

AUSTRALIAN AND NEW ZEALAND COLLEGE OF ANAESTHETISTS

Submission

to the

HEALTH WORKFORCE STUDY

of

THE PRODUCTIVITY COMMISSION

EXECUTIVE SUMMARY

The Australian and New Zealand College of Anaesthetists summarises its position in relation to the provision of safe anaesthesia in Australia, a key part of the acute care hospital system; reviews developments in approaches to the anaesthesia workforce, as part of the acute care hospital systems in the United Kingdom, Canada, the United States of America, Europe, New Zealand and Australia; comments on issues relevant to the Scopes of the Terms of Reference of the Health Workforce Study of the Productivity Commission; and makes a number of suggestions relevant to the short, medium and long term future of the anaesthesia workforce as part of the acute care hospital system in Australia.

INTRODUCTION

The Australian and New Zealand College of Anaesthetists (ANZCA) is the professional medical body in Australia and in New Zealand which carries out the education, training, assessment and examination of anaesthetists, and sets the standards of anaesthesia clinical practice. In doing this, ANZCA meets the requirements set by the Australian Medical Council (AMC) (2002). ANZCA has two Faculties, the Joint Faculty of Intensive Care Medicine (JFICM), jointly with the Royal Australasian College of Physicians (RACP), and the Faculty of Pain Medicine (FPM), which has representation from the Royal Australasian College of Surgeons, the Royal Australasian College of Physicians and its Faculty of Rehabilitation Medicine, and the Royal Australian and New Zealand College of Psychiatrists. The training and education programs of both Faculties have been approved by the AMC. ANZCA has contributed to the work of the Australian Medical Workforce Advisory Committee (AMWAC) (1996) (2001), and reports annually to the Medical Training Review Panel (MTRP) (2004). More recently, ANZCA has had discussions with the Australian Consumer Competition Commission (ACCC), and with the Department of Health and Ageing, the latter in relation to the Overseas Trained Specialists (OTS) and Area of Need (AON) pathways of medical registration. Details of the ANZCA education and training and continuous professional development programs are available on the College website at www.anzca.edu.au.

This submission concentrates on the specialty of anaesthesia because it is a broad area of medical specialist practice which underpins many services in acute care hospitals. ANZCA Fellows often play a key role in orchestrating peri-operative and peri-procedural services in these hospitals (with the assistance of other members of the anaesthesia care team). Anaesthetists also assist in the provision of intensive care and medical retrieval, and in acute and chronic pain management. Fellows of JFICM and of FPM are the specialists responsible for provision of intensive care and pain medicine services respectively.

This submission comments on Scopes 1, 2, 3 and 4 of the Productivity Commission's Terms of Reference.

Scope 1

Consider the institutional, regulatory and other factors across both the health and education sectors affecting the supply of health workforce professionals, such as their entry, mobility and retention, including:

- (a) the effectiveness of relevant government programs and linkages between health service planning and health workforce planning;*
- (b) the extent to which there is cohesion and there are common goals across organizations and sectors in relation to health workforce education and training, and appropriate accountability frameworks;*
- (c) the supply, attractiveness and effectiveness of workforce preparation through VET, undergraduate and postgraduate education and curriculum, including clinical training, and the impact of this preparation on workforce supply;*
- (d) workforce participation, including access to the professions, net returns to individuals, professional mobility, occupational re-entry, and skills portability and recognition;*
- (e) workforce satisfaction, including occupational attractiveness, workplace pressure, practices and hours of work; and*
- (f) the productivity of the health workforce and the scope for productivity enhancement.*

Undergraduate medical, nursing and other health workforce training resides with the Universities and Vocational Education Training (VET) sectors, with cooperation of hospitals and healthcare agencies, mainly public, but some private. Early postgraduate medical training comes under the aegis of the various State/Territory Medical Postgraduate Councils, while Vocational Postgraduate medical training is organized by the Medical Colleges. In all of these scenarios, trainees' salaries are paid mainly by State and Territory Governments.

