Productivity Commission Health Workforce Study

SA Government Submission

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Government
of South Australia

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1. Executive Summary

Over the foreseeable future, South Australia will face similar issues to the rest of Australia and the developed world in relation to the supply of health workforce to meet growing community demand. That is, an aging workforce, an increasing burden of chronic disease and the rising cost of health services. South Australia as a state will "hit the wall" in relation to workforce shortages sooner than the other mainland states due to the demographic profile of the state. This is compounded by interstate and overseas migration of the younger age groups.

This submission identifies key issues of growing supply and demand mismatches, and sets out the particular issues for South Australia in the context of the Government's reform agenda for the health system.

The South Australian reform agenda is based on:

- The development of a stronger focus on population health, necessitating changing service models to reduce pressure on the acute sector and on the delivery of all clinical services
- Greater engagement of the consumer, community and clinicians in the planning of health services
- Establishing demand management strategies that will help to sustain the level of quality, safe services
- Investing in early intervention and prevention
- A definition of health workforce that goes beyond the traditional concept of a medical workforce thereby increasing the capacity to deliver a wider range of services that prevent or reduce the impact of disease or injury.

Australian residents, regardless of location or status, expect that the health system is supported by a professional workforce that will ensure the best health outcomes for all. We must challenge the current paradigms and adopt new approaches or stop some of those approaches that have no evidential base.

This submission explores a range of areas that South Australia considers vital in understanding the health workforce dynamics to enable possible future solutions. These are the:

- Appropriateness of current health workforce (current paradigms tend to focus only on incremental change which may deliver very little in terms of improved health outcomes)
- Capacity and opportunity to redefine the health workforce to support new ways of working
- Need for competency based approaches to health training rather than time serving and to build better engagement structures between the health industry and the education and training sector
- Need to manage the "machinery" (eg consistency in education, training, accreditation, registration, remuneration, specialisation, competency development etc) for the training, development and deployment of the health workforce
- Need for national consistency in information collection, planning and design to match the labour requirements with the system needs to ensure minimum standards of care.

This submission defines the health workforce in a broad context that is consistent with the SA health reform focus. It recognises that health inequalities will only be reduced through concerted and integrated action that is not just vested in the delivery of clinical services, but also addresses socio determinants of health.

2. Context

2.1 Introduction

The South Australian Government recognises that demographic, cultural, economic and social changes are affecting health systems worldwide. SA too, has been affected by these changes, the most significant of which have been the ageing of its population, and the increasing burden of chronic disease.

The Australian Bureau of Statistics Australian and New Zealand Standard Industrial Classification (ANZSIC), defines the Health sub-division as comprising Hospitals and Nursing Homes, Medical and Dental Services, Other Health Services and Veterinary Services groups. The *ABS Census of Population and Housing* showed that in 2001 there were 52,177 persons employed in the Health sector in South Australia, representing 8.3 % of the State's workforce.

The Health & Community Services industry is the third largest industry in SA, generating output worth $3605 million, or 7.7 % of the State's Gross State Product.

SA is experiencing its lowest level of unemployment since 1978, and although the labour force participation rate continues to remain below the national average (by around 1%), it has been growing over the last twelve months in response to a strong labour market. This has significant implications for the future supply of skilled workers across the range of health related occupations, as older skilled workers retire and are not replaced by a sufficient number of younger entrants through the education and training system. As the number of new labour market entrants declines, there is a clear mismatch between the capacity of this cohort to meet the replacement and growth requirements of the health sector, particularly given the lengthy training times for the professional health workforce.

The demand in the health sector for professionally and vocationally trained staff who can deliver high quality safe services, will not be met by increasing the number of new entrants only at the high skills end. A "skills escalator" approach will be needed to create new opportunities across the spectrum of the existing health workforce, utilising new technology as much as possible, as well as creating opportunities for skills transfer across industries to bring in new entrants. In turn this requires a re-thinking of the roles and functions of all health professionals, leading to curriculum and course redesign.

The reforms of the South Australian Health system proposed by the *Generational Health Review Better Choices, Better Health April 2003* have been adopted in the main, by the SA Government. The recommendations focus on developing population health approaches, building the primary health care sector and addressing health inequalities. This is being done by challenging the current structures, service models and thinking about the SA health workforce.

This submission will not canvass all of the issues in relation to the health workforce. Many of these have been adequately described in *The Health Workforce Productivity Commission Issues Paper May 2005*, *The National Health Workforce Strategic Framework* and many of the submissions already on the Commission's website.

The South Australian submission proposes that the most effective response to health workforce shortages is to adopt a two tiered strategy. Firstly, an incremental reform of the current workforce is necessary to respond to immediate issues and which can be implemented in the short term. Secondly, and in parallel, there needs to be a fundamental reform of service models and job roles and responsibilities which considers both the supply of labour and importantly, also addresses the management of the demand for health services.

Linking reform activity to these demand management strategies, requires engagement of health professionals as well as the community, to build their knowledge and understanding of the capacity of the health system to meet up to their expectations. A consistent national approach to this is essential if this gap between workforce supply and demand for health services is to be reduced.

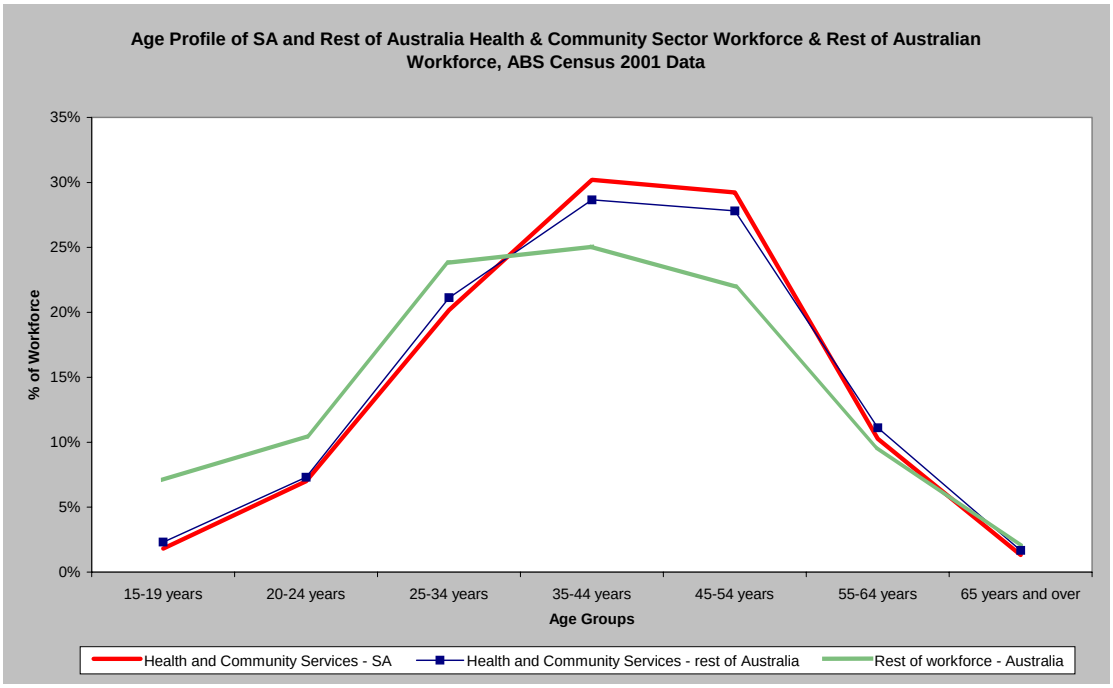
The Productivity Commission (Productivity Commission 2005, *Review of National Competition Policy Reforms* Report No 33, Canberra p303) has identified the need for a national approach to integrated health services reform within an agreed national framework to "address the structural problems of long standing that are preventing the health care system from achieving its full potential."

2.2 South Australia's Workforce Profile and Development

2.2.1 The paid workforce

As with SA's total workforce, the health sector workforce is ageing. Diagram 1 illustrates the increased age of the health and community sector workforce compared with other workforce sectors in Australia.

Diagram 1
Age profiles of the South Australian and rest of Australian health and community services (H&CS) and other workforce



Source: Australian Bureau of Statistics, 2002 Basic Community Profile - Australia Catalogue No. 2001.0

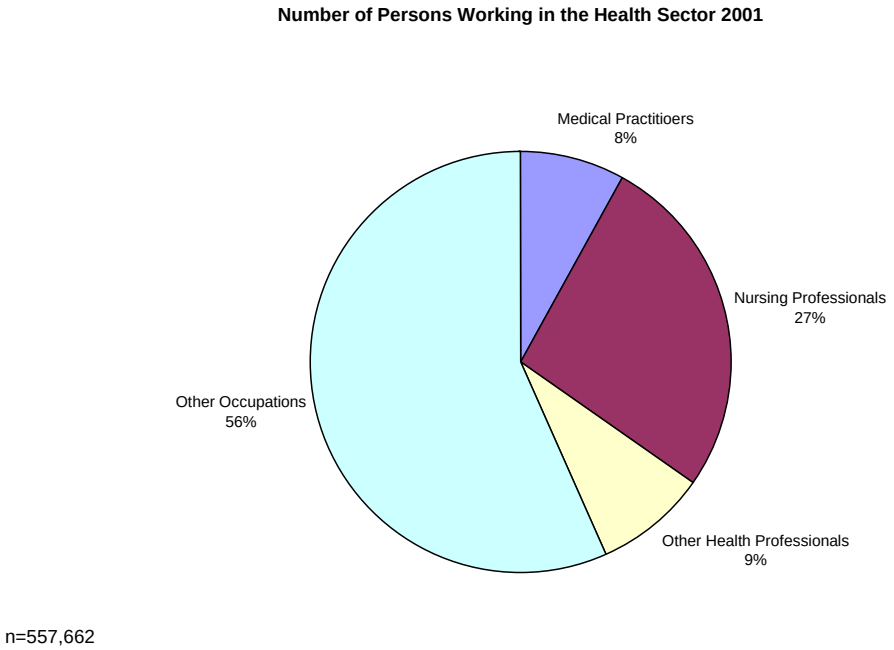
Diagram 1 also illustrates that South Australia's health and community sector workforce is slightly older than the health and community sector workforce in the rest of Australia.

The supply of the professional health workforce in South Australia, like the rest of Australia, is under pressure and continues to fall short of escalating demand. Currently, services are provided at levels that relate to budgetary constraints and as a result unmet demand exists. The health workforce itself is a mechanism for creating demand for services (i.e. supply led demand).

The demand for health services is insatiable, that is, the more services are offered, the more consumption occurs. A modeling exercise carried out by SA Generational Health Review found that demand for acute care hospital services would continue to escalate unless wide ranging and fundamental reform of the health system occurred (GHR 2003). It is clear, that with the current health workforce configuration, the gap between the health workforce supply and the rising demand for services will continue to widen. If left unaddressed, the viability of the SA health system will be compromised.

Many of the issues affecting the supply of the professionally trained health workforce are just as relevant to the other occupations within the health workforce, which collectively represent the largest proportion. This is illustrated below in Diagram 2 of the national health workforce.

Diagram 2:
Number of persons working in the Australian health sector 2001



n=557,662

Source : S Duckett (2004) The Australian Health System. 2nd Edition. Oxford University Press, Australia. Cites unpublished ABS data.

Unless this component of the health workforce is also considered, the ability of professional health workers to maximize their contribution to the provision of health care will be further compromised.

It should also be acknowledged that an additional 50,000 health professionals have left the health sector to work in other industries.

2.2.2 The Unpaid Workforce

The provision of health care also includes care provided by unpaid (informal) carers in community and family settings. Family carers are relatives or friends caring for someone with needs associated with an illness or disability or volunteers working in government and non-government organisations without remuneration. For family carers there is often no choice in providing this care, while volunteers like paid workers, can choose whether they will continue to provide a service.

Family carers and volunteers provide health care or assist people get to health services, for example by giving medication, emotional support, palliative care, arranging and transporting to appointments, changing dressings, crisis management, case coordination etc. Family carers in particular usually provide this health care without the compulsory training provided for paid health workers and without being offered the occupational health and safety support given to volunteers and the paid workforce. As a result, they have poorer health than the general population, decreased work, social and educational opportunities and are increasingly demanding better conditions and support.

Changes in the volunteering sector and the expectations of family carers will have an impact on the health workforce in the future. The role of family carers particularly, has been under scrutiny nationally and in a number of States including SA. This has been prompted by a wide range of factors including increasing workforce participation of women who have traditionally provided the bulk of family care, demands for access to carer support to minimize carer burnout and changing expectations of carer's rights.

Recent analysis suggests that the number of family carers is going to drop significantly in the next 30 years. In 2001 there were 57 primary carers for every 100 people over 65 years of age needing care and living in the community (*NATSEM 2004).* By 2031 this ratio is projected to drop to 35 carers for every 100 people. The consequence of this increasing imbalance between the demand and supply of informal care may be that cared-for people are required to turn increasingly to the formal health sector for their health care needs.

