



The National Aboriginal Community Controlled Health Organisation

NACCHO is the national peak body in Aboriginal health, representing over 120 Aboriginal Community Controlled Health Services throughout Australia.

Summary of supporting evidence underlying the
Position paper on improving access to PBS medications for Aboriginal peoples and Torres Strait Islanders

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1. What is the evidence that Aboriginal people form a unique group in Australia?

Aboriginal people are a unique group in Australia because they are the most marginalised of any identifiable group. On any marker of disadvantage, Aboriginal people consistently feature at the lowest point. Individual markers of disadvantage are not unique to Aboriginal people; for example, poverty and unemployment are not experienced solely by Aboriginal people. However the coalescence of markers of disadvantage into a single group is unique to Aboriginal people, as are the health outcomes which flow from them.

1.1 Selected health indicators

The *expected lifespan* of an Aboriginal and Torres Strait Islander male born in 1998-2000 is 56.0 years, which is 21 years less than the 76.6 years expected for all Australian males. For Aboriginal females, the expectation of life at birth is 62.7 years - more than 19 years less than the expectation of 82.0 years for all Australian females.¹

The median ('typical') *age of death* for Aboriginal and Torres Strait Islander males was 50.8 years in 2000, compared to 75.5 years for non-Indigenous males. Median ages at death for Aboriginal and Torres Strait Islander females was 57.4 years as against 81.9 years for non-Indigenous females.²

The dominant feature of mortality statistics for Aboriginal and Torres Strait Islander populations is the *marked excess of death in middle age*. While infant mortality is three times the non-Indigenous rate,³ it is in the middle years that age-specific death rates run to five or six times higher than the general population (Figure 1). This particular profile is highly unusual and has recently been found to be almost without comparison in the world.⁴

There are *four major causes of the premature mortality* experienced by Aboriginal and Torres Strait Islander populations.⁵ The following diseases together account for 70% of the *excess* of deaths experienced by Aboriginal and Torres Strait Islander people:

- circulatory conditions (largely coronary heart disease, but also rheumatic heart disease and stroke);
- injury and poisoning (road accident, drowning, suicide, homicide and others);
- respiratory disease (largely pneumonia, asthma and chronic obstructive airways disease);
- diabetes.

1 Australian Bureau of Statistics and Australian Institute of Health and Welfare. The health and welfare of Australia's Aboriginal and Torres Strait Islander Peoples, 2001. Canberra 2001. ABS Catalogue no. 4704.0.

2 Australian Bureau of Statistics and Australian Institute of Health and Welfare. The health and welfare of Australia's Aboriginal and Torres Strait Islander Peoples, 2001. op cit

3 Australian Bureau of Statistics. Births Australia, 2000. Canberra, Australian Bureau of Statistics, 2001.

4 Paradies Y, Cunningham J. Placing Aboriginal and Torres Strait Islander mortality in an international context. Aust NZ J Public Health. 2002;26:11-16

5 Australian Bureau of Statistics and Australian Institute of Health and Welfare. The health and welfare of Australia's Aboriginal and Torres Strait Islander Peoples, 2001. op cit

Of all indicators, life expectancy is the single most significant measure of a people's health status. The above statistics, more than anything else, is evidence of the need for urgent action.

1.1.1 Cardiovascular disease

In 2002 cardiovascular disease was the leading cause of death for Indigenous people, accounting for 28% of deaths registered as Indigenous (including ischaemic heart disease 16% and cerebrovascular disease (stroke) 5%).⁶ Indigenous people are more likely to suffer from cardiovascular disease (heart, stroke and vascular disease) than other Australians across all age groups.⁷ Based on the estimated completeness of Indigenous identification in these jurisdictions it is likely that the Indigenous:non-Indigenous ratio for cardiovascular mortality could be as high as 4.5.⁸

The disparity between Indigenous and non-Indigenous people is even greater in the younger age groups, where the cardiovascular disease death rate among 25-54 year olds is eight to ten times that of other Australians (possibly as high as 15 times).⁹

In terms of specific categories of cardiovascular disease, the differences in rates between Indigenous and non-Indigenous people in 1996-2000 were:

- coronary heart disease: 3-4 times higher for males and females;
- stroke: 3-4 times higher for males and 2.5-3.6 times higher for females;
- rheumatic heart disease: 27 times higher for males and 23 times higher for females; and
- other cardiovascular disease: 3-4.5 times higher for males and females.¹⁰

1.1.2 Respiratory disease

In 2002 deaths from diseases of the respiratory system accounted for 9% of all deaths registered as Indigenous.¹¹ For 1999-2001 (the most recent years for which detailed figures are available), deaths from respiratory disease were around 4 times more common for Indigenous people than non-Indigenous people living in Queensland, WA, SA and the NT.¹² Death rates were considerably higher for Indigenous people than for other Australians from the 35-44 years age group, for which ages the rates were around 20 times higher for males and 10 times higher for females.

For Indigenous males in 1999-2000 respiratory disease was responsible for 15% of all hospital separations (excluding those for renal dialysis), and for 14% of all separations of

6 Australian Bureau of Statistics, Australian Institute of Health and Welfare (2003) *The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples*, ABS Catalogue Number 4704.0; AIHW Catalogue Number: AHW11

7 Ibid

8 Thomson N Unpublished Analysis of Data from the AIHW mortality Data Base, 2003

9 Australian Bureau of Statistics, Australian Institute of Health and Welfare (2003) *The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples*, ABS Catalogue Number 4704.0; AIHW Catalogue Number: AHW11

10 Thomson N *opcit*

11 Australian Bureau of Statistics (2003) *Causes of Death 2002* (Catalogue Number: 3302.0)

12 *Opcit* at 6

Indigenous females (excluding those for renal dialysis and pregnancy-related conditions).¹³ The separation rates for respiratory disease were much higher for Indigenous people than for non-Indigenous people - 2.6 times higher for males and 3.2 times higher for females (based on the under-identification of Indigenous people in the hospital inpatient collections, these ratios could be up to 25% higher). Indigenous rates were particularly high in infancy and early childhood.

1.1.3 Diabetes

The age-adjusted prevalence of diabetes for Indigenous people (which takes into account the younger age structure of their population) was 11%, almost four times higher than the age-adjusted prevalence of 3% for non-Indigenous people.¹⁴ The age-adjusted prevalence for Indigenous people was 16% in remote areas and 9% in non-remote areas. Taking account of the fact that for every person identified as having diabetes in surveys such as this there is likely to be another person with undiagnosed diabetes, the age-adjusted prevalence among Indigenous people is probably between 20% and 25%, and possibly higher than 30% in remote areas.¹⁵ These figures are consistent with the findings of a major recent review, which concluded that the overall prevalence among Indigenous people was between 10-30% (2 to 4 times that among non-Indigenous people).¹⁶ The onset of diabetes occurs at a much lower age in Indigenous than non-Indigenous people.¹⁷

In 2001-2002 deaths due to diabetes accounted for 7.6% of total Indigenous deaths compared with 2.4% of total non-Indigenous deaths.¹⁸ In 1999-2001, deaths from endocrine, nutritional and metabolic disorders (predominantly diabetes) were eight times more common than expected for Indigenous males living in Queensland, WA, SA and the NT, and 12 times more common for Indigenous females.¹⁹

1.1.4 Renal disease

Rising rates of renal disease and renal failure are a serious public health threat to Indigenous Australians. The high rates of end-stage renal disease among Indigenous people have only been fully recognised in recent years. Notifications of end-stage renal disease (ESRD) are much higher for Indigenous people than they are for non-Indigenous

