

# ***INDIGENOUS HEALTH ECONOMICS AND POLICY RESEARCH***

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# VICHEALTH KOORI HEALTH RESEARCH AND COMMUNITY DEVELOPMENT UNIT

## ***Discussion Paper Series***

The VicHealth Koori Health Research and Community Development Unit (VKHRCDU) was launched in June 1999 and has been developed in partnership with the Victorian Community Controlled Health Organisation, the Victorian Health Promotion Foundation (which funds the Unit) and the University of Melbourne through the Centre for the Study of Health and Society where the Unit is located.

At the core of the Unit's work is a commitment to undertaking, collaborating in and supporting research that directly benefits the Koori community. The work of the Unit spans academic and applied research, community development, and medical education. The combination of these activities is a central and innovative aspect of the Unit's function, as is the identification and use of mechanisms to link research with the improvement of health care practices and policy reform. Overall, these tasks are guided by both an Advisory Committee and a Research Advisory Group.

In relation to the research program, five key areas govern the inquiry undertaken within the Unit. These comprise: historical research into Koori health policy and practice; historical and contemporary research into health research practice, ethics and capacity building; applied research on the social and cultural experience of Koori health, well-being and health care delivery; health economics research on the factors and processes that impact on the provision and use of Koori health care; and the evaluation of Koori primary health care and related health promotion programs.

The Discussion Paper Series (DPS) is directly linked to this diverse program of research and provides a forum for the Unit's work. The DPS also includes papers by researchers working outside the Unit or in collaboration with VKHRCDU staff. Individual papers aim to summarise current work and debate on key issues in Indigenous health, discuss aspects of Indigenous health research practice and process, or review interim findings of larger research projects. It is assumed that the readership for the series is a broad one, and each paper is closely edited for clarity and accessibility. Additionally, draft papers are 'refereed' so as to ensure a high standard of content.

More information on the series, on the preparation of draft papers, and on the work of the Unit can be obtained by directly contacting the VKHRCDU.

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# INTRODUCTION

Health economics research is vital not only to the improvement of policy and practice within Indigenous health, but also to the better funding and delivery of cost-effective health services to Indigenous Australians. It is well documented that the health status of Indigenous Australians is far below that of the non-Indigenous population (Australian Institute of Health & Welfare [AIHW] 1999; National Aboriginal Health Strategy Working Party 1989; Department of Health & Family Services 1997). The life expectancy of Indigenous Australians is approximately 15-20 years less than that of their non-Indigenous counterparts. Many indigenous Australians suffer from debilitating and often fatal diseases of the circulatory system, respiratory illness, injury, and cancer. Some of these illnesses are largely preventable (AIHW 1998). Research, at its best, has helped to raise the profile of this tragic situation, and provided a variety of approaches to solving it.

Health economics is a relatively young profession, although its profile has been heightened by work undertaken overseas, particularly in Canada, the UK, the European Union, and the USA. Health economics can inform policy makers and those who manage and deliver services in Indigenous health about mechanisms of resource allocation and costing of health services for evaluation purposes. However, its application to date has been limited, which has meant that the extent of its impact on Indigenous health policy and its implementation is not yet fully known.

This paper reviews and synthesises the existing health economic research on Indigenous health in Australia, and attempts to establish the extent to which health economics has contributed to knowledge and practice in Indigenous health. It also looks at the research conducted to date in Indigenous health by general economists and by those specifically involved in health economics.

In order to identify all the relevant literature on Indigenous health economics, electronic searching of Medline, AUSThealth, and the Aboriginal and Torres Strait Islander health bibliographic database for years 1976 to date was undertaken, as well as a hand search of government documents and printed bibliographies. Additional unpublished works from known academic centres involved in Indigenous health research in Australia were also identified. Studies that met the following selection criteria were included in the review: i) those that dealt with Aboriginal or Indigenous health funding issues; ii) those done by health economists and/or done from an economics perspective; and iii) those that addressed Aboriginal health policy.

This paper begins by looking at the status of Indigenous health and the amount government spends on it, and then introduces the role of health economics in Indigenous health policy. It highlights economic principles, such as equity and efficiency, and their relevance to health policy, and critically reviews the work done so far and the work still to be done. Under policy and health system reform, this paper discusses the relentless search for a health system and a funding mechanism that will appropriately address the key issues and barriers faced by Indigenous Australians in their efforts to utilise primary health care services. Finally, the paper concludes by highlighting the current gaps in Indigenous health economics research, and its relationship with health policy.

