MedEd09

Investing in our Medical Workforce

30–31 October 2009 │ Sydney

Final Report

February, 2010

Abbreviations and acronyms

AHW	Aboriginal health worker
AIDA	Australian Indigenous Doctors' Association
AMA	Australian Medical Association
AMC	Australian Medical Council
Bradley Review	Review of Australian Higher Education Report by Emeritus Professor Denise Bradley AC
COAG	Council of Australian Governments
CPMC	Committee of Presidents of Medical Colleges
CPMEC	Confederation of Postgraduate Medical Education Councils
DoHA	Australian Government Department of Health and Ageing
Garling Report	*Final Report of the Special Commission of Inquiry into Acute Care Services in NSW Public Hospitals*, Peter Garling SC, October 2009
GP	general practitioner
IPE	interprofessional education
HWA	Health Workforce Australia
KPI	key performance indicator
L-TIPP	'Learning and teaching for interprofessional practice' project
MDANZ	Medical Deans of Australia and New Zealand
MEE	Medical Education England
MMC	Modernising Medical Careers (UK medical postgraduate training program)
MoLIE	More Learning for Interns in Emergency (training program in Queensland)
MSOD	Medical Schools Outcomes Database
NHHRC	National Health and Hospitals Reform Commission
NHWT	National Health Workforce Taskforce
RACGP	Royal Australian College of General Practitioners
RACP	Royal Australasian College of Physicians
RACS	Royal Australasian College of Surgeons
RANZCOG	Royal Australian and New Zealand College of Obstetricians and Gynaecologists
RPL	recognition of prior learning

Contents

Appendix A

Background

Health care in Australia is currently facing a range of challenges. Our ageing population, population growth and changes in technologies will require new approaches to health care provision. Staffing shortages are being felt in many settings, especially rural, remote and outer metropolitan areas, and in a number of specialities, including that of general practice. To start to meet these challenges, there has been tremendous growth in training intake, with the number of new doctors graduating from medical schools set to more than double by 2012.

However, this rapid increase creates in turn a new set of challenges and pressures on hospitals, teaching general practices, postgraduate specialty colleges, and all other organisations in the sector. We must develop the systems and capacity now to ensure that we develop the health-care workforce that Australia needs in the future, and to ensure our world-class medical standards are maintained and improved.

The recent National Health and Hospitals Reform Commission report identified a key component of an agile and self-improving health system as a modern, learning and supported health workforce:

> We believe that our health system should seek to optimise the dedication, diversity, energy and dynamism of our health workforce. Australia has a world-class approach to the education and training of this workforce. The people who care for and treat us comprise one of the major strengths of our health system. Our health workforce is responsible for the enviably high standard of health care that we enjoy in Australia. They are key agents of change, reform and innovation, driving continuous improvement in the delivery of health services at the coalface. And they are essential in monitoring whether our health system is achieving on its purpose of delivering better health outcomes for people. Accordingly, we want health system reform to be integrally shaped by the experience and knowledge of our health workforce, including clinicians and health system managers.
> *A Healthier Future for All Australians,* National Health and Hospitals Reform Commission, June 2009

Hosted by Medical Deans Australia and New Zealand, MedEd09 was the third in a biennial series of national meetings aimed at advancing medical education in the two countries. It was sponsored by the Australian Government Department of Health and Ageing, the Australian Medical Council, the Committee of Presidents of Medical Colleges, and the Confederation of Postgraduate Medical Education Councils.

MedEd09 brought together approximately 170 representatives from Australian and New Zealand medical schools, medical colleges (most are trans-Tasman), hospitals, key medical organisations, the Australian Medical Council and Australian, state and territory health departments. There was also strong representation from the principal 'consumers' of medical education and postgraduate training including more than 15 medical students and 25 junior doctors. Against a background of several significant recent initiatives (including the report of the National Health and Hospitals Reform Commission, the recent negotiation of National Healthcare Agreements and National Partnerships in Health, and the National Registration and Accreditation Scheme for the health professions), the conference examined the issues and ideas around investing in our medical workforce.

The conference themes were:

- Increasing health workforce flexibility
- Achieving vertical integration
- Building training capacity

The conference involved expert presentations on a range of issues, as well as panel discussions and two sets of six breakout groups. The breakout groups discussed predefined issues and made recommendations back to the plenary group. The meeting benefitted greatly from the expertise and insights of Professor Sir John Tooke, the keynote speaker, who recently led the *Independent Inquiry into Modernising Medical Careers* for the United Kingdom Government.

At the end of two days, the conference used a KeyPad system so participants could anonymously vote on a series of issues and recommendations. In some instances, questions were modified 'on the fly' after voting by show of hands before being formally put to the vote via the KeyPads. Because there was only a short time before the voting session in which to formulate the issues and recommendations emerging during the meeting, it was agreed that participants could also email any additional suggestions in the week after the meeting, to be circulated for voting by email. Overall, the voting resulted in 17 recommendations emerging from MedEd09.

It should be noted that the constant theme in discussion over the two days, and one which underpins the final recommendations, was that governments and all stakeholders need to recognise the pivotal importance of education, training and research to a future sustainable health system and health workforce. Because of its importance, it was felt that this principle should be explicitly addressed in the planning and accountability frameworks for all aspects of current and future health system development.

What follows are edited summaries of the material covered in the individual presentations, the panel discussions and the breakout sessions.

Medical Deans will chair a small Implementation Group to prioritise and progress the recommendations. The Group will comprise representatives of the key organisations involved in the medical education and training continuum. We hope that the following summary of proceedings will provide a comprehensive basis for the bold and timely decision-making needed to sustain the high quality medical workforce of the future.

Emeritus Professor Neville Yeomans
Chair, MedEd09 Steering Committee.

Summary of Recommendations

Recommendation 1
That this meeting advises the Australian Government that medical workforce capacity and training are critical issues for delivering quality health care.

Recommendation 2
That state and commonwealth governments and medical colleges develop clear policies and strategies to promote generalist training pathways by the end of 2010.

Recommendation 3
That governments, colleges and Postgraduate Medical Councils develop models to increase pre-vocational and vocational training models in rural and regional areas in an integrated fashion.

Recommendation 4
That governments at all levels take immediate steps to address the gap between national and state jurisdictions in medical training.

Recommendation 5
That the Council of Australian Governments review the governance structure of Health Workforce Australia to ensure high level continuous national input from senior doctors responsible for training.

Recommendation 6
That there should be a combined approach to the Federal Minister for the creation of a Board to advise on coordinating training across the continuum.

Recommendation 7
That funding be provided to identify curriculum and other needs to facilitate the co-ordination of training across the continuum.

Recommendation 8
That a follow-up workshop be held between jurisdictions, universities, medical colleges, Health Workforce Australia, Postgraduate Medical Education Council, student representatives and the Australian Medical Council.

Recommendation 9
That MedEd09 endorses the continuation of the MSOD project, and urges the use of the database in the development of robust medical education and workforce models.

Recommendation 10a

That an evidence - based approach be adopted to clearly define and inform the optimal use of both competency and experiential (time-based) approaches to medical education and training within an integrated education system.

Recommendation 10b

Where such evidence does not exist, support should be made available for the required research and development.

Recommendation 11

That an approach be made to CPMC to develop workable models for recognition of prior learning during vocational training, which (i) are transparent, accessible and reproducible (ii) fit with their curricula (iii) guarantee principles of equality, fairness and natural justice and (iv) have clear criteria against which applicants are assessed.

Recommendation 12

That governments ensure that training institutions are appropriately resourced, to ensure essential infrastructure for effective training is available in all environments.

Recommendation 13

That all levels of government (with relevant stakeholders) should develop clear strategies and policies by the end of 2010 that permit training to expand into private and other settings.

Recommendation 14

That governments at all levels, through the Council of Australian Governments, ensure that coupling between service delivery and training is achieved.

Recommendation 15a

That jurisdictions and employers ensure 'teaching and training' are essential requirements in job descriptions, and support, encourage and reward the clinicians for teaching.

Recommendation 15b

That jurisdictions and employers ensure that 'teaching and training' performance are key performance indicators to be addressed at annual appraisal of their medical staff.

Investing in our medical workforce

Introduction

Professor Judy Searle
Principal Medical Adviser; Workforce, Education and Training
Australian Government Department of Health and Ageing

We are in an era of health reform. The Australian government, with strong stakeholder engagement, wants to address the health challenges we are facing. A range of initiatives is being seen at both federal and Council of Australian Governments (COAG) level, including:

- The National Registration and Accreditation Scheme

- The establishment of Health Workforce Australia (HWA)

- Commonwealth Government Budget measures in 2009–2010 (targeting consolidated specialist training, medical school support, research, and scholarship scaling)

- A restructure of the Department of Health and Ageing (DoHA), to include a Health Workforce Division

- The establishment of national committees, including the Medical Training Review Panel (MTRP) and the Enhanced Medical Education Advisory Committee (EMEAC)

- The release of the Review of Australian Higher Education Report by Emeritus Professor Denise Bradley AC (the Bradley Review) (with implications for health educators).

There are big challenges and big opportunities. However, the health workforce may be the rate limiting issue for reform.

The challenges we face in the area of our health workforce are many:

- How do we expand our workforce while maintaining a high quality output?

- How will we deal with the influx of graduates? The medical workforce pipeline needs to respond now, especially in terms of pre-vocational places by 2012.

- Can we improve planning and tracking for international medical graduates?

- How do we improve the distribution of doctors, to ensure we deliver health in metropolitan, rural and remote areas? There have been both federal and state initiatives around this, but we have seen little change as yet.

This last challenge, of the distribution of medical practitioners, is a particularly important issue. In 2007 there were over 77 000 medical practitioners with 87% practising; however, there is a marked variation of distribution across regions, as shown in Figure 1.
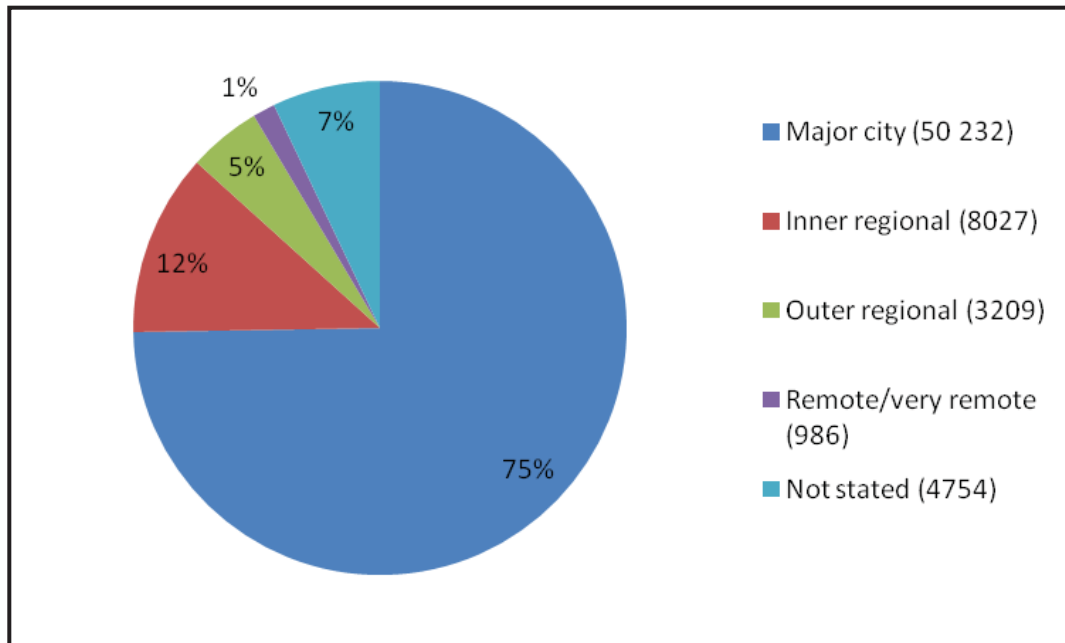
Figure 1   Distribution of medical practitioners in Australia

We need to build on where we are. The previous medical education conferences in 2005 and 2007 have provided a valuable contribution to the health care and workforce debates.

MedEd05, held in Canberra, resulted in eight recommendations:

1. Establish a national health care education council (achieved)

2. Define competencies and curriculum content for different stages of medical education (commenced, ongoing)

3. Review clinical teaching and learning (commenced, ongoing)

4. Review use of potential teaching environments (commenced, ongoing)

5. Marry medical education with other health workforce needs (still at awareness raising stage)

6. Ensure that the wider health sector recognises that education and research are intrinsic to health service planning and delivery (still at awareness raising stage)

7. Provide a more rational and transitional process for career development/change (still at awareness raising stage)

8. Define good medical practice (achieved)

MedEd07, held in Melbourne, resulted in seven recommendations:

1. Improving the education and training continuum

2. Challenges to clinical education (commenced, ongoing)

3. Professionalism, accreditation and registration

4. How education can contribute to the alleviation of workforce maldistribution, both geographical and discipline

5. Optimising stakeholder interaction and placing medical education on the national agenda (good progress, ongoing)

6. Supporting doctors to become effective health care team members

7. Developing longer-term educational innovations

These recommendations have proved more problematic, with the big issues (1, 4, 6 and 7) still remaining elusive.

It is important that MedEd09 address the health workforce challenges we now face, particularly the urgent question of the training pipeline. The number of medical students has increased by about 60% over the last five years. While there have been increases in pre-vocational (33%) and vocational (50%) trainee places between 2004 and 2007; this needs to increase now and from 2012 onwards. We need to plan so that these trainees end up where they are needed, both in terms of the services they provide and the regions they practise in.

How will we get there? By combining our collective expertise with benchmarking and learning from others, and by asking the right questions.

How will we know when we are there? When we have achieved a well planned, well managed, well distributed, high quality and happy medical workforce.

A healthier future for all Australians

Professor Justin Beilby
University of Adelaide
Commissioner, National Health and Hospitals Reform Commission

The National Health and Hospitals Reform Commission (NHHRC) was established in February 2008 to:

> provide a blueprint for tackling future challenges in the Australian health system including:
>
> - The rapidly increasing burden of chronic disease
> - The ageing of the population
> - Rising health costs
> - Inefficiencies exacerbated by cost shifting and the blame game.
>
> The Commission will focus on health financing, maximising a productive relationship between public and private sectors, and improving rural health.
> *Media release*, Prime Minister and Health Minister, 25 February 2008

The Commission aimed to 'go boldly' in making recommendations on health reform to bring about much-needed changes in Australian health care. The NHHRC undertook a 16-month long research process (February 2008–June 2009) that was overseen by a broad panel and involved detailed consultation including a national listening tour, submissions, commissioned papers, and consultative forums, attracting input from a wide range of stakeholders including public and private hospitals, rural health clinics, and many health and training organisations. An interim report, released in December 2008, was again the subject of stakeholder feedback. In June 2009, the NHHRC delivered the final report on health reform, entitled *A Healthier Future for all Australians*.

The report looked at the changing nature of health, such as how the increasing burden of chronic illnesses and the ageing population is creating tension because the workforce needs more trained professionals to service this health care need.

Because of these changing health needs the Australian system has reached a tipping point. We estimate that by 2020 it will simply not be able to cope. Now is the time for action if we want to safeguard the health and wellbeing of future generations at an affordable cost to our nation.

The report detailed its vision of 'A sustainable, high quality, responsive health system for all Australians now and into the future', and identified three reform goals that would be needed to reach that vision. Each of the reform goals then raises a number of challenges for medical education. We need to recognise and include education as part of our reform of the delivery of services — they are not separate areas but part of a whole.

1   Tackle the major access and equity issues that affect people now

It is important that we make real the universal entitlement to health services, targeting on the basis of health need. A number of areas are of particular concern, including Indigenous health care, dental health, rural and remote health, and mental health.

- Indigenous health care — Indigenous curricula need to be developed both to expand the number of Indigenous practitioners and to provide all practitioners with Indigenous patient care training

- Dental health — we need to be able to provide restorative and preventive healthcare for all Australians. 'Denticare Australia' would provide a new dental care system building on a private health insurance and private dental services platform. An intern model and additional training infrastructure need to be developed to complement this.

- Remote and rural health — to achieve equitable health care for all regions we will need innovative workforce models, equitable and flexible funding, support and incentives for rural training and career choice, and other support structures such a telemedicine and patient travel support. In education there are opportunities for increased rural educational links and rural placements. The Bradley Review found that rural clinical schools are very successful, and we need to build on this model. The medical schools outcomes database (MSOD) will also provide valuable guidance in this area.

- Mental health — early intervention for young people is important, rapid response teams and sub-acute care are needed, as are links between health and social services. We need to develop a national curriculum in this area.

2 Redesign to position us to meet emerging challenges

We will need to strengthen primary health care and invest in a healthy start to life from before conception through the early years. General practitioners (GPs) will be the medical coordinators and team leaders in the new systems, with comprehensive primary health care centres or services in most local communities. These GP super-clinics will be 'one stop shops' and the preferred location of care for an expanded range of generalist services with better links to other services including hospitals and aged care.