While there is some consistency being brought to College programs by the AMC, and some consistency to the analysis of data relating to supply of health workforce professionals by AMWAC, there are a number of limitations. For example, AMWAC Report 1996.3 and AMWAC Report 2001.5 deal with the Anaesthesia workforce. The 2001 Report has at the end of the Introduction a series of key assumptions, emphasizing "that the projections for anaesthesia supply and requirements are based on the assumption that there will be no significant change in existing national health structures"; again "that the candidates will complete the program within the prescribed time frame"; and again "the pattern of workforce participation and service delivery of the current workforce provides a suitable basis on which to project future workforce trends." ANZCA has endeavoured to, and been successful at, exceeding AMWAC targets of specialist anaesthetist supply, but this does not mean necessarily that the supply of anaesthetists is completely adequate at all times and in all places.

Although the medical Colleges are sometimes accused of being educational "silos", and that there should be more commonality in training, the great advances in knowledge and

technology in medicine in the last 40 years or so have required specialization for their safe application. A doctor entering years of postgraduate vocational training to specialize as a cardiac surgeon cannot afford much of that time to keep up with the generic knowledge and skills required of a junior doctor, a general practitioner, or an anaesthetist, and emerge a competent cardiac surgeon.

Many organisations agree that since the public teaching hospitals have now shed a lot of their patient load to the private sector, the teaching of doctors should also move to that sector. However, while this can be accommodated by some disciplines in medicine, surgery, and some other specialties, private sector training is more limited in disciplines such as anaesthesia, except to provide training in necessary advanced modules such as cardiac and neuro-anaesthesia. There are many reasons for this, including salary or other payments, indemnity, and the need for anaesthesia trainees to underpin the services for which they are essential in the public system. This has been referred to in Phelan's 2002 Report, and summarized in his conclusion. An important issue is that when decisions are being made about the training of specialists in the disciplines of surgery, obstetrics, procedural medicine and medical imaging, for whose procedures anaesthesia is the sine qua non, the implications for anaesthesia training must also be considered. This may well require additional funding. ANZCA does not restrict the number of trainees, and increased numbers can be accommodated if funding is provided by jurisdictions. This was a recommendation of the 1996 AMWAC Report, but was not followed up in all jurisdictions.

With regard to nurse and technician training of relevance to anaesthesia, the anaesthesia team in Australia relies on anaesthesia nurses in the pre-operative, operative and post-operative components of anaesthesia, just as intensive care units and pain medicine units rely on nurses as part of their teams. In some regions, technicians assist anaesthetists. There is currently a shortfall in relevant VET, undergraduate and postgraduate training activities for both nurses and technicians to support the above teams, and this is an area that should be reviewed, in collaboration with the College.

There is a shortage of doctors, specialists and nurses in Australia, with over-reliance on overseas trained professionals. Issues such as disillusionment, workforce dissatisfaction, workplace pressure, poor conditions of service etc. were canvassed during the Romanow Commission inquiry in Canada in 2002: "Experience with health human resources planning in Canada has been plagued by the following problems:

- planning is intermittent at best
- too often, the emphasis is on quick fixes
- the lack of adequate planning has contributed to the declining quality of work life for health professionals
- planning has been limited to individual provincial and territorial initiatives
- planning is complicated by the interdependency of issues and the significant number of actors involved" (pp110-111).

Solutions were proposed by the Canadian inquiry, and The Productivity Commission may have information on progress on these reforms. Of interest is the statement that: “The conclusion, then, on services and sustainability is that more needs to be done to ensure timely access to quality services. The answer, however, is not to look to the private sector for solutions. Instead, governments should seek the best solutions within the public system and ensure that adequate resources are available and services are accessible to all.” (p8)

Scope 2

Consider the structure and distribution of the health workforce and its consequential efficiency and effectiveness, including:

- (a) workforce structure, skills mix and responsibilities, including evolving health workforce roles and redesign, and the flexibility, capacity, efficiency and effectiveness of the health workforce to address current and emerging health needs, including indigenous health;*
- (b) analysis of data on current expenditure and supply of clinical and non-clinical health workers, including the development of benchmarks against which to measure future workforce trends and expenditure; and*
- (c) the distribution of the health workforce, including the specific health workforce needs of rural, remote and outer metropolitan areas and across the public and private sectors.*

Subsections (a) and (b) are best prefaced by some information from different world perspectives, where there have been substantial changes to views over the past few years.