## **1. Background: Indigenous Health Status and Expenditure**

According to the Australian Bureau of Statistics (ABS) 1996 Census and AIHW (1999), Indigenous Australians represent approximately 2.1 per cent of the Australian population and of these around 11 per cent are of Torres Strait Islander origin. The largest number of Indigenous Australians live in New South Wales—approximately 28.5 per cent of the entire Indigenous Australian population—while the Northern Territory has the highest proportion of Indigenous Australians—about 28.5 per cent of its population. Approximately one-quarter of Indigenous Australians live in non-urban areas.

The number of Aboriginal and Torres Strait Islanders, 2.1 per cent, represents a significant increase from the 1991 Census (ABS & AIHW 1999), which found that approximately 1.6 per cent of the population were Indigenous Australians. Such an increase was far greater than can be readily explained by normal demographic changes, hence the possibility of under-identification in the 1991 census. The limitations in the data are likely to result in an underestimation of death rates, disease rates and their prevalence, and the number of hospitalisations. These data quality problems should, therefore, be taken into account when policy and related research is carried out.

The health status of Indigenous Australians is well below that of the non-Indigenous population and their life expectancy lower than that of Indigenous people in the USA, Canada or New Zealand (Kunitz & Brady 1995). Indigenous infant mortality rates are still two to four times higher than in the non-Indigenous Australian population (AIHW 1998). Furthermore, incapacitating and often fatal diseases of the circulatory and endocrine systems, respiratory illness, and injury are significantly more common among Indigenous Australians. In terms of self-reported health status, the most commonly reported long-term conditions suffered by Indigenous Australians were asthma (13 per cent) and ear problems (9 per cent), while 4 per cent reported having diabetes (AIHW 1996). Most of these illnesses are largely preventable and some require appropriate and effective management that Indigenous Australians may not be receiving from service providers. While research and advocacy have helped raise the profile of Aboriginal ill-health nationally, there has been little or no change to many of the key Indigenous health indicators over the last few decades (ABS & AIHW 1999).

In a study by Stamp *et al.* (1998) using acute hospital separation data, it was found that Indigenous Australians use far more hospital care than their non-Indigenous counterparts, often for conditions where hospitalisation could have been avoided with appropriate primary health care provision. They used ‘ambulatory-sensitive conditions’—those conditions which are thought to be potentially reduced or eliminated from hospital care by high-quality appropriate primary health care services delivered under ideal conditions—to estimate Aboriginal use of hospital care. The study found that age-specific acute hospital separation rates for ambulatory-sensitive conditions were 1.7 to 11 times higher for Aboriginal people. This raises the issue of whether or not Indigenous Australians have access to appropriate and effective primary health care services. One central research question thus involves exploring barriers faced by Indigenous Australian communities and individuals in their attempts

to access and consume mainstream primary health care services. Subsequent questions include why those barriers exist and what can be done to reduce them.

In 1995–96, total spending on health services for Indigenous Australians was found to be about 2.2 per cent of the total Australian recurrent health expenditure, with overall health expenditure per capita on Indigenous Australians being only 8 per cent higher than for other Australians (Deeble *et al.* 1998). This marginal difference in expenditure between Indigenous and non-Indigenous health services does not confront the gravity of the health problem within Indigenous communities where more resources are needed to overcome gross health inequalities. Such an under-resourcing is further complicated by the fact that Indigenous Australians have significantly less access per capita to resources from the Medical and Pharmaceutical Benefits Schemes (Deeble *et al.* 1998). Health economics can go some way to explaining these inequities in resource allocation and funding arrangements.

## **2. The Role Of Health Economics in Indigenous Health Policy**

### **2.1 Health Economics Principles**

Health economics deals with the process by which scarce resources (money, personnel, infrastructure, time, equipment, and knowledge) are allocated among alternative and competing uses, such as services and infrastructure in the health sector. In its purest form, health economics is a philosophy of inquiry into the process of resource allocation in the health sector. In an applied form, it offers answers to the questions of how and why health services are financed. These questions may include the following: Is ‘prevention’ better than ‘cure’ for Indigenous Australians, and for what illnesses? Should we increase spending on hospitals or public health and by how much? How should government fund Indigenous health expenditure? Should more funding come from public coffers or from private health funds?

