

**Submission to Productivity Commission
Health Workforce Study**

**Introducing physician assistant type practitioners
to
Australia**

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Contents

Physician assistant type practitioners	4
Why introduce physician assistants to Queensland Health	4
Part 1 The Physician Assistant in USA	5
What is a physician assistant	5
Definition	5
History	6
Education	7
Regulation	7
Supervision	7
How physician assistants responded to workforce shortages in USA	8
<i>Rural response</i>	8
<i>Primary care response</i>	8
<i>Hospital based response</i>	8
The physician assistant current role in USA	9
Risk factors	10
<i>Quality of care</i>	10
<i>Acceptance by patients</i>	11
<i>Cost comparisons</i>	11
<i>Resistance from medical profession</i>	12
Flexibility of profession	13
Part 2 The physician assistant in Australia	14
How physician assistants could be used in Australia	14
<i>Indigenous health</i>	14
<i>Rural settings</i>	15
<i>Urban settings</i>	15
Issues to consider	16
<i>Education</i>	16
<i>Regulation</i>	16
<i>Supervision</i>	17
Managing resistance and opposition	17
<i>Resistance from medical profession</i>	18
<i>Opposition from nursing profession</i>	18
Differentiation of physician assistants and nurse practitioners	18
Conclusion	20
References	21

Abbreviations

AAPA	American Academy of Physician Assistants
ACP	American College of Physicians
ACRRM	Australian College of Rural and Remote Medicine
AIHW	Australian Institute of Health and Welfare
ARC-PA	Accreditation Review Commission on Education for the Physician Assistant
CARPA	Central Australian Rural Practitioners Association
CRANA	Congress of Remote Area Nurses Australia
CVP	Central venous pressure
DH&A	Department of Health and Ageing
GMC	General Medical Council
GP	General practitioner
KAMSC	Kimberley Aboriginal Medical Services Council
NP	Nurse practitioner
NRHA	National Rural Health Alliance
PA	Physician assistant
PAHx	Physician Assistant History Center
RCGP	Royal College of General Practitioners
RFDS	Royal Flying Doctors Service
US	United States
USA	United States of America
WAMI	Washington Alaska Montana and Idaho
WWAMI	Washington Wyoming Alaska Montana and Idaho

Physician assistant type practitioners

Physician assistants are mid-level health care professionals who have made a valuable contribution to the health care services in the United States particularly in providing primary care in rural and remote areas and in substituting for junior doctors in institutional settings as demand for doctors grew in the face of reduced supply of international medical graduates and reduced allowable work hours for junior doctors.

Why introduce physician assistant type practitioners to Australia

There is a medical workforce shortage in Australia which is not going to be fixed only by importing doctors from other countries, increasing the medical student numbers or developing advanced roles for nurses. There are health care staff within the health system whose roles could be developed and there are people in the community whose health experience is not being used. A physician assistant type practitioner would provide a mechanism for developing these people's skills and using their abilities in the health system, addressing some of the workforce shortages.

The medical shortage is worldwide and importing doctors, particularly from countries with overwhelming health problems is only contributing to the maldistribution of doctors across the world. According to the Australian Department of Health and Ageing the Australian government "supports the Commonwealth Code of Practice for the International Recruitment of Health Workers"¹ and only developed countries are targeted for international medical recruitment. Given the number of doctors from less developed countries in Queensland hospitals, targeted recruitment is not the only strategy attracting doctors.

Increasing medical student numbers will lead to an increase in the number of Australian trained doctors available but this will not be for some years as it takes between 10 and 15 years to train a doctor from undergraduate to specialist (including general practitioner). Given that all countries are competing for doctors, some of these doctors are likely to leave for overseas countries particularly if better working conditions are offered.

Expecting nurses to take up the work of doctors in the current context of nursing shortages and high workloads has some difficulties associated with it. One of the earlier submissions to the Productivity Commission stated this clearly.

The intensification of nursing work is not taken into account, yet increasing throughput etc. is dependent upon greater productivity by nurses. There is some US work on this that is troubling and it shows that RNs simply wear out from overwork.²

Certainly extending the work of nurses to use all their skills and ability is an essential element in providing health care in Australia. However there are not enough nurses available for what may be expected of them.

Other health care workers in the system include Indigenous health workers, enrolled nurses and care attendants, such as medical orderlies. Within the community are people with health qualifications from other countries which are not recognised in Australia,

health professionals who have let their registration lapse because it is so long since they worked in their professions, paramedics, and people with health science qualifications (e.g. biomedical science degrees) who are unable to find work within patient care areas. All these people could potentially be trained as physician assistant type practitioners.

This submission contends that a mid-level health profession, similar to that of the physician assistant of the United States, would add value to the Australian health system.

