BACKGROUND
Specialisation has served the surgical profession and the community well over the last 100 years. Specialisation within surgery facilitates the concentration and acquisition of knowledge and experience. It contributes to the setting of standards, research and advances in care. Specialists and specialist units can be a focus for teaching and the dissemination of best practice. For patients with a well-defined clinical problem treatment by a specialist and or in a high volume specialist unit has an increased likelihood of a good outcome.

Specialisation however does have some disadvantages. It can lead to fragmentation of knowledge and patient care. This is particularly relevant for patients with undifferentiated illnesses and multiple system diseases. Given that specialisation requires a critical size of population and institution it has implications for access to care and especially access to emergency care. This in turn can be a major problem for governments and hospital managers as they seek to provide a full range of accessible surgical services to all of their population within finite budgets.

Governments, health providers, workforce planners and specialist medical Colleges are increasingly examining the paradoxes and nuances of the relationship between specialisation and generalism. This includes consideration of models of delivery of care, philosophies of practice and the training and maintenance of an appropriately skilled and empowered workforce.

The Royal Australasian College of Surgeons (RACS) has created ‘six principles of Generalism within Surgery’. These principles are relevant to practice within the nine specialty areas in which the RACS recognises, trains and examines. It also speaks to the relationship and cooperation between established specialties, sub-specialists, and specialists practicing across a number of recognised specialties. The same principles can be used to guide interactions with appropriately trained Fellows of other Colleges and other health practitioners who may provide surgical services.

A major problem confronting RACS and others who have addressed this issue is the nomenclature.

“Generalism” and “Generalist” have been usefully defined by the Royal College of Physicians and Surgeons of Canada as:

“Generalism is a philosophy of care that is distinguished by a commitment to the breadth of practice within each discipline and collaboration with the larger health care team in order to respond to patient and community needs.”

“Generalists are a specific set of physicians and surgeons with core abilities characterized by a broad based practice. Generalists diagnose and manage clinical problems that are diverse, undifferentiated, and often complex. Generalists also have an essential role in coordinating patient care and advocating for patients”

Nevertheless, within surgery the terms ‘generalism’ and particularly ‘generalist’ are easily confused with the specific surgical specialty discipline of ‘General Surgery’. Outside of surgery ‘generalist’ may also be used to refer to General Practitioners, or to undifferentiated doctors yet to enter a specialist training program.

For this reason we have used the more specific terms of ‘narrow scope specialist’ to define a surgeon practicing within a limited clinical area of their recognised specialty, ‘broad scope specialist’ to refer to a surgeon practicing across the full range of their speciality and ‘extended scope specialist’ to refer to a surgeon practicing across several RACS recognised specialties. The latter two can be equated to a ‘generalist’.

All FRACS surgeons are initially trained in the broad scope of their specialty. Many subsequently function simultaneously or sequentially as a narrow scope specialists and broad or extended scope specialists in different work contexts or at different stages of their career. For instance, some will undertake a narrow scope of practice at a major institution’s specialist unit, a broad scope in in emergency work and or private practice and an extended scope on outreach visits to smaller centres.
This document is intended to promote discussion within the surgical community and to provide guidance and framework for jurisdictions and institutions as they seek to safely and efficiently provide surgical services to whole populations.

Specialisation is a dynamic and continuous process. Achieving the right balance between generalism and specialisation will also need to be an ongoing and dynamic progression. Seeking the best outcome for all of the people we serve is an inviolable and overriding principle.

**SIX PRINCIPLES OF GENERALISM WITHIN SURGERY**

1. **Rationale**
   Safe, cost effective and equitable delivery of high quality surgical services to the whole population of Australia and New Zealand requires a mix of surgeons who specialise in a narrow range of conditions and surgeons who cover a wide scope or extended scope of practice working in cooperative relationships.

   Surgeons working across a wide scope or extended scope of practice are particularly necessary and effective in emergency surgery, rural and regional areas, military and humanitarian work. They are also increasingly desirable for the management of patients with multiple and complex conditions.

2. **Training**
   Surgeons working across a wide scope of practice need initial broad training in multiple specialty areas.

3. **Context**
   To deliver a safe and high quality service to patients, Surgeons working across a wide scope of practice and their institutions should establish cooperative, easily accessible and mutually supportive relationships with more specialised colleagues and specialised institutions.

4. **Development and audit**
   Continuous two-way, audit, education, learning and development should occur within and as an essential part of these mutually supportive relationships

5. **Scope of practice**
   The scope of practice will be best determined by local need and developed in the context of the wider regional service networks. The appropriate scope of practice will be location specific and depend on the training and skill set of the extended or broad scope surgeon, available local facilities and existing or planned supportive specialist relationships.

6. **Legal and credentialing frameworks**
   The RACS (in dialogue with Fellows, specialty and sub-specialty societies and jurisdictions) needs to foster a medico-legal and credentialing framework which facilitates extended and broad scope of practice surgery while protecting patients, institutions and jurisdictions.
COMMENTARY AND EXPLANATION

1 Rationale

Safe, cost effective and equitable delivery of high quality surgical services to the whole population of Australia and New Zealand requires a mix of surgeons specialising in a narrow range of conditions and surgeons covering a wide scope or extended scope of practice working in cooperation.