#### **2.1.1: Choice and scarcity**

Health economics recognises that there is a limit to the amount of resources available to society as a whole, and to any organisation, group, and individual. This is the notion of ‘scarcity’ in the availability of resources. Coupled with the insatiable wants of human beings, it means that people have to prioritise their wants and make choices (decide what should be left out). It implies that certain wants may be sacrificed for the sake of others.

#### **2.1.2: Opportunity costs**

Given that resources are scarce, such a sacrifice means that some opportunities are foregone and that we incur opportunity costs. In other words, if we devote time to fishing or watching ‘footy’ then we miss out on the benefits afforded by other recreational pursuits such as surfing or cycling. Similarly, a parent who gives up work to care for their sick child foregoes benefits from wage income. Hence, the opportunity cost of caring for a sick child is the loss of wages. Clearly, there is a difference between ordinary costs in everyday life and opportunity costs.

### **2.1.3: The margin**

In economic analysis, the concept of the 'margin' is crucial. The margin is defined as the extra increase or decrease, either in benefits or costs, of a specific activity or intervention. For example, if there is a government program to immunise children against measles, let us hypothetically assume that this is costing about a \$100m. Suppose we increase the amount of money spent on this immunisation program to \$105m, and the number of children dying due to measles falls by 10. This implies that an additional \$5m spent on immunisation helped bring about this reduced mortality. In economic analysis, critical decisions are thus made around the extra amounts spent or not spent on these kinds of programs. These decisions may include 'how much more and less to spend on immunisation', but not how much amount of money to be spent on average. This is what economists call 'marginal analysis'.

Marginal analysis can be used to inform decision makers as to which project or program (among many) deserves increased funding, assuming issues of equity and justice have already been addressed elsewhere. An example would be that while an increase of \$5m for the immunisation of children against measles leads to a reduction of 100 in the number of severe cases, the same amount spent on immunisation against whooping cough could prevent 150 severe cases. Health economics, therefore, argues that it is better to increase funding for immunisation against whooping cough rather than measles, as more cases will be prevented.

### **2.1.4: Efficiency**

Health economics tends to deal primarily with issues of efficiency, an economic concept that involves maximising the benefits or minimising the costs to society of any given resource allocation or expenditure (Drummond *et al.* 1987). Thus, it tends to focus on issues such as whether or not a particular service or program achieves its objectives efficiently, but ignores the issue of equity and justice. This is because it is expected that both equity and justice will be addressed separately by government in its tax structure and other redistribution principles.

Efficiency in health care is commonly perceived to be synonymous with cost cutting, which involves reducing the level of funding or expenditure for a project or program regardless of its benefits, hence a financial phenomenon. Focusing on both costs and benefits is an economic phenomenon, because some costly interventions tend to have a lot of benefits which should not be ignored just because it is costly. An example would be a heart transplant. However, decreasing funding on a project or program may sometimes lead to increased efficiency, especially if a project's pattern of expenditure is focused on non-productive issues such as the management travel and entertainment.

### **2.1.5: Equity**

Equity involves the extent to which scarce resources are distributed across society. It incorporates issues such as how benefits or costs of a health intervention are distributed or shared across the group being targeted by the intervention. It may also include the extent to which these benefits or costs spill over to others outside the target group. Equity is often defined as equality of expenditure per capita, equality of

access for equal need, equality of utilisation for equal need, or equality of health, but the most commonly used definitions describe equity as equality of utilisation for equal need, and equality of access for equal need (Mooney 1992). These definitions are often used by policy makers and researchers, and have formed a basis for debate over recent years (Culyer *et al.* 1992a, 1992b; Mooney *et al.* 1991, 1992).

There are two types of equity: horizontal and vertical equity (Mooney 1982). Horizontal equity assumes that the groups or individuals being addressed are of equal economic and social standards, or their health needs are the same. Resources such as funding should be shared equally, which is not the case when indigenous health issues are addressed compared to the rest of the population. When the term equity is used in the Australian health policy context, it often means horizontal equity (Jan & Mooney 1998; McDermott & Beaver 1996). This notion is clearly embedded in the Medicare principle of ‘universal access’ to health care by all Australian citizens. The application of horizontal equity to the allocation of resources between Indigenous Australian communities vis-à-vis the rest of the country, therefore, would be inequitable and unfair. But the horizontal equity principle of resource allocation could be applied to a limited extent<sup>1</sup>, for example, between Indigenous Australian communities themselves.