While the predicted drop is more than 10 years into the future, these projections do not take into account the possibility that the supply of family carers may drop much sooner, because of changing beliefs about their role and rising rates of labour market participation as more people decide to re-enter the paid workforce.

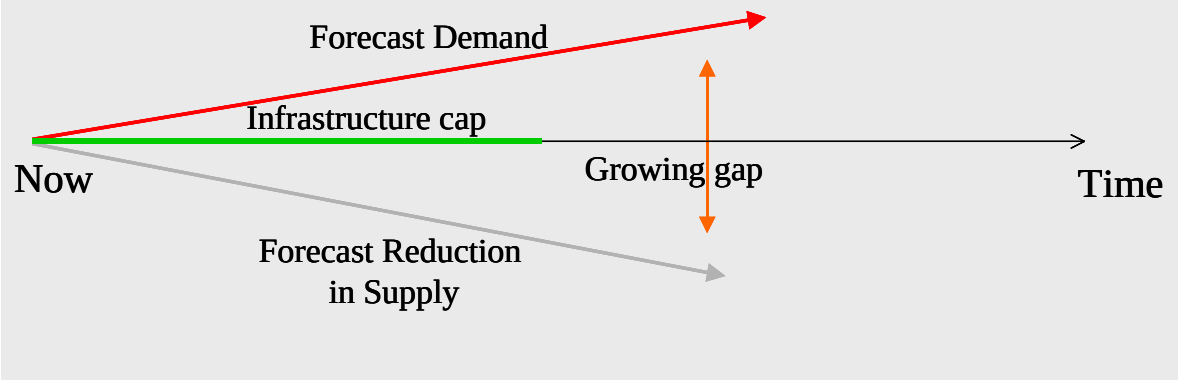
The SA Government, as with several other jurisdictions, is drafting a Carers Policy and Carers Recognition Legislation. As a result, family carers are likely to be included to greater degree in health care decisions that impact on them and service providers will have to assess their capacity to provide care.

The Australian Government provides funding for family carers services as well as income support. While the sustainability of this system of informal care may be outside of the current review of the Productivity Commission, the changes described above should be considered because of the significance of family carer input into health care.

3. Defining the Problem

The aim of a review of the health workforce should be to identify ways to reduce the gap between the increasing demand for health services and the supply of appropriately trained and equipped health workers. This can be represented diagrammatically as illustrated in Diagram 3.

Diagram 3 *Supply and demand gap over time*



The timing and magnitude of the changes in demand and supply are unlikely to be as smooth as those suggested in Diagram 3, which is a schematic representation. Other assumptions that affect the supply and demand forecast also exist, including the maintenance of technology levels. If major technological advances (e.g. in drug therapy to cure diabetes) were to occur, the diagram would be significantly different.

Another inherent cap on demand is created by the supply of infrastructure. South Australian major public hospitals operate at very high levels of occupancy. High occupancy levels do not always enable fluctuations in demand to be met (see also section 3.1.1). In SA the fragmented way that acute care is provided has provided a range of opportunities for redesigning services around the patient journey, thereby improving throughput within these existing infrastructure restrictions to better balance demand and supply (see Case Sudy Section 7.7).

While addressing supply-side issues can lead to a reduction in the forecast gap between demand and supply, addressing demand-side issues is also important, especially in light of the increased ageing population and the decline in the size of the workforce.

There are four main ways to address the gap between supply and demand:

- Improving the productivity of the existing workforce
- Increasing and/or replacing the workforce
- Changing the nature of, or reducing demand as well as community expectations of the health system
- Changing service models.

Changing the nature of health care through the use of different funding models, introducing new technology, and the adoption of a population health approach as ways of managing demand, are considered in section 6. Options for achieving improved productivity are described in section 7.

3.1 Productivity of the Health Workforce

Productivity is a measure of the relationship between inputs and output. The most widely measured form of productivity is labour productivity and this is usually calculated by dividing total output by the number of workers or the number of hours worked.

Given that the health sector production inputs rely heavily upon labour inputs, workforce productivity measures are an appropriate statistic for use in benchmarking and trend analysis purposes.

Health and economic literature refers to various measures of health productivity including:

- Measures relating to expenditure and waste
- Expenditure and increases in life expectancy
- Measures relating to the cost of inputs and outputs of care hours provided (for example nursing hours of care provided)
- Measures relating to how much output can be achieved within a given time frame (for example the number of medical consultations per hour)
- The general contribution to the economy and life expectancy.

However, some have argued that outputs for health are difficult to define. Instead health outcomes, either at an individual level, such as the “curing” of acute disease or at a population level such as gain in life expectancy from health prevention or promotion, should be used. Measuring outputs such as hours of care provided, is therefore not necessarily a good substitute for measuring the real outcome or impact of a health care service.

This complexity is compounded by outdated service models and infrastructure that have been based on assumptions, disease burdens and population distributions that are no longer valid.

To measure productivity across States or even within a State is problematic as health care services have very different rates of utilisation. For example, in SA hospitals in rural and remote areas, are often significantly under utilised. This is because of changing transport options available, the increased utilisation of technology now available in major metropolitan areas and a decline in most rural populations. Health Services are often the last government service based in a small town, and often the largest or second largest employer, and their loss would lead to further rural decline (Eg hospitals using the local banking services ensure sustainability of the town bank- A hospital plus the Post Office/ Bank equals a town).

3.1.1 Productivity and Capacity

Productivity is influenced by system capacity and also the investment in capital. The capacity to efficiently deliver services can also be compromised by outdated infrastructure.

System capacity in relation to public hospital bed availability has reduced in recent times while overnight bed days have been maintained (see Table 1). In some States this has contributed to an increasing number of hospital bed crises that have lead to increased waiting times for beds and events such as ambulance bypass.

It is not easy to determine the effect of increasing same-day hospital bed usage on the capacity of the system as this data is not available (i.e. the impact on waiting lists, bed crises or other measures of system performance). However, it should be noted that during the same period that same-day activity has increased, overnight admissions have actually been maintained (in terms of absolute bed days), rather than decreased as shown in Table 1 below.

Table 1:

Bed days by Patient Type	Financial Year				% Change
	98-99	99-00	00-01	01-02	
overnight	14,379,666	14,162,974	13,721,780	14,230,636	-1%
same-day	2,749,487	2,914,643	3,114,049	3,342,530	22%
Total	17,129,153	17,077,617	16,835,829	17,573,167	3%

Note: same-day length of stay is recorded as 1 day

(Source data: AIHW, 2003)

When viewed in this context, the change in the system capacity and the effects on productivity (bed crises imply a decrease in effective activity) can be appreciated.

3.1.2 Productivity and Capital Investment

Variation in capital will impact on productivity. Public sector investment in capital does not occur uniformly and is limited by budgetary considerations. This is different from the private sector where profit motives may influence capital investment decisions.

Comparisons between States are also problematic because of SA's significantly ageing infrastructure. The Generational Health Review (2003) identified that much of SA's infrastructure requires updating and that the capacity to efficiently deliver services can be compromised by outdated infrastructure.

3.1.3 Measures of Productivity – A SA Perspective

Despite the difficulties associated with the direct measurement of productivity and the workforce supply issues, it is appropriate that some measures are introduced or further developed that enable the gains that affect the work force to be measured. The impacts may be related to supply or demand side issues and should include:

- Micro-reform efficiencies – the measurement of gains in efficiency achieved at the local level through the introduction of change
- Technology assisted gains – those that contribute to the reduction of input by staff (supply side) and those that help reduce the burden of disease (demand side e.g. new drugs)
- Population health impact – improvements in population health outcomes arising from increasing the use of population health approaches (such as using fluoridation to reduce the incidence of tooth decay).

3.2 Workforce Replacement

The ageing of the South Australian health sector workforce has significant implications for the future supply of skilled workers across the range of health related occupations, as older workers retire and are not replaced by a sufficient number of younger entrants.

Table 2 shows annual average replacement demand rates for South Australia and Australia as a percentage of the number of people employed in a range of health related occupations. Annual average replacement demand refers to the number or workers required on average, per year, to replace those workers who will be retiring over the period 2004/05 - 2009/10.

Table 2: Replacement demand for Health workforce

Occupation	Average Annual Replacements SA	Annual Average Replacement as a Percentage of the People Employed in the Occupation (SA)	Annual Average Replacement as a Percentage of the People Employed in the Occupation (Australia)	SA Annual Average Replacement Higher than Australian Annual Average Replacement
Health Services Managers	50	3.2%	2.4%	Yes
Medical Scientists	79	4.5%	3.9%	Yes
Generalist Medical Practitioners	106	4.0%	3.4%	Yes
Specialist Medical Practitioners	109	4.4%	2.7%	Yes
Nurse Managers	53	8.7%	4.3%	Yes
Nurse Educators and Researchers	9	7.5%	4.7%	Yes
Registered Nurses	414	3.2%	1.6%	Yes
Registered Midwives	85	5.9%	3.6%	Yes
Registered Mental Health Nurses	41	10.0%	3.8%	Yes
Dental Practitioners	59	7.3%	3.7%	Yes
Pharmacists	106	8.9%	3.2%	Yes
Occupational Therapists	75	9.7%	6.1%	Yes
Optometrists	17	4.6%	5.2%	
Physiotherapists	42	6.9%	3.7%	Yes
Speech Pathologists	28	10.0%	5.1%	Yes
Chiropractors and Osteopaths	31	9.7%	6.8%	Yes
Podiatrists	17	10.6%	5.4%	Yes
Medical Imaging Professionals	55	8.3%	5.0%	Yes
Dietitians	18	7.5%	7.2%	Yes
Natural Therapy Professionals	30	4.4%	4.7%	
Other Health Professionals	49	7.4%	5.0%	Yes
Psychologists	62	8.1%	1.9%	Yes
Medical Technical Officers	134	9.6%	1.8%	Yes
Enrolled Nurses	210	4.9%	3.0%	Yes
Ambulance Officers and Paramedics	10	7.7%	2.3%	Yes
Dental Associate Professionals	35	11.3%	2.7%	Yes
Aboriginal and Torres Strait Islander Health Worker	12	12.0%	5.9%	Yes
Personal Care and Nursing Assistants	131	1.9%	1.4%	Yes
Dental Assistants	78	4.3%	2.8%	Yes

Source: Monash CoPS, Replacement Demand Forecasts, December 2004

Table 2 also shows that the average annual replacement demand rates for almost every occupation are higher for SA than for the rest of Australia. This is an outcome of various factors, but the age profile of SA and its health workforce are significant contributors. This means more effort will be needed in South Australia to recruit and retain workers (in competition with the larger health systems in other States) and to plan effectively for future workforce requirements.

The impact of the faster ageing workforce in South Australia can be illustrated by consideration of the demand for medical technical officers (See Case Study Section 7.6). Despite being a small State, South Australia will have a higher level of replacement demand for the next five years to ensure retiring staff is replaced.

While a variety of factors are involved in this demand, ageing has exacerbated this situation for South Australia. Retirement is only one factor that is important in determining future demand for new recruits. Other factors include attrition rates for reasons other than retirement, forecast increased demand for services and the influence on the workforce size from the volunteer workforce (e.g. the ambulance workforce is supported by a large volunteer section).

3.3 Current skill shortages in the health sector

The Commonwealth *Department of Employment and Workplace Relations' National and State Skill Shortage Lists (March 2004)* identified the following skill shortages in the health sector in South Australia:

- Nurses - all types
- Pharmacists
- Physiotherapists
- Speech pathologists - in regional areas only
- Radiation therapists
- Sonographers

This study does not include shortages also being experienced in the oral health workforce and which are being currently being considered in the implementation of Australia's *National Oral Health Plan 2004 – 2013* (See section 8).

More detailed modelling in SA relating to attrition and growth issues has identified a shortfall in educational places needed to maintain the current workforce across all professions. This has resulted in additional demand for training places being identified as shown in Table 3.

Table 3: Demand for additional health professional training places

Workforce (listed in priority order)	SA Resident Numbers required to replace attrition of current workforce per year	Shortfall between 2003 uni places and numbers of SA residents required to maintain current workforce per year	Additional positions required to cope with growth or other issues	Total additional SA resident places required
Medical Practitioner	184	110	0	110
Dentist	38	20	0	20
Dental Auxiliaries	29	7	0	7
Occupational Therapist	80	8	40	48
Podiatrist	29	8	15	23
Speech Pathologist	30		15	15
Audiologist	10		5	5
Physiotherapist	90	8	45	53
Pharmacist	65	10	33	43
Psychologist	90		45	45
Social Worker	150		75	75
Othotic Prosthetic	9		4	4
Radiographer	40		20	20
Sonographer	35		18	18
Dietician	26		13	13
Nursing	2377	1542	0	1542
Medical Scientists	-		5	5
Optometrist	24		12	12
Orthoptic	1		1	1
Chiropractor	30		15	15
	3337	1713	361	2074

Source: Unpublished data, Department of Health SA, April 2004

It is important to note the different assessments and models, such as those described in Table 2 and Table 3, are not necessarily constructed on the basis of the same assumptions or data. Therefore, the projections of future requirements under one approach may not be the same as under other approaches. This is why a consistent national approach to data collection and analysis would be very useful.

