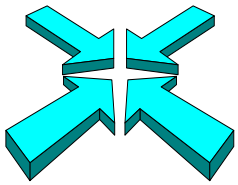

CONFEDERATION OF POSTGRADUATE MEDICAL EDUCATION COUNCILS

Clinical Training in Prevocational Years

Second Report to the Clinical Training Subcommittee of
The Medical Training Review Panel

January 2008

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1. BACKGROUND

a. Study Brief

The Clinical Training and Education Policy Section of the Australian Government Department of Health and Ageing (DoHA) had commissioned CPMEC to undertake a study to document the following:

- Description of what is currently happening in each jurisdiction with respect to clinical training in the prevocational years;
- Analysis of the similarities and differences between jurisdictions in this phase of medical education and training.

An initial report to DoHA addressed the following issues:

- The range of clinical training activity in prevocational years across the jurisdictions.
- How this clinical training activity is organised in each state, including a description of the rotations i.e. what are they and how are they changing.
- Have there been any recent reviews of these activities?
- If there have been reviews of these arrangements, what were the outcomes?
- A comparative analysis of the similarities and differences in these arrangements across the different jurisdictions.
- The accreditation framework including how compulsory and optional terms are decided upon and how quality is defined.
- How current arrangements for prevocational clinical training could be expanded and what potential new arrangements could be developed in order to cater for increasing numbers of medical graduates e.g. increased use of clinical skills labs.

This study by CPMEC complemented an equivalent study being undertaken for undergraduate training by the Medical Deans of Australia and New Zealand (MDANZ). This CPMEC study was completed within a relatively tight time framework of two months.

Subsequent discussions with DoHA led to agreement to make changes to the initial report. Amongst the additional questions to be explored were:

a. The current position in states/territory regarding IMGs in prevocational posts including data availability.
b. In relation to the core terms, information on strategies that address likely pressure points in the current training arrangements once intern numbers increase.
c. The exact status regarding GP & community placements
d. Any issues or trends identified in accreditation visits pointing to perceived shortcomings in arrangements for prevocational training.
e. Work done by PMCs or state agencies in relation to identifying the infrastructure and resource needed to support effective prevocational medical training and education in hospital or other settings.

c. Acknowledgements

CPMEC acknowledges the contributions made by Postgraduate Medical Councils (PMCs) to this study:

- Postgraduate Medical Council of Western Australia (PMCWA)
- Postgraduate Medical Council of South Australia (PMCSA)
- Postgraduate Medical Council of Victoria (PMCV)
- Postgraduate Medical Council of Queensland (PMCQ)
- Postgraduate Medical Institute of Tasmania (PMIT)
- NSW Institute of Medical Education and Training (IMET)

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On behalf of CPMEC

January 2008

2. EXECUTIVE SUMMARY

This study was commissioned to provide an overview of prevocational clinical training and highlight some options being considered for expanding capacity in prevocational medical education and training to cater for the increasing number of medical graduates.

The range of clinical training activity in prevocational years across the jurisdictions. This is well documented for PGY1, the pre-registration year. There are national guidelines (2001), a national prevocational curriculum framework, the *Australian Curriculum Framework for Junior Doctors* (2006)[1] and well-developed accreditation processes with considerable similarities across states and territories. A CPMEC National Technical Group is currently developing the National Prevocational Medical Accreditation Framework to facilitate portability of training and recognition of prior learning.

The general principles governing prevocational training in PGY2, PGY3 and beyond are that this training occurs during a series of different clinical rotations in a flexible way that allows for accumulation of clinical and professional skills sufficient to meet the training needs of the doctor and the entry criteria of Colleges, whilst simultaneously meeting health workforce needs, predominantly in the acute healthcare sector.

In most but not all states, clinical experience, education and training during the PGY2 year is surveyed on a voluntary basis during hospital accreditation visits. In general, the educational content and training experience is evaluated across a wide range of clinical rotations. Retrospective recognition of training in PGY2 is also undertaken by Colleges; this is generally an informal process. A recent review of the PGY2 year may provide useful information in this regard. The clinical training activity in prevocational years beyond PGY2 is largely under the guidance of college training programs for enrolled trainees. For undifferentiated trainees, the training process is essentially experiential along lines of the traditional apprenticeship process and with minimal formal educational content. International medical graduates (IMGs) and career medical officers fall into this latter category.

Data on numbers of IMGs (except for those in PGY1 positions in some states) is very difficult to obtain. Some jurisdictions are in the process of assessing specific infrastructure support to meet education and training needs of IMGs. A number of PMCs have been involved in initiatives in relation to up-skilling and support for the integration of IMGs into the medical workforce, however there is much to be done in this area. All jurisdictions are considering supervision and assessment requirements as a result of the 2006 COAG initiatives.

Major limitations of any oversight of PGY2 and beyond training are the lack of comprehensive data collection on numbers of prevocational trainees and inconsistent and voluntary accreditation processes.

How this clinical training activity is organised in each state, including a description of the rotations i.e. what are they and how are they changing.
In PGY1 there is a requirement by medical boards in most states and territories for compulsory core terms in medicine, surgery and emergency medicine. In NT, SA, and WA emergency medicine is not an absolute requirement and alternative accredited positions are recognised. However, even in these states the great majority of graduates undertake an emergency medicine term. In this connection, it is pertinent to note that the AMA Council of Doctors in Training has developed a position paper on intern training which reaffirms the importance of emergency medicine training.

All states and territories departments of health are actively engaging with PMCs in strategic planning for expansion of PGY1 numbers. Key factors likely to impact on the capacity to provide an adequate number of intern positions include funding, the availability of senior clinicians to provide adequate supervision and access to educational facilities, infrastructure and an appropriate case-mix of patients.

There is a very broad range of prevocational PGY2, PGY3 and beyond rotations, and many of these are currently occupied by IMGs.

Have there been any recent reviews of these activities? If there have been reviews of these arrangements, what were the outcomes?
Many of the states have undertaken a review of their compulsory PGY1 term rotations to address the challenge of meeting the traditional rotations in surgery, medicine and emergency medicine. In particular, the emergency rotation has come under scrutiny with PMCs considering options especially through increasing GP and community placements.

The recent review of PGY2 may provide a national perspective for discussion. Some states like NSW, Victoria and WA have also undertaken formal reviews of the PGY2 terms. However, given their non-binding status any recommendations arising from the PGY2 reviews have been left to the health service providers to implement.

The accreditation framework including how compulsory and optional terms are decided upon and how quality is defined.
As a general principle, prevocational accreditation programs in all states and territories seek to establish and monitor standards for prevocational training with the aim of promoting a high standard of medical training. The objective is to produce high quality clinicians who recognize the limits of their skills and are competent to practice within those limits. Training hospitals are periodically evaluated by survey teams using clearly defined and established standards. Accreditation helps to ensure that the optimal environment exists for the supervision and training of prevocational trainees in hospitals throughout Australia.

State and territory accreditation guidelines include standards and criteria for the following:

- Orientation of junior doctors;
- Organisation and administration of the training and education program;

- Structure and content of the training and education program;
- Supervision of junior medical officers;
- Assessment of junior medical officers;
- Feedback from junior medical officers about their programs and supervisors;
- Procedures for ongoing evaluation of the training program;
- Welfare concerns of JMOs; and
- Resources and facilities for JMOs.

Under the auspices of CPMEC there is an ongoing process to develop a Prevocational Medical Accreditation Framework. Additionally, the Australian Medical Council has established a working party to examine the feasibility of accreditation of prevocational training organisations. As the common element in the work of all PMCs is PGY1, the issue was raised about the explicit standards to be achieved in PGY1 so that boards can certify doctors as eligible for general registration. There do not seem to be any agreed Australian standards for this point in the medical education continuum. An essential piece of work would therefore appear to be the development of agreed standards or a statement concerning the requirements for the first postgraduate year. The Australian Medical Council, at its November 2007 meeting, agreed that it would be appropriate for the AMC to facilitate the development of such a statement building on locally available documents, such as *Australian National Training and Assessment Guidelines for Junior Medical Doctors: PGY1 and PGY2* and *Australian Curriculum Framework for Junior Doctors, State documents setting out expectations and standards for interns,* and other documents such as the General Medical Council and the Medical Council of New Zealand standards for completion of the first postgraduate year. This would be a useful first step in moving to reduce overlaps and identify gaps and weaknesses in the various stages of medical education.

Some problems areas identified in prevocational accreditation visits

PMCs were asked to identify some of the key problem areas that have emerged from their accreditation processes. The concerns identified relate to the following areas:

- Supervision
- Assessment processes
- Term orientation
- Resources (including access to synthetic learning; training support staff)
- IMGs support and upskilling training
- Access to education sessions
- Workloads (work/ support training balance)
- Interactions between primary allocation and secondment centres

A number of recent projects have examined quality of training issues. A 2003 study[2] on the learning needs of prevocational medical trainees also highlighted the need for improvements in supervision, feedback, workplace teaching, protected time, skills training, access to simulation centres and medico-legal training. A recent prevocational

training and workforce project[3] in NSW identified 5 key areas for improvement: prevocational trainee networks; prevocational trainee workforce distribution; network management; recruitment of prevocational trainees; and education, training, supervision and mentoring. In this regard, *the 2006 Australian Curriculum Framework for Junior Doctors* provides an important blueprint for prevocational training in Australia and there is a national approach underway to mapping undergraduate and college curricula to this, along with development of accredited resource materials and examination of assessment processes. PMCQ undertook a project[4] titled *Researching a Flexible Model of Education and Training for PGY1 Doctors*. There is also another project underway in Queensland which aims to enhance capacity for accommodating increased numbers of interns - *More Learning for Interns in Emergency* (MoLIE).

However there are important limitations to any quality surveillance in Australia with regard to prevocational training. The lack of accreditation requirements for prevocational trainees in PGY2 and beyond, limited supervision capacity, inadequate infrastructure support, variable access to clinical skills training facilities and incomplete data collection all serve to make the process difficult.

How current arrangements for prevocational clinical training could be expanded and what potential new arrangements could be developed in order to cater for increasing numbers of medical graduates e.g. increased use of clinical skills labs.

A number of initiatives are in place to address the issue of the projected increased numbers of medical graduates, including:

- changes to compulsory term rotations;
- re-evaluating and adapting PGY2 positions such that they are suitable for PGY1 training;
- increasing numbers of GP placements;
- alternative training sites such as Drug & Alcohol rehabilitation units and community centres;
- training in skills laboratories;
- restructuring of clinical skills training programs;
- split terms;
- increased breadth of terms; and
- spreading the clinical supervision workload.

There is little doubt that concerted action and increased resources are required to address the imminent increase in numbers of medical graduates and the flow-on effects on prevocational education and training.

For the increasing numbers of PGY1 trainees, there is a need for innovation in structuring appropriate terms without sacrificing well-supervised, safe and competent care. Particular concerns relate to the capacity for Emergency Medicine terms. This report documents the many and varied innovative approaches being taken to address these issues at the individual jurisdiction and PMC level. Considerable progress is being made, particularly in Queensland where a Health Ministerial Taskforce on Clinical

Education and Training has identified and supported a number of areas for reform and this has led to a stronger focus on medical education in its operational framework.

There have been a number of pilot programs investigating placements in general practice and other community settings, predominantly in WA, SA and QLD. These were reported at the 2006 National Prevocational Forum. There is a need to go beyond these pilot programs and develop a coherent national strategy for implementation. Both the financial and supervisory resource implications need to be addressed. There should be a national target for experience in general practice during the first two prevocational years.