This submission is divided into two parts. Part 1 of will describe the physician assistant profession in the United States, giving definitions, history, information about education and regulation as well as outlining their current work. Relevant risk factors will also be discussed.

Part 2 will outline the roles that physician assistant type practitioners could undertake in Australia. The education, regulation and supervision issues will be discussed as well as some particular risk factors. While the term 'physician assistant' is used throughout the document, another term more acceptable to the Australian context could be substituted.

Part 1 – The physician assistant in USA

What is a physician assistant

This category of health care worker was specifically developed to address the medical shortage in the USA, particularly in rural and remote areas of the country. Its original focus was primary care but this has broadened into hospital work and a number of specialty areas.

Definition

The physician assistant health profession arose in the United States of America. The definitions all highlight the fact that physician assistants work under the supervision of a physician. On its official website the American Association of Physician Assistants provides a detailed definition which states that a license (from a state authority) or credentials (from the federal constituency) is required and outlines the specific responsibilities physician assistants have and their relationship with physicians. This is the most comprehensive definition found.

Physician assistants are health care professionals licensed to practice medicine with physician supervision. PAs employed by the federal government are credentialed to practice. 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.³

The following definition shows how the physician assistant can undertake some of the roles previously only done by doctors.

Physician assistants are clinicians who are licensed throughout the United States to practice medicine in association with physicians. They perform many of the tasks previously done solely by their physician partners, including examination, diagnosis, and carrying out investigations, as well as treatment and prescribing. All physician assistants must be associated with a physician and must practice in an interdependent role, described as “negotiated performance autonomy”.⁴

The crucial points to take from these definitions are that physician assistants cannot practice in the USA without a license, need to be associated (either on site or at a distance) with a doctor, and can undertake the broad spectrum of health care including diagnosis, treatment and prevention. Physician assistants practice “within the medical model of care”.⁵

History

Duke University Medical Center is the birthplace of the physician assistant profession. In response to shortages of nursing and allied health professionals, the chairman of the Department of Medicine, Dr Eugene Stead Jr, proposed the development of a group of health care workers who could work in the clinical setting and relieve rural physicians who wanted to undertake continuing education. His ideas stemmed from experience during the Second World War when medical students had assisted in the running of a hospital at which he was working and doctors were educated within three years for use in the armed forces.⁶

The original proposal was for nurse clinicians to take on this role. However after the proposal was rejected three times by the National League of Nursing, who claimed that it was “perhaps dangerous for nurses to assume medical tasks”, veterans who had worked with the military medical corps were recruited into the program which was initially taught by a nurse and then by other health care professionals.⁶

After two years of study and practice three students, all former US Navy medics, graduated in 1967. Stead was looking for a solution to healthcare staff shortages and worked from the premise that

a person with a high school education, a reasonable rate of learning, and a tolerance of the unavoidably irrational demands often made by sick people can learn to do well those things a doctor does each day. Under the wing of the doctor, such a physician’s assistant can collect clinical data, including history and physical examination, organize the material in a way which allows its use in diagnosis, and carry out any required therapeutic procedure which the doctor commonly uses.⁶

By 2001, there had been 52,716 graduates from PA programs and it was estimated that 45,120 of these were in employed as PAs at that time.⁷ In 2002, the Bureau of Labor

estimated there were 63,000 PA jobs available with many PAs working in more than one job.⁸

The physician assistant movement expanded to Canada in 1992 when senior medical technicians in the armed forces were authorised to use the PA title.⁹ In 2004 the Canadian Medical Association granted recognition of civilian physician assistants and at least one of the physician assistant training institutions in the USA is offering admission to Canadian applicants in 2006.¹⁰

In Britain in 2003, two PAs from the USA were employed in a pilot program by one of the NHS trusts and one PA started work in a general practice in the Midlands where there had been a vacancy for a doctor for 18 months.¹¹ Since then there has been a growing interest in this category of health professional. Birmingham Medical School has developed a pilot training program, as has Wolverhampton University, and other trusts have taken on PAs to work in accident and emergency departments.¹²

Education

There are more than 130 PA education programs accredited by the Accreditation Review Commission on Education for the Physician Assistant¹³ in the USA. Sixty-eight (over fifty per cent) of the programs offered master's degrees while the rest were either bachelor's degrees or associate degrees.⁸

Most programs insist on students having had some time in patient care prior to enrolling for PA studies. The average course takes two years, each of three semesters, of which up to twelve months can be clinical practice under supervision. In some universities the PA students take classes with medical students (e.g. University of New Mexico).

Regulation

Between 1972 and 2000 all states legislated for the practice of physician assistants.¹⁴ The legislation that enables physician assistants to practice in each state is usually found within amendments to the Medical legislation of that state.

