



GUIDELINES ON CONSTRUCTING AND RETAINING A SENIOR EMERGENCY MEDICINE WORKFORCE

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1. INTRODUCTION

This document provides a framework for establishing and maintaining a senior emergency medicine workforce. It describes the considerations health services should make in planning for appropriate senior emergency department (ED) medical staffing.

Emergency physicians are an integral part of hospital staffing. They provide clinical leadership and quality care for ED patients, and perform essential teaching, education, managerial, administrative planning and advisory roles. These activities occur within the ED, and at hospital, district, regional, state, and national level. Directors of Emergency Medicine and health administrators have a duty to ensure that ED staffing allows for the delivery of high quality patient care.

The demand for ED care is increasing both in total numbers of patients as well as the complexity and severity of presenting conditions. At the same time, government and community expectations regarding quality and timeliness of care have increased. This trend is likely to continue over the next decade with the rapid expansion of the elderly population.

This document outlines a general framework for health services to use in establishing their senior emergency medicine workforce. The framework focuses on activities in two key areas:

- Constructing a senior emergency medicine (EM) workforce; and
- Retaining a senior EM workforce.

Effectiveness across these two areas will ensure the longevity of the profession and the sustainability of its senior workforce. From an organisational perspective the benefits of a stable, senior emergency medicine workforce include retention of corporate knowledge, increased investment in hospital process development (both in and outside the emergency department), reduced costs (through avoidance of repeated recruitment and reduced need for short term/locum staffing), and the establishment of a culture of clinical excellence in both patient care and staff training.

2. SCOPE

2.1 In-Scope

General

This guideline is applicable to all emergency departments in Australian and New Zealand, as defined in ACEM's *Statement on Emergency Department Delineation* [1].

It is recognised that as there is a wide variability of roles and work practices between departments, there cannot be a single staffing formula or profile for all departments. In determining their ED staff profile, services must consider the individual needs of their ED. This guideline provides information on the following:

- Recommended modelling for senior ED staffing requirements, based on number of annual presentations;
- Recommended time allocation for clinical support activities including supervision, teaching and education requirements, and professional development; and
- Recommendations relating to senior ED staff retention, including the importance of the ED environment and physician well-being.

The recommended senior staffing levels outlined in Table 1 are the minimum number required to provide quality patient care, to be applied 7 days per week, and inclusive of public holidays. They have been modelled on the needs of a mixed and/or adult hospital. Modifications may be required when considering niche population hospitals such as paediatric hospitals, and when also taking into account local need, including number and case-mix of ED presentations, and the availability of appropriate staffing and clinical supervision, and consultant review prior to discharge.

The recommended modelling is based on the assumptions that:

- A 'consultant-led' emergency department is used as the staffing framework.
- All patients should have senior medical input into their diagnostic and management plan; FACEM involvement is optimal.
- Maximum sustainable long-term weekend commitment is 10 weekends per year (2 shifts per weekend). Services should refer to the Australian Medical Association's (AMA) *National Code of Practice: hours of shiftwork and rostering for hospital doctors* [2].

Junior Medical Officers

The contribution of junior medical officers (JMOs) to service delivery is also important, and appropriate JMO staffing must also be considered when constructing the ED workforce. To ensure adequate experience in generalist medicine, junior doctors must be exposed to a wide spectrum of acute and undifferentiated illness. This is best obtained by a period of training in emergency medicine.

Health services should consider the following factors in determining the JMO component of their workforce:

- In EDs, JMOs contribute to the management of low-complexity patients who require hospital services, allowing specialist emergency medicine staff to see more complex patients.
- Independent practice in emergency medicine takes time to develop, and JMOs will need extensive support and oversight of their functioning [3].
- The direct contribution of JMOs in service delivery will increase over time as they become more experienced and independent.
- Interns should be considered supernumerary for staffing purposes [4].

Additional Notes

ACEM's *Accreditation of Adult and Mixed EDs* guidelines relates to the minimum appropriate staffing required to provide emergency medicine training; this is currently one FACEM for any accredited department providing direct 'on the floor' supervision of trainees [5]. This is not the same as the staffing level required to provide appropriate service delivery both in terms of direct patient care and clinical support roles.

