been disadvantaged by reduced access to appropriate local surgical services. Metropolitan communities have access to the many surgical sub-specialties, this is not so for rural and remote communities.

Reduced access to surgical services has resulted from multiple factors including:

- increasing technology
- sub-specialisation of the surgical workforce
- reduced access to training for generalist surgeons and Rural Generalist candidates, and
- absence of an appropriate specialist workforce, especially the lack of generalists in many specialties.

The absence of specialist surgical services in rural and remote areas is primarily a workforce issue and is not addressed by current programs. To address some of these inequities, a safe and high quality procedural workforce needs to be trained and deployed. The essential needs of these communities can be addressed by a working collaboration of Specialist Surgeons and with Rural Generalists with advanced surgical skills.

Maintaining surgical capacity in this context assists in maintaining standards and safety of care across all these disciplines, an inter-dependent and inter-supporting network of medical care.

This is the same in any hospital, however in a rural setting where the medical teams are often smaller, the loss of any one of these 'spokes' of care can compromise the integrity of the whole system. Surgery is a basic part of medical care, and thus maintaining local access to surgical care, within the appropriate bounds of role delineation of the Rural Generalist with advanced surgical skills and the designated health facility, is a basic part of achieving good health outcomes in rural and remote regions.

## 4. Learning abilities

The curriculum defines the abilities, knowledge and skills for Advanced Specialised Training in Surgery.

The seven domains of rural and remote general practice provide the framework for organising the abilities required in the curriculum.

The domains are:

1. Provide medical care in the ambulatory and community setting
2. Provide care in the hospital setting
3. Respond to medical emergencies
4. Apply a population health approach
5. Address the health care needs of culturally diverse and disadvantaged groups
6. Practise medicine within an ethical, intellectual and professional framework
7. Practise medicine in the rural and remote context

These levels of achievement build on the abilities, knowledge and skills in the Surgery Curriculum statement in the ACRRM Primary Curriculum.

Where phrases are *italicised and underlined* further information relating to this phrase is found under 'Definition of Terms' later in the section.



## **Domain 1: Provide medical care in the ambulatory and community setting**

***Themes: Patient-centred clinical assessment, Clinical reasoning, Clinical management***

### **Abilities**

- 1.1 Establish a doctor-patient relationship and use a patient-centred approach to care
- 1.2 Obtain a clinical history that reflects contextual issues including: presenting problems, epidemiology, culture and geographic location
- 1.3 Perform a problem-focussed physical examination relevant to clinical history and risks, epidemiology and cultural context
- 1.4 Use specialised clinical equipment as required for further assessment and interpret findings
- 1.5 Order and/or perform diagnostic tests where required to confirm a diagnosis, monitor medical care and/or exclude treatable or serious conditions
- 1.6 Apply diagnostic reasoning to arrive at one or more provisional diagnoses, considering uncommon but clinically important differential diagnoses
- 1.7 Communicate findings of clinical assessment effectively and sensitively to the patient and/or carer
- 1.8 Formulate a management plan in concert with the patient and/or carer, judiciously applying best evidence and the advice of expert colleagues
- 1.9 Identify and manage co-morbidities in the patient and effectively communicate these to the patient and/or carer
- 1.10 Ensure safe and appropriate prescribing of medications and treatment options in the clinical context
- 1.11 Manage uncertainty and the need to evaluate the risks versus the benefits of clinical decisions
- 1.12 Refer, facilitate and coordinate access to specialised medical and diagnostic and other health and social support services
- 1.13 Provide and/or arrange follow-up and continuing medical care.