Physician assistants are required to undertake 100 hours of continuing education and each 6 years complete the Physician Assistant National Recertifying Examination or a similar piece of assessment.¹⁵

Supervision

All physician assistants must practice under the supervision of a doctor, though this can be at a distance. The original plan was that each PA would work with one doctor. However since then it has been agreed that the PA to doctor ratio can be 2:1 in some states up to 6:1 in California with the proviso that this ratio is decided at the practice level by the doctor.¹⁶

One of the mechanisms of supervision is the use of clinical protocols.¹⁷ These are standard treatment plans for common conditions. They provide detailed information about how to treat particular presentations of illness.

How physician assistants responded to workforce shortages in USA

Rural response

The first PA program started as a response to workforce shortages in North Carolina.⁶ In 1969 the MEDEX Northwest physician assistant program was started at the School of Medicine, University of Washington, Seattle. This program was developed in response to primary care health professional shortages in the Northwest region of the USA, particularly the states of Washington, Alaska, Montana and Idaho, large states accounting for 23 per cent of the land mass of the USA but with only three per cent of the population.¹⁸

The WAMI program, now WWAMI with the addition of Wyoming to the group, has designed health professional programs specifically aimed at keeping health professionals in these sparsely populated states. One of the strategies that WAMI adopted was to recruit health care personnel from the rural and underserved communities into their PA program.¹⁸ This seems to have paid off as the physician assistant graduates from the MEDEX Northwest program have mostly remained within the five state region (76%) while 24% have moved to other western or central states with only 4% of graduates moving to the heavily populated eastern states.¹⁹

A survey of the geographical workplaces of physician assistants in the mid 1970s found that half of PAs were “working in communities of 50,000 persons or less” which the study equated with medically underserved communities.²⁰ This study concluded that the “MEDEX programs have been particularly effective in producing physician assistants who are providing general primary care services in smaller communities”.²⁰ As PAs need to practice under the supervision, or in association, with a physician, they could only undertake practice in smaller communities if there was a physician willing to supervise them. This occurred with a PA working in a satellite service in a community supervised by a physician in the main service centre.²¹ By 2001 23% of the non-physician providers (PAs and NPs) worked in rural areas, while only 13% of doctors did.⁷

Results that will be familiar to anyone associated with rural health in Australia were found by Singh when developing a predictive model of PA location. “Male gender, rural or small town background, early commitment to primary care and primary care choice of specialty were predictive of rural location.”²²

Primary care response

There was a crisis in primary care in the USA during the late 1960s when health care was considered to be over specialised, difficult to access and poorly distributed geographically.²¹ In the mid 1970s 75 per cent of PAs were working in primary care settings,²⁰ with a similar figure found in the mid 1980s also.²³ By 2001 this figure had dropped to 50 per cent as the PA movement had responded to other health workforce needs⁹ and in 2003 44 per cent of PAs reported that they worked in primary care.²⁴

Hospital based response

By the early 1980s there had been a significant shift of PAs into institutions, particularly public ones. There were three drivers of this shift, the first of which was a reduction in the number of foreign medical graduates due to more stringent entrance requirements. The second was the ability of PAs to adapt to a different clinical settings quickly and finally the recognition that PAs were cheaper than medical staff.²¹

Hospitals found they could substitute about 50-75 per cent of a doctor's work with one PA, with their broad based training enabling them to quickly function in a number of different clinical settings.²¹ PAs worked in medical, surgical and paediatric settings, including emergency care. In one geriatric institution, the Beth Abraham Hospital in New York, "foreign medical graduate house officers were replaced by 10 physician assistants in 1979. There was a marked decreased in patient mortality on physician assistant-staffed wards when compared with the results before 1979."²¹

One of the advantages of having PAs working in house officer positions was the continuity of service they offered. They were not rotated as junior medical staff were and "they get trained for a very specific role and stay with it."²⁵ "PAs in these positions function with a degree of skill and competence similar to that of first-year physician residents in the same position."²⁵

By 2003 thirty-seven per cent of PAs reported that they worked in hospital settings. This was divided between emergency rooms (10%), inpatient units (9%), hospital outpatient units (8%) and operating theatres (7%).²⁶ With the reduction in the hours of work hospital residents were allowed to work which came into effect on 1 July 2003 and limited resident hours to no more than 80 hours per week²⁷ there was even more demand for the services of PAs to fill the gaps left in hospital services.²⁸

The physician assistant current role in USA

As can be seen from the previous discussion PAs work in a broad range of settings and fields of medicine. The role of physician assistants includes procedural/technical activities, direct patient care, administration, research and medical education. Besides directly caring for patients they also undertake patient education and health promotion.²⁵

Those working in primary care fields cover family practice, paediatrics and women's health. The places where they work include private practices with family medicine practitioners (equivalent to GPs), in their own practices associated with a supervising doctor who may be some distance away, in prison services, in walk-in clinics in poorly resourced areas, in hospital outpatients, and in occupational health positions.^{4,29-32}

They also work in hospital and specialist settings. These include trauma centres,²⁷ renal dialysis services,³³ paediatrics,³⁴ medical and surgical wards^{35,36} and specialty units such as gastroenterology,³⁷ urology,³⁸ dermatology³⁹ and cardiac services.⁴⁰

A clear description of the PA surgical role is provided by the American Academy of Physician Assistants.