Hospitals in turn will need to be reshaped, developing new models of care with rapid patient throughput, strengthening outpatient and community specialist services, and expanding choices for care and accommodation in aged and palliative care.

Again, these changes create challenges for medical education. Short hospital stays limit teaching opportunities, and new teaching models involving community health centres will be needed. New curricula — to support the healthy start approach and the need for expanded aged care — will also be required.

3 Create an agile, responsive and self-improving health system for future generations

We will need to foster a culture of continuous improvement and innovation and strong clinical leadership, and to increase our investment in clinical, health services and health policy research. A permanent national body would help to promote, monitor, report and support clinicians and health services to provide safe and high quality care.

We also need to evolve to the next generation of Medicare, creating a broader, more responsive system that covers public and private health service; with activity-based funding and payments for performance and quality. This model may include changing the application of the medical benefit scheme to remote areas to provide more equitable and flexible funding; funding based not on numbers of patients seen but on the proportion of the population seen, or some other measure.

We need to make smart use of data, knowledge and communication with data linkages and reporting to support evidence-based medicine and health care system planning. We can also strengthen consumers' informed decision making with public reporting on access, efficiency and quality for public and private hospitals, and by providing patient-controlled health records.

In medical education, we will need agile and responsive curricula. We need to recognise that to change our health care workforce we will need a new framework for education and training, including a strong framework for competency based clinical training and practice.

Large reforms are needed to bring health and education together. Implementation of these reforms is vital for the future of the Australia health-care system.

The role of the doctor in the 21st century: implications for medical education and training

Keynote Address

Professor Sir John Tooke
Dean, Peninsula College of Medicine and Dentistry, United Kingdom

The changing context

The role of the doctor in the twenty-first century will be shaped by the changing context. Demographic changes will have a large impact on the health-care system: countries like the United Kingdom (UK) and Australia have an ageing population, which increases demand for health care but reduces the number of tax payers per beneficiary. For countries in the OECD, health spending has increased faster than GDP due to factors such as ageing, changing disease patterns and medical innovation. Economic pressure will also come from the global financial crisis; for example, the UK anticipates a cut of around 15% health spending in the coming years.
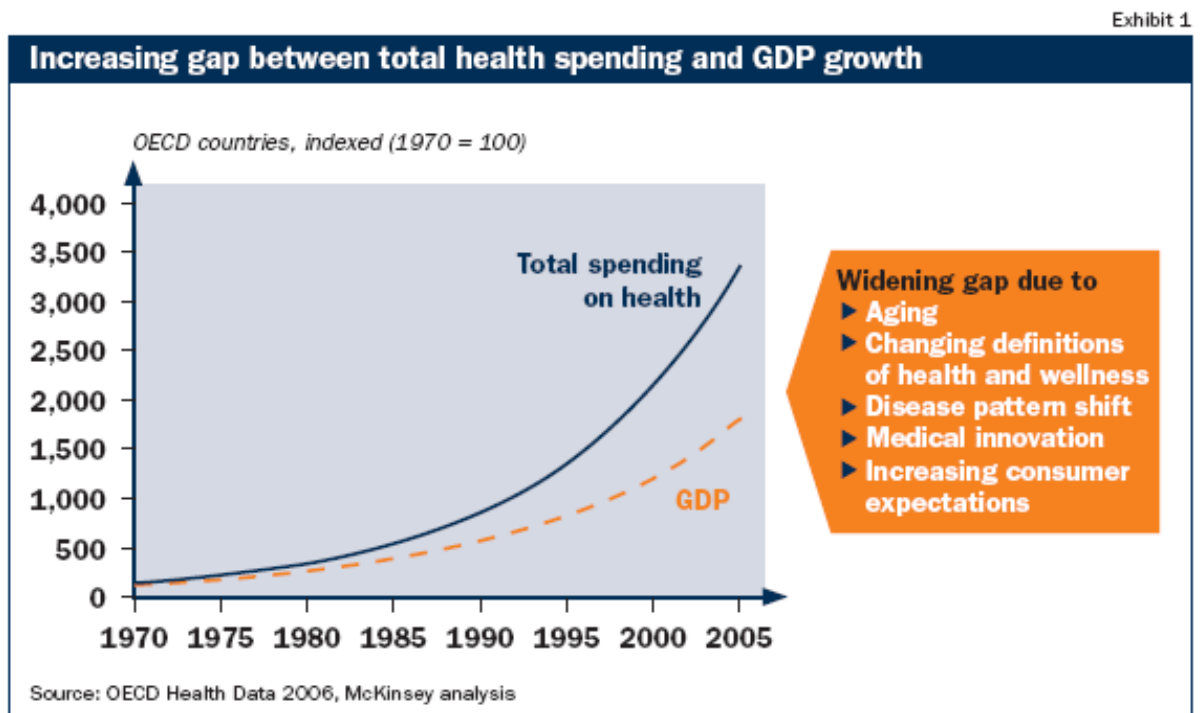
Figure 4   Increasing gap between total health spending and GDP growth

Other global trends that will affect doctors and their training include climate change (bringing new health problems to some areas); globalisation (medical students will be more mobile and may be attracted to the international arena); preventative medicine (potentially changing health-care demands); technological capacity (raising issues of affordability and ethics); and increasing public expectations of health care.

Defining roles

It is important that the role of the doctor is clearly defined. Without role definition it is impossible to pursue outcome focused medical education, plan the workforce, or for our trainees to understand what to excel at. Maintaining clear definitions of professional roles is also important to avoid deprofessionalisation. The MMC inquiry in the UK (the *Independent Inquiry into Modernising Medical Careers*) launched in April 2007 revealed there was a lack of appreciation of the contribution of doctors to health-care teams. The MMC inquiry demonstrated that aligning role definition, health policy, workforce considerations and education is key to avoiding problems.

Given the rapid changes in demands on the health-care workforce, maintaining teams with a cost-effective mix of skills is also a major challenge. Task transfer to expand the role of nurses and other mid-level personnel has been suggested as a possible solution to this challenge, but there is little evidence about the costs. Much of health care involves unanticipated problems; if an individual doesn't have the skills to provide all aspects of care they may need to call in an expert, which would increase costs.

Task transfer may also start to erode the professional base. Role models are important in the health workforce and task transfer may direct more senior nurses into substitute roles, instead of providing leadership and support in nursing.

Skills

Generic skills required by doctors include communication, team work, empathy, integrity and the ability to be non-judgemental.

Specific skills required by doctors are about the ability to deal with complexity — the ability to synthesise, integrate and interpret a range of information; the ability to manage risk and uncertainty; and the ability to lead and take responsibility for clinical decisions. Most important are skills in high level clinical reasoning and diagnosis: the majority of those patients surveyed in the UK agreed with the statement 'My top priority is having confidence that my doctor will achieve an accurate diagnosis of what is wrong with me'.

Doctors have a key role in enhancing health services, and in managing resources. As economic pressure on the health system grows, doctors will increasingly need to manage the tension between advocacy for the individual patient and cost-effective, equitable care. Each doctor needs to remember the 'patient outside the door', as well as the patient in front of them.

Training

Recognising the changes in work environment and necessary skills, the document guiding undergraduate outcomes and standards in the UK, *Tomorrow's Doctors*, has had several changes since the last edition with more emphasis on science, on clinical leadership and on building clinical experience.

Medical training focuses on clinical competency; however, clinical expertise also requires experience and the ability to make good judgements. Unfortunately, a barrier to increasing experience may be the medical community's increasing aversion to risk. A strong focus on patient safety is important, but it may obscure the fact that medicine is inherently risky. Most

importantly it acts as a barrier to service innovation and prevents young doctors from having earlier supervised clinical practice.

Following the MMC enquiry, the UK has made significant changes to the postgraduate training path. Previously, this path was narrow; now, there are core specialty stems with a broad base. This path reduces the risk that doctors will need to restart the training process if there are major technological changes. Other training considerations include training people in the right areas to increase the workforce in places of need, and considering the logistics of training doctors, nurses and physiotherapists in the same location to assist with communication and collaboration skills.

In conclusion, it is important for the medical workforce to aspire to excellence, but students must have a clear definition of what excellence is, and the tools and environment to achieve it.

Discussion

- To ensure that trainees acquire the critical skills of clinical reasoning, we need to equip supervisors with the knowledge and skills to unpack their own thinking, explain the thinking process to students and then give them structured feedback. This will teach students the reasoning process, which too often they are expected to learn 'by osmosis'.

- Greater professionalism in postgraduate training is needed, and increasing the links between academia and postgraduate training may help to achieve this.

- Limited hours are available for training so professionalising and planning for early clinical experience are important.

- Supervising and mentoring is challenging because hospital shift work breaks down the relationship between senior and junior doctors, creating an imperfect learning experience and losing many case-based learning opportunities. Improving the relationship between junior and senior doctors is important.

- There is a divide between clinicians and managers: medical education should help clinicians to understand managers' needs and managers to understand clinicians' needs.

- GP trainees want more training in the community and less training in the hospitals; meeting these needs would encourage and facilitate young doctors moving into community roles.

- Student locum positions are a good model; facilities should be encouraged to increase student assistantships.

- If doctors are to take on the role of team leaders, we need to look at how to implement and support this; how other health-care professionals can support this leadership; how the public can understand this role; and how to gain a better understanding of roles and how they fit together.

Indigenous Health: Key Imperatives for Closing the Gap

Associate Professor Peter O'Mara
President, Australian Indigenous Doctors' Association

The linkages between the theme of this year's medical education conference, 'Investing in our medical workforce', and Aboriginal and Torres Strait Islander health equality are very significant. Recognising ways of working together to build the capacity of the medical workforce to deliver better outcomes for Indigenous Australians is an important step to close the gap in health status.

In March 2008, Australian Indigenous health organisations and the Prime Minister signed the Close the Gap 'Statement of Intent', which set down their aims to work together to build the capacity of the Indigenous health workforce and to achieve equality in health status between Aboriginal and Torres Strait Islander peoples and non-Indigenous Australians by the year 2030.

It is the unfortunate truth that many of our Aboriginal children today are living in extreme levels of poverty, poor health and disadvantage. Aboriginal babies are dying at three times the rate of non-Indigenous babies, our old people are dying ten years earlier than non-Indigenous Australians, and prominent causes of death for Aboriginal and Torres Strait Islander people are chronic diseases — most of which are entirely preventable.

Aboriginal and Torres Strait Islander Social Justice Commissioner Tom Calma has said:

> It is a simple fact that Aboriginal and Torres Strait Islander peoples still do not enjoy the same opportunities to be healthy as non-Indigenous Australians.

It makes sense to promote the Indigenous medical workforce as a key plank in any reasonable strategy to 'Close the Gap' in Indigenous health outcomes. Currently, Aboriginal people represent 3% of the population, but only 0.3% of doctors, 0.6% of nurses, and 1% of health care personnel overall.

The positive effects of Indigenous doctors for Indigenous people's physical, emotional and cultural wellbeing have long been recognised by government and other Indigenous and non-Indigenous stakeholders. The Federal Minister for Health, Nicola Roxon, has said:

> To further encourage Indigenous people to see the doctor or a nurse, we need more Indigenous doctors and nurses. To improve the relations of trust between the Indigenous community and the medical profession, we must deliver more Indigenous health professionals.

Aboriginal and Torres Strait Islander doctors look at health in a holistic way. They take into account a patient's personal and family situation when dealing with a health issue and will work together with them, their family, and their community for a way forward. And of course, when we treat our own people, there is a sense of connection and trust between doctor and patient, which can improve outcomes.

Beyond the highly skilled and unique contributions that Indigenous doctors make to the medical workforce, they are also invaluable role models, mentors and leaders to future generations. Our

numbers have grown steadily over the years and we now have 140 Indigenous medical graduates and 137 Indigenous medical students.

If governments and medical institutions are genuine about recruiting and supporting more Aboriginal and Torres Strait medical students, then medical education strategies must begin early in the life and education cycle. There is a large pool of smart potential students, but Aboriginal students often lack the support, access to role models, career information and other opportunities that would lead to a better future for them and their communities. The Department of Employment Education and Workplace Relations (DEEWR) has provided funding for the Australian Indigenous Doctors' Association (AIDA) for a 12-month project, known as the *Pathways in Health Project*, aimed at fostering interest in and support for Indigenous students into health-related fields of study and employment. Many of our doctors often retell the inspiration of seeing and talking to an Aboriginal and Torres Strait Islander medical student or doctor as the turning point in making their decision to become doctors. To be able to offer the same encouragement in turn to other Indigenous kids is an enriching experience.

The solution to an improved workforce and improved Indigenous health is about our people working together alongside non-Indigenous people in order to achieve an agreed goal. Better Indigenous health education, better workforce training and schools and universities having better selection, recruitment and support strategies for Indigenous people will go a long way to improving our people's health.

In saying this, I want to acknowledge how far we've come, particularly in the university teaching environment. At a national level, there has been collaboration between three key organisations: the Australian Medical Council (the AMC), the Medical Deans of Australia and New Zealand (MDANZ), and the Australian Indigenous Doctors' Association (AIDA). We envisage that this collaboration will lead to real reform and sustainable improvements in Indigenous health and Indigenous workforce.

In 2006, the AMC reviewed its standards and procedures for accrediting medical schools. For the first time, part of this review looked at how Indigenous health should be incorporated in curricula. The review involved significant consultation, collaboration and input from AIDA, the Medical Deans Indigenous Health Project, and the Committee of Deans of Australian Medical Schools (CDAMS; now renamed Medical Deans Australia and New Zealand) Indigenous Health Curriculum Framework.

This collaboration did not happen by accident — it was a lengthy process and trust was built over time and through each organisation demonstrating their commitment to improving Indigenous health. This is a model that could be employed across the board.

MDANZ and AIDA's strong desire to work in partnership to increase the number of Indigenous doctors and improve the health expectations and outcomes for all Indigenous people led to a formalised collaboration agreement (2008–2011).

Aboriginal and Torres Strait Islander Social Justice Commissioner, Tom Calma, said:

> The collaboration between AIDA and the Medical Deans provides a concrete example of what needs to happen more broadly in this country…Indigenous organisations and people engaged in mutually respectful relationships with other leaders in their fields.

The collaboration agreement recognised the shared work in developing the CDAMS Indigenous health curriculum framework, the AIDA best practice report on recruitment and retention and also set the framework for driving reform with the AMC to develop new standards around Indigenous health content, recruitment and retention strategies and staff and student support.

This agreement has since been renewed with an updated work plan and priority outcomes. It allows MDANZ and AIDA to work collaboratively on the vertical integration of Indigenous health content as well as allowing us to negotiate and develop streamlined pathways for Indigenous people into medical schools.

It is also important that all health professionals develop an increased awareness of Indigenous issues. It is important that health practitioners understand the barriers that might prevent an Aboriginal patient attending care or following advice, or how an individual's Aboriginality affects their need for medical attention. Medical schools need to ensure all students get Aboriginal cultural training and skills, and even simple exercises made part of curricula would help.

On the strength of the platform established with MDANZ, we have met with the Committee of Presidents of Medical Colleges, to develop work on vertically integrating Indigenous health content, training and greater recruitment of our people into specialist medical college training programs — continuing the Indigenous health content covered at the medical school level all the way through specialist training. There is excellent engagement with this strategy at a number of colleges (eg the Royal Australian College of General Practitioners and the Royal Australasian College of Physicians).

As a clinician and a medical educator, I am passionate about the need to make the health system culturally safe for our doctors and students. I think the best way to measure cultural safety is when Indigenous people feel supported, valued and appreciated in their learning and working environments. With the number of Indigenous doctors within the profession growing, that can only mean a better future for our children.

Theme 1: Increasing health workforce flexibility

Convenor: Dr Andrew Singer,
Senior Medical Advisor, Acute Care Division
Australian Government Department of Health and Ageing

Key questions and issues:

How do we increase the flexibility of our health workforce, to maintain an appropriate number of generalist professionals? How do we make education and training of the health workforce more flexible to both meet our future needs and minimize any retraining required when roles or work practices change?

What is the right medical model for our workforce?

What is the ideal balance between 'generalism' and 'subspecialisation' for the health workforce? How do we ensure that there is an appropriate workforce for after-hours and emergency cover, coordination of care for the 'whole' patient and an ability to provide services to patients outside of capital cities?

Interprofessional learning and flexibility

Interprofessional learning is about training teams made up of different disciplines, working together for the benefit of the patient. How important is it for medical education, training and extending healthcare in general? If it is important, how do we promote it?

Competency based education and training and flexibility

Can competency-based training be used as a tool to increase health workforce flexibility and portability?