13 Lehoczky S, Isaacs J, Grayson N, Hargreaves J (2002) Hospital Statistics: Aboriginal and Torres Strait Islander Australians: 1999-2000 (ABS Catalogue Number 4711.0; AIHW Catalogue Number: IHW-94711.0

14 Australian Bureau of Statistics (2002) National Health Survey: Aboriginal and Torres Strait Islander Results. ABS Catalogue Number: 4715.0

15 Dunstan D, Zimmet P, Welborn T et al. (2001) *Diabesity and Associated Disorders in Australia, 2000: The Accelerating Epidemic*, Melbourne International Diabetes Institute

16 De Courten M, Hodge A, Dowse G, King I, Vickery J, Zimmet P (1998) Review of the Epidemiology, Aetiology, Pathogenesis and Preventability of Diabetes in Aboriginal and Torres Strait Islander populations., Commonwealth Department of Health and Family Services

17 Couzos S, Metcalfe S, Murray R, O'Rourke S (1998) Systematic Review of Existing Evidence and Primary Care Guidelines on the Management of non-Insulin Dependant Diabetes in Aboriginal and Torres Strait Islander Populations, Office for Aboriginal and Torres Strait Islander Health Services, Commonwealth Department of Health and Aging.

18 *Opcit* at 11

19 *Opcit* at 6

people across most of the country, but rates are particularly high in remote areas - up to 30 times higher than the total national incidence.²⁰

Between 1997 and 2001, a total of 719 new Indigenous patients were identified with ESRD - the age-standardised notification rate of 645 new cases per 1,000,000 population for Indigenous people was almost nine times the rate of 75 per 1,000,000 for non-Indigenous people. The highest rates were for Indigenous people in the NT (1,471 per 1,000,000) and WA (906), but Queensland (691) and SA (562) also had very high rates. Between 1999 and 2001, compared with rates for the total population, eight times as many Indigenous people died of chronic kidney disease.²¹

In 2001, about 84% of all Indigenous dialysis patients on the ANZDATA registry were receiving haemodialysis treatment in either a hospital or a hospital satellite unit.²² In 2001-02 'Care involving dialysis' accounted for 33% of all hospital separations among Indigenous people.²³ Indigenous men were around six times as likely to be hospitalised for 'care involving dialysis' as non-Indigenous men; Indigenous women were approximately 14 times as likely to be hospitalised for this reason than their non-Indigenous counterparts.

Despite high treatment rates, a recent analysis of Indigenous ESRD patients commencing treatment between 1993 and 1998 revealed inequitable access to treatment services for a significant proportion of these patients.²⁴ Almost half of all Indigenous ESRD patients came from regions without dialysis or transplant facilities, and around one-sixth from regions with only satellite dialysis facilities. At the beginning of 2001, only five of the 16 ATSI regions with the highest Indigenous ESRD incidence rates had satellite dialysis units.

1.2 Selected social indicators

By any social indicator, Aboriginal and Torres Strait Islander people are the most disadvantaged sub-population in Australia.²⁵ Indigenous disadvantage results from the history of colonisation and dispossession and is reflected today in measures of education, employment, income and housing.²⁶ The National Aboriginal Health Strategy²⁷ pointed

20 Cass A, Cunningham J et al (2001) Regional Variation in the Incidence of End-stage Renal Disease in Indigenous Australian, *Medical Journal of Australia*, 175:24-27

21 Opcit at 6

22 Australian Bureau of Statistics, Australian Institute of Health and Welfare (2003) *The health and welfare of Australia's Aboriginal and Torres Strait Islander peoples 2003*. (ABS Cat no.4704.0, AIHW Cat no. IHW11) Canberra: Australian Bureau of Statistics

23 AIHW (2003) *Australian Hospital Statistics 2001-2002*, AIHW Catalogue Number: HSE-20

24 Opcit at 20

25 O'Donoghue, L. (1992). "A vision for the future." *Impact* October: 11-13.

26 Commonwealth Department of Health and Family Services (1997). *Submission from the Commonwealth Department of Health and Family Services to the House of Representatives Standing Committee on Family and Community Affairs Inquiry into Indigenous health. Inquiry into Indigenous health: submissions. Volume 1, House of Representatives Standing Committee on Family and Community Affairs: 215-316.*

27 National Aboriginal Health Strategy Working Party (1989). *National Aboriginal Health Strategy*. Canberra, Department of Aboriginal Affairs

out that Indigenous people are poorer than other Australians, experience greater unemployment, have lower educational attainment, live in poorer housing and have lower access to basic facilities (such as clean water, sewerage and waste disposal).²⁸

1.2.1 Education

The Royal Commission into Aboriginal Deaths in Custody noted that Indigenous education is characterised generally by lower levels of success, lower levels of achievement, lower retention rates and inadequate education. It felt that low levels of attendance and low retention rates were a reflection of the widely held Indigenous perception that the education system is irrelevant and inappropriate to their needs.²⁹

According to the 1996 census, almost 3 per cent of Aboriginal and Torres Strait Islander people aged 15 years or more had never attended school, compared with less than 1 per cent of the total population of Australia.³⁰ Of those people who stated the age at which they left school (as with all collections of this type, not all respondents answer all questions), 40 per cent of Indigenous Australians and 34 per cent of all Australians reported leaving school before the age of 16 years. The proportion of the Indigenous population attending a university or other tertiary institution was 1.6 per cent, less than half that of the total population (3.6 per cent). Among those who had left school, over 34 per cent of the total Australian population had some form of post secondary school qualification (including degrees, diplomas, and trade or basic qualifications), compared with less than 14 per cent of Indigenous Australians.³¹

1.2.2 Employment Status

The contraction in employment opportunities during the last two decades has been felt keenly by the Indigenous population.³² Factors that contribute to the current poor employment status of Aboriginal and Torres Strait Islander Australians include: the disappearance of employment in primary and pastoral industries in which Indigenous people previously participated strongly³³; a reluctance by non-Indigenous employers to employ Indigenous people; and lower educational levels.³⁴ From information collected by the census,³⁵ almost 25 per cent of Indigenous males aged 15 years or over were unemployed, as were 20 per cent of Indigenous females. These levels - influenced to some degree by the Community Development Employment Projects scheme (CDEP - a scheme which offers unemployed Indigenous Australians the opportunity of working in

28 Ibid

29 Aboriginal Affairs Department of Western Australia 1996

30 1998

31 Ibid

32 Gray, A. and H. Tesfaghiorghis (1991). *Social indicators of the Aboriginal population of Australia*. Canberra, Centre for Aboriginal Economic Policy Research, Australian National University.

33 Ibid

34 Aboriginal Affairs Department of Western Australia (1996). "Socio-economic indicators of Aboriginal people." *Aboriginal Affairs Department of Western Australia Bulletin* 6.

35 Australian Bureau of Statistics (1998). *1996 Census of population and housing Aboriginal and Torres Strait Islander people*. Canberra, Australian Bureau of Statistics (which uses different procedures to those used in the compilation of the standard employment indicators)

community-managed projects and enterprises if they forego unemployment-related social security entitlements), which operates predominantly in rural and remote areas - are more than double those for the total population: 10 per cent of males and 8 per cent of females were unemployed.

The CDEP is the main source of employment for Aboriginal and Torres Strait Islander people in rural areas. Of those Indigenous people in rural areas who had income from employment, 53 per cent derived it from the CDEP.³⁶ The level of unemployment within the Indigenous population varies between States and Territories, and between city and rural areas.

