

UNDERSERVED COMMUNITIES - AUSTRALIA

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INTRODUCTION

A number of groups within the Australian population, notably rural and remote communities, are underserved by the medical workforce. There is an extent of underservicing of low socioeconomic and migrant groups, although this may be less significant in relative terms. Aboriginal and Torres Strait Islander Peoples are singularly disadvantaged, with many living in poorly serviced rural and remote areas, and with added social, cultural and financial barriers to accessing medical care.

The task of improving medical services to these groups, in particular rural and remote and Indigenous Australians, has been challenging governments, the profession and the communities concerned for decades. Various initiatives, for instance to encourage the workforce to practise in these communities, have met with mixed success, and much has been learned about what works and what does not. Increasingly it has been recognised that tailoring health care services to best meet the self-identified needs of individual communities is more important than simply improving “physical” access to medical practitioners.

A community may be underserved in relation to medical care due to:

- insufficient practitioners for a population, such that waiting times for care or distances that must be travelled to see a practitioner are high;
- services being unaffordable; or
- services being socially and or culturally inappropriate.

Such barriers can mean a lack of adequate medical care and an attendant risk of poorer health outcomes.

This paper looks at the underservicing of the above-mentioned groups in Australia, at what we know about this disadvantage, at measures used to try and ameliorate it, and at what our experience has suggested will be the most productive directions for the future.

IDENTIFICATION AND QUANTIFICATION OF UNDERSERVED COMMUNITIES, AND ADJUSTMENTS REQUIRED TO IMPROVE SERVICING

Identifying, and more particularly measuring, underservice is fraught with complexity. It requires agreement about what constitutes adequate service, which in a Western economy and medical system leads ultimately to questions of medical necessity and efficacy, allocative efficiency, and so on. In Australia, which has acknowledged areas of medical workforce oversupply, and marked differences in the health care needs and delivery environments of population subgroups, there is no “natural” benchmark of adequate medical servicing.

This qualification makes the task no less important. Underservicing of rural and remote and Indigenous Australians has long been acknowledged, and concerns held about apparent imbalances in the workforce, with too many primary practitioners and insufficient specialists of certain kinds. In recent years availability of more comprehensive data and tools for analysis have enabled an increasingly detailed picture of the workforce to be drawn, and its geographic maldistribution and other imbalances better understood.

Since 1993, an annual national medical workforce survey has been conducted, significantly improving on the data previously available for workforce planning. Since 1995, the Australian Medical Workforce Advisory Committee (AMWAC) has been examining and analysing the structure, balance and geographic distribution of the workforce and supply and demand for medical services, and developing models for projecting future workforce requirements and supply.

AMWAC has developed a set of possible indicators to assist in identifying and analysing medical workforce shortage in particular areas. These indicators are:

- doctor provision well below the national norm;
- prices significantly above the average (due to lack of competition);
- under-servicing and unmet need;
- higher waiting times;
- overworked practitioners;
- high levels of dissatisfaction with the stresses of overwork and inability to meet population need;
- substitution by alternative providers; and
- employment of temporary resident doctors to fill unmet need.

As discussed below, these indicators are present in many rural and remote areas of Australia, and some feature in Indigenous communities. They also reveal shortages in urban areas in the public hospital system, upon which low income groups rely.

Underservicing due to a lack of socially and culturally appropriate care is less observable and more difficult to measure, but it is nonetheless evident in Australia, particularly in relation to Indigenous and migrant groups.

It should be noted that there is considerable overlap in the four groups identified: many Aboriginal and Torres Strait Islander Australians live in rural and remote areas and are severely disadvantaged in socioeconomic terms. Non-urban populations generally have lower socioeconomic status, as do certain migrant groups.

Other groups could be considered in a discussion such as this; the aged, the mentally ill, the disabled and the homeless in Australia, are underserved by the medical workforce in particular ways. However the focus of this paper will be on underservicing of the four previously mentioned groups, which have broader and more similar workforce policy implications.

Structural imbalances within the medical workforce are relevant in analysing the extent to which communities are underserved. Some specialist disciplines in Australia have shortages to the extent of potentially affecting the whole community, including anaesthesia, dermatology, ophthalmology, urology, orthopaedic surgery, ear, nose and throat surgery and psychiatry. As well as specialists being unevenly distributed between urban and rural areas (discussed below), practitioners in some disciplines are unevenly distributed among the states and territories of Australia. Individual specialist workforces have been studied by AMWAC and shortages are being addressed by targeted increases in trainee numbers. This is an important issue for Australian governments, as specialist shortages affect rural, Indigenous and low income groups disproportionately.

Australians in rural and remote locations

The shortage of medical practitioners in rural communities is a focus of public and political attention in Australia. Over the last decade, a combination of falling commodity prices, rationalisation of government and private services, and the rise of large scale farming and agribusiness have meant significant changes in the rural sector. Some rural communities have experienced a withdrawal of a range of services, including banking, schools and transport, and governments have come under sustained pressure to address their needs in a number of areas, including health.

AMWAC's workforce shortage indicators, listed above, are all in evidence in rural and remote Australia. In December 1998, 15.6% of medical practitioners worked in rural and remote areas, serving 28.7% of the population. The national average was 244.5 practitioners per 100 000 population, with metropolitan and rural/remote averages at:

- 306.3 practising medical practitioners per 100,000 population in capital city and other metropolitan areas; and
- 143.6 per 100,000 in rural and remote areas.

Within the rural and remote medical workforce distribution is also uneven. In December 1998 there were:

- 266.9 practitioners per 100,000 population in large rural centres;
- 154.3 in small rural centres;
- 91.1 in other rural areas; and
- 105.2 in remote areas (AIHW 2000b¹).

¹ These figures are based on the Rural and Remote Areas (RARA) classification. Data presented in this paper are based on three different systems for classifying areas of Australia according to remoteness. In brief, the RARA classification, developed in the late 1980s, comprises the following categories: metropolitan (capital city and other metropolitan), rural (major rural centre and other rural area) and remote (major remote centre and other remote area). The Rural, Remote and Metropolitan Areas classification (RRMA), developed in 1994, represents a finer index of remoteness, comprising: metropolitan areas (capital city and other metropolitan centres), rural zones (large, small and other rural areas) and remote zones (remote centres and other remote areas). Both of these systems measure remoteness according to population density and distance to large population centres. The more recent Accessibility Remoteness Index of Australia (ARIA) derives remoteness purely from road distance to service centres, to produce five categories: highly accessible, accessible, moderately accessible, remote and very remote (Department of Health and Aged Care (DHAC) and the National Key Centre for Social Applications of Geographical Information Systems (CISCA) at the University of Adelaide (1999),

Distances travelled by rural Australians to visit doctors add to this numerical disadvantage.

Data from Australia's national health financing program, "Medicare", shows that for primary or general practitioner (GP) consultations in 1995/96, 98% of capital city patient visits were to a GP in the same region. This declined to 65% for patients in "other remote" regions². Specialist consultations show an even greater travel requirement: 99% of city patients visits were to specialists from the same region, declining to 5% for persons living in other remote areas (AIHW 1998)³.

Pricing of services is another marker of workforce shortage in the Australian context. Most primary care is provided through private practices and is subsidised by Medicare on a fee-for-service basis. The Medicare rebate effectively constitutes a "floor price" for services. In areas of practitioner oversupply, there is a tendency for competition to push prices down to the rebate level, whereas in undersupplied rural and remote areas, patient copayments are more common. An examination of 1994 copayments showed that the highest were charged in remote areas where practitioner supply is lowest (AMWAC 1996.1).

Another available measure of different levels of servicing is Medicare expenditures; these show people in capital cities making significantly greater use of Medicare for GP visits compared with their counterparts in remote centres (AIHW 1998⁴). This cannot be taken as a simple measure of the extent of underservicing of rural people. As discussed below, it is generally accepted that some utilisation of medical services in excess of need occurs particularly in capital cities which tend to be oversupplied with GPs. Further, Medicare data underestimates usage of services in rural and remote areas because state provided community health services and Aboriginal Community Controlled Health Services are not necessarily reimbursed through Medicare. Lastly, social and cultural factors partly account for the difference in medical service utilisation between urban and rural areas (further discussed below). Nonetheless, it is reasonable to attribute some of the difference in Medicare expenditure to the shortage of primary care practitioners in rural and remote areas.

There are also differences in specialist service levels. These are attributable to practitioner shortage, and in some instances to infrastructure requirements. In 1995/96 rural patients received 27% fewer radiation oncology services than people in capital cities; provision of these services in rural areas poses particular difficulties due to megavoltage machine requirements and the need for patients to attend for treatment over a period of time (AMWAC 1998.2).

Measuring Remoteness: Accessibility/Remoteness Index of Australia, DHAC Occasional Papers: New Series No.6).

It should be noted that AMWAC data for "metropolitan" and "rural/remote" areas refers to the RRMA categories of metropolitan areas; and rural and remote zones, respectively.

² Based on the RRMA classification.

³ Medicare data includes consultations in private practice, but (generally) not consultations through public facilities.

⁴ Based on the RRMA classification.

Hours worked by doctors also suggest practitioner shortages. Average hours worked and on-call are considerably higher for rural practitioners than their urban counterparts, with the proportion working 60 hours or more per week rising with distance from a capital city. Surveys have found dissatisfaction among rural and remote doctors related to overwork and workforce shortages (AMWAC 1998.8).

Specialist shortages in rural and remote areas mean that rural GPs substitute for specialists, for example in the areas of general surgery, obstetrics and anaesthesia. Limited substitution of nursing staff for some activities normally undertaken by GPs occurs in some remote areas. (Nurse substitution is further discussed below.)

Use of temporary resident doctors (TRDs) is similarly both an indicator of shortage and a partial answer to it. The numbers and location of TRDs in Australia are indicators of geographic and sectoral shortages. State and Territory Governments have made increasing use of TRDs for public hospital, rural general practice and locum services. Between 1993/4 and 1998/9, the numbers of TRDs increased by 124%, with most of the increase occurring in the last three years (AIHW 2000b). Recent figures show that TRDs comprise:

- more than 10% of GPs in rural Western Australia;
- 34% of hospital non-specialists in rural areas;
- 70% of the deputising workforce and 60% of the locum workforce nationally; and
- 12% of the hospital workforce nationally (AMWAC 1999.3).