For example, the average number of nurses required to replace those retiring each year as reported in Table 2 (Section 3.2) was significantly less than the projected need for training places to meet growth requirements and attrition via detailed modelling conducted by the SA Department of Health.

It is also important to note that supply of workforce may come from outside of South Australia and thus not all training positions necessarily have to be provided in SA or filled by South Australians. In fact, given the high level of demand for replacements in the forthcoming years there should be an expectation that some of the workforce will be attracted from outside of the State.

While the Australian Government has allocated additional places to undergraduate courses from 2007, it is important that the criterion for allocation includes both current shortfalls as well as projected longer-term shortfalls.

A labour market shortage exists when the demand for workers for a particular occupation is greater than the supply of workers who are qualified, available and willing to work under existing market conditions.

The main causes of shortage for these occupations in South Australia are:

- Occupational wastage, where graduates or those with experience move interstate or overseas. This is the case particularly for physiotherapists, radiation therapists and speech pathologists
- Insufficient supply of trained graduates, particularly nurses and midwives
- Career interruptions, to have children or care for relatives. This is particularly the case for nurses and physiotherapists where a high percentage of participants are women.

There is evidence from surveys and occupational studies that job satisfaction, personal safety and recognition are important in reducing occupational wastage and attracting workers to particular occupations, including nurses. Improved career paths are also important, particularly in occupational areas where wastage is high.

In SA the annual labour force survey for 2004 (*The South Australian Medical Labour Force, 2004* June 2005, Department of Health) found that:

- The average age of all doctors was 47.2 years and increasing
- Average weekly hours are declining for GPs and female doctors but remaining relatively constant for specialists with a slight increase over the last two years for male doctors (up by 0.6 hours per week)
- The intended rate of retirement is positively related to the age of the doctor at the time of survey, that is the older doctors were intending to retire later, younger doctors intended to retire at a younger age
- Approximately half of those surveyed planned to retire within the next 15 years
- Variation in the distribution of General Practitioners per 1000 people *within* the greater metropolitan region was greater than *between* the greater metropolitan region and the outer rural areas (1.66 in eastern metro to 0.86 in the inner north vs. 1.66 in the eastern metro to 1.00 in the outer rural area).

The SA shortfall of medical practitioners is being addressed through a range of strategies including recruitment of overseas trained doctors, increasing the proportion of medical training places taken up by SA residents and ensuring intra-state intern placement opportunities. These solutions alleviate the problem but do not solve it.

Recommendation 1:
That national forecasts are developed to reflect future demand for the Australian health workforce that encompass demand based upon, inter alia, the expected growth in service demand, the ageing of the current workforce, attrition rates and private/public maintenance.

Recommendation 2:
The Australian Government ensures the number of current and proposed new training places for undergraduate courses meet projected demand based upon criteria that relates to a consistent definition of current and future workforce demands and includes consideration of new service models.

3.4 The Indigenous health workforce

The health status of Indigenous Australians continues to be dire and despite gains in some areas, in others (eg diabetes), the situation is worse than a decade ago. Despite being a younger population than the Australian average, they are also a sicker population. Health status is related to a range of socio-economic factors, personal choices as well as access to services. The health of Indigenous Australians has been documented, described, researched and reported on extensively, but Australia has still made little progress in finding comprehensive solutions, unlike improvements in Indigenous health made in similar countries such as New Zealand and Canada.

The situation for Indigenous Australian health care workers is even more critical than for the rest of the professional health workforce. A report prepared by Access Economics for the Australian Medical Association in 2004 concluded that an additional 430 FTE medical practitioners would be required to make up the current shortfall in services to Indigenous Australians. A similar number of dentists, nurses and para-medicals, Aboriginal Health Workers and allied health professionals, would also be needed.

The South Australian Government Health Reform Agenda includes a commitment to expanding primary health care. The greatest improvements in health care for Indigenous people are expected to be achieved by adopting this approach. There has been significant success in the Anangu Pitjantjatjara Yankunytjatjara Lands with a primary health care programme that has dramatically increased the birth weight of babies. Low birth weight is one of the major indicators of poor health outcomes later in life. However, these success stories are isolated and ad hoc and do not amount to a meaningful improvement in the overall health of the Indigenous population. Indigenous health care requires particular skills and training must be targeted accordingly.

The national work that has been done in relation to Indigenous health has been significant. However, it is important that all the major frameworks, *The National Cultural Respect Framework* (to change organisational culture to increase recruitment and retention), the *National Strategic Framework for Aboriginal and Torres Strait Islander Health* (to improve health outcomes) and the *Aboriginal and Torres Strait Islander Health Workforce National Strategic Framework* are fully implemented and well resourced by all jurisdictions and the Australian Government.

Jurisdictions must increase their Aboriginal and Torres Strait Islander workforce at all levels of the health system. In South Australia the Government has set a target for the state public sector to increase the percentage of Aboriginal and Torres Strait Islander people from 1.2% to 2% by 2009. In health, strategies are being developed to translate this target across all levels of the health workforce.

An issue for the central and western States is the eastern seaboard base of the Aboriginal and Torres Strait Islander Doctors Association (AIDA) and the Congress of Aboriginal and Torres Strait Islander Nurses (CATSIN). These two bodies give professional development support and act as advisory and decision making structures to Aboriginal and Torres Strait Islander doctors and nurses. South Australia supports the development of a national professional body for Aboriginal Health Workers based outside the eastern seaboard.

Australian Government and jurisdictional partnerships at all levels are crucial to getting improvements in health and employment outcomes for Australia's Indigenous population. In the past there has been a history of joint Australian/State Government funding of Indigenous employment and training initiatives. More recently Australian government investments in this area have been predominantly in the private and non-government sector. To build the Indigenous health workforce we need to re-establish these funding partnerships to increase the participation of Indigenous people in employment, education and training.

Some Australian Government departments have the mandate and are resourced to contribute to improved participation of Australia's Indigenous population in training and employment. However, accessing these resources at a jurisdictional level for local training and employment initiatives, even with an upfront commitment to meaningful and sustainable employment is complex, and has therefore limited the contribution from the Australian Government to these initiatives.

In SA, experience has shown that in order to bring more Indigenous people into employment, education and training, a significant investment has to be made in community capacity building and in healing the community before more people are ready and able to take up new opportunities.

Case Study – SA Indigenous Health Workforce employment, education and Training

SA has established a culturally supportive learning environment in a rural location, recently recognised nationally as a best practice model. This model has been successful in the training and subsequent employment of local Indigenous people. However, recent funding submissions to the Australian Government for training and employment programs have had limited success, because of the complexity of operationalising the money and inflexible funding criteria. For example, most Indigenous people seeking employment in the health sector are of mature age, not school leavers, so they are ineligible for Commonwealth Cadetship monies for 17 – 28 yr olds.

There are also few incentives for mature aged people to obtain a formal health-related qualification to work within the health sector. Many have financial commitments that require a full-time salary to cover their cost of living, often coupled with family responsibilities that may extend to a number of family members. For example, an individual may wish to become a qualified Health professional, but cannot afford to live on Abstudy because of financial responsibilities and the future impact of a HECS debt. Individuals are also often required to forfeit their Abstudy allowance if they are recipients of scholarships.

There is also little uptake of health related VET in schools within SA of Indigenous secondary students. Primarily, this is due to the high attrition rates of students before the age and year level criteria to participate in VET programs. SA is addressing this through targeted school retention initiatives through its Social Inclusion work.

Recommendation 3
Support a national review of the complexity of Australian Government funding arrangements to ensure that support is given to locally developed flexible Indigenous health workforce employment, education and training strategies.

3.5 After hours GP services adjacent to hospitals

SA took part in a national trial of after hours GP services established adjacent to hospitals in response to the need for improved after hours primary medical care. Two trial clinic sites were established in Adelaide metropolitan public hospitals. The third trial clinic was established at a private Hospital, where no after hours or Emergency Department (ED) services existed.

The trial enabled the exploration of issues in preparation for the investigation of sustainable models of after hours care. Funding for the trial was provided by a Commonwealth grant through the National Health Development Fund (NHDF) under the 1998-2003 Australian Health Care Agreement (ACHA). The trial period was from July to November 2001 when data was collected for reporting purposes.

The SA trials produced the following findings:

- Stakeholder engagement and consumer satisfaction was very high. GPs and consumers support continuing the service as it provided improved access to after hours GP services
- Approximately 29-35% of low triage patients presenting at EDs after hours, could also be treated by a GP if the services were available
- After hours clinics co-located with EDs reduced waiting times for low priority patients and allowed for improved management of more acute patients in the ED
- Outcomes for patients seeing the GP were equivalent to those seen in the EDs
- The cost of maintaining a co-located GP service was high and financial sustainability is complex.

The trial evaluation (*After Hours General Practice and Hospital Co-location Trial Report 2001* Department of Human Services July 2002 p 56) concluded "Co-location of GP services within hospitals had positive outcomes for EDs, GPs and patients. The Trial demonstrated that selected primary care patients in EDs are willing to see a GP, experience reduced waiting times and equivalent health outcomes to those patients remaining in the ED. "

The main reason that the trials did not continue in public hospitals, is the cost and complexity of the funding model. In SA some modelling has been done which demonstrated that, depending on how the service is constructed, financially sustainable models are possible.

Recommendation 4:
Support further national development of a sustainable model of After Hours General Practice and Hospital co-location.

4. Strategic Reform in South Australia

In SA, a major review of the health system was completed in April 2003. The challenges identified at the time of the review included:

- Population changes
- The need to address the social determinants of health including the physical, social and economic environments in which people live
- The changing burden of disease
- Mal-distribution of services
- Fragmentation, client assessment processes and duplication of planning and delivery of health services
- Growing health inequalities between population groups.

As a consequence of this review, the SA Government has adopted a health reform philosophy that underpins the future direction, operations and planning of the State's health system. It is based on:

- Development of a stronger focus on population health, necessitating changing service models to reduce pressure over time on the acute sector and on the delivery of all clinical services
- Greater engagement of the consumer, community and clinicians in the planning of health services
- Establishing demand management strategies that will help to sustain the level of quality, safe services
- Investing in early intervention and prevention
- A definition of health workforce that moves beyond the traditional concept of a medical workforce thereby expanding the opportunities to deliver a wider range of services that prevent or reduce the impact of disease or injury.

This means that in addressing workforce pressures and shortfalls SA will be seeking to:

- Develop new models of service that are closer to home, increase prevention, early intervention and health promotion
- Strengthen primary health care services by providing greater opportunities for health professionals to work in local multi-disciplinary teams
- Improve health services for the most vulnerable populations in the community
- Develop a health workforce with the right skills balance with the required training, recruitment and retention strategies
- Maintain and sustain the current system
- Establish new governance structures, models of funding and ways of sharing information
- Broaden the involvement of health practitioners and the community in health planning and policy development and decision making.

The SA Government has also set the following health and wellbeing targets in the *South Australian State Strategic Plan*:

- Increase healthy life expectancy of South Australians to lead the nation within 10 years
- Infant mortality: Continue to be the best performing State in Australia
- Psychological distress: Equal or lower than the Australian average within 10 years

- Smoking: Reduce the percentage of young cigarette smokers by 10% within 10 years
- Overweight: Reduce the percentage of South Australians who are overweight or obese by 10% within 10 years
- Reduce the gap between the outcomes for South Australia's Aboriginal population and the rest of South Australia's population in relation to health, life expectancy, employment, school retention rates and imprisonment.

These strategic objectives will impact on the way in which the health workforce is used and deployed. The changing paradigm shift to a focus on population health outcomes will only be achieved by addressing some of the risk factors through early intervention and prevention strategies.

In SA the Government is attempting to increase the focus on primary health care but not at the expense of the acute sector. The opportunity to better link people working in hospitals to the primary health care sector is fundamental to this reform. This will require some cultural change and role redefinition.