Vertical equity, on the other hand, refers to the notion of unequal but equitable treatment of the unequals (Mooney 1982). It implies that in order to be fair to two unequal groups, which have different resource endowments or an unequal number of problems, it is fair to treat them unequally or differently. This would be positive discrimination of unequal groups (Mooney 1999). Such is the case with Indigenous Australians who, compared with other Australians, have an unequal number of health problems and poor health indicators such as higher mortality and morbidity rates (AIHW 1998, 1999; NAHSWP 1989; DHFS 1997). Vertical equity implies that any significant improvement in Indigenous Australian health problems can only occur if more resources are given over to Indigenous health intervention programs than to non-Indigenous programs.

In conventional economics, the question of equity is often ignored because it is essentially driven by value judgments that are outside the scope of economic analysis as it is conventionally defined (Jan & Mooney 1998). Furthermore, it is generally agreed that increasing equity in the allocation of scarce resources leads to a reduction in efficiency as to how that allocation may end up and vice versa. This is what economists call the dichotomy between efficiency and equity—the trade-off between competing claims and objectives. However, this dichotomy is not explicit in the health sector, hence the active involvement of health economists in equity research.

## 2.2 Policy Relevance

Health economics ‘injects’ the idea that the efficient and equitable provision and utilisation of health services is possible in health policy-making. Additionally, it underscores the role of evaluation in the provision of health services to Aboriginal and Torres Strait Islander people. This gives us a better insight into issues such as whether

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1. Health problems between indigenous communities themselves are highly disparate, such as between rural and remote communities in central Australia and an urban community in Melbourne. It would not seem appropriate to assume that these two groups have the same health needs.

the health services being provided by governments to Indigenous people can/are appropriately addressing the inequities in health outcomes and health status between Indigenous and non-Indigenous people in Australia.

Traditionally, health policy-makers have focused either solely on the effectiveness of various interventions or on the notion of cost cutting alone. As a result there is a lack of consideration about the link between costs and the effects/effectiveness of these interventions. Thus, policy-makers have relied on a somewhat romanticised view of how much government is spending on Indigenous health, rather than on value for money. Health economics helps to bridge this gap by providing mechanisms of analysis that bring together costs and effectiveness through cost effectiveness, cost benefit and cost utility analyses.

The strategic link between health economic research and Aboriginal and Torres Strait Islander health policy and practice is so crucial that any strengthening of this link will undoubtedly lead to more informed decisions about Indigenous health policy. In the face of rising costs in health care, reflected in the percentage share of recurrent health expenditures in the Commonwealth government budget, there is an increasing demand for transparency and accountability in the provision of these services. This in turn demands that health economics makes a contribution to Indigenous health policy in the form of research and evaluation.

### **3. Health Economics and Indigenous Health: Accomplishments to Date**

The bulk of the policy work done on Indigenous Australian health has been conducted under the auspices of the Commonwealth and State/Territory governments, and includes the findings and recommendations of various reports of different commissions of inquiry. The broad framework (inter-governmental agreements) for improving Indigenous health outcomes currently adopted by the Commonwealth government focuses on the reform of the health sector, and the development of appropriate and effective inter-sectoral linkages.

This strategic framework is based on the principle that both Commonwealth and State levels of governments are 'jointly responsible for responding to the needs of all Australians (including) Aboriginal and Torres Strait Islander peoples' (DHFS 1997). It uses two approaches: a macro approach applied through the Aboriginal Health Framework Agreements, and a local/regional approach implemented through the development and provision of good quality primary health care services to Aboriginal and Torres Strait Islander people.

The existing research on economics and Indigenous health in Australia mainly focuses on funding and expenditure analysis, equity in resource allocation, and access to health services. Most researchers involved in this work have not had formal health economics training, a situation that reflects the shortage of trained health economists involved with Indigenous health. There is a body of work involving the analysis of funding, expenditure and related issues, which is concentrated in particular, but not exclusively, on New South Wales, Queensland and the Northern Territory (Warchivker 1996; McDermott 1998; Scrimgeour 1996; Mooney *et al.* 1998; Deeble *et al.* 1998). This research has addressed the problems and structural arrangements of funding in Australia and its impact on Indigenous health issues. The problems

include a lack of transparency in the way the States and Territories fund Indigenous health services, and the cost shifting that occurs between the States, Territories and Commonwealth governments.

For example, Mooney *et al.* (1998) found that if the Commonwealth redeployed about 1 per cent of the health care budget, it could increase spending on Indigenous health services by about 50 per cent. This would have a significant impact on the health status of Indigenous Australians. Mooney *et al.* (1998) strongly advocate for unequal per capita expenditure on Indigenous and non-Indigenous Australians in order to bring about equity (vertical equity).