Geographic flexibility/skill flexibility (including rural clinical schools)

What are the important aspects of workforce flexibility we need to concentrate on? Do we need to strike a balance between geographic flexibility (the ability and willingness to work in urban, suburban and rural areas) and skill flexibility (the ability to multi-skill, or to sequentially attain skills in career development), or is one more important than the other?

Rural perspective

Associate Professor Richard Murray
Dean and Head of School
School of Medicine and Dentistry, James Cook University

The Australian health-care system is divided along state lines; however, it is valuable to look instead at the division between metropolitan and regional Australia. Metropolitan Australia has a population of 14 million, with 160 000 indigenous Australians (1%); regional Australia has a population of 7 million, with 360 000 Indigenous Australians (5%).

Metropolitan areas are concentrated in terms of both population and resources; however, they still have to deal with:

- erosion of generalist scope and increasing subspecialisation

- fragmentation of care, where concentration on subspecialties mean that patients may not receive the holistic care needed (this is particularly of concern in chronic and aged care)

- increased awareness of medico-legal hazards, where the basis for treatment protocols is driven by legal constraints, rather than evidence-based medicine.

Regional areas deal with the issues of population dispersal and scarce resources, and also have the challenges of Indigenous health; they are even more affected by the erosion of generalism and the trend towards subspecialties. As rural and remote areas are served by a more limited health workforce, it is essential that this workforce be able to manage a wide range of health conditions. Rural health depends on the generalist specialist, and the decrease of these professionals in Australia is a vital issue. Figure 2 shows the current training trends, with the vast majority of medical fellows opting for subspecialty training.
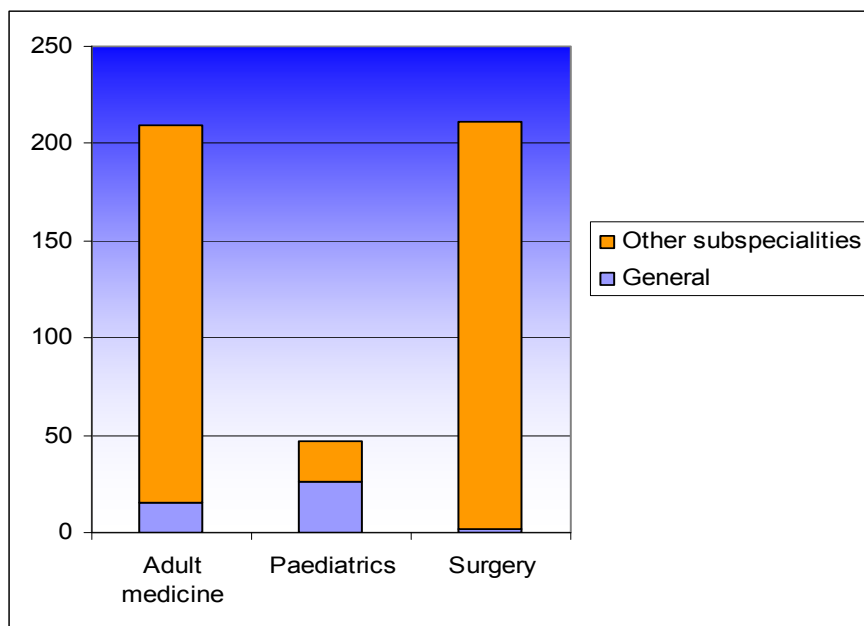

Figure 2   New Fellows in 2007: selected specialties
Medical Training Review Panel 12th Report, May 2009

It is vital that the generalist specialist is re-invented, re-incentivised and re-tooled, to reverse this trend.

Along with this, we need health workforce reform. We cannot spend as much as we want on health care — there are always other pressures on the tax dollar — so we must work smarter and come up with a different, more flexible, health workforce model.

Team-based 'delegated' care can provide an answer in rural areas, allowing many roles traditionally taken by doctors to be delegated to mid-level health care personnel. While both independent and delegated workforce practices (see Table 1) are needed in a successful overall health workforce model, team-based care is a good model for rural primary care, creating a local workforce in areas of need by training nonspecialists.

Table 1   Independent vs delegated workforce practices

	Independent	Delegated
Training	Specialised, formal postgraduate qualification	Generalist, often primary qualification
Scope of practice	Codified, static	Flexible, evolving
Controls	External regulation	Local supervision
New clinical tasks	Formal training and credentialing	Often informal skilling-up
Indemnity	Problematic, public sector cover usually essential	Supervisor retains responsibility, supplementary insurance affordable
Examples	Nurse practitioner Clinical pharmacist	Practice nurse Remote area nurse AHW Physician assistant

In Queensland, the Aboriginal Health Worker (AHW) model provides a good example of a successful delegated workforce. The AHWs are given basic health care training, and this is then supported through the development of clinical experience to allow them to provide primary care to their communities. Support is also provided by protocols involving other health professionals. For example, in the area of eye care, the need for an outside ophthalmologist to visit Aboriginal communities to check for retinal changes associated with diabetes (which has a high prevalence in the Aboriginal population), was replaced by the AHW taking pictures with a portable retinal camera, and sending via a telemedicine link to a metropolitan ophthalmologist.

Similarly, in the United States, the physician assistant (PA) model is being developed, where trainees with a variety of health backgrounds are given generic 2–3 year postgraduate clinical training, and are employed under a delegated practice model. The PA model is now being adopted by Canada, the Netherlands and South Africa, England and Scotland, and is being trialled in Queensland in Cooktown, Mount Isa and Brisbane.

While delegation or task transfer is seen as problematic by some health professionals, there seems to be less resistance to or anxiety about roles and task transfer in rural or regional areas, possibly as necessity has demonstrated the effectiveness of this approach.

We need to recognise that innovative and creative solutions to the challenges of health care and the health-care workforce often occur in the workplace — when need meets opportunity and people are active in creating solutions — rather than at the policy table. We need to learn from and support the solutions that are developing on the ground.

We also need to encourage more health workers to take up the option of a rural career, to ensure that the regional-based health workforce grows and improves. While many areas see a shortage of doctors, there is not actually an overall shortage in Australia, just a maldistribution.

Research into health career choices show that the predictors of a rural health career are:

- rural origin (and spouse rural origin)

- rural curriculum focus

- rural clinical exposures as a student

- regional university programs

- regionally located postgraduate training.

It is clear that regional training plays a major role in career choices, so it is vital that the number of rural training places is increased. Indeed, increasing regional capacity to capture an appropriate share of medical graduate growth can be considered a national policy emergency.

Overall, Australia needs more planning, flexibility, incentives and a systems approach to producing a medical workforce to meet our needs. If the incoming numbers of students follow the trends we are now seeing — staying in cities and moving to subspecialties — we will end up with exactly the workforce we do not want or need. We will end up with health care that will cost more, and it will be hard or impossible to change, as once the workforce is trained and in place it will be hard to move them to ensure all Australians have the best access to the health care they need.

Specialist perspective

Professor Russell Stitz, AM
Chairman, Committee of Presidents of Medical Colleges
Head of the Surgical Discipline, University of Queensland

In terms of the distribution of our health workforce, the current situation is that metropolitan areas are fine, outer metropolitan areas are struggling, and regional areas are chronically undersupplied. This decreased rural equity of access to quality care is magnified by the problems of distance in the larger states, and the trend towards subspecialisation rather than generalism.

Australia has responded to the realisation of a shortage in doctor numbers by increasing the numbers of undergraduate trainees. Colleges in turn have increased the places available for further training; however, this has been done on an individual college basis rather than a coordinated approach. This means we may not end up with the specialists we actually need.

How else can we address the rural shortages? We need to make regional service more attractive. Perhaps we need to take on a business model such as the mining companies — their employees are rewarded for remote placement with major remuneration both in terms of salary and other benefits such as subsidised travel. We also need increased resources and management commitment in regional areas to reduce burnout. We will need to support and expand our rural training options. This will include support for rural clinical schools, increased funding for rural training positions, and development of models to provide training in settings other than major hospitals, such as community health centres.

We also need to make sure that we retain and expand our generalist base, including GPs, general surgeons, general paediatrists etc. A key to this is the standing of generalists. Generalism is not afforded much kudos within the health community — it is often seen as the last option, rather than a conscious career choice. We therefore need to recognise that generalism is a specialty in its own right, and to incentivize trainees to take this path.

The lack of generalism has a particular impact on acute care. We need generalists to support this care, and we also need better models of acute care delivery and better infrastructure support for acute care delivery. Government programs could also assist in lessening the impact of trauma on elective surgery coupled with initiatives to develop step-down, sub-acute and limited stay beds.

Medical education and training is of course at the basis of developing a flexible workforce. Current issues with medical education include the lack of coordination across the continuum of medical education and training in Australia, the length of time which medical education takes, and the ignored role of pedagogy.

The Garling Report summarises our goal nicely:

> The completion of medical education and training in an efficient, flexible and timely manner to a standard which will facilitate the most accessible medical workforce in Australia for the provision of safe and effective health care to the community.

> *Final Report of the Special Commission of Inquiry into Acute Care Services in NSW Public Hospitals*, Peter Garling SC, October 2009

One way to shorten the time for training may be the use of simulation. Simulation may also be useful in certification, recertification and retraining processes. Simulation can easily be used to improve technical skills, and even nontechnical competencies can be taught and improved in a simulated environment. For example, the Royal Australasian College of Surgeons (RACS) has developed its surgical education and training program around nine core disciplines. Competence criteria will be used to assess progress, rather than the traditional time and numbers, and the skills courses and simulation are designed to accelerate the acquisition of competencies.

While the effectiveness of such strategies depends on the specialty, we need to understand how simulation can be used to improve training. We need to understand which skills can be acquired by low and high tech simulation, what level of competency can be achieved, and how training in judgement can be simulated. Some of this research is already being done:

- Scallon et al, Lossing et al (1992) and Reznick (1993) found that simulation was effective.

- Ericsson (1996) emphasised deliberate practice to develop technical skills rather than just time in surgery.

- Seymour et al (2002), Grantcharov et al (2004) found that low-tech simulation produced fewer errors on transfer to the operating room.

- Taffinder et al (1998) found that transfer of skills was better with simulation for laparoscopic techniques.

- Gallagher (2005) found that high-tech virtual reality simulation conferred the greatest skills transfer but is considerably more expensive.

- Sedlack and Kolars (2004) showed that the initial gain may be negated after time, with an initial positive effect for the colonoscopy simulator but no difference after 30 colonoscopies.

Better simulators are required with more detailed study of the skills sets and motor activity, and larger scale validation of the strategy is necessary. This is being undertaken for example in a component of the RACS program. The 'Fundamentals of laparoscopic surgery' course was developed and validated by the Society of American Gastrointestinal and Endoscopic Surgeons and the American College of Surgeons (ACS). RACS requires general surgical trainees to complete the course, and the assessment component is being studied in collaboration with ACS.

Another way in which the shortage of rural doctors may be addressed is through task transfer. While task transfer needs to be carefully defined and managed, the policy of the Committee of Presidents of Medical Colleges (CPMC) is that of support for team-based health care with effective and safe delegation of medical care. In task transfer, CPMC believes that:

- medical care should be overseen by an appropriately qualified medical practitioner

- the primary consideration must be the maintenance of high quality care

- the delegation must be specific with documented policies and monitoring processes

- adequate consent procedures and indemnity arrangements must be made.

Colonoscopy provides a good example of where task transfer can be effective. The need for colonoscopies is underserviced in regional areas where surgeons predominantly provide the

service. Evidence from the United Kingdom supports the training of nurse endoscopists to perform this role.

Another aspect of medical education is the medical educators themselves — what we really need is to make all doctors into educators. Public hospital medical specialist appointments should include obligatory educational criteria, teaching incentives and quarantined teaching time. These criteria can be extrapolated to other health professional programs. In addition, education and training should be included in management performance criteria and appraisal. Such requirements should be part of future COAG reform processes and should be linked to funding.

Overall, all educational processes should be linked to the ultimate graduation of high quality generalists and specialists. Colleges need to continue to evolve and expedite training based on innovative, competency-based individualised vocational programs, and to consolidate programs to produce high standard specialists in a timely fashion.

Interprofessional perspective

Professor Alison Lee
Director, Centre for Research in Learning and Change, University of Technology Sydney

Interprofessional education (IPE) is defined as occasions when two or more professions learn from, with and about each other to improve collaboration and the quality of care.[1] IPE is sometimes accused of undermining specialisations, but it is actually about collaborating and learning about each other. Most importantly, IPE is about supporting teamwork. Communications skills developed through IPE promote interaction between people rather than siloing roles. And if team members value and respect each specialty and understand each person's role in the team, the team as a whole works together more effectively.

There is an internationally recognised need for team approaches and IPE, and an extensive body of evidence on the benefits of IPE and of the contrasting problems with practice fragmentation. IPE leads to improved:

- workplace productivity

- patient outcomes

- staff morale, and hence retention rates

- patient safety, since lack of communication or miscommunication is major cause of adverse events

- access to care, particularly in rural areas where the team approach helps patients get the care they need.

Later in 2009, the World Health Organization will publish the *World Health Organization Framework for Action on Interprofessional Education and Collaborative Practice.* In this, they argue for the need for IPE to support collaborative practice for improved health. By building IPE into our healthy education systems, we can achieve a collaborative practice-ready health workforce and deliver a culture shift in health-care delivery.

This comes against a background of a range of challenges to health-service delivery, including falling numbers of generalists, increasing incidence of chronic illness and lifestyle diseases, and workforce shortages in rural and remote areas. At the same time, we are seeing a move for health-service reform which includes improved systems of governance, increased responsiveness to Australian demographics, and new models of interprofessional and team-based care. Overall, we are recognising the need for the establishment of a flexible workforce that works effectively as a team.

The question now is how do we achieve such a team-based workforce? We are in early days in developing better ways of educating people how to work together better. The 'Learning and teaching for interprofessional practice' (L-TIPP) project looked at IPE in medical education. In a collaboration between the University of Sydney, University of Technology Sydney, and the

---

[1] Centre for the Advancement of Interprofessional Education (CAIPE,1997, revised)

Australian Learning and Teaching Council, L-TIPP conducted an international and national literature review, comprehensive activity profiling within Australian universities, and a national consultation on the draft proposals.

The L-TIPP report, *Interprofessional health in Australia: The way forward* (April 2009), found that a recurring theme in health care reports has been ineffective team work. The higher education and medical training system is based on competition rather than collaboration, whereas the health workforce system needs collaboration. They also found that IPE can be a valuable response to this health care challenge, and that students learning about others helped them to work effectively in a team later.

The report recommended four key areas of development:

- informing and resourcing IPE curriculum development

- embedding IPE as a core component of health professional practice standards and where appropriate, in registration and accreditation processes

- establishing and implementing a program of research to support and inform development

- establishing an IPE knowledge management system.

These findings were backed up by *A Healthier Future for All Australians*, the final report of the National Health and Hospitals Reform Commission released in June 2009, which indicated a need for a flexible team-based workforce and for a system-wide learning approach.

A successful example of IPE can be found in Linköping University in Sweden. The university has delivered a problem-based, interprofessional learning curriculum since 1986. IPE is integrated course-long and course-wide, and includes interprofessional 'clinicum', including simulations, interprofessional quality improvement initiatives, interprofessional student-led training wards. IPE also continues beyond the student training stage, with continuing professional learning and development for working health professionals within clinicum space, and mandatory two-way secondments and joint appointments for academic staff.

While IPE has been around for the last 20 years, up until now it has relied on local champions to push it forward, but this is not a sustainable or broad enough approach. We are now developing our knowledge about how best to support team building through IPE. The Australasian Interprofessional Practice and Education Network[2], for example, aims to provide a space for the sharing of information, networks and experiences in the area of interprofessional education, interprofessional learning and interprofessional practice in health care across Australia and New Zealand. If we want to harness IPE to build our health care teams, we will need to embed and sustain change to include IPE as part of the medical education system.

[2] http://www.aippen.net

Trainee perspective

Dr Michael Bonning
Australian Medical Association Council of Doctors in Training
Australian Medical Students' Association

Trainees represent the future of the profession. They also represent a major resource, not just in the future but now, as they provide a significant proportion of the care in our hospitals. This role must be balanced with their other responsibilities and needs, and all trainees experience conflicting pulls from universities and hospitals, and their own career needs.

How can we improve the trainee experience?

Firstly, we need to ensure we have the educational resources we need. Unfortunately, there is a lack of teachers and training places, and there needs to be rapid development in this area to cope with the growing numbers of medical school graduates. In looking at our future supply of doctors, we should realise we will also need a future supply of educators — this expectation and some training in this should be made part of the current curricula.

In addition, often a most challenging part of training from the trainee's perspective is just navigating the administration and paperwork. Streamlining the bureaucracy would improve the trainee experience and may reduce administration costs.

What do trainees want from training? In talking to other trainees, the core themes seem to be the desire for minimal, meaningful and flexible rotations, and expedition of re-training.