Finally, underservicing appears evident in the treatment choices which rural people make. Rural women are more likely to use tubal ligation, hysterectomy and mastectomy, as they are either unable or unwilling to access services requiring repeated or prolonged attendance away from home. In Victoria, in 1996/7, an urban woman was 47% more likely to have a lumpectomy rather than a mastectomy, compared with a rural woman (Wainer 1998).

In considering the extent of underservicing of rural and remote areas, greater provision of public hospital beds in rural areas should be noted. There are 65% more beds per person in rural areas than in capital cities. Accompanying hospital admission rates are 20% to 40% higher in the remote zone than in capital cities (although admission rates for remote area residents requiring specialist medical practitioners and equipment are lower, at 70%-90% of capital city rates). These differences relate to the inaccessibility of hospital facilities in rural and remote zones; for example residents with chronic conditions may be hospitalised more frequently if they need to travel great distances for follow up treatment (AIHW 1998⁵).

There has been improvement in primary care provision in rural areas since the mid 1980s when the Medicare program commenced providing significant public subsidy of almost all medical care provided through private practices (on a fee-for-service basis) and public health care facilities (Commonwealth Department of Health and Aged Care, 2000). Large rural centres now have on average a similar supply of GPs per 100,000 population as non-capital city metropolitan areas. Between 1984/5 and 1998/9 the GP workforce per 100,000

⁵ Based on the RRMA classification.

population in “other rural” and “remote” areas increased by about a third, although this improvement is not consistently spread and there remains an undersupply of practitioners in rural and remote regions (AIHW 2000b)⁶. In contrast there is continuing oversupply in capital cities.

To this point discussion has concerned the adequacy of geographic practitioner supply. To serve rural areas properly, the workforce must also provide care which is appropriate. This means for instance, practitioners with sufficient breadth of skills to compensate for the scarcity of specialised care, and sufficient female practitioners to cater for rural women. In addition, social and cultural factors can have implications for the quality of care received and service usage.

The social and cultural appropriateness of care is a consideration which receives more attention in relation to Indigenous and migrant Australians, however there is some evidence that it is also relevant to (non-Indigenous) rural and remote communities. The research in this area is not extensive, perhaps due to the predominance of the issue of workforce maldistribution. However rural culture and health needs are distinct from those of urban populations in ways which practitioners need to have experience of and understand.

- Rural communities have a strong preference for locally provided care, for attending a practitioner whom they know. One study of rural Australians suggested that geographic proximity is important to rural people, particularly those in more remote areas, but that “social accessibility” (how comfortable they feel with a practitioner) and continuity of care are of such importance that they will travel further than the nearest doctor to see these needs met (Humphreys et al. 1997).
- Rural and urban women share a preference for female practitioners particularly for the purposes of reproductive health, and inability to see a female doctor may limit service use (Wainer, 1998; AMWAC 1996.7). Only 24% of the rural medical workforce is female, although efforts are made to compensate for this with health prevention screening initiatives, including a Rural Women’s GP Service for some rural areas that have little or no access to a female GP. (This fairly new service is currently in place in 36 locations in which it was piloted, and consultations are underway with a view to rolling out the service nationally to over 90 more communities.)
- Males in rural and remote areas of Australian utilise services at significantly lower levels, in part because of attitudinal differences, which lead them to neglect their health and only consult a doctor for acute conditions (Humphreys et al. 1997; Commonwealth of Australia 2000; DSHS 1996).

Determining necessary adjustments

As noted, establishing the numerical adjustments required to reach an adequate supply of medical practitioners is notoriously difficult, as AMWAC has carefully elucidated in the

⁶ Based on the RARA classification.

Australian context (for example in AMWAC 1998.8, 1998.7 and 1996.1). There is evidence that under Australia's health care system, provision of the bulk of primary care through private practice, subsidised by government on a fee-for-service basis, has seen demand for and utilisation of services follow practitioner supply independently of need (AMWAC 1998.8). Strong growth (until recently) of the GP workforce, and a preference by the profession for metropolitan practice, has resulted in oversupply and over-utilisation of medical services in urban areas, while rural areas remain under-served. In response, Australian governments have acted to slow growth of the GP workforce and introduce a range of measures (discussed below) to try and encourage practitioners to locate themselves in underserved communities.

Requirements for practitioners vary among communities: differences in health status, population dispersion and requirements for sustainable medical practice, together with geographic differences in existing practitioner supply (all discussed below), complicate the task of determining necessary overall adjustments, and limit the uses to which averaged calculations can be put. The length of medical training and factors such as the increasing proportion of female doctors, who have quite different workforce participation patterns to their male counterparts, must also be factored into any estimate. Considering the range of possible reasons for differences in service utilisation between urban and rural communities (noted above) further reveals the difficulty of the task.

AMWAC has grappled with this complexity and progressively developed and refined practical benchmarks and projections of future workforce supply and requirements, using a needs based approach (that is, focussing on population need for services rather than demand levels which can be in excess of need). It has also undertaken micro analyses of most parts of the Australian medical workforce⁷. This work has provided a valuable knowledge base for governments to determine appropriate workforce policy approaches, and will enable monitoring of trends and the effects of workforce interventions.

As noted, there is evidence of undersupply of primary practitioners in many rural and remote areas, and of oversupply in capital cities. No estimate has been made of the overall shortage of specialists in rural areas, as this is complicated by provision of outreach services by metropolitan practitioners and by the requirements for sustainable specialist practice (discussed below). Nonetheless greater numbers of practitioners providing services on both a resident or visiting basis are required, plus substitution of services by GPs and other health professionals in a number of disciplines⁸.

⁷ These include thoracic medicine, psychiatry, consultant paediatrics, cardiology, orthopaedic surgery, intensive care, obstetrics and gynaecology, radiation oncology, dermatology, ear nose and throat surgery, geriatric medicine, rehabilitation medicine, general surgery, emergency medicine, ophthalmology, urology, anaesthesia and orthopaedic surgery.

⁸ The percentages of the specialist workforces located outside metropolitan areas, where 28.7% of the population reside, are as follows:

- 6.8% of thoracic specialists (AMWAC 2000.1);
- 9% of psychiatrists (AMWAC 1999.7);
- 11.4% of consultant paediatricians (AMWAC 1999.6);
- 11.7% of cardiologists (AMWAC 1999.5);
- 4.4% of intensive care specialists (AMWAC 1999.1);

As suggested above, adjustment to the sex ratio of the rural workforce is also needed and medical training must ensure that the future workforce is equipped with experience and understanding of the culture and health needs of rural communities.

Aboriginal and Torres Strait Islander communities

Indigenous Australians as a group are distinctly under-served by the medical workforce. This is due to the geographic distribution of the workforce, and to social, cultural and economic barriers to accessing medical services. The immediate effect of these barriers is a pool of unmet need and preventable hardship, and the longer term effect is acute conditions and complications that require more intense forms of treatment. This is a situation which is both inequitable and inefficient in terms of resource usage.

As outlined below, the health of many Indigenous Australians is extremely poor, due to a combination of economic, historical and social factors including poverty, dispossession, racism, family separation and loss. While under-servicing by the medical workforce is probably a relatively minor contributing factor in relation to their poor health, appropriate medical services are essential for addressing the effects of their disadvantage. Adequate services means not necessarily more doctors, but doctors who are able to provide culturally appropriate care within integrated health services tailored by Indigenous communities to their individual needs.

Identifying and quantifying the underservicing of Aboriginal and Torres Strait Islander peoples is hampered by uncertainties in estimating the size and composition of the Indigenous population, a lack of quality national health data on this population and incomplete identification of Indigenous Australians in data collections of all kinds (AIHW 2000a; Deeble 1998). In addition, Medicare data, which is one of the best sources for mapping practitioner distribution, does not include doctors working for health services on which many Indigenous communities rely, for example Aboriginal community controlled health services and the Royal Flying Doctor Service. In addition, many Indigenous Australians are not enrolled in Medicare, particularly in rural and remote areas.

However there are clear indicators of underservicing. Firstly, many Indigenous communities are located in rural and remote areas of Australia. While Aboriginal and Torres Strait Islander peoples represent only 2.1% of Australia's population, they make up 13% of the

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- 15.3% of obstetricians and gynaecologists (AMWAC 1998.6);
 - 1.3% of radiation oncologists (AMWAC 1998.2);
 - 7.4% of dermatologists (AMWAC 1998.1);
 - 14.4% of ear nose and throat surgeons (AMWAC 1997.6);
 - 27.8% of geriatricians (AMWAC 1997.5);
 - 7.1% of rehabilitation specialists (AMWAC 1997.3);
 - 23.3% of general surgeons (AMWAC 1997.2);
 - 2.5% of emergency medicine specialists (AMWAC 1997.1);
 - 12.9% of ophthalmologists (AMWAC 1996.6);
 - 10.6% of urologists (AMWAC 1996.4);
 - 12.3% of anaesthetists (AMWAC 1996.3); and
 - 17.2% of orthopaedic surgeons (AMWAC 1996.2).

rural population, and 26% of the population in remote areas, which have the lowest supply of medical practitioners (Strong et al 1998).

In 1996 about one in seven rural Indigenous Australians did not have a doctor or nurse available within 25 kilometres on either a permanent or visiting basis (McLennan and Madden 1997). The 1998 national medical workforce survey found that 698 medical practitioners worked full- or part-time in Aboriginal health services, with 63% of those working in metropolitan areas (AIHW 2000b). This represents 1% of the workforce, compared with 2.1% of the Australian population who identify as Indigenous. Practitioners working in Indigenous health are unevenly distributed, with the ratio of clinicians to Indigenous Australians being lower in the states and territories with larger populations (Bell et al 2000).

As is the case for many rural Australians, distances to be travelled to see a doctor and basic infrastructure factors add to the disadvantage of rural Indigenous communities in accessing care. National data on motor vehicle ownership show that rural and remote areas with the lowest rates of ownership tend to be those with higher proportions of Indigenous Australians (Glover et al 1999⁹). Some very remote communities, including outstations, have no telephone or radio contact, no roadworthy vehicles, and unreliable roads and airstrips. Water transport in the Torres Strait can be unreliable.