United Kingdom

The specialty of anaesthesia in the UK in 1996 perceived itself as a “Physician Only Service” (Association of Anaesthetists of Great Britain and Ireland 1996). This view was promulgated via the National Health Service (NHS) (Audit Commission 1997). This excellent and readable review however did provide a substantial amount of information about the indispensability of a safe medical specialist anaesthesia service to acute care hospitals, including the facts that anaesthetists provided essential services in Operating Theatres, Surgical Wards, Intensive Care Units, Outpatients, Accident and Emergency Departments, Radiology Departments, Psychiatric Units, Dental Surgeries and Maternity Units. Anaesthetists were estimated to have underpinned **two thirds of an acute trust’s income**. Development of anaesthesia teams, with non-physician assistants working under medical specialist anaesthetist direction was canvassed.

In 2002, “The Role of Non-Medically Qualified Staff in the Delivery of Anaesthetic Services” was published by the Royal College of Anaesthetists (RCA) and the Changing Workforce Programme, NHS Modernisation Agency. This important review followed combined RCA/NHS visits to the USA, Netherlands and Sweden.

Conclusions from these visits were that:

- (a) “The current pattern of delivery of anaesthesia services in the UK will not be able to meet the aspirations of the NHS Plan to increase surgical throughput”;
- (b) “Non-medically qualified staff were employed successfully in other countries as part of a team in the delivery of anaesthesia services, with good outcomes”;
- (c) “The use of non-medically qualified staff in the UK is only one of several strategies, which may be considered as a means of alleviating the shortage of anaesthetic manpower relative to the pattern of demand for services.”

It should be noted that in the UK there is no equivalent to the Australian General Practitioner anaesthetist program agreed by ANZCA, the Royal Australian College of General Practitioners (RACGP) and the Australian College of Rural and Remote Medicine (ACRRM), and administered by the Joint Consultative Committee on Anaesthesia (JCCA).

A further comment was that “the Royal College of Anaesthetists would wish to collaborate and play a major role in setting the standards of training and supervision of such staff. British anaesthesia has a very high reputation internationally and the College would be anxious to ensure that our current high standards are not compromised.”(p8).

The most recent article relevant to this discussion is that of Leedal and Smith (2005), which is cautious in its approach to safety aspects of including non-physician anaesthetists in that role, especially in relation to safety in critical events.

Canada

Canada is demographically and geographically much more like Australia than is the United Kingdom. There have been several reviews of medical and anaesthesia workforces in Canada. An early court decision following a patient death resulted in a policy that anaesthesia would be delivered only by medical specialist anaesthetists.

In 2003, the Canadian Health Services Research Foundation reported an international comparative review, which examined the health human resource planning in Canada, Australia, France, Germany, Sweden and the United Kingdom. It found a range of poor practices in all of these countries, and proposed several positive changes that could be applied in Canada, specifically mentioning that: “There is evidence in ambulatory care and in some areas of hospital care, such as anaesthetics and endoscopy, that nurses may be effective substitutes for doctors” (p iv). This, despite a nurse shortage in all countries.

Attempts to come to grips with anaesthetist shortages in Canada since 2000, where the physician anaesthetist model had followed the British pattern, led to two papers in the Canadian Journal of Anaesthesia this year. An Editorial (2005) was entitled “Anaesthesia physician resources – time to change the focus”. After considering the findings of the Ottawa Federal/Provincial Health Summit in September 2004, it challenged the Canadian Anesthesiologists’ Society, the Association of Anesthesiologists of Quebec and the Association of Canadian University Departments of Anaesthesia to address four issues.

The first three relate to the anaesthesia workforce, but the fourth states in part, that: “we need to face the realities and ensure that we play both an early and a leadership role in the provision of anesthesia services by non-physician providers, including the setting of standards and training of these individuals. Our input and collaboration with the authorities and other interested organizations ensures some measure of control over the quality of delivered anesthesia care.”