The flow-on effects of increasing numbers to later prevocational years, education and training requirements for these trainees and for IMGs under the new COAG initiatives are all looming issues for which planning seems to be in early stages in most jurisdictions. Again, quantification of the size of the problem seems to be an issue.

Investment in prevocational training with support for training networks and personnel is being evaluated in a number of jurisdictions.

The development and utilisation of Clinical Skills and Simulation (synthetic learning) training facilities for prevocational education and training in all jurisdictions are progressively increasing in response to recognised need. Issues of resourcing, access and protected time need to be addressed.

There is also considerable scope for integration of initiatives addressing the development of generic skills across the continuum. There are now a number of initiatives such as the Professional Development of Registrars, and Teaching on the Run which have demonstrated application across specialties.

CPMEC contends that agreement on national guidelines on a range of prevocational medical education and training issues is important in achieving national consistency:

- At the most basic level, agreement on the numbers, roles and support needs of clinical medical educators, medical education officers would be useful. At the same time there is a need to simultaneously recognise the need to allow for local adaptations.
- There is a need to develop national guidelines on clinical skills and high-fidelity simulation training for prevocational doctors.
- The development of national guidelines on supervision and assessment of IMGs provides an opportunity to extend this process to all.
- One way of increasing effectiveness across the medical education and training continuum is to better integrate prevocational training with medical school and college training programs. Medical undergraduate education and clinical skills development need to have a defined focus on preparedness for internship. More effective interaction between PMCs and colleges could better prepare trainees for entry to specialist training. The application of robust

mechanisms for recognition of prior learning, attainment of competencies for 'readiness to practice', and more flexible programs are all worth exploring to reduce duplication and redundancy.

In this regard, it might to pertinent to note the recent Final Report of the Independent Inquiry into Modernising Medical Careers led by Professor John Tooke which identified eight key areas requiring corrective action[5].

RECOMMENDATIONS & ACTION PLANS

Recommendations	*Activities*	*Responsibility*	*Time frame*
A. Alignment & Interdependency			
1. There needs to be greater alignment and explicit recognition of the interdependency between prevocational medical education, workforce planning and service delivery, and development of national quality processes to assess outcome measures.	• **Establish administrative arrangements for lead and coordination**	• **MTRP & HWPC**	• **Sep 2008**
	• **Establish national process to establish consultative structure to facilitate CPMC/MDANZ/CPMEC/HWPC/DoHA interactions on a regular basis.**	• **MTRP, HWPC, MDANZ, CPMC & CPMEC, Employer groups**	• **Dec 2008**
2. There should be explicit recognition of the education and training component of the prevocational medical years. In this regard, balancing service workload with educational access and opportunities is imperative.	• **Acknowledgement in AHCA and the need for all stakeholders to articulate the this**	• **Jurisdictions, all stakeholders**	• **As per AHCA schedules**
	• **Agreement on fair workload for prevocational trainees**	• **PMCs, CPMEC, jurisdictions and AMC/Medical Boards/JMBAC**	• **End 2008**
	• **Recognition that prevocational training does not end at PGY1**	• **Jurisdictions & PMCs**	• **End 2008**
3. Identifying redundancies and duplications in the current medical training arrangements.	• **Establishing a mechanism for Recognition of Prior Learning (RPL)**	• **Colleges, Medical Schools, PMCs and their peak bodies** • **MTRP**	• **End 2008**

4. Postgraduate Medical Councils need increased support and more effective partnerships with their respective health departments to maintain high quality prevocational medical education and training.	• **Review of role of PMCs in the postgraduate medical education and training** • **Determining optimal relationships and accountabilities with key stakeholders** • **Providing adequate resourcing for sustainable PMCs and CPMEC**	• **MTRP** • **MTRP, HWPC and jurisdictions** • **State & Territory Dept/MTRP**	• **June 2009** • **June 2009** • **Ongoing**
B. Data collection 5. National data collection methods need to be refined to adequately track all prevocational trainees. Further, this must be an ongoing process with involvement of all key stakeholders.	• **Agree on and establish national process to obtain data for <u>all</u> doctors in prevocational training positions including IMGs** • **Agree on review process for data collection**	• **MTRP/HWPC/NHWT/CPMEC** • **MTRP/HWPC/CPMEC with other key stakeholders.**	• **Sep 2008** • **Sep 2008**
C. Accreditation 6. All prevocational training positions should be formally accredited to allow for work to proceed towards national standards of education and training in these years. 7. Establish a national accreditation process for prevocational medical education bodies (PMCs).	• **Reaching agreement between states/territories and PMCs on accreditation of all prevocational training positions including dealing with objections and concerns raised by jurisdictions and employers.** • **Establish national accreditation process starting with PGY1 and extending to all prevocational training positions**	• **MTRP/HWPC/AMC/ CPMEC & PMCs/Employers** • **CPMEC/Australian Medical Council/JMBAC**	• **End 2008** • **End 2008**
Capacity Building Strategy			

8. The issues of increased supervisory requirements, support for existing clinical supervisors, and development of strategies to grow supervisory capacity demands urgent attention.	• **To undertake gap analysis on jurisdictional basis.** • **To establish national guidelines for clinical supervision requirements and ancillary educational support**	• **State & territory Health Departments/PMCs/CPMEC and AMC/JMBAC** • **MTRP/HWPC/CPMEC and other stakeholders**	• **End 2008** • **End 2008**
9. Prevocational doctors require adequate access to new training technologies including clinical skills training facilities at the workplace and high-level simulation training.	• **Establish national guidelines on clinical skills and high fidelity simulation training for prevocational doctors.**	• **CPMEC & PMCs & relevant national groups dealing with this area**	• **End 2008**
10. Review of current and potential innovative approaches to structure appropriate terms without sacrificing well-supervised, safe and competent care.	• **Review current approaches outlined in CPMEC report to assess national applicability** • **Identify other potential approaches not being used currently.** • **Evaluate the approaches to assess:** ➢ **Whether desired capabilities are achieved; and the** ➢ **Impact on health system delivery as a whole.**	• **PMCs and jurisdictions/agencies funding innovative projects.**	• **End 2008**

4. THE CONTEXT OF PREVOCATIONAL TRAINING

This study of clinical training in prevocational years is being taken in a rapidly evolving prevocational medical education and training context in Australia. The changes include:

- Expansion in the number of medical students with implications for accommodating increasing numbers of PGY1, PGY2 and vocational trainees and for clinical training capacity.
- Moves towards national registration and accreditation of the health workforce as a COAG initiative.
- Under COAG reform measures, the establishment of dual-track assessment processes for non-specialist international medical graduates (IMGs). Many of the latter occupy prevocational training positions.
- National recognition of the prevocational phase of prevocational education and training as evidenced by the recommendations of the MedEd 2007 Conference. This has led AMC to set up a Working Party to explore the feasibility of extending their accreditation processes to include prevocational training.
- The development and launch of CPMEC's *Australian Curriculum Framework for Junior Doctors*.
- Setting up a National Technical Group within CPMEC to develop a National Accreditation Framework for prevocational training positions.
- Initiatives aimed at achieving greater integration between the levels of medical education in generic areas such as professionalism and, teaching through programs such as the Professional Development Program for Registrars and Teaching on the Run.
- Increasing requirements by Colleges for clinical training and assessments of vocational trainees using tools such as mini-CEX, DOPS (direct observation of clinical skills), case record reviews etc.
- Increased demands on trainers: particularly in the acute hospital sector the same group of clinicians is being asked to do training and assessment of medical students, IMGs, prevocational trainees and vocational trainees.
- Medical teaching and training taking place outside the traditional teaching hospitals in private, general practice and community-based settings.
- Expanding use of simulation and other technologies with increasingly sophisticated fidelity and instrumentation in medical teaching.

5. THE RANGE OF CLINICAL TRAINING IN PREVOCATIONAL YEARS

In 2001 an advisory committee with broad representation was set up under the auspices of the CPMEC to review and update the national guidelines for the training and assessment of junior doctors in their intern year (PGY1) and to develop general principles in relation to the second postgraduate year (PGY2)[6]. The guidelines encapsulate the key characteristics of prevocational training arrangements in Australia. A major development since those guidelines were issued has been agreement on an *Australian Curriculum Framework for Junior Doctors*.

Each State and Territory medical board had previously established intern training and assessment procedures and were guided by their respective legislation. The CPMEC national guidelines were not designed to replace state-based programs or standards; rather they intended to provide general principles for achieving the broad aims and objectives of the prevocational years. Each state and territory was encouraged to use the guidelines as a framework for informing their processes and for identifying gaps in specific goals and objectives. The guidelines had been drawn from best practice and experiences in each state. The guidelines covered, *inter alia*, accreditation of training programs, roles and responsibilities of parties involved in prevocational medical education, rotations, supervision, assessment, feedback and welfare of junior medical officers. In the context of this study, it would be useful to highlight some of those agreed guidelines.

The guidelines further recommended that each rotation should have clearly articulated educational objectives with the opportunity for any additional objectives to be negotiated between the JMO and the supervisor. A mix of terms, both core and elective, should reflect the overall educational objectives of the PGY1 or PGY2 programs, satisfy the appropriate medical registration requirements, and meet the interests of the prevocational doctor.

Further, the guidelines noted that the internship and early years of residency should provide the junior medical officer (JMO) with sufficient opportunities in clinical practice to enable meaningful decisions to be made regarding career choice and vocational training. Exposure to paediatrics, obstetrics, liaison psychiatry, general practice and other community based experience, and anaesthesia and intensive care was considered highly desirable to supplement the core experience in general medicine, surgery and emergency medicine. Hospitals and other training organisations were encouraged to promote active participation of attending medical officers in educational programs, including bedside teaching.

It was noted that whilst registration was conferred at the end of the intern year, many medical graduates in their second postgraduate year remained within the network of hospitals to which they had been allocated as interns. This potentially allowed a hospital sufficient time to develop comprehensive term rotations and broad educational programs.

As regards community and rural rotations, the guidelines reiterated the recommendations of the Medical Training Review Panel that JMOs be exposed to at least one rural and/or

community based term. Such terms enabled junior doctors to broaden their experience and gain a greater understanding of how the health system operates outside large metropolitan teaching hospitals. It was further noted that the wider clinical and health service experience offered by rural and community terms contributed to the generalist orientation that characterised the first two years of postgraduate training.

Curriculum Framework

The Australian Curriculum Framework for Junior Doctors was developed by CPMEC and launched in October 2006. It has been approved by all state and territory PMCs and has received strong endorsement from all stakeholder groups as the blueprint for the expected capabilities of PGY1 and PGY2 doctors across Australia. The curriculum framework addresses capabilities in three broad domains: Clinical skills, Communication and Professionalism. There is a National Steering Group and 3 Working Parties to oversee its ongoing development, implementation and evaluation. State and Territory PMCs, Universities and Colleges are currently mapping their curricular to the *Australian Curriculum Framework for Junior Doctors.* The Framework is providing a major impetus to the progressive development of clinical education and training in prevocational years. This was apparent in the number of presentations at the anzMET Forum in Sydney that discussed the various applications of the Framework.

Some of the activities undertaken by the three Working Parties are highlighted below:

a. The Workplace Implementation Working Party has set up a group to identify the components of the implementation plan.

b. The Assessment Working Party has set up three sub-groups to deal with the following issues respectively: discussion paper on the components of a national assessment strategy; pros and cons of a national term assessment process; and blueprinting assessment methodologies to the ACFJD capabilities.

c. The Curriculum Development & Learning Resources (CDLWP) Working Party will act as the National Advisory Committee for the MTRP Resources Catalogue project being run by the University of Queensland. The CDLWP has also set up a group to develop a discussion paper on the peer review process for vetting resources to populate the ACFJD.