Surveys show that Indigenous Australians are not satisfied with the health services they receive. The problems they report include having to wait too long for care; inadequate hours of operation; insufficient health care practitioners, including doctors (a problem more often reported by rural than urban survey subjects); infrequent doctor visits to outstations; lack of specialised services (such as for women); lack of transport and lack of control by their communities over services (McLennan and Madden 1997).

Comparative statistics on health care utilisation and expenditures are also consistent with relative underservicing of Indigenous Australians by the medical profession (and the health workforce generally). In the mid-1990s we began to recognise that there were large gaps in information on funding allocation and expenditure on Indigenous health and the extent to which Indigenous Australians access mainstream health services. This was highlighted by growing concern about the lack of improvements in health outcomes for Indigenous Australians, despite apparently significant efforts by governments over several decades. Recent years have seen improvements in the data in this area, although gaps remain to be filled.

A 1998 study concluded that expenditures on Indigenous health were not as high as had been widely thought. Specific findings included that:

- total per capita spending on health services for (and by) Indigenous Australians was only about 8% higher than for the non-Indigenous population; and

⁹ Based on the ARIA classification.

- government expenditures over one year on Indigenous and non-Indigenous Australians in the same economic position were approximately the same. As the health of Indigenous populations is almost certainly worse than that of non-Indigenous socioeconomically disadvantaged persons, this suggested that the needs of Indigenous Australians could not have been equally well met. (Deeble et al 1998).

While this research considered health rather than specifically medical service expenditure, it has also been established that Indigenous Australians under-utilise primary medical care in comparison with the non-Indigenous population, particularly given their poorer health (AIHW 2000a). It has also been established that in some rural locations, GPs are unaware that there are Indigenous Australians living in the area.

The pattern of spending on medical care for Aboriginal and Torres Strait Islander peoples is very different to that of the rest of the population. Expenditure on acute hospital and community care is higher for Indigenous Australians, however outside hospitals they use very few of the specialist medical services (and specialist prescribed drugs) which represented nearly 20% of all non-Indigenous government outlays, which appears to be a function of geographic and cultural barriers to access (Deeble et al 1998). And despite relatively high expenditure on acute hospital care, hospital admission rates for the conditions from which Indigenous Australians typically suffer (such as circulatory, endocrine, respiratory, infectious and parasitic conditions) are not as high as corresponding mortality rates for these conditions. As hospital admission patterns generally follow mortality patterns, this suggests that utilisation of hospital care by many Indigenous Australians is not as high as it should be, given their health status (McLennon and Madden, 1999).

Social and cultural barriers to Indigenous Australians using medical services are well-recognised. The workforce is overwhelmingly non-Indigenous; at the last census, in 1996, there were only 70 Aboriginal and Torres Strait Islander medical practitioners. Language and cultural differences can mean that health services can be confusing and anxiety provoking, particularly where people are hospitalised. Indigenous Australians are reluctant to use services if providers lack understanding of their communities, cultural differences, socioeconomic circumstances and recent history, and will do so only if there is no alternative or a health problem is extreme. Together with practitioner shortages, these barriers mean that access to appropriate primary care is generally low, contributing to poorer health status and a higher dependence on hospital-based care (as a result of failed prevention) (Bell et al 2000).

There is a large amount of anecdotal evidence that Aboriginal and Torres Strait Islander men do not seek medical treatment for many forms of illness because of an unwillingness to attend health services, particularly primary health care, whether mainstream or community controlled (Briscoe 2000; DSHS 1996). This means they are not receiving medical attention early enough, often waiting until conditions are severe. Particularly in rural and remote communities, this appears to be because men's health is considered men's business, and involvement of women in their medical and health care may therefore be inappropriate (Hayman 2000; DSHS 1996). For women too the cultural appropriateness of health care

services, including medical ones, is a vital determinant of whether or not they are utilised. Breast cancer screening services for example need to be culturally sensitive and community controlled (Fagan 2000).

Survey work in 1999 showed a lack of consistency and scattered approach to the inclusion of Indigenous health issues in core medical education curricula, such that graduates are often ill equipped to work in this field in both rural and urban areas.

Necessary adjustments to the medical workforce

The need for more Indigenous doctors is clear, and as discussed later, efforts are being made to recruit and support medical students from Aboriginal and Torres Strait Islander communities.

As the above discussion suggests, non-Indigenous practitioners need a cultural and historical understanding of Aboriginal and Torres Strait Islander peoples, in order to work with them in addressing their health care needs. They need to understand the social, cultural, economic and political determinants of health, as well as the complex issues of race and racism, to be able to recognise differences and act upon them, but not in ways that support racially or culturally based stereotypes and inequalities (Lowe et al 1995; McLennan and Madden 1997; Paul 1999). The strong social determinants of health mean that the workforce has a role not only on providing treatment and health prevention, but also inter sectoral liaison and advocacy to ensure that the policies and activities of other sectors, such as education, transport, taxation and housing, are monitored and assessed for their potential impacts on the community.

Practitioners need specific clinical skills and must be able to work within the Indigenous health care framework. As outlined later, many Indigenous communities have community controlled health services, which are quite different working environments to private non-Indigenous medical practice. Health professionals work in multidisciplinary teams and are responsible to the communities which they serve. An important part of the philosophy of community controlled health care is a holistic approach to health, and services therefore operate within an integrated rather than disease oriented primary health care model, which is not always the case for GP services in other parts of the health system (Bell et al 2000).

The relative importance of sheer doctor numbers is questionable. Given the complex causes of Indigenous morbidity, and the critical importance of services being appropriate to individual communities, Aboriginal and Torres Strait Islander health workers, administrators and informed community members, rather than non-Indigenous doctors, are probably the key to future improvements in Indigenous health status. (The central role of Aboriginal health workers is discussed below.)

Socioeconomically disadvantaged Australians

There is an extent of underservicing of low socioeconomic groups, at least in comparison with wealthier urban populations, although this disadvantage is not as marked in relative terms as that of Indigenous Australians and rural and remote populations.

As discussed below, the health outcomes of Australians of lower socioeconomic status are significantly poorer than those of higher status. Both in Australia and internationally, research has consistently identified socioeconomic status as a contributing factor in health inequalities, with health status the result of a complex set of interrelationships between social, economic, political and cultural processes and institutions, and individual actions. While the poorer health outcomes of low socioeconomic groups are not generally attributable to lack of medical services, appropriate health care interventions have the capacity to ameliorate the health consequences of disadvantage and must be pursued.

It should be noted that rural and remote populations in Australia have lower socioeconomic status overall, that Aboriginal and Torres Strait Islander peoples are severely disadvantaged, and that some migrant groups have lower than average socioeconomic status. This section looks across low socioeconomic groups, including those in metropolitan areas.

There is uneven geographic distribution of practitioners in metropolitan areas, with concentrations of practitioners of all kinds in the inner cities (AMWAC 1999.4). This is unlikely to be significant in relation to primary care, as Australian cities have too many GPs, and even outer metropolitan areas tend to be adequately supplied. However the concentration of specialists and of tertiary hospitals in inner cities imposes time and travel costs on less well-off communities in outer metropolitan regions.

In addition, there is some evidence that low socioeconomic groups in Australia may be underserved by the specialist workforce, due to the cost of care. This barrier is created by a combination of a relative shortage of specialists, waiting times for public specialist care and the inability of people on low incomes to pay for private treatment.

By way of background, since the 1970s virtually all Australians have had universal access to mainstream health and medical care, regardless of their ability to pay. The Medicare system provides primary, secondary and tertiary care, with either:

- no charge to the individual, for medical services delivered through public facilities (public hospitals and community medical centres); or
- sizeable patient rebates for services delivered by doctors in private practice.

This has been of significant advantage to people on low incomes, who faced considerable barriers and in cases great hardship prior to universal access. National expenditure on medical care and public hospital treatment is significantly higher per capita for low socioeconomic groups, consistent with their poorer health status (Schofield 1997). A recent first attempt in Australia to examine the lifetime distributional impact of health outlays using a dynamic microsimulation model has also suggested that publicly financed and subsidised health care has a major redistributive impact over an individual lifetime from the affluent to the poor (Harding et al, 2000).

In relation to hospital care, an individual may elect to be a public patient in a public hospital, with the cost of care fully borne by the government, or to be treated privately, bearing the

cost his/herself, or with the assistance of private health insurance. This freedom of choice is widely valued in Australia and is seen as a means of strengthening consumers' capacity to control the timing and setting of their care. (The current Government has recently introduced financial assistance, in the form of a 30% rebate on the cost of premiums, to persons who maintain private health insurance, which has assisted persons on lower incomes to afford private insurance.) It means however, that we do not have a single "queuing" system for elective (non-urgent) surgery and specialist ambulatory care, with the potential for public and private patients to wait different periods for care.

In common with all OECD countries, Australia has experienced a rapid increase in health care costs over recent decades and various measures to control costs have been applied, including in the public hospital system. It has been argued that reductions in funding over the last decade have extended waiting times for elective inpatient treatment and restricted the services available from public hospital outpatient departments (McClelland and Scotton 1998). This appears to have been exacerbated by workforce shortages in some specialties in the public sector. For instance, a recent study of the psychiatry workforce found unacceptably long waiting times for care and significant numbers of psychiatry positions vacant in the public sector (AMWAC 1999.7).

Private treatment is not an alternative for all. Approximately 50% of the population does not have private insurance and for those that do, "gap" payments for hospital inpatient treatment as a private patient can be significant¹⁰. In addition, private health insurance does not cover ambulatory specialist care; privately delivered specialist services are rebated through the Medicare system. Our relatively lean supply of specialist practitioners, even in urban areas, means that there is not the competition in this part of the workforce which keeps GP prices down. Specialists consulting privately tend to charge copayments, which can be sizeable. It should be noted that shortages in some specialist disciplines are such as to lead to long waiting times for private care also.