This conference is examining workforce flexibility; however, we need to recognise that trainees themselves need flexibility, not just the system. Workers do not stay in one position for 30 years any longer — the trainees of today will move and change paths, from generalism to subspecialisation and maybe back again. The system needs to accommodate and support these broader career paths and expectations of workers, and to facilitate movement between specialities.

The recent AMA research into work-life flexibility[3] surveyed 600 junior and senior doctors, with 40% being senior salaried doctors. The survey found that:

- 85% of all those surveyed indicated they want to access flexible working arrangements in the next 10 years

- 68% of surveyed senior doctors had accessed flexible working arrangements in the 12 months prior to the survey.

This shows that both senior and junior doctors want and should expect access to flexible training and working experiences.

---

[3] Work-life Flexibility Survey - Report of Findings, 2008 www.ama.com.au

At the same time we will need to balance our own wants and needs with the needs of the population:

> The doctor's role must be defined by what is in the best interest of patients and of the population served.
> *Consensus Statement on the Role of the Doctor*, Medical Schools Council, UK, 2008

We are now in an era of change in the world of trainees and medical education. Figure 3 shows the dramatic rise in the number of medical school graduates that we are seeing in Australia. While the upsurge in graduates is one of the key issues the medical education system needs to address, it is worthwhile recognising that the graph also shows the previous chronic undersupply of clinicians to the Australian public.

This is of concern to us now because of the lack of teachers that this undersupply has generated, and also because under-resourcing to manage chronic disease may be now leading to greater acute presentation, further straining the clinical workforce responsible for training junior doctors.
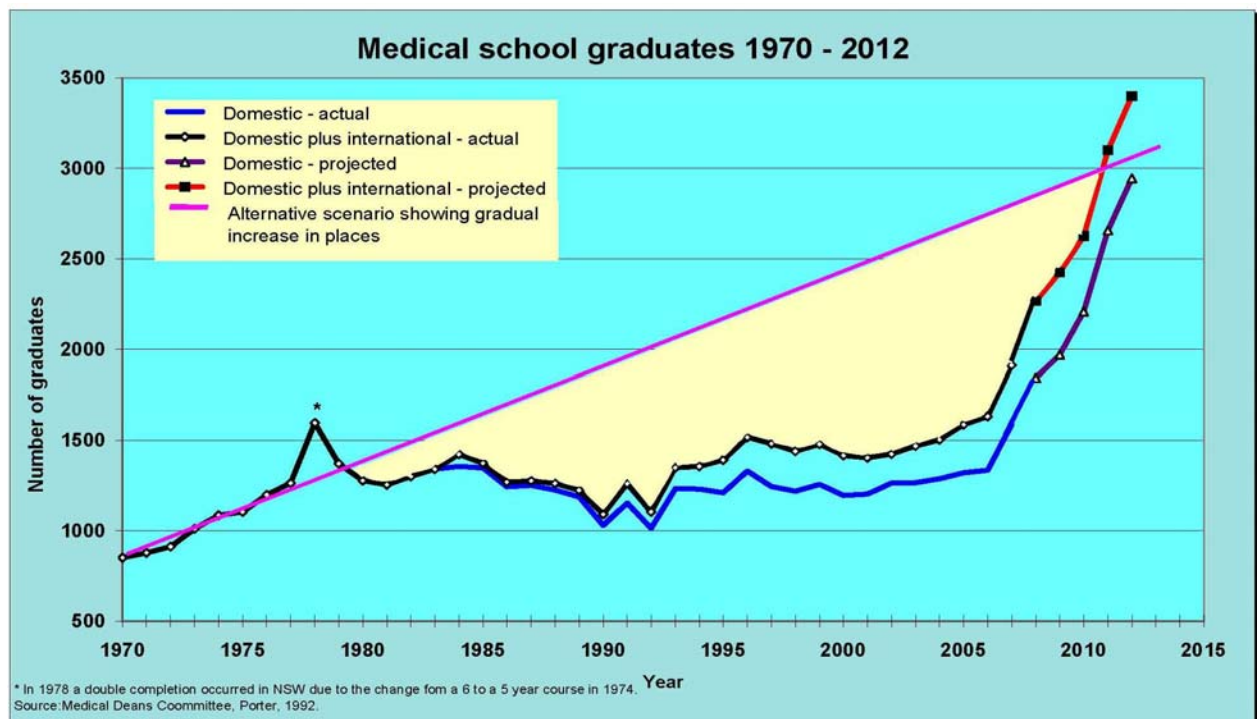
Figure 3   Medical school graduates (Source: AMA)

In conclusion, the Australian health workforce needs to increase in size and to be able to deliver to the needs of an ageing population, and training will be the key to this. Trainees understand the issues and should be included as stakeholders in discussions of changes to the medical education system. There are many organisations involved and driving change, and trainees need greater input across the system to ensure their experiences inform the new system and the next generation of trainees.

Breakout Session A — Increasing workforce flexibility

This breakout session looked at four key topics.

(i) Generalism versus subspecialisation

What is the ideal balance between 'generalism' and 'subspecialisation' for the health workforce? How do we ensure that there is an appropriate workforce for after-hours and emergency cover, coordination of care for the 'whole' patient and an ability to provide services to patients outside of capital cities?

- **Is it important to encourage the retention of some of the specialist workforce in generalist roles?**

Delegates felt that generalist roles are vital to the medical system. Particularly in treatment areas such as acute medicine, major trauma, complex surgical cases, and comorbidity encountered in ageing patients, it was recognised that the overall view that generalism brings to medical care was crucial to patient outcomes. Hospitals were increasingly facing problems with the subspecialty approach, where specialists could not optimally provide the care required for the multitrauma or multidisease cases which are becoming increasingly common. Also, a lack of generalism causes particular problems in regional areas — for example in regional surgery generalists are needed to deal with a wide range of techniques rather than specialists who can only perform a few specific operations.

It was raised that specialist care is certainly good — if someone only does one type of operation then they are likely to be good at it. However, if you look at the whole of the safety process, patient safety and outcome is more to do with the effectiveness of the health care team as a whole, and these tend to be better in smaller team environments including generalist roles.

It was also raised that it is important that it is recognised that the topic should not be seen as generalism vs specialisation, as generalism is in itself a specialty and should be recognised as such. What was needed was a balance between general specialists and subspecialists, and ensuring we have the right mix to provide the care needed into the future.

- **Are there other specialties where this is important?**

The growing lack of general practitioners receives the most publicity; however, delegates nominated a range of other areas where general specialists were lacking, including surgery, obstetrics, anaesthesia and orthopaedics.

- **Assuming it is desirable to retain generalists, what are the current impediments?**

The discussion focussed on why trainees decided to opt for specialty and subspecialty roles. The reasons for this were based around negative perceptions of generalism and positive aspects of specialisation.

Delegates identified that the main reason for trainee moves into specialisation was that generalism was generally given less recognition and status than specialisation. This lack of recognition came from both the public and within the profession, and reflected the view that generalism was something that trainees stayed in if they weren't 'good enough' to subspecialise. The inability to train specifically as a generalist was also seen as an important driver of trainee choice. Generalism also attracted less remuneration; however, most delegates did not believe that this was a major influence in trainee choice.

It was also perceived that generalism was more complex and potentially carries higher professional risk (for example, whether a general practitioner be sued if they don't treat a cardiac patient as well as a cardiologist would have). There was usually a higher burden in hospitals for generalists to be on call. There was also a higher burden on generalists to maintain continuing professional development across the whole breadth of their discipline.

It was expressed that choosing a specialty was a very human desire to want a defined, 'safe' role, knowing a lot about one area instead of having to know 'everything'. Specialists saw their role as being able to intervene definitively. Specialists were also 'looked up to' by patients, who may ask generalists for a referral to a particular specialist as they are perceived to give better care or advice.

- **What are potential solutions?**

The solutions discussed were mainly to do with developing better rewards for generalists — not just different funding models to provide additional remuneration, but status, support, and clear career paths.

It was essential that the negative perception of generalists is turned around both in the profession and public. This will require marketing and promotion of particular careers, and positive role models.

It is important that current training models are changed to provide specific training in how to be a generalist — the current model of training a generalist by rotating them through the specialities is flawed. The development of a generalist 'specialty' would provide both a specific training pathway and assist in diffusing the negative perception of generalism as not requiring further training.

In addition, exposure to generalist team approaches would assist trainees to see this as a potential career path. Currently the trainee experience is mostly provided in major hospitals, which mainly reflect the subspecialty approach. The expansion of training into community health centres and regional centres would allow trainees to be better exposed to the generalist approach.

More support was needed to prevent career burn-out. Particularly in regional areas, the generalist is the essential 'workhorse'. Unfortunately, this often means they do everything, leading to a high drop-out rate in rural areas, as well as making it an unattractive career path for trainees. Regional generalists need better support (eg regional registrars) otherwise trainees will not choose the generalist option.

(ii) Interprofessional education and training

Interprofessional education (IPE) is about training teams made up of different disciplines, working together for the benefit of the patient. How important is it for medical education, training and extending health care in general? If it is important, how do we promote it?

- **How important is it for medical education/training and improving health care in general?**

Interprofessional education was seen as important because of the importance of team care. Communication and collaboration between different members of the health care team are fundamental to good patient care, with effective teamwork helping to deliver patient safety and quality outcomes. There is a strong evidence base that IPE helps to develop this effective teamwork in health-care settings, however most delegates said that the need for IPE was poorly recognised.

- **Assuming it is important, what are the impediments?**

The lack of recognition of its importance was a key impediment to institutions developing IPE as an addition to their curricula. Delegates also identified a number of logistical problems, including the already crowded curricula, the difficulty of getting trainee groups together across schools and disciplines, geographic non co-location of different courses, timetabling clashes, and organisational barriers when different schools are in different administrative structures.

- **What are potential solutions?**

The solutions firstly need to address the institutional barriers to IPE, by developing an evidence base to highlight its importance, and to develop guidelines for curricula and training approaches. A handbook of ideas would help training institutions to build IPE into their activities, and the development of training simulations involving IPE would be a valuable addition to medical training resources. Champions were important local drivers of change. However, strong guidelines, perhaps supported by the inclusion of IPE progress in institutional performance indicators, are needed to ensure the IPE programs are ongoing and sustainable. Any IPE program must also have measurable outcomes and assessment.

- **At what level(s) of training should it be attempted?**

It was felt that the IPE concepts should be built into all levels of training, with a spiral curriculum to match learning objectives. Exposure to team-based health care should be an important part of clinical training.

- **What government help (Australian or state) might be needed?**

Government could assist IPE by providing funding for research to develop the evidence base for the IPE approach within health care. Additional federal and state funding would support the development of IPE curricula.

(iii) Competency-based training, and recognition of prior learning

Can competency-based training be used as a tool to increase health workforce flexibility and portability?

- **Are there some disciplines or areas of training where the duration of training can be shortened by periodically checking whether competency has been reached?**

Competency-based training was one of the areas of most varied opinions in the MedEd09 group. Overall, it was felt that competency-based training can be part of education curricula, but that further understanding was needed to see exactly what part it would play. Many delegates thought that competency-based training could be used for specific procedures, and some thought that competency-based training through simulations could go beyond this and offer more complex training scenarios, but this is considerably more difficult.

It was less clear whether competency-based training should be used to shorten training times. It was generally felt that time and experience were necessary to the training process, and that specific competency in a procedure was not by itself sufficient to allow trainees to move forward. The important skill of clinical judgement needs time to mature. However, it was suggested that those trainees with prior learning or those who were fast learners could be used as peer teachers, to help provide the teaching resources needed.

Competency-based testing was also seen as of use in on-the-job appraisals and also in recognition of prior learning (RPL), where specific competencies could be tested in simulations.

- **Should prevocational and vocational training allow more (time) credits for prior learning?**

Similar to IPE, RPL was seen to be important, but not yet well recognised by institutions. Delegates felt that there needed to be better collaboration between institutions, particularly colleges, so that the growing culture of a more flexible and changing career structure was adequately supported by RPL. An agreed approach was needed for RPL both to ensure that students received the recognition they deserved for work completed, and that training standards were maintained.

(iv) Geographic flexibility and skill flexibility

What are the important aspects of workforce flexibility we need to concentrate on? Do we need to strike a balance between geographic and skill flexibility, or is one more important than the other?

- **Do we need to strike a balance between geographic flexibility (ability and willingness to work in rural or outer metropolitan areas) and skill flexibility (ability to multiskill, or to sequentially attain skills in career development)?**

It was agreed that we needed a flexible workforce, which meant one that is able to cover our health care needs in terms of both geographical and specialty requirements. Achieving geographic flexibility would require better rural training. While it was recognised that workforce planning could assist with this by mandating that a certain number of students undertake rural

training, it was more important that these are committed students who are happy to consider a rural career.

Achieving the right mix of specialties and skills would also require workforce planning. There is a need for coordination between programs and transferability between colleges. This aspect of flexibility can be difficult to manage, but it is important to support workforce movement.

- **Which current programs or incentives have been shown (or at least seem) to work?**

It has been shown that rural training increases the likelihood of a rural career, and it was also anecdotally noted that during training up to 90% of trainees say that they were happy to experience a rural placement. It was therefore important that trainee places be available in rural and remote areas. However, delegates pointed out that just placements were not enough — a complete rural pathway and good logistical and management support was necessary for people to stay in regional areas. Also, a consistent research finding is that that quality of geographical placement is dependent upon length of time in place, so that students are more likely to stay longer term after a longer placement.

It may also be worthwhile to map out the geographical dimensions of training for medical students in advance, in order to to flag the possibilities of a rural career very early with students.

- **What other methods or incentives may be worth trying?**

Recognition of prior learning was seen as a way to allow people from diverse backgrounds to enter rural service, and it was important that RPL be developed to allow doctors to make a mid-career change to rural areas. More generalist training will also support greater geographic flexibility.

- **Which strategies are likely to be most successful for increasing our Indigenous workforce?**

Two aspects were discussed about our Indigenous workforce – increasing the number of Indigenous health care workers, and ensuring all medical graduates have some Indigenous health training.

The main strategy needed to increase the number of Indigenous medical students was support, including financial support, specific placements for Indigenous students, mentoring and career support. This support would be needed until a critical mass is reached to allow students to readily see role models and career pathways. The development of flexibility within courses to allow Indigenous students to study in their own communities may also assist in expanding the Indigenous workforce.

It was also important that all students understand the cultural needs which are part of Indigenous health care. All medical graduates need education in Indigenous culture and some experience in Indigenous health (eg in New Zealand there is integrated Indigenous teaching in medical school for all students and all students are required to visit a Maori community). An important step in this direction in Australia has been the mandating of the Indigenous health curriculum framework in all Australian medical schools, by the Australian Medical Council, with the support of Medical Deans.

Theme 2: Achieving vertical integration

Convenor: Dr Peter White
Project Manager, Committee of Presidents of Medical Colleges; Manager, Assessment Services, Royal Australian and New Zealand College of Obstetricians and Gynaecologists

Key questions and issues:

Making genuine progress with developments to improve transitions across the so-called 'Continuum of Medical Education' has been a topic of discussion in all sectors associated with the continuum for some time now. But just how much progress has been made in enabling a more streamlined, coordinated transition between stages for those undertaking medical education at a time when more demands look likely to be placed on all sectors, and where are the examples that indicate just what can be achieved?

What is the continuum of medical education?

Is the landscape commonly understood, or is it different things to different people?

Where do competency and time-based programs fit in the context of facilitating vertical integration?

Are they mutually exclusive with room for only one, or is there a role for both?

What is the role for recognition of prior learning (RPL) and other similar mechanisms in achieving effective and meaningful vertical integration?

What are some of the issues that are encouraging the use of such mechanisms, and what issues are inhibiting their utility?

The focus of the theme is on examining situations in which attempts have been made to achieve real progress in vertical integration, and the issues involved, as well as the lessons that have been learned from where attempts may not have produced the long-term sustainable progress hoped for in the timeframes that had been envisaged.

What is the continuum of medical education?

Dr Greg Keogh
Project Manager, Australian Curriculum Framework for Junior Doctors Project

The continuum of medical education begins with university curricula, continues through the pre-vocational and postgraduate medical college phases, and ends with continuing professional development. While we talk about a 'continuum' of education, there are in fact gaps and challenges that need to be addressed.

Along with the different stages of education and clinical training, there are new and more complex roles for the trainee and doctor that emerge at every stage of the continuum (Table 2).

Table 2   Roles across the medical training continuum

Stage	Roles							
	Learner	Practitioner	Educator	Supervisor	Leader	Researcher	Manager	Advocate
Medical student	▓							
Junior doctor	▓	▓	▓	▓				
Registrar	▓	▓	▓	▓	▓	▓	▓	
Consultant	▓	▓	▓	▓	▓	▓	▓	▓

This is a natural progression as the doctor gains experience and knowledge. However, there is often a sudden transition between stages, when new roles are added. For example, when a student is suddenly expected to become an educator, or a junior doctor is expected to carry out researcher functions.