6. ORGANISATION OF PREVOCATIONAL TRAINING

6.1 The Intern Year (PGY1)

This is a compulsory pre-registration year in all states and territories of Australia. There are uniform requirements for successful completion of core terms in Medicine and Surgery. An Emergency Medicine term is core in most jurisdictions. The PGY1 year is generally divided into 3 core and 2 elective terms (Table 1.)

Table 1: Duration of PGY1 terms (in weeks)

State/Territory	*Medicine Term*	*Surgery Term*	*Emergency Medicine Term*	*Elective Terms*
NSW	10-12	10-12	10-12	8 + 8
Northern Territory	12-15	12-15	6-8 [a]	12-15
Queensland	10	10	10 [b]	10 + 8
South Australia	8-12	8-12	8-12 (90%) or General Practice [c]	8 + 8
Tasmania	10	10	10	10 + 8
Victoria	10	10	8 (5 + 3)[d]	10 + 10
Western Australia	10	10	10 (90%)	10 + 8

[a] Currently Emergency Medicine is not a Core term in the Northern Territory and can be substituted; however a proposal will be put to newly formed NT PMC to make Medicine, Surgery and Emergency Medicine core terms.

[b] In Queensland in 2008 there will be a trial of a structured learning program during the Emergency Medicine rotation which will allow an increase of interns.

[c] In South Australia accredited General Practice rotations can substitute as core terms for Emergency Medicine terms.

[d] In Victoria, the core 8 weeks or Emergency Medicine can be divided into 5 weeks core component where the supervision is by a Fellow of the Australian College of Emergency Medicine (FACEM) and 3 weeks non-core component where the supervisor is not a FACEM. This was introduced in 2006.

Training needs and scope of practice of Interns (PGY1 doctors)

Interns are an essential group of health workers with specific training needs. The relationship between the training of doctors and the delivery and financing of medical care was acknowledged in the 1988 Doherty Inquiry report, Australian Medical Education and Workforce into the 21st Century[7]. In Australia interns are only permitted

to work in approved hospitals and other approved training sites and are not allowed to practice independently.

The purpose and structure of each of core and non-core rotations are documented in the various state and territory Intern Guidelines. These publications outline the learning objectives for each rotation, the responsibilities interns can be expected to exercise, and a range of procedural and interpretive skills they are expected to master. At the beginning of the year and each rotation, interns receive an orientation that includes some clinical training specifically designed to meet the needs of the health service or clinical unit. During each rotation they are exposed to a range of clinical training that may include ward rounds, case presentations, tutorial programs, and use of clinical skills laboratories. Interns may also attend regular clinical training sessions and short courses such as advanced life support training. In general, the clinical supervisor must have the relevant clinical and educational knowledge and skills.

Processes of clinical practice that are common to all rotations, include history taking, examination, developing a management plan, maintaining appropriate documentation, and communication with patients, relatives and other health professionals. Elements of hospital practice, such as requesting investigations, dealing with medico-legal issues and resource management, are also common to all rotations.

At the completion of the core ***medical rotation*** it is expected that interns will have developed expertise in assessing and managing common potential life-threatening medical problems including dyspnoea, chest pain, hyper/hypovolemia, hyper/ hypoglycaemia, fitting, shock and pain management, and be able to communicate effectively with patients, relatives, and multidisciplinary team members.

During the ***surgical rotation*** interns should be exposed to all phases of care including pre-operative evaluation, operative management and post-operative care. If possible, it is desirable for them to be involved in all phases of care of an individual patient. A core surgical post provides experience in managing patients who exhibit the broad principles of surgical illness. These include, but are not confined to, the metabolic response to trauma, infection, shock, and neoplasia.

During the ***emergency medicine rotation*** interns are expected to discuss all patients with serious or complex presenting problems with a senior doctor before commencing treatment. For patients with less complex clinical presentations interns could be expected to manage the patient for discharge. In all cases supervisors should ensure that interns' level of responsibility matches their knowledge, experience and competence. The nature of work in an Emergency Medicine department places particular responsibilities on hospitals to ensure interns are adequately supervised. An important aim of the emergency term is the appreciation of which patients and conditions require hospital admission and which are best managed within outpatient, community or other ambulatory settings. In this context, it is pertinent to note that the AMA Council of Doctors in Training has developed a position paper on intern training which reaffirms the importance of emergency medicine training.

Non-core terms make up the balance of the intern year. These must also been accredited to ensure good educational content. These terms provide opportunities to explore additional areas of medicine, surgery, anaesthesia, intensive care, psychiatry, obstetrics and gynaecology, paediatrics and sub-acute care such as rehabilitation medicine, palliative care and geriatrics.

Intern numbers
The table below provides projections of intern numbers by state or territory:

Table 2: Projections of Intern Numbers

State	2007 [a]	2008	2009	2010	2011	2012
NSW	533	617	740			
NT	15	24				
QLD	357	391	415	542	667	677
SA	214	226				
TAS	56	57				
VIC	447	459	469	479		
WA	155	190	246	306	300	300

a Data from MTRP 11th Report Nov 2007 (with permission)

The unavailability of data on projected numbers of interns or commitment to funding of intern posts in a number of states and territories beyond 2 or 3 years is a significant impediment to effective planning by PMCs.

Arrangements for PGY1 allocation and registration in different states and territories

New South Wales*:* The provision of supervised training and development of doctors in their postgraduate years, along with the necessity to provide services, was explicitly recognised by the NSW Department of Health when it introduced the 12 months pre-registration requirement for internship in 1984. All intern (PGY1) positions NSW and the ACT are accredited by the NSW Institute of Medical Education and Training (IMET) on behalf of the NSW Medical Board. Eligible medical graduates are allocated to a hospital network position via a centralized allocation process managed by IMET. From 2008, all junior doctors are employed on a two-year appointment although that is not to be equated with a two-year internship[8].

Northern Territory: IMET (NSW) currently accredits the PGY1 training programs at the Royal Darwin and Alice Springs Hospitals on behalf of the Registration Board of the NT. It is expected that this accreditation role will be resumed by a re-formed NT Postgraduate Medical Council (NTPMC) in the coming year. Currently there are 16 Intern positions at Royal Darwin Hospital and 8 at Alice Springs Hospital. Appointment to these positions is undertaken independently by the two hospitals, but with cooperation when necessary. There have been proposals made to vest responsibility for recruitment and allocation of Interns in the NTPMC in the future, as part of a network approach to Health provision in

the Territory. To obtain full registration with the Medical Board of the Northern Territory, interns must successfully complete 48 weeks of service, with terms in medicine, surgery and two other terms.

***Queensland**:* The Postgraduate Medical Council of Queensland (PMCQ) accredits junior doctor training programs on behalf of the Medical Board of Queensland. Legislative backing for this activity is confined to PGY1. Eligible medical graduates are allocated to a Primary Allocation Centre position through a centralized allocation process managed by Queensland Health Medical Workforce. In 2007 PMCQ has accredited 540 training positions for interns (384 core compulsory and 156 non-compulsory positions).

***South Australia**:* Prevocational training is provided at six teaching hospitals with rotations to rural and outer metropolitan general practices for PGY1s. The Postgraduate Medical Council of South Australia accredits junior doctor training positions on behalf of the Medical Board of South Australia. To obtain full registration with the Medical Board of South Australia interns must successfully complete 48 weeks of service, with terms in medicine, surgery and either accident & emergency or general practice (GP) as the core terms (8-12 weeks service). The alternative between an emergency term and or a GP placement at an outer metropolitan or a rural general practice has represented a departure from the traditional internship training models.

***Tasmania**:* Intern positions are accredited by the Postgraduate Medical Institute of Tasmania (PMIT) on behalf of the Medical Council of Tasmania. There are currently no intern positions outside of the public hospital system. Unlike in other states, medical graduates apply to each hospital individually. There is no statewide placement or matching scheme and the Postgraduate Medical Institute of Tasmania (PMIT) has no role in intern placements. Rotations within each hospital are similar, comprising both core (compulsory) and non-core terms (optional).

***Victoria**:* Intern posts can be offered only if they are accredited by the Postgraduate Medical Council of Victoria (PMCV), as the delegated authority of the Medical Practitioners Board of Victoria. Interns are allocated to a hospital post through the Computer Match Service administered by the PMCV on behalf of the Victorian Department of Human Services. There are currently 143 core medical terms accredited for interns in Victoria. There are currently 122 non-core terms accredited for interns in Victoria. Almost all Victorian interns undertake at least one rotation in a rural setting.

In Victoria, intern rotations have been reviewed on a regular basis both substantively and as part of the routine accreditation process. The most recent review of the core surgical rotation (2002) resulted in changes to the minimum standards for core surgical intern positions. Supervision requirements and position descriptions for surgical terms were defined and criteria for core and non-core surgical terms were set out. The most recent review of the core medical rotation (2003) led to inclusion of additional objectives and tasks and a list of procedures and investigations which interns should be able to perform and interpret. The key recommendation of the 2003 review of the Emergency Medicine core term was to increase the length of rotation from 4 to 8 weeks. This change was

implemented in 2005. In a subsequent review in 2006 the term was divided into a 5 week core component supervised by a Fellow of the Australian College of Emergency Medicine and a 3 week non-core component with less stringent supervision requirements. The review also defined requirements for 'direct' and 'indirect' supervision. Direct supervision (where supervision is on-site and continuous) must be provided at least 80% of the time during which an intern is rostered. Indirect supervision (where supervision is offsite but advice is available immediately by phone and within 5 minutes in person) must not make up more than 20% of an intern's rostered hours. A number of recommendations were made regarding support for interns and protocols to be followed when direct supervision is not available.

***Western Australia**:* Prevocational training in Western Australia is facilitated by the Postgraduate Medical Council of Western Australia (PMCWA) and managed by three Primary Allocation Centres, Fremantle Hospital, Royal Perth Hospital and Sir Charles Gairdner Hospital, and two additional teaching hospitals. JMOs employed by Primary Allocation Centres are also rotated to secondment hospitals, which are located in metropolitan or regional areas. Each unit that provides a rotation to a PGY1 must be accredited by the PMCWA. The Medical Board of Western Australia requires a PGY1 to complete 48 weeks of supervised clinical training to be granted general registration. Even though, emergency medicine is not considered a core rotation for a PGY1, it is designated 'desirable'. All PGY1s in two Primary Allocation Centres, and two-thirds in the remaining Primary Allocation Centre complete an Emergency Department rotation. Currently there are 172 accredited units in Western Australia, 149 of which are non-core rotations.

Detailed descriptions of the rotations in each state were provided in the first report.

6.2 Prevocational years PGY2 and beyond

The general principles governing prevocational training in PGY2, PGY3 and beyond are that this training occurs during a series of different clinical rotations in a flexible way that allows for accumulation of clinical and professional skills sufficient to meet the training needs of the doctor and the entry criteria of Colleges, whilst at the same time meeting health workforce needs, predominantly in the acute healthcare sector.

In most but not all states, clinical experience, education and training during the PGY2 year is surveyed on a voluntary basis during hospital accreditation visits by state/territory PMC accreditation teams. In general, the educational content and training experience is evaluated across a wide range of clinical rotations. Retrospective recognition of training in PGY2 is also undertaken by Colleges; this is generally an informal process based on satisfactory completion of nominated term rotations. The *Australian Curriculum Framework for Junior Doctors* includes key educational objectives for PGY2 trainees; these generally fall into the 'advanced' category, and importantly recognize the continuum of education and training that occurs during the first two postgraduate years, and the need to allow for differential rates of skills acquisition during this period. A recent review of the PGY2 year should provide much needed information.