Just under a quarter of Indigenous Australians were employed in unskilled occupations ('labourer and related workers' in the Australian Standard Classification of Occupations (ASCO)) and a little over an eighth as managers or professionals (ASCO 'managers and administrators' and 'professionals'). These proportions are the reverse of those for the total Australian population, with more than a quarter being employed as managers or professionals, and less than one-tenth in unskilled occupations.³⁷

1.2.3 Income

The low levels of education, high rates of unemployment and the greater employment in unskilled occupations result in a substantially lower economic status for Indigenous than other Australians. In 1994, 59 per cent of Indigenous people received a gross annual income less than \$12,000, compared with 46 per cent of the total population. Indigenous average income at that time was \$14,000, 30 per cent less than the average of \$20,000 for the total population.³⁸ Similar levels were reported in the 1996 census data.³⁹ The median income for people in the 'prime working age' group, 25-44 years, was almost 40 per cent lower (\$265) for Indigenous people than the total population (\$437). Of people aged 15 years or older, 8 per cent of Aboriginal and Torres Strait Islander people reported having an individual income of \$600 a week or more, compared with 21 per cent of the total Australian population.

Recent census estimates of the contribution of social security payments to Aboriginal and Torres Strait Islander incomes are not available, but data from the National Aboriginal and Torres Strait Islander Survey, 1994⁴⁰ reveal that government payments were the main source of income for 55 per cent of Indigenous people. The prospects for Indigenous employment and income are not bright. With the restructuring of the Australian economy, 'labour markets will be tight and those, like many Indigenous people, with few skills, little work experience and locational disadvantage will have difficulty finding gainful

36 Australian Bureau of Statistics (1996). *Income of Indigenous people*. Australian Social Trends 1996. Canberra, Australian Bureau of Statistics. Catalogue No. 4102.0: 121-125.

37 Australian Bureau of Statistics (1998). *1996 Census of population and housing Aboriginal and Torres Strait Islander people*. Canberra, Australian Bureau of Statistics.

38 *Opcit* at 36

39 *Opcit* at 37

40 *Opcit* at 36

employment'.⁴¹ As a result, the economic disadvantage and welfare dependency of many Aboriginal and Torres Strait Islander Australians is likely to continue.

1.2.4 Housing and Physical Environment

The level and standard of current housing is a clear expression of Indigenous disadvantage, not only in remote areas, but also in long-settled parts of Australia. The sub-standard living conditions are generally characterised by overcrowding, inadequate water and washing facilities, poor sanitation and sewage disposal, limited food storage and sub-optimal food preparation facilities. In 1994, the National Aboriginal and Torres Strait Islander Survey revealed that 70 per cent of dwellings occupied by Indigenous households were rented (compared with 28 per cent of all dwellings in Australia), and 23 per cent of Indigenous people living in rented dwellings shared with eight or more other residents.⁴² The 1996 census found that the average number of people per household was higher for Indigenous than for other households: 3.7 people per household compared with 2.7.⁴³

In 1994, 12 per cent of all dwellings occupied by Indigenous households were in need of repair, 11 per cent of dwellings did not have enough bedrooms and 10 per cent did not have enough living area. Additionally, 6 per cent of dwellings had inadequate bathing facilities, 6 per cent did not have sufficient insulation or ventilation and 1 in 10 Indigenous people reported that their water, toilet or electricity had broken down in the previous four weeks.⁴⁴ Mainly in remote areas of Australia about 1 in 5 people had experienced these problems.⁴⁵ The survey found that almost all dwellings occupied by Indigenous households in capital cities and other urban areas had electricity and/or gas connected, toilet, running water and bathroom/shower facilities. However, 8 per cent of rural dwellings did not have electricity and/or gas connected, 8 per cent did not have running water, 9 per cent did not have a toilet and 11 per cent did not have a bathroom/shower.⁴⁶

An assessment of the housing need of Indigenous Australians using normative indicators derived from the 1991 Census of Population and Housing noted that there were clear differences in the level of disadvantage in housing between regional populations. While Indigenous people living in urban areas were clearly disadvantaged in their housing status relative to non-Indigenous people, they were significantly less disadvantaged than the rural Indigenous population.⁴⁷

41 Altman, J. and W. Sanders (1991). *From exclusion to dependence: Aborigines and the welfare state in Australia*. Canberra, Centre for Aboriginal Economic Policy Research, Australian National University.

42 Australian Bureau of Statistics (1996). *Housing conditions of Indigenous people*. Australian Social Trends. Canberra, Australian Bureau of Statistics. Catalogue No. 4102.0: 142-145.

43 *Opcit* at 37

44 *Opcit* at 36

45 Australian Bureau of Statistics and the Australian Institute of Health and Welfare (1997). *The health and welfare of Australia's Aboriginal and Torres Strait Islander peoples*. Canberra, A joint program of the Australian Bureau of Statistics and the Australian Institute of Health and Welfare.

46 *Opcit* at 36

47 Jones, R. (1994). *The housing need of Indigenous Australians, 1991*. Canberra, Centre for Aboriginal Economic Policy Research, Australian National University.

The disadvantages experienced by the rural Indigenous population were exemplified in a 1994-95 survey of environmental health conditions in 155 remote and rural Aboriginal communities in Western Australia. Environmental health problems were prevalent and often serious. Over one-third of the communities had water supply or sanitation problems, 70 per cent had housing problems (with overcrowding and substandard housing being commonplace) 36 per cent had difficulties with waste water disposal, 37 per cent had no rubbish disposal, and in others the methods of disposal were often inadequate. Pests were problems in 44 per cent of communities and the hygiene and maintenance of communal toilets was unacceptable in 25 per cent.⁴⁸

As part of the National Aboriginal Health Strategy, the Aboriginal and Torres Strait Islander Commission (ATSIC) and the Australian Construction Services initiated in 1992 a two-stage survey of Indigenous housing and community infrastructure needs.⁴⁹ The first stage addressed the needs of around 175,000 Indigenous people living in rural and remote parts of the country, and found that almost 10,000 family units (including sole parent and extended families) living in these areas - more than 40,000 Indigenous people - required housing. As well, 7,000 of the 12,000 houses owned and/or administered by Aboriginal or Torres Strait Islander organisations required repairs or replacement. The estimated cost of providing the required houses was \$1,088 million, with a further \$280 million needed for repairs.

As well as assessing the housing needs of Indigenous people living in rural and remote areas, the stage one survey also examined the availability of a number of essential services in discrete Aboriginal and Torres Strait Islander communities (including homelands/outstations). For the more than 88,000 people living in discrete communities, the survey found that:

- more than 14,600 people did not have access to water which complied with NHMRC guidelines for human consumption
- around 3,600 people lived in communities without a sewage disposal system, and almost 12,300 lived in communities where the system did not work satisfactorily
- almost 6,800 people did not have access to a garbage collection service
- more than 8,400 people lived in communities without electricity supply.

48 Gracey, M., P. Williams, et al. (1997). "Environmental health conditions in remote and rural Aboriginal communities in Western Australia." *Australian and New Zealand Journal of Public Health* 21(5): 511-518.