## Domain 2: Provide care in the hospital setting

**Themes: Medical care of admitted patients, Medical leadership in a hospital team, Health care quality and safety**

### Abilities

- 2.1 Manage admission of surgical patients to hospital in accordance with institutional policies
- 2.2 Order or perform a range of diagnostic procedures
- 2.3 Undertake a judicious pre-surgical assessment that considers both surgical and non-surgical factors
- 2.4 Consider alternative diagnoses and their implications for care in current medical setting
- 2.5 Consider anaesthesia issues for the case under consideration
- 2.6 Develop and implement an appropriate operative or non-operative management plan for patients with surgical illnesses in concert with the patient and/or carer
- 2.7 Provide general management of surgical illnesses and complications
- 2.8 Provide surgical care at the nationally endorsed professional standard
- 2.9 Apply relevant checklists and clinical management pathways
- 2.10 Monitor clinical progress, regularly re-evaluate the problem list and modify management accordingly
- 2.11 Maintain a clinically relevant plan of fluid, electrolyte and blood product use with relevant pathology testing
- 2.12 Maintain or re-establish basic bodily functions
- 2.13 Recognise and implement a management plan for surgical complications
- 2.14 Maintain timely and accurate patient documentation in hospital records including drug prescription and administration
- 2.15 Communicate effectively with the health care team, patient and/or carer including effective clinical handover
- 2.16 Recognise and respond early to the deteriorating patient
- 2.17 Anticipate and judiciously arrange safe patient transfer to other facilities, considering clinical indications, service capabilities, patient preferences, transportation and geography
- 2.18 Undertake early, planned and multi-disciplinary discharge planning
- 2.19 Contribute medical expertise and leadership in a hospital team
- 2.20 Provide direct and remote clinical supervision and support to nurses, junior medical staff and students
- 2.21 Recognise, document and manage adverse events and near misses
- 2.22 Participate in institutional quality and safety improvement and risk management activities

## **Domain 3: Respond to medical emergencies**

***Themes: Initial assessment and triage, Emergency medical intervention, Communication and planning***

### **Abilities**

- 3.1 Undertake initial assessment and triage of patients with acute or life-threatening conditions
- 3.2 Stabilise critically ill patients and provide primary and secondary care
- 3.3 Provide definitive emergency resuscitation and management across the lifespan in keeping with clinical need, own capabilities and local context and resources
- 3.4 Perform appraisal of whether surgical care should be undertaken and if this should be non-definitive (intermediate) or definitive surgical care
- 3.5 Perform damage control techniques for presentations where surgical intervention is not safe
- 3.6 Arrange and/or perform emergency patient transport or evacuation when needed
- 3.7 Demonstrate resourcefulness in knowing how to access and use available resources
- 3.8 Communicate effectively at a distance with consulting or receiving clinical personnel
- 3.9 Participate in disaster planning and implementation of disaster plans, and post-incident analysis and debriefing
- 3.10 Provide inter-professional team leadership in emergency care that includes quality assurance and risk management assessment

## **Domain 4: Apply a population health approach**

***Themes: Community health assessment, Population-level health intervention, Evaluation of health care, Collaboration with agencies***

### **Abilities**

- 4.1 Analyse the social, environmental, economic and occupational determinants of health that affect the community burden of disease and access to health-related services
- 4.2 Apply a population health approach that is relevant to the trends in surgical presentations and clinical practice profile
- 4.3 Integrate evidence-based prevention, early detection and health maintenance activities into practice at a systems level
- 4.4 Provide continuity and coordination of care for own practice population
- 4.5 Evaluate quality of health care for practice populations
- 4.6 Fulfil reporting requirements in relation to statutory notification of health conditions
- 4.7 Access, and collaborate with, agencies responsible for key population health functions including public health services, employer groups and local government
- 4.8 Participate as a medical advocate in the design, implementation and evaluation of interventions that address determinants of population health

## **Domain 5: Address the health care needs of culturally diverse and disadvantaged groups**

***Themes: Differing epidemiology, Cultural safety and respect, working with groups to improve health outcomes***

### **Abilities**

- 5.1 Apply knowledge of the differing profile of disease and health risks among culturally diverse and disadvantaged groups
- 5.2 Communicate effectively and in a culturally safe manner, using interpreters, key community contacts and networks as appropriate
- 5.3 Reflect on own assumptions, cultural beliefs and emotional reactions in providing culturally safe care
- 5.4 Apply principles of partnership, community ownership, consultation, capacity building, reciprocity and respect to health care delivery, health surveillance and research
- 5.5 Harness the resources available in the health care team, the local community and family to improve outcomes of care
- 5.6 Work with culturally diverse and disadvantaged groups to address barriers in access to health services and improve the determinants of health