The clinical training activity in prevocational years beyond PGY2 is largely under the guidance of colleges for those trainees enrolled in college training programs. For undifferentiated trainees, the training process is essentially experiential along lines of the traditional apprenticeship process. International medical graduates (IMGs) and career medical officers fall into this latter category.

Initiatives such as the Rural and Remote Area Placement Program (RRAPP) and the Prevocational General Practice Placements Program (PGPPP) have provided funding for general practice and community terms in PGY2/3 and these programs have recently been extended to PGY1 terms.

Arrangements for PGY2/3 allocation and accreditation in different states and territories

NSW*:* A resident medical officer (RMO1 = PGY2) who receives general registration is also expected to complete a second year of employment/training in approved hospitals. IMET requires the PGY2 to be another generalist year with a mix of 5 terms. Currently in their PGY2 year doctors are required to complete an intensive care or emergency medicine term, a term providing medical experience and a term providing surgical experience or another intensive care experience. Streaming in PGY2 is not encouraged. It is an IMET policy that there be 2 year appointments for PGY1 and PGY2 to ensure continuity of training. As a result the numbers of accredited PGY2 position numbers are at least equal to PGY1 positions.

Northern Territory*:* RMO1 (PGY2) and beyond pre-vocational junior doctor training positions are nominally accredited by IMET as part of the intern accreditation process, although this is not mandatory. It is expected that a more formal accreditation of these positions will commence with the re-formation of the NTPMC. PGY2 is regarded as a generalist year with opportunity to emphasise a particular vocational stream. All pre-vocational years beyond intern year are currently 4-term years, but there are proposals to increase this to 5 terms to improve flexibility and provide greater choice. In PGY3 and beyond, Medical Officers are able to rotate through positions in District Hospitals or to take up long term appointments at these hospitals. In later years, Medical Officers can also take District Medical Officer positions. In PGY2 and beyond, Medical Officers can also undertake pre-vocational General Practice terms in urban or rural placements. There are approximately 90 PGY2 & above pre-vocational positions in the Territory as a whole.

Queensland*:* A Junior House Officer (PGY2) who receives general registration is also expected to complete a second year of employment/training in an approved hospital and its secondment sites. PMCQ offers facilities the opportunity for accreditation of PGY2 and other positions. PGY1 and PGY2 trainees may be required to undertake time in regional secondment hospitals provided they meet the requirements of PMCQ accreditation. There are a range of advantages of working in a regional centre including access to a much wider range of patient conditions; more time for assessments; a more direct relationship between the intern and specialist (where there is no registrar); more experience with practical procedures, with less competition from others; contact with local indigenous communities and an appreciation of their health issues; closer

relationship with local general practitioners and a better understanding of the interface between hospital and community care.

***South Australia**:* PGY2 junior doctor training positions are not accredited by PMCSA. These include secondment sites and community health sites for PGY2s/3s. Some community placements are funded under the PGPPP program. The number of JMOs in PGY2/3 positions in SA in 2007 was 291 (includes 105 IMGs).

***Tasmania**:* PMIT reviews the PGY2/3 positions as part of its triennial cycle of hospital accreditation visits. The PMCV accreditation documents are used. The positions are not formally accredited, mainly because there is no medical board requirement for them to be accredited (unlike the interns), so there is no real sanction if the hospitals don't meet accreditation standards. The number of PGY2/3 trainees in 2008 is 121.

***Victoria**:* An intern is expected to complete a PGY2 year in approved positions. Accreditation of PGY2 and non-vocational PGY3 positions is not mandatory; however the PMCV has reviewed the majority of Victorian PGY2 positions over the last 3 years. A total of approximately 450 PGY2 posts have been accredited for 2008.

***Western Australia**:* All medical prevocational positions are accredited in WA (PGY1, PGY2, PGY3 and other). There are currently 419.5 JMOs employed by the Primary Allocation Centres, 260.5 of who are PGY2/3s.

6.3 IMGs in prevocational training posts

IMGs comprise approximately 25% of the Australian doctor workforce. In 2007 there were 631 IMGs who received AMC certificates on the basis of successful completion of both written and clinical examinations. For registration purposes these AMC graduates are required to complete 12 months of supervised training. As shown in Table 3 only 123 AMC graduates were included in PGY1 training positions, in keeping with the fact that the majority of these doctors gain retrospective accreditation for clinical training undertaken when employed largely in Australian hospitals whilst they are AMC candidates. In addition there is a very large number of IMGs who come to work in Australia every year under temporary registration. The majority of IMGs in their first few years in Australia are effectively lateral entry prevocational trainees.

Support for IMGs' education and training needs, upskilling and effective integration into the Australian medical workforce is a priority objective for CPMEC and its state and territory PMCs and has been the subject of a number of reports and conferences.

Supervision and assessment of IMGs under Competent Authority and Standard Pathways (non-specialist) under COAG initiatives are expected to involve almost 4000 IMGs in 2008 (Table 3).

In consideration of medical clinical training capacity in Australia, the needs of this group of doctors has considerable resource implications over and above what is presently allocated by jurisdictions.

Estimated numbers of IMGs in prevocational training positions

***New South Wales**:* In NSW, except for those who have received a waiver from the NSW Medical Board, all IMGs who have passed the AMC examinations are employed for one year as PGY1 doctors. In 2007 there were 84 IMGs employed in NSW hospitals in this category. In addition there are estimated to be 550 IMGs employed in equivalent PGY2/3 prevocational positions.

***Northern Territory**:* IMGs comprise approximately 30% of all medical positions in the Northern Territory from PGY2 up to Specialist appointments. In general IMGs are not appointed to Intern (PGY1) positions, although there are exceptions. There are between 50 and 70 IMGs who are eligible for the Competent Authority Pathway to registration and between 80 and 100 eligible for the Standard Pathway. There is an unknown number who have completed their registration requirements.

***South Australia**:* A recent survey (Department of Health SA, July 2007) showed that there were 105 IMGs employed as JMOs in SA hospitals in 2007.

***Tasmania**:* As at September 2007 there were 130 IMGs working in 4 hospitals in Tasmania. Each year 70-80 new IMGs enter the Tasmanian workforce.

***Victoria**:* In 2001 there were 270 IMGs who were AMC candidates employed in Victorian hospitals with specific registration by the Medical Practitioners Board of Victoria *'to enable an applicant to undertake training, where that applicant is a candidate for an Australian Medical Council examination."*[9]. In 2007-8 it is expected that approximately 1000 new IMGs will come to Victoria. Of these 800 will have specific registration for the purpose of study or training, 150 will have specific registration as a specialist and 50 will fill other roles such as research or teaching. However, in contrast to these figures, there were only 16 AMC graduates (5 PGY1 and 11 PGY2) included in the 2007 MTRP report.

***Western Australia**:* The total number of IMGs currently employed (as at June 2007) was 403 (79 from Competent Authorities) at the 3 Primary Allocation Centres. It is estimated that at least 50% of these are in prevocational training positions.

What data is currently recorded?
***NSW**:* Except for those granted a waiver by the NSW Medical Board, all other IMGs who have passed the AMC written and clinical examinations and who have obtained the AMC certificate are allocated to prevocational training positions for 12 months. Data recorded on these doctors includes country of origin, source of medical degree, and whether they are Australian residents and temporary residents. There are UK trainees on the GP exchange program who are working in PGY2 positions.

***Queensland**:* Only special purpose registration information is kept by the Medical Board. The Queensland Health HR/payroll system does not differentiate between Australian and internationally trained doctors.

***South Australia**:* IMGs fill vacancies that cannot be filled by Australian graduates. All junior IMGs to be considered for employment in SA must be registered with the AMC/JMO database. There were 32 IMGs who were AMC applicants included in the 214 intern positions in 2007; the equivalent figures are 23 and 227 for 2008. PMCSA has categorised intern applicants into 6 groups [Australian permanent residents attending university in SA; Australian permanent residents attending university interstate; Australian permanent residents who did year 12 in SA; non-permanent residents (internationals) attending university in SA; non-permanent residents (internationals) attending university interstate; AMC applicants]. This data has been collected since 1998. Information on IMGs filling PGY2 posts and upwards would have to be obtained directly from the hospitals.

***Tasmania**:* IMGs are allowed to work in Tasmania before they have successfully completed the AMC MCQ or clinical exam. Some take up intern positions filling up approximately 10% of intern positions state-wide. The Medical Council of Tasmania records IMGs' country of origin, place of work, and AMC status. PMIT also records that information.

***Victoria**:* IMGs are employed as interns and Hospital Medical Officers (HMOs). IMGs who are AMC graduates are eligible to apply for an intern post if they have not already completed 12 months of supervised practice. The PMCV computer matching system captures data on source of medical degree for all doctors who apply for intern, HMO and physician training positions.

***Western Australia**:* IMGs may be employed as Interns and Resident Medical Officers. Interns are centrally coordinated by PMCWA and IMGs are prioritized as group 4 or 5. Source of primary medical qualification is recorded. RMOs are employed by individual hospitals. There is no data recorded in a centralised database to capture information on these doctors. The Medical Board of WA provides data to WA Health regarding IMGs who are conditionally registered, and where they obtained their primary medical degree but it does not indicate whether they are employed in prevocational training posts

5.4 Summary: Prevocational Training Positions in Australia

A summary of prevocational training positions in Australia is given in Table 3. The most accurate data is that of PGY1 numbers. PMCs accredit PGY1 positions in all states and territories.

As has been regularly indicated in annual MTRP reports, the data on PGY2 numbers has to be considered as estimates since specific data on for the MTRP survey is not provided by many jurisdictions. PMCs accredit PGY2/3 positions in NSW, SA, Tasmania, Victoria and WA. The accreditation process is not mandatory and this impacts on data reliability. It is also unclear how many IMGs and PGY3 prevocational trainees occupy PGY2

accredited positions, although the division is artificial in relation to training processes and prevocational training should be considered as a group statistic.

Data on the numbers of IMGs occupying equivalent prevocational training positions in Australia is generally not available. The table numbers are therefore best estimates.

Table 3: Numbers of prevocational trainees by category and state/territory

State/ Territory	PGY1 2008 [a]	PGY1 2007[b]	PGY2 2008 (PGY2/3)	PGY2 2007[b]	IMGs in prevocational training posts PGY2 + 2008	IMGs who would require supervision and assessment under COAG initiatives 2007 (CA pathway) [c]
NSW/ACT	618	533 (84AMCG)	550*	449	550*	1663 (669)
NT	24	15	50* (90)	32	55*	77 (19)
QLD	391	357 (2AMCG)	350*	284	300*	847 (179)
SA	226	214 (32AMC)	200*	220	110*	387 (55)
TAS	57	56	50* (121)	28	60*	95 (43)
VIC	459	447 (5AMCG)	450*	477	350*	634 (276)
WA	190	155	140*(260)	96	150*	258 (71)
Totals	**1965**	**1777**	**1790***	**1586**	**1575***	**3961 (1312)**

[a] Data collated from PMCs for this survey

[b] Data obtained from MTRP 11th Report 2007 (with permission). AMCG = AMC graduate. PGY2 data includes Australian trained, NZ medical graduates plus 57 AMC graduates (14 ACT, 32 SA, and 11 Victoria).The number of AMC graduates in NSW, QLD, Tasmania and WA was not recorded.

[c] Data obtained from AMC Interim Accreditation Committee for IMG Assessment. Figures in brackets are numbers of IMGs who are from Competent Authorities.

* denotes estimated number.

This survey shows an increase in PGY1 numbers of 10.6% from 2007 to 2008 with a corresponding increase in PGY2 numbers.