PAs work in general surgery and in virtually every surgical specialty and subspecialty. In addition to their ability to first and second assist at surgery, surgical PAs provide pre- and post-operative care and can prescribe medication. . . In a typical team approach to surgical care, with the surgeon as head of the team, the PA might meet the patient in the office or hospital, perform the preoperative history and physical examination, order and compile any necessary tests, and order preoperative medication and preparations.

Post-operatively, PAs might dictate the operative report, write the postoperative orders, and manage the surgical patient in the intensive care unit or on the ward. PAs may insert and remove lines and monitoring devices (including Swan-Ganz catheters, CVP lines, arterial lines, Foley catheters); insert and remove drains (including intrathoracic drainage catheters); regulate the pharmacological needs of the patient (including analgesics, antibiotics, anticoagulants, insulin etc.); remove temporary pacemaker wires, casts, sutures or skin clips; and perform other tasks delegated by the surgeon.

Surgical PAs also oversee discharge planning, including the dictation of discharge summaries and confirmation of follow-up appointments. Following the patient's discharge, the surgical PA may continue to follow the patient in another facility or in the office on a scheduled or urgent basis, answer questions from patients and their families, and refill prescriptions.⁴¹

Since their advent as primary care providers forty years ago the PA profession has expanded to fill the entire medical care spectrum.

Risk factors

The risk factors associated with physician assistants are considered in four areas. These are the quality of their clinical care, the acceptance of physician assistants by patients the cost effectiveness of physician assistants and resistance from the medical profession. As the physician assistant profession has developed in the USA and only recently spread to Canada and Britain, all the studies undertaken have been done in the USA.

Quality of care

The quality of care provided by physician assistants has compared well with that offered by doctors when PAs are working within their scope of practice as demonstrated by a broad series of reports that describe the outcomes of PAs both in primary care and specialty practices. Collectively, they demonstrate that PAs perform competently within the framework of their delegated responsibilities and that the complexity and autonomy at which they function are greater in situations in which they have worked for sustained periods with the same physician.⁵

Despite early concerns about whether acceptable clinical care would be provided by physician extenders,⁴² no major problems have been reported in the literature. In 1979, after reviewing research undertaken into the quality of physician assistant care, Sox was able to state that “[A] physician’s assistant should be well accepted by patients and provide the average office patient with primary care that compares very favorably with care given by the physician.”⁴³ In a specific surgical setting a Vermont study found that there were no differences in the “overall, immediate, or delayed complication rates” of first trimester abortions performed by physician assistants or physicians.⁴⁴

When undertaking screening flexible sigmoidoscopies, PAs were found to have no differences in rates of detections of polyps than gastroenterologists.³⁷ Physician assistants have been shown to be able to safely perform diagnostic cardiac catheterization with coronary angiography. While they took about 12 months to be able to perform satisfactorily (twice as long as doctors undergoing the training) once they were proficient, and in less complicated patients (i.e. those without heart failure) they were able to demonstrate similar outcomes to the doctors performing the procedure.⁴⁰

In a level II trauma unit surgical residents were replaced by physician assistants with no affects on either mortality rate, length of stay or transfer time of patients from the emergency unit to a hospital ward.²⁷ “Numerous studies have shown that the quality of care given by physician assistants is at a level of that given by physicians in comparable situations, with a high level of patient satisfaction.”⁴

Acceptance by patients

As early as 1974 it was demonstrated that physician assistants were well accepted by patients.⁴⁵ As physician assistants spent more time with patients than doctors did⁴⁵ they may have built closer relationships with the patients that added to their acceptance. A study thirty years later was able to demonstrate that patients in primary care settings were significantly more likely to be satisfied with a visit to a PA or a NP than with a physician.⁴⁶

Research undertaken in five rural communities that did not have PAs or NPs was able to demonstrate that the communities were open to attending a PA or NP as long as there was coordination with their current doctor, despite having limited knowledge of these health care professions.⁴⁷ A very large study (146,880 surveys), undertaken in 2000 and 2001, found that there were no significant differences in acceptance by patients of doctors, physician assistants and nurse practitioners.⁴⁸

Cost comparisons

The USA medical financing system is quite different to that of Australia and it is difficult to make direct comparisons. Some physician assistants are self employed and bill medical insurance organisations, like Medicare or Medicaid.^{49,50} Yet when salaries are considered, there are reduced salary costs with employing a physician assistant as a substitute for a doctor. However the cost savings associated with using physician assistants as substitutes for doctors seems to have diminished over time. For instance in 1975 a doctor cost 3.5 times the cost of a PA but by 1992, the doctor only cost twice the cost of a PA.⁵¹