A recent study found that while disadvantaged groups in major urban areas had higher rates of health service utilisation, they had lower rates of hospital admissions for procedures of myringotomy, hip replacement, lens insertion and endoscopy (Glover et al 1999). Other studies have found some evidence of inequality in use of specialist services in favour of higher income groups, particularly given their better health status (Scott 1996; Wiggers 1997).

Research on underservicing however is scant and more information is needed to determine its causes, including the role of workforce factors. We do not have a good understanding of the impact of copayments, scarcity of public services, waiting times and transport on access to services by persons on low incomes (Wiggers 1997). It must be borne in mind that while there is evidence of differences in access to significant treatments like hip replacements, it is

¹⁰ The "gap" is the difference between the fee charged by a doctor for an in-hospital medical service, and the combined health insurance benefit and Medicare benefit. The gap is payable by the patient and is non-insurable. It is one of the most intractable problems facing the private health sector in Australia, with market research consistently showing it to be a pre-eminent issue of concern for the public.

also the case (both in Australia and other Western countries) that private patients are receiving services of uncertain efficacy, which means that the services they receive are not a benchmark of necessary care.

There are also issues for the medical workforce in relation to the appropriateness of care provided to the disadvantaged. Low income groups in Australia are more likely to delay seeking medical treatment and make less use of preventive, early intervention, screening, rehabilitation and after care services (Mathers 1994; AIHW 2000a).

A recent study of primary care of low and high socioeconomic patients produced mixed findings in relation to care quality. GPs were found to spend less time with patients employed in low status occupations and not to meet their greater need for detection of risk factors (behaviours, family history and health screening status). On the other hand, these patients were more likely to be given preventative advice than high status occupation patients, which is appropriate given their generally poorer health status. GPs provided no less interaction and nor did they provide nor seek less information in treating low versus high socioeconomic patients. While generalisations cannot be drawn from a single study, these findings do suggest a need for more research into quality of care and the ongoing importance of practitioner training and resources to enable them to identify and respond to needs of disadvantaged patients (Wiggers 1997).

Migrant groups

Australia has an ethnically diverse population, with a great diversity of languages, cultural backgrounds and religious beliefs and practices. Approximately 23% of the population in 1998 was born overseas, with more than half born in a non-English speaking country. (AIHW 2000a). Approximately 20% of Australians from non-English speaking backgrounds are unable to speak English well or at all (Thomas 1998).

As discussed below, new migrants have better health than the population at large, although this effect reduces over time, underscoring the importance of good access to medical care to maintaining their health status (Kelaheer 1999; AIHW 2000a).

Language, cultural and social barriers to migrants accessing services of all kinds, including health care, are recognised in Australia. The implications of these are not only for the medical workforce of course, but for the health workforce more generally, and for health care delivery institutions. Despite recognition of these barriers, the responses needed to counter them in relation to accessing medical care, have not been consistently made (see for example Fuller, 1997). These barriers are of growing importance in relation to health care as many migrant groups in Australia are ageing and requiring more and better access to services.

Recent studies suggest that language barriers remain an area requiring attention. Structural and practitioner commitment to addressing language needs does not appear to be consistent; there have been some findings of reluctance by practitioners to use trained interpreters because of time, cost and unfamiliarity with interpreting services; and debate

continues about the appropriateness of using family members to interpret during medical consultations (MacKinnon 1998; Chan 1997; Thomas 1998; Fuller et al 2000).

A recent study of five different ethnic groups in relation to sexual health found a need to integrate ethno-sensitive strategies for prevention and treatment into the mainstream health services and to increase the role of the family doctor in prevention and treatment (Gifford 1997). Arabic women are less likely than Australian-born women to present early in pregnancy for antenatal care because they have a strong cultural preference for antenatal care provided by women and this is frequently not available. This can result in increased rates of undetected maternal or perinatal risk and higher complication rates (Dollis et al 1993).

Geographic variation in settlement patterns, with migrants with the poorest English tending to locate in capital cities close to their communities, has tended to focus attention on culturally attuned service provision in urban areas. More recently, the unmet needs of migrants in rural and remote areas have started to receive attention. Results of a 1996 study in South Australia suggested that the rural migrants studied made disproportionately low use of local health services, for reasons such as language difficulties and unfamiliarity with use of prevention services, and that these barriers were exacerbated by the low priority given to the needs of country immigrants because their numbers are small. Other findings were that:

- language specific information about services was lacking; and
- health professionals felt they needed assistance to develop cross-cultural skills (Fuller and Ballantyne, 2000).

In view of the above, an extent of underservicing of non-English speaking groups can be inferred from the overwhelmingly English-speaking profile of the medical workforce: in 1998 at least 90% of doctors practising in Australia trained in an English-speaking country (AIHW 2000b).

Delivery of quality care in a linguistically and culturally diverse society requires the workforce to have training and experience to equip them with cultural awareness, an understanding of specific health beliefs and practices of different cultures, flexibility and the ability to negotiate patient care within families, plus adequate access to and assistance with interpreting services.

DIFFERENCES IN HEALTH STATUS BETWEEN UNDERSERVED AND WELL RESOURCED COMMUNITIES

Australians in rural and remote locations

Many city dwelling Australians still believe that living in the country would improve their health. The reality is that circumstances which in the past could be considered advantageous in relation to health, such as distance from the city or working outdoors, have increasingly become disadvantages for country dwellers. In short, the further Australians live from metropolitan centres, the less likely it is that they will be healthy.

Mortality rates are higher in rural and remote regions, in part reflecting the higher proportion of Indigenous Australians in these areas. Adjusting for this, city-dwellers can generally expect to live a year longer than their non-Indigenous counterparts in rural areas and four years longer than those in remote areas. Women in all areas live longer than men, but those in cities live longer than their rural and remote sisters (Strong et al 1998)¹¹.

Men in country areas are more likely to die prematurely from injury or accidents. Rural and remote dwellers are more likely to suffer road vehicle fatalities linked to remoteness of accident sites and consequent lack of access to facilities and medical professionals. Hospital separation rates due to road injuries also show a strong correlation with remoteness.

Rural Australians are more likely to die from coronary heart disease with the time taken to reach hospital in rural areas being a possible contributing factor. Male hospitalisation rates from coronary heart disease are particularly low in remote areas, reflecting the fact that men in these regions are more likely to die before reaching medical facilities. Residents of rural and remote areas also suffer higher mortality related to diabetes and asthma.

The country appears less healthy for the very young and the old. Rural people over 65 years of age have more chance of being hospitalised or dying from falls or burns than do their counterparts in metropolitan areas. Low birth weight is more common in remote areas and infant mortality, including that from sudden infant death syndrome, is significantly higher. An important factor in these rates is the higher proportion of Indigenous Australians in remote areas. On a positive note, a high percentage of children in non-metropolitan areas are immunised against vaccine preventable diseases.

There is a higher incidence of cancer detection in metropolitan zones possibly reflecting better diagnostic services available in capital cities and metropolitan areas.

In terms of health risk factors, women in rural and remote areas are more likely to be overweight, those in small rural centres have the highest female alcohol intake and those in remote areas are most likely to smoke. Regardless of the zone in which they live, men consume more alcohol than women and they are more likely to be overweight.

Of particular concern in Australia at present are suicide, depression and other mental health problems, with the suicide rate of men noticeably higher in rural areas than metropolitan areas.

Aboriginal and Torres Strait Islander communities

The health of Indigenous Australians as a group is extremely poor, with mortality and morbidity rates far worse than the non-Indigenous population on every major indicator.

¹¹ Specifically, women in cities live 5% longer than rural and 22% longer than remote women. Unless otherwise stated the statistics quoted in this section are from this source and are based on the RRMA classification.

Lowe et al (1995) summarised the health outcomes of Indigenous Australians as follows:

“Causes of morbidity and mortality in this ... population fall into three main clusters. First, Aboriginals have an extremely high perinatal mortality rate compared to the total Australian population and there is a high prevalence of diarrhoeal, parasitic and respiratory disease in infancy. Second, among teenagers and those in their early twenties and thirties there is a high incidence of psychiatric disorders, unemployment, poverty, homicides, assaults, suicides and motor vehicle accidents. This is associated with a high prevalence of alcohol and other substance abuse. Overall, the death rates for young adults are as much as ten times that for the rest of the Australian population. Third, by early middle age Aboriginals and Torres Strait Islanders become susceptible to a cluster of ‘western’ diseases including obesity, Type 2 diabetes mellitus, hypertension and ischaemic heart disease. A high proportion of adults smoke and abuse alcohol, and there is a high incidence of liver, lung and cervical cancer.”

Importantly, the gap between the health of Indigenous and non-Indigenous Australians generally has not declined and on some measures appears to be widening (AIHW 1996).

Considering mortality alone:

- The estimated rates for Indigenous Australians in middle age (40-64 years) are amongst the highest recorded in the world, with rates in early middle age estimated to be six to eight times greater than the rest of the Australian population.
- There has been little improvement in adult rates over the last 20 years, and this lack of progress is virtually without precedent on a world scale.
- While considerable gains have been made in infant mortality since the early 1970s, improvement has slowed in recent years, and rates have stabilised at unacceptably high levels (over two and a half times the all Australia rate) (McLennon and Madden, 1999).

Of note, improvements in mortality rates for New Zealand Maoris and Native Americans have been far greater than that of Indigenous Australians. It is not clear why this is so, although it has been suggested that better self-determined primary care of the right kinds in New Zealand and North America is part of the reason (Ring and Firman 1998).

Survey work on how individuals perceive their health shows relatively poor results for Aboriginal and Torres Strait Islander peoples. After adjusting for age (necessary because of the relatively young profile of the Indigenous Australian population), those in non-metropolitan areas are about twice as likely as non-Indigenous persons to report their health as fair or poor (Glover et al 1999¹²).

¹² Based on the ARIA classification.

Socioeconomically disadvantaged Australians

Health differentials associated with socioeconomic status have been repeatedly identified in Australia, with many indices showing a clear gradient with greater disadvantage. Persons of lower socioeconomic status have higher mortality rates, are more likely to suffer from disability or chronic or recent illness, and more likely to report experiencing only fair or poor health.