While substantial research has been undertaken on equity and Indigenous people's access to mainstream health services, it has mostly concentrated on horizontal equity. This had led to the neglect of vertical equity, which is much more relevant to Indigenous health issues. This is partly because equity is essentially driven by value judgements, which are however outside the scope of economic analysis as conventionally defined (Jan & Mooney, 1998). The introduction of the concept of 'communitarian claims' as a basis for understanding equity in an economic perspective, would introduce the concept of 'society' into the traditional economic analysis. This would improve a basic needs approach for resource allocation in Indigenous health by introducing the concept of 'society' in its analysis.

Research on Indigenous health economic policy and health service delivery has mostly included work on models of Indigenous health service financing and delivery such as casemix <sup>2</sup> (Fisher *et al.* 1998; Owens 1995). Using casemix, Stamp *et al.* (1998) found a high utilisation by Indigenous people of hospital services for cases that were largely preventable using appropriate primary health care services.

Ruben (1998) also found that a casemix system of funding would further disadvantage Aboriginal and Torres Strait Islander children. The study, carried out on children younger than ten years of age discharged from Royal Darwin Hospital, revealed that Indigenous children had higher co-morbidities <sup>3</sup> than non-Indigenous children. This could explain why Indigenous children had prolonged stays in hospital, and further highlights the need for the revision of casemix models so that they suit Indigenous people's issues.

## **4. Health Economics and Indigenous Health: The Future**

### **4.1 Emerging Work**

Over the past few years there has been an increasing emphasis on health economics research within the pharmaceutical manufacturing sector, government health departments, and non-government health organisations. This has been largely due to the Commonwealth government's support of the role of health economics in health policy-making. For example, there is a legislative requirement for all pharmaceutical companies to carry out an economic evaluation of their drugs before they can be

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2. Casemix is a method used by government to reimburse hospitals for the costs of treating patients based on the mix of cases that come through the hospital. These cases are based on groups of related diagnoses called DRGs.

3. Co-morbidities refers to the presence of co-existing or additional diseases with reference to an initial diagnosis. Comorbidity may affect the ability of individuals to function and also their survival; it may be used as a prognostic indicator for length of hospital stay, cost factors, and outcome or survival. (Online Medical Dictionary, 12 Dec 1998)

listed on the pharmaceutical benefits scheme. However, while this has led to an increase in the overall number of researchers in health economics in Australia, the interest has not been significant in Indigenous health where they are needed most.

The VicHealth Koori Health Research and Community Development Unit at the University of Melbourne attempts to address some of these gaps in Indigenous health economics research by concentrating its efforts in two key areas: the financing and organisation of Indigenous health systems, and the evaluation of Indigenous health services. While these do not encompass all the necessary areas for Indigenous health economics research, they do reflect what the Unit can and hopes to handle.

With regard to the financing and organisation of Indigenous health systems, emerging research involves investigations into the patterns and models of health care expenditure in Indigenous Australian health at both national and State levels. Health care delivery and increased equity (especially vertical equity) considerations in resource allocations are also issues in which the Unit will be actively involved.

There is a new body of research into models of service delivery in mainstream services. These include managed care-related models such as the General Practitioner Budget Holding Model, and casemix. Research into managed care in Indigenous Australian health, and the development of casemix measures for Indigenous health services are issues that need substantial research. Other issues include the practical application of different economic techniques of resource allocation, such as Program Budgeting and Marginal Analysis (PBMA) and the disease-based model of allocative efficiency, and further research on the current model of service delivery provided by existing Aboriginal Community Controlled Health Services <sup>4</sup>.

There will also be a need for the collection of more Indigenous health data, as funding bodies must have facts and figures to support any increase in funding for Indigenous health services. Improved data will also be useful in the monitoring and evaluation of new and existing Indigenous health services, particularly in the areas of public health, general practice, and pharmaceuticals consumption.

