



## Background

Historically, a large proportion of a surgeon's prestige is measured by prowess in elective surgical practice. Nonetheless, in general surgery up to one third of surgical workload relates to management of emergencies. Emergency general surgery has been the "poor cousin" of elective general surgery. It has often been relegated to out-of-hours and may have been performed by unsupervised junior staff. There is a wealth of international and Australian data that shows that this is associated with poor patient outcomes. The community rightly expects that acute general surgical presentations are managed efficiently, effectively, and with the best possible outcomes.

In recent times, there has been a resurgence of interest in emergency surgery and the sensible organisation of emergency surgical services in Australia<sup>1,2</sup>. Much of the work commenced in New South Wales with recognition at a state level that emergency surgery is actually predictable and should be part of the planned working week<sup>3</sup>. A range of emergency surgical models have been published, particularly the Prince of Wales<sup>4,5</sup> and Nepean<sup>6</sup> models. In 2009 the Royal Australasian College of Surgeons (RACS) convened a one day meeting relating to emergency service provision, which then led to a consensus document<sup>7</sup>. In July 2010 a two day meeting was subsequently held at Nepean Hospital that discussed various aspects of emergency

surgery. There was broad agreement about the relevant issues. This document builds on these frameworks.

At the GSA Annual Scientific Meeting, held from 17-19 September 2010, a consensus document was produced relating to emergency general surgery in the Australian context. The following twelve points were agreed upon at that meeting. Additional material for clarification has been included under each point.



### 1. Emergency general surgery is a continuing core competency of a general surgeon

- Emergency general surgery has always been taught during surgical education and training and is examined in the FRACS examination in general surgery. All graduating Fellows in General Surgery have therefore developed experience and competence in this area. Post-Fellowship, the vast majority of general surgeons continue to practice emergency general surgery, even when undertaking sub-specialist training.
- Across Australia the vast majority of hospitals still maintain general surgical on call, where the general surgeon on call is expected to be competent at managing a wide range of surgical emergency presentations. The same holds true

in the private sector. General surgical emergencies arise unexpectedly in patients in hospital for other reasons, or as complications in patients who have undergone elective surgery. Notwithstanding any sub-specialisation in elective practice, the ability to manage these emergency presentations, either from emergency admissions or emergencies that occur in hospital in-patients, must be maintained as a core competency of every general surgeon.

## 2. Emergency general surgery should be consultant led

- Emergency general surgery patients may suffer significant morbidity and also mortality during their hospital admission. There is ample evidence that consultant involvement at all stages of their emergency presentation can be advantageous. This requires close supervision of junior staff during the assessment phase, during critical decision making, in the operating theatre, and in the post-operative phase. On site consultant surgical presence is ideal. Whenever any of these areas are delegated to junior staff, very close supervision must be maintained.



## 3. There should be dedicated staff allocated to the provision of emergency care, with the need for training recognised

- Adequate junior medical staff must be rostered to fulfil emergency commitments. Registrars must be rostered in such a way that they can rapidly attend emergency departments to assess emergency patients. They should be supported by adequate numbers of more junior medical staff. Several models of emergency care emphasise the role that dedicated nursing staff and ancillary staff play. At all levels training is essential. There is no doubt that supervised exposure to emergency general surgery provides an excellent training opportunity for general surgical trainees. There are also ample training opportunities for more junior medical staff and medical students.

## 4. There should be separation of emergency general surgery and elective general surgery streams

- In the past emergency surgery was seen as an add-on to elective surgery. It is now abundantly clear that emergency general surgery workload is predictable within an institution and does not vary markedly from day to day. The workload needs to be identified and planned for. This involves staff allocation, bed access, and theatre access. This should be organised in a way that does not disrupt elective surgery.
- Separation of general surgery may be done by process in a co-located service, or geographically in a regional network model. In a co-located model, degree of physical separation will depend upon the size of the hospital. Large hospitals may well develop Acute General Surgical Units, with dedicated beds and ward staff, and with dedicated theatre lists. In smaller hospitals the separation may well be by administrative process more than physical separation, with a plan that suits that institution.

## 5. There should be appropriate and timely access to emergency operating theatres

- Once the emergency workload has been calculated, appropriate planning should reveal the amount of emergency theatre time needing to be allocated each day, including weekends and public holidays. In many hospitals the workload will justify a theatre devoted specifically to emergency general surgery. In some hospitals an emergency theatre will need to be shared with other

specialties. In smaller hospitals it may be appropriate to schedule emergencies as a percentage of a normal routine operating list.