Analysis of mortality for 1997 and 1998 found that males in the most disadvantaged socioeconomic quintile experience 12% higher mortality than the average Australian male, and 30% higher than males in the least disadvantaged quintile. For females, the latter difference was 16%. One recent analysis found a 3.6 year gap in life expectancy at birth for males between the top and bottom quintiles of socioeconomic disadvantage, and nearly a two year gap for females (AIHW 2000a). Although there has been improvement in mortality rates overall since 1986, disparities in death rates between residents of well-off versus poorer areas have not reduced (Glover et al 1999).

The higher mortality of low socioeconomic groups is related to circulatory and respiratory disease, ischaemic heart disease and lung cancer, and injuries and poisoning (Glover et al 1999). A national health survey in 1995 found arthritis, asthma, bronchitis/emphysema, ulcer and diabetes to be more common in the most disadvantaged areas of Australia (AIHW 2000a). People in these areas also have greater self-reported morbidity and higher rates of risk factor behaviours (Wiggers 1997).

Migrant groups

Health requirements for people migrating to Australia mean that their health status is generally better than that of the Australian born population, and features lower death and hospitalisation rates as well as lower incidence of some lifestyle related risk factors. Their access to medical care is nonetheless important for maintaining this health status. In addition:

- particular groups suffer certain health risks: men from the Middle East and North Africa seem more susceptible to endocrine, nutritional and metabolic disorders; the rate of mental illness in some migrant groups is higher than that of the general population and the stress of migration and resettlement can significantly impact on health, particularly for refugee immigrants who have experienced torture and trauma (Dollis et al 1993); and
- illness and disability of migrants increase with length of residence in Australia. For example, while migrants have lower levels of cardiovascular mortality compared with the Australian-born population, rates increase after 10 years of residence (AIHW 2000a).

POPULATION MASS AND SERVICE INFRASTRUCTURE REQUIRED TO SUPPORT CLINICAL PRACTICE IN URBAN AND RURAL AREAS

Population catchment and service infrastructure are key determinants for sustainable clinical practice. They determine whether resident services are feasible in a location, and also influence the type and level of services which can be provided. They are key considerations in addressing medical underservicing, particularly for rural Indigenous and non-Indigenous communities.

General practice

AMWAC has calculated need for GPs in particular areas of Australia with reference to:

- population size;
- age and sex structure of the population, for example to account for higher service usage by older persons and women;
- higher morbidity levels in low socioeconomic status populations;
- particularly high morbidity amongst Aboriginal and Torres Strait Islander people; and
- different means of access to services in different communities, with more GP services accessed through hospital outpatient departments in rural areas.

The economics of GP practice and infrastructure requirements make it desirable that four or more practitioners are employed in a location. This requires a minimum catchment population of between 4,000 and 5,000 people. While population dispersion in many areas makes this impractical, every rural centre of 1,000 or more people desires a resident GP and therefore small and solo practices are common. Significant subsidies are necessary to attract and retain practitioners in areas of particularly low population density and to make practices financially viable under Australia's health financing arrangements (AMWAC 1998.8).

Solo and small practices in rural areas need locum relief for leave and other purposes such as continuing medical education (CME), whereas in cities large practices often use internal rostering to cover leave and small practices can employ a locum or may close for a short period and redirect patients to other providers in the area.

Specialist services

AMWAC has studied sustainable practice requirements for the individual specialist disciplines in Australia, with reference to:

- the factors listed above for general practice, including population characteristics which significantly affect catchment for individual specialties; and
- specific infrastructure needs of specialties, which variously include complementary services (pathology, pharmacy, radiology, specialist nursing and other allied health services), equipment (intensive and coronary care units, theatres, etc), the presence of a certain number of specialists in the same field for relief and the presence of appropriately qualified GPs to supplement an on-call roster (AMWAC 1998.7).

Areas with population catchments of less than 10 000 people are too small to sustain resident specialist services in most disciplines. Those with populations between 10,000 and 20,000 are large enough to support resident services in such areas as general surgery and anaesthesia (provided other discipline specific requirements are met).

Rural areas with catchments of 20,000 to 60,000 can support resident services in obstetrics and gynaecology, paediatrics, psychiatry, orthopaedic surgery, geriatric medicine and pathology. Urban and rural areas with catchments between 50,000 and 80,000 can support ear nose and throat services as well as dermatology, rehabilitation medicine, neurology and thoracic medicine.

Population catchments in rural and urban areas above 80,000 can support practice in urology, diagnostic radiology, intensive care medicine, nephrology and medical oncology. These services require support from facilities equivalent to those found in regional or urban referral hospitals. In radiation oncology infrastructure requirements impose a further population restriction, making some services viable in catchment areas of 200,000.

On average, population catchments necessary to support a rural outreach service range between 14,000 and 30,000 people. The level of service which can be provided is restricted by availability of appropriate infrastructure including support services and resident GPs able and willing to continue treatment. Regular consulting services generally can be provided in remote locations even if catchment populations are very small and infrastructures and support services minimal, but the provision of major diagnostic and procedural services depends on accessibility of hospital and support services, which means they are usually confined to large regional centres.

INITIATIVES TO BETTER PROVIDE FOR UNDERSERVED COMMUNITIES

A range of initiatives have been applied to improve medical service supply to the four groups identified in this paper. In the main, we have refined approaches over time, rather than embarking on major changes in direction, although increasingly the emphasis is on tailoring services to the needs of individual groups, rather than simply extending the service models in use in the wider community.

Rural and remote

Initiatives to address underservicing of rural and remote communities have broadly comprised educational, recruitment/retention and alternative delivery, and service subsidy restriction approaches. This shows an overall strategy aimed at:

- increasing the numbers and skills of practitioners resident in rural and remote areas, to the extent that is possible without impinging on practitioner choice and within limits imposed by population and infrastructure requirements; and
- supplementing services to rural communities with alternative delivery models.

Due to the lead times for some initiatives, such as changes in medical education, the outcomes of many initiatives are yet to be measured.

Educational Initiatives

The bulk of our educational initiatives have been based on the findings that medical graduates from rural backgrounds tend to return to rural areas to practise, and that increasing the rural focus and experience included in medical training aids later recruitment and retention of practitioners.

Various measures have been in place for some time to recruit and support rural origin medical students. Rural students face considerable financial barriers to taking up tertiary education, particularly the costs of moving to and living in the city. Scholarships are provided to assist with accommodation, living and travel expenses, and graduating students can “work off” their university fees debt by practising in designated areas. The

Commonwealth Government funds universities to implement rural student recruitment strategies, variously including high school promotion activities and mentoring schemes. These various measures have had an impact: in 2000, 25.2% of commencing medical students were of rural origin, compared with 10.7% in 1989.

In a recent initiative, new scholarships are being offered to 100 medical students (whether from rural backgrounds or not) commencing next academic year, in return for a commitment to practise in rural and regional areas for at least six years after post graduate training. Medical school places will be increased cumulatively by 100. Scholarship holders will be unable to receive Medicare rebates for services delivered in urban areas until they have met their rural service obligation.

Efforts commenced in the early 1990s to build a rural focus into medical training, but progress in this area has been patchy and generally slow. We have begun to establish clinical schools and university departments of rural health in rural areas to create a better infrastructure for rural medical training. One clinical school and seven university rural health departments have been opened, and a further nine schools and three departments are planned. This is intended to increase opportunities for medical students to undertake training in rural settings and to encourage more country students to pursue a career in rural medicine. The academic positions will mean more practising clinicians in the regions where the facilities are located, and they will provide existing local practitioners with clinical support, research capacity and CME opportunities.

A medical school has been established at James Cook University in Townsville to address workforce maldistribution through provision of 60 medical school places in far north Queensland. Of these places, 20 have been allocated to rural and Indigenous students.

In 1997 the John Flynn Scholarship Scheme was established, named after the founder of the world's first flying doctor service. It aims to attract medical students to rural medicine by providing them with an opportunity to spend part of their holidays working in remote areas. Students commit to an annual two week placement in a rural or remote community over four consecutive years of their medical course, and develop personal links in that community. Supervised placements are in general practice, hospitals, and other facilities; some 600 students are currently part of the scheme.

A pilot program has also been established, with the aim of increasing the exposure to rural general practice of doctors in their first and second postgraduate years. In the shorter term, the program will increase rural communities' access to primary care, as participants take time out from their hospital work in order to undertake a 10-13 week placement in a rural location.

In 1999 we trialed a temporary increase to the medical school entry cohort with 100 additional places for overseas trained doctors (OTDs) whose qualifications were not immediately recognised for practice in Australia. Instead of sitting the licensing examination for OTDs, candidates who agreed to undertake five years of rural practice were admitted to

the final years of an Australian medical course and allowed to convert their qualification to an Australian degree. Evaluation of the success of this measure is not possible at this early stage.

At the postgraduate level, GP rural training has been on offer for some years, with the aim of building interest in rural practice as well as the professional and personal skills needed for this work. The training included placements in regional hospitals and rural practices plus an additional year of advanced training in skills relevant to rural practice, including anaesthesia, obstetrics and psychiatry. The uptake for the stream was however quite low. As part of a broader reform of GP training, a dedicated GP rural training stream is being introduced from 2001 which will see larger numbers of graduates undertaking GP training with a rural focus. The total (national) training intake is being increased from 400 to 450 places, with 200 of these set aside for training for rural general practice. This training will involve placements in rural practices and (optional) additional training in advanced skills. The management and funding of GP training in Australia is also being reformed to give it a more regional focus.

Various efforts are underway to increase the rural component of postgraduate training in other specialist disciplines. Rural and regional placements for advanced specialist trainees have been in place for several years, as joint initiatives of the specialist medical colleges and Commonwealth and State/Territory Governments. These enable medical registrars to receive accredited training in their specialty at a rural or regional hospital, and more recently in rural community settings. Posts are negotiated and funded to reflect the specialist workforce needs identified by the States and the Northern Territory, and AMWAC. This work also encompasses development of curricula and distance supervision technologies for rural training. Some college training programs now include compulsory rural placements.