Do we need instead to teach some of the skills at the previous level so that the trainees will be better prepared (eg providing some understanding of the role of a doctor as a researcher or teacher or supervisor right from undergraduate level)? This would both prepare doctors for the full spectrum of roles they need to take on, and would ensure that we have the human resources we need in those areas which are lacking — namely teaching and research.

While this brings up the issue of scarce resources, it would be possible to do some of this sort of teaching in vertical silos, so that a subject or module would be taught to a number of levels at the same time, instead of keeping everyone in separate groups.

As well as the competition for limited resources, other challenges in the medical education continuum include:

- repetition of learning between levels of the continuum with minimal recognition of prior learning
- multiple accreditation systems
- minimal collaboration between the levels.

The Australian Curriculum Framework for Junior Doctors was designed as a tool to address some of these challenges and to promote integration between the different stages. The Curriculum Framework was developed under the auspices of the Confederation of Postgraduate Medical Education Councils (CPMEC) by a writing group of experienced clinicians and educators. CPMEC undertook extensive consultation and feedback prior to the launch of the Framework at the 11th National Prevocational Forum in Adelaide, November 2006. The framework provides a way to map between undergraduate and postgraduate curricula, using national processes including term description templates, assessment principles/glossary, and supervisor training. The framework also emphasises workplace observation and interaction with supervisors, and has a place for the recognition of prior learning across the continuum. CPMEC is now overseeing implementation of the Curriculum Framework.

Our future challenges will be working together to ensure rational use of resources, development of support and training for trainers, and the management of change.

Performance vs competency vs time

Dr Victoria Brazil
Director, Queensland Medical Education and Training

One of the current questions in medical education is whether we can measure progress by something other than time, in order to speed progress through the training continuum.

Time is of course the tried and tested measure of progress. Undoubtedly, expertise develops with experience, and an increasing amount of time is presumed to be a useful measure of the volume of experience. However, time does not necessarily equal volume, and volume certainly does not necessarily tell you anything about the quality of the experience.

What we really need is to identify the point of competence. Currently, we don't really know how many hours it takes actually to reach competence in a particular task.

We also don't know how well competence translates to the real world. The role of the doctor is not just to perform a task, but to manage complexity and make judgements integrating many factors. Thus, while competence testing for specific tasks can tell you if a trainee has the technical ability to complete the task, the challenge is really to measure competence in a useful way — not just can you do this procedure, but should you, and can you when there are other difficulties or conditions present.

Simulation may be the tool we need to provide 'real' scenarios and enable us to test performance against what an 'expert' would have done. Simulations allow us to build in complexity to the task – enabling us to measure real-world performance rather than simply individual competencies in specific tasks.

In Queensland, examination of a simulation test of competency in intubation demonstrated both the ability of the simulation to add complexity, as well as the competence difference between different levels of the workforce continuum.

The first simulation involved a straight test of intubation skill, with no added difficulties. The left side of Figure 5 shows that in the easy test the interns took longer to perform intubation, but that there was little difference between the registrar and consultant groups.

The second simulation then introduced a range of unexpected real-world difficulties. While these were not especially challenging (the bed being at the wrong height, wrong equipment, etc), the right side of Figure 5 shows that there is now a clear differentiation between the groups, with consultants far more able to cope with additional challenges and manage the complexity of the task to achieve a good outcome.

Time to intubation
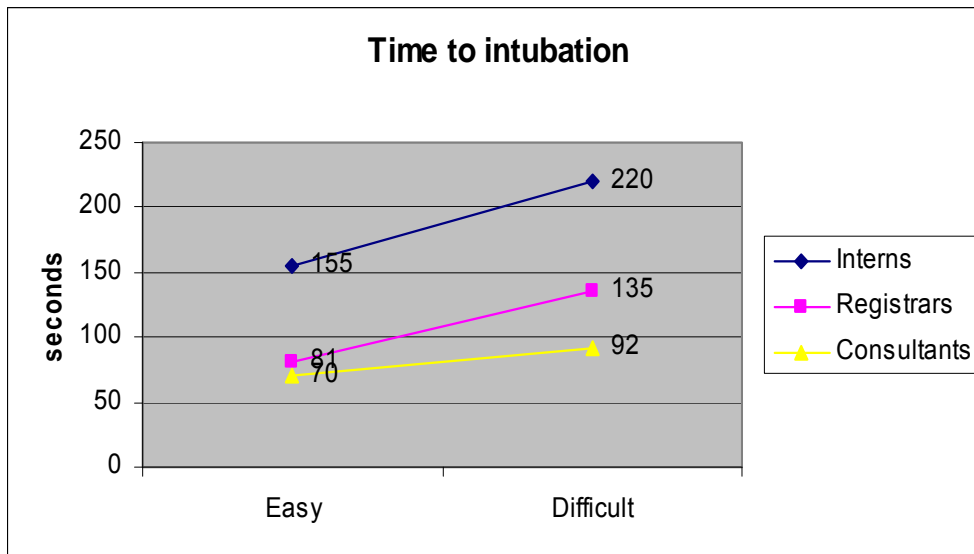
Figure 5   Easy and difficult intubation simulation

Well-designed simulations may provide not only a useful test of real-world competence, but also could be a useful education tool for providing real-world scenarios for individuals to learn from.

We need to utilise all the resources at our disposal to improve medical education and ensure that our future doctors develop what matters to patients — high quality real world performance. Let us develop measures to robustly measure performance rather than skill set competence.

Recognition of prior learning

Dr Andrew Perry
Chair, Australian Medical Association Council of Doctors-in-Training

Dr Jolyon Ford
Consultant Obstetrician and Gynaecologist, Frankston Hospital, Victoria

Recognition of prior learning (RPL) is a process for assessing and formally recognising a student's existing skills and knowledge (Good Universities Guide 2009).

Recognising prior learning brings with it a number of benefits:

- Trainee benefits:

  – avoids retraining

  – respects that skills have been already acquired

  – shortens training time

  – brings employment, financial, and social benefits

- Training institution benefits:

  – allows another trainee to be recruited

  – avoids repetition of administration

- Healthcare provider benefits:

  – enables earlier access to a specialist.

RPL will also become increasingly important as the workforce becomes more and more mobile, with trainees and doctors changing geographical location as well as specialty. RPL will support this movement and assist in the development of workforce flexibility. RPL is also an issue within the training continuum, as we need to ensure that scarce education resources are not used to reteach areas that have already been covered.

Unfortunately, while there are some examples of RPL in the Australian medical education system, in general RPL is ad hoc and it is usually a laborious task for the student to apply and achieve the required recognition. RPL is starting to occur at the vocational level but more needs to happen, and it needs to occur at the medical school and prevocational levels.

Why is RPL not more widespread and standardised in Australia? It may be that training institutions do not trust the training that has already been provided, but perhaps the main reason is that RPL has been seen as too hard to assess and too difficult to get institutions to agree to a common approach.

All medical colleges and institutions should incorporate a process of RPL that has broad principles. RPL should:

- be transparent and accessible

- fit with the curriculum

- guarantee principles of equality, fairness, and natural justice

- guarantee fast turnaround times for assessment
- have clear criteria against which applicants are assessed
- keep paperwork and cost to a minimum
- include a means of appeal.

The Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) have developed a RPL policy incorporating those principles. The policy was approved in November 2007 and the first applications were heard in 2008, and it is expected that RANZCOG will hear 4–5 RPL applications each year. The policy's criteria for RPL include:

- at least one year of a similar specialist training program (supervised, formally assessed, competitive entry, detailed curriculum)
- completion of the DRANZCOG advanced training program (1-year advanced diploma for procedural GPs)
- at least one year of a related specialist training program.

Each training institution will need to develop their own methods of RPL assessment, which may go beyond just looking at the time spent in another institution, and include examinations, supervised time period and supervisor reports, logbooks/portfolios, or interviews.

There are of course limitations and potential difficulties with any RPL policy. There will always be the risk of disappointment for some students, and differences in opinions about what should be recognised. Administering the policy will also take time, adding to the burden of administration costs.

However, RPL is an important issue and one that all training institutions will need to address.

Perspectives of vertical integration

Professor Kevin Forsyth
Dean, Royal Australasian College of Physicians

Associate Professor Tim Shaw
Office of Postgraduate Medical Education, The University of Sydney

Vertical integration of the trainee journey would enhance the training provided, would streamline the trainee experience, and would help to better utilise and harness our medical education resources. There are a number of obstacles to achieving vertical integration. The first is that training takes place within separate colleges and universities, and there is no structure for dialogue and collaboration to take place. Similarly, postgraduate trainees are placed within state and territory health services, whereas universities are generally federally based. This fragmentation leads to a number of problems. It is difficult to manage postgraduate trainee placement across different clinical settings and organisations and to ensure that training is consistent. It is also difficult to identify poorly performing trainees, and there is a recognised need for communication across sectors to identify and support poor performers.

Recognising these obstacles and challenges, the Royal Australasian College of Physicians (RACP) decided to re-frame itself to be a post-university education provider, to emphasise the link between undergraduate and postgraduate teaching. They have developed curricula utilising formative assessments to university standards, utilising teaching and learning processes common to universities, and have also developed a comprehensive *e*-environment to also reflect university teaching strategies.

RACP also initiated a specific project to examine possible models of university–RACP partnership in educational provision.

The University Partnership Project aimed to proactively explore how universities and the RACP can collaborate in the delivery of aspects of specialist training. An initiative of the RACP, the project reflected a growing desire from universities and colleges for increased vertical integration, and the need for an open and structured approach to potential collaboration. The project commenced in July 2007 and involved the RACP, University of Sydney, Monash University, and Flinders University.

In the project, Associate Professor Tim Shaw of the Office of Postgraduate Medical Education at the University of Sydney worked with the RACP and conducted extensive internal and external consultation. The project also brought together university deans and college members in a series of meetings.

The project found that there were clearly opportunities for the college and universities to collaborate, and that sufficient trust and good will existed to move forward. RACP and medical school deans agreed to proceed with further exploration. Five main areas were identified for further exploration:

1. Universities assisting in building educational capacity amongst the College Fellowship.
2. Supporting research and academic medicine.
3. Universities developing programs to support specialist training programs.

4. Looking at ways to reduce training times through collaboration.

5. Supporting sharing of resources in medical education.

The University of Sydney is continuing a productive discussion with the RACS around a number of potentially collaborative projects. In Phase II of the project, the RACP will engage with the other interested universities.

Panel discussion

Dr Peter White, Dr Greg Keogh, Dr Victoria Brazil, Dr Andrew Perry, **Dr Jolyon Ford, Professor Kevin Forsyth**, **Associate Professor Tim Shaw**, **Dr Jag Singh and Associate Professor Peter O'Mara**

The panel examined issues relating to vertical integration.

A coordinated network / vertical integration

There are many different players in medical education. The panel discussion recognised that the system is therefore fragmented, and that we need orchestration to bring it all together. This orchestration should be a coordinating rather than a governing role. A suggestion was made to develop an overall coordinated process that marries the silos, for example using the same teachers across different levels of the continuum. A managed network was supported (eg the Northern Clinical Training Network in Queensland has successfully joined the process up at the local level).

Competency vs time

The discussion on competency vs time brought out a wide range of opinions. Many felt that competency testing was a valuable addition to medical education, while other had reservations about its use. Those on the side of competency training and testing believed that:

- Time does not necessarily substitute for competency — how much someone has learned is not necessarily related to how long they have been in training.

- Time is a proxy for meaningful engagement with a patient; however, the time for training is increasing and engagement is decreasing - it is not about the number of patients observed but about the quality of engagement.

- We use time as a measure mainly because we are conservative, for fear of putting poor students in service. Should we instead match a faster process with better methods to identify poor students?

Those against competency training and testing believed that:

- there is a lack of adequate assessment mechanisms for competency

- some competencies can be assessed but others cannot, which is why time is a blunt but safer tool to fall back on

- if the primary reason for using competency testing is shortening training time, students do not actually want shorter training — they recognise they need a certain amount of time and practice to be and to feel competent.

It was also expressed that the debate should not be around competency vs time but something more intangible: the meta-cognizance and clinical reasoning that is needed in quality doctors. We need to produce a framework of learning that will produce such a workforce. This may or may not incorporate competency training and testing, both to shorten training times and to broaden the educational experience.

It was also felt that additional clinical experience should be provided across the training continuum. We need perhaps to incorporate an increasing gradient of responsibility for trainees providing health services, so that competencies can be built on with real-world experience. This strategy would need to be balanced with our risk aversion and fear of allowing poor students into service. An expansion of training into medical and community centres rather than hospitals may help in this.

It was also recognised that while shortening training time can have some advantages, it is important at the jurisdictional or hospital level to have a degree of certainty around service provision by staff. Since trainees provide a large proportion of service, fast-tracking training is not always appropriate because a lack of trainees can result.

Overall, it was thought that further research around competency training and testing was needed, to see how it may be used effectively to improve medical education and trainee experience.

Continuous professional development

A suggestion was made to put more effort into continuous professional development and post-fellowship trainees.

Theme 3: Building training capacity

Convenor: Professor Kevin Forsyth
Dean and Director of Education, Royal Australasian College of Physicians

Key questions and issues:

How do we provide clinical exposure, experience and good educational supervision for medical students, pre-vocational doctors and vocational trainees in our health system? Fundamental to good clinical training is the opportunity to experience clinical medicine in a supportive environment with good educational supervision. Given the enormous increase in trainee numbers coming, how can we best organise things at a system level and provide the most appropriate learning environments for our trainees?

What are the key challenges to clinical placements for vocational trainees, prevocational trainees and medical students?

- Physical capacity

- Clinical opportunity

- Educational supervision and support

What systems approaches might help overcome some of the obstacles?

What supports are fundamental? Are they common to all phases of the continuum?

How do we build supervisory capacity across the training continuum?

How do we equip supervisors in medical education expertise?

Are clinical placements key drivers to motivating students/doctors to work in areas of need (eg rural placements) or with populations with poor health indicators (eg placements within indigenous communities)? If so, what is the significance?

United Kingdom perspective

Professor Sir John Tooke
Dean, Peninsula College of Medicine and Dentistry, United Kingdom;
Author, *Aspiring to Excellence* - Findings and final recommendations of the independent inquiry into Modernising Medical Careers, led by Professor Sir John Tooke

Modernising Medical Careers (MMC) was introduced in the United Kingdom (UK) as a program of radical change to drive up the quality of care for patients through reform and improvement in postgraduate medical education and training. Under MMC, a new system of recruitment and training was introduced; however, following unprecedented levels of protest from medical graduates, an independent inquiry into MMC was launched in April 2007.

The results of this inquiry provide a valuable insight into the mistakes that can be made in medical education, and what may be needed to build an effective postgraduate clinical training system.

The inquiry produced eight key findings. The first of these was that guiding principles were lacking in the design of MMC. What is needed is for medical educators and program and system designers to have clear shared principles. In moving forward in the UK, it was decided to embrace clear, shared principles for postgraduate training that emphasise *inter alia* flexibility, 'broad-based beginnings', and aspiration to excellence. It was also important that related health policies (eg community focus, public health, care pathway integration etc) should be aligned and co-developed with the profession.

The second finding was that there needed to be clarification on what we wanted a doctor's role to be. Against a background of deficient acknowledgement of what a doctor brings to the health care team, trainees were increasingly becoming supernumerary, and their role after their Certificate of Completion of Training was unclear. This lack of understanding meant that workforce planning and the development of outcome focused medical education were impossible.

The third finding was that there was weak policy development, implementation and governance at the government health department level, and that there were poor intra- and interdepartmental links, particularly in the area of partnerships between the health and education sectors. Effective policy implementation was hampered by ambiguities and inconsistencies in supporting organisational structure (eg accountability for overall implementation was split between the Director of Workforce and the Chief Medical Officer; accountability in England was split between the Deputy Director Workforce and the Deputy Chief Medical Officer; and accountability for international medical graduates and the Medical Training Application Service lay outside MMC).

It is important to get governance on track at the outset of any change in systems. The inquiry's recommendation was for strengthening of health department policy, implementation and governance, strengthening of the health–education sector partnership, and the establishment of high-level leadership in medical education. All of this would support the much-needed co-development of policy and communication between government sectors and between relevant organisations.

The fourth finding was that medical workforce planning was extremely deficient. Evolving health policy/practice was not reflected in the medical education system, and there was a policy vacuum regarding increased numbers of prospective trainees. What was needed was revised medical workforce advisory machinery (in the form of the National Workforce Intelligence Unit) and policy in a range of areas.

The fifth finding examined the engagement of the medical professional in medical education and medical education planning. The inquiry found that there was a lack of professional input and even that people were deterred from questioning policy. The profession should develop a mechanism for providing coherent advice looking to the future on matters affecting the entire profession; however, it will need to be decided how consensus is reached between the different players.