The numbers of IMGs in prevocational training positions in Australia has been conservatively estimated as 1575, equivalent to 80% of intern numbers. A 2007 survey of numbers of IMGs in Australia who would require supervision and assessment under the 2006 COAG reform agenda showed that there were 3961 doctors in this category (202% of intern numbers), 33% could be considered as coming under the Competent Authority pathway.

Neither the MTRP annual surveys nor the data collection process used in this survey is able to provide accurate data on PGY2 and above prevocational positions in Australia. Prevocational PGY3 trainee numbers (as shown in brackets in column 4) are available for

NT, Tasmania and WA only and approximately equal to PGY2 numbers. As indicated above the data relating to IMGs is even more difficult to obtain and this is not being captured in MTRP statistics. IMGs fill a significant proportion of current positions in PGY2 and PGY3 years (estimated at 30%).

The lack of data recording is a major limitation to resource planning for meeting the needs of increasing numbers of trainees.

7. ACCREDITATION OF PREVOCATIONAL TRAINING

Accreditation of prevocational medical training in Australia is undertaken by state and territory prevocational medical councils or equivalent. The Medical Training Review Panel First Report (1997[10] recommended a *"need for one organization… with full responsibility for coordinating, planning, resourcing and accrediting the training of PGYs 1 and 2"* and that *"the process …be extended to cover the training needs of non-vocationally trained PGY3s and beyond"* .

In this regard, CPMEC has a key role in facilitating vertical integration of medical education in Australia, a role that has been endorsed at the 2007 MedEd conference. An important recommendation arising from that meeting was for medical schools, prevocational councils, the colleges and AMC to work together to improve the medical education and training continuum in Australia.

The National Guidelines for prevocational training also recommended that State accreditation guidelines should include standards and criteria for the following:

- organisation and administration of the training and education program;
- structure and content of the training and education program;
- supervision of junior medical officers;
- assessment of junior medical officers;
- feedback from junior medical officers about their programs and supervisors; and
- procedures for ongoing evaluation of the training program.

As a general principle, prevocational accreditation programs in all states seek to establish and monitor standards for prevocational training. The objective of the accreditation process is to produce high quality clinicians who recognize the limits of their skills and are competent to practice within those limits. Through the accreditation process, training hospitals are evaluated by a survey team using clearly defined standards. The aim of accreditation is to ensure that the optimal environment exists for the supervision and training of prevocational trainees in hospitals throughout Australia. For this report we have examined the current accreditation standards and processes in place in each state and territory. Individual reports are available on request.

The principles underlying the accreditation processes in each state and territory are in substantive agreement. In this context, it is important to reiterate that CPMEC is currently overseeing a national project to develop a National Prevocational Medical Accreditation Framework. A National Technical Group has been set up to develop this national framework. The NTG is seeking to ensure that any framework will be consistent with AMC accreditation processes for medical schools and colleges. It is expected that the National Accreditation Framework will include the development of national principles, policies, and processes for prevocational training. In finalizing the framework, CPMEC will undertake a comprehensive consultation process to canvass the support of all key stakeholders in prevocational medical education and training.

Common key issues arising from accreditation surveys of Prevocational Training positions in Australia

PMCs were asked to identify what were some of the key shortcomings in prevocational training arrangements that were identified during accreditation surveys. Where shortfall in standards were identified, responses fell into the following categories

- Supervision. This includes not only ease of access to supervisors but also the level of training support provided to supervisors themselves. The problem seems more acute where IMGs are in prevocational positions beyond PGY1.
- Feedback and assessment processes. This includes provision of ongoing feedback between supervisors and prevocational doctors on strengths and areas for improvement as well as regular formal assessment of prevocational doctors which involved multi-source inputs.
- The unit or department not providing orientation to all prevocational doctors at or immediately before the commencement of each term.
- The lack of dedicated administrative support for DCTs and MEOs.
- Access to education sessions due to imbalance in workloads (work/training balance).
- Orientation, teaching, assessment, feedback and up-skilling programs for IMGs are not as well developed as for interns. Further, they tend to be employed in mainly in service positions with sometimes limited clinical exposure.
- Lack of financial and staffing resources. This includes access to synthetic learning and training support staff.
- Limited communication between the primary allocation and secondment centres in some states.

A number of these concerns were highlighted in other studies looking at the quality of clinical training experience discussed in the next section.

8. STUDIES OF NATIONAL SIGNIFICANCE IN RELATION TO QUALITY OF PREVOCATIONAL TRAINING

A. Learning Needs Analysis project

A national MTRP-funded project[11] involving 470 prevocational doctors in 36 health services was undertaken in 2003-4 and results published[12]. The objectives of this project were:

1. To identify trainees' perceptions of deficiencies and educational needs in their training.
2. To assess the trainees' perceptions of the quantity, quality and usefulness of currently available teaching and learning methods.
3. To identify subgroups of postgraduate trainees with particular needs, including rural and regional and specialty rotations as well as overseas trained doctors.
4. To use the results to develop strategies to improve the education and training of postgraduate doctors.
5. To provide an opportunity for PGY1, PGY2 and non-vocational PGY3 to reflect on their education and contribute to its improvement.

Some of the key findings from that study were:

Trainee perceptions of deficiencies and educational needs: Very few prevocational doctors believe that they were poorly prepared in general for their duties, although there were several areas where they lack confidence, especially the management of emergencies, choosing a career and meeting medico-legal obligations. Much prevocational training occurs along the traditional person-to-person apprenticeship model. Most doctors learn directly from their seniors and find direct informal contact the most useful method of learning. …While there are often good learning opportunities in the intern year the exposure to, and perceived usefulness of, learning opportunities decreases slightly in PGY2 and PGY3. IMGs report a slight preference for more traditional and formal learning methods as compared to Australian graduates. They also express both a stronger desire for more learning opportunities, and place higher value on existing opportunities compared with Australian graduates.

Only 56% of the doctors surveyed reported adequate contact with consultants. In the main it is the consultant, the senior member of the unit or department, who is responsible for the assessment of junior staff and may influence or inspire progression on a career path. PGY1s, the least experienced of the survey group, reported least contact with consultants (52% of surveyed PGY1s found contact adequate). However 61% of the IMG cohort reported adequate exposure to consultants. Informal contact with registrars was seen by 80% of the respondents as useful or very useful.

Junior doctors expressed a strong preference on the value of consultant feedback, with 80% wanting more formal contact, 60% identify a desire for more supervisor feedback and informal contact with their consultants.

75% of those surveyed wanted more preparation for their future teaching roles. As a result trainers need to have professional development on supervision, on workplace teaching (so

called ‘teaching on the run’), on giving feedback to trainees and on monitoring their progress.

In order to provide what trainees want from the educational process it is clear that developing protected time ‘out’ of the clinical environment is only one approach that might be beneficial. Protection should also be afforded to patient-oriented and clinical activity that can be structured towards educational goals for trainees.

This and other studies… emphasised the importance of “good” registrars - that is, among other things, registrars who make time to review patients with interns, explain decisions and plans to interns, and are effective and willing teachers.

This provides further support for the need for programs for registrars and explains in part the reasons for the success of CPMEC’s own Professional Development Program for Registrars.

Consultant Feedback: A need was identified to increase consultant feedback to trainees. Adequate constructive feedback is known to be a very powerful educational tool in postgraduate training. Trainees appreciate it although currently not receiving it in sufficient amount. Trainees should also be trained on how to give and receive feedback, as this is an important knowledge that all should possess to become and remain competent in the medical profession.

Simulation exposure: The biggest difference between existing exposure and desired exposure is the experience of high fidelity simulation centres. Lack of preparedness for resuscitation and emergencies is the most significant gap for prevocational doctors. Simulation is perceived, along with on the job contact with registrars as the most useful learning method for all subgroups of surveyed prevocational doctors. Simulation improves confidence and probably competence for real emergencies but is currently available to a minority of prevocational doctors.

Protected Educational Time: Trainees see lack of time and clinical duties as the major barriers to their education. Permitting trainees to attend medical education sessions is often difficult amongst other clinical duties. While most registrars and some specialties have protected education time the pattern is uneven across hospitals for prevocational doctors.

There were seven recommendations arising from the study:

- *All pre-vocational doctors should have opportunities for substantial contact with supervisors (registrars and consultants). This contact should be both work-oriented and educational.*
- *All prevocational doctors, but particularly IMGs, need more exposure to clinical and procedural skills training. All groups need exposure to high fidelity simulation training, primarily to maintain patient safety and quality of care.*
- *Opportunities for early career planning, advice and support during undergraduate studies and after graduation should be identified and made available to enable doctors to feel informed and more confident in choosing their career.*

- *Hospitals should be encouraged to provide additional educational opportunities to Registrars, Consultants and others involved in a trainee's education on supervision, monitoring progress, giving constructive feedback and workplace teaching. "Teaching on the Run" modules provide such opportunities. Seventy five per cent of prevocational doctors want more preparation for their role as a teacher.*
- *Protected, rostered and structured educational time should become part of the schedule for prevocational doctors in Australian hospitals.*
- *Access to high fidelity simulation centers to improve preparedness for resuscitation skills is highly desirable.*
- *Trainees feel ill prepared to address medico-legal issues. Resources, appropriate education and training will help to reduce this gap.* (Excerpts from report)

B. Prevocational Training and Workforce Project

The *NSW Prevocational Training and Workforce Project* spanned almost two years and involved consultation with over 800 clinicians (14).

The review focused on the following:

- Concerns about the longevity of Directors of Clinical Training (DCT) given their increasing workload and relative lack of support services in the existing system.
- The perceived need for additional and specific support for AMC graduate workforce and their clinical supervisors.
- Imbalances in current prevocational training arrangements.
- Whether workforce distribution mechanisms reflected current workloads of hospitals.
- The impact of current prevocational training structures on career development options for trainees.
- Lack of perceived control for trainees to choose the hospital at which they work, particularly rural students being able to access rural hospitals.
- Whether current recruitment processes met Equal Employment Opportunity principles.

Arising out of this review were five priority areas for improvement: *prevocational trainee networks; prevocational trainee workforce distribution; network management; recruitment of prevocational trainees; and education, training, supervision and mentoring.* The latter is focused particularly on support for DCTs and AMC graduates. The recommendations from the review are being implemented in NSW in the 2008 clinical year.

C. Australian Curriculum Framework for Junior Doctors

The development of the Australian Curriculum Framework for Junior Doctors evolved over 2005-2006 as a result of a national project funded by MTRP and involved extensive consultations with all stakeholders. The project is now in the implementation phase and oversight by CPMEC will ensure a quality process that ensures national and international

best standards are applied to resource materials, and to the refinement of existing assessment processes.

A National Project Steering Group comprising key stakeholders in prevocational medical education and training has been set up as a high level oversight body in that is supported by three Working Parties dealing with Workplace Implementation, Assessment, and Curriculum & Learning Resources Development.

The Workplace Implementation Working Party has set up a group to identify the components of a workplace implementation plan with respect to the ACFJD. The Assessment Working Party has set up three sub-groups to deal with the following issues respectively: components of a national assessment strategy; pros and cons of a national term assessment process; and blueprinting assessment methodologies to the ACFJD capabilities. There is considerable work being undertaken at both the prevocational, undergraduate and vocational levels with regard to workplace formative and summative assessment. A discussion paper will be developed by the Assessment Working Party after further consultations with junior doctors and jurisdictions. The AWP also will consider work being undertaken under the COAG IMG Assessment Pathways.

The Curriculum Development & Learning Resources (CDLWP) Working Party will act as the National Advisory Committee for the MTRP Online Resources Catalogue project being run by the University of Queensland. PMCs will be invited to trial an information collection tool for the ACFJD. In addition, PMCs will also be asked to play a key role as a conduit to stakeholders in gathering information on resources. The CDLWP has also set up a group to develop a discussion paper on the peer review process for vetting resources to populate the ACFJD.