Recruitment and retention initiatives and alternative delivery models

Disincentives to rural and remote practice in Australia have been well documented, including by AMWAC in their workforce reviews (see in particular AMWAC 1998.4 and 1996.8), and various strategies developed to counter them, including financial incentives, family support measures, locum relief and CME assistance. Alternative models of service delivery supplement these measures by extending workforce reach in various ways.

General practice

With most primary care in Australia provided through small private practices, mechanisms for coordination of rural workforce initiatives have been important. Divisions of General Practice based on postcode area were created in the early 1990s. Sixty-one rural and 62 urban divisions provide a structure for:

- GPs to better identify and communicate the health care needs of their communities, including in relation to workforce shortage;
- development and implementation of initiatives at the local level to address particular needs; and
- linkage at the local level with district and regional health authorities, local hospitals, community based health service providers, consumers, specialists and other medical bodies.

More recently, state and territory Rural Workforce Agencies have been established to recruit and retain doctors for rural and remote communities. To date they have focussed on retaining GPs already working in rural and remote areas and filling temporary placements with more permanent arrangements. In the 1999 calendar year, approximately 600 doctors (mostly overseas trained) were placed in rural and remote areas.

Lack of access to locum relief is a well-documented disincentive to rural practice. Considerable efforts have been made to improve locum relief since the mid 1990s with a national Rural Locum Relief Program which assists in the provision of improved coverage of GP services in rural and remote areas. This scheme is also structured to give supervised and supported experience to more junior practitioners who would not otherwise work in rural areas.

Various financial and other incentives have been offered by Commonwealth, state/territory and local governments to attract and retain rural and remote practitioners.

- The Commonwealth Government's Rural Retention Program is aimed at long-serving primary practitioners, specifically targeting those in locations identified as being in relatively high need of retention support. It is intended to recognise the contribution of GPs who continue to practise in rural and remote areas and thereby encourage them to remain. In the first year of its operation (1999/2000), payments totalling approximately \$19.6 million have been made to over 1,640 GPs. The categories of payments are based on variables reflecting retention issues such as physical remoteness, access to services and peer support.
- State/territory and local governments provide a range of support measures, commonly including accommodation, relocation assistance and salary bonuses. Other initiatives have been employed, for example, an internet based CME has recently been developed for rural GPs with funding from the Queensland Government.

Alternative service models have been used to boost primary care provision, including outreach services and practitioner substitution. The Royal Flying Doctor Service (RFDS) provides aeromedical emergency and primary health care to 80% of rural and remote Australia (7,150,000 km²). (The RFDS also provides over 2,500 medical chests containing an extensive range of numbered drugs and medical supplies. These are located in isolated locations such as pastoral properties, Aboriginal out-stations, remote mining sites and lighthouses.) The RFDS's infrastructure includes 20 bases, 45 aircraft and 476 staff, including 101 pilots, 64 doctors and 111 nurses. In 1999-2000, the RFDS provided 47,368 telehealth consultations, 5,102 immunisations, 6,383 clinics, transported 22,191 patients and assisted 108,906 patients through medical clinics.

Very limited substitution of nurse practitioners for doctors is occurring in Australia. Particularly since the early 1990s, work has been underway to review and enhance the role of nurses in health care delivery. One state has given nurses limited responsibility to administer drugs and another has passed legislation allowing appointment of nurse

practitioners under prescribed circumstances. In most states however, trials are still underway to identify and explore the issues involved, which include cost, collaboration and appropriate delivery. Nurse substitution is complicated by the fact that states and territories have responsibility for training and registration of nurses and regulation of nursing practice, whereas the Commonwealth has responsibility for public subsidy of fee-for-service medical practice. It is controversial within the medical profession, parts of which have expressed the view that it is a cost saving exercise by governments.

Evident in this debate (which admittedly has been limited so far), is the recognition that any substitution should be within the framework of collaborative provision of health care services which are designed in consultation with communities. Simply increasing numbers of GPs in underserved areas will not fully address the needs of all communities. Extra GPs with surgical skills will save more road accident victims for example, but different professionals such as counsellors and community welfare workers are needed to address the causes behind high alcohol consumption and associated risk taking in many rural areas. The view has been expressed that substitution should be part of more holistic solutions to community health status (see for example National Nursing Workforce Forum, 1999).

The Commonwealth is also sponsoring a number of trials exploring better ways of providing after hours medical services. Two of these trials have particular relevance to rural areas as they involve a triage system providing the first point of contact for people seeking after hours help. This has reduced the number of calls that rural GPs in the trial areas have had to make, which is a positive finding given that the onerous nature of rural on-call work is a factor in practitioner retention.

Many rural and remote communities lack not only medical services, but the range of allied health services which are available in metropolitan areas. This has medical workforce implications, with over-committed GPs providing services that an allied health professional could readily provide, and is a barrier to sustainable specialist practice of certain kinds.

A number of state and territory governments have instituted educational and other initiatives to boost the rural allied health workforce. The Commonwealth Government has recently committed funds for rural Divisions of General Practice, in collaboration with Rural Workforce Agencies and other organisations, to increase recruitment of allied health practitioners, including practice nurses, psychologists, physiotherapists and podiatrists.

A broader program of initiatives has been underway since the late 1980s involving the Commonwealth and states developing mechanisms for jointly funded health and aged care services in consultation with individual rural communities. The most recent of these, the Regional Health Services Program, is based on the recognition that no two communities are alike, not only in demographics but also in local health priorities, so that there can be no one template for service provision. The Program targets small rural communities (usually less than 5,000 people) and works with them to identify local priorities and develop and support health services to meet those needs. A range of services can be supported under the program, including primary medical care, health promotion, mental health services, aged

care services, physiotherapy and podiatry. Expanded funding of \$68.9 million over the next four years has recently been committed to target very high areas of need.

There has been a significant decrease in access to non-government health services over recent years in rural areas, with 18 community hospitals closing since 1995. Community hospitals, mostly operated by not-for-profit organisations, are highly valued in rural areas and are frequently the largest employer in a community. Funds have therefore been allocated at the Commonwealth level to revitalise community bush nursing and small to medium non-government hospitals. Hospitals will be able to restructure their facilities according to local needs, for example to create multi-purpose centres and aged care facilities. This measure will link with the Regional Health Services Program work and the University Departments of Rural Health, by attracting medical, nursing and allied health professionals to work in rural areas.

Lastly, the Commonwealth's Rural Health Support, Education and Training (RHSET) Program aims to improve rural and remote health services by funding initiatives that support or educate rural and remote health practitioners, thereby helping to counter barriers to the recruitment and retention of this workforce. The program, established in 1991, provides grants for projects that enable health practitioners to assist and progress collective efforts to improve the health status of rural and remote communities. It therefore complements the mainstream initiatives of Commonwealth, state and territory governments. Support is given to projects with a primary health care focus which assist individuals and communities to develop healthy lifestyles, prevent illness and manage their health problems. Community development and participation and the importance of local collaborative networks are emphasised as key approaches to addressing health care needs. Over \$31 million has been provided since 1996 to fund projects under the Program, with recent successful projects including:

- "The Heart Story" – a cardiac education visual resource on cardiac disease processes, prevention, management and rehabilitation developed by the Northern Territory Health Service with 200 copies distributed, including a copy to each Remote Area Health Service in the Northern Territory; and
- "Healthy Little Ears" – a practical resource for preschool teachers to encourage children to blow their noses to reduce the effects of upper respiratory tract and ear infections – developed by the Mid Western Area Health Service with over 500 packages sold.

The RHSET program has been particularly successful in providing support for a range of rural and remote health workers, for developing curricula specific to the needs of rural health workers, and for establishing an infrastructure to support communication, education and training opportunities. Evidence is that:

- the projects funded have helped to counter the isolation of this workforce;
- the program has assisted in providing a mechanism for the concerns of the workforce to be considered in policy debate and formulation; and
- a number of projects have been "mainstreamed" and applied to other communities with success.

Specialist services

Efforts have been made to improve specialist locum coordination and other measures to support and encourage specialist rural practice. The Commonwealth Government funds a number of specialist medical colleges to coordinate locum relief, assist with CME for rural specialists and promote rural career opportunities.

Outreach services are a major plank in efforts to better provide specialist services to non-metropolitan areas, particularly those which cannot sustain or attract resident specialists. Significant proportions of metropolitan practitioners participate in outreach work, ranging from approximately 14% of practitioners in obstetrics and gynaecology, psychiatry and general surgery to approximately 30% of ear nose and throat surgeons.¹³ Various outreach models have been in place in each state and territory for some time, involving collaborative efforts among hospitals, state and territory government health authorities and specialist medical colleges. The Commonwealth Government provided funding in the last budget to address some of the disincentives to specialists providing outreach services, such as travel and opportunity costs, with a view to maximising the sustainable delivery of services.

State and territory governments also have travel assistance schemes to cover patients' travel costs for specialist care.

Substitution by GPs for specialist services is common in rural Australia and GPs are assisted to train and provide care in a number of disciplines, particularly obstetrics, anaesthesia and psychiatry. This is supported in various ways, including by improved Medicare subsidy arrangements, assistance with indemnity insurance and training and professional support coordinated by the specialist colleges.

Overseas trained doctors

As noted above, recruitment of OTDs has been extensively employed to meet supply shortfalls in Australia, particularly in rural areas. The Commonwealth, states and territories have recently agreed on a national model to ensure consistent arrangements with agreed standards for GP recruitment. Arrangements vary from state to state, but generally provide fully trained overseas trained GPs with various incentives, including assistance in gaining permanent residence and unconditional medical registration in return for periods of rural service.

Telemedicine

Communication technologies have been a boon in the delivery of medical care to rural and remote communities. Australia has been a leader in this field in the past, servicing remote communities by telegraph links and the RFDS. Since the early 1990s governments and the private sector have invested heavily in technologies such as video conferencing and digital transfer of diagnostic information, in particular teleradiology.

¹³ AMWAC 1998.6, 1999.7, 1997.2 and 1997.6 respectively.

Overall benefits have yet to be evaluated in detail but it appears that telehealth can reduce inequalities of access for rural communities. It has the potential to improve communications among health professionals, which has direct patient benefits such as earlier intervention, while also reducing the practitioner isolation which is a powerful disincentive to rural practice. Teleconsultations have been particularly useful in specialist medicine, for example in psychiatry, oncology, dermatology and renal medicine. They enable language interpreter services to be used, improving access for non-English speaking consumers and are employed for distance CME.