## **Domain 6: Practise medicine within an ethical, intellectual and professional framework**

***Themes: Ethical practice, Professional obligations, Intellectual engagement including teaching and research***

### **Abilities**

- 6.1 Ensure safety, privacy and confidentiality in patient care
- 6.2 Maintain appropriate professional boundaries
- 6.3 Be aware of duty of care issues arising from providing health care to self, family, colleagues, patients and the community
- 6.4 Recognise unprofessional behaviour and signs of the practitioner in difficulty among colleagues and respond according to ethical guidelines and statutory requirements
- 6.5 Keep clinical documentation in accordance with legal and professional standards
- 6.6 Demonstrate commitment to teamwork, collaboration, coordination and continuity of care
- 6.7 Contribute to the management of human and financial resources within a health service
- 6.8 Work within relevant national and state legislation and professional and ethical guidelines
- 6.9 Provide accurate and ethical certification when required for sickness, employment, social benefits and other purposes

- 6.10 Manage, appraise and assess own performance in the provision of medical care for patients
- 6.11 Develop and apply strategies for self-care, personal support and caring for family
- 6.12 Teach and clinically supervise health students, junior doctors and other health professionals
- 6.13 Engage in continuous learning and professional development (see section 10. Maintenance of Professional Standards)
- 6.14 Critically appraise and apply relevant research

## **Domain 7: Practise medicine in the rural and remote context**

### ***Themes: Resourcefulness, Flexibility, Teamwork and Technology, Responsiveness to context***

#### **Abilities**

- 7.1 Identify an appropriate plan of management for each case, considering the various geographic, social and professional conditions that apply to each case
- 7.2 Provide effective clinical care when away from ready access to specialist medical, diagnostic and allied health services in line with the facility's clinical services capability
- 7.3 Collaborate with supporting specialist surgical colleagues where required
- 7.4 Demonstrate resourcefulness, independence and self-reliance while working effectively in geographic, social and professional isolation
- 7.5 Demonstrate an ability to conduct initial emergency assessment, stabilisation and time critical surgical care
- 7.6 Arrange referral to distant services in concert with the patient and/or carer considering the balance of potential benefits, harms and costs
- 7.7 Provide direct and distant clinical supervision and support for other rural and remote health care personnel
- 7.8 Use information and communication technology to provide medical care or facilitate access to specialised care for patients, including becoming adept at managing telehealth services
- 7.9 Use information and communication technology to network and exchange information with distant colleagues
- 7.10 Respect local community norms and values in own life and work practices
- 7.11 Identify and acquire extended knowledge and skills as may be required to meet health care needs of the local population

## 4.1 Definition of terms

This table provides further information on the terms that were *italicised and underlined* in the ability statements.

Pre-surgical assessment including assessment of:	<ul style="list-style-type: none"> <li>▪ age, weight and health of patient</li> <li>▪ degree of urgency</li> <li>▪ local clinical services capabilities</li> <li>▪ own skill set</li> <li>▪ if surgical intervention is required</li> <li>▪ possible alternative diagnoses or pathologies</li> <li>▪ whether to refer or manage locally</li> <li>▪ whether to liaise with specialist surgeon regarding management options</li> <li>▪ retrieval services available and likely time to definitive care, should a retrieval be considered</li> </ul>
Diagnostic procedures	<ul style="list-style-type: none"> <li>▪ basic blood tests</li> <li>▪ Focused Assessment with Sonography for Trauma (FAST) ultrasound of abdomen</li> <li>▪ plain x-rays – interpretation for emergency purposes pending definitive reporting, including adult and paediatric chest, spine, abdomen and extremities</li> <li>▪ CT scans – interpretation to help guide emergency treatment pending a definitive report (considerations around emergency use of contrast)</li> <li>▪ ultrasound examination of the pregnant uterus and pelvis, including diagnosis of acute emergency events such as ectopic pregnancy and ruptured viscera</li> <li>▪ lumbar puncture</li> <li>▪ endoscopy</li> </ul>
Alternative diagnoses	<p>Consideration needs to be given to operative approaches to a case if the pathology found at operation were to be different to that postulated pre-operatively, particularly when the pathology found requires more complicated care. Such a finding may require revisions in surgical approach, which could take on a number of forms:</p> <ul style="list-style-type: none"> <li>▪ Revised surgical procedure, within the scope of the Rural Generalist's skills &amp; professional capacities. This could entail a revised definitive operation or a revised operation that is not definitive but advances the patient's medical safety.</li> <li>▪ Intra-operative communication may be considered with either an on or off-site specialist surgeon.</li> <li>▪ Recruiting a specialist surgeon, if available, to come to theatre for completion of the required operation.</li> <li>▪ Abandoning the planned procedure, making the appropriate intermediate surgical steps – such as insertion of packing or wound closure – and then arranging transfer to a larger centre for definitive care.</li> </ul> <p>Such events are not uncommon in any surgical practice, but the position of a remote and isolated surgeon is different from one in a larger centre that has the potential immediate on-site back up from a variety of other sub-specialists. Rural Generalists with advanced surgical skills thus need careful consideration of this feature of their context of practice, including in their pre-operative</p>

