



The potential role of Physician Assistants in the Australian context

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Prepared for HWA by Siggins Miller Consultants

Professor Mel Miller, Professor Ian Siggins, Professor Napier Thomson, Gregory Fowler, Susan Bradshaw

Main messages and conclusions

- Decisions about introducing Physician Assistants (PAs) into the system are ultimately based on the needs of the health system and the communities they serve. From this review there appears to be an explicit desire to employ PAs in rural and remote general practice, the private, non-government and community sectors, Aboriginal Medical Services, and Defence.
- Rural and remote doctors are the strongest advocates for urgent and positive consideration of the roles of PAs to deliver services in their sector. They see them as the major solution to the imminent loss of experience in the medical workforce owing to retirement, burnout and unsustainable workloads.
- All jurisdictions support a planned diversification of the health workforce to better address current and anticipated health needs and innovative service models. Informants in most State and Territory jurisdictions indicated that they were willing to consider PAs as part of their health workforce. NSW representatives and some Western Australian representatives considered that further research was required to compare the benefits and relative value of this model over other current workforce models in nursing, allied health, and other professional groups.
- The PA profession could make a significant contribution to addressing a number of key strategies of the National Health Workforce Innovation and Reform Strategic Framework (Framework) agreed by Ministers in August 2011. They include:
 - Supporting and extending the career span of our existing rural and remote medical workforce
 - Providing medical services in regional, rural and remote areas of Australia where it is difficult to attract and retain Australian trained doctors
 - Supporting health services for Indigenous Australians, through multi-disciplinary teams, that include Aboriginal Health Practitioners for whom the PA profession may be an advanced practice career option
 - Slowing clinical health workforce attrition among experienced paramedics, allied health workers and nurses and midwives for whom the challenge of a career as a medically trained PA may be attractive and therefore beneficial to the health system
 - Reducing emergency department waiting times by adding another staffing option for both fast-track services for low acuity patients and experienced paramedics in PA roles for trauma patients
 - Reducing elective surgery waiting lists by enhancing the productivity of surgeons and medical proceduralists in public and private practice, as demonstrated in the international research literature
 - Reducing escalating health care costs by providing a new workforce group who are qualified and can provide safe and effective services at lower cost
 - Increasing the productivity of other health professionals and doctors by releasing them from routine and repetitive tasks to allow them to work at the top of their license
- The Physician Assistant role may be part of a broader future workforce innovation and reform solution once Ministers have had the opportunity to consider and respond to the National Training Plan for Doctors, Nurses and Midwives.
- A key difference between PAs and other roles, for example Nurse Practitioners (NPs), is that PAs work under delegation in a medical model of care, and not as autonomous health professionals, while NPs are endorsed to function autonomously and collaboratively in an advanced and extended clinical role. PA education is a condensed version of traditional medical education. Their contributions to the health workforce should be seen as complementing other disciplines, not conflicting with them.
- Stakeholders with direct experience of PAs or PA students are confident about the safety and acceptability of the PA profession for the Australian health system. Further, they argue that

PAs would improve the productivity of other health professions and would be unlikely to threaten the training of medical graduates, or advanced practice roles in other professions.

- Stakeholders consider that national registration is desirable for the PA profession and that this would be best done under direction of the Medical Board of Australia, with the Australian Medical Council accrediting PA education programs. However, there is no existing decision or imperative to include PAs in the National Registration Scheme. Like some other unregistered and self-regulating health professions, development of a PA workforce does not depend on government employment, funding, or regulation for its governance structure.
- An Australian professional society of PAs has already been formed, and adopted a Code of Practice and plans for continuing professional development. In the meantime, while PAs practise as an unregistered profession, The Society is well placed to establish an accreditation body and formulate a set of accreditation standards for professional training. This task is best carried out in consultation with the Medical Board of Australia, the Australian Medical Council and ACRRM, and with universities that express an interest in offering educational programs for PAs.
- Education programs have been developed, and are planned to be delivered from 2012. James Cook University will open a three year Bachelor's program for enrolment in 2012. Edith Cowan University have a two year Master's program ready for enrolments from 2013. The University of Queensland is still teaching PA students: while it has suspended the program to new enrolments, it has indicated that it may re-open the program if national registration of graduates is likely and if employers indicate that positions will be available.
- Despite a decade of discussion and two successful pilot programs, there remains a high level of misunderstanding among many stakeholders in the Australian health system about the clinical role and professional attributes of the PA and how they might complement and add value to the existing team structures.
- Experience with and knowledge of the PA role varies significantly across the stakeholders. Not surprisingly, the most knowledgeable were international and national PA educators, qualified PAs, those involved in implementing the pilots in South Australia and in Queensland; PA program graduates and current PA students. The degree of support for implementing the PA role in the Australian health system was in direct proportion to experience and knowledge of the PA profession: the greater the experience and knowledge, the higher the level of support.
- Those who openly declared opposition to introducing PAs in Australia were likely to advocate for the interests of existing professions, either nursing or medicine. Those with more cautious opinions did not argue that there would never be an Australian PA contribution to the health workforce – rather that it was not timely now or that a range of significant issues affecting other professions needed to be addressed first.
- There are legitimate concerns about the capacity of the health system to accommodate the expanded cohorts of medical graduates now in train. However, there is no evidence that the small number of PA students and graduates potentially entering the health workforce will negatively affect either medical training or the employment of junior doctors.
- The projected balance of supply and demand for doctors and nurses to 2025 indicates that there will be a shortfall in the supply of doctors and a very significant shortfall in the supply of nurses. The current maldistribution will continue and be exacerbated as overall shortages eventuate from 2015 onwards. There is therefore face validity for creation of a PA workforce that will assist with retention, offer career paths for some who would have left the health sector, and attract back some of those who have left.

The development of the Nurse Practitioner role has been a challenge in some specialist areas of practice, and in some State and Territory jurisdictions. It will clearly take time for the benefits of this important innovation in health workforce development to be fully realised. There is much to be learned from the NP workforce implementation that can inform the

development of a PA workforce, should it be required, to ensure the roles are developed to be complementary and add value to existing professions.

Executive summary

In response to a referral from the Australian Health Ministers' Advisory Council, Health Workforce Australia approved a project on the potential role of the Physician Assistant (PA) in Australian health care. The project's Terms of Reference were as follows:

1. Conduct a comprehensive review of the literature in relation to the roles, responsibilities, competencies, training requirements, accreditation, remuneration, credentialing and re-credentialing of PAs internationally.
2. Review the available results of PA pilots or ongoing evaluations in Australia and internationally.
3. Document what would be required to successfully and safely implement PA roles in the Australian Health system including PA remuneration, career pathways, training and supervision requirements and accreditation issues.
4. Examine the potential impact and value of PA implementation on the roles, functions, training and development of current practice and advanced scope of practice by other health practitioners, e.g. nurses, pharmacists, physiotherapists, Aboriginal Health Practitioners etc, in roles / functions similar to PAs roles.
5. Investigate PA type roles as potential advanced practice roles for other health professional groups including but not limited to nursing and Aboriginal Health Workers. Suggest the possible additional training requirements and the registration and credentialing and supervision requirements for such additional roles.
6. Consult with employers about their views and intentions re the creation of PA positions or PA type roles and their regulation and certification.
7. Investigate the specific potential impacts of PA roles in underserved areas including rural remote communities in comparison with metropolitan and urban communities.
8. Develop a report that outlines the options raised by the literature and stakeholder views

The findings are based jointly on the evidence gathered from the research literature, evaluations of pilot programs, workforce data drawn from HWA's National Training Plan, and interviews with a large number of stakeholders in the health system.

The role of a Physician Assistant

The Physician Assistant is a health professional who practises medicine as a member of a team with a supervising doctor. A basic principle is that a PA's scope of clinical practice is determined by agreement between the PA and his or her supervising doctor. The supervisory relationship between the PA and their physician is considered a defining feature of the profession, and distinguishes it from other health care professions. In the relationship between a generalist PA and a medical practitioner, supervision consists of delegation, authorisation, and advice rather than further training. PAs' previous experience in a range of other health disciplines can influence their choice of location and scope of practice.

PA education is built on a medical model of care. The typical Inter-disciplinary training program comprises joint learning with medical students, and courses in the principles of primary care medicine, clinical skills, and professional issues for PAs, followed by clinical rotations in general practice, internal medicine, aged care, surgical and emergency departments, and elective rotations.

An Australian Society of Physician Assistants has been formed, and has a Code of Practice and plans for continuing professional development. One university has delivered a PA education course, and two more programs are planned to begin in 2012.

National governance framework

Informants to the project believed that, if the PA profession is to be introduced, it would be desirable for it to be registered under the National Registration and Accreditation Scheme to protect the public from the risk of poor quality health care and to legitimise the profession with other health care providers. However, development of a PA workforce does not

depend on government employment, funding, or regulation, and there is no existing decision to include PAs in the National Registration Scheme.

If the profession were to become registered, most informants considered that the Medical Board of Australia would be the appropriate body to register PAs, since they are trained in the medical model, and supervised and delegated by registered medical practitioners as an extension of medical practice. If so, the Australian Medical Council would be responsible for developing accreditation standards for the Board's approval.

Jurisdictional representatives said that, whether or not they were registered, PAs in public sector employment would need to be credentialed individually, using the credentialing system of their particular State or Territory, given the general nature of their training and their broad areas of competency.

Impacts on the health system

Both the literature and interviewed informants familiar with the PA role suggested a range of positive impacts PAs could have on the Australian health system.

Rural and remote doctors are the strongest advocates for an urgent and positive consideration of the roles of PAs. They see them as a major solution to the imminent loss of experience in the medical workforce owing to retirement, burnout and unsustainable workloads. The rural medical workforce is ageing and retirement intentions foreshadow the loss of experienced practitioners. In some jurisdictions, rural medicine is currently sustained only by the recruitment and deployment of International Medical Graduates.

Medical specialists in regional areas have found that PAs extend specialist services by taking on routine assessment, pre- and post-procedural care, and follow-up and outreach to free specialists for complex cases. Observers of the pilot trials believed PAs would decrease burn out, and make a positive contribution to the general health of rural communities. PAs have the potential to benefit consumers by increasing workforce capacity and health service access.

Medical informants spoke of the potential value of PAs to suburban or regional general practices, where they may be able to provide procedures that would be beyond the scope of most practice nurses and many advanced practice nurses.

Private medical and surgical specialist practice was also identified as a potential source of demand for PAs, especially those who sought advanced specialist skills. College representatives said that PAs' productivity was likely to be greatest in areas of current workforce shortage. Productivity could be increased in the private system by relieving specialists of the duties that could be done by a PA.

However, a number of other respondents expressed concern about potential negative impacts. Misgivings about PAs' impact on the health system chiefly concerned two issues: the potential for conflict and confusion with the Nurse Practitioner role; and perceptions that the PA role would negatively affect the clinical training of medical students, interns and junior doctors.

It is true that in some settings NPs and PAs may perform similar tasks, but PAs work under delegation in a medical model of care, not as autonomous health professionals, while NPs are endorsed to function autonomously and collaboratively in an advanced and extended clinical role. While the Australian Nursing Federation said the proposed scope of a PA's practice was within the ambit of an Enrolled Nurse, Registered Nurse, and Nurse Practitioner, the Royal Nursing College of Australia said that international evidence demonstrated NPs and PAs could work very well together in a collaborative team setting. Their contributions to the health workforce should be viewed as complementary, not conflicting.

If the PA role is accepted for practice in the Australian health system, the number of health workers who decide to seek training and employment as PAs will be small, and the need for clinical placements will increase only slowly. There will be only about 30 locally trained PAs by 2012, and when planned new programs begin in 2012 about 70 PAs may be available for employment in 2015. In the short term, likely options for PA placements will be in general

practice and rural and remote communities. If and when PA specialisation takes place, it is likely that employment opportunities will arise in private surgical and other practices, not only in teaching hospitals.

Further work is needed to draw more definitive conclusions about the potential productivity gains that may flow from the growth of the PA workforce in Australia. The immediate starting point for that work should be those parts of the Australian health care system where the needs of patients are least well served owing to workforce constraints.

Employment prospects

Respondents discussed where PAs were most likely to come from, suggesting that the role may be an attractive option for career advancement for paramedics, Aboriginal Health Workers, and some nurses and allied health workers living in rural communities.