The previously mentioned research comparing PA screening flexible sigmoidoscopies with those undertaken by gastroenterologists, found that the costs of PAs providing this service was 33% less than the costs incurred when gastroenterologists were used.³⁷ Another study which looked at four common acute care conditions found that for every condition the total cost of a visit to a PA was less than that to a doctor. The difference was significant in three of the four conditions, urinary tract infections, otitis media and shoulder tendonitis.⁵²

With training time at least half that of medical degrees and final salaries are about half that of doctors³⁰ it seems apparent that PAs can provide cost effective service for a health department. In the Australian health system once physician assistants were experienced it would be expected that there would be a cost benefit to using them in a range of settings but it is not possible to state what proportion of the medical salary could be saved as it has not been established how much such health professionals would cost.

Resistance from medical profession

Despite PAs working in the USA health system since the mid 1960s there are still doctors who are resistant to them. Examples of this appear in consumer literature where doctors make statements about the non physician practitioners, some of which appear at odds with the research information. The titles of such articles could well to raise doubt in the reader's mind about the services they are receiving. Examples include: "The doctor extender will see you now"⁵³, "Turf wars: are consumers caught in the middle?"⁵⁴, "Can you rely on a doctor substitute?"⁵⁵ and "Is there a doctor in the house?"⁵⁶

In medical literature legal issues are raised. Under the legislation of each state in the USA physician assistants need to practise under the supervision of a physician. However with some PAs practising at a distance from medical supervision and some of these PAs perhaps going beyond their scope of practice there are legitimate concerns about the liability of the supervising doctor.⁵⁷⁻⁵⁹

A number of issues have been raised as causing tension between physicians and physician assistants in the US scene. These include resistance to PAs undertaking diagnosis and treatment, competition in an over supplied medical market (some areas of USA), and misunderstanding of roles and working practices.⁶⁰

However there has been much support for the physician assistants. The American College of Physicians published a position paper on physician assistants and nurse practitioners supporting their practice within a collaborative model with doctors.⁶¹ This same body started offering affiliate membership to PAs in 2004 demonstrating a high level of acceptance of the physician assistant profession.⁶²

In Britain the general practice community has reacted to plans for establishment of a health care group similar to the physician assistant, called 'medical care practitioners' or 'physician practitioners' in the general practice literature. With headlines such as "GPs condemn plan to transfer core work"⁶³, "RCGP rejects physician practitioners scheme"⁶⁴,

“Physician’s assistants’ should not do GPs’ work”⁶⁵ and “GP practice: Protocols are nice, but GPs are better”⁶⁶, some parts of the general practice community have raised fears of their work being taken over and reduced in quality by the addition of physician assistant type practitioners.

Other parts of the British medical establishment are more supportive. There are physician assistants working in some pilot programs in Britain and the Birmingham Medical School has set up a pilot education program as has Wolverhampton University. A spokesperson for the Royal College of Physicians is reported as saying

We are keen to develop people who will assist doctors. I think doctors have always welcomed it. There is plenty of work for everyone. There is always a rising workload. Some of the PAs will provide continuity of care and it will allow doctors to concentrate on some of the areas in which they don’t have enough time.¹²

Flexibility of profession in response to particular workforce needs

A major advantage of the physician assistant health profession is the flexibility that the profession has been able to demonstrate in response to particular workforce needs. It is a practice focused profession and PA students usually bring experience in patient care with them as they begin their PA studies.¹⁸ With broad based and short training, relative to nurse practitioners and doctors, they are able to adapt to a broad range of clinical settings and clinical specialties. They are not seeking to practice independently of doctors⁴ which makes them attractive to the medical profession.

Part 2 - The physician assistant in Australia

Part 2 will outline the potential roles that physician assistant type practitioners could undertake in Australia. The education, regulation and supervision issues will be discussed as well as some particular risk factors.

How physician assistants could be used in Australia

The scope of work that physician assistants could undertake grew as the profession grew. It is expected that a similar situation could occur in Australia. Three specific areas of potential practice are explored in this paper.

Indigenous health

One of the characteristics of the physician assistant profession is that at least 25% of the PA students are from minority groups within the USA. There is “greater diversity” and “increasing visibility of underrepresented minorities” among physician assistants than is seen in the medical workforce.⁷

In Australia Indigenous health workers have been providing health services for their communities for over thirty years. It is only in recent years that Queensland has allowed Indigenous health workers to undertake clinical roles, but now there is “already training and endorsement for Indigenous health workers to work in clinical roles that includes supply and medication according to Queensland Health primary care protocols.”⁶⁷

In some other states, Indigenous health workers have had clinical roles for many years. For example, the Kimberley Aboriginal Medical Services Council (KAMSC) has had an active training program for Indigenous health workers and offers courses to Advanced Diploma level. These courses prepare Indigenous health workers to work in a variety of settings including remote settlements where there are no other health professionals. They are supported at a distance by other health professionals within the organisation. The courses developed by KAMSC are now taught at the Mount Isa Centre for Rural and Remote Health through cooperation between KAMSC and James Cook University.