	assessment.
Anaesthesia issues	<p>Consider the range of anaesthetic possibilities for the case under consideration, including procedure and patient morbidity considerations.</p> <p>e.g. General or Local anaesthesia for repair of inguinal hernia or skin surgery or types of sedation for endoscopies</p> <p>This may entail discussions with an Anaesthetist.</p>
General management of surgical illnesses and complications, including:	<ul style="list-style-type: none"> <li>▪ fluid and electrolyte balance</li> <li>▪ standard ABCDE prioritisations</li> <li>▪ nutrition</li> <li>▪ management of shock</li> <li>▪ wound management and wound healing</li> <li>▪ pain management – pre-emptive, operative, post-operative and emergency</li> <li>▪ fracture/dislocation management including principles of fixation</li> <li>▪ recovery and mobilisation planning.</li> </ul>
Nationally endorsed professional standard	<p>The standard is the same for Specialist Surgeons and Rural Generalist with advanced surgical skills; both are held accountable to the same legal standards of care.</p> <p>It should be noted that the same standards of care do not necessarily mean the same care in each context. Remoteness can sometimes require different approaches to treatment to those undertaken in more centralised centres. Achieving the best medical outcome, given the geographic, social, medical treatment and/or retrieval circumstances, will dictate the appropriate approach towards care for each case.</p>
Basic bodily functions	<ul style="list-style-type: none"> <li>▪ including oral intake, bowel &amp; bladder function, mobility, capacity to self-care.</li> <li>▪ minimise unnecessary medical interventions or interventions that might be unnecessarily delaying the return of these functions.</li> </ul>
Surgical complications	<ul style="list-style-type: none"> <li>▪ management of post-operative haemorrhage and infection</li> <li>▪ management of incision wound infection / abscess</li> <li>▪ management of wound dehiscence</li> <li>▪ identification and management of vascular insufficiency or deep vein thrombosis, including appropriate preventative strategies</li> <li>▪ management for complications such as pulmonary embolus</li> <li>▪ perforation/obstruction, pneumothorax, spinal headache, pressure sores</li> <li>▪ medical complications following surgery – respiratory (eg infective pneumonia, aspiration), cardiac (eg arrhythmias, MI) renal (eg ARF, hyper and hypo-kalaemia), neurological (eg CVA, delirium), GI (eg ileus, constipation)</li> <li>▪ complications of therapeutics – allergy/anaphylaxis, toxicity, drug interactions, GI bleeding, dystonic reactions, neuroleptic malignant syndrome, transfusion reactions, under or over-hydration, over-anticoagulation.</li> </ul>
Clinical services capability	<p>Surgical services that can be provided in a facility are dependent on support services, staffing, safety standards and other requirements that are necessary in health facilities to ensure safe and appropriately supported clinical services.</p>

Damage control techniques	<p>The principles of damage control techniques are to control haemorrhage, prevention of contamination and protection from further injury, for example in the following presentations</p> <ul style="list-style-type: none"> <li>• intra-abdominal haemorrhage</li> <li>• appendicitis</li> <li>• open fracture</li> </ul>
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## 4.2 Knowledge and Skills

### 4.1 Essential knowledge

Candidates undertaking Advanced Specialised Training in surgery are required to have the following knowledge:

- Anatomy and physiology relevant to domains of surgical practice in the curriculum.
- Selection criteria, protocols, principles and limitations of the diagnostic procedures tests and interpret their results.
- Knowledge of basic principles for:
  - emergency ultrasound
  - procedural sedation
  - endoscopy
  - surgical technique
  - laparoscopy
  - laparotomy
- Potential surgical complications, as per Table 4.1, including possible failure of the surgical procedures listed in this curriculum, describe the signs and symptoms of these complications and outline appropriate rescue plans.
- Management plans and algorithms for common potential variations for common procedures eg when an ovarian pathology or bowel cancer is found for a case that was thought to be appendicitis.