The Australian Defence Forces (ADF) have made a considerable investment in supporting the introducing the PA role into Australia. There is a high level of support for the introduction of PAs into the ADF and into the civilian health system. If PAs were to become a national registered profession, the ADF would employ PA graduates immediately and would be most likely to offer scholarships to current personnel to undertake appropriate PA programs.

State and Territory representatives said PAs' skill level, years of training, the amount of autonomy compared to other health professionals, and the comparative value they would add to a health service were the main factors in estimating what PAs should be paid, perhaps similar to a senior nurse or NP. Other respondents also nominated a salary range commensurate with comparable skills in other professions, for example a junior doctor or NP. Almost all respondents said PAs should be paid less than senior registrars.

Advocates for PAs argued that access to the MBS and the PBS, similar to those available to NPs, would be essential for the profession working in private practice to make a sustainable contribution to GP supervised primary care services, especially in rural areas.

The projected supply and demand for doctors and nurses to 2025 indicates that there will be a shortfall in the supply of doctors and a very significant shortfall in the supply of nurses from 2013-2015 onwards. There is strong face validity for employment of a PA workforce that will encourage retention by offering career paths for some who would have left the health sector, and attracting back some who have left.

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The potential role of Physician Assistants in the Australian context

Introduction

In response to a referral from the Australian Health Ministers' Advisory Council, in January 2011 Health Workforce Australia approved a project on the potential role of the Physician Assistant (PA) in Australian health care. The findings of this report are based on three sources: a comprehensive review of international literature and the results of evaluations of PA programs in Australia and abroad,¹ data from the National Training Plan, and the opinions of many directly interested stakeholders in health care delivery.²

Guided by its terms of reference, the project has explored these questions:

- What are Physician Assistants? What is their scope of practice?
- How are PAs trained and supervised in initial education, continuing professional development, and advanced training?
- What arrangements, if any, would be needed for professional registration?
- How would PA training programs to be accredited and PAs credentialed?
- What impacts would introduction of PAs have on the Australian health system, in particular on junior doctors in training, nurse practitioners, and other advanced practice roles?
- Can PAs add to the productivity and quality of health care services?
- What is the employment potential and demand for PAs – for instance, in rural health services, defence health services, specialist medical services, other underserved areas of medical care, public hospitals, urban general practice?
- How would PAs be remunerated?

What are Physician Assistants? What is their scope of practice?

The Physician Assistant is a health professional who practises medicine as a member of a team with a supervising doctor. The most commonly cited definition of the Physician Assistant comes from the American Association of Physician Assistants (2009), which says in part:

“Physician assistants are health care professionals licensed to practice medicine with physician supervision. ... As part of their comprehensive responsibilities, PAs conduct physical exams, diagnose and treat illnesses, order and interpret tests, counsel on preventive health care, assist in surgery, and in virtually all states can write prescriptions. Within the physician-PA relationship, physician assistants exercise autonomy in medical decision making and provide a broad range of diagnostic and therapeutic services. A PA's practice may also include education, research, and administrative services. “

The supervisory relationship between the PA and their physician is considered a defining feature of the profession, and distinguishes it from other health care professions. It provides a level of mutual support in a team environment. In the relationship between a generalist PA and a medical practitioner, supervision consists of delegation, authorisation, and advice rather than continuing training. The scope of practice for a PA is determined by the supervising physician and develops over time as trust and experience grows and training needs addressed.

Scope of practice

A basic principle is that a PA's scope of clinical practice is determined by agreement between the PA and his or her supervising doctor.

¹ The literature review is in Volume 2 of this report.

² Informants to the project are listed in Appendix 2.

Primary care: Early PA training programs in the US prepared PAs for roles in the primary care sector. PAs are trained to perform many of the uncomplicated primary care tasks a doctor would otherwise perform, but it is up to the supervisor to decide what level of responsibility the PA carries, based on experience, skill, effective communication, and their working relationship. The skills that PAs may apply in a primary care setting include patient interviews, associating presenting complaints with history, physical examinations, knowledge of signs and symptoms, and recognising emergencies.

Specialist care: In the US, PAs now work in 61 specialty fields of practice, including paediatrics, obstetrics, gynaecology, surgery, surgical subspecialties, neonatology, orthopaedics, oncology, cardiovascular surgery, and genetics.

Hospital care: PAs are trained as doctor-extenders. Their skills may be used in emergency medicine, intensive care, labour and delivery units, infection control and surgical units. They may assume responsibilities usually assigned to interns and registrars. Typically their duties are to review patient records, take histories and perform physical examinations, collect specimens, identify abnormal findings on histories or pathology results, determine need for medical attention, carry out the supervisor's orders for diagnostic procedures, treatments and medication, provide pre-operative and post-operative surgical care and assist in surgery, performing administrative duties and other duties as delegated by a consultant. Their scope of practice may range from solo providers in small rural hospitals to practising in triage or trauma units in large hospitals. A recent development has been to implement a 'patient navigator role' where the PA forms an integral part of a patient transition team involved with care of the patient in the emergency departments.

PAs' previous experience in a range of other health disciplines can influence their choice of location and scope of practice.

The Australian trials illustrated the diversity in the potential scope of PA practice. The South Australian trial employed four US-trained PAs in three urban teaching hospitals, two in surgery, one in anaesthetics, and one in a paediatric outpatient clinic; but delays in obtaining prescribing authority meant the PAs could not carry out all the tasks for which they were certified in the US system. In Queensland, five US-qualified PAs worked in primary and secondary care at four sites, including rural and remote areas. One worked in the interventional cardiology unit of a major metropolitan hospital, one in the emergency department of a regional hospital, two in a rural multi-purpose health service, and one at a GP clinic and local hospital in a remote area town.

The views of informants

For several years now, there has been vocal support for appointment of PAs in rural and remote Australia.³ Two Australian pilot programs have trialled the PA role, and university training programs are in active development. Nevertheless, interviews disclosed much misunderstanding about the clinical role and professional attributes of the PA among stakeholders in the Australian health system, generally owing to limited experience with and knowledge of what PAs do.

Among stakeholders, the degree of support for implementing the PA role in the Australian health system varied consistently with experience and knowledge of the PA profession: the greater their experience and knowledge, the higher their level of support, while the less knowledgeable were more likely to express concern or opposition.

Those who declared opposition to introducing PAs tended to advocate the interests of existing professions (nursing or medicine). However, even the more cautious respondents did not argue that there would never be a PA contribution to the Australian health workforce – rather, they believed it was not timely, and significant issues affecting other professions should be addressed first.

³ eg Cameron 2005 and 2009; Murray & Wronski 2006; ACRRM 2011

What is the employment potential and demand for PAs?

Employers among the stakeholders were asked whether they were likely to employ PAs. Their answers indicated a level of demand in rural and remote Australia, in the Defence forces, in some areas of medical specialist practice, and in some less popular areas of medical practice - openings that would quickly absorb the small numbers of Australian trained PAs.

It is likely that, in the short term, attractive options for PA placements will be in general practices and rural and remote communities. If and when PA specialisation takes place, it is likely that employment opportunities will arise not only in teaching hospitals but in private surgical and other practices.

Rural and remote health services

There are significant shortages of medical services in some regional and many rural and remote areas of Australia. The rural medical workforce is ageing and retirement intentions foreshadow the loss of experienced practitioners. Evidence for the effectiveness of recruitment and retention strategies is mixed. In some jurisdictions, rural medicine is sustained only by the recruitment and deployment of International Medical Graduates.

ACRRM points out that rural and remote medical practice in Australia has a long tradition of team-based health care, including flexible delegation of clinical tasks by rural doctors to nurses and midwives, Aboriginal health workers, allied health practitioners, paramedics, lay health care assistants and others. It says team-based flexibility around clinical roles is increasingly under pressure from the increase in mandatory credentials, particularly in the public sector. The introduction of PAs would ensure that the doctor can continue to provide medical leadership and support within health care teams in a flexible way.

Respondents identified rural practice, in hospitals and in primary care with GPs as the greatest areas of need. The National Rural Health Alliance and ACRRM believe there is an urgent need for PAs in rural and remote Australia to support the GP primary care and GP proceduralist workforce. Private medical specialist practice was also a potential source of demand for PAs.

Respondents discussed where PAs were most likely to come from, suggesting that the role may be an attractive option for career advancement for paramedics, Aboriginal Health Workers, and some nurses and allied health workers already living in rural communities.

There is good evidence from the Queensland PA pilot that PAs are acceptable and effective for clinical practice in rural Australia. PAs can support rural GPs by taking first on-call, doing home and aged care visits, and managing the patient journey through primary to tertiary care services in regional hospitals.

PAs can provide surgical and other medical procedures that would be beyond the scope of most practice nurses and some advance practice nurses. Medical specialists in regional areas have found that PAs stabilise and extend specialist services by taking on routine assessment, aspects of pre- and post-procedural care, and providing follow-up and outreach that might otherwise take specialists away from complex cases and surgical procedures. They can assist visiting medical specialists by running rural clinics, perform fast track emergency services for low acuity patients in regional hospitals, make home and aged care visits, and provide community health care for Indigenous Australians.

An officer of a Medical College said PAs could play a valued role in coordinating the care of currently underserved chronic patients (for example, people with cancer) in rural, regional and remote areas, and manage the patient journey through primary to tertiary care services. They would add value to the limited health workforce in these areas, and enhance the quality of the care provided by a multidisciplinary team.

The NRHA is undertaking work to boost medical student placements in rural settings. Some respondents saw PAs as competing for this clinical experience, as either PA students or as staff who would pick up routine medical tasks currently done by interns. Initially PA students

may add to these pressures, but their number is likely to be relatively few over the next five years. In contrast, some respondents said the PA pilots had shown that experienced PAs could provide training for medical students and interns, and that recruiting experienced PAs from overseas would present opportunities for PAs as both clinicians and educators.

Hospital and community services

Heavy workloads in areas of high demand in hospitals, such as emergency departments and elective surgery, have led to creation of mid-level and advanced clinical roles for nurses, midwives and allied health workers. The US literature says that PAs possess a wide range of clinical skills that make them ideally suited to such hospital practice, and their skills are widely used in US hospitals in emergency medicine, intensive care, labour and delivery units, infection control and surgery assistance.

Eight of the ten US-trained PAs who took part in the Australian and New Zealand pilots were assigned to hospital posts, but while their contributions were positive and effective, the evaluations provide little information about the potential for PAs to fill the expanding roles PAs now play in US hospitals. The placement of one PA in a regional hospital illustrated the capacity of the PA to provide fast track emergency services for low acuity patients. One observer said the pilots showed that experienced PAs could provide training for medical students and interns

Medical College representatives supposed that the public system would not be interested in PAs unless new money was provided for their employment. The cost benefit of PAs would be an important consideration. They said private sector employers were likely to be interested in hiring PAs if they could lead to greater productivity and relief from "mundane" work currently done by the medical practitioner. In the short run, primary care was more likely to employ Advanced Practice Nurses than PAs, but this could change if it became clear that PAs could complement and add value to an already pressured workforce team.

Jurisdictional representatives saw potential roles for PAs in underserved areas of health care such as mental health services, drug and alcohol services, disability care, and corrections health.

Private practices

Medical informants spoke of the potential value of PAs to suburban or regional general practices, where they were able to provide procedures that would be beyond the scope of most practice nurses and some advanced practice nurses.

Private medical and surgical specialist practice was also identified as a potential source of demand for PAs, especially those who sought advanced specialist skills.

Respondents said PAs would be particularly useful in surgery where there were waiting lists for elective procedures, in procedures such as gastroscopy and colonoscopy, and in medical specialties such as rheumatology and cardiology.

Recent estimates to the distribution of PAs in various sectors of the US health care system find that around 36% of PAs work in primary care, followed by surgical subspecialties (22%), internal medicine subspecialties (11%) and emergency medicine (10%).

Defence

The Australian Defence Forces (ADF) have made a considerable investment in supporting the introducing the PA role into Australia. This investment has been through work done by the Centre for Military and Veterans' Health (CMVH) at the University of Queensland (UQ) in the initial development and implementation of UQ Physician Assistant Studies (PAS) program and with the provision of scholarships for Defence personnel to undertake this Master's program.

The views of executive staff of the ADF health service and a range of medical officers and medics were sought. These staff had considerable knowledge of the PA role and in some cases considerable personal experience of working alongside US military PAs in the US or on deployment in conflict zones in the Middle East and Afghanistan.