The state of Indigenous health in Australia is well documented. In June 2000 it was estimated that 27% of Australia’s Indigenous population lived in Queensland⁶⁸ and it is expected that Queensland will have the largest population of Indigenous people in Australia by 2006⁶⁹. Indigenous people make up 1% of the metropolitan zone, 3% of the rural zone and 13% of the remote zone.⁷⁰ As remoteness increases the Indigenous death rate rises.⁷¹

Providing health services in remote areas has proved difficult when using health professionals from outside the area. The turnover rate is extremely high and positions may remain vacant for some length of time. One way of addressing these problems is to train health professionals from within the community to a level that enables them to provide safe primary care. Indigenous health workers trained as physician assistants would be able to undertake this role.

In rural and urban areas Indigenous health workers trained as physician assistants could undertake case management of Indigenous patients with chronic illness. This provides a well trained professional with close links to the community overseeing the long term care of community members. As case managers they could take an active part in the care of patients in all settings, community as well as institutional, facilitating continuity of care.

Rural settings

There are problems attracting doctors and nurses to rural areas and often staff shortages. In communities with only one doctor, a physician assistant could provide on call and weekend relief as well as allowing the doctor to leave the community for regular breaks. Paramedics or nurses who have had additional training as physician assistants could take on such a role. Others who may be able to provide this relief would be pharmacists who have physician assistant training, or other health care providers within the community e.g. Indigenous health workers and allied health workers who have undertaken physician assistant training.

In larger rural centres, e.g. Mount Isa physician assistants could work as junior house officers within the local hospital. As already stated in Part 1, one of the advantages of having physician assistants working in house officer positions was the continuity of service they offered. They were not rotated as junior medical staff were and “they get trained for a very specific role and stay with it.”²⁵ “PAs in these positions function with a degree of skill and competence similar to that of first-year physician residents in the same position.”²⁵

Urban settings

In urban hospitals physician assistants could undertake the role of junior doctors in a number of settings, including general medical wards, surgical wards, emergency departments, and specialist areas. Each physician assistant would remain within the one area, developing specific expertise enabling them to function at the level of junior house officer. In addition to providing support to the medical team they could take an active role in training junior medical staff. As a reminder of the level of care that physician assistants could provide the following section from Part 1 is repeated.

A clear description of the PA surgical role is provided by the American Academy of Physician Assistants.

PAs work in general surgery and in virtually every surgical specialty and subspecialty. In addition to their ability to first and second assist at surgery, surgical PAs provide pre- and post-operative care and can prescribe medication. . . In a typical team approach to surgical care, with the surgeon as head of the team, the PA might meet the patient in the office or hospital, perform the preoperative history and physical examination, order and compile any necessary tests, and order preoperative medication and preparations.

Post-operatively, PAs might dictate the operative report, write the postoperative orders, and manage the surgical patient in the intensive care

unit or on the ward. PAs may insert and remove lines and monitoring devices (including Swan-Ganz catheters, CVP lines, arterial lines, Foley catheters); insert and remove drains (including intrathoracic drainage catheters); regulate the pharmacological needs of the patient (including analgesics, antibiotics, anticoagulants, insulin etc.); remove temporary pacemaker wires, casts, sutures or skin clips; and perform other tasks delegated by the surgeon.

Surgical PAs also oversee discharge planning, including the dictation of discharge summaries and confirmation of follow-up appointments. Following the patient's discharge, the surgical PA may continue to follow the patient in another facility or in the office on a scheduled or urgent basis, answer questions from patients and their families, and refill prescriptions.⁴¹

Physician assistants could be trained in some of the diagnostic areas, e.g. undertaking colonoscopies and cardiac studies, they could provide the assistant surgeon role in theatre and could provide anaesthetics. Adding to the number of professionals who could undertake these roles would assist in reducing the waiting times for these services.

Issues to consider

Before physician assistant type practitioners could be introduced to any state health system a number of issues need to be considered. These include education, supervision, regulation, and managing resistance and opposition to a new practitioner group from the medical and nursing profession.