49 Aboriginal and Torres Strait Islander Commission and the Australian Construction Services (1993). 1992 National housing and community infrastructure needs survey Final report Stage 1: Australia, States and Territories. Canberra, Aboriginal and Torres Strait Islander Commission

2. Access barriers

2.1 *Why do Aboriginal people need Aboriginal specific health services?*

The following is an excerpt from ‘National Strategies for Improving Indigenous Health and Health Care.’⁵⁰

Indigenous Australians’ access to primary health care is a problem in all areas of Australia, but varies with location. Aboriginal and Torres Strait Islander Australians do not access mainstream services, even in cities where they are readily available, to the level that would be expected given their health status. The government’s approach to improving access is based on two complementary strategies: increasing the capacity of the Indigenous-specific sector, and enhancing the accessibility of the mainstream primary health care system, through adjustments to MBS and PBS and other measures. Both of these strategies are essential, because Indigenous Australians (like all Australians) need good access to a complex network of primary health care services with good linkages. Both Indigenous-specific and mainstream services are needed by Indigenous communities.

Firstly, Indigenous Australians need different services because their health needs are different. In particular, the greater prevalence of chronic diseases in the Indigenous population means that a complex ongoing set of interventions is required which can only be provided by a skilled multi-disciplinary workforce, able to sustain effective long-term treating relationships and links with other providers. General practice services funded through the MBS are not able to meet these needs fully (Keys Young 1997), while Indigenous specific agencies are designed to provide the basic health infrastructure required for effective service delivery. Secondly, for several reasons including historical and cultural ones, mainstream health services are not generally capable of meeting the needs of Indigenous Australians and this makes it hard for Indigenous people to use them. This lack of capacity is more pronounced in some areas where traditional cultures and languages are still practised. Work to change the responsiveness of mainstream services should continue, but effective primary health care is needed now. Many Indigenous Australians will go without primary health care (Keys Young 1997, p. 61) if a service that specifically welcomes them and responds appropriately to their needs is not available. Thirdly, the Indigenous population constitutes such a small proportion of the total primary health care ‘market’ in many areas of Australia (even if they used mainstream general practitioners (GPs) and other services proportionately) that their power in the market to stimulate mainstream health services to be responsive to their needs is severely limited. Their high levels of poverty exacerbate this problem. GPs are responsive to their markets, and a strategy that relied on GPs making independent decisions to substantially change their services to meet the needs of 2% of the market would be unlikely to produce significant results, and neither would many of them have

⁵⁰ Dwyer J, Silburn K, Wilson G, La Trobe University, Commissioned by Office of Aboriginal and Torres Strait Islander Health Report Number 1

the skills and experience to do so. However, there are some outstanding exceptions among GPs and mainstream community health agencies, and the work of these individuals and groups makes a valuable contribution, as do GPs who work part time in local Indigenous-specific clinics. Finally, the role of Indigenous-specific services is not simply one of *substitution* for mainstream services. They also provide a base for training of both Indigenous and non-Indigenous health professionals, and for research and development of new approaches to Indigenous health (either alone or in partnership with mainstream agencies and researchers). This aspect is particularly important in urban services, because of their proximity to medical schools etc. and to the headquarters of mainstream specialist providers (e.g. the leadership of child and adolescent mental health services tends to be based in capital cities). Indigenous-specific services in all areas provide the referral pathway to specialist and tertiary services, and support the providers in their responses to Indigenous patients. They are also the appropriate base for community development approaches to improving health.

2.2 What is the evidence for under-use of medicines by Aboriginal people?

There is compelling evidence of poor uptake and barriers in access to medicines. The Keys Young review in 1997 for the Health Insurance Commission documented widespread barriers in access by Aboriginal people to health care and medicines, most of which remain relevant.⁵¹ A particularly striking finding of the report was the consistency in the nature and extent of access barriers across various remote, regional and urban trial sites.

What expenditure data that is available suggests substantial under-use of medicines, in spite of the much higher burden of acute and chronic disease. The two national expenditure reports which have been undertaken found per capita PBS spending for Aboriginal people to be of the order of a quarter to a third of that spent on the rest of the population.

One of the four central objectives of the National Medicines Policy, 2000, is achieving 'timely access to the medicines that Australians need, at a cost individuals and the community can afford'.⁵² The Policy also states that 'cost should not constitute a substantial barrier to peoples' access to the medicines they need. Therefore normal market mechanisms may be tempered in access arrangements to increase the affordability of important medicines.'⁵³ The inequity of access to medications by Aboriginal people is reflected in the National Medicines Policy, as it notes 'there are substantial access barriers and evidence of under-use of medicines by Aboriginal and Torres Strait Islanders peoples.'

In addition, the peak advisory group to the Federal Minister for Health on pharmaceutical issues, the Australian Pharmaceutical Advisory Council, has prioritised improving access

51 Keys-Young. Market Research into Aboriginal and Torres Strait Islander Access to Medicare and the Pharmaceutical Benefits Scheme. Report for the Health Insurance Commission, November 1997.

52 National Medicines Policy, 2000 Commonwealth Government of Australia

53 Ibid

to PBS medications for Aboriginal people as a key objective in their Strategic Plan 2002 – 2005.⁵⁴

2.3 Isn't access only a problem in remote areas?

As evidenced by the table below, Aboriginal and Torres Strait Islander peoples' mortality rates do not differ significantly across geographical locations.

Impact of the Aboriginal and Torres Strait Islander population on the total death rate for all Australians, 1992-96 (deaths per 100,000 population)

Population group	Metropolitan	Rural	Remote	Total
Males				
Indigenous	1,500.4	1,559.0	1,879.2	1,739.6
Non-Indigenous	800.0	836.9	873.5	811.0
All Australians	804.6	845.8	1,055.1	830.5
Females				
Indigenous	983.9	1,170.2	1,418.2	1,273.9
Non-Indigenous	520.7	521.3	494.5	520.3
All Australians	524.4	528.1	708.5	535.0

*Based on data for South Australia, Western Australia and the Northern Territory Aged-standardised to the Australian population at 30 June 1991.*⁵⁵

The percentage of Aboriginal and Torres Strait Islander peoples benefiting from the arrangements under s100 of the National Health Act is 36.7%.⁵⁶ However, the life expectancy of Victorian Aboriginal people, none of whom benefit from the arrangements under section 100, is just two years higher than the lowest life expectancy of indigenous people in the country being South Australia.⁵⁷ This means that even where it can be argued that no geographical barrier to access of medications can be reasonably argued, life expectancy still languishes at around 20 years less than non-Indigenous people.

The Keys Young study found that health service personnel recommended immediate access to medications by Aboriginal people when they present at an Aboriginal health service. In addition, virtually all Aboriginal community controlled health services dispense some medication directly, even in urban areas with pharmacies nearby, because they regard it as essential to ensuring that a client receives what he or she requires. Health care providers are particularly concerned about the health consequences of non-compliance due to inability to afford medication. Some services divert funds from much needed primary health care service delivery to 'run a tab' at the local pharmacy to cover the co-payments for their most needy clients, or for children's medications, while others try to accumulate medication samples to keep on hand for emergency cases.

Danila Dilba, the Aboriginal Medical Service in Darwin, spends over \$340,000 per year on medications – all used to meet the co-payment for their Aboriginal clients. Even

⁵⁴ Australian Pharmaceutical Advisory Council, Strategic Plan 2002 – 2005

⁵⁵ Australia Institute of Health and Welfare, *The Health and Welfare of Aboriginal and Torres Strait Islander Peoples* 1998

⁵⁶ Australian Indigenous population estimate is based on actual census count 2001. The percentage drops to 32.7% if estimated rather than actual count is used as the denominator: ABS 2001

⁵⁷ Life expectancy in Victoria for males and females is 57 years and 63.8 respectively. For indigenous male and female South Australians it is 55.2 and 61.7 years respectively: AIHW 2003

though this funding is much needed for other programs, the service diverts funds for this purpose because they know otherwise people would not be able to get the medication they need.