Use of telecommunications technologies have been a major contributing factor in creating more medical training opportunities in rural areas.

Issues for Australian in extending the use of telemedicine include cost, availability of telephone lines and the need to ensure confidentiality of clinical information. The challenge in using this technology will be to reduce further the inequities in service levels while maintaining positive outcomes, by selecting technologies which are both cost effective and address high priority health needs.

A recent initiative to improve access quality health information through the Internet is expected to be of benefit to those consumers and practitioners in rural areas of Australia with internet access. Health *Insite* is a readily navigable gateway to the sites of more than 50 of Australia's leading health organisations, thus providing to up-to-date information on a wide range of health topics and related information on health services. The facility is an enclosed search engine referring users to sites that have been quality assessed by an editorial board which includes medical experts and consumer representation.

Western Australia has introduced a state-wide telephone triage service which enables callers to talk to a registered nurse about immediate health issues at any time. It has only been operational in rural areas of the state since July 2000, so its success in improving rural health care access has not yet been assessed.

Medicare subsidy restrictions

The third part of the Australian response to medical workforce maldistribution has been targeted restrictions on access to Medicare rebates. These “provider number restrictions” have both workforce distribution and service quality effects, encouraging more service provision in both rural areas and the public hospital system and improving the standard of medical care provided to the whole community. They restrict OTDs (who do not have recognised postgraduate qualifications and who wish to work in private practice) to working in areas of workforce shortage – rural areas and identified areas of the public hospital system. They also restrict access by Australian trained doctors who do not have specialist or general practice qualifications, to working in supervised practice in areas of workforce shortage. The effects of the restrictions have been to:

- reduce the oversupply of GPs in metropolitan areas from approximately 4,000 in 1996 to 2,000 in 1999;

- generate savings of approximately \$556 million over 4 years, with ongoing savings of approx \$250 million per year - the result of doctors remaining in hospitals and/or undertaking postgraduate training, rather than adding to the oversupplied GP workforce in metropolitan areas;
- provide significant numbers of doctors to rural areas under the Rural Locum Relief Program; and
- establish primary care as a distinct discipline, requiring training and experience.

At the same time, post-graduate training places have increased nationally by 11.4% over the past three years, which will enhance access to specialist services in both metropolitan and rural areas.

Indigenous communities

Efforts to assist Indigenous Australians to improve the health status of their communities are based on the principles of community empowerment and participation in the development and delivery of health care services. It is within this context that workforce planning is conducted.

In some states and the Northern Territory, government funded clinics deliver primary health care services to Indigenous Australians. Additionally, since the early 1970s, Aboriginal Controlled Community Health Care Services (ACCHCs) have been integral to primary health care service provision for Indigenous Australians, particularly those living in rural and regional areas. These services have provided greatly improved access, more culturally appropriate care, and a better range of primary health care services in one location. Over 100 ACCHCs operate throughout Australia, ranging in size from services which may employ several medical practitioners to smaller services which do not employ a medical practitioner, but rely on Aboriginal Health Workers and/or nurse practitioners for the bulk of the service provision.

Aboriginal and Torres Strait Islander Health Workers are fundamental to the operation of ACCHCs, and the Commonwealth provides funding for their training through a range of community controlled health education providers. They perform a range of health care functions in Indigenous health settings, including traditional health, cultural brokerage, clinical care and western medicine, health education and promotion, environmental health, community care, administration, management and control, and policy development and program planning. Their presence and work is an integral and important component of effective health care delivery in Indigenous communities. They inform the work of other health professionals, and act as interpreters between Western and Indigenous health and wellbeing concepts and treatment regimes.

The functions performed by Aboriginal and Torres Strait Islander Health Workers are also differentiated by urban/rural and remote settings and specialist and generalist workers. Increasingly, they are undertaking some of the allied health services such as dental health, podiatry, mental health and nutrition.

Medical workforce policy, as part of broader health workforce policy, is aimed at developing and maintaining a skilled multidisciplinary workforce, of both Indigenous and non-Indigenous professionals, with a commitment to and the skills required for working with communities in improving their health. Initiatives fall under four broad headings.

Workforce planning and modelling

To improve understanding of the extent of underservicing of Indigenous Australians, the Commonwealth Government has recently commissioned a National Workforce Modelling Project to provide further data on the numbers and types of health professionals working in Aboriginal health services.

Recruitment and retention /alternative models

Efforts to increase numbers of Indigenous medical students have been underway for some time, and approaches have been developed as difficulties with recruitment and retention of students have been identified. Some of these include disrupted secondary education, social and financial disadvantage, cultural and family commitments and frequent need for students to repeat the early years of medical courses. While progress has been made, student numbers remain very small, with less than 1% of the intake in 1999 identifying as Indigenous. There is both a need to improve recruitment rates and scope for medical schools to develop more consistent support strategies for Aboriginal and Torres Strait Islander students, covering financial, educational (including pre-entry) and personal support. The work to increase rural origin medical student numbers, discussed above, is also expected to contribute to the Indigenous medical workforce and to non-Indigenous practitioners with a commitment to health of rural Indigenous communities.

Outreach programs have been used to boost access to medical care of more remote communities. Attention has been given in recent years to the need for a greater role to be played by specialist practitioners in improving the health of remote Indigenous Australians. Particularly successful has been an outreach service operating in the Northern Territory since 1997, which delivers surgical, obstetric and gynaecology, ophthalmic and ear nose and throat specialist care to remote community people, most of whom are Indigenous. This service has dramatically increased specialist consultations, with up to five times as many consultations occurring than prior to the program, when patients were transferred to outpatients clinics in Darwin. A recent evaluation has found that the service:

- enables much better doctor-patient communication than is possible in outpatients clinics, due to involvement of family and local clinic staff, local interpreter support and greater time for explanation during consultations. Flow on effects include better patient understanding and informed consent, and greater adherence to treatment;
- by removing the need for patients to travel, has lessened the anxiety and expense experienced by patients associated with treatment, as well as the loneliness and disorientation which can be experienced in unfamiliar environments, particularly by young women and older people;
- has provided remote GPs and other health workers with useful professional contact; and

- is less costly (to government) than providing services through outpatients clinics. (Of note, the service is jointly funded by the Commonwealth and Territory Governments.) (Gruen and Bailie 2000).

The evaluation identified a range of personal and administrative challenges in providing outreach services, and clearly highlighted the need for the specialists involved to be well supported.

A number of “coordinated care trials”, discussed later, have been established in Indigenous communities to try and improve the integration and coordination of health care provided to persons with serious or chronic illness.

Education and training

Training for both Indigenous and non-Indigenous medical practitioners is a current priority in Australia. Progress to date by medical schools has been patchy; some have developed Indigenous health curricula, but this is not the case in all schools and Indigenous health is not well integrated into the broader curricula. Greater involvement of Indigenous Australians in the delivery of the medical education is also needed. It is thought too that exposure of all medical students to Indigenous health, including via practice placements, will increase interest in pursuing Indigenous health as a career, and development of a national medical curriculum is therefore underway.

Efforts in one state, South Australia, include the recent introduction of a compulsory two day camp on Ngarrindjeri land for new medical students, with a program focussing on Indigenous health in its historical context. A training package for medical educators developed in 1997 by Flinders University has recently been evaluated, and its uptake and barriers to use analysed; the package has been redeveloped as a train-the-trainer module for use across the health care professions.

A distance education package in cross cultural care, the Binan Goonj, has been developed by a team of Indigenous and non-Indigenous health professionals with support from the Commonwealth Government RHSET Program discussed above. The package is aimed at ensuring appropriate, culturally safe health care for Indigenous communities with non-Indigenous professionals able to work effectively and efficiently in this area. The model has been judged to be very successful and has been adopted by a number of health departments and adapted to different geographic settings.

At the post-graduate level, all GP registrars undertake training in Indigenous health using a curriculum jointly produced by the Royal Australian College of General Practitioners and the National Aboriginal Community Controlled Health Organisation. The Binan Goonj makes up a core element of this training. Psychiatry trainees all undertake training in Indigenous mental health. The extent of coverage of Indigenous health in postgraduate and CME programs appears variable and Colleges generally do not have information on the extent of take-up of optional training.

Support for health professionals and managers.

An Australian Indigenous Doctors' Association was established two years ago to advise governments on issues related to the needs of the Indigenous medical workforce and communities and provide a network for support for practitioners and students.

Adjustments have been made to remuneration structures under Medicare to improve financing of ACCHSs and financially support primary care which is enhanced in relation to health prevention and promotion.

Low socioeconomic communities

A major research initiative is underway which will contribute to more equitable access to health care for all parts of Australian society. The Commonwealth Government is funding a Health Inequalities Research Collaboration to reduce the research and policy fragmentation in the area of health inequalities in Australia. One focus of the project is in evaluating the effectiveness of health service approaches in improving health outcomes for disadvantaged groups.

In the field of general practice various efforts have been made over the last decade to assist practitioners to better respond to the health needs of disadvantaged groups, by better coordination of care of persons with complex and chronic illness, and better health promotion care. This work has combined education and professional support and better structuring the financial subsidy of primary medical care to reward changes to care.

Many GPs find care of disadvantaged groups difficult, seeing the causes of disadvantage as beyond their control and believing they lack the training and skills for dealing with the multiple problems of these patients, which often including psychosocial ones. While management of persons with chronic or complex illnesses, many of whom are on low incomes, is a fundamental part of general practice, doctors have traditionally been trained to focus on pathology and a medical rather than a multi-disciplinary model of care (General Practice Strategy Review Group 1998). In addition, Medicare rebate and private practice arrangements have not encouraged GPs to increase health promotion and prevention efforts.