A paper in the same issue of this journal, reporting a survey of all licensed health care facilities potentially employing anaesthetic services in Canada, achieved a 93% response rate (Engen 2005). The paper concludes with the following:

- “There is an urgent need to determine why all specialist anesthesiology graduates are not entering clinical practice; and
- Why family physician anesthesiologists make limited use of their anesthesia training
- The barriers to International Medical Graduates (IMGs) and to the return of Canadian anesthesiologists trained or practicing abroad need to be investigated, to ensure that we are not unnecessarily foregoing these valuable resources
- Canada needs to increase medical school, postgraduate, re-entry and IMG training positions and evaluate whether or not the current pedagogy is relevant for our health system
- We need to consider rejuvenating the medical profession by decreasing the length of training or by reducing the time spent in pre-medicine years
- New models of delivering health care, including the appropriate use of anesthesia assistants, need to be explored to increase clinical output and emphasize the role of physicians as diagnosticians.”

This is a long step from the statement in the Romanow review that “Nurse practitioners, for example, are trained to provide some health services that used to be the exclusive responsibility of physicians. Despite much rhetoric about interprofessional cooperation, in reality, the professions tend to protect their scopes of practice.” (p93)

Anaesthetists in Canada are currently working with Government to develop the curriculum for training, and for examinations for anaesthesia assistants, who will work under the supervision of medical specialist anaesthetists. These assistants, it is envisaged, will come from science and/or nursing backgrounds.

United States of America

The US model of health care is a complex one, and anaesthesia has a quite different history and development there. Anaesthesia was first provided by nurses under the direction of the surgeon, and physician anaesthesia developed long after medically trained anaesthetists provided this function in Britain and its Commonwealth. Australian surgeons are not trained for this role and are unlikely to accept liability for nurses.

Today, anaesthesia is provided by medical trained anesthesiologists, supported in most States by nurse anaesthetist assistants, under Medicare. Some States allow Certified Registered Nurse Anaesthetists (CRNA) to practise independently. The difficulties created in the US are well summarized in Bacon's article (2002). Major concerns are medicolegal issues, increasing salaries of CRNAs and unwillingness of surgeons to accept responsibility for nurse anaesthetists.

On a broader front, Druss (2003) used two national representative surveys to examine trends in outpatient care provided by physician and non-physician clinicians between 1987 and 1997. He looked at ten categories of non physician clinicians, chiropractors, midwives, nurse or nurse practitioners, optometrists, podiatrists, physician assistants, physical or occupational therapists, psychologists, social workers and others. One of his most significant comments on the results was that even though there was increased collaboration between non-physician clinicians and physicians, "for the most part, patients treated by non-physician clinicians were more similar to than different from patients treated by physicians. If anything, our data on race or ethnic group, education, income, and insurance status suggest that non-physician clinicians see patients who are somewhat less disadvantaged than those seen by physicians." (p136). Thus the concept of non-physician clinicians managing "simple" anaesthetics for noninsured patients is questionable, to say the least.

In the US, physician anesthesia has been shown to be cost-effective (Abenstein 2004). This paper reports cost-effectiveness analysis to estimate the incremental cost per year of life saved associated with physician anesthesia compared with the nurse anesthetist model of care from the private as well as the public payer perspective. Using mortality data and closed claims studies, and other papers such as that of Silber (2000) for outcome, and Medicare and private payers and anesthesia practices for costs, he considered that "provider costs for physician-directed anesthesia are similar to provider costs for non medically directed nurse anesthesia and, when cost savings with reduced mortality are considered, physician anesthesia seems to decrease net health care costs."(p756).

Modell, in his Rovenstine Lecture in 2004, summarized the situation in the US when he said: "It is unfortunate that tension exists between some CRNAs and anesthesiologists. And now we have a new member of the anesthesia care team, the anesthesiologist assistant. CRNAs and anesthesiologist assistants can play an important role in ensuring appropriate access to excellent anesthesia care. However, this clearly must be done under the immediate medical direction or supervision of an anesthesiologist to preserve and improve on our current safety record."(p1055).

Europe

Information on anaesthesia supply and demand, and use of nurse practitioners in continental Europe comes mainly from France, Belgium and Scandinavia.