There is a high level of support for the introduction of PAs into the ADF and into the civilian health system. This support is more intense in some single services than in others. The Royal Australian Navy (RAN) has developed an advanced medic role for deployment at sea. One of these medics has completed the UQ PAS program and is the current President of ASPA. The advanced medic role is equivalent to the emerging advanced practice paramedic role. A nurse from the Army is also now a graduate of the UQ PAS program.

It is important to distinguish between how the PA role has evolved in the US and to some extent Canadian militaries, and the potential role in the ADF. The US military is an immense organisation with significant health care and health training facilities to service the needs of their personnel and their families in diverse domestic and international settings. In Australia, the ADF's health services are more limited, focusing on health care on deployment as the first priority, and increasingly outsourced health services in garrison settings. The ADF relies on the civilian education system to train its clinicians, and the civilian health system to meet the needs of employees' dependents, and in some instances to provide continuing clinical training and experience for its health workforce.

Attracting and retaining doctors and particularly medical specialists to the ADF is challenging. Single services have responded to these shortages with various approaches such as the advanced medic role or advanced practice nurses. Nurses are commissioned officers, while medics are usually non-commissioned officers. This has constrained the career path and opportunities for advanced training for medics in the Defence services. Medics also face difficulties once they leave the services, as their training does not currently align with academic qualifications, and career options in civilian health services are limited.

The PA role is seen in the ADF as offering a potential solution to a number of these issues: providing an advanced training career pathway for medics, an attractive career after military service, and substituting for a range of medical tasks now provided by a limited number of often part time medical officers. Among those personnel interviewed there was a consistent response that if PAs were to become a national registered profession and the university sector offered accredited PA programs, the ADF would employ PA graduates immediately and would most likely offer scholarship to current personnel to undertake appropriate PA programs.

Career pathways

PAs are drawn from diverse health backgrounds, and the role is a promising second career for health workers. Students in the University of Queensland UQ PAS program had previous careers that included nursing, physiotherapy, pharmacy, naturopathy, paramedics and defence medics.

ACRRM's Position Statement says a PA training pathway presents "a route into expanded, flexible, clinical careers for interested paramedics, allied health practitioners, nurses and midwives, Aboriginal Health Workers and military medics who might otherwise be lost to the health care system".

The Australian Paramedic professional and industry Associations see the PA role as a natural progression for their advanced practitioners. They describe it as a major transition from "pick up, patch up, deliver to ED, and leave" to advanced medical practice roles.

Stakeholders involved in the current process for national registration of Aboriginal Health Practitioners have identified the PA profession as a potential advanced career progression pathway for the indigenous health workforce.

A senior medical commentator pointed out that, once a PA was qualified and registered, he or she was free to decide where they would work. This could eventually lead to a migration from general to more specialised practice. It will be some years before a market evolves in openings for PAs, and in the short run their opportunities will depend on employers' creation of positions.

Most of the States and Territories expect that there will be positions for PAs in their health services. One was prepared to go ahead even without national registration of PAs because

major employers were interested in creating PA posts. A regional health service in Victoria is in the planning stages of a pilot program. One jurisdiction is not willing to employ US-trained PAs until their scope of practice is clearly determined, but would be happy to employ locally trained PAs.

There will be about 30 Australian-trained PA graduates from the UQ PAS program by July 2012. At present, there do not appear to be more than 10 US-trained PAs in Australia. Some of them are working in clinical education roles; others are employed in PA clinical roles or in PA type roles under other titles but not to the full potential of the PA scope of practice.

James Cook University intends to begin a three year Bachelor's program from semester 1, 2012 with an intake of 20 students. The first cohort would graduate for employment in 2015. The earliest that Edith Cowan University could enrol students in its planned two year Master's program is 2013, also with a cohort of 20 students who would be job ready in 2015.

Internationally trained PAs from the US, the UK and Canada may be a potential supply of experienced PAs for the education programs and clinical positions necessary to support development of the PA profession in Australia and New Zealand.

These plans by the universities mean that there would be only 30 Australian-trained PAS available for the Australia health system in 2012 – 2014 and potentially 70 in 2015. This supply needs to be seen in perspective with the current health workforce entry of over 3,000 medical students and over 10,000 nursing students each year.

What impacts would introducing PAs have on the Australian health system?

There has been growing interest in a potential role for PAs in the Australian health system in the past decade, prompted in part by the long success of the role in American healthcare. The role developed in the US chiefly to supplement the work of doctors, extend their medical practices, and substitute for doctors in an expanding number of clinical tasks.

An ageing population, the growing prevalence of chronic illness, and community expectations accelerate the demand on the health workforce in Australia. Among the measures considered to meet this demand are expansion of the supply of health workers, multidisciplinary care, and gains in efficiency by changing the distribution of clinical tasks.

Access to health services, particularly medical services, in rural, remote and indigenous communities is an issue of concern in workforce and service planning. Heavy workloads in areas of high demand, such as emergency departments and elective surgery, have led to creation of mid-level and advanced clinical roles for nurses, midwives and allied health workers.

Impacts reported in the international literature

The international literature records strong evidence that the PA role can improve health care productivity, reduce stress on doctors, expand clinical education opportunities, and improve the continuity of care. There are consistent reports from the US that PA care is safe, effective and satisfying to patients. PAs are regarded as having the potential to fill many gaps in health service delivery. The use of PAs in the US decreases waiting times for appointments, increases time spent with patients, and increases total patient volume. PAs working alongside doctors produces primary care that is more efficient than doctors working alone.

In hospital settings, too, specialty trained PAs have effectively filled responsibilities that would otherwise have required the time of interns and registrars.

Australian reports

At this early stage, Australian studies of the effectiveness of PAs are not available, but there is some evidence of similar results in the evaluations of the South Australian and Queensland pilots.

The South Australian evaluation said that the four PAs made a positive contribution to health service delivery, clinical outcomes, and patient care: waiting lists decreased; additional clinics were established; patient throughput increased; PAs identified medical conditions requiring further intervention, and helped amend protocols for patient care. Patients were satisfied or very satisfied with the care PAs provided, and believed the PAs had enhanced their care.

In the Queensland evaluation, PAs were assessed as having a positive impact on service delivery, and throughput increased across the trial sites. PAs were able to respond to nurses' queries about medical charts; their presence allowed doctors to redistribute tasks to those most clinically able, and also freed them to give attention to junior doctor training requirements; services to Aboriginal and Torres Strait Islander patients were increased; and patients surveyed were highly satisfied with the PAs' patient care in the clarity of their information, courtesy, listening skills, and respect for cultural needs.

The views of informants

Relatively few informants to this project had direct experience of the effect PAs could have on Australian health care. With the caveat that knowledge and experience of the PA role varied widely among the respondents, they were asked their expectations about the effect of PAs on the health system.

Suggested positive impacts

The *Policy Statement on Physician Assistants* of the Australian College of Rural and Remote Medicine (ACRRM 2001)⁴ says in part:

“The College ... supports the sensible further development of models of clinical practice and training for ‘mid-level’ health care personnel, including an Australian adaptation of the US Physician Assistant (PA) role, so as to extend the reach of doctors in rural and remote communities and stabilise health care services. The College therefore:

- acknowledges that the Physician Assistant model represents an extension of informal delegated medical practice arrangements that already exist in rural and remote Australia, strengthened by formal vocational training and a local clinical governance framework;
- recognises that Physician Assistants, under the direction and supervision of doctors, are part of a broader range of solutions for increasing participation in health care to meet the needs of communities;
- recommends broader adoption of clinical governance frameworks that support local delegated medical practice in determining appropriate clinical roles and supervision within a health care team, enabling Physician Assistants (and others) to work to the full extent of their evolving abilities with the support of medical practitioners;
- notes that an Australian Physician Assistant training pathway represents a route into expanded, flexible, clinical careers for interested paramedics, allied health practitioners, nurses and midwives, Aboriginal Health Workers and military medics who might otherwise be lost to the health care system;
- supports a model of accredited tertiary educational programs for Physician Assistants in the interest of standardisation, quality assurance and professional credibility, ideally housed within medical schools;
- acknowledges in the context of the more than doubling of medical student numbers, that clinical training is under pressure and that while Physician Assistants can assist in the supervision and teaching of medical students and junior doctors, the demands on clinical placements and training opportunities must be managed;
- expects national registration for Physician Assistants through the Australian Health Practitioner Regulation Agency (AHPRA); and
- welcomes the participation of Physician Assistants in ACRRM-accredited continuing medical education courses.

In a background to its Position Statement, ACRRM says:

“An extensive collection of evidence-based literature amassed over more than 40 years (and now accumulating in other OECD countries that have adapted the model) confirms that PAs deliver safe, high quality medical and surgical care. The US Physician Assistant profession is fully endorsed by the American Medical Association and all of the major medical and surgical colleges. The American Academy of Family Physicians (AAFP) has been particularly supportive. Progressive rural physicians in the US were notable champions in the emergence of the profession, reflecting substantial rural medical workforce shortages at the time. Physician assistants continue to be an invaluable component of the rural health workforce. In addition, medical specialists in regional areas have found that PAs stabilise and extend specialist services by taking on routine assessment, aspects of pre- and post-procedural care and in providing follow-up and outreach that might otherwise take specialists away from complex cases and surgical procedures.”

The National Rural Health Alliance said the NRHA would like the PA profession to grow rapidly in Australia. Rather than single-mindedly trying only to recruit more doctors, a better outcome for rural communities would be to “spread the doctoring around”. There did not yet appear to be widespread knowledge of what is possible in the PA role, particularly in general

⁴ See Appendix 1

practice, and examples and case studies would be helpful. It also seemed a sensible strategy to recruit existing health workers in rural communities who would like to become PAs.

A senior medical officer in a regional centre where a PA had worked believed PAs would increase job satisfaction, decrease burn out, and make a positive contribution to the general health of rural communities. Given the shortages in the Australian medical workforce and the need to import overseas trained doctors in rural areas, he said, a new role that would improve retention of the remaining medical workforce should be supported.

The Consumers Health Forum of Australia was very supportive of innovation in health workforce reform. It believed PAs had the potential to benefit consumers by increasing workforce capacity and health service access.

A number of allied professional groups also considered PAs would have positive effects. The Australian College of Pharmacy said there was a potential role for the PA wherever there was a doctor (though caution was needed in introducing them in light of the existing presence of practice nurses). The Council of Ambulance Authorities thought role delineation was important in advancing the PA profession, and it was essential to differentiate their scope of practice from Advance Paramedic Practitioners. Paramedics Australia said paramedics were often overlooked in health workforce planning: advanced paramedics roles and community paramedics needed closer attention, and PAs represented a natural career path for paramedics.

Suggested negative impacts

Misgivings about PAs' impact on the health system chiefly concerned two issues:

- the potential for conflict and confusion with the recently and emerging established Nurse Practitioner role
- perceptions of that the PA role would impact negatively on the clinical training of medical students, Interns and junior doctors.

Physician Assistants and Nurse Practitioners

The perception of competition and overlap between NPs and PAs has given rise to the largest number of misgivings expressed during these consultations.

The Royal Nursing College of Australia (RNCA) said the College was not opposed to the PA role, and cautiously accepted it so long as the policy process of implementation was sound. Rather than diminish potential advance practice roles for nurses and midwives, physiotherapists and other allied health roles, they suggested PA training could open up new careers that built on existing professional experience. International research evidence demonstrated that NPs and PAs could work very well together in a collaborative team setting.

However, the Australian Nursing Federation (ANF) said Introducing yet another unregulated health worker raised major issues for the safety of the public, and this was a major concern to the union. The proposed role and scope of a PA's practice was very much within the ambit of an Enrolled Nurse, Registered Nurse, and Nurse Practitioner (NP) role, the ANF said.

The roles of PA and NP require a similar level of education, chiefly to postgraduate level, but there are substantial differences in their educational pathways. To be eligible to train as an NP, a nurse must have an Advanced Practice Nursing background with a minimum of ten years' advanced nursing experience. All NPs are senior nurses with a defined scope of autonomous specialist practice. As the RNCA describes it, to become an NP one must be a Registered Nurse, then an Advanced Practice Nurse in a particular specialty, and then one can become a Nurse Practitioner Candidate (not a student). The NP Candidate remains in employment in a designated position and undertakes workplace-based training in advanced nursing practice and studies for the postgraduate qualification at the same time. Advanced Nurses must be endorsed by their health service to enter an NP program.