Education

With examples of education programs available in many universities in the USA it will not be difficult to design curriculum for a physician assistant program in Australia. This is not to suggest that a specific program should be 'picked up' entirely from a USA institution. Rather there needs to be discussion between potential employing institutions, e.g. state health system, the medical profession and the education institution about what role a physician assistant may undertake in the state health system. From this discussion the curriculum needs to be developed by those with education experience and ability, with the assumption that it will need revision once the students move into the workplace. It is essential that there is a "high level of involvement of clinicians in the design and delivery of curriculums . . . to aid credibility and ensure full partnership with the service."⁶⁰

This suggests that the first such program to be developed needs to have medical school support and commitment from the faculty to undertake such a program. One of the newer medical schools, particularly one that is interested in meeting the health workforce needs of rural and remote parts of the country, may have the infrastructure and expertise to develop such a program initially.

Regulation

In the USA the regulation of the physician assistants is done through the physician regulation board of each state. In Britain, Hutchinson and associates have provided a number of alternatives for consideration with regards to the regulation of physician assistants.

Alternative regulatory options include:

- Not directly regulating physician assistants at all but relying on the regulation of the supervising doctor(s) by the GMC
- Seeking a subregister at the GMC in the same way that dental auxiliary groups are registered by the General Dental Council
- Seeking health service guidance, equivalent to that published in 1999 for clinical perfusionists, requiring all to be members of a specified (and still to be set up) professional association with responsibility for standards in education and conduct.⁶⁰

These options could all be considered in Australia.

Supervision

Supervision strategies need to be developed in partnership with the medical profession. On site or distant supervision would be provided depending on the circumstances in which a physician assistant type practitioner was working. For instance, those working in urban settings would be supervised in a manner similar to the supervision of junior medical staff that currently exists.

Those working in small rural settings would need to be supervised at a distance when they were undertaking relieving primary care duties. For example, if the general practitioner/medical superintendent from Hughenden Hospital was being relieved by a physician assistant, the PA could be supervised by the medical superintendent in Charters Towers for the period of relief.

For physician assistants working in remote settings supervision would be at a distance. For instance a physician assistant working at Lockhart River may be supervised by the medical superintendent of the Cooktown Hospital, or there may be arrangements made for supervision by medical staff in Cairns or the Royal Flying Doctor Service. The arrangements would need to be acceptable to the supervising doctor.

There are a range of clinical protocols available for use in Australia. Examples of commonly used clinical protocols are:

1. Queensland Health & RFDS (Qld Section). (2001). The Primary Clinical Care Manual 2001. Brisbane, Queensland Health.
2. Central Australian Rural Practitioners Association. (2003). CARPA Standard Treatment Manual 4th edn. Alice Springs, CARPA.
3. CRANA. (2001) Clinical Procedures Manual for remote and rural practice: How to do it in the Bush! Alice Springs, CRANA.

Managing resistance and opposition

As demonstrated in Part 1 there will be considerable resistance to the introduction of a new group of practitioners from the medical profession. In addition it is to be expected that there will be opposition from the nursing profession who are likely to see this new group as competitors with the nurse practitioner. Strategies for dealing with this resistance and opposition are discussed below.

Despite these strategies it is to be expected that there will still be resistance to the development of a new health care professional in Australia. This is not necessarily a negative issue, as the social movements approach to change argues that “change needs opposition – it is the friend not enemy of change” .⁷² From this resistance can come the best outcomes for the change, as the resistance raises arguments that the proponents of the change have to deal with creatively.

Resistance from the medical profession

Involvement of the medical profession in any discussions about the introduction of a physician assistant like practitioner into Australia is essential if resistance is to be managed. Finding a medical organisation that is open to such a practitioner is the key to this involvement. As the physician assistant program developed in the USA out of shortages of primary care workers in rural and remote areas of that country, it may be that a body such as the Rural Doctors Association (RDA) or the Australian College of Rural and Remote Medicine (ACRRM) would consider sponsoring such a movement. The National Rural Health Alliance (NRHA) and the National Aboriginal Community Controlled Health Organisations (NACHHO) may be other bodies that could provide some support for the proposal, though they are not solely medical bodies.

The role of the physician assistant type practitioner would need to be discussed in detail and legislation drafted to ensure that doctors and the new practitioners were clear about their roles and responsibilities. In addition the research findings on the quality of practice of current physician assistants would need to be made available to doctors in Australia. This could be presented at clinical meetings, national forums and conferences and in the medical literature, both research based and general news based publications.

Opposition from the nursing profession

The physician assistant and the nurse practitioner developed in parallel in the United States. As Australia has only recently embraced the nurse practitioner model it is to be expected that there will be resistance from the nursing profession to a new group of health professionals who may be seen as direct competitors to nurse practitioner roles. However it seems important to differentiate the nurse practitioner role from this new mid-level health practitioner.