Independent and unsupervised practice of emergency medicine, is best performed by medical specialists who have completed the ACEM Fellowship, which has standards for competency and definitions for professional practice principles. All medical staff as well as non-medically trained staff who provide clinical care for patients are required to be supervised according to their level of experience, clinical abilities and insight into their personal limitations.

The following ACEM policy documents provide guidance on relevant supervision requirements:

- [Policy on the Supervision of Junior Medical Staff in the ED \[3\]](#);
- [Guidelines on the Role of Interns in the ED \[4\]](#);
- [Adult Mixed ED Guidelines \(AC01\) \[5\]](#); and
- [Overseas Specialist Training - Supervision and Credentialing Guidelines for External Agencies \(OC111\) \[6\]](#)

2.2 Out-of-Scope

General

The following factors have not been considered as part of the assumptions, due to site variability, relevance and difficulty in quantifying resource requirements:

- Populations with increased health needs. These may include socio-economic factors and patient demographic profile, mental health patients, drug and alcohol services, Indigenous patients or those with other cultural and language factors, which may influence possible demand on ED resources.
- Admission rates are subject to numerous local factors and the relative need for total or senior medical input can be frequently lower than that for ensuring patients can be safely discharged.
- Access block rates have significant impact on emergency department function and increased staffing may be required.
- Increased proportion of high acuity patients may also require increased specialist involvement.
- Differences in ED design and physical layout, which exist across hospitals depending on the integration of clinical requirements, functional needs (including patient needs) and size requirements.
- Additional responsibilities and roles external to the ED e.g. ICU supervision, MET calls, transfers, ward supervision.
- Discrete units within the ED including, Short Stay Units*, Hospital in the Home, retrieval activities and toxicology services. ACEM recommends that separate staffing models are developed for these activities.

* While Short Stay Units (SSUs) remain under the governance and responsibility of the ED, staffing models for SSUs should be considered separate from the ED. Short Stay Unit models and governance are highly variable across jurisdictions. It is therefore difficult to define a generalizable staffing model, as these will invariably need to be tailored to local factors. All SSUs require adequate clinical support staff – this includes junior medical officers (JMOs), nursing staff, allied health staff, interpreting services and cultural liaison officers.

2.3 Relevant definitions

ACEM Accreditation Guidelines: refer to the minimum appropriate staffing required to provide emergency medicine training; this is currently one FACEM for any accredited department providing direct 'on the floor' supervision of trainees.

Consultant led ED: where the majority of medical staff are not senior clinical decision makers. These doctors undertake the majority of initial patient assessments. Specialist emergency physicians (or other non-FACEM senior clinical decision makers) provide oversight and supervision of junior medical staff, high level skills and supervision of a small number of patients.

Consultant run ED: an ED where specialist emergency physicians or other non-FACEM senior decision makers, comprise the majority of the ED medical workforce. These senior staff will provide the primary assessment of patients as well as the initiation of patient management. The small number of junior medical staff will provide support to the senior staff.

FACEM: Fellow of the Australasian College for Emergency Medicine.

Junior Medical Officers: registered medical practitioners in their first or second postgraduate year (ACEM P53, 2013).

Non-FACEM senior decision maker (SDM): a physician who has the appropriate clinical care skills to manage a critically ill patient unsupervised, or until a specialist emergency physician (FACEM) becomes available and can assist. This can encompass training (i.e. ACEM trainees) and non-training roles (e.g. Career Medical Officer).

Specialist emergency physician: specialist physician in emergency medicine; also referred to as a FACEM.