Admission to a PA education program requires substantial relevant experience in health care or a health related degree. PA trainees come from nursing and from a variety of allied health

backgrounds, including pharmacy, paramedics (both military and civilian), Aboriginal health workers and physiotherapists. They are trained for a generalist scope of practice under medical supervision. PAs consider themselves a delegated extension of the doctor, practising in a style and manner consistent with the directives of their supervisor. NPs consider themselves an autonomous health professional without a requirement to refer to a doctor. A further difference is that PAs are able to incorporate a surgical component in their training that is not traditionally available to the NP candidacy model.

The NP role is focused on leadership within nursing practice, while the PA role as developed to date adds stability and medical knowledge as part of a team. The NP aim to develop a high level of expertise in their area of specialisation, while PAs are trained to practice as generalists with an option to specialise after further training.

A key difference in the education programs is that NPs' training is an advanced form of the "nursing model of care" - how a patient is affected by their illness, the nursing care the patient needs, and how this care is provided within a holistic nursing assessment of the person; whereas PA education is built on a "medical model of care" - medical history, physical examination, and diagnostic tests as the basis for the identifying and treating a specific illness, a condensed version of the traditional medical degree.

Clearly, in some settings NPs and PAs may perform similar tasks, but their contributions to the health workforce must be viewed as complementary, not conflicting. There is strong support and respect for NPs among the advocates of PAs. As the ACRRM Policy Statement says:

'Delegation' strategies in clinical governance complement, rather than replace, stand-alone 'extension' training approaches that are normally tied to a discrete clinical role expansion within an established professional group. Health care of the future requires participation of many more workers at all levels – delegated and stand-alone - and no one health workforce innovation holds the answer.

Advice from HWA suggests significant nursing shortages relative to demand by 2015. Given the projected shortages in the nursing workforce, and the nature of training for a Nurse Practitioner, it is obvious that there will not be a readily available supply of NPs to serve as practice extenders, especially in primary care and rural areas, - places for which PA training is expressly designed. Both professions deserve to be supported in developing team-based models of care.

Student clinical placements

Some concerns were expressed about the potential effect of the introduction of PAs on the availability of student clinical placements and early career training opportunities for medical interns.

Officers of the AMA said "a huge bulge" of medical students and interns was looming, and the primary focus must be on getting them all fully trained. They were concerned that introducing a new proposal to have PAs would divert attention away from real problems of retaining the current workforce and training the next generation.

The Australian Medical Students Association (AMSA) policy said that PAs might have a role in improving select patient health outcomes and reducing the burden on doctors, but PA training increased the demand on limited clinical training capacity and might have a detrimental impact on the capacity and quality of clinical training for medical students. AMSA wants any steps towards PA registration, the accreditation or the initiation by universities of PA educational programs to be delayed until the impact of increased cohorts of medical graduates on the employment and training capacity of the health system have been assessed.

AMA Doctors in Training proposed mounting a proper trial where the experience and skills of health professionals were compared as a basis for deciding whether the system should seek to employ more medical and nursing staff to fulfil positions similar to the PAs' role.

Similarly, the South Australian Salaried Medical Officers Association (SASMOA) said the projected role was not unique to the PA, and Career Medical Officers, NPs, or advanced practice allied health practitioners could perform similar roles. It argued that the system should wait and see what happened as the increased number of medical students worked through the system. A particular concern was competition for training time requiring senior doctors' attention. The SA pilot did not really test the PA role - the PAs just filled a gap. If they were taking up jobs that could be done by junior doctors, SASMOA would not support them.

Supervision

Respondents unfamiliar with the PA role raised concerns about the time pressures and potential legal liabilities placed on the supervising doctor. The frequency and intensity of supervision was their major concern. Insufficient supervision was considered a potential risk to patient safety, and too much supervision (characterised as continual monitoring) could negate the need for a PA in the first place. But in general, respondents felt that the level of supervision should be determined by the PA's experience in the assigned task.

Some respondents thought access to supervision and professional isolation were potential problems in rural practices; but advocates regarded advanced tele-health communication technology as a solution to these concerns. In PA practices in remote areas of the US, supervision is often done by distance communication, and the supervisor does not have to be physically present. A detailed guide to the various forms of PA supervision has recently been published by a key international respondent to this study.⁵

Concerns were expressed about the current availability of clinical placements for students and access to clinical supervision for all health workers. Increasing medical student numbers in particular were seen as needing greater innovation in providing settings for Internships and ensuring the quality of clinical training for medical students and junior doctors. The issue of supervision evoked similar concerns from several groups of respondents.

All jurisdictions spoke of the significant training burden they faced, both for existing medical training and the expected increase in the number of interns graduating over the next few years. Most jurisdictions are already facing the problem of providing supervision to interns and registrars outside metropolitan areas because of the lack of supervising doctors, and also because training requirements have been made more stringent by some Colleges. Most also feared that setting up supervision requirements would have a negative impact, but they were uncertain of its extent because they were unsure what the postgraduate training needs of PAs would be, and how supervision would work in practice. Some of those less concerned recognised that the number of PAs was expected to be small, since only three universities were likely to proceed initially with PA training. Nevertheless, they hoped to avoid incurring added costs by having to pay doctors for more supervision sessions.

Medical and nursing organisations voiced similar concerns. They feared that PA training would put further strain on already under-resourced clinical training programs. Training of junior doctors and advanced practice nurses was currently limited by the availability of trainers and training positions. Colleges also said the health workforce available to be supervisors was limited. However, there was some acknowledgement that experienced PAs could potentially contribute to medical student training.

The research literature from the US and the experience in pilot studies in Australia and New Zealand go some way to allay these concerns. The PA role has demonstrated its usefulness in large teaching hospitals, especially in busy overworked hospitals, to free interns and registrars up to participate in theatre, in training sessions, and supervision sessions. The role has also enabled consultants to be free from the more mundane aspects of their work to spend more time teaching and pursuing research opportunities. It appears that those with the most direct experience of the PA role gained from working in the pilot studies or from working in the US

⁵ Danielson R, Ballweg R, Vorvick L & Sefcik D (2012). *The preceptor's handbook for supervising Physician Assistants*. Sudbury, MD: Jones & Bartlett Learning.

understand this dynamic in the acute hospital setting. Those expressing concern are those without this direct experience.

Taking stakeholder views, published literature and documentation of educational programs into consideration we conclude that:

- It is unlikely that the projected number of PA students will have any significant impact, if at all, on clinical placements for medical students over the next five years.
- PA students in Australia have been taught and supervised by US trained PA educators and by Australian doctors throughout their course work and their clinical rotations. This is consistent with US experience where both experienced PAs and doctors supervise PA students. These clinical placements often have medical students and PA students on the same rotation with the same clinical supervisors. Experienced PAs in the US are often involved with the teaching of medical students and Interns.
- There are no Internships for PAs in the US or in Canada. Stakeholders did not anticipate that an Internship for PAs would be required in Australia, and PAs will therefore not compete for Internships. PAs usually have a clinical career before their PA studies. This existing employment experience as a paramedic, physiotherapist, nurse or other health worker makes PAs more job ready than medical Interns.
- There is no evidence from the international literature that supervision of PAs by doctors in settings where medical students and interns are taught has any negative effect on the quality of medical education. There is evidence that PAs relieve senior doctors of routine tasks freeing them for a range of other tasks, including teaching.

A recent presentation by HWA concluded that concerns over the availability of Internships were overstated. All Commonwealth supported medical graduates have been guaranteed an internship, and HWA believes there will be capacity to absorb international medical students trained in Australian universities.

Health workforce data

HWA advised that current modelling in the National Training Plan indicates that:

- There is no expectation of a surplus supply over demand in either the nursing or the medical workforces from the present to 2025.
- The modelling factored in the current expanded cohorts of medical and nursing students and the impact of the global financial crisis on retirement or other workforce exit plans.
- For the nursing workforce, supply and demand are likely to stay in balance for the next 2 to 3 years, and then from around 2013-15 supply and demand diverge with overall demand significantly greater than supply.
- For the medical workforce that, even with the growth in medical student and Intern numbers, supply will not exceed demand in the short term and from 2020 there will be an overall shortage of doctors.

If the PA role is accepted for practice in the Australian health system, the impact of the new profession would be slight in the short term. There will be only about 30 locally trained PAs by 2012. If the new programs at James Cook and Edith Cowan begin to enrol trainees in 2012, the first graduating cohort (for a 2 year Master's program) will not enter the workforce before 2014, and about 70 PAs could be available for employment in 2015. University program coordinators say that the initial intakes are likely to be about 20 students.

The number of health workers who now decide to seek training and employment as PAs will be small. The need for clinical placements will increase only slowly.

The other short-term supply of PAs could come from the USA, Canada, or the UK. These numbers are likely to be, at most, in the low hundreds, based on views about employment intentions among the stakeholders interviewed in this project.

Accordingly, health workforce inflows from PAs are likely to be less than 5% of current locally trained medical graduates, and a significantly smaller proportion of the larger nursing workforce. Nevertheless, if they are strategically placed and used, the additional PA staff may alleviate some of the pressures both in rural and remote health services, and in metropolitan services that experience unacceptable waiting times and workloads.

How are PAs trained and supervised in initial education, continuing professional development, and advanced training?

The literature review for this project contains detailed descriptions of PA training programs in the US, Canada, the UK, The Netherlands, Germany, and South Africa.

The most fully developed PA education program exists in the US. It produces a generalist who may also receive advanced or specialist training in the workplace under the direction of a supervising medical practitioner. Any specialisation is determined by the type of clinical practice of the supervising doctor and by the preferences of the PA. Regular clinical supervision results in vocational learning and quality assurance in patient care.

Some Australian respondents perceived this as on-the-job training that would not necessarily require academic certification.

The only training program offered in Australia to date is the University of Queensland Physician Assistant Studies (UQ PAS) program. It began in mid 2009, and offered a Master's degree with two semesters of part-time didactic courses, taken largely online, followed by two semesters of full time study in eight clinical rotations. Minimum requirements for admission included an approved bachelor's degree in biological sciences, health sciences or a related clinical field, and at least a year's recent clinical experience appropriate to the program.

The program structure and course content were adapted from US PA education programs. Part A comprised courses in principles of primary care medicine, clinical skills, and professional issues for PAs. Part B comprised clinical rotations in general practice, internal medicine, aged care, surgical and emergency department, and two elective rotations. Students were provided with a hierarchy of learning objectives in a lengthy handbook for each course.

Most respondents considered an accredited education program would provide Australian graduates with the necessary skills to enter the PA profession, especially if they had had a previous health career. Respondents differed significantly in their perspectives of the post registration training needs of PAs, and of the supervisory process.

At this point the only steps to develop continuing professional development (CPD) for Australian PAs have been made by the Australian Society of Physician Assistants (ASPA) in preparing the CPD requirements for an application for registration. In a public statement ASPA says that says the objectives of its CPD program are:

"to provide an accountable and peer-validated framework that demonstrates to patients, communities, the professional and government bodies that ASPA members are committed to and to engage in quality improvement, continuing professional development, as well as life-long learning of all members".

Meanwhile, the Australian College of Rural and Remote Medicine (ACRRM) says it welcomes the participation of PAs in ACRRM-accredited continuing medical education courses.

Competencies for PAs in the US

Competencies for the PA profession in the US have been based on the competencies for medical residents developed by the Accreditation Council for Graduation Medical Education.⁶ They cover the six areas of medical knowledge, interpersonal and communication skills, patient care, professionalism, practice-based learning and improvement, and systems-based practice, and each standard is accompanied by a list of specific competencies the PA is expected to have:

Medical knowledge: Medical knowledge includes an understanding of patho-physiology, patient presentation, differential diagnosis, patient management, surgical principles, health promotion and disease prevention. PAs must demonstrate core knowledge about established and evolving biomedical and clinical sciences and the application of this

⁶ http://www.acgme.org/acwebsite/RRC_280/280_corecomp.asp

knowledge to patient care in their area of practice. In addition, physician assistants are expected to demonstrate an investigatory and analytic thinking approach to clinical situations.

Interpersonal and communication skills: Interpersonal and communication skills encompass verbal, nonverbal and written exchange of information. PAs must demonstrate interpersonal and communication skills that result in effective information exchange with patients, their patients' families, physicians, professional associates, and the health care system.

Patient care: Patient care includes age-appropriate assessment, evaluation and management. PAs must demonstrate care that is effective, patient-centered, timely, efficient and equitable for the treatment of health problems and the promotion of wellness.