“Coordinated Care Trials” commenced in Australia in 1997, to test whether planning of care and coordination of services improves the health and well-being of people with chronic or complex illness, within existing resources. For many such people, care has traditionally been provided by a number of quite separate service providers and funded by different levels of government, resulting in them getting the care they can get rather than the care they need. It was hypothesised that coordinated care intervention would lead to the substitution of services which are both more appropriate and lower cost, for services which are more costly, such as hospitalisation. The trials involved funds pooling among Commonwealth, state/territory and community programs (and in one instance, private insurance funds), with the amount of money placed in each pool based on an estimate of what would otherwise have been spent on services used by trial participants. Each participant had a care coordinator, often the person's GP, who worked with them to develop

and implement a care plan. The care coordinator then drew on money from the funding pool to buy the full range of services set out in the care plan.

The first round of Coordinated Care Trials concluded in late 1999. There were difficulties in the measurement of health outcomes in a group of mostly older, frail individuals through an intervention of just over two years. One interim finding however, is that participation in a trial resulted in improved feelings of well being among clients.

It is anticipated a second round of coordinated care trials will commence in early 2001, building on the lessons of the first trials. These are expected to:

- continue to explore approaches to improve care within existing resources;
- involve more people and providers and operate for longer;
- focus more intensively on increased consumer empowerment;
- improve the capacity to identify and involve people most likely to benefit from care coordination;
- further explore and develop best practice disease management approaches and evidence based protocols for multidisciplinary care across services and settings; and
- examine the potential for the involvement of residential aged care. (In the first round of trials patients who entered nursing homes ceased to participate.)

In the meantime, the Commonwealth has funded an “Enhanced Primary Care Program” using a similar approach to improve care of people with complex care needs who require better care planning and care coordination. New Medicare rebates will be provided for annual health assessments of elderly Australians and for Indigenous Australians aged 55 years and older; and for case conferencing among GPs and other health and support workers about the care and progress of patients requiring care from these multiple providers. Arrangements involving pooling of funds are also being explored, such as for projects supporting GPs to address the needs of disadvantaged groups based on a detailed assessment of need in their practice area.

Mental health is a significant focus of concern in Australia at present. The National Mental Health Strategy includes initiatives to address unmet need for psychiatric services, including a Primary Mental Health Care initiative which seeks to provide GPs with education through the Divisions of General Practice and better link them with specialist mental health services.

The Commonwealth Government is endeavouring to address the problem of gap payments, discussed above. Legislation was introduced in 1995 to allow health insurance funds, doctors and hospitals to negotiate agreements to provide gap payments for inpatient services. Although some success was achieved through these agreements, some doctors have in-principle objections to entering into formal contracts with funds and hospitals. To address these concerns, new legislation has recently been introduced to enable gaps to be covered without the need for contracts. This is expected to greatly increase the availability of gap-free services. Health funds wishing to offer consumers the Government’s 30% rebate as a premium reduction were required to offer either a “no gap” or “known gap” policy by 1 July 2000.

Migrant communities

Considerable efforts have been made since the 1970s to assist migrant groups to access services, including medical ones. Broad approaches, such as maintenance of a national multicultural access and equity policy framework, provision of government-funded English language education and a national interpreter services for migrants, and a myriad of community-focussed initiatives, such as funding of migrant health workers and multilingual health care information sources, have been variously applied by Commonwealth, state/territory and local governments.

Recent initiatives include:

- a national program to improve the responsiveness of mainstream medical and other health services to the needs of recently arrived refugees, which includes working with providers to improve their awareness and understanding of refugee health needs and their ability to provide appropriate services; and
- a pilot project by Australia's government-funded national telephone interpreter service to support medical practitioners' use of telephone interpreting services, by providing training in its use and a dedicated line for medical interpreting. This is intended to improve use of the service, and assist practitioners in rural and remote areas.

Cross cultural and diversity awareness training in medical education

At the level of undergraduate medical education, cross-cultural work is a current focus of attention and a topic of discussion among medical schools. Universities are aware of the need for more comprehensive training in this area and are addressing it in different ways. Notably, the University of New South Wales is developing a multi-cultural health program aimed at ensuring cultural "competence" in all levels of medical education with an emphasis on integrating training within each curricula. The program also involves establishment of multicultural health research partnerships with other teaching institutions and service providers.

In post-graduate medical education, the medical colleges as well as the hospitals and other care settings in which trainees are posted, are generally aware of the need for skills in cross-cultural care, and address it in a variety of ways. In post-graduate psychiatry training for example, learning is based on a biopsychosociocultural model, with trainees taught to identify and consider cultural factors in the assessment and management of all patients. All registrars have training in the management of patients from non-English speaking backgrounds in conjunction with trained health care interpreters.

As well as structured training elements designed by colleges, training settings provide cross-cultural experience, particularly in urban areas. The large metropolitan teaching hospitals develop services to respond to the needs of individual communities in their catchment populations; a Melbourne hospital is currently conducting a project to better meet the obstetric needs of East African women (a more recently arrived migrant group), with involvement of all relevant health professionals.

CME in Australia is the responsibility of individual specialist colleges. Their CME programs vary greatly in scope, content and “take-up”. Overall, cross-cultural content does not appear to be significant.

BARRIERS TO POLICY APPROACHES AND WHAT MORE CAN BE DONE?

A consistent barrier in addressing workforce imbalances in Australia is created by the sharing of responsibility for health care funding between the Commonwealth and state/territory governments. For example, the Commonwealth directly funds Medicare, while the state and territory governments (with assistance from the Commonwealth) fund public hospitals and community care. This is responsible for what is termed “cost-shifting”, where service delivery is arranged so that responsibility for services can be transferred by one player to another. In workforce planning, the division of responsibilities presents an immediate barrier where initiatives require flexible funding or collaboration between providers who are funded from different sources.

Australia has begun to address this barrier by experimenting with pooled funding arrangements, some of which are discussed above, however further development of this capacity to pool resources will improve our ability to direct assistance to geographic areas and/or disease groups, and reduce inequities in medical care access.

A further barrier is the fee-for-service rebate structure under Medicare. This has limitations as a mechanism for remunerating practitioners, including in the context of addressing underservicing. For instance it has limitations in terms of encouraging health prevention and promotion efforts by GPs, and does not reward specialists who spend hours travelling to visit a small number of patients. We have gone some way to overcoming this, for example with:

- development of a “blended payments” approach, which rewards GPs who spend time and resources addressing the ongoing health needs of patients; and
- supplementary funding to address the financial disincentives and barriers to specialist practice in regional, rural and remote areas.

However there is scope to take this further.

Perceptions about practice in underserved communities are a barrier to redistributing the workforce in Australia. Historically, prestige in clinical and medical research work has been attached to the oldest medical schools and particularly to the major metropolitan teaching hospitals. The network of rural clinical schools and university departments of rural health which are being established will create a quality rural infrastructure which will help to break these historical barriers. Public support and momentum to address the manifest disadvantage of Indigenous Australians, the increasing breadth of experience in medical education at all levels, and the government lead in the range of initiatives discussed, including establishment of the Health Inequalities Research Collaboration, should all help to broaden the aspirations of new generations of doctors.

There is a perception in Australia that rural practitioners need to be “super doctors”, which we believe discourages both graduating and experienced practitioners from embarking on

rural service. The consistent inclusion of rural experience and training in all areas of medical training will help to counter this.

In relation to medical care provision to rural Australia, we need to manage the expectations of the community in relation to service levels. Not unnaturally, there is a perception that rural communities should be afforded the same access to medical services as urban populations, viz a doctor available at all times. While governments are spending very large amounts of money improving workforce provision in rural areas¹⁴, our extreme population dispersion simply puts this ideal level of access beyond our reach. At the local level, such expectations place great pressures on rural doctors, a further discouragement to practise in small communities. Our increasing emphasis on working with individual communities in determining their particular health care needs and alternative ways of meeting them, will assist in managing expectations by not only creating more efficient and effective care systems, but by improving community understanding of the service planning challenge.

While the increasing proportion of female doctors in Australia is a positive workforce trend, the barriers to women taking up rural and remote practice need to be addressed. As touched on earlier, the steadily growing proportion of female practitioners, and their preference for urban general practice, have implications for geographic and structural imbalances in the medical workforce and hence for adequate serving of rural and remote and Indigenous communities, particularly in terms of female patients' preference for female practitioners. Women are deterred from rural practice by concerns about personal safety, lack of a peer group, lack of emotional support, lack of family support, lack of access to confidential health care, and the restriction on mobility of many women related to the careers of partners (AMWAC 1996.7). Ways of countering these disincentives need to be found.

Women are also more likely to choose general practice over other specialist disciplines, it appears, because training and employment in the former offer greater flexibility to accommodate family responsibilities. Some specialist colleges have made efforts to improve the flexibility of their training programs, however other strategies may need to be considered, such as mature age entry into specialist training, part time work accreditation and shorter training. There may be scope, for example, to move the focus from time-based training to competency-based training. Also of benefit would be greater numbers of women in educational roles and decision-making bodies, for both role model and mentoring purposes and to ensure that the needs of women are adequately represented. Lastly, more research into female participation is needed, for example to explore different participation patterns and needs of female doctors from some ethnic backgrounds (AMWAC 1996.7)

¹⁴ In 1999-2000, overall Commonwealth expenditure relating to rural health (that is, medical services and health and aged care more generally) was in the order of \$6,207 million, approximately 25.9% of the estimated \$23.935 billion the Commonwealth spent on health in that year. Of this, \$5,918 million was provided to rural and remote areas under mainstream programs (such as the Medicare rebate system). In addition, \$289 million was for special initiatives targeted at rural and remote locations. This included \$180.9 million for programs targeted to the entire rural and remote population and \$107.7 million for specific expenditure on indigenous health programs. A range of new rural initiatives in this year's Federal Budget will significantly increase this expenditure over the next four years.

CONCLUSION

Ensuring that the medical workforce equitably serves all Australians is an important challenge for governments and the profession. Underserved groups in Australia share poorer health outcomes, and great potential exists for the medical profession to assist in addressing the effects of their disadvantage. Considerable progress has been made in implementing short and long-term solutions to rural underservice; contributing to better Indigenous health needs an ongoing high level of commitment and flexibility of approach; and a watch must be kept on the care of low income and migrant groups. Further developing the capacity to determine local workforce solutions, while maintaining efforts in medical education and other long term strategies, will be our means to progress.

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