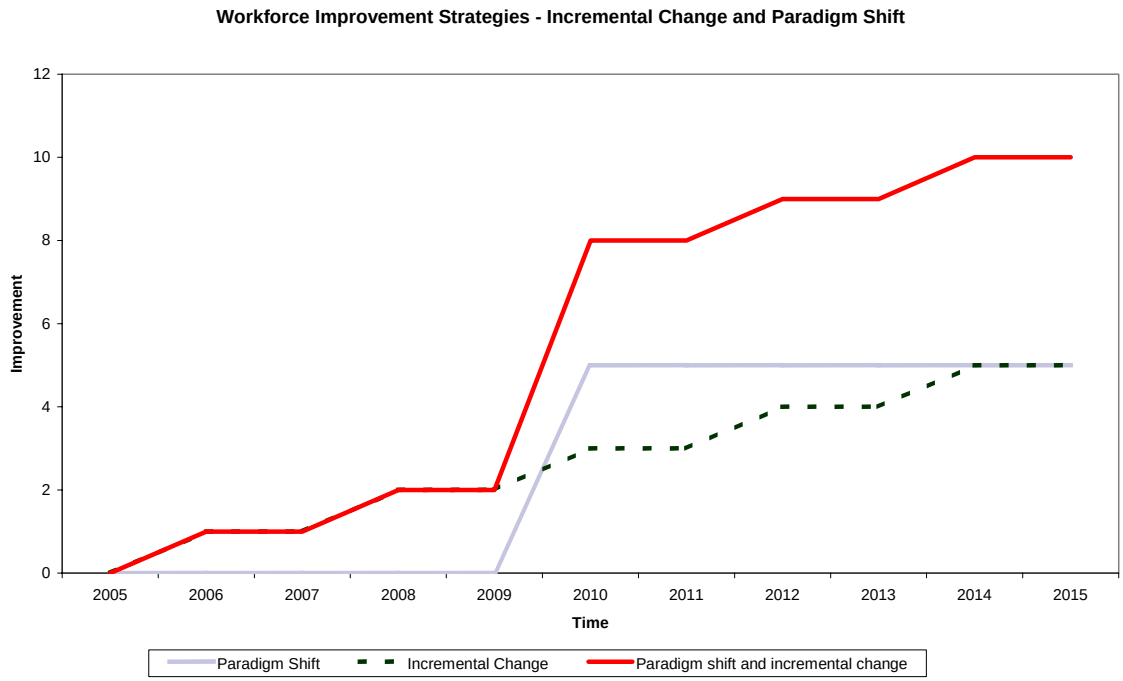
5. The way forward to Workforce Reform

Ensuring that the health service demand does not continue to outpace the supply, requires two simultaneous and parallel streams of action at both a National and a State level:

1. *Incremental change - Maintaining and sustaining the current workforce in the delivery of a high quality and safe health system.*
2. *Paradigm shift.- Redesigning and fundamentally rethinking the service and funding models, clinical roles and responsibilities, and connecting the generation and management of demand to the reality of the health system capacity.*

The gains that can be achieved through incremental change and paradigm shift are illustrated schematically in Diagram 5

Diagram 5:



Source: Unpublished Department of Health

Maximum gain (red line) will occur if both approaches to improving productivity are used to address the forecast increasing gap between demand for health care services and the ability of the workforce to provide them. This is illustrated in Diagram 6.

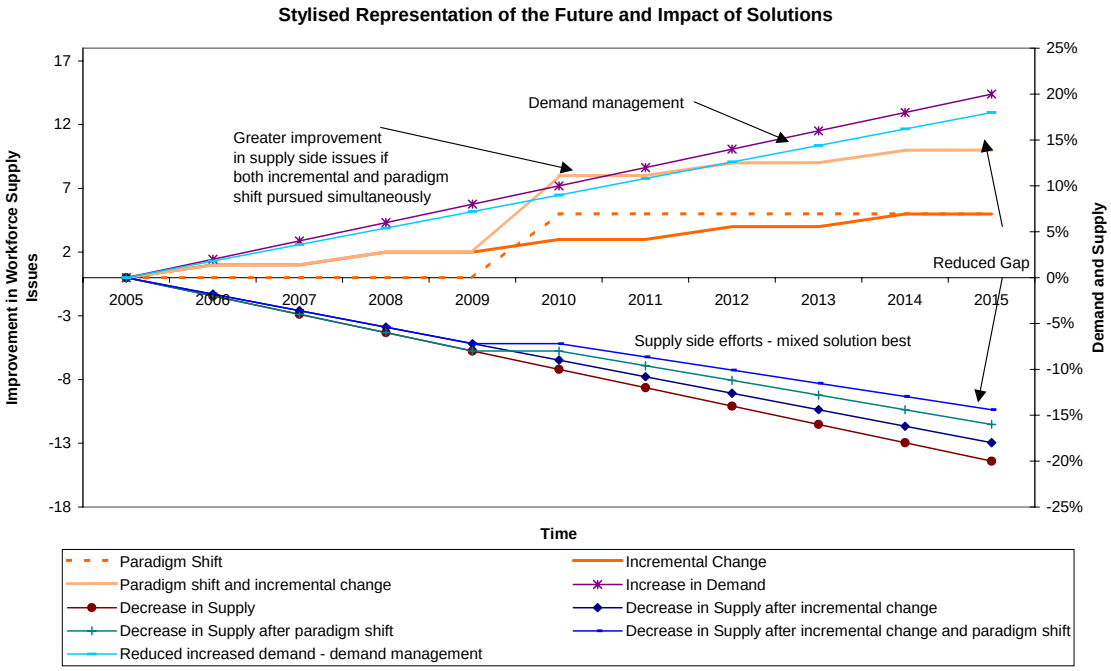


Diagram 6: Stylised representation of the future and impact of solutions
Source: Unpublished Department of Health

Diagram 5 & 6 are representations of health care supply and demand. In reality, it is unlikely that reductions in supply or shifts in demand and supply will be smooth. The greatest gains will be through using both incremental and paradigm shift solutions to address current and future workforce supply issues. The concurrent use of demand management strategies will also be beneficial in managing the gap between forecast demand and supply.

There is an urgency to implement solutions, particularly as changes to workforce roles often involve significant training associated with long lead times until course completion. In SA both incremental and paradigm shift changes are being made, but national level support is necessary, particularly for those changes involving a paradigm shift in areas such as the creation of new and extended roles in the health workforce.

6. Philosophy of Change

Earlier in this submission it was proposed that there are two simultaneous and parallel streams of action required.

Reform of the health workforce centres on four major frameworks:

- Using a population health approach at a State and National level to influence service provision
- Building up the primary health care sector
- Improving the use of technology
- Changing the funding model.

Under any analysis, the changing nature of Australian society will continue to place demands on the health system that are unlikely to be met from within the current paradigm. The fundamental nature of these changes means that in terms of cost and future workforce demands, the system's current trajectory will continue to see the imbalance between supply and demand worsen. While it is important to try to achieve efficiencies within current systems, fine tuning at the margins will not be sufficient to effect the necessary structural changes to address the problem.

Alternative strategies are required to manage demand through new investment strategies that significantly restructure current workforce roles, invest more in population and public health initiatives, develop more effective prevention and early intervention initiatives and seek new methods of channelling demand to alternative pathways. Without national consistency in data collection and analysis (both in terms workforce supply and demand) which can offer insights into new models of care, there is a risk that we will continue to do more of the same, rather than being able to create new ways of working.

The South Australian Government has recognised the importance of a dual strategy to both manage improved performance of the current system, while at the same time implementing strategies to influence and change demand into the future. This requires:

- Increasing consumer participation in planning and decision making governance structures
- Developing and communicating the evidence based approach to the development and delivery of health services (for example in SA, the successful Sustained Family Home Visiting Program is based on strong international evidence supporting intervention and family support in the first years of life)
- Encouraging the media focus to move from health meaning hospitals and a government only responsibility, to health as a continuous system supporting people in both wellness and illness, requiring their active engagement and responsibility-taking, both individually and collectively as a community.

The SA Government has embarked on a health reform agenda that seeks to sustain and improve the performance of the current health system, while embarking on a series of new initiatives that will require changes in community expectations.

The Government recognises however that no jurisdiction can act alone and that a national, fully integrated health system is essential in Australia to ensure its long term viability.

In April 2005 the SA Minister for Health, the Hon Minister Lea Stevens commented in The Advertiser (14 April 2005) that SA "absolutely" supported the move to investigate ways of reforming the overlapping roles of the Commonwealth and State in relation to health.

6.1. Using a population health approach to drive change

It is clear that the medical model of healthcare does not provide an adequate explanation of the types of services required to respond to changes in the social, economic and political environments. At its simplest level, the biomedical model describes healthcare services as a spectrum that extends from prevention to cure. However useful this model has been in the clinical environment, it has proved less useful in defining newer programs and services.

Major gains in the health of communities and individuals can be made by applying population health approaches. These gains can in turn reduce pressure on the clinical health services. For example, it is estimated that up to 50% of serious burn cases occur due to very hot bathwater. Serious burns can cost hundreds of thousands of dollars for each individual case in acute treatment and the same again for what is sometimes, lifetime rehabilitation. A possible population health response to this problem is to legislate for temperature controlled water in all bathrooms. While the legislative levers can be pulled at the State level, a consistent national population health policy approach would help ensure national application.

The Australian Government's report *Returns on Investment in Public Health an Epidemiological and Economic Analysis* provides further evidence of successful public health campaigns that have resulted in health gains (eg immunisation, tobacco, road trauma, HIV/AIDS etc) that all have had a significant impact on workforce requirements. More of this work needs to be done to support new opportunities for identifying and implementing population health responses and changing the nature of demand for services.

In the current system there is no independent entity that pulls together the research and evidence, to provide Governments with advice about where the best investments are from a population health perspective. Widespread adoption of population health approaches has the potential to alleviate the pressure on the professional health workforce in the longer term. Other examples of population approaches could include legislating to replace use of corn syrup in soft drinks and foods with sugar or artificial sweeteners to reduce obesity, increasing the cost of cigarettes to reduce their consumption or building swimming pools in isolated communities to reduce the rate of otitis media. Approaches such as these can change the nature of support required from the professional health workforce.

While each jurisdiction has some of the levers that would enable a population health approach, there is no national approach linking sources of population health information to their analysis and interpretation in a way that is seen to be independent and apolitical. Each jurisdiction also tends to undertake its own approach to population health, but the lessons and values are not always passed on due to a lack of investment in evaluating and reviewing, in general health services are established and funded to deliver a service, and not to contribute to the overall knowledge of what actually works. The opportunity to translate such knowledge more broadly into long term changes in workforce roles and requirements is often lost.

In making a commitment to improving population health, one option is to create a national independent advisory body that, in collaboration with existing researchers, could provide advice to both the Australian Government and the jurisdictions, and which:

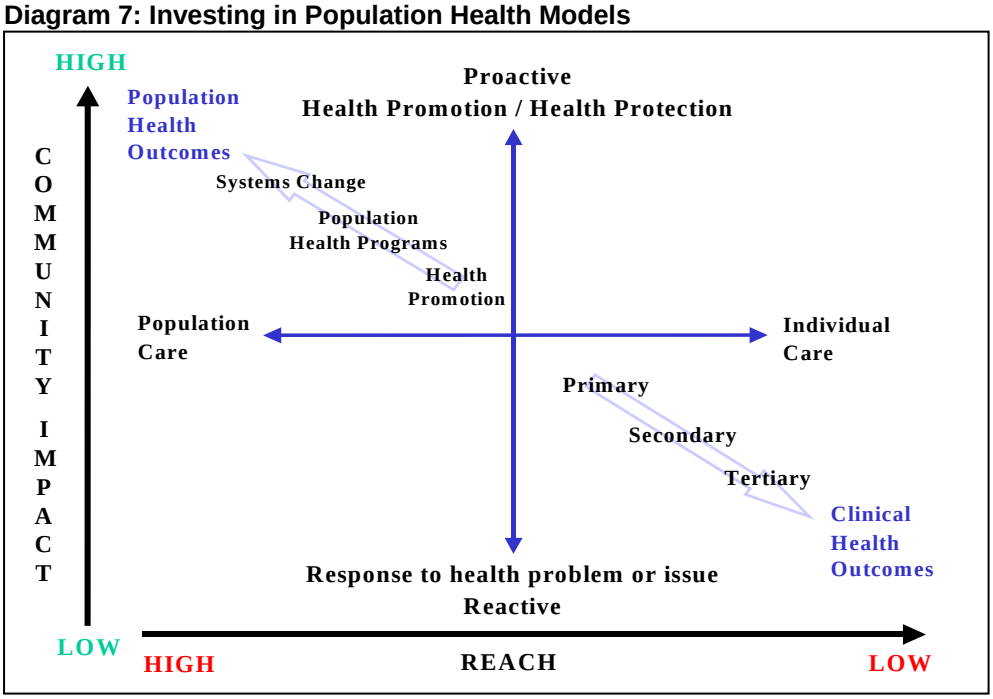
- Brings together sources of population health Information, including that contained in health service databases, community surveys, audits, workforce surveys, qualitative surveys etc
- Undertakes environmental scans and analyses the information in the context of social and technological trends and models the options
- Develops population health policy options, practice improvement and clinical support information.

The workforce implications of applying a more concerted, integrated national effort to introducing population health approaches can be significant. Early intervention and prevention strategies can reduce the impact on episodic acute services, by delaying or reducing chronic disease onset and its progress within a population. This means that more investment would be needed to build the capacity of the health workforce in early intervention and prevention, which in turn can reduce demand for episodic acute clinical services.

Recommendation 5:
Establish a national independent mechanism to advise on population health issues drawing on international experience.