Professionalism: Professionalism is the expression of positive values and ideals as care is delivered. Foremost, it involves prioritizing the interests of those being served above one's own. PAs must know their professional and personal limitations. Professionalism also requires that PAs practice without impairment from substance abuse, cognitive deficiency or mental illness. PAs must demonstrate a high level of responsibility, ethical practice, sensitivity to a diverse patient population and adherence to legal and regulatory requirements.

Practice-based learning and improvement: Practice-based learning and improvement includes the processes through which clinicians engage in critical analysis of their own practice experience, medical literature and other information resources for the purpose of self-improvement. PAs must be able to assess, evaluate and improve their patient care practices.

Systems-based practice: Systems-based practice encompasses the societal, organizational and economic environments in which health care is delivered. PAs must demonstrate an awareness of and responsiveness to the larger system of health care to provide patient care that is of optimal value. PAs should work to improve the larger health care system of which their practices are a part.

Australian Code of Practice for PAs

As yet, there is no set of competencies for PAs in Australia corresponding to the US model, or to the *National Competency Standards for the Nurse Practitioner* of the Australian Nursing & Midwifery Council (ANMC). However, in September 2011 the Australian Society of Physician Assistants (ASPA) published the first draft of a *Code of Practice*⁷ which in summary covers:

1. *Professional values and qualities of a Physician Assistant:* While individual Physician Assistants (PAs) have their own personal beliefs and values, there are certain [listed] professional values on which all PAs are expected to base their practice.
2. *PAs are mid-level medical practitioners who are able to practice medicine under the auspices of a registered Medical Practitioner.* The relationship between a PA and the delegating medical practitioner is one of mutual trust and respect. The Physician Assistant is a representative of the delegating Medical practitioner, treating the patient in the style and manner developed and directed by the delegating Medical officer. Both professionals practice as members of a medical team. The registered Medical practitioner has complete responsibility for the care of the patient and PAs share that responsibility with their delegating medical officer.
3. *Providing excellent patient care:* In clinical practice, the care of patients is the PAs primary concern.
4. *Maintaining a high level of medical competence:* A high level of medical competence and professional conduct is essential for excellent patient care. This involves understanding cultural needs.

⁷ <http://www.aspa-australianpas.org/Forms/ASAP%20Member%20Code%20of%20Conduct.pdf>

5. *Maintaining professional performance*: Maintaining and developing the knowledge, skills and professional behaviour are core aspects of excellent medical practice. This requires self-reflection and participation in relevant professional development, practice improvement and performance-appraisal processes to continually develop professional capabilities.
6. *Confidentiality, privacy and informed consent*: Patients have a right to expect that PAs and their delegating Medical practitioner will hold information about them in *confidence*, unless the release of information is required by law or public interest considerations.
7. *Minimising risks*: Risk is inherent in health care. Minimising risk to patients is an important component of medical practice. Good medical practice involves understanding and applying the key principles of risk minimisation and management.
8. *In the case of adverse events*: When adverse events occur, PAs have the responsibility to be open and honest in their communication with the patient and to review what has occurred, reporting appropriately.
9. *Complaints*: Patients who are dissatisfied have a right to complain about the care they received.
10. *Insurance*: Physician Assistants have a professional obligation to ensure that they are appropriately covered by professional indemnity insurance.
11. *Working with other health professionals*: Good relationships with medical colleagues, nurses and midwives and other health care professionals strengthen the PA-Patient relationship and enhance patient care.
12. *Patient – Physician Assistant Relationship*: The basis for a cohesive Patient-PA relationship requires high standards of professional conduct on behalf of the Physician Assistant.
13. *Public Health*: PAs have a responsibility to promote the health of the community through disease prevention and control, and education and screening.

Can PAs add to the productivity and quality of health care services?

In the evaluations of the two Australian pilot programs, PAs were measured against six domains of quality identified by the US Committee on Health Care Quality: safe, effective, patient-centred, timely, efficient, and equitable care. Based on qualitative data, findings from the evaluations suggest that, at all the sites where PAs were deployed, a range of staff members considered that they had contributed to improving the functioning of service delivery. Pilot participants firmly asserted that PAs were safe, clinically effective and acceptable to patients and other health practitioners on the trial sites. Clinicians supervising PAs stated that they were freed up to undertake other tasks.

A number of jurisdictional informants involved in the pilots cited examples of reduction in waiting times, increases in volumes of patients being seen and other productivity gains. However, others questioned these claims on the grounds that all the PAs were employed as supernumeraries, and any gains could as easily be attributed to having more staff resources.

The views of informants

Some State or Territory informants suggested that productivity benefits would flow from using PAs in areas where work is more structured, such as peri-operative and procedural work, or where protocols are in place to manage care, freeing doctors to do more complex care.

Medical college representatives said that PAs' productivity was likely to be greatest in areas of current workforce shortage, especially in rural Australia. Productivity in the private system could be increased by relieving the doctor of duties which could be done by a PA. Their productivity would also depend on their acceptance by other health care disciplines.

Some stakeholders were concerned that PAs might move rapidly into medical specialist positions and not remain in generalist roles, particularly in rural health care. This concern is prompted by recent trends in US PA employment, where the proportion of PAs working in medical specialties has grown over the past decade, and the proportion in generalist primary care roles has declined, though at a lesser rate than for doctors.

While this is the case, the organisation of primary health care in the US is substantially different from Australia, where public funding and public service delivery is far greater. State and Territory jurisdictions have the policy tools to determine where and at what pace PA positions are created. Similarly Medicare, as the principal funder of private medical practice, can influence what type of PA services would be remunerated under the Schedule.

While the private sector in Australia may welcome PAs as a resource to increase productivity and income, their ability to do this may be constrained by available revenue streams such as Medicare, private health insurance and co-payments for non-medical procedures. This is certainly the case for Nurse Practitioners and for a range of allied health services. There is scope for Australian health policy makers and employers to determine what elements of the US experience with PAs are worth adapting to local health system contexts and which are not.

The need for further evaluation

Productivity narrowly construed refers to the number of services PAs provide to patients or permit others to increase or enhance services to patients. US agencies constantly document the volumes of PA services in each discipline and setting, but there is little qualitative analysis of these data.

Here the pilot evaluations also gathered data on clinical activity, outcomes, patient waiting-times, and throughput as productivity indicators, but *ad hoc* methods of local data collection restricted the potential for comparison across sites where the PAs were deployed, and diminished the strength of conclusions made about PAs' productivity.

Internationally, research on productivity is remarkably thin. A study of the revision of clinical roles in the UK concluded:

“There is remarkably little evidence regarding the impact of physician assistants on quality of care and outcomes. The available evidence is largely based on non-experimental studies and narrative analysis of the data. We recommend more rigorous research in this area.”⁸

A recent paper on productivity in the US health system asks why labour productivity in health is so much lower than in the wider economy: ⁹

“While some activities, such as feeding patients and tending to their hygiene, may be impossible to accelerate, productivity is improved when these activities are performed by lower-cost but capable labor. Approaches that encourage delegation of tasks from physicians and nurses to other workers — for instance, transferring postsurgical care from surgeons to physician assistants — provide opportunities for additional savings and increased productivity.”

Further work is needed to draw more definitive conclusions about the potential productivity gains that may flow from the growth of the PA workforce in Australia. The immediate starting point for that work should be those parts of the Australian health care system where the needs of patients are most constrained. As ACRRM says, PAs under the direction and supervision of doctors are part of a broader range of solutions for increasing participation in health care to meet the needs of communities.

⁸ Laurant M, Harmsen M, Faber M, Wollersheim H, Sibbald B, Grol R (2010). *Revision of professional roles and quality improvement: a review of the evidence*. London: The Health Foundation

⁹ Kocher R, Sahni NR (2011). Rethinking Health Care Labor. *New England Journal of Medicine* 365(5):1370-72

What arrangements, if any, would be needed for professional registration?

Informants to this project agreed that, if the PA profession is to be introduced into the Australian health workforce, it should ideally be registered under the National Registration and Accreditation Scheme as a health profession, for two main reasons: first, to protect the public from the risk of poor quality health care by maintaining appropriate professional standards; and secondly, to legitimise the profession with other health care providers.

Some progress has already been made by members of the Australian Society of Physician Assistants (ASPA) in preparing an application for registration. Informed by the registration standards developed by the Medical Board of Australia, the Society has begun drafting a set of professional standards and CPD requirements that will be required for registration through the Australian Health Practitioner Registration Authority (AHPRA) should the PA profession be subject to national regulation.

In the meantime, while PAs practise as an unregistered health profession, ASPA is well placed to establish an accreditation body and formulate an agreed set of accreditation standards for professional training. This task is best carried out in consultation with the Medical Board of Australia, the Australian Medical Council, and ACRRM, and with universities that express an interest in offering educational programs for PAs.

Some informants suggested that the National Board for registration of the PA profession should be as a supervised, delegated medical role under the Medical Board of Australia, similar to the management of registration for dental hygienists and oral therapists under the Australian Dental Board, for example. A minority opinion was that a separate National Board could be established for the PA profession, but others commented that it would be preferable to wait until the role had been fully endorsed by the medical profession.

International parallels

USA

In a sense, the process here will be the reverse of the US experience, where early graduates of training programs created a registry of PAs before there was any formal agreement to define their competence or scope of practice. The US Institute of Medicine then proposed a classification based on PAs' capacity to make independent judgments or work in a clinical specialty, and the American Medical Association's Council on Medical Education, with the support of medical colleges and societies, approved a set of educational essentials for accrediting PA training programs. The AMA asked the Council of Health Manpower to help develop a national certification program for PAs, to ensure the new professional role developed in an orderly fashion under medical guidance. This task eventually fell to the National Commission on Certification of Physician Assistants (NCCPA). To assure the public that certified PAs met professional standards, all US states rely on NCCPA certification for licensure or regulation of PAs. To gain certification, PAs must graduate from an accredited program and pass the Physician Assistant National Certifying Exam (PANCE), and repeat the exam every six years. Australian respondents thought the processes of PA re-accreditation in the US seemed unduly rigorous compared with other professions.

Canada

Similarly, in Canada, after completing an accredited PA education program, graduates are eligible to sit national certification examinations provided by the Physician Assistants Certification Council (PACC). Passing the exam confers the designation Canadian Certified Physician Assistant.

United Kingdom

The UK National Health Service (NHS) established a Competence and Curriculum Framework Steering Group in 2006 to develop a framework for the emerging role of the PA, building on work already begun by medical colleges, and informed by a public consultation process. However, PAs are not yet a registered profession, and while national moves towards protected

registration are under way, registration may not eventuate. PA trainees are required to undertake an internship.

The Netherlands

The Nederlandse Associatie Physician Assistants (NAPA) was founded in 2004 to promote the professional and personal development of PAs. The NAPA accredits PAs who can show that they have concluded a widely orientated PA training and are in active practice. From the outset, PA training programs have been accredited by the Accreditation Organisation of Netherlands and Flanders (NVAO), and funded by the Ministry of Health, Welfare and Sport and the Ministry of Education, Culture and Science. A new accreditation system came into operation in January 2011 focussed on the quality of individual training programs.

Germany

PAs are not yet a registered profession in most parts of Germany, but are permitted to practise under delegation from a medical doctor. However, the province of Baden-Württemberg does register PAs through the German Association of Physician Assistants, which also registers internationally qualified PAs.

South Africa

A national program began in South Africa when the Department of Health's Strategy on Health Human Resources recommended that a mid-level medical worker program be developed by various health professional groups, in order to facilitate implementation of a primary health care package across South Africa. In 2008, the Health Professions Council of South Africa (HPCSA) endorsed the introduction of Clinical Associates by establishing a register of mid-level health workers in medicine. The Medical and Dental Board of the HPCSA then developed guidelines to help other institutions interested in training Clinical Associates.

How would PA training programs be accredited and PAs credentialed?

ACRRM's 2011 Position Statement *"supports a model of accredited tertiary educational programs for Physician Assistants in the interest of standardisation, quality assurance and professional credibility, ideally housed within medical schools"*.

Each health profession that is part of the National Registration and Accreditation Scheme is represented by a National Board. The relevant National Board requires that educational programs for that profession be accredited by a relevant national body.

Most informants to this project regard the Medical Board of Australia as the appropriate body to register PA programs, since they offer training in the medical model, supervised and delegated by registered medical practitioners, as an extension of medical practice.