Outcome measurement through the empirical investigation of people's attitudes towards the distribution of health benefits, especially in Indigenous communities, is also likely to be on the research agenda. This is particularly important because of the lack of studies that identify the expectations of Indigenous communities in relation to primary health care interventions. Such research will help us to understand how Indigenous Australian communities view these services and enable a comparison with non-Indigenous community. An understanding of Indigenous Australian expectations would then be built into the outcomes of Aboriginal primary health care interventions. This will be useful when establishing appropriate performance indicators for such interventions, which will be designed both for accountability and an effective improvement in the health status of Indigenous Australians

Given that the National Aboriginal Community Controlled Health Organisation (NACCHO) is increasingly demanding transparency and accountability from State

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4. Aboriginal Community Controlled Health Services (ACCHS) refers to a model of primary health care delivery in Indigenous Australian communities, in which the health service is under the control of an Indigenous community by way of a board of direction. It is a model of participatory, holistic primary health care in which illness care is integrated with disease prevention, intersectoral collaboration and advocacy for social justice (Couzos and Murray, 1999).

and Territory governments in the allocation of Indigenous health funding, it is crucial that we establish Indigenous Australian-specific health outcomes for primary health care that can be used as benchmarks. This would also enable us to address the problem of accountability, and give service providers and funding bodies the information they need to evaluate these services.

## **4.2 Work to Be Done**

### **4.2.1: Research and evaluation**

Health economists argue that more health resources should be allocated to those who need it most. However, what does it mean to be in ‘need’? ‘Need’ is defined and measured in two ways—either as an epidemiological issue or as an effectiveness (capacity-to-benefit or interventionist) issue (McDermott *et al.* 1996)—and is a crucial concept in the debate over increased funding for Indigenous health services for equity reasons. Most research on the measure of need has been on the prevalence and incidence of disease, with little or no research done on the effectiveness (interventionist) approach.

Even within the epidemiological approach (which highlights the prevalence of health problems), need is commonly defined and measured using standardised mortality rates (SMR), with morbidity rates excluded. SMR is data collected from death rates, which is then adjusted for differences such as sex, age and location. A higher SMR indicates a greater need for intervention to solve the cause of deaths reflected in these rates. However, the use of SMR fails to reflect the full extent of ‘need’ in Indigenous communities as it excludes the many debilitating illnesses that are not necessarily fatal but chronic. These include diabetes, kidney, lung, and heart problems. Research on methods that incorporate standardised morbidity (illness) rates would improve the epidemiological approach for measuring need, as would further research into the value of interventions (McDermott *et al.* 1996).

The use of the effectiveness approach (capacity-to benefit concept) to define ‘need’ would not only allow for the possibility of using an appropriate method to measure such ‘need’, but would also measure the extent to which those people affected by a health intervention itself would benefit from that intervention (McDermott *et al.* 1996). This is especially important, as it is widely known that most methods used to address Indigenous people’s health issues seem to have had little or no impact at all on their health status. However, the capacity-to-benefit (effectiveness) method for measuring ‘need’ is not at all well described for many interventions (McDermott *et al.* 1996), and so is not widely used. It is necessary therefore, for increased research to be undertaken in the ‘measurement of the notion of need’, most especially the measurement of ‘need’ in Indigenous health.

More research into the social and cultural determinants of health is required urgently to highlight the sources of ill-health and inequities in Indigenous Australian health, and the relevance of equity in the Australian health system, especially in regards to the Indigenous population. This research must, of course, be balanced with an increase in health economics and policy research. Such an approach can only be determined in collaboration with Indigenous Australians. To date, however, organisations such as the National Health and Medical Research Council has ‘been shockingly neglectful of the need to research into the solutions or ameliorations of the health problems of Indigenous health’ (Mooney 2000).

Some States, such as New South Wales, Queensland and Victoria, have tried to modify horizontal equity when allocating resources so as to reflect the inequalities that exist (Jan & Wiseman 1996; McDermott et al. 1996). In fact, Queensland gives Indigenous communities a weighting of three compared to non-Indigenous communities, implying that an Indigenous person needs an equivalent of 300 per cent of any resource allocated to a non-Indigenous person (Runciman et al. 1996; Jan & Wiseman 1996; McDermott et al. 1996). In stark contrast, Victoria allocates only an extra 10 per cent on its casemix re-imburement mechanism for Indigenous Australians who visit hospitals for treatment (DHS 1999). Thus, there needs to be meaningful research carried out on vertical equity, so as to inform policy makers on equitable resource allocation.

However, there are practical difficulties associated with the weighting of health gains from different health interventions to the different groups (indigenous and non-indigenous groups) under consideration (Mooney 1996). Should one year gained by an indigenous person from a health intervention be treated as the same year gained by a non-indigenous person, given that indigenous people have poor health status, or should it have a higher value? In other words, if the year gained by an indigenous person is valued more (has more weight), then priority in the allocation of funds should be placed on indigenous health. The main problem is what weight should be put on Indigenous Australian health gains as opposed to what would be attached to non-Indigenous Australian gains from the same health intervention. And who decides that weight? Should it be the bureaucrats or the community? Even if it is the community, as Mooney (1996) suggests, should it be the Indigenous or non-Indigenous Australian community? These are some of the questions challenging health economists.