D. Researching a Flexible Model of Education and Training for PGY1 Doctors

The PMCQ undertook this project and it achieved the following objectives:

- Identification of strategies that will address the current barriers to the provision of an increasing number of intern places.
- An analysis of core terms, in particular emergency medicine, to determine if they provide the core elements required to produce competent and confident doctors.
- Development of alternative models of education and training of interns that will meet the current needs of junior doctors, while also meeting medical registration board requirements for full registration.
- Identification of proposed alternative placements in rural and community settings for doctors in their intern year.

9. EXPANDING PREVOCATIONAL TRAINING CAPACITY

All states face an increase in demand for intern places in the coming years based on increased numbers of medical graduates. In this section, we will describe some of the initiatives being undertaken within each of the jurisdictions to address the anticipated increase in medical graduates.

NSW: IMET has developed a specific project plan to assess and deal with the impact of increased numbers of graduates of Australian Medical Schools and the Australian Medical Council. The project has five phases: Planning; Data gathering; Comparison, analysis and forecasting; Solution development and recommendation; and Ongoing review and evaluation. The data gathering phase is intended to include the following:

- Obtain and analyse data from Australian medical schools and the Australian Medical Council regarding the increased number of medical graduates between 2007 and 2014.
- Obtain information about where additional student numbers will be training in hospitals and analyse impact on available training for junior medical officers
- Obtain and analyse data on NSW Health capacity for prevocational training. These data should include:
    - Current number of accredited terms
    - Assessment of capacity of accredited terms
    - Assessment of capacity to seek accreditation for new terms – particularly in priority areas
    - Assessment of number and sustainability of the number of 'trainers' required to supervise an increasing number of trainees
    - Review other work being undertaken on this area by National groups and other States
    - Identify where there are workforce shortages in vocational training and whether vocational training can cope with the increased number of trainees

Once the data is obtained IMET will use the data to:

- Compare the forecast increasing numbers of prevocational trainee applicants with system capacity including an assessment.
- Identify benefits and opportunities for the health system in increasing capacity.
- Identify strategic threats and costs associated with increasing system capacity.
- Assess the impact of increasing numbers of graduates on IMET operations over the next seven years.

In considering innovative opportunities for increasing system capacity IMET have highlighted the following as possible options:

- Increasing the breadth of terms available to trainees, particularly in areas of workforce shortage such as: General Practice (including the PGPPP); rural medicine or surgery; drug and alcohol medicine; rehabilitation medicine; pathology; community mental health; acute psychiatry; palliative care; and ambulatory care
- Considering new models for terms e.g. trainee working alongside supervisor across different sites.
- Exploration of variations to the core terms required for registration e.g. Queensland model of General Practice seen as equivalent to Emergency; NSW IMET would not take this whole approach but is interested in 'hybrid' models of emergency training for interns.
- Proactive approach to increased early exposure to vocational training terms; and
- Exploration of alternative training sites where prevocational training could occur.

The first report will highlight the significant barriers to progressing the work of preparing the State for the trainee influx and make recommendations as to how NSW should approach the task. It is anticipated that a draft report emanating from this project will be available to IMET within the next few weeks.

IMET is now commencing work considering the flow through to vocational training programs, with a facilitated meeting with College representatives on February 12th.

Queensland*:* There are particular pressures to meet the increasing demand for intern placements contingent on the increasing graduate numbers. There is a projected 102% increase in intern numbers over the next 5 years.

The number of medical graduates is now outgrowing traditional hospital terms with demand on general practice, privatised clinics and private hospitals to fulfill the requirements of the PGY1 year. There is a requirement for all these terms to meet all of PMCQ's accreditation criteria. In addition, interns may spend one term in a rural setting provided adequate supervision is available.

All Queensland hospitals have undertaken capacity audits and, in conjunction with PMCQ, are aiming to address increased training placements at the next full accreditation review of the hospital. PMCQ has already accredited some of the following options available for extending the quantity and range of placements for junior doctors:

- *Doubling up* numbers of interns in appropriate terms may be possible e.g. surgery. This allows each intern to be sure to have increased theatre time.
- *Community terms in:*
    - Alcohol & Drug Rehabilitation
    - Aboriginal Health

- Prisoner Health
- Additional Rural Generalist terms
- Additional General Practice terms
- Public Health Centres

- Another option is offering a number of half terms (5 – 6 weeks), or *split terms* (Combining 2 electives across 10 weeks e.g. morning at the Primary Allocation Centre; afternoons in another training placement) for electives extending the usual practice of keeping interns within the Primary Allocation Centre. Skills Centres may be very useful in this arrangement.
- It has been suggested that there may be opportunities to build terms around *novel use of shifts* i.e. having interns begin an afternoon shift instead of the traditional morning shift start.
- PMCQ's recent study on 'Flexible Models of Education and Training of PGY1 Doctors' has assisted in dealing with the issue of training increased numbers of medical graduates in Queensland.
- PMCQ has also been engaged in developing a rural generalist (cross–discipline) rotation for junior doctors in small rural and provincial hospitals.
- Queensland Health, in conjunction with the Postgraduate Medical Council of Queensland (PMCQ) and the Confederation of Postgraduate Medical Education Councils (CPMEC) is embarking on a Professional Development Program for Registrars throughout the medical workforce in Queensland beginning in September 2007. The program is aimed at enhancing the leadership and management skills of registrars who are expected to assume greater responsibilities in dealing with an expanding prevocational medical workforce.
- PMCQ is the fund holder for the MoLIE project (More Learning for Interns in Emergency) which aims to enhance capacity for accommodating large numbers of additional medical graduates entering postgraduate training throughout Queensland over the next 7 years. A large teaching hospital is piloting this project during 2008. Specifically it will implement a structured learning program into the Emergency Medicine component of intern prevocational training. Clinical service will not be affected as interns. Queensland Health and PMCQ are working together to expand on a curriculum mapping exercise that will enable identification of additional terms with core term potential.
- Using the *Australian Curriculum Framework for Junior Doctors* as a template PMCQ and Queensland Health are working together to extend curriculum mapping work undertaken on core terms to evaluate potential new terms.
- During 2006, the Queensland Health Ministerial Taskforce on Clinical Education and Training presented a number of recommendations which has led to a stronger focus on medical education in its operational framework. The recent Queensland budget also provided resourcing of a number of initiatives

including $33 million over four years to develop infrastructure for clinical education and training for junior doctors and to fund additional intern positions for medical graduates in public hospitals. In addition, $2.5 million will be used to improve the level of available medical education support across Queensland; including the funding of new roles for Network and Network Hub Directors of Clinical Training.

Agreement has been reached in 2008 to run a new collaborative project this year focusing on innovative positions for junior doctors titled *Innovative Prevocational Training and Educational Positions (IPTEP) Feasibility Project* involving PMCQ, the Rural and Regional Consortium (RRQC), and Queensland Health Medical Workforce. The aim of the project is to explore the feasibility of additional quality training positions for interns in Queensland. The following objectives have been identified for the project:

- To assess the feasibility of increasing the number and type of options of accredited positions for intern training in Queensland
- To develop a collaborative project model including 3 key medical education bodies working with a large number of interest groups
- To utilise learnings and project outcomes from other states and countries
- To assist the Project Executive in identifying areas where additional activities or partnerships may be required to support a rural hospital in becoming accredited as general practice and rural and remote medicine training post
- To define models that capture the mix of service and education experiences required for registrars in rural hospitals on a national basis
- Develop and document the processes and tools required on a national level to prepare a hospital for accreditation for GP terms

South Australia*:* The Medical Board of South Australia have recognised the increased difficulty in providing emergency terms for all interns and to this end have accredited rural and outer metropolitan general practices as alternative rotations to emergency medicine. The Medical Board approved accredited general practice terms as an alternative core term for interns from January 2005. The PGPPP supports these PGY1 rotations via GPETs and feeder hospitals.

On 25 September 2006, the PMCSA convened a Think Tank to explore potential new training opportunities for prevocational doctors in South Australia. The Think Tank had two key objectives:

- To raise awareness of the timing and numbers of new graduates nationally and their expected impact on SA.
- To raise awareness of the associated need to review current intern registration requirements nationally.

The meeting identified 6 options to be developed in order of priority as follows:

- Expansion of existing hospital system
- General Practice placements
- Private Metropolitan Sector

- Rural Sector in total
- Community Sectors
- Other creative possibilities (e.g. international electives; partnerships with mining, defense forces etc.).

Tasmania*:* By 2012, there will be 110 medical graduates from the University of Tasmania's School of Medicine. The current COAG funding agreement specifies that each state will provide funds to create additional intern positions to accommodate every Commonwealth-funded medical student. For Tasmania, this means that at least an additional 30 intern places be created (some of the graduates will be overseas students and some will be full fee-paying and there is currently no requirement to create intern positions for these graduates).

Unlike other states, there is currently limited potential to create intern positions outside of the public hospital system. The PGPPP initiative is unlikely to be effective in Tasmania because of a shortage of GP trainers and problems with indemnity. The absence of appropriate clinical supervision in the private sector means that this option, too, is unlikely to be available (unless the suggested changes to registrar training will result in registrars working in private hospitals in Tasmania).

There is insufficient capacity within the public hospital system to provide the required number of positions in core terms for the increased numbers of graduates. PMIT has negotiated with the Tasmanian Medical Council to set up a project to analyse the current core terms and codify those elements (clinical exposure, competencies achieved etc) which define the term as a 'core term' and then assessing other terms available (or potentially available) that could be considered to provide equivalency in these areas. An example might be orthopaedics (currently non-core) being considered to provide the same generic competencies as general surgery and therefore being reclassified as a core term. Once this project is completed, hospitals will be asked to identify those terms available (or potentially available if funding is supplied) which are not currently core terms but would be considered to be equivalent according to the criteria developed. An Accreditation visit to the hospital will be undertaken and, if the suggested terms meet the criteria, they will be accredited as core terms.

The other initiative is to more clearly express the amount of clinical exposure which is required in order to accredit a term as a core term. It would be easy to increase the numbers of core terms available by just placing an extra intern in each existing term. This will dilute the clinical exposure of the interns, potentially to levels which are considered insufficient for appropriate training. This information is especially needed for the Emergency terms, where there is currently no existing equivalent training outside of the three public Emergency Departments. Therefore, the only way in which the extra interns can be accommodated for this term is to place them in departments which currently already have interns in post. PMIT will be utilizing the work already done by PMCV to guide this project.

***Victoria**:* There has been a 40% increase in the number of intern posts in Victoria since 2001, and significant expansion will continue over the next 5 years. It is anticipated that between 600 and 650 intern posts will be required from 2012 to accommodate permanent resident graduates from Victorian medical schools, an increase of approximately 42% on current numbers. Key factors likely to impact on the capacity to provide an adequate number of intern positions include funding, the availability of senior clinicians to provide adequate supervision, access to educational facilities, infrastructure and an appropriate case-mix of patients.

Potential new intern positions are assessed by an accreditation survey team. The establishment of these new posts is informed by the team's assessment of whether accreditation standards are met, and the quality of the rotation. Training and Development grants provided by the Department reflect capacity and workforce distribution issues.

The Victorian Department of Human Services has recently formed the Postgraduate Medical Reference Group with broad terms of reference. A primary focus is prevocational medical growth planning, which includes providing advice on an appropriate workforce planning model for supply and distribution of new funded intern positions; the flow-on to new PGY2 positions; identifying potential challenges and barriers to this growth; and to make recommendations as appropriate on resourcing needs and incentives.