The accrediting body for the Medical Board is the Australian Medical Council (AMC). The AMC is responsible for developing accreditation standards for the approval of the Board. Accreditation standards are used to assess whether a program of study, and the education provider that provides the program of study, provide persons who complete the program with the knowledge, skills and professional attributes to practise the profession.

The AMC has closely observed the PA pilots in Australia, and has offered its templates as a guide to the ASPA's work on registration standards. It has no specific position on whether it should have a role in accrediting PA training programs: in this respect, it depends wholly on whether the Medical Board of Australia accepts the PA profession as a delegated medical role within its ambit. Otherwise, accreditation of PA training would fall outside AMC's function.

Credentialing

All jurisdictional representatives said that PAs in public sector employment would need to be credentialed individually, using the credentialing system of their particular State or Territory, because of the general nature of their training and their broad area of competency. This concerned not just what a PA could do technically, but also to the support structures available, the amount of supervision, the assessed degree of risk, and the specialist or generalist nature of the role the PA was performing.

In their general comments on PA training programs, stakeholders expressed support for rigorous entry requirements and selection of candidates, Inter-disciplinary education including joint learning with medical students, a comprehensive curriculum with a blend of knowledge-based didactic teaching and clinical placements, and clinical rotations. However, there was no support for Internship for PAs as in the UK, or for national board examinations and recertification as in the US.

How would PAs be remunerated?

Remuneration for most health care workers in the public sector is by way of salary. In the private sector, remuneration can be by salaries or by fee for service. In private medical practice, fee for service is the norm, and these fees may be in full or in part rebated to the patient through Medicare, private health insurance, third party payments, and co-payments by patients.

The PAs in the Queensland trial were paid salaries between the midpoint of a Grade 7 NP Candidate (\$95,294) and a Grade 8 NP (\$105,255). In the South Australian Pilot, individual contracts were negotiated with the US trained PAs.

According to US Bureau of Labor Statistics in June 2011, the mid-career median pay of a US PA is US\$109,000. Salary profiles vary by region and employment, and are monitored annually by the AAPA. Primary care and family medicine, particularly in rural areas, tend to be less well paid, and procedural specialties, for example cardiology, tend to be paid significantly more. The level of remuneration is negotiated between the PA and the employer. The rule of thumb seems to be that a PA in private practice would normally receive 50% of the salary of their supervising physician.

In the UK, the Department of Health employed US-trained PAs on a trial basis. They were appointed for fixed-term contracts of two years at a salary of £39,500 (about A\$61,460) plus relocation costs. The salary of a PA towards the end of the Scottish trial was between £29,091 and £38,353 (about A\$45,090 to A\$59,450).

Funding of PA trainees

Health Force Ontario is currently conducting demonstration projects to maintain a stable PA workforce while a long-term policy and funding framework for PAs is developed. One aspect of the demonstrations is subsidies to encourage employers to engage PAs. Financial support between CA\$46,000 and CA\$92,000 a year will help eligible employers create opportunities for PA graduates for two years, and a one-time only supervisory support of CA\$10,000 is available to supervising doctors. An additional CA\$10,000 is offered as an incentive for PAs who accept positions in underserved regions.

In the Netherlands, PA students are paid a salary while studying, covered partly by the government and partly by the student's medical mentor.

Informants' opinions

State and Territory representatives said PAs' skill level, years of training, the amount of autonomy compared to other health professionals, and the value they would add to a health service compared to other roles were the main factors in estimating what PAs should be paid. Consistent estimates were salaries between \$70,000 and \$110,000 p.a., which would equate them to a senior nurse or NP. Almost all these respondents said PAs should be paid less than senior registrars.

Some jurisdictions were reluctant to comment on actual costs and award structures on the grounds that it was too early to be talking about awards without knowing what the final model would look like. There was no consensus around award structures – one suggested that PAs should have their own award as a separate profession, while others considered it more appropriate for pay scales to be aligned to medicine, since a PA was an assistant to a doctor and relativities should be developed and maintained.

Most other respondents at interview nominated a salary range for PAs commensurate with comparable skill levels in other professions, for example a junior doctor or NP. Some suggested a lower starting salary for PAs of \$70,000, with shift work and remote area allowance. Salaries would vary with State jurisdiction and with employment in the public or private sectors: private sector remuneration was likely to be higher based on the numbers of patients seen and the procedures undertaken.

Other respondents thought that starting salary levels in the public sector should be higher than the training wage of an Intern, starting at the PGY2 level and increasing to that of a junior registrar. Salaries should be set at an attractive enough level to attract experienced health workers to consider a two year retraining period without a parallel income stream. This would need to be equivalent to what NPs or allied health professions received. One health services union has already drafted a salary scale for PAs with a base salary range of \$97,800 - \$113,700 with remote area allowances between \$1,500 p.a. and \$5,800 p.a.

Informants based their salary estimates on the assumption that PA training did not include a salaried Internship at a trainee rate as in the case in medicine, or in the case of NPs, a fully salaried candidature for two years.

Access to benefits

A number of stakeholders raised the issue of PAs in private practice where the supervising doctors' fees are paid by Medicare, both in general practice and in specialist medical and surgical practice. Medicare provides limited reimbursement for fees charged by non-medical health professions. This reimbursement is available for services that are clearly and directly substituted for services provided by medical practitioners, or are provided under the direct supervision of a medical practitioner, or are recommended by medical practitioners as part of a treatment plan.

Medicare provides that medical practitioners can bill for certain items, mainly diagnostic tests, where much of the work is provided by other professionals under the medical practitioner's supervision. For example, a radiologist may bill for reports on radiological tests where an x-ray was taken by an imaging technologist without the medical practitioner's being present. What Medicare subsidises is the report signed by the supervising medical practitioner, such as a radiologist or pathologist.

More recently, specific items have been added to the Medicare Schedule to allow medical practitioners to bill for some therapeutic items provided by practice nurses and midwives under the supervision of the medical practitioner, without the requirement for the medical practitioner to be present. Current practice nurse items include wound care, immunisation, and Pap smears.

Another cluster of services where Medicare support is available to a wide range of other allied health professionals (including physiotherapists and podiatrists) is under the Enhanced Primary Care program, where patients with certain chronic diseases have access to a capped number of allied health services after their doctor has completed a care plan.

From November 2010, the Commonwealth significantly extended Medicare access by allowing NPs and midwives access, subject to certain conditions, to specific items in the Medicare Benefits Schedule (MBS), and a limited list of items under the Pharmaceutical Benefits Scheme (PBS). A key condition is the requirement for 'collaborative arrangements' between NPs and medical practitioners (there are differing views in these professional groups about how such arrangements should operate).

Advocates for PAs argue that access to the MBS and the PBS similar to those available to NPs will be essential for the profession working in private practice to make a sustainable contribution to GP supervised primary care services, especially in rural areas.

Legal liability

One medical college mentioned the issue of legal liability and risk as an element of cost. The one major guidebook on the legal aspects of PA practice in America advises that PAs bear their own legal liability for treatment of patients, and should have their own indemnity insurance, even though the number of law suits against PAs is tiny by comparison with those against physicians. The Australian Society of Physician Assistants (ASPA) also says PAs have a professional obligation to ensure that they are appropriately covered by professional indemnity insurance. The US guidebook does not assume that an individual supervising doctor is held vicariously liable for a PA's actions. Whether this is the case in Australian law requires further examination.

Appendices

Appendix 1: ACRRM Position Statement on Physician Assistants



Position Statement on Physician Assistants

Team-based models of medical care that are characterised by responsiveness to local needs, mutual reliance and flexibility have always been a part of rural and remote medicine. The College recognises that this often occurs within what might formally be described as a ‘delegated practice’ framework – locally-negotiated and flexible arrangements for clinical task allocation and supervision within a health care team that accommodate the evolving clinical abilities of members.

The College recognises that the meeting the future health care needs of communities require ongoing innovation in approaches to health service delivery and health workforce. Much of the innovation will come from rural and remote areas. The College supports the further development of delegated practice models for doctors working with other health care personnel and learners. ‘Delegation’ strategies in clinical governance *complement*, rather than replace, stand-alone ‘extension’ training approaches that are normally tied to a discrete clinical role expansion within an established professional group. Health care of the future requires participation of many more workers at all levels – delegated and stand-alone - and no one health workforce innovation holds the answer.

The College therefore supports the sensible further development of models of clinical practice and training for ‘mid-level’ health care personnel, including an Australian adaptation of the US Physician Assistant (PA) role, so as to extend the reach of doctors in rural and remote communities and stabilise health care services.

The College therefore:

acknowledges that the Physician Assistant model represents an extension of informal delegated medical practice arrangements that already exist in rural and remote Australia, strengthened by formal vocational training and a local clinical governance framework;

recognises that Physician Assistants, under the direction and supervision of doctors, are part of a broader range of solutions for increasing participation in health care to meet the needs of communities;

recommends broader adoption of clinical governance frameworks that support local delegated medical practice in determining appropriate clinical roles and supervision within a health care team, enabling Physician Assistants (and others) to work to the full extent of their evolving abilities with the support of medical practitioners;

notes that an Australian Physician Assistant training pathway represents a route into expanded, flexible, clinical careers for interested paramedics, allied health practitioners, nurses, Aboriginal Health Workers and military medics who might otherwise be lost to the health care system;

supports a model of accredited tertiary educational programs for Physician Assistants in the interest of standardisation, quality assurance and professional credibility, ideally housed within medical schools;

acknowledges in the context of the more than doubling of medical student numbers, that clinical training is under pressure and that while Physician Assistants can assist in the supervision and teaching of medical students and junior doctors, the demands on clinical placements and training opportunities must be managed;

expects national registration for Physician Assistants through the Australian Health Practitioner Regulation Agency (AHPRA); and

welcomes the participation of Physician Assistants in ACRRM-accredited continuing medical education courses.

Background to College Position Statement

Precedent for Delegated Medical Practice in Australia

Rural and remote medical practice in Australia has established traditions of team-based health care, including flexible delegation of clinical tasks by rural doctors to nurses, Aboriginal health workers, allied health practitioners, paramedics, lay health care assistants and others. This is a sensible adaptation to workforce shortage and geography and has helped to ensure that the evolving abilities of all members of a health care team can be fully applied. In most cases, these are informal, locally negotiated arrangements, often supported by common clinical care protocols and models that support team-based care.

Team-based flexibility around clinical roles is increasingly under pressure in Australia, particularly in the public sector. The trend is for more bureaucracy and mandatory credentials - and this has paralleled the emergence of profession-specific, advanced practice extension training. The introduction of Physician Assistants (PAs) will help to balance these developments and ensure that the doctor can continue to contribute medical leadership and support within health care teams in a flexible way. In the US, Physician Assistants are well established members of medical teams and are a well-developed example of medical task delegation.

Physician Assistant Facts

The Physician Assistant profession is a medical extension officer model that emerged in the United States during the 1960s in response to the lack of access to primary care services, particularly by poor, rural and minority populations. According to the peak professional body, the American Academy of Physician Assistants (AAPA), Physician Assistants are:

‘...health professionals who practice medicine as members of a team with their supervising physicians. PAs deliver a broad range of medical and surgical services to diverse populations in rural and urban settings. As part of their comprehensive responsibilities, PAs conduct physical exams, diagnose and treat illnesses, order and interpret tests, counsel on preventive health care, assist in surgery, and prescribe medications.’

There are over 80,000 PAs licensed to practice in the US across all 50 states and the profession is very popular. The great majority of states apply practical regulatory frameworks that allow supervising physicians to delegate any task within their own scope of practice, providing the PA has had the appropriate training and has demonstrated abilities. This allows for flexible, locally negotiated and evolving scope of practice and autonomy within the PA-doctor relationship. Supervision does not necessarily require the physical presence of a physician at the place where services are rendered - providing an added benefit in rural and remote practice. Education in the US consists of a condensed and accelerated generalist medical paradigm. Graduates must be nationally board certified to qualify for state registration. There have been a number of phases of PA recruitment and education since the initial utilisation of returning military medics from Vietnam. The general trend now is an uptake by younger professionals with higher-level qualifications. Minority populations are well represented



within the PA profession and there has been a particular emphasis historically on primary care and medically-underserved populations. Around 36% of PAs work in primary care, followed by surgical subspecialties (22%), internal medicine subspecialties (11%) and emergency medicine (10%).