Surgeons working across a wide scope or extended scope of practice are particularly necessary and effective in emergency surgery, rural and regional areas, military and humanitarian work. They are also increasingly desirable for the management of patients with multiple and complex conditions.

The population of Australia and New Zealand is distributed amongst a few large and sprawling cities, large regional centres, smaller rural centres and remote towns and settlements. There are in addition a mix of cultural and economic factors which influence the health and wellbeing of our populations.

The provision of safe, equitable, accessible and sustainable modern surgical services is a concern of our governments and a professional obligation for us as the College Surgeons in Australia and New Zealand. Our geography, social mix and economic realities do not allow all the population ready access to large institutions with multiple specialty and subspecialty units.

Our populations are ageing and suffering from increasing rates of multi system disease and co-morbidities. Presentations with illness or accident are often undifferentiated and potentially involve multiple medical and surgical specialties. Even in large, fully developed specialist institutions it is difficult practically and financially to cover all needs with multiple teams of narrow scope specialists.

Many of our most disadvantaged Indigenous populations live in regional and remote areas and culturally have difficulty dealing with multiple different and new healthcare providers.

Governments and other health care funders are faced with increasing costs and an unsustainable rise in health costs as a proportion of Gross National Product. As nations and as a profession there is an imperative to find the most cost effective way of delivering high quality surgical services to all.

A number of surgeons will serve in the military or work in humanitarian situations in low income countries in which it will be desirable to competently practice over an extended scope of practice.

All the previous factors and scenarios are unlikely to be met solely by an increasingly specialised surgical workforce. Surgeons working across the full scope of their specialty or across multiple specialties will continue to be needed. The right mix of narrow scope and broad and extended scope specialists and specialist surgical units will be determined by the interplay of all these factors. Maximising the quality and safety of specialised services delivered in a generalist context is covered in subsequent principles.

2 Training

Surgeons working across an extended scope of practice need initial broad training in multiple specialty areas.

Historically surgical trainees were exposed to a broad experience in surgery in general before entering a specialist training program. Commencement of the RACS SET (Surgical Education and Training) program in 2007 allowed medical graduates to be selected into one of nine specialist training programs from Post Graduate Year 3 (PGY3). While many had several more years as an undifferentiated junior doctor or an unaccredited trainee before entering SET, the exposure to multiple specialties within surgery is currently reduced.

Surgeons who intend to work in rural areas or other environments where an extended scope of surgery is desirable therefore need personalised, targeted and appropriate training in other specialty areas. This may be accomplished by clinical terms before SET, facilitated during SET by supportive
regulations for training of that particular specialty and or by a personalised high impact post Fellowship program, tailored to the surgical needs of the trainee's intended practice location. Specialist societies have a crucial role in the design of such extended scope training pathways. The contacts established during these specialty attachments should ideally translate into ongoing mentoring, referral and continuous medical development relationships.

3 Context

To deliver a safe and high quality of service to patients Surgeons working across an extended or broad scope of practice and their institutions should establish cooperative, easily accessible and mutually supportive relationships with more specialised colleagues and specialised institutions.

It is vitally important for the health of the population that extended and broad scope of practice surgeons and institutions are not in, or perceived to be in, competition with narrow scope surgeons and institutions.

For patients to gain from all the benefits of Specialisation along with the continuity, efficiency and access that Generalism may add, extended and broad scope specialists and institutions should have supportive and functional links with narrow scope specialists and institutions. These links may include initial training, ongoing mentoring, bilateral regular clinical or educational visits and regular clinical case based consultations.

The sharing of protocols, inclusion in multidisciplinary disease based meetings and participation in specialty or multi institutional audits should be encouraged.

Such functional relationships allow patients easy access to expert second opinions and referral for more specialised care if indicated. They enhance the practice of the narrow scope specialist and institution by increasing the number of appropriately triaged, diagnosed referred complex cases in their area of expertise. Ongoing appropriate local after-care is also enhanced.

The extended or broad scope specialist's practice is also enhanced. By cooperation and input from a supportive narrow scope specialists and institutions they can undertake the care in areas of extended expertise, confident they have ready access to appropriate advice and back-up in case of unexpected complications. Over time, they may safely develop the capacity to manage more complex cases.

The population, health funders and providers of surgical services gain by increased local continuity of care, an enhanced level of emergency care, functional and sustainable emergency rosters and decreased transfers, travel and disruption.

4 Development and audit

Continuous two-way, audit, education, learning and development should occur within and as an essential part of these mutually supportive relationships

Surgical practice is changing at an increasing rate with an explosion of knowledge and technology. Initial surgical training serves as a sound platform for future continuous learning and development. Extended and broad scope specialists have a particularly arduous task in maintaining currency and competency.