Population health approaches to service delivery must occur in tandem with existing acute care service delivery to achieve a better balance between the two types of service delivery. Diagram 7 illustrates the difference between investing in population health models of care and acute care services.

Diagram 7: Investing in Population Health Models



Source: Nossar and Engelhardt unpublished work for SA Children, Youth and Women's Health Service 2005)

Using this model, it becomes clear that greater investment in clinical health services (responding to the issues and problems of individuals and producing clinical health outcomes), has a very low impact on improved population health outcomes.

If this model is applied at a service function level, it is possible to not only identify the current position in terms of the contribution to population health outcomes but also where future opportunities might exist for further investment in population and primary health care and changing workforce structures and roles.

Since 2002, the SA Government has moved to introduce a range of reforms aimed at achieving the longer-term changes required to alleviate pressures on the health system. These include a range of initiatives that extend existing health activity into new areas and create changed roles that impact on the broader social determinants of health.

In addition the Social Inclusion program of the government seeks to tackle some of the broader social determinants of health through its Social Inclusion Agenda with the aims of:

"…ensuring a safer community, to providing a world-class education for our children, to achieving more skilled and secure jobs, improved indigenous health and reduced homelessness, will all contribute to a more socially inclusive community"
http://www.socialinclusion.sa.gov.au/site/page.cfm?u=1

The South Australian Social Inclusion initiative has led to greater cross agency and portfolio collaboration, to address some of the fundamental conditions underpinning ill health (e.g. homelessness, low educational attainment). This in turn has led to the identification of new types of workers who can span the system and deliver a wider range of services under new arrangements (eg mobile health clinics for homeless people).

Despite the role that may be played by State jurisdictions in reform the health system, there are many areas that cannot effectively be addressed without a more concerted national effort and the development of national strategies and partnerships.

A Case Study: Early Childhood Services an example of a population health approach.

There is significant interest shown by governments in investing in the early years to improve population health outcomes, in both the medium and long term, to reduce pressure on the health system.

South Australia has reoriented its system of child and maternal health from traditional, clinically based services to services based on sophisticated population health programming. Multidisciplinary approaches to problem solving have been introduced, the skills base of front line staff substantially expanded and new ICT has been incorporated into the day to day operations.

These programs are provided from within a universal framework, are perceived by the public as being non-stigmatized and are highly responsive to consumer defined need. The programs generally work with families who are well and seek to build protective factors and mitigate risk factors.

Workforce changes required to deliver these programs have been:

- Training nursing, social work and other staff to build sustained relationships of trust with clients and adopting a multidisciplinary approach to problem solving.
- Developing staff expertise and systems to work across a range of social, economic and emotional domains (e.g. relationship issues, child protection, housing and income support).
- To support clinicians work in new systems of quality control and implementing professional development such as cross disciplinary case conferencing.
- Broadening cross-disciplinary management skills
- A more mobile and responsive workforce that is increasingly reliant on ICT for data collection, knowledge and information management and performance management. This requires significant systems development, training and infrastructure investment and aligning ICT planning with workforce redesign
- Community education campaigns to inform clients of new roles and to manage their expectations.

Community response to the new service arrangements has been overwhelmingly positive. Hard to reach groups such as Aboriginal families are using the services at levels not previously seen (close to 100% enrolment in metropolitan areas with equally an high retention rate). Client satisfaction ratings to the service exceed 90% positive ratings.

In addition the nurses providing the service are predominantly re-entrants to the nursing workforce, rather than existing employees. Anecdotal evidence suggests that they have been attracted back into nursing by the new roles and more flexible working conditions.

The health and wellbeing of our children is a major public health issue. Early life experiences are a major determinant of our health status throughout life and as such effective early intervention programs present a major opportunity to manage costs of the system into the future. This is reinforced through the number of national processes on this issue currently under development including *The National Agenda for Early Childhood, The Stronger Families and Communities Strategy* and *the National Public Health Strategic Framework for Children 2005 -2008*

While workforce reform in Early Childhood services has been successful in South Australia the greatest impact on population health will be achieved through national level support and collaboration, rather than by individual jurisdictions acting alone. Key aspects of child health that are driven by the developmental and health needs of children when considered as a population group, are the same. There is reform occurring across all jurisdictions in early childhood services. A National approach will avoid duplication, achieve economies of scale and ensure consistent quality assurance systems and evaluation.

A more coordinated approach in the Early Childhood sector will maximize use of Australia's intellectual capital and experiences of workforce reform. This can be applied across the health workforce as a whole. National infrastructure will best support this kind of innovation and ensure adequate research transfer to inform policy and practice.

6.2 Primary Health Care

As outlined above, building up the primary health care sector within a population health framework that encourages and enables action on the social determinants of health, has implications for the future shape, structure and roles of the professional health workforce.

The primary health care workforce includes those involved in first contact care or health service provision such as the:

- Public sector - community health services (eg. domiciliary care, early childhood services, Aboriginal health services, sexual health and family planning services etc), local Government services (eg. community development workers with health roles, education sector (eg speech pathologists, psychologists)
- Private fee-for-service practitioners (eg. general practitioners, speech pathologists, psychologists, pharmacists, podiatrists etc)
- Non Government sector – Aboriginal and Torres Strait Islander health services, church based services etc

Primary health care workers work in a wide variety of settings providing services on an individual and/or group basis. This requires them to have knowledge, experience and skills that enable them to work successfully across sectors, across disciplines and often within a range of different funding models.

General practitioners are often described as the core of the primary health care system, but their capacity to undertake population health work is limited by the current funding models. *Thinking Populations: Population Health and the Primary Health Care Workforce* (A Public Health and Research Program Project published in 2004) found that unless practitioners working in private practice could access government funded schemes and the infrastructure to support and enhance general practice systems and strategic planning, they were less likely to undertake population health activities.

In addition it found that "For primary health care professionals to engage in population health activities they require population health knowledge, skills and competencies beyond those usually required for clinical practice. Apart from the specific knowledge and skills required to design and conduct population health activities, they require skills in needs assessment, program planning, implementation and evaluation and monitoring." (*Thinking Populations: Population Health and the Primary Health Care Workforce* A Public Health and Research Program Project, 2004, p13).

The implications are that primary health care health professionals need a number of skills beyond clinical skills, as well as the infrastructure and funding support to undertake population health activities. This in turn has implications for current models of training, and curriculum content.

In SA, the Government is implementing a new chronic disease strategy (*Chronic disease: prevention and management opportunities for chronic disease,* South Australia 2003, Department of Human Services). It has 4 key strategies to reduce the burden of disease, on individuals and on the system that provides services, by developing local partnerships that enhance and expand the roles of health service providers.

For example, support for the workforce includes train-the-trainer programs, with "master trainers" being developed to train other health professionals (clinicians) as leaders so that both consumers and health professionals can gain the skills needed to provide peer support, support self management, deliver information sessions etc.

Development of a national policy framework would provide the opportunity to create the infrastructure and funding changes needed to enable the workforce to make the transition to a more population health based approach to primary health care service delivery.

6.3 Online knowledge and information systems

The use of the internet and related technologies as a gateway to information and other services is becoming increasingly pervasive across all age, cultural and socio-economic groups. In Australia, 75% of the adult population have access to the Internet, with 54% of households having a direct Internet connection *(National Office for Information Economy Pocket Statistics,* July 2003).

This trend is likely to continue with the next generation of health consumers being increasingly proficient at accessing information on line. Significant improvements can be achieved in the use of information and communication (ICT) to reduce pressure on health workforce and costs as well as improving customer services.

A Case Study – The SA Child and Youth Health Web-site

In South Australia, The Child and Youth Health Web site www.cyh.com.au provides free online access to information on health and wellbeing to parents, young people and children.

Despite limited marketing, the site's growth in traffic has been significant. 41 gigabytes of page are downloaded per month, equivalent to 340,000 page downloads of information by 120,000 unique visitors. This now exceeds any other form of contact with the public across all other child and youth services combined (clinical consultations, home visiting, parent helpline etc.) by a factor of six.

The logistics of trying to deliver this amount of information by traditional means such as pamphlets, health promotion campaigns etc would be beyond the resources of most agencies. While it is only possible to estimate local South Australian usage of the site, the data suggests web usage is a growing at a greater rate than direct public contact. At the same time as this growth in web traffic to the site, the number of face-to-face consultations has declined by 40% over the past 5-7 years. Whilst this does not infer a causal relationship, it clearly reflects significant changes in the nature of consumer behaviour over a relatively short period.

The site also acts as a knowledge base for both Child and Youth Health field staff and other professionals. Health professionals can also access a variety of other online services, including searchable databases such as the Cochrane and Campbell Collaboration and medical journals.

This significant change in consumer behaviour both in Australia and internationally has occurred despite any obvious strategies by health at National or State levels to harness the opportunities presented.

The potential to use this and new and emerging methods of information transition, present significant opportunities to channel demand for information into more sustainable forms of service delivery than the traditional face-to-face consultation preferred by the professions.

The significance of such large scale and rapid changes in consumer and professional behaviour, present both opportunities and risks in terms of future workforce strategies. Better informed health consumers can play a more significant role in the management of their own health, but their health may also be worsened from inaccurate information accessed by the consumers themselves or their health workers. Quality control measures for both professional and public use of online health information sites are becoming a pressing issue. The consumer needs an authoritative and reliable source of quality health information.

The very nature of the Internet and the complex nature of the health workforce mean that efforts to manage the rapid changes in Information and Communication Technology are best made at a national level.

The introduction of better technology support to the workplace is also essential so that health professionals can make the best use of technology as a tool to support their decision-making and client services. This may mean that in time, the professional health workforce includes a greater range of people involved in technology support for the health system, to better release the capacity of the clinically trained workforce for clinical procedures, diagnosis and decision-making.

Recommendation 6:
It is recommended that a national strategy be developed around the provision of ICT services for health professionals and consumers, with consumer involvement, to support both consumers and health professionals in accessing quality health information. This should address the opportunities for redefining roles and technical support needs of health professionals.

6.4 The Health Continuum and the Workforce

Another way to look at the health system and workforce issues, is to consider the health workforce in the context of a value chain, from wellness to illness. Currently the health system is primarily a disease-based system that has a significant focus on providing episodic acute services in response to the presentation of injury and illness. However, investment in health, particularly well-being, also occurs in other sectors, such as through the provision of education, community, housing, environmental and other services. Typically such investments are not seen as health investments, yet it is these very same investments that have contributed the most towards achievement of greater population health (see Section 6.1).

While the focus of the health sector will continue to be predominantly at the disease management end of service provision, explicitly identifying the contribution of the non-health sectors towards health and well being will expose their value.

Acknowledgment of the value of the non-health sectors in creating health and wellbeing is important as it:

- Can alter or support different investment decisions
- Means that other sectors of the workforce impact on the health and well being of the population.

In terms of this review, it is the latter point that is important. There are implications for a changing structure and investment decisions for the health workforce, both the professional component, as well as the volunteers and family carers. By analysing the health workforce in the context of where other workers are improving the health and well-being of individuals or communities, it is clear that there are opportunities for role redefinition beyond the traditional health sector.

7. Potential Solutions

Many solutions to health workforce problems are well known and are already being implemented and thus it is not proposed to list all potential solutions to the workforce issues. There are some solutions however, that are likely to have a greater impact and these are described in more detail in this section.

7.1 Whole of Workforce planning

In 2002 the South Australian Government commissioned a number of reviews and inquiries examining South Australia's skills base. The two key reviews, the *Skills for the Future Inquiry* and the *Review of South Australian Employment Programs* both recommended the need for a workforce development strategy for South Australia, with nine key industry sectors identified, including health and community services.

A State workforce development strategy covering all industry sectors is due for release in 2005. The strategy aims to increase participation, particularly among older workers, young people, women and unemployed people, and to identify and respond to the many factors which impact on workforce supply and demand. It represents a whole-of-government approach, in partnership with the business and community sectors.

To support these strategic initiatives, a Workforce Development Research Consortium has been established to work with Government and industry to develop the State's capacity to understand the impact of demographic change and ageing on the workforce. It brings together researchers from the Australian Institute for Social Research (University of Adelaide), the National Institute for Labour Studies (Flinders University) and the University of South Australia.

The project will develop a conceptual framework to strategically inform workforce development, and develop workforce planning tools to assist Australian workplaces respond to the challenges of demographic change and ageing. The three year project is currently in its initial stages, focussing on an extensive review of Australian and international literature, and initial interviews with firms in South Australia regarding their workforce development and planning knowledge and activities.

A number of significant industry and occupational employment forecasting models exist in Australia. Arguably the most sophisticated is that developed by Monash University's Centre of Policy Studies (CoPS), in conjunction with the Centre for the Economics of Education and Training (CEET). The model has primarily been used to estimate the demand for training within the vocational education and training (VET) sector. Alternative models in use in Australia include the Murphy Model (MM), developed by Chris Murphy in 1988 and the model developed by the National Institute of Economic and Industry Research.