3. MINIMUM RECOMMENDED SENIOR STAFF MODELLING FOR A MIXED EMERGENCY DEPARTMENT

These recommendations:

- Provide the total number of specialist emergency physicians required to be either present or on-call for each shift; and
- Are based on adequate numbers and staff-skill mix, which provides **a minimum of two senior decision makers at any one time. Senior clinical decisions makers can be either a FACEM or non-FACEM senior decision maker.**

Table 1: Recommended minimum senior staff modelling for mixed emergency departments

	DAY SHIFT	EVENING SHIFT	NIGHT SHIFT
~ 15,000 presentations / year	1 x FACEM 1 x non-FACEM SDM	1 FACEM 1 x non-FACEM SDM	1 x on-call FACEM 1 x non-FACEM SDM
15,000 - 30,000 presentations / year	1 x FACEM 2 x non-FACEM SDM	1 x FACEM 2 x non-FACEM SDM	1 x on-call FACEM 2 x non-FACEM SDM
30,000 - 45,000 presentations / year	2 x FACEM 2 x non-FACEM SDM	2 x FACEM 3 x non-FACEM SDM	1 x on-call FACEM 2 x non-FACEM SDM
45,000 - 60,000 presentations / year	2 x FACEM 3 x non-FACEM SDM	2 x FACEM 4 x non-FACEM SDM	1 x on-call FACEM 2 x non-FACEM SDM
60,000 - 75,000 presentations / year	3 x FACEM 3 x non-FACEM SDM	3 x FACEM 4 x non-FACEM SDM	1 x on-call FACEM 3 x non-FACEM SDM
75,000 - 90,000 presentations / year	4 x FACEM 4 x non-FACEM SDM	4 x FACEM 6 x non-FACEM SDM	1 x on-call FACEM 4 x non-FACEM SDM
Over 90,000 presentations / year	4 x FACEM 6 x non-FACEM SDM	4 x FACEM 8 x non-FACEM SDM	1 x on-call FACEM 5 x non-FACEM SDM

All EDs will require additional clinical support staff. This includes JMOs, nursing staff, allied health staff, interpreting services and cultural liaison officers. Interns should be considered supernumerary for staffing purposes.

Additional specialist emergency physicians will be required if:

- There are inadequate numbers of non-FACEM SDM; or
- The ED has a higher than usual niche population compared to an average mixed ED, (e.g. higher paediatric, geriatric or trauma presentations).

High Resource Decisions

In the occurrence of regular resource intensive functions and activities, such as inter-hospital transfer, services should consider additional medical specialist staffing requirements for EDs. An inability to provide diagnostic or therapeutic services at a primary hospital necessitates decision-making regarding the need for such services and their urgency. Transporting critically ill patients exposes them to additional risks and requires the services of highly trained and skilled practitioners. Senior clinical input to such transfer decisions is **essential** to ensuring that the indication for transfer outweighs the patient risk and system resources inherent in inter-hospital transport (i.e. risk-benefit ratio).

4. CLINICAL SUPPORT

Emergency physicians must have adequate time allocated to facilitate clinical support activities. These activities include the supervision of ED staff, the provision of leadership and mentoring to staff, professional development as well as the various quality improvement activities.

ACEM recommends that Emergency physicians are allocated a minimum of 25% clinical support time to undertake required clinical support activities listed in this section.

4.1 Supervision and Education Requirements of ED Staff

As outlined in ACEM's accreditation standards [5], the position of Director of Emergency Medicine (DEM) should ideally be supernumerary to the clinical staffing needs of the department, and should ideally be a 1 FTE position. The following is the minimum clinical support FTE required for a DEM, if a full time position is not possible. This is based on the number of months for which an ED is accredited for:

- Accredited for 24 months, with at least 30,000 presentations: minimum = 0.5 FTE
- Accredited for 18 months, with at least 30,000 presentations: minimum = 0.5 FTE
- Accredited for 12 months, with at least 25,000 presentations: minimum = 0.5 FTE Accredited for 6 months: minimum = 0.33 FTE

The role of FACEMs in the education and supervision of junior medical staff is paramount but the two activities are also performed to a lesser extent by registrars for their peers and to more junior staff.