### 4.2 Essential skills

A doctor who has attained an AST in Surgery is expected to advance their surgical skills beyond those described in the Primary Curriculum. At the completion of advanced training the doctor is expected to be able to manage the following presentations and provide the essential surgical skills and under minimal or distant supervision and/or liaison with regional specialist surgeons.

#### 4.2.1 Basic skills

- emergency ultrasound
- procedural sedation
- gastroscopy & colonoscopy - required to fulfill requirements of the Conjoint Committee for Recognition of Training in Gastrointestinal Endoscopy (CCRTGE)
- surgical technique
- laparoscopy
- laparotomy
- surgical audit
- risk assessment

#### 4.2.2 Management of abdominal presentations

- Abdominal wall mass or pain: hernia repair.
- Acute right and left lower quadrant pain: appendicitis, adnexal/ovarian disease, diverticular disease, constipation.



- Gastrointestinal bleeding (upper and lower).
- Gastrointestinal screening and surveillance (upper and lower).
- Perianal presentations: hemorrhoids, infections, warts, pilonidal sinuses, anal fissures.

#### 4.2.3 Management of non-abdominal presentations

- Integumentary lesions: skin, nail, subcutaneous lesions, ganglia, lipoma, digital amputation, burns cellulitis, skin flap and skin graft closure.
- Wounds: dressings, excision and suture, drainage and debridement, drainage and packing.
- Fertility: vasectomy
- Genitourinary disease: acute testicular torsion, epididymitis, phimosis, circumcision,
- Breast lump: triple assessment and referral.
- Hand/limb: carpal tunnel release, hand trauma/infection, extensor tendon repair, compartment syndrome upper and lower limb.

#### 4.3 Additional skills

It is suggested that a Rural Generalist with advanced surgical skills considers also undertaking DRANZCOG advanced training during or after Fellowship training to be able to manage complications of pregnancy, including:

- Complications of labour and delivery: operative vaginal delivery, cesarean section, perineal trauma, uterine inversion, postpartum haemorrhage, retained placenta, advanced labour and risk management, neonatal resuscitation.
- First trimester pain and bleeding: uterine bleeding: dilation, curettage and hysteroscopy (pregnant and non-pregnant), ectopic pregnancy and
- Tubal ligation

Other additional skills for example vascular / trauma surgery procedures such as amputations may be obtained either during or following Fellowship training to address community needs. These additional skills may require special training or accreditation to perform. Before undertaking new procedures, the candidate must obtain specific approval and training by his/her supervisor.

Important considerations when seeking to develop additional skills include:

- Training requirements for envisaged elective and emergency work, including requirements for maintaining competencies relevant for potentially required emergency procedures.
- Frequency of exposure in regular practice to various medical conditions and operations.
- Where qualifications require specified volumes of cases for successful completion, the training facilities need to have a training plan that enables the training candidate to have sufficient clinical exposure to meet these training requirements. This may require discussions between the different supervisors / facilities as to how these case volumes can be achieved.
- Capacities of the future envisaged district hospital facilities and workforce.
- Medico-legal considerations for the candidate and the supervisor.

## 5. Teaching and learning approaches

The emphasis for Advanced Specialised Training in surgery will be on acquiring relevant clinical experience and skills.

Teaching approaches will include, but are not limited to:

- *Formal academic study* – Courses and programs relevant to the curriculum.
- *Clinical experience-based learning* – The majority of teaching and learning should take a case based experiential format. This is the most valuable approach to learning specific clinical skills.
- *Simulation laboratory sessions* – these may be needed for those situations that are encountered infrequently in the clinical setting, or those requiring rehearsal of team and inter-professional co-operation. Examples may include cardiac and resuscitation skills.
- *Small group tutorials* – These may be face-to-face, via videoconference or using online tele-tutorial technology.
- *Face to face education meetings* – These may be provided by the hospital or regional training organisations, or through relevant conferences.
- *Structured and semi-structured education meetings* – these will generally be inbuilt into an institution's educational responsibilities e.g. grand rounds, journal clubs.
- *Distance learning modes* – These are available via the internet, using Rural and Remote Medical Education Online (RRMEO) and other sources.
- *Self-directed learning activities* – including morbidity and mortality outcome audit and discussion.