Access to scientific meetings such as the RACS Annual Scientific Congress (ASC) which involves simultaneous programs for most surgical specialties and sub-specialties is important. 'Recent developments' and 'up-date' sessions by narrow scope specialists specifically catering to the needs of extended and broad scope specialists are valuable at international, national and local meetings.

Clinical attachments and or joint clinics and operating sessions function as both learning and auditing opportunities. Formal specialty or institutional based audits should be open to the broad or extended scope specialist.
Narrow scope specialists benefit from close interaction with their extended and broad scope counterparts by refreshing their knowledge of the breath of their specialty and or being exposed to developments and advances beyond their usual scope of practice. They may also learn valuable insights into the particular needs and structures of a society outside their usual experience.

5 Scope of practice

The scope of practice will be best determined by local need and developed in the context of the wider regional service networks. The appropriate scope of practice will be location specific and depend on the training and skill set of the extended scope surgeon, available local facilities and existing or planned supportive specialist relationships.

There is no ‘one size fits all’ in the provision of high quality surgical services to a whole population. Different contexts and different specialty services will need different solutions.

Local needs, local skill sets and local support facilities will be an important factor in configuring the safe level of services that can be offered at a particular location. National, state and regional health services and frameworks are equally important as is particular specialty’s prerequisites for sustainability.

All these factors and stakeholders need to be consulted and have the ability to influence the mode of delivery and level of service at a particular location. A safe, sustainable, equitable and accessible surgical service is the driving denominator.

6 Legal and credentialing frameworks

The RACS (in dialogue with Fellows, specialty and sub-specialty societies and jurisdictions) needs to foster a medico-legal and credentialing framework which facilitates extended scope of practice surgery while protecting patients, institutions and jurisdictions.

In their role as expert witnesses to courts and membership of credentialing committees’ surgeons are integral and important parties in establishing legal frameworks and local working environments for the practice of surgery.

Broad and extended scope surgeons are particularly vulnerable to adverse rulings in legal matters if the context of practice is not taken into account. The expert opinion of a narrow scope specialist will often appropriately be sought by the courts. It is very important for the narrow scope expert to consider the broader issues of context of practice, the access to surgical services and the implications for standards of surgery available to the whole population in their advice to the court.

Rigidly applying criteria that are only relevant to the largest and most specialised units may lead to a lowering of overall standards of surgery available to the whole community. Similar attitudes should be considered in credentialing. Issues of protecting market share, prestige of the profession, membership of particular societies, political or financial advantage should be subservient to creating a safe, sustainable, accessible and continuous surgical service to the local population.

Credentialing can be used as an extending and empowering process rather than seen only in restrictive terms. For instance the credentialing process may identify deficiencies in the scope of practice of a surgeon, a unit and or an institution and proactively suggest or set in motion processes such as extra training, mentoring or partnerships which facilitate a safe expanded scope of practice.

Self-imposed or institution imposed excessive restriction of scope of practice based on minimising medico-legal risk may paradoxically increase the clinical risk for patients due to delays in diagnosis and appropriate treatment while awaiting more specialised attention. It will also decrease the local expertise available for emergency management.

Costs incurred by the health system and opportunity costs should also be taken into account by the expert surgeon functioning across the full range of RACS competencies.
DEFINITIONS

**Generalism:** “Generalism is a philosophy of care that is distinguished by a commitment to the breadth of practice within each discipline and collaboration with the larger health care team in order to respond to patient and community needs.”

**Generalist:** “Generalists are a specific set of physicians and surgeons with core abilities characterized by a broad based practice. Generalists diagnose and manage clinical problems that are diverse, undifferentiated, and often complex. Generalists also have an essential role in coordinating patient care and advocating for patients”

**Specialist:** A medical practitioner who has competed all the requirements of a specialist training program. In the context of surgery in Australia and New Zealand this is a medical practitioner who has been awarded the Fellowship of the Royal Australasian College of Surgeons (FRACS)

**Specialisation:** The process in which a medical practitioner or group of practitioners restricts the range of their practice while increasing the depth of knowledge and expertise in that area.

**Specialties:** The nine areas of surgical expertise in which surgeons are trained, examined and recognised by the RACS. They are cardiothoracic surgery, general surgery, neurosurgery, orthopaedic surgery, otolaryngology head and neck surgery, paediatric surgery, plastic and reconstructive surgery, urology and vascular surgery.

**Sub-specialist:** A surgeon who restricts their range of practice and increases their expertise to a clinical area within their main recognised specialty.

**Narrow scope specialist:** same as sub specialist.

**Broad scope specialist:** a surgeon who continues to practice across the full range of their primary specialty

**Extended scope specialist:** A surgeon who in addition to practicing across the full range of their specialty practices in limited areas of other specialties.

**SET Program:** The RACS Surgical Education and Training Program, accepted by the Australian and New Zealand Medical Councils as the approved training pathway for recognition as a specialist surgeon in Australia and New Zealand.

**PGY:** Post Graduate year. Distinguishing the experience and seniority of an undifferentiated junior doctor prior to commencing a specialist training program.