The sixth finding was that management of postgraduate training was deficient. There is a need for integration between universities, colleges and medical practice; and for better postgraduate medical education and training initiatives. Corrective actions include a review of postgraduate deaneries to ensure they deliver against guiding principles of flexibility, aspiration to excellence and equity of access, and trials of 'graduate schools' where supported locally. New programs to 'train the trainers' will also be needed, and the Department of Health has launched a project to develop a curriculum for educational supervisors and to consider options for a UK approach to mandatory training and accreditation.

The seventh finding was that the regulatory environment is confused, with the split between two bodies — the General Medical Council (GMC) with responsibility for undergraduate and continuing professional development, and the Postgraduate Medical Education and Training Board (PMETB) with responsibility for postgraduate training — creating dis-economies (finance and expertise), and risking policy differences. As a result of the inquiry, PMETB is to be merged with GMC by 2010.

The final finding was the MMC structure of postgraduate training lacked broad-based beginnings, lacked flexibility, and did not encourage excellence. A restructure or modification of postgraduate training was therefore needed to re-establish a broad base of training and to ensure the health system got the doctors it needed. This system is now being designed (Figure 6).

A key result of the inquiry is the formation of a new coordinating organisation. Responding to recommendations from the inquiry, the Department of Health established from 1 January 2009 a new advisory body that will operate at arm's length from Ministers. Medical Education England (MEE) will act as a professional interface between policy development and implementation on matters relating to medical education. The new body will provide independent expert advice on training and education for doctors, dentists, health care scientists and pharmacists. It will also develop a national perspective on training numbers working with the revised medical workforce advisory machinery. The concept is supported by professionals and has been developed as a result of extensive consultation with stakeholders.

In conclusion, the UK health service will and must evolve. Doctors are central to shaping that future and we must harness the aspiration of trainees. The UK has a singular opportunity to grasp this agenda, but it will require professional groups to act in the common interest and the establishment of MEE with the necessary authority, clear lines of accountability and adequate resources to drive change. Australia should look to its own systems and see which problems and solutions may be relevant to the local situation, and in particular examine whether you have the overarching driver (MEE) that is needed for change.
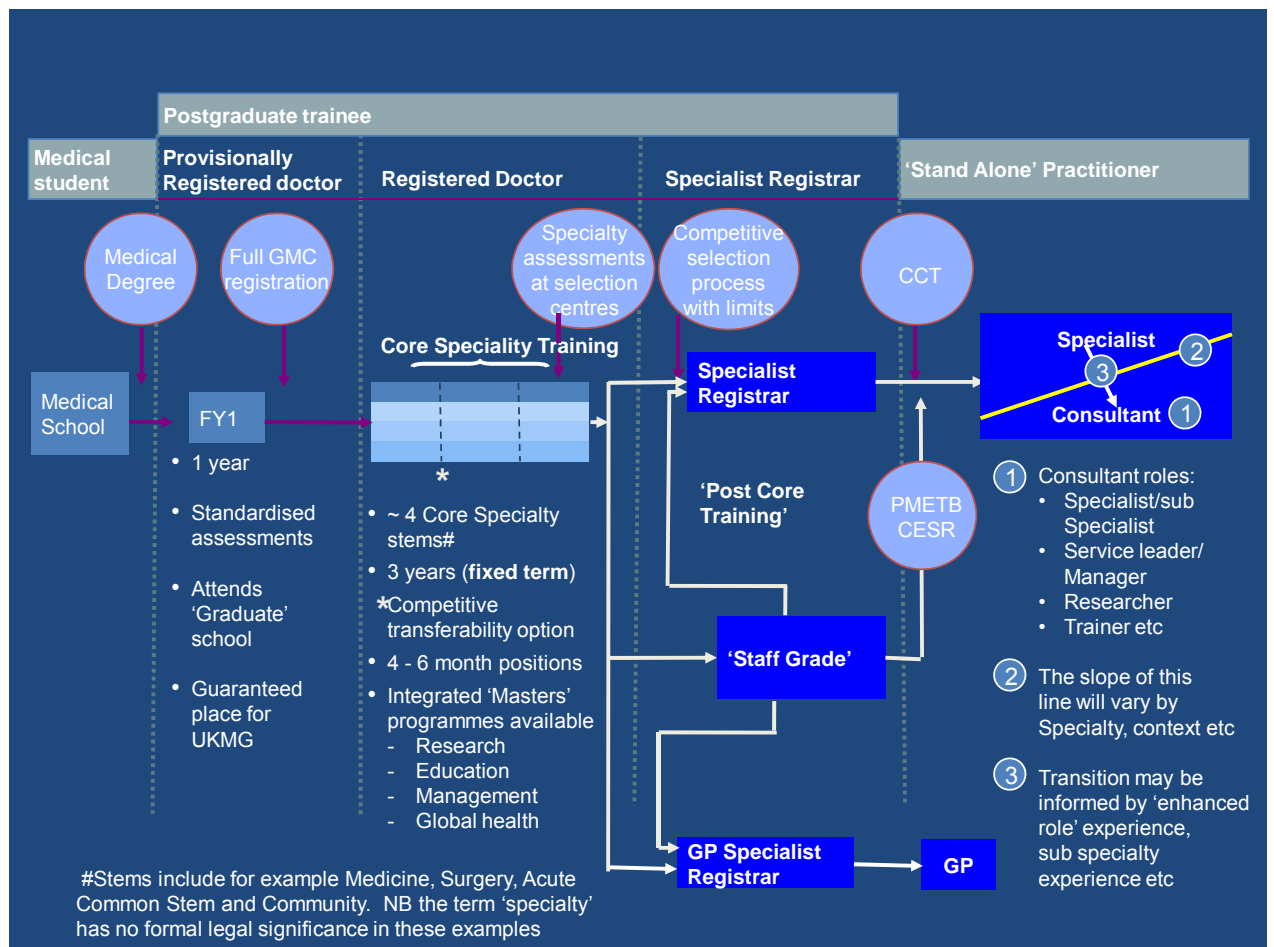

Figure 6   The new UK postgraduate training system

New Zealand perspective

Dr Ken Clark
Chief Medical Officer, Mid Central District Health Board, New Zealand

New Zealand has similar health system problems to Australia and the United Kingdom, with the main features being an ageing population, and subsequent increases in complex chronic illness and in spending on health care (Figure 7).

Chart 9. Health expenditures per capita in New Zealand and OECD countries, 1990-2004

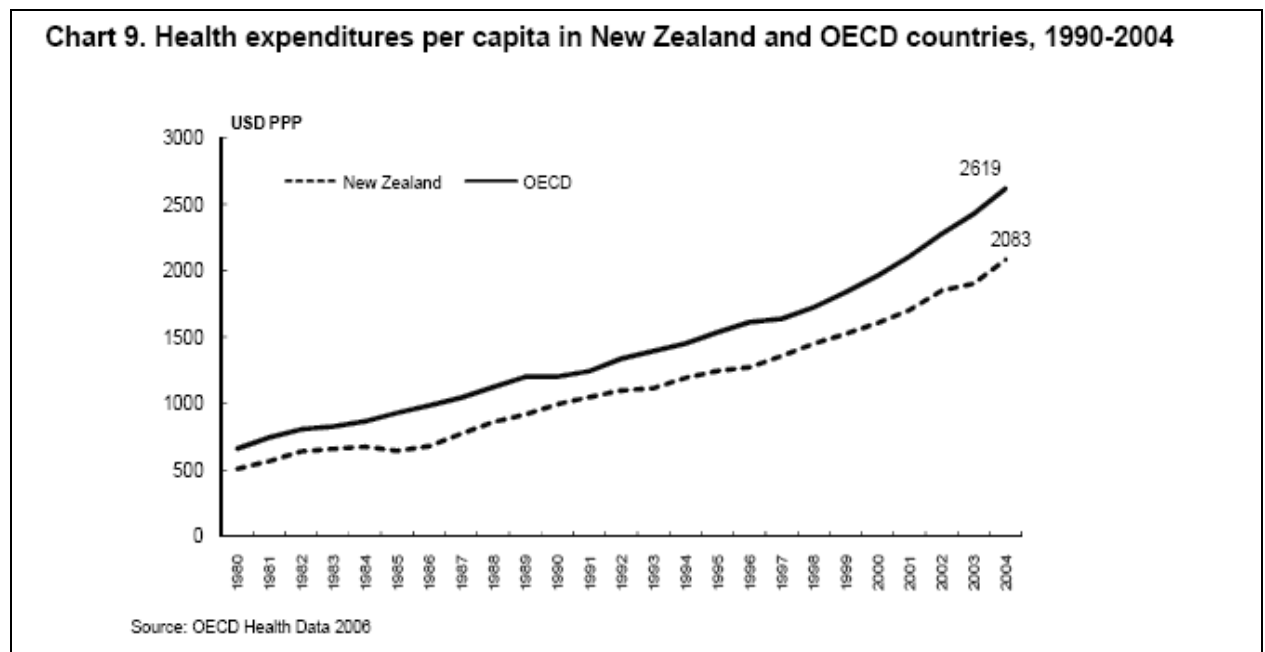Source: OECD Health Data 2006

Figure 7   New Zealand health expenditure 1990-2004

In terms of the health workforce, the average number of practising doctors per 1000 people in OECD countries is 3.1, in Australia it is 2.6 and in New Zealand and the United Kingdom it is 2.2. New Zealand retains 65–70% of its medical graduates; Australia retains 70–80%. About 40% of medical graduates in New Zealand are international medical graduates; in Australia, this is 24% of medical graduates. One question is: what is the 'right' number of doctors for the population? For example, Australia has five times the population of New Zealand, but seven times the number of medical student places.

The challenges and problems in New Zealand health are again similar to what we see elsewhere. There is tension between training and service delivery, and the inextricable ties between them make it difficult to direct training activities without service delivery pressures. There are increasing numbers of medical graduates (from 365 to 565 places over the next two years).

However, the increasing graduate output should not be seen as a crisis — it is actually an opportunity to deal with the real crisis, which is the ageing population. The key is to ensure that we make best use of these graduates. As yet, there has been little planning and expansion of the system to cope with the new influx. The numbers of vocational training positions are based around college training positions and jobs available, and not to any extent on projected needs.

Overall, workforce planning is not happening, and the capacity to do so is lacking. At present, the system is disjointed and the autonomy of all the parts is too great, with a lack of coordination and communication between the universities, medical councils, colleges, district health boards, ministries of health and education. A coordinated approach is needed to bring the parts together and focus on one goal. Perhaps with so many players, there is a need for a conductor — not to tell them what to play, but to make sure they all play in tune.

The New Zealand Medical Training Board was established in 2007 to provide strategic oversight of the education and training of medical practitioners. With the change of government in 2008, a number of groups were commissioned to produce reports on the health system to be presented to the New Zealand Minister of Health in July 2009. These included reports from the Medical Training Board, the Ministerial Adviser, the Senior Medical and Dental Officers Commission and the Resident Medical Officer Commission. The reports broadly agreed on the need to:

- enable greater leadership for improvements in national and regional co-ordination to reduce the current duplication in workforce activities across the health and disability sector

- strengthen health and disability workforce planning that is aligned to service delivery

- balance long-term responses to workforce supply issues with the pragmatic tactics used by district health boards to meet their unique short-term workforce needs.

On 6 August 2009, the Minister of Health announced the disestablishment of the Medical Training Board and the establishment of the Clinical Agency Board, which will oversee education in medicine and nursing. In harnessing the work of this new agency, there are fundamental questions we must ask in assessing anything and everything we propose:

- Are our medical students inspired and motivated, and how do we create the trainers and systems that build this inspiration and motivation?

- Does the health service environment, including employment arrangements, truly support training and education?

- Are our universities and health services sufficiently accountable for the quality of training and education that they provide?

- Are we fully utilising all parts of our health services for training and education, including general practice, private health providers, and provincial and rural sites?

- Are our trainers recognised, supported and empowered?

- Have we really embraced 'life-long learning' to ensure our trainees and doctors have access to the knowledge they need at every stage of their career?

- Do we have robust and effective collection of training and workforce data?

- Is our medical workforce altruistic, industrious and innovative?

- Are our doctors 'fit for purpose'? Who judges this — the public, academia, or the medical profession?

There is an urgent need for the medical education system to evolve and these questions will help us to design a clear pathway to a high quality responsive system.

Australian perspective

Mr Peter Carver
Executive Director, National Health Workforce Taskforce

There has been substantial investment over the last two years in nursing and medicine through the Council of Australian Governments (COAG) and its involvement in health workforce reforms. In November 2008, COAG acknowledged that the bridging of health and education was needed to achieve necessary reform of the health workforce. The National Health Workforce Taskforce (NHWT) was established to develop plans for those reforms.

The main outcome of the NHWT is Health Workforce Australia (HWA). Backed by an injection of $1.55 billion over four years, HWA will be operational from December 2009. HWA will have a specific focus on implementing workforce reform, including integrating workforce planning and policy with necessary and complementary reforms to education and training.

HWA aims to plan and coordinate within existing structures, and will take an inter-sectoral and collaborative approach with their role being planning, coordination, policy direction, standard setting and quality assurance. The role of HWA is to foster collaboration rather than take control; to produce a national framework that allows for flexibility yet provides results. The aims of HWA are to:

- progress a national agenda focussed on innovation and reform, research and workforce planning and education and training

- devise solutions that integrate workforce policy and reform with reforms to education and training

- work across geography, sectors, organisations and professions

- ensure outcomes are achieved and clear accountabilities allocated.

HWA will be governed by a Board of representatives of the medical jurisdictions, including an independent chair and three other members. However, the key driver of policy will be stakeholder advice. Along with the Board, standing stakeholder advisory structures will be established to ensure input from a range of interests and opinions. Stakeholder advisory committees will be supplemented by expert working groups, discussion papers, reference groups, forums, and by feedback from regular updates on the website (www.nhwt.gov.au) and electronic newsletters. Engagement with the higher education, not for profit, private and non acute sectors, as well as clinician, academic and student input, will be paramount.

COAG has allocated $1.2 billion over four years for education and training in health care, to:

- maximise the capacity of the health and education systems to provide sufficient trained graduates to meet demand (funding and coordinating clinical training to provide new, effective, and integrated placements)

- ensure education and training is appropriate, responsive and relevant to changing health system needs (increasing capacity through infrastructure funding, simulated learning environments and training new clinical supervisors).

In clinical placements, starting in 2011, $992 million will be provided to subsidise professional entry clinical training. The funding will be attached to students in whatever service setting they

train and aims to make better use of under-utilised capacity (eg in regional/remote hospitals, primary care/ community-based settings and private hospitals). The need to increase clinical placements has provided us with considerable impetus for reform. With the supply of medical undergraduates increasing from 1871 in 2005 to 2560 in 2007, we will need to expand the number of clinical placements from 640 705 in 2005 to 1 273 405 in 2013 (the placement figures are estimates done in late 2008 based on averaging course hours).

In clinical supervisor support, $56 million will be provided to improve clinical supervision capacity and competence in professional entry training. There is broad agreement that the quality of supervision is a key influence on the quality of clinical placements, and that there is a pressing need to build up the numbers in the workforce who are prepared to take on this role.

In simulated learning environments, $96.5 million has been allocated to capital works, including new centres and/or redevelopment and expansion of existing centres and mobile programs. This is designed to both improve clinical training capacity and improve accessibility, particularly to regional and rural centres.

There is a high level of investment in these new strategies and processes, so we need to ensure we use it wisely. We have many policy decisions to be made around all of these strategies, and we will be listening to all the stakeholders to maximise our understanding and knowledge of the area. We need to ensure that programs that we put into place are sustainable and integrated. Most importantly, our aim is to not just create capacity but to maintain and improve quality in education.

Medical Schools Outcomes Database (MSOD)

Professor Justin Beilby
Medical Deans Australia and New Zealand

The Medical Schools Outcomes Database (MSOD) is a national resource being developed for medical education and workforce planning. Now involving all Australian and New Zealand medical schools, the MSOD project aims to:

- develop an agreed national process to collect reliable demographic and educational data on medical students for all Australian medical schools

- establish a national database for monitoring and reporting on outcomes of medical education programs

- use the national database for tracking students throughout their careers to assist workforce planning, policies and strategies.

Data are collected longitudinally on entry to medical school, during the medical course, on exit from the course and will be collected in the postgraduate years. The Project is a collaboration of a number of key stakeholder organisations representing students, postgraduate education and training, rural and indigenous health, and workforce planning.

MSOD is important for a number of reasons. In education, it is important for us to monitor which factors most influence career choice and location of practice. For our workforce planning, we need to evaluate the outcomes of Australian and jurisdictional governments and individual university workforce initiatives. And for accountability, we need to assess the value for money from government expenditure on medical education initiatives.