## 6. Supervision and support

Candidates undertaking AST in Surgery will require specific medical, cultural, professional and personal support and supervision arrangements.

This will include at least:

1. *Specialist supervisor* – a doctor holding a Fellowship of RACS, who is overall responsible for the clinical and educational supervision of the candidate.
2. *Rural Generalist mentor* – a practitioner who is working or has worked in a similar situation to where the candidate intends to use their advanced skill. The mentor provides pastoral care and opportunities to debrief or act as a sounding board about cultural or personal issues. The supervisor should be a rural doctor who can put specialist information into rural context.

See [Standards for Supervisors and Teaching posts in AST](#) for further information.

## 7. Assessment

The assessments required for Advanced Specialised Training in surgery are additional to the assessments undertaken for Core Clinical Training and Primary Rural and Remote Training.

Candidates undertaking Advanced Specialised Training in surgery are required to complete the following additional formative and summative assessment tasks.

Formative tasks:

- Formative AST surgery supervisor feedback reports – each six months
- Formative AST surgery mini Clinical Evaluation Exercise (miniCEX) – minimum 10 surgical consultations spread throughout training

Summative tasks:

- Summative AST surgery supervisor feedback reports – at 12 and 24 months
- Summative AST Surgery Structured Assessment using Multiple Patient Scenarios (StAMPS)
- AST Surgery Procedural skill logbook

## 7.1 AST Surgery supervisor feedback reports

The candidate's supervisor must complete feedback reports at a minimum each six months through the training term as a formative activity to guide further candidate learning and development. While six monthly reports are the minimum, more frequent verbal and written feedback is encouraged.

Supervisor reports require information collated from the feedback from staff who have supervised or worked alongside the candidate during the period of training, a review of logbook and any formative assessments for example miniCEXs conducted during the period. At a minimum, feedback will be obtained from at least two consultants or colleagues, including the candidate's supervisor.

The last supervisor report for each rotation will be a summative exercise used to determine the candidate's competence and to outline the general scope of their training and general procedural / surgical domain competencies.

It is the responsibility of the candidate to ensure that supervisor reports are sent to their training organisation and uploaded onto their ACRRM training record – currently through 'My College Dashboard'.

## 7.2 Formative MiniCEX

A minimum of ten formative miniCEX consults must be conducted throughout the two years of training. The ten formative miniCEX consults may be undertaken consecutively by one reviewer, however the process will be more valuable if conducted at different sessions or locations by different reviewers.

A miniCEX is conducted at the instigation of the candidate with their supervisor or by any medical practitioner of their choosing, provided the assessor is a fully trained general practitioner, hospital based senior registrar or consultant.

In each formative miniCEX consultation the assessor provides written and oral feedback to the candidate during and after each consultation using a standardised format. Formative miniCEX forms and information can be downloaded from the ACRRM website by visiting <http://www.acrrm.org.au/training-towards-fellowship/reporting-and-assessments/minicex>

It is the responsibility of the candidate to ensure that the completed miniCEXs are sent to the training organisation responsible for their training and uploaded onto their training record through ACRRM's 'My College Dashboard'.

To assist candidates and assessors in this process, an online training module on conducting a miniCEX is available on the College's online learning platform. Users can enrol in this module via the Educational Inventory.

## 7.3 AST Surgery StAMPS

Structured Assessment using Multiple Patient Scenarios (StAMPS) is an OSCE / VIVA-type examination consisting of eight scenarios, each of 10 minutes duration. StAMPS examinations may be delivered via videoconference or face-to-face. Candidates remain in one place (at their videoconference facility or room) and the examiners rotate between the candidates.

The examiners observe and rate each candidate across five competencies:

1. Overall Impression
2. Develop appropriate management plan that incorporates relevant medical & rural (community profile) contextual factors
3. Define the problem systematically
4. Communication
5. Flexibility in response to new information

The StAMPS assessment will be undertaken at the end of the second year of training.

## 7.4 AST Surgery Procedural Skills Logbook

Candidates are required to maintain a log of all surgical procedures undertaken during training.

This is a practice that needs to be continued throughout a surgical career.