PMCV and the Victorian Department of Human Services have commenced discussions on additional intern and PGY2 training positions. PMCV is currently evaluating data on PGY2 and IMG terms from accreditation visits. This will provide a useful perspective on current and developing prevocational education and training programs beyond PGY1.

It is anticipated that there it will not be difficult to identify additional core Medicine rotations for interns but increasing the number of core Surgery and core Emergency Medicine rotations will be more difficult. There are a limited number of surgeons to provide supervision and a finite number of suitable surgical patients admitted to public hospitals. The Emergency Medicine Departments which currently provide rotations for interns are reluctant to take on any more and all departments that fulfill current supervision requirements are already hosting interns.

General Practice Placements: The PMCV has commenced development of new training posts in general practice. A small number of General Practice rotations have been available for PGY2s for several years. In 2008 Victorian interns will be able to undertake a 10 week, non-core, placement in General Practice. These new posts will be funded by the Prevocational General Practice Placement Program (PGPPP) scheme. Initially there will be three sites, which will accommodate 10-15 interns. These placements will be closely monitored to assess the extent to which they provide appropriate education, clinical exposure and support. There are likely to be opportunities to increase the number of General Practice placements for interns and PGY2s in future years.

Skills laboratories provide opportunities for junior doctors to practise a range of procedural, teamwork and communication skills and are likely to be an increasingly important component of prevocational training as the number of graduates expands. . They are expensive to build and maintain and require appropriately trained and experienced supervisors. A review undertaken by PMCV for the Victorian Department of Human Services led to the establishment of a Clinical Skills Committee but a coordinated strategy to develop Skills Laboratories in Victorian hospitals is yet to emerge.

It may be possible to place interns in *private hospitals for core surgery terms.* There are already a small number of Registrar rotations in Victorian private hospitals. It will be essential to ensure that interns undertaking a core surgery term in a private hospital are exposed to a broad range of presentations and it may be necessary to split rotations between public and private settings to achieve this. *Expanding the range of surgical subspecialty posts accredited as core surgery terms for interns* is also under consideration (e.g. orthopaedic surgery). One way to achieve this would be to identify current PGY2 positions which could be accredited as intern positions. As PGY2s are able to practice more independently than interns, there is likely to be more opportunity to develop *new PGY2 positions in ambulatory settings* thereby freeing up some existing positions to be filled by interns. It is anticipated that these positions can be funded through the PGPPP scheme.

Development of training opportunities at smaller *rural and regional hospitals* is another strategy for increasing Intern positions, particularly those which have established Rural Clinical Schools (e.g. Ballarat, Shepparton, Traralgon, Mildura and Bendigo). Development of higher level prevocational positions and vocational training posts at larger regional sites may attract interns and improve retention of junior doctors. Eventually this strategy is likely to improve recruitment of senior staff as vocational trainees who have completed most of their training in a regional location are more likely to choose to remain in the region as senior staff.

Western Australia*:* PMCWA is working with Medical Workforce Branch in WA Health to develop strategies to cope with increased intern numbers. PMCWA is conducting a feasibility study which aims:

- to define WA's capacity to cater for increased intern numbers;
- to investigate the potential for accreditation of non-accredited emergency placements; and
- to identify to capabilities of the *Australian Curriculum Framework for Junior Doctors* that are unique to Emergency Term rotations to support the case for resourcing increased placements through Emergency Departments.

While WA already offers JMOs unique prevocational experience due to rotations offered in remote areas such as Port Hedland and Broome Regional Hospitals, the demands of increased intern numbers are also providing an opportunity to create placements in non-traditional clinical settings, an example is the Silver Chain hospice palliative care rotation.

Each of the Primary Allocation Centres has developed plans to cater for the increased intern numbers so that general surgery and general medicine terms are provided to interns. Research is currently being done to explore the capacity for all interns to participate in an emergency medicine rotation. Early findings show that this should be feasible with the first significant increase in 2009.

In accordance with the requirements of the MTRP, new training opportunities in community and rural settings are constantly being explored. Currently these rotations extend to rural hospitals in New Zealand (currently on hold), rural general practices, and public health in the Kimberly region.

Western Australia has also supported the PGPPP. In 2007, pilot sites have been developed at the Joondalup Health Centre, Bunbury Regional Hospital and local general practices. These sites have combined rotations covering disciplines of general practice, emergency medicine, palliative care and paediatrics. During 2007, further sites will be developed in outer metropolitan and regional areas, and it is anticipated that 14-20 posts will be available in 2008.

While the Primary Allocation Centres are developing plans, increased intern numbers are providing an opportunity to examine the feasibility of additional Primary Allocation Centres. The possibility of the Western Australian Country Health Services becoming a Primary Allocation Centre for 2009 is in the preliminary discussion phase. This arrangement would offer medical graduates who had left their regional homes to study an option to return and to assist regional areas increase their supply of medical officers.

The increase in intern numbers will also require an examination of the supervisory capacity in hospitals. This is becoming a major issue. Increases in intern positions is already leading to an increased number of PGY2+ positions, all of which will require supervision by Registrars and consultants. The Department of Health Western Australia is currently progressing a supervisory model to cater for these needs.

10. RESOURCING PREVOCATIONAL TRAINING

As noted by Queensland Health, there does not seem to be any 'science behind the existing resourcing of medical education units'[15]. However, there have been attempts to develop funding models that more equitably reflect postgraduate training numbers including IMGs. Any equitable model would also need to factor in workload considerations as well.

Queensland undertook a range of informal consultations which identified a reasonable level of consistency in the opinions of Directors of Clinical Training (DCTs) and Medical Education Officers (MEOs) at a limited number of sites spread across tertiary, metropolitan and regional locations in relation to the time required to support these pre-vocational doctors.

The information obtained has been worked up into a tool for determining the resourcing of medical education units. The tool is planned to be reviewed two years after implementation to identify whether it has improved equity and transparency in resourcing of medical education units to support pre-vocational doctors.

Queensland Health has noted that there are currently a large number of IMGs requiring educational support to achieve general registration. Recent changes to various special registration requirements in Queensland mean that in the short term, there will be a larger number of IMGs requiring support, but this large number will start to decrease within the next three (3) years. Medical education units will not be providing this support by themselves, but will work closely with the Queensland Centre for International Medical Graduates (CIMG) in implementing strategies aimed at assisting IMGs to achieve general registration. In some of the other states, this responsibility will be undertaken mainly by the Postgraduate Medical Councils.

The resourcing tool that has been developed is conservative in terms of the ratio of DCT/MEO/AO (Administrative Officer) time per prevocational doctor. An electronic tool has been developed to calculate the FTE requirement for each of these roles.

For Medical Education Officers (MEO), the Queensland model assumes that a minimum of 0.4 MEO FTE is needed to establish a Medical Education Unit. It assumes, based on best available evidence, that MEO efficiency increases above 1 FTE providing support to approximately 20 PGY1s. It also assumes an IMG in PGY2, 3 or 4 who is not from an AMC declared Competent Authority requires the same level of support as a PGY1 doctor.

In terms of Administrative Officer (AO) support, the Queensland model advocates that a minimum of 1.0 FTE Administrative Officer should be appointed to each fully fledged medical education unit i.e. one with a DCT and at least one MEO, not where there is just a DCT at the facility. This will ensure that a medical education contact is usually available within normal working hours and that DCTs and MEOs are not unnecessarily performing administrative functions. Administrative FTE will increase in the same

manner as for MEOs, except the number of PGY2-4 IMGs will be included in the PGY2 rather the PGY1 numbers.

In South Australia there have also been wide ranging consultation by PMCSA with DCTs and MEOs within the state and further discussions with PMCs in Queensland, Victoria and Western Australia as these are the States whose postgraduate education structure most closely resembles that in South Australia. Currently, all three states are examining funding requirements for JMO education. Queensland is about to trial a formula based on a 'per head' allocation of funding. This Queensland formula is seen to provide validation to the estimates obtained in South Australia.

In SA, DCTs and MEOs hold the view that site specific funding should more closely reflect JMO numbers and training requirements, especially taking into account the needs of IMGs. A DCT/MEO Forum in July 2007 concluded that an IMG would require approximately 50 per cent more resources than an Australian trained intern, and an Australian trained RMO (PGY2, PGY3) would require only 50% of the resources of an intern. This can be expressed in Intern Equivalents (IE). (1 IMG = 1.5 IE and RMO = 0.5 IE). This formula may then be applied to work out the total IEs and hence funding.

In Victoria, the Department of Human Services has provided funding since 2000 to support the employment of MEOs and innovative education and training projects within health services. Funding has also supported the employment of Medical Clinical Educators in hospitals to support IMGs. Funding is based on a formula based on the number of prevocational trainees in a hospital/health service.

Victorian hospitals receive a $28,500 Training and Development Grant for each intern. Hospitals do not believe the grant adequately covers interns' salaries (approximately $60,000 pa) and the associated costs of supervision and training. Several hospitals have recently declined offers of additional intern positions for this reason. Training and Development Grants are only available for a minority of current PGY2 positions and additional grants have not been provided for new positions. Establishment of an adequate number of new hospital based intern and PGY2 positions over the next 5 years is likely to be limited by this gap in funding and by the limited number of senior staff available and willing to supervise junior staff.

The costs of training are not well documented but include the costs of: payment of educational staff such as MEOs, Directors of Training and Supervisors of Intern Training; provision and administration of training activities; and payment of covering staff during attendance at courses; access to simulation training.

It is difficult to accurately establish the cost of supervision but it is apparent that this is a particular problem for rural and other hospitals which have comparatively higher staff costs because of reliance on Visiting Medical Officers. As the number of graduates increases it may be necessary to provide additional funding for supervision by VMOs. Senior HMOs (registrars particularly) are major contributors to supervision and training

of JMOs and it will be necessary to factor this in to their workload as demands for their role as supervisors grows.

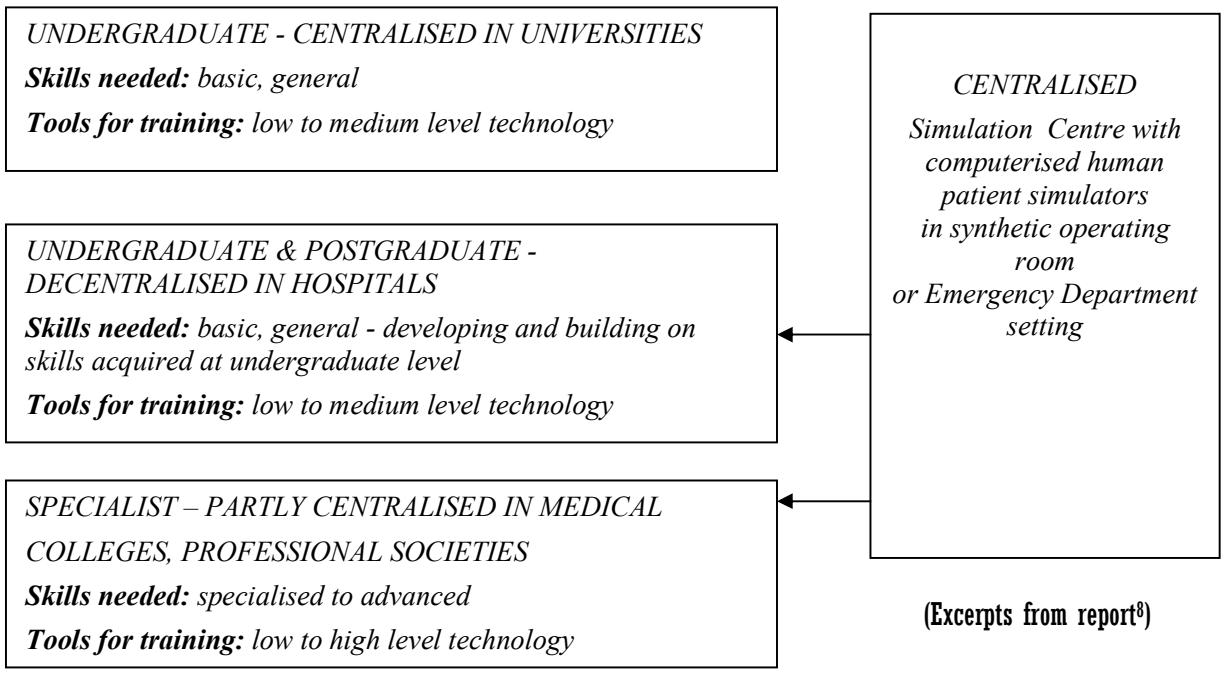
The provision of appropriate training to the current cohort of junior doctors is an effective strategy to increase the pool of future supervisors. This training has included the '*Teaching on the Run'* program and a Professional Development Program for Registrars. These are very successful, well developed and highly effective programs.