An extensive collection of evidence-based literature amassed over more than 40 years (and now accumulating in other OECD countries that have adapted the model) confirms that PAs deliver safe, high quality medical and surgical care. The US Physician Assistant profession is fully endorsed by the American Medical Association and all of the major medical and surgical colleges. The American Academy of Family Physicians (AAFP) has been particularly supportive. Progressive rural physicians in the US were notable champions in the emergence of the profession, reflecting substantial rural medical workforce shortages at the time. Physician assistants continue to be an invaluable component of the rural health workforce. In addition, medical specialists in regional areas have found that PAs stabilise and extend specialist services by taking on routine assessment, aspects of pre- and post-procedural care and in providing follow-up and outreach that might otherwise take specialists away from complex cases and surgical procedures.

In the US, Nurse Practitioners (NPs) have also had a significant impact on the delivery of health services to rural populations. Twenty-three per cent of all PAs and NPs work in rural areas, compared with only 13% of doctors. While there are contrasts, NPs and PAs in the US evolved around the same time, provide comparable clinical services and have similar numbers in their respective roles in the workforce. The differences with NPs are in background (nursing only), educational philosophy (grounded in the nursing profession's values, knowledge, theories and practice), gender (predominantly female) and in systems for regulating clinical practice (autonomous versus delegated clinical practice). For the most part, the two professions now have a collegial and complimentary relationship.

International Spread of the PA Model

Two independently-evaluated Physician Assistant pilots that were completed in South Australia and Queensland in 2010 found the model to have promise for Australia. The US-trained PAs were found to have no negative impact on junior doctor training opportunities and in fact augmented prospects and teaching in some cases.

A number of Physician Assistant trials have also been run in Canada and the UK, countries that have successfully incorporated similar PA prototypes to that which Australia is considering. Australia shares key features with Canada in regards to healthcare governance, an over-burdened public healthcare sectors and substantial rural population and geography. The College of Family Physicians Canada has officially endorsed the Canadian PA profession. Other developed nations applying or evaluating the PA model include the Netherlands, Germany, South Africa and Taiwan. Ireland, Scotland, New Zealand and Saudi Arabia. Variations of the PA role with a similar scope of practice exist in Russia, India, Ghana, Tanzania, Mozambique, China, Malaysia, Fiji, Papua New Guinea and other developing nations.

Development of the Physician Assistant Role in Australia

In addition to the completion of the Queensland and South Australian pilot projects, there have been other developments. For instance, one of the PAs from the Queensland Health pilot is providing clinical services at Mulungu Aboriginal Corporation Medical Centre in the Atherton Tablelands. Another PA from South Australia pilot continues to be employed in a similar capacity to her initial role at Queen Elizabeth Hospital in Adelaide. James Cook University School of Medicine & Dentistry employs three US PAs on staff. The University of Queensland (UQ) Physician Assistant Program graduated the first cohort of students in June 2011 and some graduates have already secured employment. The second cohort will graduate next year. Largely due to inadequate funding, UQ has decided to close the program for now, but the Head of School, Medicine has stated that, "if commitment to the development of a Physician Assistant workforce arises, the University will give serious consideration to re-activating the program". James Cook University commences intake into a Bachelor of Health Science (Physician Assistant) program in 2012.

Several peak organisations have stated their support for a Physician Assistant model in Australia to strengthen the rural health workforce. The Royal Australasian College of Physicians (RACP), in its submission to the National Health and Hospitals Reform Commission in 2009, encouraged and supported task substitution and recommended the development of funding programs for Physician Assistants and other workforce substitution programs to help address rural and remote workforce mal-distribution. Recommendations from National Rural Health Conferences in 2009 and 2011 emphasised 'the need to speed the rate of development of new health professional roles (eg Physician Assistant, Nurse Practitioner and advanced allied health practitioners) to help meet rural and remote health workforce shortages and to improve care'.

With responsibility of guiding national policy development, Health Workforce Australia (HWA) has committed to, 'foster workforce innovation and reform exploring opportunities to better utilise the skills and competencies of the current workforce, redesigning existing roles and multidisciplinary teams and developing new roles'. With apparent vexation, HWA has stated that 'the pace of reform of health professional roles and service delivery models has been slower in Australia than in many other comparable OECD countries. New roles such as Nurse Practitioners, Physician Assistants, and lay health workers that are long established in other developed (and developing) countries have often faced barriers in Australia and continue to be the subject of debate, despite evidence of the effectiveness of these roles in achieving the same or improved patient outcomes'.

With ever-increasing demands on the Australian health care system related to increasing levels of chronic co-morbidity, ageing populations and an increasing range of technological interventions, health workforce and health service innovations are essential. Health workforce shortages demand innovative and flexible approaches to delivering health care services in order to assure access to quality, essential health care – particularly for rural, remote and Indigenous Australian communities.

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Appendix 2: Informants to the project

Participants in consultations and interviews

PA educators, clinical supervisors, graduates and students. PAs in Pilots

Ian W Jones	University of Manitoba	PA Program Director
Cobie J Rudd	Edith Cowan University	Pro-Vice-Chancellor (Health Advancement)
John Yerxa	University of Queensland	PA Program Coordinator
Moira Sim	Edith Cowan University	Associate Professor Head, School of Medical Sciences
Allan Forde	James Cook University	Senior Lecturer
Dennis Pashen	Mt Isa Centre for Rural and Remote Health, James Cook University	Director
Jim Parle	University of Birmingham	Professor of Primary Care
Jim Cawley	George Washington University, DC	Professor in the Department of Health Care Sciences. PA Program Director
Roderick S Hooker	Department of Veterans Affairs Medical Centre, Texas, USA	Director of Rheumatology Research
Ruth Ballweg	University of Washington	PA Program Director
Peter Brooks	Australian Health Workforce Institute	Director
Richard Murray	James Cook University	Head of Medical School
Ben Bidsrup	Holy Spirit Hospital	Surgeon / Intensive Care & Clinical Educator
Ben Stock	Australian Society of Physician Assistants. RAN Medic. UQ PAS graduate	President. Lieutenant
Deborah O'Kane	UQ PAS Graduate	Registered Physiotherapist. PA to orthopaedic surgeon
Lauren Wierenga	UQ PAS Graduate	PA Graduate
Louise Podgorski	UQ PAS Graduate	Paramedic
Mitchell Herriman	UQ PAS Graduate	RAN. Underwater Medicine Clinician
Peter Davis	General Practitioner, Queanbeyan	GP supervising PA student
Ron Hastings	UQ PAS Graduate	Emergency / Intensive Care RN
Sandi Lear	UQ PAS Graduate	Advanced Practice Paramedic, Rural Graduate, UQ PAS
Sean Balkin	UQ PAS Graduate	Naturopath
Sharon Ashman	UQ PAS student	Supervised UQ PA students
James Price	Orthopaedic Surgeon, Brisbane	RN
Niri Pandit	UQ PAS student	RN in ACT
Sheila Waterman	US trained PA	Clinical educator JCU
Nanette Laufik	US trained PA in Qld pilot	Professor, Paediatrics
Gary Freed	University of Michigan	PA QE Hospital, Adelaide
Amy Schafer	US trained PA in SA pilot	PA in US
Dawanda Pesicka	US trained PA in SA pilot	Professor of Anaesthesia University of Adelaide / RAH. SA PA Pilot supervisor
Guy Ludbrook	Royal Adelaide Hospital	Medical Director Qld PA Pilot supervisor
Greg Coffey	Mount Isa Health Service District	Medical Superintendent Qld PA Pilot supervisor
Natasha Coventry	Cooktown Multi-Purpose Health Service	President
Valoree McKay	Canadian Association of Physician Assistants	
Kate Lamb Straughton	UK Association of Physician Assistants	President

Medical Colleges

Alana Killen	Australasian College for Emergency Medicine (ACEM)	CEO. Referred to Andrew Maclean
Andrew Maclean	Australasian College for Emergency Medicine (ACEM)	Executive Council & Treasurer
Anthony Cross	Australasian College for Emergency Medicine	Executive Council & Secretary
Cathy Reid	Australasian College of Dermatologists	Hon Secretary
Claire Jackson	Royal Australian College of General Practitioners	President. Referred to Elizabeth Marles

Daryl Sadgrove	Australasian College of Health Service Management	CEO
Debra Graves	Royal College of Pathologists of Australasia	CEO. Referred to Paul McKenzie
Don Swinbourne	Royal Australian and New Zealand College of Radiologists	CEO
Elizabeth Marles	Royal Australian College of General Practitioners	Vice President, Chair New South Wales and Australian Capital Territory Faculty Fellow
Jo Karnaghan	Royal Australasian College of Medical Administrators	Fellow
John Waugh	Royal Australasian College of Medical Administrators	Fellow
Karen Owen	Royal Australasian College of Medical Administrators	CEO. Referred to Jo Karnaghan
Les Bolitho	Royal Australian College of Physicians	CEO
Leslie Apolony	Committee of Presidents of Medical Colleges	CEO. Referred to individual Colleges.
Marita Cowie	Australian College of Rural and Remote Medicine	CEO. Referred to Richard Murray
Natalia Vudolova	Royal Australian and New Zealand College of Radiologists	Director of Radiation Oncology
Paul McKenzie	Royal College of Pathologists of Australasia	Fellow
Peter Sharley	College of Intensive Care Medicine	CEO
Peter White	Royal Australian and New Zealand College of Obstetricians and Gynaecologists	CEO. Referred to Rupert Sherwood. Acting CEO
Richard Willis	Royal Australian and New Zealand College of Anaesthetists	Director of Professional Affairs
Rupert Sherwood	Royal Australian and New Zealand College of Obstetricians and Gynaecologists	President
Susannah Ahern	Royal Australasian College of Medical Administrators	Fellow
Susi Tegan	The Royal Australian and New Zealand College of Ophthalmologists	CEO
Zena Burgess	Royal Australian College of General Practitioners	CEO
Guy Maddern	Royal Australasian College of Surgeons (RACS) Queen Elizabeth Hospital, University of Adelaide	Professor of Surgery. SA PA pilot supervisor

State & Territory Government representatives for the Workforce Innovation & Reform Group

Brenda McLeod	NSW Health	Chief Allied Health Officer. Referred Linda MacPherson and Robyn Burley
Bronwyn Ellis	ACT Health	Workplace Policy & Planning Unit
Catherine Eadie	ACT Health	Workplace Policy & Planning Unit. Referred to Elizabeth O'Leary
Dan Jefferson	Health Victoria	Manager Sector Workforce Planning
Elizabeth O'Leary	ACT Health Workplace Policy & Planning Unit	A/g Principal Medical Advisor
Etienne Scheepers	Dept of Health, SA	Executive Director Workforce Reform and Innovation
Helen Toyne	GP Advisor	Workplace Policy & Planning Unit
Honey Donovan	Dept of Health, WA	Manager, Workforce Division
Karen Buckingham	NT Govt	Director, Strategic Workforce Planning. Referred to Michael Lowe
Karen Cook	Director	Workplace Policy & Planning Unit
Katy Fielding	Health Victoria	Manager, Nurse Workforce Policy & Programs
Kerry Flanagan	CWTH Health	a/Dep Sec. Referred to Paula Sheehan
Linda MacPherson	NSW Health	Medical Adviser, Workforce Development and Innovation Branch
Louis Landau	Dept of Health, WA	Principal Medical Adviser, Medical Workforce
Michael Lowe	NT Health	Consultant Physician
Nick Lord	Qld Health	Deputy Director, Medical Workforce Advice and Coordination Unit

Paula Sheehan	DOHA	A/Deputy Secretary. Referred to Ros Bauer
Robyn Burley	NSW Health	Director of Workforce Development & Innovation. Referred to Linda McPherson
Ros Bauer	DOHA	A/Asst Secretary, Workforce Policy & Data Branch
Simon Towler	Dept of Health, WA	Chief Medical Officer
Terry Brown	DHHS Tasmania	Chief Health Officer
Ann Connolly	NSW Health Workforce Development and Innovation Branch	Manager

Defence

Kerry L Clifford	Royal Australian Army	Commanding Officer Lavarack Barracks Medical Centre. Referred to Paul Alexander
Margaret Hine	Joint Health Command ADF	Group Captain
Merilyn White	Centre for Military and Veterans' Health - CMVH (UQ)	Wing Commander
Paul Alexander	Commander Joint Health Command ADF	Major General
Rebecca Conway	Centre for Military and Veterans' Health - CMVH (UQ)	Professional Development Officer
Robert Curtis	Navy Health Services	Commander, RAN Acting Director Navy Health
Thomas Brough	Royal Australian Army	Senior Military Medical Officer - Captain