The Victorian Aboriginal Health Service in Melbourne spends approximately \$200,000 per year on medications provided from the service, plus a further \$72,000 per year on meeting co-payment costs.

This expenditure on medications in urban areas is further evidence that barriers to accessing PBS medications exist across all areas – not just in remote locations.

3. The link between medicines and health outcomes

3.1 Medicines play an important role in health care

The pillar of the National Medicines Policy is the Pharmaceutical Benefits Scheme (PBS) which provides timely access to the medicines that Australians need, at a cost individuals and the community can afford. The system is hailed internationally as a model providing for equitable access to medicines. Public health gains are maximized through the PBAC review of drugs, which provides safeguards to ensure a standard for the quality use of medicines. It would be trite to say that the Australian Government has made an unequivocal commitment to prioritizing timely access to quality medicines in recognition of the benefits not only to health outcomes but as cost effective public health policy.

Advances in disease control and prevention have been linked with the use of pharmaceuticals. Much of the reduction in blood pressure, which is crucial to the reduction in deaths and disability from coronary heart disease, is substantially due to increased use of drugs including diuretics, beta blockers, calcium blockers and ACE inhibitors.⁵⁸

3.2 What are the health effects of restricting medication use because of cost?

Evidence is emerging that restricting prescribed medicines because of cost barriers is detrimental to health. Studies demonstrated significantly worse health outcome among individuals who reported restricting their use of prescription medications because of cost. In one study, cost related medication restriction was associated with almost twice the odds of experiencing a significant decline in overall health over two years of follow up.⁵⁹ In another, those with cardiovascular disease with cost-related medication restriction reported more angina and had higher rates of non-fatal heart attacks and strokes.⁶⁰

58 Returns on investment in public health – an epidemiological and economic analysis prepared for the Department of Health and Ageing 2001

59 The Health Effects of Restricting Prescription Medication Use Because of Cost, Heisler et al, *Medical Care*, Volume 2, Number 7, July 2004

60 Bierman and Bell, *Medical Care*, Volume 42, Number 7, July 2004)

4. The Case for Improving Uptake of Medications

4.1 What is the evidence for increased use of medicines will result in improved health outcomes for Aboriginal and Torres Strait Islander peoples?

46.4% of excess deaths amongst Aboriginal and Torres Strait Islander peoples are caused by circulatory diseases, respiratory diseases and diabetes that is, deaths in excess of whole of population data. (Table 1)

Pharmacological-based risk-reduction interventions go directly to improved health outcomes and impact positively on secondary prevention and treatment interventions.⁶¹

In all major diseases causing premature death in Aboriginal and Torres Strait Islander peoples pharmacological intervention is recommended. (Appendix 1)

4.2 How do we know that free medication will improve compliance?

Other than the issues of poverty discussed above, the Commonwealth evaluation of Section 100 illustrates the case of some health professionals who initially queried whether free medications would improve compliance, and who subsequently realised access to medications in fact did change ability to manage medications.

For example one Queensland doctor noted:

“I came from the old colonial view that if people did not pay for their medicines they wouldn’t value them. I was expecting a complete mess. However like Paul on the road to Damascus I have seen the light. The program has been great for patients and great for staff. No-one is a greater convert than me .”

A Tiwi Island trial looked at effective implementation of primary health care with medications to treat renal disease and hypertension.⁶² Over the course of the study adherence to medications increased and 65% of participants reported taking their medications 70% of the time. This compares with the World Health Organisation’s figures of 50% adherence to long term therapies in developed countries.⁶³

Among other things, this study demonstrates that Aboriginal people are interested in their health and will take medication over the long term when appropriately supported to do so.

4.3 What evidence is there that providing clients with medications direct from an Aboriginal Health Services will or does result in improved health outcomes?

Recent evidence from the Derby Aboriginal Health Service, Western Australia points to significant improvements in clinical indicators for patients diagnosed with diabetes and receiving treatment and medicines from the medical service. This data indicates two important outcomes for patients accessing the Aboriginal Health Service. Firstly, once a person is diagnosed by the AHS, management by the service results in improved clinical outcomes. The second is that a correlation can be drawn between the introduction of the

61 Adherence to Long-Term Therapies: Evidence for Action, World Health Organisation 2003 at 20

62 Hoy WE, Wang Z, Baker PR, Kelly AM. Secondary prevention of renal and cardiovascular disease: results of a renal and cardiovascular treatment program in an Australian aboriginal community. *J Am Soc Nephrol.* 2003 Jul;14(7 Suppl 2):S178-85

63 Adherence to Long-Term Therapies: Evidence for Action, World Health Organisation 2003

supply of medicines from the service and improved health outcomes for clients. This is even though Derby Aboriginal Health Service is approximately 1 kilometre from a community pharmacy. (Appendix 2)

4.4 What about Quality Use of Medicines?

A Commonwealth study (unpublished) of Aboriginal Health Services who have accessed medications under the arrangements pursuant to s100 of the National Health Act states that the arrangements do not have a negative impact on QUM.⁶⁴ Rather the arrangements provided the opportunity to identify existing problems.⁶⁵ Increased funding as a result of the arrangements and a closer relationship with pharmacists meant that many services had made significant progress towards addressing these issues.⁶⁶

Further to this, the development of Standard Drug Lists (SDL) by some services has progressed QUM through evidence-based prescribing from the SDL resulting in judicious, appropriate, safe and effective quality use of medicines.⁶⁷

4.5 What about Consumer Quality Use of Medicines?

A survey of Aboriginal and Torres Strait Islander Health Services (ATSIHS) for the purposes of evaluating PBS medicine supply arrangements under section 100 of the National Health Act found that 33.3% of clients reported an increase in the amount of information provided on medicines and 58.4% of clients reported an increase in their knowledge of the use of their medicines.⁶⁸

Amongst other things, the above is evidence that holistic health care services for Aboriginal people are appropriate and result in improved QUM for consumers of the service. Aboriginal people's definition of health is unlike that of much of mainstream Australia, in that Aboriginal people do not silo clinical health objectives, social and emotional well being and the overall well being of the community. As such, to separate points of distribution of health care, such as currently occurs when people receive a script from the Aboriginal Health Service and are expected to go to a pharmacist elsewhere, who is not part of their perceived health care provider community, is one of the factors that results in what can only be described as an overwhelming under-use of medicines and lack of quality use of medicines on the part of the consumer. Failure to draw this link between the community model for appropriate delivery of holistic health care, including the dispensing of medicines and consequent education on medicines, is a failure to understand the Aboriginal person's definition of health.

64 Evaluation of PBS Medicine Supply Arrangements for Remote Area Aboriginal Health Services Under s100 of the National Health Act, Cooperative Research Centre for Aboriginal and Tropical Health, Menzies School of Health and Program Evaluation Unit, University of Melbourne, 2004, unpublished

65 Ibid

66 Ibid

67 See for example the Kimberley Aboriginal Medical Service Council

68 Ibid

5. What makes Aboriginal people different from other disadvantaged groups in the community such that special arrangements should be implemented for their benefit?