Clinical Skills Training

A state-wide review of Clinical Skills Education Requirements of the Health Professions in Victoria was commissioned by the Victorian Department of Human Services and reported in September 2003 (16). This report concluded:

There was general agreement that the relatively inexpensive low to medium level technology tools needed for training at undergraduate and postgraduate level should be available in universities and in hospitals where there is undergraduate and/or postgraduate teaching/ training. In the case of medical practitioners, this includes the generalist pre-vocational years (PGY1 and PGY2).

However, sophisticated, high cost, high technology simulation centres, by their nature, should be centralised to prevent underutilisation or inappropriate utilisation (use when lower cost, lower technology tools would be sufficient). These facilities have a place in undergraduate, postgraduate and some specialist training, for medical practitioners and nurses in particular. An outline of the recommended organisational structure for skills training facilities is shown below:



(Excerpts from report[8])

The Victorian Government subsequently established a clinical skills reference group to oversee and coordinate clinical skills education on a state-wide basis.

The utilisation of Clinical Skills and Simulation (synthetic learning) training facilities for prevocational education and training in all jurisdictions is progressively increasing.

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11. EXTENT OF USE OF GP & COMMUNITY PLACEMENTS IN PREVOCATIONAL YEARS

Table 1: Use of PGPPP & Community Placements in Prevocational Training

Jurisdiction	PGPPP – PGY1	PGPPP- PGY2	Community & Other placements - PGY1	Community & Other placements – PGY2
NSW		1		
VIC	4	4		
QLD	6	NA	NA	NA
SA	16	2		7
WA		2		12
TAS				
NT	4	NA		

The table above captures the extent of reported usage of the PGPPP program and other community placements for prevocational training positions. Figures for Queensland are estimates only and exact figures are not available as they do not have a centralised record of the extent of usage of PGPPP for prevocational trainees. The figures show that SA, and to a lesser extent, WA are the highest users at the moment with other states moving into its usage. Blanks indicate that no usage was reported. It is evident that the program is expanding albeit slowly at this stage.

12. USE OF CLINICAL SKILLS LABS IN PREVOCATIONAL TRAINING

Providing a quantitative assessment of the extent of use of skills labs is an enormous task given the diverse arrangements that exist for the use of skills labs nationally. Indeed, a NSW study[12] that undertook an extensive literature review on the use of skills labs noted that:

- There is little objective high quality evidence on the cost effectiveness of medical skills labs.
- There appear to be no state, national or international standards for the operation of simulators.

Despite these limitations, CPMEC notes that over the past five years there has been a considerable move towards increasing use of clinical skills training facilities for training of health professionals. This area has been the subject of formal reviews in NSW and Victoria[12].

Prevocational doctors are now undertaking clinical learning in both low-fidelity and high-fidelity centres, although there are significant differences across states and across hospital sites with problems of availability, access, time-allocation, availability of clinical instructors and funding support. It is also suggested that should DoHA require more detailed data on the number of skills lab in Australia and the domains of training that they cover, it might wish to contact the Australian Society for Simulation in Healthcare (ASSH). We understand that DoHA has partially funded the ASSH which operates out of the Skills Development Centre (SDC) at the Royal Brisbane and Women's Hospital[12].

As noted previously, the utilisation of Clinical Skills and Simulation (synthetic learning) training facilities for prevocational education and training in all jurisdictions is progressively increasing.

The following is a brief summary of current and projected activities in this area. It is recognised that the use of synthetic training environments can cover the whole range of medical trainees from undergraduates through to vocational trainees. Where available, quantitative data is provided. The summary also seeks to capture some of the key issues in the use of skills labs, based on ringing a limited number of hospitals in Victoria.

NSW: The NSW report cited earlier noted that training in synthetic environments was becoming increasingly popular in the NSW health system with over 20 sites state-wide delivering skills training in dedicated sites. Where dedicated facilities are not available, synthetic patient training equipment is often owned and used at a department level especially with Emergency Departments and Intensive Care Units. The report further notes that there is a system of formal or informal barter or loan arrangements between hospital education departments (often associated with the nursing education group) and medical trainees.

The NSW report also noted a trend towards the amalgamation of what currently exists into a more cohesive and structured centre delivering cross professional training. The move towards integration has been led by 'groups of highly dedicated professionals determined to improve what they see as a currently poorly structured and resourced system of training". The NSW report notes that having the training facilities in the local Area Health Services would allow trainees to travel for centralised training or receive their training whilst on rotation with the principal hospital.

QLD: The Skills Development Centre (SDC) at the Royal Brisbane and Women's Hospital is the core of simulation within Queensland Health. It operates as a hub and spokes model with an additional seven affiliated centres being set up throughout the state. In addition Queensland Health is forming partnerships in the tertiary and private sectors. The SDC has joint staff with the University of Queensland and draws upon clinical staff from the private sector for teaching/training and curriculum development. Simulation Coordinators are primarily responsible for the development, provision and evaluation of clinical and communications training using simulation in Queensland Health.

There is no specific program within Queensland for prevocational doctors to attend skills laboratory training. Junior doctors receive a vocational training subsidy of $1500pa and 1 week of professional development leave. They can access supported time and attendance at courses where the Director of Medical Services decides this is required for safe clinical practice.

SA: Flinders Medical Centre and the Royal Adelaide Hospital have high fidelity training which is used by PGY1 and other JMOs in training. All other hospitals including rural centres have models for skills training. Mt Gambier has Sim Man. Increasing use of these facilities is being made by IMGs. It is difficult to quantify the current utilisation and there is a need to develop some forward projections.

VIC: A state-wide review of Clinical Skills Education Requirements of the Health Professions in Victoria was commissioned by the Victorian Department of Human Services and reported in September 2003 (16). In our previous submission we had highlighted the recommendations of the report. The Victorian Government subsequently established a clinical skills reference group to oversee and coordinate clinical skills education on a state-wide basis. However, although there is universal agreement on the importance of clinical skills laboratory training, individual hospital/consortium development and adoption of specific programs for prevocational medical trainees has been slow to roll out. In contrast, nursing trainee access is much better defined.

The following is a snapshot of current activities based on a ring around to hospitals in Victoria in March 2008, and it illustrates many of the limiting factors:

Site 1 (Central City Hospital):

"We have only just set up our Sim Centre. In the near future prevocational doctors will be undertaking simulation training probably, realistically on an individual basis twice each during their intern year and ditto for PGY2 year - in contrast each of these groups attend one or two education sessions per week (so it actually constitutes a very small part of their education and training. However a) this component will increase as the Sim Centre develops, and b) it is a much more effective form of training than didactic lectures. Resource needs include:

- *dedicated simulation centre and equipment (including SimMan)*
- *dedicated nurse to run the centre*
- *dedicated time of a number of specialists to train in running simulation training - and time to actually take the sessions*
- *'time off' the floor for doctors to attend the centre (which is away from the main site). "*

Site 2 (Rural Hospital):

"At present our prevocational doctors get some training from their home hospitals. Our IMG's have no simulation training apart from some manikins, and other training models eg IV arms etc. We are hoping to get funding to get a proper clinical room where a few of the educators here could carry out some simulation training in the future."

Site 3 (Metropolitan Hospital Network):

"All PGY 1/2/3s are expected to attend a 2 hour Advanced Life Support (ALS) session in the simulation suite here. This involves being actively involved and also observing simulation scenarios and then debriefing as a group as to what has occurred. If needed or requested, extra sessions may be organised for prevocational doctors if they feel they would like to be involved in scenarios around a condition that they would like work in. In addition advanced clinical skills workshops are designed and provided throughout the year for doc around topics such as paediatric emergencies, chest tube insertion, and airway management.

The support and resources that are required to provide effective simulation experiences and education are significant. We have two medical simulation instructors that share the ALS session on a weekly basis. A simulation coordinator and quite a significant outlay in costs to establish maintain and use both the three manikins that are within the education centre and the part task trainers that are available."

Site 4 (Outer Metropolitan Hospital):

"We have resuscitation dolls used for training, this training is done by an Emergency Physician who is the Supervisor of Intern Training."

Site 5 (Outer Metropolitan Hospital):

"There is a skills centre which houses resuscitation dolls, we use dolls for) ALS training for Interns. Establishment of mock code blue scenarios have been established this year and will include prevocational staff."

Site 6 (Large Metropolitan Hospital and affiliated network hospital):
"For us there are a few problems: distance, back-filling of staff & associated costs with getting docs there. We run between 4-8 ALS courses a year where we use a simulated dummy to practice cardiac arrest scenarios etc. These are held in the Nurses' Practical Room at the peripheral hospital (this is not ideal as room is fairly small and is also the Nurses' Tea Room). The central hospital site uses one of their Training Rooms, this is a more efficient. It would be safe to say that very little if any of our training is done in a Sim Centre at both hospitals. With regards to support/resources we're currently looking into establishing a Clinical Skills Lab where we can 'house' our equipment and perhaps conduct some of the simulated training ourselves. We need financial support for building, equipment and human resources to manage the Lab."

Site 7 (Paediatric Hospital):
"We use live actors, camera and DVD recorder in any teaching room that is available for communication skills in paediatrics simulation programme for PGY2. The percentage of time is not calculable. Each of ~40 PGY2s gets one hour in the simulation program."

WA: All three of the Primary Allocation Centres (i.e. Sir Charles Gairdner Hospital, Fremantle Hospital and Royal Perth Hospital) provide in-house simulation training for interns. At two of the primary allocation centres, the simulation training provided is Advanced Life Support training which is compulsory (consisting of a half day workshop) while the other Primary Allocation Centre provides resuscitation training during orientation week. As training is provided in-house, there is no data available regarding costs. The Department of Health has a contract with The Clinical Education and Training Centre (CTEC) and each of the Primary Allocation Centres are provided with a specific number of 'units' to provide training to their staff. However, the Primary Allocation Centres elect to provide in-house training for their interns. At CTEC the cost of providing a half day training session for 3-6 people is approximately $3,000.

The foregoing discussions would suggest that there is a need for a coordinated approach and some national guidelines to ensure that clinical skills labs are providing a standard of training that ensures a specified level of competence.

13. USE OF TRAINING IN PRIVATE SETTINGS

Information supplied to us by our Postgraduate Medical Councils indicates that limited knowledge of arrangements that exist for prevocational trainees to be trained in private sector settings. The information that is available is very sparse and o that data would require substantial resourcing as it will involve liaising with individual health service providers and networks and understanding details of their rotations. Current training arrangements for use of private sector training seem better articulated for vocational trainees.