Institutionalist schools of thought emphasise the role of institutions and structures in coping with the failures of markets in health care, and examine why some economies have advanced and others (such as Indigenous health economies) have not (Harriss *et al.* 1995). This holistic approach to the analysis of health economic issues has led some economists (Jan 1998) to suggest the use of institutional economics as an alternative to conventional approaches when analysing and evaluating Indigenous health issues for policy purposes. This is a particularly relevant approach for Indigenous communities, which have always viewed the concept of health care in a more holistic way (NAHS 1994; NAHWP 1989), and been let down by more conventional economic approaches that have failed to capture critical issues in Indigenous health.

This failure has occurred largely because such approaches seek to analyse issues at a particular moment and take little cognisance of peculiarities of time and place. In addition, they only take into account the preferences of individuals, not preferences of society. This means that in conventional economics, the social welfare function<sup>5</sup> is the sum of individual preferences. However, social welfare may be more than this, especially if society prefers that individual preferences should be overridden by government. An example is when government forces people to wear seatbelts when driving because it makes travelling in a car safe, in spite of an individual's objections.

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<sup>5</sup> The social welfare function refers to a function or a method used to compute the welfare of society

In the formulation of health policy, most health economists advocate for government to take into consideration what society prefers, thereby overriding individual preferences, notwithstanding the prejudices and phobias of individuals who have stated their preferences. Health economists disagree as to whether it is what society as a whole wants that counts in policy making or what an individual prefers. Richardson (1998) argues that in the health sector population preferences can and should override individual preferences, and that there is strong evidence that most people agree with this. Thus, if individuals are misinformed about an issue such as whether more funding should be directed to indigenous housing to solve health problems, it would be left to government to override those preferences. One possible area of research for health economists would be to establish community preferences for the funding levels and expenditure patterns on Indigenous Australian health. Another would be to find out what Indigenous Australians expect from a health service, as this would help improve the viability of performance indicators in Indigenous health.

If community and population preferences can and should override individual preferences, it implies that the role of institutions—such as the community organisations that are present in the holistic approach to Indigenous health—should be taken into consideration (Jan 1998). This is why the use of the institutionalist approach to Indigenous health economics policy seems most relevant, yet it has not attracted much attention from health economists involved with Indigenous issues worldwide.

#### **4.2.2: Workforce issues**

There is much work to be done in recruiting and encouraging health economists to undertake research into the health of Indigenous Australians. More than half of the economics and policy research papers in the bibliography of this discussion paper were written by researchers who are not economists, which may reflect the increasing level of interest in Indigenous health economics and policy. However, it also raises concerns about the lack of trained personnel researching and advising policy makers from a health economics perspective. This shortage of Indigenous health economics and policy researchers highlights the need to increase the number of cadetships in the current health economic training program at both Monash and Sydney Universities.

The Commonwealth acknowledges that the Aboriginal and Torres Strait Islander primary health care workforce can be improved by ensuring a long-term approach to employing workers who are skilled and culturally appropriate (DHFS 1997). To do this effectively, it is important to increase the participation and capacity of Aboriginal and Torres Strait Islander people in the health workforce through such bodies as the National Aboriginal and Torres Strait Islander Health Workforce Strategy.

#### **4.2.3: Policy and health service reform**

There is a general agreement in health economics that ‘markets’ alone cannot address issues of supply and demand in health care services, hence the need for government involvement. This implies that government should either provide health services or regulate the suppliers of health services. This is because, in many cases patients do not have information to help them make rational decisions as to what and how much treatment one needs. Moreover, if a person is critically ill (such as in a coma) in an emergency situation they will not be able to make rational decisions as to what they

want and who can or cannot treat them, and this would require any nearest doctor to make decisions on their behalf. However, a conflict of interest may arise if the same doctor is acting on behalf of the provider of these services. To avoid this situation, research has been done on different forms of health services delivery such as the purchaser/provider model. This research is aimed at creating a health care market in which consumers (patients) and providers (hospitals, GPs and Community Health Centres) interact to achieve an efficient distribution of health services. It is hoped that this will protect consumers (patients) by delineating between service providers and those utilising the service.