The individual health determinants affecting Aboriginal health are not unique but their co-existence and coalescence in one group is unique by international standards. While other groups suffer disadvantage in accessing health services and medicines, no other population suffers the burden of disease that Aboriginal and Torres Strait Islander people do.⁶⁹

5.1 Would there be negative community attitudes to a 'special program' for Aboriginal peoples' access to medicines?

There is some risk that non-Aboriginal people in the community may object to Aboriginal clients of Aboriginal Medical Services having access to medicines at no cost. However, it should be noted that:

- Section 100 has already been introduced into a range of larger and smaller remote centres with significant non-Aboriginal populations – Alice Springs, Broome, Mt Isa, Kalgoorlie, Walgett, Ceduna, and others – without a significant backlash.
- The “visibility” of the program is generally quite low, and any promotion of the program has been done with an emphasis on the advantages of providing pharmaceuticals to Aboriginal people as part of comprehensive primary health care service provision, rather than emphasising the payment aspects. It is proposed that the program could be introduced in a similar way for metropolitan and rural areas.
- It is unlikely that the introduction of Section 100 arrangements to metropolitan and rural centres would be more “visible” than in these remote areas. In fact, non-Aboriginal people in metropolitan areas generally have far less contact with Aboriginal people than do their counterparts in remote centres and would often have little awareness of the existence of Aboriginal health services, let alone their arrangements for providing pharmaceuticals.
- In any case, most Aboriginal community controlled health services are already providing “free” medicines for as many of their clients as they can afford to, through “stamping” prescriptions so that the co-payment is put on the service’s account at the pharmacy, rather than being made by the patient. Extending the Section 100 arrangements would not mean “free” medicines for the first time, but would allow the medicines to be provided at the health service, and would allow for them to be paid for through the PBS rather than base grants.
- Any community backlash could be easily answered with evidence that Aboriginal people are demonstrably a special case, as the group suffering by far the worst health status, most intense poverty, and lowest access to pharmaceuticals, of any identifiable group in the Australian population.

5.2 What about non-Aboriginal people who use the Aboriginal Health Services?

Current protocol for use of the Section 100 scheme in Aboriginal Health Services in remote areas is all clients of an Aboriginal health service are included in the access

⁶⁹ It is accepted that Aboriginal people suffer a burden of disease at least three times greater than their non-Aboriginal counter-parts.

arrangements – both Aboriginal and non-Aboriginal. However, it is important for all stakeholders – including the Government, NACCHO and the Pharmacy Guild of Australia – that the primary beneficiaries of the program are Aboriginal people as the program is designed to overcome access barriers specific to this population.

To date, this arrangement has worked well not only in very remote, isolated locations with almost 100% Aboriginal clientele, but also in remote centres, such as Alice Springs, Broome and Kununnurra. Such centres have much larger populations and sometimes larger proportions of non-Aboriginal clients. For example, the Aboriginal health service in Kununnurra is the only GP service in the town and takes its responsibilities to the non-Aboriginal residents seriously. The current arrangement allows individual Aboriginal health services the flexibility to develop protocols for access to free medications for their non-Aboriginal clients which suit their local environment. While there have been some non-Aboriginal clients who have questioned the reasons for having a special program for Aboriginal people, this has been effectively countered by explanations of the rationale for the program, including the significantly lower PBS expenditure for Aboriginal people and their overwhelmingly higher rates of illness.

This experience indicates there would be no significant difference for metropolitan or rural areas, and no change is proposed to these arrangements. This position is further supported by current data which indicates that on average approximately 15% of clients at Aboriginal Medical Services in rural and urban areas are non-Aboriginal.⁷⁰

6. What precedents exist for the introduction by Government of Aboriginal specific health measures?

6.1 Differential access to immunisations

In recognition of their much higher risk, the Federal Government runs a national program on immunisations specifically targetting Aboriginal people – the National Indigenous Pneumococcal and Influenza Immunisation Program. The program provides free vaccines for Aboriginal people aged over 50 and those younger than 50 at high risk according to NHMRC guidelines. The Program notes that respiratory diseases are major causes of preventable sickness and death in the Indigenous community, with some Aboriginal communities having the highest incidence of invasive pneumococcal disease in the world with hospitalisation rates for respiratory disease 20 times those for the overall population in some areas.⁷¹ The Program aims to reduce the rate of acute respiratory illness and death by increasing pneumococcal and influenza immunization.

Differences in the standard vaccinations schedule recommended for Aboriginal and Torres Strait Islanders children are due to the differences in the age-specific incidence of vaccine-preventable diseases between Aboriginal and Torres Strait Islanders children and non-Indigenous children. It is recommended that, in addition to the Australian Standard Vaccination Schedule, some Aboriginal children receive vaccines against tuberculosis, haemophilus influenzae type b (Hib), invasive pneumococcal disease, meningococcal disease, hepatitis B and hepatitis A.

⁷⁰ *Service Activity Reporting 2000-2001 Key Results*, NACCHO, Australian Government Department of Health and Aging

⁷¹ *The Australian Immunisation Handbook*⁷¹, Part 2 Australian Government, Department of Health and Aging

Aboriginal and Torres Strait Islanders adults experience considerably greater mortality and morbidity from pneumonia and invasive pneumococcal disease than do other Australian adults. In Western Australia, Aboriginal adults aged 25 – 24 years have at least a 30-fold greater risk of hospitalisation from pneumonia than other adults of the same age, an excess risk apparent even among Aboriginal adults living in urban areas.

6.2 EPC MBS items for aged care assessments

Enhanced Primary Care (EPC) MBS items included the annual health assessment for older Australians. Differential age criteria for Aboriginal people were agreed, so that this EPC item was available for Aboriginal people over 55 years of age, whereas all other Australians were not eligible unless over 75 years of age. This was in recognition of the fact that 53% of the Aboriginal population are dead before 50 years of age, whereas in the non-Aboriginal community, 53% of male deaths occurred at ages of 75 or less.

As outlined in the EPC Medicare Benefits Items, Questions and Answers, the lower age range for Aboriginal people ‘recognises that this group faces increased health risks at a much earlier age.’

6.3 New MBS item for adult health check

The Government has introduced a new MBS item for an adult health check for Aboriginal people aged 15 – 54. Budget papers 2004 – 2005 state this ‘will enable Aboriginal and Torres Strait Islander people, who have higher levels of untreated illness than other Australians, to have that illness detected and treated earlier’. The Schedule notes that:

“The purpose of this adult health check is to ensure that Aboriginal and Torres Strait Islander people receive the optimum level of health care by encouraging early detection, diagnosis and intervention for common and treatable conditions that cause considerable morbidity and early mortality.”

In the supporting information, the need for such a health check is explained: “Aboriginal and Torres Strait Islander people have higher rates of illness and, on average, die much earlier than other Australians. Regular health checks should help to reduce or prevent serious illnesses by early detection and treatment.”

6.4 19(2) exemption for AMS GPs & for AHWs in new MBS item for allied health

Through an exemption under section 19(2), GPs in the Aboriginal Community Controlled Health Sector are able to claim Medicare rebates, as well as to receive their salaries via grants from the Department of Health to the sector. This would otherwise be regarded as ‘double dipping’ but has been approved as a legitimate gap closing measure given the recognised need to increase expenditure on Aboriginal health. This form of exemption is to be expanded to ensure that AHWs employed in non-private practice settings are eligible to generate this MBS item, despite the fact this item is only available to other allied health professionals where they are employed in private practice.