- Whatever model is adopted, there should be ready access to an emergency operating theatre for a deserving patient. Time to theatre should be clinically appropriate.

## **6. Emergency operations should be performed during the working day unless there is a threat to life, limb, or organ**

- There is clear evidence that operations performed out of hours tend to have a worse outcome than those performed in hours. There are a variety of reasons for this. However, most emergency presentations do occur during daylight hours. Few of these conditions benefit from waiting and it is in everybody's interest for the surgery to proceed expeditiously.
- Conversely, it must no longer be accepted that patients have operations performed by junior doctors unsupervised in the small hours of the morning, simply because there is no other time for the operation to proceed. The working day may well extend into the evening, but does not include the period midnight to 7:00am. The common practice of emergency surgery being deferred to the late evening or overnight must be stopped.

## **7. Consultant surgeons should contribute to the efficient management of the emergency theatre**

- Prioritisation of emergency lists can remain problematic and there can be a risk of conflict occurring. The priority of surgical procedures is primarily a surgical problem and it is imperative that surgeons collectively see this as an area to which they should contribute. In most hospitals the on duty general surgeon is uniquely placed to perform this role but this does not mean that surgeons from other specialties should not have input. Delegating this important task to junior doctors, anaesthetists, or nursing staff is often inappropriate and surgeons need to take a leadership role in this area.

## **8. The period of service of the emergency general surgeon must be defined. Work practices must reflect safe hours principles**

- A variety of on call models have been proposed - from the traditional 24 hour model, up to 7 day models promoted by some rural hospitals. Whichever model is adopted, it must be clear when the on call period commences and ends. There must also be a mechanism in place to enable fatigued surgeons to rest appropriately when required.



## 9. There must be robust handover and transfer of care: peer to peer, documented, and retrievable

- Once the on call period is over, it is appropriate to hand over unresolved problems to the next on call surgeon. This minimises call backs in the days following an on call period and allows a fresh set of eyes to review any unresolved surgical problem.
- Handover should occur at multiple levels; consultant to consultant, registrar to registrar, intern to intern, nursing staff to nursing staff. To satisfy medico-legal requirements, the transfer of care should be documented in a fashion that is readily retrievable. Whilst in the past this required an entry in the patient's notes, in the modern era there are electronic methods that could fulfil this role. Development of such tools should be facilitated.

## 10. Best practice should be defined. Quality should be measured by clinically meaningful Key Performance Indicators (KPI's)

- There are now a wide range of clinical protocols, guidelines, or checklists that can assist in defining best practice in individual situations. They usually require refinement in an individual hospital to reflect available resources or other local factors. Once best practice is defined, it is possible to develop a range of KPI's. Any KPI's developed should reflect clinically meaningful outcomes, not merely process issues.

## 11. The service must reflect community need and regional variation

- This is particularly important in rural and outer metropolitan areas. A key determinant of the quality of a service is access. It would be unrealistic to expect patients to travel long distances for treatment of minor conditions. The service should not be overly centralised, and should strike a balance between access, safety, effectiveness and efficiency. Across a country as vast as Australia, there will be natural regional variations in care and this should be expected.



## 12. The service must be valued (recognised, rewarded, resourced, and remunerated)

- Personnel who work in emergency general surgery should be recognised for their commitment and the time required for them to keep up-to-date across the range of emergency general surgery. In the past, prestige in surgery has related to areas of elective practice rather than consistent performance in the emergency area. Personnel who contribute to an emergency service should be rewarded by their public hospital appointment. Indeed this should be a condition of a public hospital appointment. Ability to manage a range of surgical emergencies should be viewed by colleagues as equally prestigious as the ability to perform a highly specialised elective procedure.
- Resources are required for adequate staffing for emergency services. The total resource required is offset by considerable efficiencies in reduced length of stay for emergency patients and less disruption to elective services, but an appropriate budget must be set. Staff involved must be paid in a way that takes recognition of their opportunity cost in providing an emergency surgical service. Innovative payment methods may be required. Currently elective surgery is well remunerated compared to emergency surgery. This needs to be redressed. For example, emergency consultations and operations should be rewarded with a bonus compared to elective surgery. Equally an emergency session should be remunerated at a level higher than an elective session.

## References

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