These models are economy wide, dynamic general equilibrium models that cover all occupations in the labour market. In addition to these models, there are also specific sector models in Australia. The most sophisticated models in use are those within the health and community services sector, which generally plan in detail for a group of occupations such as medical workers or teachers. Of these, the most sophisticated is the process used by the Australian Medical Workforce Advisory Committee (AMWAC) to plan for specialist medical occupations in Australia.

The model developed by AMWAC over several years, is regarded as a sophisticated best practice model. While the model produces a report on specialist medical workforce planning in Australia, its methodology is broadly applicable to other occupational areas, and also at an economy-wide level.

7.2 Health Workforce planning

Health workforce planning activity in Australia is fragmented across the States and Territories, across professional disciplines and between the public and private sectors in health.

One way to overcome this fragmentation, is to take a national approach to coordinated and integrated health workforce data collection, and its potential application in terms of education and training requirements, workforce sustainment options and workforce development.

It is important to ensure that any approach to workforce planning does not simply forecast based on existing models and roles, but has the capacity to develop new options based on world best practice. This requires concerted and integrated national support for health futures planning, so that each jurisdiction does not need to duplicate the research and resources in identifying new services and service models and hence workforce reform requirements.

Recommendation 7:
That Australian health workforce analysis and planning efforts be nationally supported to provide advice across all health workforce occupations, this would include the development of an agreed set of common planning tools.

7.3 Market forces in health

The current funding model for the health system in Australia is a complex mix of public and private sector funding. The Australian Government controls the major funding levers for higher education, aged care, Medicare and the Pharmaceutical Benefits Scheme, as well as subsidising the private health insurance market through tax rebates. State Governments are responsible for funding public hospitals and other services agreed upon under the Australian Health Care Agreement. This makes it difficult for jurisdictions to address the stratification of the workforce, particularly as outside of nursing (which has a significant component in the public sector) and social work, all major professional health groups operate primarily in the for-profit sector.

The traditional market economy model does not work well in the context of health as the Australian Government operates forms of price fixing in relation to Medicare, the PBS and health insurance. The Government can also impact on the health system "market" through its legislative controls (eg. increasing the cost of cigarettes reduces uptake and consumption, reducing the incidence of smoking related diseases and thus lowering the demand for health services to treat them).

The issue of balancing workforce supply and demand cannot be considered without discussing the ramifications of the existing funding models (both State and Commonwealth), that reward high volume activity, encourage cost shifting between levels of Government and thereby limiting the capacity to redesign work.

Opportunities to create new types of professional health workers can falter, as there is no economic model to support their development. This could also be viewed as a restriction of trade. The introduction of the nurse practitioner role provides an example of where general practitioners (and other medical practitioners), may be able to use some of their time differently. If some of their work was redesigned, new models of work could include the role of nurse practitioners. However, as there is limited opportunity for nurse practitioners to operate under the Medicare Benefits Scheme, it is difficult for such roles to exist, when clients who use a nurse practitioner are required to pay full fees.

Current funding models have significant ramifications for the workforce. Some of these effects will be highlighted in the following discussion.

7.4 Market Controls - Provider Numbers

Medical practitioners require provider numbers in order to be able to receive payments from the Medical Benefits Scheme. The Commonwealth has limited the number of provider numbers available to new graduates. The consequence of the limitation of provider numbers, is that it has altered the job prospects for medical students. While this has served as a short-term control enabling the growth in MBS payments to be curtailed, it has also served to reduce the stock of new workers, which has consequences for the workforce in the longer-term.

7.5 Funding models as a Driver of Activity

The MBS is a funding mechanism that pays a fee for the provision of a service. Medical practitioners can choose to work in the private or public sectors. The services offered within different sections of the health sector do not always occur at the same rate as illustrated in the following case study.

A Case Study – Different Trends: Public and Private Hospitals

Ear infections are a common problem for many children. The issue of what type of treatment and when it should be provided is not necessarily straightforward. Much has been written about the use of antibiotics and surgical interventions.

Analysis of the 2002-03 hospital separation data from South Australia for children aged 0-8 years, indicates that there is a difference in the types of services that are offered by the public and private sectors. Some of these differences can be accounted for in terms of availability of services (e.g. the highest level of neonatal intensive care is only available at public hospitals). Infrastructure does not limit the provision of surgical care for ear infections, yet the private sector provides in both absolute and relative terms, more myringotomy with tube insertion and tonsillectomies or adenoidectomies.

Private hospital activity also is greater in relation to dental extractions and restorations (absolutely and relatively) and circumcisions (relatively) than public hospital activity. It is suggested that fee for service payments may influence the level of this work performed in the private sector.

A similar example that illustrates that activity occurs as a direct consequence of the funding model in use can be found at the State level.

A Case Study – A perverse outcome associated with Casemix funding

Casemix funding was introduced as a funding mechanism for public hospital activity. In very basic terms, Casemix funding provides hospitals with a payment for each service provided to a patient. The role of this funding mechanism in different jurisdictions across Australia has been variable.

One initial perverse outcome in South Australia, was that a hospital increased its activity to try and achieve activity targets set out in accordance with the funding model. In order to increase activity within the hospital, local doctors were encouraged to move activity from the community into the hospital environment and also increase the level of certain types of activity.

The strategy was directly related to the funding mechanism. While the activity targets were achieved, the acuity of the activity declined and thus the hospital did not achieve the funding it sought. The significant consequence of this strategy was that human resources were devoted to achieving increased activity without consideration of the community needs. Improved information saw the replacement of the strategy.

The decision to respond to funding mechanisms either implicitly or explicitly has numerous implications:

- The best outcome for the population as a whole may not be achieved when the allocation of scarce resources are applied freely in one sector (private) and not in another sector (managed on evidence or scarce availability of resource)
- Equity of access issues will arise as those not being able to afford private treatment must seek it in the public sector
- Alternative services that may be more beneficial to the community as a whole may not occur because of service provider decisions:
    - Theatres could be used differently
    - Hospital beds and nursing staff could be used differently
    - Private practitioners could provide other services
    - The decisions around required workforce numbers are distorted.

Recommendation 8:
That a national review of the current health funding models be undertaken to identify opportunities to remove barriers and create incentives for workforce reform and job redesign.

7.6 Education Funding

Universities are primarily funded within fairly strict parameters by the Department of Education, Science and Technology (DEST). The funding formulas are historically based and do not necessarily allow for the degree of flexibility required to meet changing demands for professional health training.

There is no formal mechanism that engages the relevant stakeholders of DEST, the Commonwealth Department of Health and Aging and AHMAC in the way that university places are planned and funded to better meet changing workforce supply requirements.

Training of the workforce is inextricably linked to educational policies. While many of those involved in professional roles within the health sector are also involved in the education of the future workforce through their work with the university sector, some of the policy decisions in the education sector have resulted in perverse outcomes for the health sector, particularly as a consequence of the move to make universities more like business units. In response, universities have sought to attract full fee paying overseas students and provide teaching overseas to ensure that they generate sufficient income.

While such activities may have benefited the universities in terms of funding, they may have been detrimental to the continuation of the capacity building of the Australian workforce (that is, fee paying places are using education resources that could be applied to expand Australian student places). In such an analysis, it is clear that the full impact on the provision of the Australian medical workforce, may not have been fully considered, particularly in light of the likely reduction in numbers of medical teaching staff due to their age profile.

Recommendation 9:
An assessment is done on the impact on Australian national medical workforce supply of overseas students training as doctors, nurses and other health care professionals in Australian universities.

7.6.1 Education / Industry interface

The provision of more publicly funded training is one of the ways of alleviating skills imbalances. It also buys time to develop more fundamental approaches to the mode of health service delivery. On its own however, it will not be enough, due to the time lags between expansion of training places and their flow on into the workforce, and the reduction in the volume of new entrants to further education and training and hence into the labour force.

The appropriateness of changing the level of provision of education and training as a response to a shortage depends on the type of shortage, the level of severity and the factors causing it. Education and training responses can include:

- Pre-vocational training and bridging courses/short courses in skill/occupational areas in high demand, particularly as a counter-cyclical response
- Other forms of institutional training eg technical high schools, VET in schools
- Cadetships, scholarships
- Reforms to apprenticeships and traineeships (contracts of training)
- Group training and employment arrangements
- Retraining and upskilling of existing workers
- Attracting people back into occupations in which they are skilled (eg return to work schemes)
- Training for unemployed people to take up jobs in areas of employment demand
- Development of new courses in areas of emerging demand

- Adjusting the fee structures for health education and training, including User Choice policy, income contingent loans (eg HECS)
- Adjusting course lengths based on attainment of competency rather than time served.

Training responses need to be coupled with strategies to ensure attraction, utilisation and retention of skilled people in the workforce, including mature age workers. Employers should be encouraged to develop an age balanced and diverse workforce and to provide life long learning opportunities. This can be facilitated by assisting enterprises undertake workforce planning as an integral part of business planning.

More generally, it is important to remove other barriers to training and labour force participation, for example, through the provision of childcare and flexible working arrangements, including phased retirement. Industrial awards and agreements need to be continuously reviewed with a view to developing flexible workforce conditions that enhance opportunities for skills escalation and job redesign. To support jurisdictions in building flexibility into industrial frameworks it would be helpful to establish some exemplar health workforce flexibility initiatives and strategies that could be nationally promulgated, possibly through the work of the Australian Health Workforce Officials' Committee.

Recommendation 10:
Development of nationally promulgated exemplar health workforce initiatives and strategies that promote workforce flexibility.

In trying to ensure a better match between the needs of workers and employers, it may also be necessary to provide incentives and/or subsidies, and to have in place awareness raising programs targeted at both workers and employers, particularly groups who have traditionally been under-represented in the labour market. Better career matching and careers advice also promote a better match between the needs of workers and employers.

Improving retention of the workforce, both now and into the future, is essential to sustain the health sector workforce. Societal views around health as a career are changing and people are no longer anticipating life long careers in the health industry.

While some people will still spend their entire working life in health, new entrants are significantly less likely to do likewise. They are requiring greater flexibility (e.g. opportunities for part time work, family friendly working conditions, greater mobility) and actively seek out other employment pathways where conditions are perceived as more attractive. For example the *SA Medical Labour Force 2004* survey showed that younger doctors intend to retire at a younger age than do older doctors (i.e. if the doctor is currently aged 30 on average they intend to retire at 60 whereas a doctor currently aged 60 intends to retire at 66).

The following case study highlights the issues in regard to recruitment and retention.

A Case Study – Medical Pathologists and Scientists

The Institute of Medical and Veterinary Science (IMVS), is the principal SA pathology service provider. Half of the medical consultants at the IMVS are aged over 50 years, with 11 over the age of 60 years. Many will be looking to retire in the next five to 10 years. Some have even delayed retirement already due to a lack of available replacements.

There are a variety of reasons why there is a shortage of pathologists. Medical students and registrars are not being recruited into pathology training programs, student selection processes in many universities actively select against the types of students who are suited to a career in pathology and many university medical courses no longer have a pathology component (medical students in many cases are not being exposed to pathology at all during their studies). These issues are not restricted to South Australia – it is evident across Australia and in fact is an international phenomenon.

This is exacerbated by market factors surrounding the recruitment of qualified staff at the Medical Officer and scientific classification. The training of staff is undertaken within the public sector in order for Medical Officers to attain Royal College of Pathologists of Australasia (RCPA) accreditation and fellowship. At the conclusion of this training, the private sector providers, both locally and interstate 'poach' qualified staff with salary packages that are significantly higher than can be offered in the SA public sector, albeit that they are traded off against tenure. In other sectors, positions are contractual and focused on work throughput.

The market for pathologists is international and has resulted in graduates moving overseas to accept attractive packages, including tax concessions. As a consequence training and specialist positions have been filled with overseas trained doctors, often to the detriment of the originating countries.

A similar situation exists for specialized medical scientists. The training provided ensures that staff are employable and are often attracted to 'packages' provided by alternative employers, with consequent loss of skills as the investment is lost with the departing employee.

Proposals to allocate more places to medical training are part of a short term solution for the medical and nursing workforce, however the fundamental changes required are more extensive if the broader industry needs are to be addressed. These include:

- Research into best practice models - Building a better understanding of selection processes to ensure the best selection fit for the roles and establishing a base for reducing attrition. This requires research to identify the issues and find ways to replicate the conditions that result in higher retention levels
- Ensuring that course lengths are not increased or the range of health courses is not reduced, without consultation with industry stakeholders. Changes of this nature should require a workforce impact assessment
- Allocation of new places should be based in part on replacement requirements
- Establishing health related courses for VET in schools

- Developing approaches to stagger clinical placements and increasing intern rotations in rural areas. Rural intern placements have been Commonwealth funded and have been most successful. The community experience exposes interns to the issues involved with delivering community care and will assist them make informed career choices, hopefully with more choosing community health as a career path and considering rural practice as an option
- Potential for development of common basic training programs for all health professionals based on the 'skills escalator' model of education and training, beginning with shared lectures in common subjects.