The Commonwealth Government (DHFS 1997) has identified three major issues that affect Indigenous health status: access to good quality health care services; socio-economic and cultural circumstances (for example, removal from land and dislocation of communities); and environmental and specific-risk factors. Any system or model of health care delivery to Indigenous people should have ingredients that easily blend with any other approach which addresses these three major issues. If health economists can hope to make an impact on policy that addresses poor Indigenous health indicators, there is a need to collaborate with social and cultural researchers, and others involved in environmental issues.

The organisational and institutional structures of the Australian health care system act as impediments to Indigenous Australians' access and use of good quality health care services. These impediments are reflected in the low use by Indigenous people of mainstream health services and their high rates of hospital care. The Commonwealth Department of Health & Family Services (1997) acknowledges that Indigenous Australians use far more hospital care than their non-Indigenous counterparts, often for conditions where hospitalisation could have been avoided with appropriate primary health care. Other studies have also found this to be the case (Stamp *et al.* 1998), which highlights the need for reform in health service delivery to Indigenous Australians if their health status is to be improved.

Primary health care services, in particular, are seen as part of the foundation on which Indigenous Australians' health outcomes can be improved. Improving these services may shift the balance of effort away from acute health services and thereby release those hospital resources for use elsewhere. According to the Commonwealth Department of Health and Family Services (1997), the strategic approach to achieving good quality primary health care should involve the delivery mechanism that provides comprehensive and population-focused primary health care services. Thus, it should integrate primary clinical care, population health and health promotion activities. Several models have therefore been developed, such as the Aboriginal Community Controlled Health Services model currently operating throughout Australia.

Indigenous Australians need to have access to appropriately resourced primary health care services. For instance, Aboriginal and Torres Strait Islander people currently have significantly less access per capita to resources from the Medical and Pharmaceutical Benefits Schemes (Deeble *et al.* 1998). Non-primary care funding structures, such as Australian Health Care Agreements and the Public Health Outcomes Funding Agreements, must also facilitate effective action within those components of the health sector they resource.

Indigenous Australians face numerous socio-cultural, locational and/or economic barriers when attempting to use primary health care services (McDermott *et al.* 1996; Bennett *et al.* 1995; Ivers *et al.* 1997; Kunitz & Brady 1995; McDermott & Beaver 1996; Siggers & Gray 1991). They also experience poor linkages in service co-ordination between components of the health system. Furthermore, these health services lack population focus in the design and organisation of clinical services, population health and health promotion, and primary health care (DHFS 1997). Calls for empowerment and self-determination of Indigenous people have led to the development of Aboriginal Community Controlled Health Services in Australia as one of the models for health service organisation and delivery. Anecdotal evidence suggests that such services have had remarkable success in increasing the number of Indigenous people accessing and utilising primary health services. There is a need for a formal economic evaluation of these services to establish the extent to which they have addressed the problems of access and utilisation of primary health services by Indigenous Australians.

## **Conclusion**

Health economics as a profession is continuing to grow in Australia but there are still few qualified researchers and policy advisors. The Commonwealth and State governments have supported the teaching of health economists, through scholarships and cadetship positions in Sydney and Monash Universities, but there is a need for training especially geared to the Indigenous health sector and an increase in the teaching of health economics to medical and public health students and professionals.

Most health economists in Australia are heavily involved in teaching, research and policy development. The main areas of research include health systems and financing, priority setting and resource allocative efficiency in the health sector, health outcomes measurement, and health services evaluation. In Indigenous health, research has concentrated on equity in funding arrangements for Indigenous health services and programs, but the emphasis has mainly been on horizontal equity at the expense of vertical equity. Yet from epidemiological and other data, there is evidence to suggest the need for the use of vertical equity in the allocation of resources in Indigenous Australian health. Thus, research in vertical equity is urgently required as the theoretical frameworks for measurement are not obvious, and need development. Furthermore, it is unclear how policy makers and implementers can apply it in practice.

Another key area for research is in the funding and expenditure patterns of government in relation to its responsibilities for Indigenous health. Such research would contribute to the debate on health service reform for Indigenous communities. This reform might include an Indigenous health system that is quite different to that used by the non-Indigenous population. For example, the current form of Aboriginal Community Controlled Health Services could be a blueprint for the provision of primary health care services to all Indigenous people. Such a move would hopefully address some of the problems faced by Indigenous people when attempting to access effective and appropriate primary health care services.

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