A survey of delegates representing their countries on the European Board of Anaesthesiology reported by Rolly in 1996 showed wide variation in anaesthesia specialists and trainees between the countries, with a shortage in the UK and Ireland. A more detailed study carried out in France was reported by Pontone in 2004. This was a cooperative survey of French Anaesthesia and Intensive Care organizations, and the National Institute for Demographic Studies. The survey examined issues relating to gender, nationality, type of practice (anaesthesia, intensive care, emergency medicine, pain medicine, teaching, research, continuing medical education and management, lifestyle and retirement plans). Taking into account the projected decline in human resources, exacerbated by the European Working Time Directive, a shortage of anaesthesiologists was predicted by 2010. Possible solutions canvassed were centralization of surgery, obstetrics, operative endoscopy and imaging into larger units, establishment of protocols for analgesia and sedation for radiologists or endoscopists, increased involvement of anaesthesia nurses under medical direction, immigration of overseas trained doctors, and an increase in medical school output.

The role of nurses in anaesthesia in Europe was examined by the Royal College of Anaesthetists and the NHS Modernisation Agency in 2002 (see UK above). They looked at practices in Sweden and Holland, where anaesthetic nurses work under medical supervision in the operating theatres. These nurses are not involved in pre-operative assessment or performance of any regional blocks, nor do they undertake any other operating theatre role.

Vickers (2002) published a very readable review article on the Anaesthesia team and the role of nurses in Europe. He showed how the role of nurse anaesthetist/assistants had decreased in Europe (as in the USA) with the increased number of anaesthetists, but that current manpower shortages were forcing a re-examination of nurse assistants to the anaesthetist, and of technicians.

The issue of skill-mix changes will be mentioned briefly:

Richardson (1998) reviewed the literature concerning alteration in skill-mix between doctors and other health professions, but posed more research issues before sensible conclusions could be reached.

The OECD Health Working Paper 17 “Skill-Mix and Policy Change in the Health Workforce” (2004) looked specifically at nurses in Advanced Roles, and surveyed 16 countries. The advice from this excellent review to countries considering introduction of advanced nurse practitioners (APNs) is to:

- Have key stakeholders agree on the need for APNs. That includes representatives of nursing and medical professions, ministries of health and education, employers and regulators
- Ensure that the advanced roles have been defined and the associated educational requirements identified
- Determine issues of national certification and regulation
- Establish the career structure and payment system.

In relation to changes in skill-mix, it must be appreciated that more rapid patient throughput does not necessarily relate to quality of care and safety.

New Zealand

New Zealand has been proactive in seeking to establish independent nurse practitioners, and little comment will be made, except that in the current HWAC consultation document, “Fit for purpose and for practice: A review of the medical workforce in New Zealand” (2005), Scotland has been used as a potential model for reasons of geography, demography and policy. This analogy is unsuitable for Australia, which has more similarities with Canada.

The Scottish Executive has published a number of relevant papers, including “Anaesthetic Assistance” in 2003 and “Securing Future Practice” in 2004. The response of the Scottish Executive to the latter paper took into account the report of the Role Development Consensus Conference on New Nursing Roles, held in 2003. The commentary by the Executive on Recommendation 6: “The public should be treated by competent and trained doctors” emphasizes the need for introduction of different patterns of work across medical services and particularly within the hospital-based training grades. A series of further recommendations elaborate on this theme.

Australia

Again, the Australian literature will not be examined in detail, but a list of references is provided, including the various relevant reports of AMWAC, AHMC, AHMAC, and AMC, and Phelan reports.

ANZCA notes the statements in AHWAC Report 2004.1 on “Nursing Workforce Planning in Australia: “that the health service be analysed in terms of the required competencies, and these should be translated into the competencies of existing or developed occupational groups” (p67); and “Team based planning recognizes that health services are most often delivered by teams of people, although they may be from different occupational groups” (p69); and “Increasing scopes of practice is achievable within the current regulatory structures, and has been evidenced with the recent introduction of a number of functional adjustments amongst health care providers, such as:

- The emergence of the nurse practitioner role
- The use of technicians in specialist areas such as intensive care...and operating theatres...” (p71).