The Vocational Education and Training System (VET) sector has a more developed industry interface than the university/health interface, with industry partnerships both nationally and at a state level developing and endorsing development of competency based training. It is important to note however, that health training packages are not as actively promoted as other sectors particularly in secondary schools where VET in schools opportunities lead to entry level intakes. Use of health packages as VET in schools is limited.

It would be interesting to see the change to the medical training if one of the main principles that underpin the VET sector was applied viz: "the recognition and training process should be based on competence achieved not training hours" (*May 2005 Industry Skills Report*, Community Services and Health Industry Skills Council p 5).

The concept of applying competency assessment to the medical workforce is one that could lead to significant curriculum redesign, potentially shortening training times and reducing attrition.

In QLD, a Skills Laboratory has been developed which can be used for competency testing in relation to the medical workforce. For example, testing of hand eye coordination early in medical training would enable the students to be assessed for their capacity to undertake certain specialisations that require high levels of hand/eye coordination (eg surgery). This could lead to earlier preselection for certain types of specialisiation and reduce wastage.

Recommendation 11:
A national approach to strengthening the interface between the Health and Education sectors to :
- Enable flexibility to better meet changing labour requirements
- Support sustainability of the Australian health workforce
- Provide opportunities to explore changing service models and job requirements in the context of the curriculum redevelopment
- Explore the application of competency based assessment to medical training

7.6.2 Overseas Students and Overseas Trained Professionals

As the population ages and the workforce declines, solutions to health sector workforce problems will be found both locally and externally. There are two aspects to the external solution, namely:

- Retention of overseas students as residents
- Recruitment of overseas professionals.

While overseas students and professionals represent another pool of human resource upon which to draw, this is not seen as a long-term solution to the current workforce problems. Firstly, other countries facing workforce shortages will also be drawing upon the resources from other countries and thus competition for these resources will increase. Secondly, many overseas students and trained professionals come from developing countries and there is a moral and ethical obligation not to erode their human capital to such an extent that the divide between rich and poor countries is expanded.

Retention of Overseas Students

While overseas students represent a source of income for universities, they also represent a source of potential workforce for Australia. "External" students already occupy a significant number of undergraduate medical places in SA universities (48 per cent at the University of Adelaide) and graduate medical places (40 per cent at Flinders University). External students come from both overseas and interstate.

Retention of international students who study in SA is already occurring with 39 being appointed to internships in South Australian hospitals during 2005.

The potential to use overseas students to fill other health sector workforce shortages is influenced by the number of overseas students undertaking training in a given course. Government policy affecting residency and market forces relating to the attraction of overseas students, affects the ability to retain overseas students in general. Recent media speculation has suggested that the overseas student market is fragile, with perceptions about the value of courses in Australia decreasing, while at the same time capacity for training is being increased in Singapore, India and China (ABCTV, 2005).

Changes to university funding arrangements would alter the need to attract overseas students. Thus, while there is scope for national coordination around the retention of trained graduates from overseas, this is linked to university funding policy (see also section 7.6).

Recommendation 12:
Development of a national policy regarding the attraction and retention of overseas health students, having regard to university funding arrangements and the effects of loss of graduates from their home countries.

Recruitment of Overseas Professionals

Overseas trained professionals represent a supply of workforce that has been utilised in Australia for many years. In South Australia the attraction of overseas trained doctors has been used to bolster the rural and remote health work force in recent years.

In many cases, overseas trained health professionals, particularly medical doctors, require additional training in order to meet Australian standards of training. The appointment of overseas trained doctors has, however, been coordinated separately by each State. Recent media coverage about poor medical practice by Dr Patel, an overseas trained doctor working in Queensland, has highlighted the need for

consistent approaches to the selection, appointment and supervision of overseas trained staff.

In South Australia, the recent appointment of a doctor arriving from a large Indian city to a small remote rural community and then his departure within a week, highlighted the need for better selection and support.

While overseas trained staff can help address short-term supply problems, there is increasing competition for overseas trained health professionals. Australia needs to be careful not to take much needed health resources from developing countries.

Recommendation 13:

Development of national guidelines to ensure consistency around the supply, appointment and support of overseas trained professionals.

7.7 Micro-reform as an example of incremental gain

The forecast reduction in the supply of work force due to the retirement of the baby boomers cannot be readily overcome unless people elect to remain in the workforce longer or other structural changes in workforce participation are introduced. However, gains in efficiencies can be made through micro-economic reform activities and such gains may serve to ameliorate the impact of workforce decline.

The following case study serves to illustrate how improvements in demand management and supply issues may improve the productivity of the system.

A Case Study – Application of Lean Manufacturing Principles to Gain Incremental Change

Issues with emergency department times and elective surgery cancellations resulted in FMC rethinking how it operated its services. The National Health Service Modernisation Agency (UK) introduced the application of lean manufacturing principles into health care in the United Kingdom. Flinders Medical Centre (FMC) in South Australia, beginning in 2004, applied the work of the NHS Modernisation Agency locally to gain incremental improvements in service operation.

"Redesigning Care" is a series of projects applying 'Lean Thinking' principles undertaken at FMC. Redesigning Care involved following the patient journey at FMC to highlight duplication, delays and potential errors and then introducing changes designed to improve the outcome for patients and staff.

By March 2005, the Redesigning Care project meant that elective cancellations had decreased, a reduction in the number of patients waiting more than 12 hours in the Emergency Department had been achieved and there had been a significant decrease in the number of patients that did not wait to see a doctor in the Emergency Department. Aside from the gains in patient care, it has also been reported that staff turnover had decreased as a consequence of the Redesigning Care projects.

Thus the reforms introduced during the Redesigning Care work have resulted in increased productivity, better management of demand and a reduction in supply issues in the short term.

Initiatives such as these highlight additional capacity for improvement and workforce change at the local level. The methodology and lessons learnt in the state context can be more widely promulgated into similar achievements Australia wide.

Recommendation 14:
It is recommended that the lessons from micro reform, which all jurisdictions are undertaking independently, be collected and promulgated at a national level, possibly through a national workforce advisory/planning body.

7.8 Recruitment and retention

In SA, the health and community service sector is the third largest industry sector in the State and health is also the third fastest growing industry. Competition between all industry sectors for new entrants will significantly increase over the next 10 years and beyond as numbers of new entrants to the labour market decline significantly.

As the *May 2005 Industry Skills Report* of the Community Services and Health Industry Skills Council states "A significant reallocation of resources to sectors that provide better returns on investment is likely to occur; as a result workers will need skills that allow them to move between industry sectors."

Recruitment approaches need to support translation across industry sectors, but this can only occur if there are competency based definitions of health roles. For example, Diagnostic Imaging services are expected to increase by 3 % per year in the 5 years to 2007 - 08, compared to average real growth of 4.1% per year in the previous 5 years. Given the shortage of radiologists, such growth might be expected to be supported by the growth of ancillary labour, which includes VET technical work competencies (*May 2005 Industry Skills Report*, Community Services and Health Industry Skills Council p 30).

The conditions, culture, entrance pathways, career prospects and remuneration frameworks must be attractive and flexible if health is to ensure adequate workforce supply. Recruitment and retention strategies therefore become more crucial.

Recruitment issues commence for the health worker prior to their decision to accept a university or training course place (e.g. school students start making career choices in health in year 10). Consequently it is critical that the education and training options meet the aspirations of the potential workforce as well as the needs of the health system.

In South Australia major efforts have been made in regard to the recruitment and retention of the medical workforce, particularly nurses and rural doctors, and an emerging focus is on the recruitment and retention of Aboriginal and Torres Strait Islander health professionals.

For rural doctors in SA, a major $27.2 million 4 year package of initiatives has been put in place to improve working and living conditions and includes:

- Increased on-call and other allowances
- Improved locum services for doctors
- Increased further development and training support for country GPs and specialists, and scholarships for country students, as well as country-based hospital internships.

The four-year package has emerged from a groundbreaking consultation process involving rural doctor representative groups and 185 doctors practicing across country South Australia (Details are available in *Recognising the past, rewriting the future – a new partnership with rural doctors* Rural Doctors' Reference Group, Department of Health June 2005).

Case Study – A recruitment and retention strategy for SA nurses

The Department of Health's *Nursing and Midwifery Recruitment and Retention Strategic Directions Plan 2002-2005*, provides a strategic approach to supporting recruitment and retention of SA nurse and midwives. The Plan focuses on more flexible and family friendly workplaces, awards for excellence, vocational and post graduate training, specific Indigenous and rural projects, as well as opportunity for workplace review and reform. Examples include:

Refresher and Re-entry programs

Refresher and re-entry programs are provided for nurses and midwives who wish to return to the workforce as well as up skill and refresh their knowledge. The programs are free of course fees and supported by student scholarships.

Nursing Scholarships:

A range of scholarships are offered including the Premier's Nursing Scholarships. In previous years this has included investigating education and workforce changes in the United Kingdom and visiting Aboriginal Health Services to set up networks related to access, referral and cultural matters that affect hospitalisation and discharge.

Rural development

The Enrolled Nursing Cadetship program established for country regions has a high retention rate. The majority of the students gained employment on completion and a number have gone on to enrol in the undergraduate nursing program. A rural based TAFE designed Aboriginal Certificate 1V Health (nursing) program has also been very successful with 15 students recently graduating.

Flexible workplaces

Eyre Regional Health service has established a room at the hospital for breastfeeding staff and community members. A quiet room has also been established for ED staff, including a reclining massage chair. The Wakefield Regional Service will employ family day care workers and explore the feasibility of a child care centre to facilitate return to work for nurses.

All jurisdictions are employing similar strategies, however in the main these are only alleviating or delaying the impact of the changing workforce numbers and profile. While the *National Health Workforce Strategic Framework (*Australian Health Ministers 2004) sets out a vision which recognises that recruitment and retention strategies are required in the short term, it is the need to build greater flexibility into both the workplace and the education and training system that will optimize the long term viability of the health workforce.

7.9 Job Redesign

Job redesign offers significant potential for alleviating workforce shortages, both incrementally (see Lean Manufacturing Case Study in Section 7.7) and through a more a radical rethink and redefinition of the currently defined roles of health professionals. It is important in considering job redesign, that it not be just redesign within the current service models, professional disciplines and industrial parameters. Fundamentally rethinking roles and responsibilities must be about maximising potential career pathways, opening up entry to a broader section of the workforce and maximising the efficiency and skills utilisation of the existing workforce.

Within the public sector in South Australia, provision for the establishment of a third level worker position in nursing, the “nursing assistant” has been established. The position, which has been has been developed for final year undergraduate nursing and midwifery students, provides them with the opportunity to work within the health industry rather than in unrelated industries while they complete their studies. They are able to experience the reality of the working conditions in their chosen profession such as shift work, the functioning of the health care team and to establish networks and relationships with nursing professionals.

The nursing assistant position provides opportunities for student nurses and midwives. The impetus for this position was driven by industrial considerations. What this means is that firstly, entry pathways into this level are not open to others. Secondly, service providers such as hospitals are limited in their access and capacity to expand the workforce. If workforce reform is driven primarily by industrial considerations, job redesign may be limited to meeting the requirements of the established workforce and professions, rather than the identified needs of the workplace.

The concept of new types of health related jobs outside the current professional disciplines has been developing in Australia. However in the main “third level workers” such as Aboriginal Health workers and other VET sector trained health staff lack a professional body. Professional health bodies (eg colleges) provide for the recognition, professional development and support for their constituents.

In the UK, significant work has gone on redesigning roles and developing new jobs This is done on the basis of creating new entry pathways, providing common core training to new entrants and looking at existing jobs through the concept of identifying opportunities to provide skills escalation to people at all points in the system. In radiography, this has occurred where there are potentially four defined areas of responsibility, from an assistant radiographer to a radiographer, to an extended practice radiographer to a radiologist.

The following newspaper article is an example of how the UK health system is creating new types of health worker to relieve pressure on the acute services.

A UK Case Study - Government unveils new approach to emergency care

London Rebecca Coombes

Fewer people calling 999 in the United Kingdom will be taken to emergency departments for treatment in future, under government plans announced last week.

A review of the ambulance service recommends instead that more patients be treated at home by new "super paramedics" who will be trained to the same level as nurses. More patients should also be dealt with over the phone and referred to appropriate services such as GP services, both in and out of hours, or an emergency nurse service. The Health Minister Norman Warner said the changes could prevent at least one million attendances at emergency departments each year:

"People, by and large, would prefer to avoid a hospital visit; most would prefer to receive treatment at home. We now want ambulances to play their full part in that process. We are spending £1.2bn [$2.1bn; €1.8bn] a year on ambulance services, and there is scope for efficiency savings to be made," he said.