Industrial Organisations

Francis Sullivan	AMA	Secretary General
Michael Bonning	AMA	Chair of the AMA Council of Doctors in Training
Steve Hambleton	AMA	President
Robert Marshall	Australian Medical Students Association	President
Lee Thomas	Australian Nursing Federation	Federal Secretary
Marc Agzarian	South Australian Salaried Medical Officers Association	Council member & consultant
Laura Wilmington	South Australian Salaried Medical Officers Association	Council member & trainee Anaesthetist
Andrew Murray	South Australian Salaried Medical Officers Association	Senior Industrial Officer. Referred to Marc Agzarian

Private Hospital sector

Christopher Rex	Ramsay Health Care	CEO. Referred to Jim Houston
Jim Houston	Greenslopes Private Hospital	Director of Medical Services
Luis Prado	Wesley Hospital Uniting Care Health	Director Medical Services. Unavailable for interview.
Marg Sturdy	Hollywood Private Hospital	Director of Medical Administration
Steven Markowski	Resident Medical Officer	Doctor in ADF & private hospital system
Rosemarie White	St Andrews Hospital	Director of Nursing

Peak Organisations

Debra Cerasa	Royal College of Nursing, Australia	CEO. Referred to Andrew McDonell
Greg Mundy	Council of Ambulance Authorities	CEO
Les Hotchin	Paramedics Australia	National Secretary. Referred to Richard Brightwell
Andrew McDonell	Royal College of Nursing, Australia	UQ PAS graduate & Nurse Practitioner
Carole Taylor	Council of Remote Area Nurses of Australia	CEO
John Chapman	Australian College of Pharmacy	CEO
Richard Brightwell	Edith Cowan University	Coordinator Postgraduate Medicine and Paramedical Sciences programs
Anna Wise	Consumers Health Forum of Australia Inc (CHF)	Senior Policy Manager
Carol Bennett	Consumers Health Forum of Australia Inc (CHF)	CEO. Referred to Anna Wise
Gordon Gregory	National Rural Health Alliance	Executive Director
Beth Johnston	National Rural Health Alliance	Policy Advisor
Dennis Ginnivan	National Rural Health Alliance	Policy Advisor
Amanda Adrian	Australian Nursing and Midwifery Accreditation Council	CEO

Jill White	Australian Nursing and Midwifery Accreditation Council	Chairperson. Referred to Amanda Adrian
Anne Copeland	Nursing and Midwifery Board	Chair. No response to interview request
Joanna Flynn	Medical Board of Australia	Chair. Referred to Joanne Katsoris
Ian Frank	Australian Medical Council	CEO, AMC
Theanne Walters	Australian Medical Council	AMC officer
Richard Smallwood	Australian Medical Council	President, AMC
Chris Robertson	AHPRA	Director National Board Services
Joanne Katsoris	AHPRA	Executive Officer, Medical Board of Australia
Martin Fletcher	AHPRA	CEO. Referred to Chris Robertson

Appendix 3: Methodology

Literature review

A comprehensive review of the domestic and international literature on PAs is published as Volume 2 of this report. The scope of this literature review reflects the international distribution of PAs and the evolution of their professional role. Much of the extensive literature reflects the evolution and role of PAs in the United States over the past fifty years, but the review also outlines literature on recent developments in Canada, the UK, The Netherlands, Germany, and South Africa, and interest in other countries in adapting this role for local health systems.

The literature also identified frequently cited authors in the history, training, employment, and record of the profession, several of whom were generous in pointing us to further valuable sources of recent information.

Reports of the evaluation of specific pilot projects using US-trained PAs in Queensland, South Australia, the UK and New Zealand were outlined in a review of relevant documents and commentary, included in the body of the literature review.

The search strategy for gathering the sources for the review is described in an appendix to Volume 2, together with an extensive reference list. The literature review and documentation helped develop an interview protocol for the next phase of the project (see below).

Stakeholder consultations

An extended process of consultation was adopted to examine the views of potential employers and other health system stakeholders, to seek their views on what would be required to implement a PA role in Australia, and the potential impact of this implementation.

The consultation first identified relevant stakeholders. This process began with relevant organisations and individuals, identified in the document review, who were involved in the PA pilots in Australia or had commented on them. HWA specified the need to consult with the Medical Colleges and representative Commonwealth State, and Territory government members of the Health Workforce Innovation and Reform reference group.

The Private Hospital Association and peak health professional and industry organisations most likely to work with PAs were approached to identify participants. Respondents from each of the Australian Defence Forces contributed in detail.

Participants in the South Australian and Queensland pilot project were invited to respond. Contact with international and Australian PA educators quickly expanded into discussions with Australian PA graduates and students, and with doctors whom had supervised these students' clinical placements.

By early November, 136 stakeholders responded to our invited to participate. Among them, 101 individual respondents were interviewed (some stakeholders having delegated a response to others). Telephone interviews of 30 to 60 minutes used a standard protocol (attached). Written submissions were received from RACP, ASPA, and ACRRM, and written responses to the interview protocol from four respondents. Some stakeholders provided documents and research literature that they believed could inform the review.

Individual interviews were analysed in the following groups:

- Medical Colleges (all the Colleges participated except the Royal Australian College of Psychiatrists)
- Government representatives in the Workforce Innovation and Reform Group.
- Industrial Organisations (AMA, AMSA, ANF, SASMOA)
- Defence
- Peak bodies for relevant health professions (including AHPRA and AMC)
- Private hospital sector
- PA educators, PA supervisors, PAs and PA students (including those in the PA pilots)



Additional data

Workforce data from the HWA National Training Plan was unavailable for this review. However, discussions with the responsible HWA executive staff provided a broad overview of the modelling to 2025 for the medical and nursing workforces. Published data from other sources were reviewed to provide background to health workforce trends in Australia and PA workforce trends in the US.

Recorded responses were categorised and underwent reliability testing by at least two reviewers and final quality control by the team. The analysis and reliability testing allowed stakeholders' qualitative contributions to be sorted into the themes that are dealt with in this report, drawn from the project's terms of reference.



Health Workforce Australia Physician Assistant Project
Interview Protocol

In January 2011, the Health Workforce Australia Board approved the addition of the Physician Assistant project to the Workforce Innovation and reform work plan following a referral from the Australian Health Ministers Advisory Council. The project aims to provide advice on the following terms of reference:

1. Conduct a comprehensive review of the literature in relation to the roles, responsibilities, competencies, training requirements, accreditation, remuneration, credentialing and re-credentialing of physician assistants (PA) internationally. Include in this review the available results of PA evaluations in Australia and internationally.
2. Document what would be required to successfully and safely implement (PA) roles in the Australian Health system including PA remuneration, career pathways, training and supervision requirements and accreditation issues.
3. Examine the potential impact and value of PA implementation on the roles, functions, training and development of current practice and advanced scope of practice by other health practitioners, e.g. nurses, pharmacists, physiotherapists, Aboriginal Health Practitioners etc., in roles / functions similar to PAs roles.
4. Investigate PA type roles as potential advanced practice roles for other health professional groups including but not limited to nursing and Aboriginal Health Workers. Suggest the possible additional training requirements and the registration and credentialing and supervision requirements for such additional roles.
5. Consult with employers about their views and intentions re the creation of PA positions or PA type roles and their regulation and certification.
6. Investigate the specific potential positive and negative impacts of PA roles in underserved areas including rural remote communities in comparison with metropolitan and urban communities.
7. Develop a report that outlines the options raised by the literature and stakeholder views.

Health Workforce Australia has engaged Siggins Miller, an Australian consultancy company (www.sigginsmiller.com) to undertake an in-depth review and analysis of the potential role of PAs within Australia's health workforce. As part of this process, interviews will be conducted with stakeholders, who have an interest in the role, in order to obtain their views about the key issues surrounding implementation, including barriers and facilitating factors for this health workforce reform process, the impact on current practice, and views on the potential uptake take of PA position.

To address the terms of reference we have been asked to seek opinions from a wide variety of national and international stakeholders. These include, state and territory governments, private and NGO employers, nurse and medical allied health associations, academics involved in the development and delivery of PA education programs in Australia and internationally, PAs in practice, PA students, international research experts, clinicians and PAs involved in PA trials in Queensland, South Australia and New Zealand, medical colleges, and

the Department of Defence. A report, including results from this stakeholder interview process and other related activities, will be made available to Health Workforce Australia.

As someone who has an interest in the PA role in the Australian context, we would appreciate your insight. If you proceed, you will be asked to provide some information about your knowledge and experience with PAs.

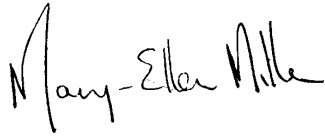
Your participation is voluntary and the responses you make are completely confidential and anonymous. If you complete the interview questions, you will be deemed to have consented to your participation in the research. You are free to withdraw or discontinue at any time. Please note that all questions may not be applicable to you considering your background and experience, so feel free to acknowledge this and continue with the rest of the interview.

In order to ensure consistency we provide the following short paper on definitions (please see attached). Can you please ensure that you read this 1 page document prior to the interview?

We value your input and time and look forward to working with you on this important project.

Warm regards

Professor Mary-Ellen Miller

A handwritten signature in black ink that reads "Mary-Ellen Miller". The signature is written in a cursive, flowing style.

Your Experience

1. Can you describe your experience with, and knowledge of, the physician assistant's (PA) role as described in our Definition document?
2. Looking at the definitions provided in the attachment to this protocol, does this reflect your understanding of what the PA role and responsibilities are?
 - a. If not, do you have any concerns with using the American Academy of Physician Assistants' definition as the working definition in this research? If so, please discuss.
3. Given you have indicated you have had little experience and /or knowledge, do you have any concerns about using the AAPA's definition etc or responding to further questions in this interview?

Implementation Issues

4. In your view, in regards to the Australian health system, what would be required to implement PA roles in the health workforce, in terms of:
 - a. Accreditation issues? [Prompt: national registration with AHPRA, requiring the establishment of a national board to determine professional standards, etc and an accreditation council for education programs]
 - b. Career pathways? [Prompt: advanced and specialist practice; primary care Vs hospital specialisation; Rural, remote and indigenous service]
 - c. Training and supervision requirements? [Prompt: requirements by supervisory doctor; competition for training placements with other professions, etc]
 - d. Remuneration? [Prompt: Pay scales similar to Allied Health, Nursing; integrate with existing Enterprise Agreements?]

Potential Impact of PA Role in the Australian Healthcare System

5. In your view, how would the **PA roles and functions** impact, positively and/or negatively, on existing similarly registered practitioners in the Australian health system (e.g. nurses, pharmacists, physiotherapists, Aboriginal Health Practitioners etc., in roles / functions similar to PAs roles)?
6. In your view, how would **PA training and development** impact, positively and/or negatively, on existing similarly registered practitioners in the Australian health system (e.g., nurses, pharmacists, physiotherapists, Aboriginal Health Practitioners etc., in roles / functions similar to PAs roles)?
7. In your opinion, would the **clinical placement requirements** for PA training displace or impact, positively and/or negatively, on the capacity of the system to cater for the increased number of medical and nursing graduates requiring clinical placements?
8. What impact, if any, do you believe having PAs in the health system would have on **productivity**?

PA Roles as Potential Advanced Practice Roles for other Health Professional Groups

9. In your view, could junior doctors (and interns) and entry level nurses safely undertake the roles and responsibilities of PAs?
 - a. If so, please discuss. In your response, please consider remuneration, career pathways, training and supervision requirements and accreditation issues.
 - b. If not, why not?
10. In your opinion, could the roles and functions of PAs be undertaken by advanced practice nursing and allied health workers?
 - a. If so, what would be the additional training requirements? If not, why not?
 - b. If so, what would be the registration, credentialing and supervision requirements? If not, why not?



Employer Views on Creation of PA Position and Regulation/Certification

11. If you are an employer of health service providers do you intend to, or are you considering, employing PAs?
 - a. If yes, how progressed are you in your deliberations? For example, please describe remuneration, career pathways, training, supervision and accreditation and credentialing issues you have considered and the outcomes to date.
 - b. If not, why not?
12. Do you believe major employers in the public and private sectors of the Australian health system intend to implement PA roles?
 - a. If so, what work has been done?
 - b. If not, why not?

PA Impact on Underserved Areas

13. What impact, if any, could PA roles have in communities with limited health service access?
 - a. If none, why not?

Final Comments

14. Do you have any final comments or key issues that you wish to emphasise?