The candidate may use any appropriate surgical logbook, for example the RACS Morbidity Audit and Logbook.

An appropriate logbook would:

- use standardised terminology, for example SNOMED clinical descriptors
- be easily sorted by procedure, to enable a supervisor to see how often a procedure has been performed
- be able to be shared electronically and in printed form
- contain the following data set for each entry:
  - date of procedure
  - name of hospital where procedure performed
  - patient name, age, gender, and hospital ID
  - name of primary surgeon
  - level procedure performed: 1<sup>st</sup> assistant, 2<sup>nd</sup> assistant, observed
  - level of supervision: independent, supervised
  - complications

# 8. Learning resources

## Recommended texts and other resources

- Access to Rural and Remote Medical Education Online (RRMEO) [www.rrmeo.org.au](http://www.rrmeo.org.au)
- Access to appropriate diagnostic training programs and workshops – eg Ultra Sound Training programs for FAST and Obstetrics
- Access to Surgical Skills Training Laboratories and supervised procedural hands-on skills training.
- Access to knowledge-based Conferences and advanced knowledge Workshops (Regional and Provincial RACS Conferences)
- RACS Acute Neuro-trauma workshop

- Anatomy and Surgical Exposure Course JCU
- Damage Control Laparotomy – University of Tasmania Course
- Assessment and management of acute appendicitis workshop - University of Tasmania
- The Cutting Edge: Proceduralist Obstetrics and Gynaecological Skills - Clinical training and evaluation centre (CTEC) – University of Western Australia
- Core Skills: Laparoscopic General Surgery - Clinical training and evaluation centre (CTEC), – University of Western Australia– University of Western Australia
- Management of Rural Surgical Emergencies (MOSES)
- EMSB - ANZBA: Australian & New Zealand Burn Association - Emergency Management of Severe Burns

## 9. Final certification

Following the successful completion of the AST in Surgery, the candidate will be provided with a certificate of successful completion of training, accompanied by a letter from their supervisor/s that outlines the general scope of their training and general procedural / surgical domain competencies.

Additional qualifications obtained, such as those awarded by the Conjoint Committee for the Recognition of Training in Gastrointestinal Endoscopy (CCRTGE) and /or DRANZCOG advanced, may also be nominated.

These documents can be submitted as part of the credentialing process to the relevant appointment/credentialing committees in the facilities/local health districts where the candidate applies to work.

## 10. Maintenance of Professional Standards

Maintaining currency in medical practice and review of one's standards of care are of on going importance. With medical technologies and techniques now evolving rapidly, this is of ever more significance. Surgery, as a discipline, has some of the highest standards of audit review processes.

Candidates should give consideration from the beginning of training as to how they will maintain their skills over time. Candidates should develop an understanding of the processes related to credentialing and scope of clinical practice used by health care organisations.

Development and maintenance of a network of supportive surgical colleagues who can be used for advice is important, as is developing strong habits relating to audit and data collection and analysis. There also needs to be ongoing consideration of caseload.

The following activities should be considered as part of a Maintenance of Professional Standards program.

- Surgical audit
- Surgical audit meetings – peer review / discussion
- Literature review processes – including presentation of literature reviews
- Clinical attachment
- Completing relevant courses to maintain or learn new skills (such as skills in laparoscopy and endoscopy)
- Critical care in surgery courses
- Conferences relevant to rural surgeons such as the RACS Provincial Surgeons Association conferences, other RACS & ACRRM conferences etc.

Medical learning needs to be a lifelong continuum. Completion of a postgraduate medical qualification entails achieving a foundation standard of competency for professional practice. Maintaining and developing this skill over a professional career requires additional professional attitudes and skills that are essential to maintain quality of care.

## **11. Evaluation**

The Advanced Specialised Training curriculum in surgery will be evaluated on an ongoing basis using both qualitative and quantitative methods. All stakeholders involved in the process will be asked to provide feedback regarding the content, feasibility, rigor and outcomes in preparing doctors to take on these roles. Stakeholders will include candidates, supervisors, employers, and medical educators from the accredited training organisations and others who may have been involved such as Rural Generalist Programs, Rural Workforce Agencies, other Medical Colleges, universities and health service providers. The information gathered will be collated by ACRRM and will feed into a 3-5 yearly review of the curriculum.