6.5 Practice Nurse PIP

This measure was initially available only in remote ARIA classifications to all other practices – but a special case was made for AMSs and these were included in the

incentive regardless of location. Note this incentive has since been broadened to all practices regardless of location under the Medicare Plus initiative.

6.4 What's the link between the adult health check & improving uptake of medicines?

The Government has introduced a new MBS item for an adult health check for Aboriginal people aged 15 – 55. Budget papers 2004 – 2005 state this:

“...will enable Aboriginal and Torres Strait Islander people, who have higher levels of untreated illness than other Australians, to have that illness detected and treated earlier”.

Some of the screening measures included in the health check, and the diseases they seek to prevent are:

<i>Screening for</i>	<i>Trying to prevent</i>
high blood pressure	Death, stroke or myocardial infarction
diabetes	Aggregate microvascular endpoint (retinal complications requiring laser Rx; two-step progression in microalbuminuria; overt proteinuria; increase in plasma creatinine)
elevated lipid levels	Fatal or non-fatal MI or unstable angina or sudden cardiac death.
Proteinuria screening	End-stage renal failure
Pneumococcal (polysaccharide) vaccination	Invasive pneumococcal disease (IPD). Pneumonia occurs at around 10 times the rate of IPD.

The MBS item also requires ‘intervention’ – that is, the GP should take appropriate action to initiate treatment of any identified problems. In all the above examples, best practice clinical guidelines include treatment with appropriate medications. If such medications are not made available to those identified as needing them, there is little point in having identified the problem at all.

Achieving the health outcomes potentially available from the measure will therefore depend to a significant extent on access to and quality use of appropriate medications.

7. What is the current situation in eligible remote areas for improving access to PBS medications?

Supply of Pharmaceutical Benefits to Remote Area Aboriginal Health Services (AHSs) Under Section 100 of the National Health Act

In 1997 the Minister for Health and Ageing, the Hon Dr Michael Wooldridge, approved arrangements under section 100 of the *National Health Act 1953* for the supply of Pharmaceutical Benefits Scheme (PBS) medicines to remote area Aboriginal Health Services (AHSs). These arrangements seek to address identified barriers experienced by Aboriginal and Torres Strait Islander peoples living in remote areas of Australia in accessing essential medicines through the PBS.

Under these arrangements, clients of remote area AHSs are able to receive medicines directly from the AHS at the point of consultation, without the need for a normal prescription form, and without charge. Eligible AHSs order required PBS pharmaceuticals from pharmacies, which then transmit claims to the Health Insurance Commission for reimbursement. There is no need for AHSs to make payments to pharmacies for medicines obtained under these arrangements.

Participation by remote area AHSs is not compulsory.

8. What is the evidence improving up-take of medications in non-remote areas is a 'best buy' for Government?

There is evidence available to support the health outcomes that are available as a result of the increased use of medications combined with a model of primary health care.⁷² A study conducted in the Northern Territory showed that in those with hypertension or diabetes, rates of natural deaths were reduced by an estimated 50% and renal deaths reduced by 57% after a mean follow-up of 3 years of ACE Inhibitor drug treatment.¹ Considering the cost of haemodialysis per patient per year is estimated to be \$78,600, the use of ACE Inhibitors, estimated at \$500 per year, is an extremely cost effective method of preventing renal failure.⁷³

There are few health expenditure initiatives where the cost-benefit is so starkly demonstrated.

Comparative to overall PBS expenditure, the proposed model would not entail significantly high costs. It should also be emphasised that the aim of the model is to improve Aboriginal health through removing access barriers to PBS medications – a citizenship right of all Australians. With current PBS expenditure on Aboriginal people approximately one third of expenditure on non-Aboriginal people, the model seeks no more than to achieve equity.

Estimates indicate that paying the dispensing fee of \$4.62 per item, rather than the lower handling fee of \$1.14, in areas currently eligible for s.100 would increase the total cost of the program by approximately \$1.8 million per year. An expansion of the program to non-remote areas would require expenditure of about \$41 million per year at prescribing rates based on current s.100 rates, or, if prescribing rates increase to the average Australian level, the cost would be approximately \$96 million.

In addition to these estimates of bringing PBS expenditure to a more equitable level, implementation costs of an extension of the program have been estimated at \$7 million over a three year period. This estimate includes start-up costs at the local level such as IT and dispensing room infrastructure and staff training, as well as funding for central support and promotion of the program.

Overall, ongoing expenditure required from the PBS is of the order of 2 - 3% of the total PBS cost, that is \$95 – 142.5 million. Interestingly, this is roughly equivalent to the

72 Hoy WE, Wang Z, Baker PR, Kelly AM. Secondary prevention of renal and cardiovascular disease: results of a renal and cardiovascular treatment program in an Australian aboriginal community. *J Am Soc Nephrol.* 2003 Jul;14(7 Suppl 2):S178-85

73 You J, Hoy W, Zhao Y, Beaver C, Eagar K. End-stage renal disease in the Northern Territory: current and future treatment costs. *Med J Aust.* 2002 May 20;176(10):461-5

percentage of Aboriginal people in the population, and thus would be the quantum of expenditure expected for basic equity.

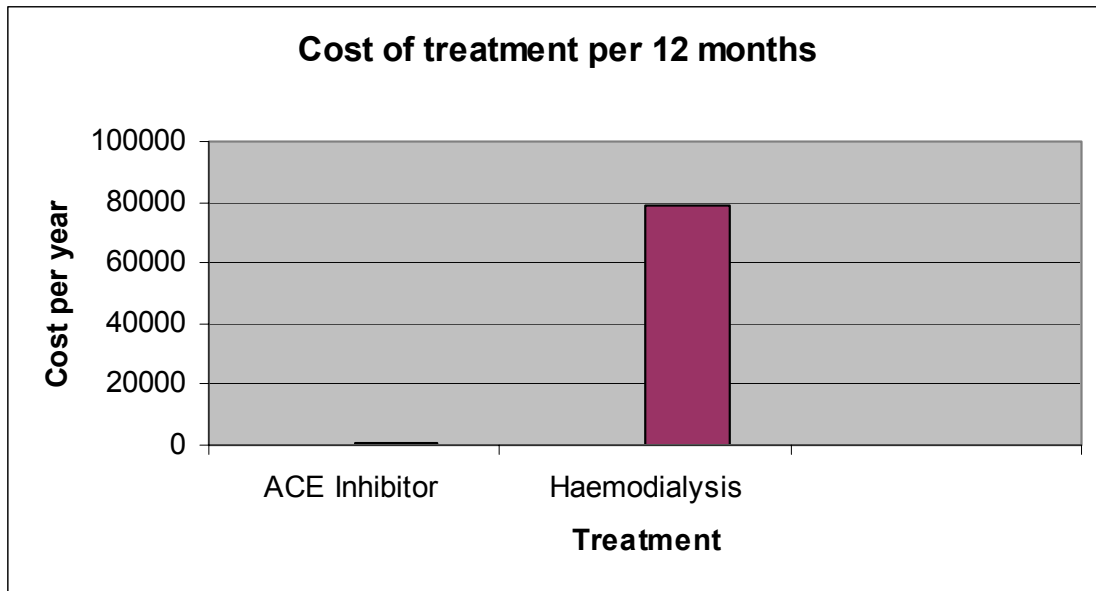


Table 1

Causes of excess* deaths among Aboriginal people 1999-2001 (Qld, NT, WA, SA)