Differentiation of physician assistants and nurse practitioners

One of the consistent messages coming from the research and commentary literature is that physician assistants and nurse practitioners undertake basically the same roles.^{4,5,60,73} This seems a waste of education resources when it is considered that physician assistants undertake approximately two years of training after some years of undefined health care practice, while nurse practitioners need to have an undergraduate degree in nursing along

with several years of practice and then a master's degree, usually in a narrow field, prior to commencing work as a nurse practitioner. With this degree of preparation one would expect the nurse practitioners would have a greater depth of knowledge in particular areas rather than the broader general level of knowledge of the physician assistants. There is no need for Australia to follow the path of using nurse practitioners and physician assistants interchangeably.

Besides different educational preparation the two groups have the different philosophical backgrounds. The medical profession uses the medical model approach to care in its education and practice. The medical model has been defined as

the traditional approach to the diagnosis and treatment of illness as practiced by physicians in the Western world since the time of Koch and Pasteur. The physician focuses on the defect, or dysfunction, within the patient, using a problem-solving approach. The medical history, physical examination, and diagnostic tests provide the basis for the identification and treatment of a specific illness. The medical model is thus focused on the physical and biological aspects of specific diseases and conditions.⁷⁴

Nursing has the patient, rather than the disease process, as the focus of its work. Anderson goes on to say

Nursing differs from the medical model in that the patient is perceived primarily as a social person relating to the environment; nursing care is formulated on the basis of a nursing assessment that assumes multiple causes for the problems experienced by the patient.⁷⁴

Nursing has been defined as

a discipline focused on assisting individuals, families and communities in attaining, re-attaining and maintaining optimal health and functioning. Modern definitions of nursing define it as a science and an art that focuses on quality of life as defined by persons and families. Nursing is not only concerned about health and functioning but with quality of living and dying, lived experience, and universal lived experiences of health.⁷⁵

Physician assistants “practice within the medical model of care”⁵ and do not seek autonomy from the medical workforce, “working in a delegated or supervised manner.”⁵ There has not been any intention of moving physician assistants away from the medical profession.

However nursing considers itself a separate profession from medicine and the goal of nurse practitioners is “independence and collegiality rather than dependency and supervision.”⁵ Nursing philosophy emphasises holistic care of the patient and nurse practitioners are particularly involved in patient education.⁵

With key differences in educational preparation and patient focus there are opportunities to use these two health care groups in different health care settings or in the same settings with different roles and responsibilities. Nurse practitioners are particularly appropriate in

managing the care of patients across the health system. For example a nurse practitioner specialising in diabetes care could take the role of case manager for diabetes patients, ensuring that they receive the appropriate care from the team of health professionals who support them. The case manager role could be carried across the community and hospital sectors, such that if the patient needed to be admitted to hospital for any reason, the nurse practitioner case manager would be still be involved in ensuring the coordination of care of the patient.

Dealing with the resistance from the nursing profession will involve discussions with them and clear differentiation of the roles of the nurse practitioner and this proposed new practitioner.

Conclusion

Physician assistant type practitioners are a viable option for Australia. With an emphasis on practical application of skills and knowledge, they are quickly prepared educationally in comparison with other health professionals. Such a group of health professionals could work in a range of settings and once experienced in the setting would provide quality health care services that are acceptable to patients and at a lower cost than health services provided by doctors.

Forty years of experience with such health providers in the USA has demonstrated the role they can take in addressing workforce shortages in rural and remote settings as well as in institutional settings. They could provide a similar role in Australia particularly in remote Indigenous communities, in small and larger rural hospitals and in the large metropolitan and provincial city hospitals.

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Health Workforce Study

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Work & Study Support. Personalised work and study support. eheadspace Support. headspace has made a joint submission with Orygen Youth Mental Health to the Productivity Commission's Inquiry into the Social and Economic Benefits of Improving Mental Health to demonstrate the importance of youth mental health for the nation's economic success. In the joint submission, headspace and Orygen have called on the Australian Government to widen and deepen youth mental health support to ensure that Australia reaches its economic potential. Build a youth mental health workforce to meet the current and future needs. Drive improvements through research, data, and outcome monitoring. Submission to productivity commission: Issues paper: data availability and use. Anz 29 July 2016. Executive Summary. Introduction. 1. ANZ thanks the Productivity Commission for the opportunity to contribute to the Commission's inquiry into data availability and use. Our contribution concerns the availability and use of private sector data. 2. Information technology sits at the core of ANZ's banking strategy. COMMISSION STAFF WORKING DOCUMENT on an Action Plan for the EU Health Workforce Accompanying the document. Communication from the commission to the european parliament, the council, the european economic and social. Alcimed (2010), Study on Healthcare Services, Sectors and Products in Europe for the European Commission, Final Report February 2010 AT, BE, DK, FR, DE, EL, NL, LU, SK "European Economy, Joint Report on Health Systems, December 2010cf. p. 111. 1. EN. The healthcare workforce thus makes up a large part of the so-called "white jobs" which also include professionals delivering social care services.