4.2 Mentoring

Emergency physicians also act as mentors to more junior staff, with additional teaching often provided by emergency physicians both inside the hospital and in the wider health community. Mentoring is an important learning and development strategy for emergency physicians and junior medical staff, facilitating the achievement of personal and professional goals, as well as improving motivation, engagement and work performance. ACEM provides a number of workplace resources through its *Mentoring Program* including:

- [Mentoring: a guide for emergency doctors – handbook](#);
- [Mentoring tools and templates](#); and
- [Mentoring Support Network contacts \[7\]](#).

4.3 Self-Education Professional Development

Accreditation of EDs by both the Australian Council on Healthcare Standards (ACHS) and ACEM requires teaching and training, while ACEM also requires both Fellows and trainees to meet educational objectives. In the case of Fellows this is measured through ACEM's Continuing Professional Development (CPD) program and for trainees through ongoing assessment and review. Emergency physicians should have adequate time and resources allocated to maintain professional standards of practice. They should also have organisational recognition of their value to the organisation, professional standing and collegiate recognition.

These activities are important to emergency physicians for professional development, satisfaction and expanding the development of emergency medicine as a discipline in its own right. These activities should be encouraged and supported by employers of FACEMs and these types of activities recognised and facilitated.

The components necessary for teaching and training must include programs for medical staff with varied career intentions and levels of seniority and experience. Medical staff pursuing a non-emergency vocation may have particular rostering requirements in order to attend teaching in their planned vocation.

The education provided in EDs is of two varieties, formal and informal. Formal education requires physical space and supporting resources including but not limited to computer access and projectors. Protected teaching time must be incorporated into rosters to facilitate this.

The following ACEM policy documents outline all educational requirements for specialist emergency physicians and emergency medicine trainees:

- [ACEM's CPD program and requirements \[8\]](#); and
- [ACEM's Emergency Medicine Specialist Training Program \[9\]](#).

4.4 Research

The delivery of high quality patient care includes research as a fundamental component of ED activity. Reflective practice involves constant evaluation of treatment and processes and is an integral part of clinical care. All practitioners have an obligation to facilitate and engage with research activity.

Research activities should be incorporated into a physician's total employed hours. Ideally, there will be a discrete unit within the ED, responsible for overseeing and fostering research opportunities.

4.5 Quality and Safety

Continuous improvements in quality and safety require time and resources an essential component of ED activity. Activities such as data and Key Performance Indicator (KPI) analysis, development of pathways, audit, sentinel event monitoring, adverse outcome monitoring, complaint investigation and resolution, as well as pathology and radiology reviews are examples of activity conducted by FACEMs in EDs. Additional activities such as hospital quality assurance committees, risk management committees, promotion of cultural safety projects and quality improvement projects are other examples [10, 11]. All these activities provide improvement in service delivery and patient outcomes.

All Emergency Departments should have:

- A documented quality framework; and
- A designated multidisciplinary quality team, with defined roles, responsibilities and reporting.

ACEM's [Quality Standards for Emergency Departments \[12\]](#) and [Policy on a Quality Framework for Emergency Departments \[11\]](#), provide detailed guidance on relevant quality and safety criteria and activities across clinical, education and training, research, administration and professional profiles.

5. RETAINING A SENIOR EM WORKFORCE

Over the last decade, the roles of emergency physicians have changed, particularly in the management of departmental management and patient flow as well as maintaining standards of clinical practice. Maintaining these levels of expertise and practice requires significant time and resources. The demand on EDs and their staff has increased significantly, with large increases in presentation numbers, compounded by increasing complexity and co-morbidities of patients. The changing demographics of the Australasian workforce, lifestyle and work balance, and societal attitudinal changes to work, are also impacting upon recruitment, retention and maintenance of the ED workforce.

Flexibility in work is a key area of concern for most workers in the healthcare industry, including emergency physicians. This section therefore outlines additional factors which should be considered by hospital DEMs and senior hospital administrators, in retaining their senior emergency medicine workforce.

Recent increases in the number of medical school programs, along with the ongoing growth in the number of international students choosing to study in Australia, is likely to result in a new wave of vocational trainees. Any significant increase in EM trainees will also increase the proportion of junior staff eventually transitioning to more senior roles, and subsequent changes to models of care, with a move away from the current consultant-led care to increasingly more consultant-run EDs.