The Queensland Nursing Council paper “The Scope of Practice Framework for Nurses and Midwives” 2005 clearly states the principles for advancing the scope of practice of Registered Nurses, Enrolled Nurses and Midwives.

In relation to the AMWAC Report on Sustainable Specialist Services – a Compendium of Requirements (Report 1998.7 August 1988), ANZCA notes that it did not make a submission to the forthcoming revision of this document because of the many changes occurring in the health workforce at the time submissions were requested.

Scope 3

Consider the factors affecting demand for services provided by health workforce professionals, including:

- (a) distribution of the population and demographic trends, including that of indigenous Australians;*
- (b) likely future pattern of demand for services, including the impact of technology on diagnostic and health services; and*
- (c) relationship between local and international supply of the health workforce.*

The best data available on demand for services are provided by AMWAC. However, because of the limitations described in response to **Scope 1** (above), the true demand for health workforce professionals is not known, but community expectations are increasing. Rural and remote communities and indigenous Australians do not have the same access to services as urban and metropolitan Australians. Technology in medicine has to date increased rather than decreased the demand for medical and non medical health professionals.

In relation to anaesthesia, the increase in number of endoscopic procedures, invasive cardiovascular procedures and imaging procedures has increased the demand for both anaesthesia and sedation. AMWAC (2001) estimated that up to 30% of anaesthesia services were provided out of the operating theatre, when this had not been commented on in its previous report (AMWAC 1996).

For anaesthesia services, sustainable practice is linked to the practice of surgeons, obstetricians, and other proceduralists. At present, anaesthetists provide services to these populations on a visiting team basis to remote areas and to indigenous Australians. In intensive care, the population base necessary to sustain units is high, and access to these services by many remote and indigenous Australians is via the Royal Flying Doctor Service or the medical retrieval services operating out of some major cities.

Scope 4

Provide advice on the identification of, and planning for, Australian healthcare priorities and services in the short, medium and long-term, including:

- (a) practical, financially-responsible sectoral (health, education and training) and regulatory measures to improve recruitment, retention and skills-mix within the next ten years, and*
- (b) ongoing data needs to provide for future workforce planning, including measures to improve the transparency and reliability of data on health workforce expenditure and participation, and its composite parts.*

Based on the information provided above, in terms of anaesthesia, the following observations are made for consideration by the Productivity Commission:

1. Modern and complex surgery has been made possible and safe for patients by the advances in anaesthesia, which over the last 45 years has become a highly specialized area of medical practice.
2. The specialty of anaesthesia, founded on the education and training program of ANZCA has also initiated and embraced improved patient medical treatment in pre, intra and postoperative care, intensive care, and in pain medicine.
3. The training which Australian and New Zealand specialist anaesthetists receive, and their continuing commitment to maintaining their knowledge and skills, has resulted in a standard of care which is equal to the best in the world (the AMC has recently accredited this program with very favourable comments).
4. Having an anaesthetic in 1940 carried a 1:1000 risk of death. In 1960, the risk was 1:5,000. In 1970 the risk was 1:10,000. In 1999, the risk of anaesthesia related death was less than 1:80,000 for all patients, including the very old and the very sick. Adverse events in Anaesthesia in Australia are the lowest of all specialty groups (Editorial 2005).
5. The people of Australia expect and deserve to continue to receive the best anaesthesia care in the world. Any decision to use less well trained providers would threaten the maintenance of this high standard.
6. Overall manpower figures (e.g. AMWAC) indicate a small shortage of Specialist Anaesthetists in Australia, being rapidly made up by increased graduation of ANZCA Fellows via: (1) increased throughput through the ANZCA training program; (2) increased output through the ANZCA OTS assessment process. Australian ANZCA graduates by training and examination in 2004: 128. ANZCA graduates admitted via the OTS pathway: 31. AMWAC target 128 per year.

It should be noted that at the end of 2004 there were 3664 Fellows of ANZCA. Of these, 2762 were resident in Australia, 432 in New Zealand, 161 in Hong Kong, 52 in Singapore, 49 in Malaysia, 86 in the UK, 49 in the USA, 16 in Canada and 57 in other countries.