Through Medical Deans Australia and New Zealand, the medical schools in Australia and New Zealand agreed on a minimum dataset to be collected about medical students commencing a medical program from 2006 onwards. MSOD is based on the following data collections:

- commencing students questionnaire — demographics, rurality, previous tertiary education, income, scholarships, career intentions (geographic location, type)

- annual medical schools' data — clinical placements (location, duration, type, infrastructure resourcing), enrolment status, rural club membership, electives

- exit questionnaire — update demographics, internship location, contact details, career intentions (geographic location, type)

- postgraduate Year 1 (Intern) questionnaire on postgraduate training — update demographics, status of current work situation, internship rotations (discipline, rural location, hours), additional tertiary education, contact details, career intentions (geographic location, type)

- medical practice — in practice, career destination (location, type).

MSOD is a huge research resource that we can use to answer the pressing questions that will enable us to plan and optimise our medical workforce.

We can examine the flexibility of our workforce, seeing for example to what extent student career preferences are influenced and changed while in medical school. So far, our data show

that of those trainees who are decided on a specialty at entry, only 18% have the same intended specialty at exit. In addition, students become more undecided during medical school. Of 89 who at some point were undecided, 21 were undecided at entry only and 68 were undecided at exit.

Table 3   Medical trainee career decisions

Specialty	Entry	Exit
Adult / internal medicine	17	15
Anaesthesia	1	4
Dermatology	2	3
Emergency medicine	5	5
General practice	12	8
Medical administration	1	0
Obstetrics / gynaecology	5	7
Occupational medicine	1	0
Ophthalmology	0	3
Paediatrics / child health	16	3
Pathology	4	1
Psychiatry	2	1
Public health	3	0
Radiology	1	0
Rehabilitation medicine	2	0
Surgery	21	17
Other	0	7
Not yet decided	50	68
Missing	3	4

We can also for example look at the factors that influence rural career choice. In initial studies we found that the key predictors were GP intentions and later rural placements. We also found that placements can have both positive and negative influences: rural placements increase rural intentions, early GP placements decrease GP intentions, and longer GP placements increase GP intentions.

Further tracking into pre-vocational years will help define the total packages that influence career choice. MSOD will help us to identify key trends in our workforce movement, and therefore to focus our strategies about workforce shortages and address decision-making across a range of specialties.

Breakout Session B — Building training capacity

Fundamental to good clinical training is the opportunity to experience clinical medicine in a supportive environment with good educational supervision. How do we provide clinical exposure, experience and good educational supervision for university medical students, postgraduate students and vocational trainees in our health system?

This breakout session looked at six discussion topics on building our training capacity, with different breakout groups focussing on different periods in the training continuum — university, prevocational and vocational.

It was found that the groups discussed very similar challenges and solutions for the three different periods of education. The following review therefore combines the results of the groups into an overall summary for each topic.

What are the key challenges to clinical placements for your trainees:

- **Physical capacity?**

The space available for clinical training is limited, particularly within hospitals, and lack of student space was seen as an issue for all trainees. Overall, the way forward expressed by all the groups was that existing capacity in non-traditional health areas (such as private clinics and community health centres) needed to be utilised, and that there needed to be recognition and agreement that teaching space would be included in the design specifications of all new health facilities. New models of teaching were also needed to allow multiple levels of teaching and training to increase capacity.

- **Clinical opportunity?**

Many delegates expressed difficulties in gaining appropriate clinical exposure for trainees given the current mode for short stay hospital visits and rapid patient turnover. Trainees missed out on the longitudinal aspects of patient management. It was also highlighted that there may be an inappropriate casemix in public hospitals, with trainees not gaining exposure to the full range of patient conditions which they may see in other environments. However some felt that the supervision structures were more limiting than the cases or patient numbers — the cases are there but what is needed is sufficient time for reflection, discussion, feedback and follow-up. It was also mentioned that the interprofessional issues — a lack of coordination between teams looking after patients — affects not only patient care but also teaching.

Again, as with physical capacity, the solutions proposed involve harnessing existing resources and working in different ways to achieve a training outcome. Private hospitals and clinics and community health centres were seen as valuable resources which would provide students with additional clinical opportunities. Students can make useful contribution in private hospitals provided supervision is adequate and they are clear what they are there for. International locations were another possible avenue for trainee placement. We need to use every encounter as an opportunity (ie every encounter between a doctor and patient without a trainee is a wasted opportunity).

To enable this expansion into non-traditional areas, it would be important to develop appropriate structures. Primary care has capacity in regards to patient numbers, but problems in terms of infrastructure, training of supervisors, and in particular, funding. Private practitioners are running a business, and taking on students therefore has financial implications. Appropriate administration support and recompense will be needed.

There will need to be a culture shift to gain acceptance of education as an integral part of all sectors of the profession. Educating the community about the importance of education in health care would also be important to gain patient acceptance of trainee involvement.

Overall, effective clinical placements were achieved by planning and support. It was also important to acknowledge that the role of the student contributes to health care. Giving students a clear role and value, which is enhanced by long enough placements, was essential.

- **Educational supervision and support?**

The key issue in teaching and supervision was widely acknowledged to be a lack of recognition of teaching roles, and the subsequent lack of time allocation and support for clinical supervisors. Clinicians are usually viewed solely as service providers by clinical management, and this creates tension with teaching requirements. A lack of trainers is especially an issue for particular areas of health (eg Indigenous medicine or rural locations).

Key solutions to these barriers were the inclusion of institutional educational goals in performance review process for clinicians and administrators, and the harnessing of additional clinical resources (eg retired clinicians).

What systems approaches might help overcome some of the obstacles?

It was recognised that a shared commitment to education and training by all participants would be fundamental to any progress in the system. We will also need agreed outcomes and an agreed range of necessary experience including educational, clinical and professional competencies. This shared vision will be vital to give us the goal we need to work towards.

We need to build in capacity for all levels to educate the level below. This will primarily occur by recognising education as part of everyone's role, and therefore by building appropriate time allocation and KPIs into position descriptions. Particularly for clinical supervisors, it needs to be recognised that 20–30% of their time will be required for training, and this will need to be balanced with service demands. It may be necessary to move education funding into health to break down the existing divide between these areas. We also need to begin the expectation of the educator's role early, so that undergraduates start learning about medical education and are prepared for teaching by the time they become interns.

We need to build the skills of our trainers and supervisors through coordinated training. We expect that interns will learn simply by exposure within a clinical setting; however, this is not necessarily so. We need to enable supervisors to articulate and teach the skills and knowledge needed.

We also need to recognise that there is and should be a broad spectrum of educational approaches. We should not debate time vs clinical experience vs competencies and simulations, but recognise that they should all be part of our educational toolkit. Innovative approaches to

education such as the More Learning for Interns in Emergency (MoLIE) project in Queensland should be explored in other areas. MoLIE provided increased capacity as well as a much more structured learning environment for the interns. A system to share innovation may also be valuable (eg an interactive website), as currently as there is no clear way of sharing innovation and successful educational approaches except by word of mouth.

As detailed previously, broadening of educational settings to include the private and community sectors was seen as key to expanding clinical capacity and providing trainees with the experiences they need. It was also suggested that basing some students rurally and rotating them in to metropolitan and specialty areas (instead of vice versa as is the case now) may be a way to both expand capacity and improve rural career choice. A coordinated Indigenous curriculum is also needed to provide sufficient workforce for Indigenous health care.

Research is needed to determine our real capacity. Modelling to determine both our needs and our capacity at every level will be essential to planning.; we shouldn't just tell everyone they are getting 50% more students — we need to plan the workforce we want.

A key issue was the question of who is in charge of the process. It was widely recognised that there needed to be some coordination and high level policy decisions, however it was not yet clear whether this would be Health Workforce Australia or whether another cross-sectoral organisation was needed.

What supports are fundamental?

The delegates recognised the need for five key supports:

- A shared philosophy and goals to align health service provision and education.
- Institutional support, including acknowledgement of the importance of teaching and support for the time taken by supervisors.
- Expansion of educational settings, particularly into the private and community sectors. There was a need to address the disincentives for this to occur and to build in teaching programs and space in all clinics, private practices etc.
- Rural infrastructure and systems support, to expand clinical training in this area and look to future career support.
- Dedicated clinical training of supervisors so that they can optimise their time with trainees and explicitly pass on the knowledge and skills of higher clinical reasoning.

How do we equip supervisors in medical education expertise?

The groups believed that it was important to start expectation of medical education being part of the role of a doctor during student days, so that all doctors became educators. It was expressed that most clinicians do enjoy training and that research shows it is an anti-burnout measure as it helps to maintain interest and commitment. However, this interest and enjoyment needs to be supported to ensure service delivery pressures do not displace education.

Key suggestions as to the support the supervisors needed included:

- Time - supervisors were expected to fit education in with full time service delivery duties. Institutional KPIs may help to build in recognition of education needs to overall clinical

activities. It was also express that currently the accountability of supervisors is split between the college and the health service who is the employer — under pressure the employer's priorities usually win.

- Professional development - medical education training should be developed and encouraged to facilitate educational career development. Training programs should be available in paid time as part of core business. A national medical education qualification should be developed as an essential component of improving medical supervision and training. While it was not thought that medical education qualifications should be mandatory, those trainers with a Masters of Medical Education were seen as the likely hub or leaders within a clinical centre.

- Recognition - clinicians taking on educational roles needed to be recognised with career rewards or other incentives.

Panel discussion

Facilitated by Ms Jenny Brockie

Mr Peter Carver
Executive Director, National Health Workforce Taskforce;
Ms Susanne Le Boutellier
 Acting Director, Medical Advice and Coordination Unit, Queensland Health;
Dr Ken Clark
Chief Medical Officer, Mid Central District Health Board, New Zealand;
Professor Brendan Crotty
Head of School, School of Medicine, Deakin University;
Ms Tiffany Fulde
President, Australian Medical Students Association;
Dr Alex Markwell
Vocational Trainee

The panel looked overall at investing in our medical workforce and what was needed to move forward.

Trainee needs

The panel agreed that quality of training relies on positive role models, and good resources and support. This is particularly crucial during clinical placement. Service provision in hospitals is predominantly done by junior doctors, so they always need to balance the demands of patient needs vs getting the training they need.

The More Learning for Interns in Emergency (MoLIE) project in Queensland was presented as a successful example of new training approaches. MoLIE addressed the problem of limited intern placements in emergency by developing alternative teaching strategies. MoLIE involves structured 'off the floor' teaching for 20% of the interns' time in emergency; teaching was based on case discussions; and the program was supplemented by a complementary web-based platform and networked solutions to provide access for smaller hospitals via videoconferencing. The result was accommodation for 20% more interns each term without changing 'on the floor' supervision ratios. The program is also extremely popular with interns.

The discussion also examined the need for an increased medical workforce in rural areas. Since rural postgraduate training is one of the biggest predictors of individuals returning to an area, more funding and placements are needed in rural and remote areas to ensure we have the future workforce we need. It was also noted that placement numbers alone will not be sufficient — there must be adequate structures to support these. The pathways to rural postgraduate training must be clear and students must be provided with good management and support.

Clinical training

The panel discussed the urgent need for expansion in clinical training. A key strategy idea was that a culture shift was needed to make every doctor a teacher, and to acknowledge teaching as an important part of everyone's role.

It was also expressed that there is a lot of latent capacity in the system that can be realised, mainly by allowing training to be delivered in different settings (private system, community

health, etc). A large percentage of our health dollar goes to the private sector, and we need to harness the resource that this represents. The proportion of medical care that is delivered through hospitals will fall, so we need to expand students' exposure to other health care delivery models and centres. Also, there is currently a mismatch between consultants who work mainly (except for emergencies) in the daytime and trainees who work in shifts, which reduces training and mentoring opportunities. Flexibility to allow training to be delivered in different settings would help to overcome this problem. Other countries do involve the private sector in medical education so it can be done successfully. However, private practitioners will need some mechanism of recompense for training time.

It was strongly expressed that education needed to be an undisputed, inbuilt and integrated part of service delivery. This could be brought about in two ways. Firstly, there needed to be institutional change so that clinical directors recognised that some staff time must be spent on training. Institutional and clinical management KPIs were seen as one way to make this happen. There also needed to be a constitutional agreement that education and service delivery are equally important, otherwise education will get squeezed out under pressure.

Secondly, public perception must change so that education and training is seen as an accepted part of medical processes — we will need to educate patients that we need their help to ensure quality of care into the future. This perception is already being assisted by media and television programs such as *ER*, *House* and *Grey's Anatomy*, which feature medical students. Public education will also need to be matched with better education of trainees, to improve their communication with patients so they are not just seen as a teaching experience.

Governance and coordination

The panel recognised that all players needed to be involved to improve and increase the capacity of the medical education system — universities, colleges, medical education units, clinicians, senior managers of hospitals, and directors of medical services. Collaboration will be the key to drive change. It will be important that all groups set aside interprofessional rivalries and work together to deliver and integrate training.

It was also recognised that looking at successful local strategies and initiatives can provide guidance to larger strategies that can be applied in other regions or globally. For example, MoLIE may provide ideas that can be implemented across the board.

The panel discussed the issue of who will drive this process. While input from all players was important, it was agreed that there needed to be a driver to provide coordination and to enhance collaboration — you cannot rely on local champions to drive global change. It was also agreed that a facilitating and coordinating process is needed, not a controlling one.

Health Workforce Australia (HWA) may take this role, by bridging health and education at the service and macropolicy level. The functions of HWA are broad and it will have a national outlook — there will be a Board member from each state. The panel discussed whether HWA had the right structure, and felt there needed to be high level clinicians and non-bureaucratic advice on the Board. The delegates were reassured that the policy drivers will be in advisory structures under the Board, which will include clinician input. HWA's first task will be to draw up its own mission and objectives and conference delegates were asked to give input and advice on this.

Issues and recommendations

Investing in our medical workforce

The quality of our medical care is directly dependent on the quality of our medical workforce, who are in turn products of our medical education system. A well-planned, responsive, comprehensive, high-quality medical education system is therefore paramount in ensuring Australia provides high-quality and accessible health care to all people.

Recommendation 1
That this meeting advises the Australian Government that medical workforce capacity and training are critical issues for delivering quality health care.

Increasing health workforce flexibility

Generalism vs specialism

As well as general practice, Australia is in need of general specialists in a range of areas, including medicine, surgery, obstetrics, anaesthesia, and orthopaedics.

There is an increasing trend for medical trainees to select a sub-specialty, rather than remaining in a generalist or general specialist role. MedEd09 felt strongly that it is very important to encourage some of the specialist workforce to remain in general specialist roles, and that the disappearance of general specialists poses a risk to Australian health care.

The lack of generalism causes problems in a number of ways. Lack of generalism causes particular problems in regional areas, where the doctor is likely to see a wide range of cases. In hospitals, major trauma or comorbidity cases require a generalist approach to tackle multiple problems in a single patient. The ageing population will also require a more generalist approach, as older persons tend to have multiple health problems.

The transition of trainees into sub-specialties is driven by a number of factors, including the perception of generalism as being of lower status or involving more work, particularly in rural areas. Furthermore, the generalist is often less well remunerated (because the Medicare schedules particularly reward the carrying out of specialised procedures).

It is therefore important that generalism is seen as a path in itself, and that generalists are given the status, support and clear career pathways to make generalism an attractive option. Additional training options may also support this move. Generalism is a particular skill, and it is important that trainees are taught how to be generalists. Currently, trainee experience is mostly provided

in major hospitals, which reflect the sub-specialty approach. More training provided by community health centres and regional centres will ensure that trainees are exposed to the generalist approach.

Recommendation 2
That state and commonwealth governments and medical colleges develop clear policies and strategies to promote generalist training pathways by the end of 2010.

Interprofessional learning

Interprofessional education (IPE) aims to build understanding between different members of the health care team, including different service levels and different specialties and sub-specialties. IPE is sometimes accused of undermining specialisations, but in actuality it is about collaborating and learning about each other, and about valuing and respecting each of the health disciplines.

There is an internationally recognised need for team approaches to health care, which are supported by IPE. It has been demonstrated that IPE leads to improved:

- workplace productivity
- staff morale (and hence retention rates)
- patient outcomes
- patient safety (lack of communication or miscommunication is major cause of adverse events)
- access (particularly in rural areas, the team approach helps patients get the care they need).

IPE can be incorporated at every level of medical education curricula to match learning objectives.

Geographic flexibility

Rural health care is a particular challenge in Australia. Fewer and fewer trainees are going to rural and remote locations, and many regional centres lack local doctors or comprehensive health care amenities. If the incoming numbers of students follow current trends of favouring cities and subspecialties, the crisis in rural health care will be accentuated.

The reinvention of the general specialist (Recommendation 2) will help to tackle this challenge; however, more is needed to encourage trainees to make the choice of a rural career. Research into the drivers for this choice shows that training in a rural setting is key to choosing a rural career. It is therefore vital that regional training models are developed, which will involve expanding the number of rural training places available, developing effective trainee educational supervision, and developing clear career pathways.