5.1 Well Being

- **Hours of work**

Emergency physicians should have a fair, equitable and supportive environment in which to do their work. It is recognised that shift work is a standard component of emergency medicine practice. This creates anti-social working hours and should be compensated appropriately by remuneration and/or incentives to compensate for these types of shifts. Appropriate rostering, in a manner consistent with circadian principles, is necessary and long sequences of rotating rostered shifts should be avoided. Fatigue issues must also be considered an important factor in determining staffing levels; this is particularly important for emergency medicine, where a recent audit by the AMA into safe working hours found that emergency medicine had been the only specialty to not see a reduction in number of doctors falling into a 'high risk' category of fatigue and performance impairment over a five year period [13].

ACEM recommends further reference to the AMA's *National Code of Practice* [2].

- **Rostering**

Decision-making accuracy and mental alertness decreases, while error rates increase, when physicians work continuously for prolonged periods and/or are suffering fatigue and sleep deprivation [14, 15, 16, 17, 18].

- Shifts should be no longer than 10 hours.
- Continuous working hours should not exceed 12 hours.
- A minimum of 10 hours between finishing and resuming clinical duties is mandatory.
- Regular 48-hour minimum periods off work with no less than a total of 60 hours per fortnight are recommended.
- On call should be limited to no more than two overnight on-calls per seven days with neither to be consecutive.

Total employed hours should be no more than 40 per seven days.

- **Age Factors**

It is recognised that tolerance of rotating shifts deteriorates with age. Therefore, the age of consultants should be taken into account when rosters are constructed.

- **Night Shifts**

At present, few FACEMs perform night shifts. Night shifts represent the most disruption to diurnal patterns. Adequate recovery time is essential with at least 1 x 24 hour period rostered off work for every night shift, not including the first 24 hour period after finishing night shift.

- **Conditions of Work**

A minimum of 25% of total employed hours should be set aside for clinical support activities (refer to Section 4), as well as other activities as requested by the organisation such as meetings and committee commitments. There should be provision for adequate annual leave, conference leave and professional development leave.

5.2 Environment

A safe, clean and appropriately equipped working environment is essential. This includes access to ancillary services and investigation modalities, adequate office space, information and communication technology access, library, internet access, and relaxation areas. These are essential to the emergency medicine workforce being able to perform its functions. Work practices should be in accordance with standard clinical practice and guidelines. Detailed information regarding appropriate ED design can be found in [ACEM's Emergency Department Guidelines \(G15\) \[19\]](#).

5.3 Roles and Responsibilities

As part of the conditions of employment, roles, responsibilities and functions should be clearly described. Additional activities outside of clinical practice such as teaching and research must be accepted as part of the emergency physician role and must be factored in as part of the total employed hours. Emergency physicians should not be required to perform surrogate roles for deficiencies of other specialties within organisations. Examples of this include:

- Emergency physicians are asked to cover critical care areas such as high dependence units or the intensive care unit;
- Registrars on night shift are asked to be responsible for overseeing the in-patient wards.

5.4 Additional Activities

Some emergency physicians have roles and responsibilities outside of their area of employment. These include participation in College activities (e.g. committees, exam assistance, accreditation visits) and membership and/or involvement with other health and clinical associations (Australian Council on Healthcare Standards, jurisdictional craft groups etc.). These additional activities provide significant benefit to health services, and employers should actively support and encourage senior staff involvement in such extended roles.

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7. DOCUMENT REVIEW

Timeframe for review: every five (5) years, or earlier if required.

7.1 Responsibilities

Document authorisation: Council of Advocacy Practice and Partnerships
Document implementation: Council of Advocacy Practice and Partnerships
Document maintenance: Policy and Research Department

7.2 Revision History

Version	Date of Version	Pages revised / Brief Explanation of Revision
01	2008	Approved by Council
02	Nov 2015	Approved by the Council of Advocacy, Practice and Partnerships. Complete revision undertaken. Recommended staffing focuses on senior clinical decision making availability per shift.

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