7. ANZCA has no restrictions on the number of training positions.
8. The OTS/AON program is in place for areas where a regional maldistribution exists. This program is under revision by Federal/State Governments, with ANZCA's participation.
9. In Australia, a joint program of ANZCA and the Royal Australian College of General Practitioners and the Australian College of Rural and Remote Medicine trains and supports General Practitioners to provide anaesthesia services in rural and remote areas.
10. Nurses are already involved in collaboration with medical specialist anaesthetists as Assistants to Anaesthetists in Operating Theatres, as Recovery Room Nurses, as Intensive Care Nurses, and as nurses in multidisciplinary Pain Management teams. Even in these roles they are in short supply.
11. Australian Surgeons and Anaesthetists have developed a team approach which has resulted in a very high standard of pre, intra and post operative care with the lowest mortality rates in the world.
12. In some countries where nurses or non-medical personnel provide anaesthesia care, they have to be supervised by the surgeon. Australian surgeons are not trained for this role, nor do they wish to have their attention diverted from the increasingly more complex surgery they perform.
13. The training required to provide safe anaesthesia in remote areas without the support of fully qualified specialist anaesthetists is higher than that required in a major metropolitan center, because of the variety of clinical situations which might arise and because of the lack of help if things go wrong in what was expected to be a straightforward anaesthetic.
14. There are a number of possible solutions to the shortage of anaesthetists in remote areas, and ANZCA is working with State and Federal Governments to address this issue.
15. In a report "Savings Due to Advances in Anaesthesia and Surgery", prepared by Access Economics for the Australian Society of Anaesthetists in 2001, it was estimated that productivity gains in anaesthesia had saved the Australian community some \$1.7 billion per annum over the previous 20 years.

The next steps to be taken in Australia to increase the availability of safe anaesthesia services in the short, medium and long term would be to review the recommendations of AMWAC, and those of the various reports described above, then to consider establishing

national principles for implementation of training programs for anaesthesia assistants who could work as part of the anaesthesia care team under medically trained anaesthetist team leaders. Such practitioners could fill other roles currently being provided, at least in some institutions, by practitioners, both medical and nursing, with inadequate training in provision of anaesthesia, or even safe sedation. One component of the above proposal would be consideration of establishment of bridging courses for those practitioners who have had some training, but especially experience, in roles as assistants to the anaesthetist and as recovery room staff. ANZCA would welcome the opportunity to collaborate with relevant health, education and regulatory bodies to establish such a system if it was considered desirable, cost-effective, efficient, and safe.

RECOMMENDATIONS TO IMPROVE ANAESTHESIA WORKFORCE PRODUCTIVITY

- Facilitate Implementation of AMWAC Recommendations in Relation to:
 - Numbers of trainees and graduates
 - Local incentives to increase the current workload of specialist anaesthetists
 - Use of appropriately qualified and skilled overseas trained anaesthetists with specific attention to the need for supervised practice
 - Increased skilling of general practitioners in rural areas
 - Establishment of state based anaesthetic services working groups, comprising ANZCA and State Department of Health representatives
 - Establishment of additional training positions by State Health Departments in consultation with ANZCA, especially in areas of subspecialty training
 - Improved data gathering and analysis
 - Update of the anaesthesia specialist workforce in 2006 (AMWAC Report 1996 -3), (AMWAC Report 2001 -5)

- Facilitate Adherence of State/Territory Health Departments and Medical Boards to the Current AMC OTS/AON Processes

- Facilitate Finalisation of the Department of Health and Ageing Review of the OTS/AON Processes

- Facilitate a National Summit To Debate Issues and Reach Conclusions Regarding Factors Which Impact on Maldistribution of the Specialist and Trainee Medical Workforce, with Particular Reference to:
 - Metropolitan, urban and rural settings
 - Public/Private sector inequalities
 - State and Territory conditions of service, particularly in relation to time available for non-clinical duties such as teaching, supervision and continuing professional development
 - Roles of medical, nursing and allied health professionals, including role substitution and skill mix
 - Realistic hours of work of medical specialists and trainees, taking into account factors such as time for training (trainees) and for continuing professional development (specialists), productivity and patient safety

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