The plans also mean that, from April 2007, all trusts must "start the clock" for calculating the response time for the most serious "category A" 999 calls from when the calls are actually received. The aim is to end discrepancies that meant that up to 14 different starting points for measuring response times were used in 31 ambulance trusts in England. The government's target response time for category A calls is eight minutes.

The number of the new breed of paramedics-emergency care practitioners will be significantly higher than the present number of paramedics of 600, said Lord Warner. They will be trained and equipped to carry out and interpret a greater range of diagnostic tests and do basic procedures. They will also refer patients to social care services, directly admit them to specialist units, and prescribe a wider range of medicines.

The history of the development of the role of Nurse Practitioner in Australia, provides a number of lessons in undertaking major health workforce reform, particularly those barriers to change which are manifest across national and professional jurisdictions.

The Nurse Practitioner role, which may include direct referral, prescribing medications and ordering diagnostic investigations, provides an expanded career path and role for nurses, increased status remuneration and job opportunities and recognition of their increased level of skills. Its development also demonstrates the capacity for such changes to influence workforce reform, but still leave unresolved some of the barriers.

There has been some resistance to the opportunities for expansion of the Nurse Practitioner role by some sectors of the medical profession. Concern has been expressed for example, about overlapping roles, particularly where it may affect the income of GPs (eg issuing medical certificates) or concerns about patient safety because of the level of the Nurse Practitioners' medical expertise. These kinds of concerns, where there is a perceived encroachment onto other professional boundaries, are likely to be reflected across many areas of the health workforce, particularly where major change is being proposed.

National leadership on the direction of workforce reform and the need to have breakthrough solutions that may fundamentally change the way current health professions are structured and trained is necessary if progress is to be made. It is essential that this be linked to the development of new service models.

7.10 Regulation

There are many regulatory disconnections that impede current service delivery and act as barriers to system reform. Disconnection occurs when there is divided responsibility and differing agendas between levels of government, the health, education and training sectors, and other stakeholders.

Despite the fact that much of health service provision requires teamwork among health professionals, the health sector is characterised by traditional role delineations. Traditional role delineations tend to be reinforced by the professional regulatory framework that focuses on individual occupations. This has given rise to a workplace culture that impedes the development of interdisciplinary education, training and practice and the development of new models of care.

The community is well served by regulation that helps to ensure health care professionals meet minimum standards to maximise patient safety. Registration of health care professionals, however, is often a multi-step task, with registration occurring at a State level, membership of an appropriate professional association required and credentialing by institutions where the professional practices. As a consequence of the State based approach to regulation, the ease of movement of workers across State and Territory boundaries can be reduced and the cost to the individual increased.

Workforce agreements also impact on the roles of professionals. All these reinforce the narrowing of the professional role and ensure that delineation of practices occur. Furthermore, codes of conduct and workplace constraints (e.g. the need for supervised practice) can also help reinforce the role delineation brought about in part by regulatory requirements.

The expansion of roles is sometimes hampered by standards of practice that are developed by professional bodies. For example, professional bodies may determine what is best practice and such practice tends to reinforce existing role delineation and prevent other professions from widening their roles. Additionally, professional bodies also help determine education requirements and how many people will be trained and thereby influencing what universities teach and the manner in which teaching occurs. Consequently, the potential for shared learning across all health professions or to move to vocational training options, can be limited and thereby reduce the flexibility to undertake job redesign or the introduction of new career roles.

A move to ease the effects of the existing regulatory structures is required to ensure that the health sector has an improved capacity to adapt to what is a complex, changing environment with ever evolving service delivery needs.

Recommendation 15:
That differences between states and territorial boundaries in relation to current regulatory practices be reduced and a national approach to consistent regulation be developed.

8. Addressing the Problem – An example of an evolving solution.

The situation in the oral health sector demonstrates the issues in relation to matching supply and demand in the face of declining numbers of dentists and a concurrent increased demand for a wider range of more complex and costly services.

Australia's *National Oral Health Plan 2004 – 2013 (Healthy Mouths Healthy Lives)* was prepared by the National Advisory Committee on Oral Health established by the Australian Health Ministers Conference. The Plan, endorsed by the Australian Health Ministers Council, August 2004, highlights the importance of oral health as being fundamental to overall health, well-being and quality of life.

The endorsed National Actions have been identified as the most appropriate and effective response to a range of issues that are best solved at this level. This is because many of these actions are outside the direct control of the dental sector itself or need to be achieved in partnership with other sectors. As such they have specific relevance to the Productivity Commission study and could be considered for broader application across the whole health workforce.

Local Responses to workforce issues

The South Australian dental workforce consists of dentists, dental auxiliaries (therapists, hygienists) prosthetists, dental technicians and dental assistants. Dental Therapists work almost exclusively in the public sector but the remaining practitioners are spread across both the private and public. 50% of dentists work in solo practice.

Currently, approximately 100 to 200 additional dental providers are necessary to supply a shortfall of 0.5 million dental visits. The particularly critical oral health workforce shortage in rural and remote South Australia in both the public and private sectors has resulted in significant cost pressures for the public sector – the SA Dental Service. This is because of increased fees paid to private dentists providing publicly funded dental services and significant allowances paid to public dentists prepared to travel to country areas.

Dentists in South Australia, like those in other States, are trained to a high standard by the five Australian Dental Schools. Training includes supervision by previous graduates with an emphasis on problem solving in an environment where there is often a lack of an agreed evidence base. Furthermore, the interpretation of quality practice can emphasize complex or frequent interventions at the expense of targeted prevention and early intervention. The community itself has come to expect this approach and the insurance industry supports it by providing rebates for services such as six-monthly checkups that are unnecessary for low–risk patients.

All of these factors have led to a "cottage industry" in the oral health sector where business incentives are often the primary motivator rather than good oral health outcomes that are based on evidence. Moreover, access to timely public dental services by disadvantaged people, such as those on low incomes or in residential aged care facilities, is being increasingly affected by these business priorities and public sector cost blow outs.

South Australia's response to these issues

The cost blow outs and critical workforce shortages are being addressed in South Australia concurrently with the proposed National Actions. The State Government is developing a State Oral Health Plan for 2005 and considering, with the dental professions amendments to the regulations in the Dental Health Act (2001) to facilitate greater flexibility in the role of dental auxiliaries.

Dental staff in the South Australian Dental Service (SADS) are now providing oral health components in the TAFE Child Care Studies course and training for Child and Youth Health nurses undertaking Kindergarten health screenings.

Increasingly, SADS is working with other Health Professionals and planners to address a range of major health issues including obesity, diabetes and other chronic conditions. In addition, targeted health promotion programs have been implemented including oral health components in the intensive home visiting service by Child and Youth Health Services.

SADS is also collaborating with Indigenous Health services to assist in providing funding, training, computing systems, materials, staff and advice in relation to Oral health services.

Proposed National Responses

The dental profession has diverse views but is still largely based on traditional health and economic models of the past. National strategies and incentives that can impact on ensuring a national approach to workforce development and in particular the mix of providers, will be significant in managing the increasing cost of oral health care.

The work of the National Advisory Committee on Oral Health and the endorsed National Oral Health Plan 2004-2013 will be significant drivers in beginning to address some of these issues. A national monitoring committee has been established as part of this process of reform to report on progress against the national goals for oral health. The National Actions include:

- Ensuring State/Territory Dental Acts, Regulations and Codes of Practice do not impose barriers to the full use of the skills of the whole dental team
- Exploring with the health insurance industry opportunities for rebates for preventive dental services that have a firm evidence base
- Support for oral hygiene programs that enable older people to remain at home
- Support for residential aged care facilities to include oral health in the care plans
- Piloting programs to provide dental care for concession cardholders by using the skills of the full oral health care team
- Integrating oral health into health systems particularly in primary health care
- Increasing the oral health workforce available to improve the oral health of Aboriginal and Torres Strait Islander people
- Increasing the supply of overseas trained dentists as a short term strategy
- Achieving workforce self-sufficiency by increasing Australian trained oral health practitioners by at least 150 graduates per year
- Improving the recruitment and retention of oral health professionals in public dental services through improved conditions and more competitive pay scales
- Improving the recruitment and retention of oral health professionals in rural and remote areas

- Increasing the remuneration of oral health academics and tertiary education institutions competitive with the private sector as well as overseas
- Developing and implementing programs, including dedicated student places and scholarships, to increase recruitment of Aboriginal and Torres Strait Islander oral health students
- Funding dental schools and other oral health training programs at a level that better reflects the full cost of training oral health practitioners
- Further developing undergraduate and postgraduate educational programs for the oral health workforce to build capacity

The gains made in dental practice in South Australia, particularly in relation to the population health approaches that have been adopted to achieve the high level of oral health, particularly among children are now at risk of being eroded. Recent evidence has suggested that there has been a decline in the oral health of SA's children. There is no evidence as yet as to why the declines have occurred, however, contributing factors may be changes in the fluoride levels in water and tooth paste and increased use of bottled (not fluoridated) water.

It has been previously stated that approximately 100 to 200 additional dental providers are necessary to supply a shortfall of 0.5 million dental visits. Continuing and worsening workforce issues are likely to result in the population gains in oral health being put at further risk of erosion. Currently much of the acute pain relief work is carried out by the private sector. As the supply of dentists decreases, the ability to access private sector dentists by people requiring acute dental services may be lessened, thus affecting waiting lists. Increases in waiting list time may see more effort being directed to the provision of acute services as opposed to population health services.

The adoption of the National Oral Health Plan 2004-2013 that will address many of the workforce problems provides an example of what is required by the broader health sector to address the widespread workforce supply issues, that is, a nationally led solution.

9. Summary and Recommendations

Australian residents, regardless of location or status, expect that the health system is supported by a professional workforce that will ensure the best health outcomes for all. We must challenge the current paradigms to do new things or stop doing some of the things that have no evidential base.

The Productivity Commission in its May Issues Paper (p9) sets out the key objective for all governments as "ensuring the community has access to high quality, safe, efficient, effective and financially sustainable health services". This represents a significant challenge as most health services are designed around aged infrastructure and workforce practices that have their roots in a century old, time serving training model.

At a national level, consistent and integrated data collection, planning approaches and tools are needed to set standards or frameworks around the provision of services to ensure that resources really go to where they produce the best health outcome for the population. To do this we need to articulate a vision of what the Australian health system will deliver in the next five, ten and twenty years.

SA is representative of the issues facing the professional health workforce across Australia. The demographic profile of SA is such that the workforce shortages will hit sooner and harder than in other States. It is essential that national leadership and strong jurisdictional support, through the range of mechanisms proposed, is developed if the gap between demand and supply of health workforce is to be managed to ensure the sustainability of the health system.

Recommendation 1:
That national forecasts are developed to reflect future demand for the Australian health workforce that encompass demand based upon, inter alia, the expected growth in service demand, the ageing of the current workforce, attrition rates and private/public service maintenance.

Recommendation 2:
The Australian Government ensures the number of current and proposed new training places for undergraduate courses meet projected demand based upon criteria that relates to a consistent definition of current and future workforce demands and includes consideration of new service models.

Recommendation 3:
Support a national review of the complexity of Australian Government funding arrangements to ensure that support is given to locally developed flexible Indigenous health workforce employment, education and training strategies.

Recommendation 4:
Support further national development of a sustainable model of After Hours General Practice and Hospital Co-location.

Recommendation 5:
Establish a national independent mechanism to advise on population health issues drawing on international experience.

Recommendation 6:
It is recommended that a national strategy be developed around the provision of ICT services for health professionals and consumers, with consumer involvement, to support both consumers and health professionals in accessing quality health information. This should address the opportunities for redefining roles and technical support needs of health professionals.

Recommendation 7:
That Australian health workforce analysis and planning efforts be nationally supported to provide advice across all health workforce occupations, this would include the development of an agreed set of common planning tools.

Recommendation 8:
That a national review of the current health funding models be undertaken to identify opportunities to remove barriers and create incentives for workforce reform and job redesign.

Recommendation 9:
An assessment is done on the impact on Australian national medical workforce supply of overseas students training as doctors, nurses and other health care professionals in Australian universities.

Recommendation 10:
Development of a core set of nationally promulgated exemplar health workforce initiatives and strategies that promote workforce flexibility.

Recommendation 11:
A national approach to strengthening the interface between the Health and Education sectors to :

- enable flexibility to better meet changing labour requirements
- support sustainability of the Australian health workforce
- provide opportunities to explore changing service models and job requirements in the context of the curriculum redevelopment
- explore the application of competency based assessment to medical training

Recommendation 12:
Development of a national policy regarding the retention of overseas students having regard to university funding arrangements and the effects of loss of graduates from their home countries.

Recommendation 13:

Development of national guidelines to ensure consistency around the supply, appointment and support of overseas trained professionals.

Recommendation 14:
It is recommended that the lessons from micro reform, which all jurisdictions are undertaking independently, be collected and promulgated at a national level, possibly through a national workforce advisory/planning body.

Recommendation 15:
That differences between states and territorial boundaries in relation to current regulatory practices be reduced and a national approach to consistent regulation be developed.

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