Regional health care, particularly for remote areas, may also require different health care approaches. Team health care, where delegated tasks are

undertaken by mid-level personnel, may assist in many rural and remote areas where health care staff numbers are low. This approach creates a local workforce by training nonspecialists to work in a primary care setting instead of bringing in specialists from elsewhere. The delegated tasks need to be carefully defined, but this approach has worked effectively in a number of areas in the Aboriginal Health Worker scheme.

Indigenous health is another major issue in Australian health care. Aboriginal people attend health care practitioners in far lower numbers than the rest of the population, often because of cultural barriers. Aboriginal people represent 3% of the Australian population, but only 0.3% of doctors and 0.6% of nurses.

To help to break down the barriers to Aboriginal health care, it is important that medical schools increase the numbers of Aboriginal health care personnel by recruiting and training more Aboriginal and Torres Strait Islander students. It is also important that all medical trainees are given some training and experience in Indigenous health, to expand awareness and skills.

Recommendation 3
That governments, colleges and Postgraduate Medical Councils develop models to increase pre-vocational and vocational training models in rural and regional areas in an integrated fashion.

Achieving vertical integration

Medical education continuum

The increased numbers of medical students has highlighted the need for coordination of medical education from the beginning to the end of student training and into workforce placement. MedEd09 saw the coordination of education across the continuum as of prime importance. The conference examined a range of issues, including:

Curricula (new roles emerge at every stage of the continuum; however, there is often a sudden transition to these roles. Do we need to teach some of the skills at the previous level so that the trainees will be better prepared?)

Teaching structure (would vertical structures teaching a number of levels at the same time be valuable?)

Research (how can we use the Medical Schools Outcomes Database to support the development of new educational models?)

Governance (who can coordinate and drive change across the continuum?)

It was felt that coordination and accountability between national and state jurisdictions for medical training is poor. It was further felt that medical education involved many different organisations, often leading to

fragmentation and to the prominence of factional interests, rather than collaboration. Orchestration and communication, as well as co-development of policy between government sectors and between relevant organizations, was needed. It was felt that a single organisation was needed to oversee change, not to command but to facilitate collaboration, consistency and communication.

The establishment of Health Workforce Australia (HWA) is an important step forward in achieving this overall orchestration. However HWA's breadth of responsibility across a large number of health disciplines (many with needs different to those of medical training) and its limited scope (university students only) warrants a specific body for strengthening the coordination of medical training across the continuum. This body (perhaps termed Medical Education Australia) would need to work closely with and advise HWA. The governance arrangements would need careful thought: it might be successfully constituted as a major committee of HWA, reporting directly to the HWA Board; however it is more likely to achieve the community's and COAG's aims if it had an independent status similar to the Australian Medical Council Ltd.

The complexity of this area has led to the recommendation of a second smaller workshop to further explore the issues.

The utility of the Medical Schools Outcomes Database and Longitudinal Tracking Project (MSOD) was showcased to the forum The value of this database to medical workforce planning for the future is now coming to fruition with the tracking of medical graduates through the early years of their pre-vocational and vocational training. The potential for linkage to other databases now being established as part of the NRAS and HWA is also recognized. However longer term funding commitment from the Australian Government is required to ensure the collection continues and maximum benefit of the investment to date is made.

Recommendation 4
That governments at all levels take immediate steps to address the gap between national and state jurisdictions in medical training.

Recommendation 5
That the Council of Australian Governments review the governance structure of Health Workforce Australia to ensure high level continuous national input from senior doctors responsible for training.

Recommendation 6
That there should be a combined approach to the Federal Minister for the creation of a Board to advise on coordinating training across the continuum.

Recommendation 7
That funding be provided to identify curriculum and other needs to facilitate the co-ordination of training across the continuum.

Recommendation 8
That a follow-up workshop be held between jurisdictions, universities,
medical colleges, Health Workforce Australia, Postgraduate Medical
Education Council, student representatives and the Australian Medical
Council.

Recommendation 9
That MedEd09 endorses the continuation of the MSOD project, and urges the
use of the database in the development of robust medical education and
workforce models.

Competency, performance, time, simulated learning environments

Competency-based training is an approach to education that places emphasis
on what a trainee can do once they have completed a program of training. For
a trainee to be assessed as competent, they need to demonstrate the ability to
perform tasks and duties to the expected standard. While 'time' is still the
traditional measure mainly used to assess whether a trainee has completed
their training, competency-based training is being explored in a number of
areas to teach and test particular skills (eg psychiatry is successfully using this
approach). It is particularly applicable to specific skills. Competencies may
also be built on over time, with the development of first and second order
skills at different levels.

There were mixed views however as to whether competency-based training
suited some components (eg procedures) but not others such as higher order,
integrated aspects of performance.

It was also recognized that there is no clearly shared understanding of the
term 'competency based training'.

Interest was expressed at the MedEd09 conference in the use of simulated
learning environments (SLEs) as a useful tool to provide 'real-world'
scenarios and test performance. SLEs allow trainers to include a wide range
of variables in the training and testing scenario. Protocols can be developed to
test specific skills, clinical reasoning and overall performance when additional
challenges are included. Developing SLE measures to robustly measure
performance instead of skill-set competence may usefully expand education
capacity and quality.

Recommendation 10a
That an evidence - based approach be adopted to clearly define and inform
the optimal use of both competency and experiential (time-based) approaches
to medical education and training within an integrated education system.

Recommendation 10b
Where such evidence does not exist, support should be made available for the
required research and development.

Recognition of prior learning

Workforce flexibility is supported when trainees can move between regions, between countries, and between specialties. Workforce and lifestyle changes mean that trainees no longer expect to stay in one position for many years.

It is therefore to our benefit to facilitate this movement to meet the needs of the workforce and to ensure we have committed and inspired doctors. The recognition of prior learning (RPL) allows trainees to move between geographical areas and between specialties without losing credit for the training they have already achieved.

While some colleges have RPL schemes, in general it is ad hoc and applying for RPL is often laborious for the trainee. A coordinated and consistent approach is needed from colleges to support this important tenet of workforce flexibility. RPL schemes should:

- be transparent, accessible, reproducible
- fit with the curriculum
- guarantee principles of equality, fairness and natural justice
- have clear criteria against which applicants are assessed.

Recommendation 11
That an approach be made to CPMC to develop workable models for recognition of prior learning during vocational training, which (i) are transparent, accessible and reproducible (ii) fit with their curricula (iii) guarantee principles of equality, fairness and natural justice and (iv) have clear criteria against which applicants are assessed.

Building training capacity

The rapid increase in the number of medical graduates will place great pressure on the colleges and hospitals that provide further training. To ensure that education standards are maintained, it is vital that training institutions continue to have the capacity to provide high-quality education to increased numbers of trainees.

Recommendation 12
That governments ensure that training institutions are appropriately resourced, to ensure essential infrastructure for effective training is available in all environments.

Physical capacity

One aspect of training capacity is simply the physical space in which trainees can learn. It is important that we use all the resources currently available — including public and private health centres — as well as developing new resources. Teaching space should be incorporated into the design specifications of all new health facilities.

Clinical capacity

Clinical training is currently delivered primarily in major hospitals. However, a number of problems have started to arise in this approach, which will only be exacerbated by increased trainee numbers.

Supervision and mentoring is clearly important for trainees to be able to learn from more experienced doctors. However, the mismatch between consultant hours and trainee shift-work breaks down the relationship between senior and junior doctors and creates an imperfect learning experience. Changing patient protocols that encourage short stays and rapid movement between specialties also mean that trainees find it difficult to 'follow' a case, and miss out on longitudinal patient management. Finally, service provision in hospitals is primarily done by junior doctors, so they need to balance the tension of dividing their time between patient needs and their training needs.

MedEd09 recognised that what is needed is a change in the system to allow training to be delivered in different settings, including the private system and community health centres. These represent significant resources in health care, and need to be harnessed for the future of health care training in Australia. This will provide the capacity needed for the influx of students, and will also provide a broadened and improved training experience for trainees. As we look to the future, it is probable that the proportion of medical care that is delivered through hospitals will fall, so expanding students' exposure to other health care delivery models and centres will be invaluable in ensuring they can deliver this care. Innovative approaches to education such as Queensland's very successful MOLIE (More Opportunities for Learning in Emergency) program, may also improve the learning experience.

Understandably, involving the private sector will require some mechanism to compensate private doctors involved in the program. It will be valuable to research how this is achieved by other countries that do involve the private sector in medical education.

It is also vital that the importance of medical education is recognised. At the moment, there is a divide between service delivery and training; a cultural shift is needed to bring them together under a shared philosophy. Service institutions need to include education as part of their mission and agree that education and service are equal and part of a continuum of activity.

At the same time, institutions need to educate the community about the importance of medical education, so that patients see training as an accepted part of service delivery to ensure quality of care into the future. This will need to be matched with education of trainees to improve their communication with patients and so patients are not seen as just a 'teaching experience'.

Recommendation 13
That all levels of government (with relevant stakeholders) should develop clear strategies and policies by the end of 2010 that permit training to expand into private and other settings.

Recommendation 14
That governments at all levels, through the Council of Australian
Governments, ensure that coupling between service delivery and training is
achieved.

Educational supervision

The expansion of medical education into the private and community sectors needs to be matched by an expansion in our concept of who the trainers are. MedEd09 strongly expressed the idea that a culture shift was needed to make every doctor a teacher, and to acknowledge teaching as an important part of everyone's role. Achieving this shift requires a number of changes.

First, it was recognised that acting as a trainer and supervisor requires expertise, time, and accountability. In the clinical setting in particular, it is important that supervision is acknowledged and supported, most especially through allocated time being given to supervision, rather than it just being part of normal duties. Most clinicians enjoy training: research shows it prevents burnout by helping to maintain interest and commitment. However, support is crucial to maintain this interest and to ensure education is not 'squeezed out' by service pressures.

Key performance indicators based around education may be needed on an institutional basis to ensure that time and support for training are built in to service models. By including educational goals in performance review processes for clinicians and administrators, the importance of the activity will be recognised and measures will be developed to meet the KPIs.

Second, in looking at future supply of doctors, we should realise that we will also need a future supply of educators. We should therefore ensure that this expectation and training in teaching are made part of the current curricula, so that trainees emerge with this understanding. We also need to explore the capacity for all levels to be trainers and educators for the level below, or even using fast learners as peer teachers.

Third, better training of supervisors will improve the performance and standing of this key group. The development of a national medical education qualification would provide valuable professional education for clinicians. A modular training course would allow clinicians to use the time they had available, and those trainers with a Masters of Medical Education or similar could act as leaders within their institution.

Finally, an important aspect of training was the recognition that 'clinical reasoning' — bringing together many facets of knowledge and skill to arrive at a diagnosis and treatment — was of prime importance in the training of a high-quality medical workforce. Clinical reasoning is critical to patient care, and protocols are no substitute for this higher level cognizance.

Unfortunately, currently students are too often expected to learn clinical reasoning simply by observation. We need to ensure that our trainees acquire the critical skills of clinical reasoning. We need to equip supervisors with the

knowledge and skills to unpack their own thinking and be able to explain this to students and give structured feedback, so that students learn the reasoning process. Dedicated professional development of clinical teachers would allow them to optimise their time with trainees and explicitly pass on the knowledge and skills of higher clinical reasoning.

Recommendation 15a
That jurisdictions and employers ensure 'teaching and training' are essential requirements in job descriptions, and support, encourage and reward the clinicians for teaching.

Recommendation 15b
That jurisdictions and employers ensure that 'teaching and training' performance are key performance indicators to be addressed at annual appraisal of their medical staff.

Conference Program

Day One – Friday 30 October

8.00am	**Program Committee [Theme Convenors Briefing Meeting]** Canberra Room, Sofitel Sydney Wentworth
SESSION ONE : Setting the Scene	**9:30am – 10:30am** Chair: Prof Allan Carmichael (Medical Deans)

9:30am	Welcome Housekeeping announcements (5 mins) Room: Sofitel Ballroom [Sydney & Melbourne Rooms]	Prof Allan Carmichael
9:35am	Welcome to Country (10 mins)The Metropolitan Local Aboriginal Land Council	Mr Allen Madden
9.45am	Investing in our Medical Workforce Introduction (20 mins) Professor Judy Searle, Principal Medical Adviser, Workforce, Education & Training, Australian Department of Health and Ageing	

10:30-11:00am	**Morning Tea (30 mins)** MedEd 2009 Ballroom Foyer
SESSION TWO : Increasing Health Workforce Flexibility	**11:00am – 12:30pm** Chair: Professor Michael Hensley (Medical Deans)

11.00am	Increasing Health Workforce Flexibility : Overview (5 mins) **CONVENOR:** Dr Andrew Singer, Department of Health and Ageing	Dr Andrew Singer
11.05am	Rural perspective (15 mins)	A/Prof Richard Murray
11:20am	Specialist perspective (15 mins)	Prof Russell Stitz
11:35am	Interprofessional perspective (15 mins)	Prof Alison Lee. UTS
11:50am	Trainee perspective (15mins)	Dr Michael Bonning
12.05pm	Panel Discussion (20mins)	All above

12.25pm	Summation (5mins)	Prof Michael Hensley

12:30 – 1:30pm	**Lunch** MedEd 2009 Ballroom Foyer	

SESSION THREE; **Keynote Addresses**	**1:30-3:30pm** **Chair: Prof Neville Yeomans (Medical Deans)**	

1:30pm	**Keynote Address (40mins)** Professor Sir John Tooke MA MSC BM BCH DM DSc (Oxon) FRCP FRCGP MedSci Dean, Peninsula College of Medicine and Denistry, Universities of Exeter and Plymouth **CHAIR:** Professor Neville Yeomans MedEd09 Conference Convenor Room: Sofitel Ballroom (Sydney & Melbourne Rooms)	Professor Sir John Tooke
2:10pm	**DISCUSSION (20 mins)** **CHAIR:** Professor Neville Yeomans (MedEd09 Conference Convenor) Room: Sofitel Ballroom (Sydney & Melbourne Rooms)	
2:30pm	**Indigenous Health – Key Imperatives for Closing the Gap (20 mins)**	Dr Peter O'Mara
2:50pm	**BREAKOUT SESSION A: (60 mins)** All Rooms (including afternoon tea)	

SESSION FOUR; **Achieving Vertical Integration**	**4:00pm – 6:00pm** **Chair: Dr Peter White**	

4:00pm	**What is the continuum of medical education? (15 mins)** Room: Sofitel Ballroom [Sydney & Melbourne Rooms]	Dr Greg Keogh
4:15pm	**Performance vs Competency versus time – the issues (10 mins)**	Dr Victoria Brazil
4:25pm	**Recognition of prior learning (15 mins)**	Dr Andrew Perry & Dr Jolyon Ford
4:40pm	**Perspectives of vertical integration (15 mins) – Pro and con perspective** College of Physicians: USYD	Prof Kevin Forsyth & A/Prof Tim Shaw

5:00pm	Panel Session (60 mins) Chairs: Dr Andrew Singer and Dr Peter White 30 mins : Issues arising from Session 4 30 mins: Key question arising for Breakout Session A)	
6:00pm	CLOSE DAY 1 MedEd 2009 Ballroom Foyer	
7:00pm	Depart for Dinner Sofitel Wentworth Sydney Foyer	
7:30 – 10:30pm	DINNER Sydney Opera House	

Day Two – Saturday 31 October

8.00am	Program Committee [Theme Convenors Update Meeting] Canberra Room, Sofitel Wentworth Sydney	
SESSION FIVE : Building Training Capacity	9:00am – 12.30pm Chair: Prof Neville Yeomans (Medical Deans)	
9.00am	Building Training Capacity : Overview (5mins) CONVENOR: Professor Kevin Forsyth, RACP	Prof Kevin Forsyth
9.05am	UK Perspective (20 mins)	Prof Sir John Tooke
9.25am	Australian Perspective (20 mins)	Mr Peter Carver
9.45am	NZ & Education Perspective (20 mins)	Dr Ken Clark
10.05am	BREAKOUT SESSION B: FACILITATOR – (45 mins) University Sector Issues • Prevocational Sector Issues • College Sector Issues	
10:50 – 11.20am	Morning Tea (30 mins) MedEd 2009 Ballroom Foyer	

11.40am	PANEL DISCUSSION: 'Investing in our Medical Workforce: what really are the solutions?'(50 mins) Facilitator: Ms Jenny Brockie	

12.30 – 1:30pm	**Lunch**MedEd 2009 Ballroom Foyer

SESSION SIX: Conclusions and where to from here?	1.30pm – 3.00pmChair: Prof Judy Searle (Principal Medical Adviser, Education and Training, Department of Health & Ageing

1.30pm	MSOD (Presentation (20 mins)	Prof Justin Beilby
1:50pm	Key Outcomes (20 mins)	Prof Sir John Tooke
2:10pm	Discussion, recommendations and action (45 mins)	Dr Heather Alexander/ Prof Neville Yeomans
2:55pm	Close	Prof James Angus