* Deaths in excess of (above) whole of population data

	Indigenous male	Indigenous female
<u>Causes of excess deaths</u>	<u>% deaths</u>	<u>% deaths</u>
Circulatory (Heart attack, stroke, heart failure, rheumatic heart disease)	27.7%	27.0%
Injury (suicide, accidents, assault)	20.0%	11.3%
Cancer (lung, throat, gut, cervical)	8.0%	8.3%
Respiratory (pneumonia, chronic airways disease, influenza)	9.4%	9.2%
Diabetes	9.3%	17.4%
Other	25.6%	26.9%

Source: ABS/AIHW 2003 4704.0

Appendix 1 Hypertension

There is now agreement that thiazide diureticsⁱ and beta blockers are effective in reducing morbidity and mortality in patients with diabetes and hypertension.ⁱⁱ These drugs should be first-line therapy in spite of the fact that the patient has diabetes.ⁱⁱⁱ The two areas of uncertainty are whether there are particular risks in using calcium antagonists, or particular benefits in using ACE inhibitors. This choice is controversial in the treatment of hypertension even in patients without diabetes. Two recent meta-analyses^{iv} using the same trials, but different selection criteria, reached conflicting conclusions. Both studies are consistent with the recommendations of the sixth report of the Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure, that diuretics or beta blockers are first-line therapy for the treatment of uncomplicated hypertension. The studies support the option of ACE inhibitors as first-line treatment, and suggest that they may have particular benefits in patients (such as those with diabetes) who are at high risk of heart failure.

Recommended blood pressure targets in the treatment of hypertension

WHO-ISH*	JNC VI†	NHF‡
<130/85 mmHg (young, middle-aged, diabetic)	<140/90 mmHg (lower tolerated)	<130/85 mmHg if (under 65 years, diabetes, renal disease)
<140/90 mmHg (elderly)		<140/90 mmHg (over 65)

* World Health Organization-International Society of Hypertension

† Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure

‡ National Heart Foundation

Chronic Heart Failure

Chronic heart failure is a syndrome associated with high mortality, frequent hospitalisation and poor quality of life.^v The increasing prevalence and incidence are creating a major public health problem.

Therapeutic strategies which favourably impact upon clinical outcomes in chronic heart failure include optimisation of non-pharmacological therapy (salt restriction, alcohol restriction, exercise and weight loss). Devices and surgery (primarily revascularisation) have a limited role. Optimising drug therapy for each patient also improves outcomes.^{vi} Nearly all patients should be treated with ACE inhibitors to provide symptomatic benefits and prolong survival. Diuretics are often added to achieve and maintain euvolaemia. Adding other treatments can create a therapeutic dilemma for the treating physician.^{vii}

Asthma

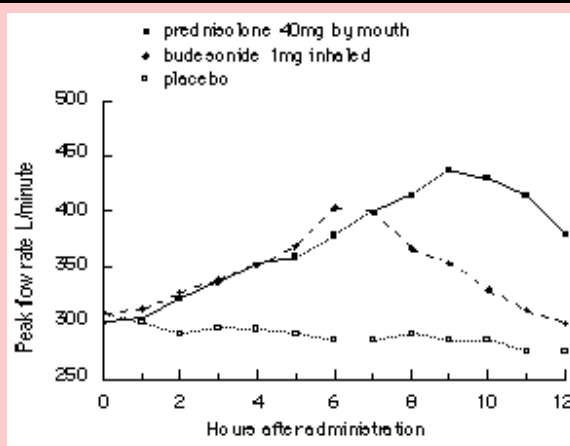
Corticosteroids are essential to reverse the eosinophilic airway inflammation which causes symptomatic exacerbations of asthma.^{viii} Much of the current variation in clinical practice is not justified by data from clinical trials. Oral prednisolone is as effective as intravenous therapy and very high doses of corticosteroid are no better than modest doses (30-50 mg prednisolone). Corticosteroids should be given twice a day for optimum effect. Therapy does not need to be tapered, but can be ceased abruptly after 10 days in most patients who are also taking high -dose inhaled corticosteroids. There is an increasing role for inhaled corticosteroids in the management of mild exacerbations of asthma. The dose, route and duration of therapy need to be defined for each patient and written down as part of an action plan to enable early intervention in future exacerbations.^{ix}

An exacerbation of asthma involves

- bronchospasm
- airway inflammation with cellular infiltration and oedema
- mucus plugging.

Recognised triggers for asthma exacerbations include respiratory tract infections, allergens, occupational chemical exposure and non-specific triggers such as irritants and emotional factors. The aims of treatment are to prevent death, to relieve hypoxaemia, to normalise lung function as quickly as possible, and to prevent future relapses. Corticosteroids are of proven benefit for eosinophilic airway inflammation, and bronchodilators are given to reverse bronchospasm. Specific therapy is not available for the poorly understood mucus plugging.

Effect of a single dose of ingested prednisolone 40 mg, inhaled budesonide 1 mg, and placebo on peak flow rate in adults with unstable asthma.



x

Diabetes

Thresholds for treatment - dyslipidaemia of diabetes^{xi}

Indications for primary prevention therapy

If HDL cholesterol level ≥ 1.0 mmol/L, treat if total cholesterol level ≥ 6.5 mmol/L or triglyceride level ≥ 4.0 mmol/L

If HDL cholesterol level < 1.0 mmol/L, treat if total cholesterol level ≥ 5.5 mmol/L or triglyceride level ≥ 2.0 mmol/L

Indications for therapy when pre-existing cardiovascular disease is present

If HDL cholesterol level ≥ 1.0 mmol/L, treat if total cholesterol level ≥ 5.5 mmol/L or triglyceride level ≥ 2.0 mmol/L

If HDL cholesterol level < 1.0 mmol/L, treat if total cholesterol level ≥ 4.5 mmol/L or triglyceride level ≥ 2.0 mmol/L

i Curb JD, Pressel SL, Cutler JA, Savage PJ, Applegate WB, Black H, et al. Effect of Diuretic-Based Antihypertensive Treatment On Cardiovascular Disease Risk In Older Diabetic Patients With Isolated Systolic Hypertension. Systolic Hypertension in the Elderly Program Cooperative Research Group JAMA 1996; 276: 1886-92

ii Grossman E, Messerli FH, Goldbourt U. High Blood Pressure and Diabetes Mellitus: Are All Hypertensive Drugs Created Equal?. Arch Intern Med 2000; 160: 2447-52; Pahor M, Psaty BM, Furberg CD. Treatment of Hypertensive Patients With Diabetes. Lancet 1998; 351: 689-90

iii Ibid

iv Opcit at i & ii

Summary of supporting evidence underlying the *Position paper on improving access to PBS medications for Aboriginal peoples and Torres Strait Islanders* July 2004

v Joseph Proietto, Associate Professor, University of Melbourne, Department of Medicine, Royal Melbourne Hospital, Melbourne cited in *Australian Prescriber* 1997; 20: 65-7

vi Ibid

vii Ibid

viii Peter G. Gibson, Staff Specialist, Respiratory Medicine Unit, John Hunter Hospital, Newcastle, N.S.W cited in *Australian Prescriber* 1996; 19: 44-7

ix Ibid

x Ellul-Micallef R, Johansson SA. Acute Dose Response Studies In Bronchial Asthma With a New Corticosteroid, Budesonid, *British Journal of Clinical Pharmacology* 1983;15:419-22.

xi Best JD, Jerums G, Newnham HH, O'Brien RC. Diabetic dyslipidaemia. Australian Diabetes Society position statement cited *Medical Journal Australia* 1995;162:91-3.