Health Policy and Inequality
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Introduction

The impact of poverty on health status, and the impact of health policy on poverty, has been the subject of considerable interest and debate among policy makers, and in the theoretical literature. The relationship between poverty and health is undeniable, yet also very poorly understood. As the research and the debates continue, it is necessary to review the available information about the relationship between poverty and health in order to determine whether existing health policies maximise the use of available information and the extent to which they are appropriately directed.

This paper will provide an examination of the nature of poverty and its relationship with health, including an exploration of the broad range of socio-economic factors associated with poor health and the identification of groups within the community facing particular disadvantage and vulnerability. The paper will then examine the current range of health strategies designed to counter the influence of these factors and highlight areas for further research or policy development.

The Relationship Between Poverty and Health

The causes of illnesses are complex. To some extent people experience poor health because of factors beyond their control – such as genetic factors or advancing age, or the essentially random incidence of certain ailments and injuries. However, lifestyle and socio-economic factors as well as factors in the physical environment associated with poverty can also contribute to illness.

It is beyond question that illness occurs more commonly among those people living in poverty than those with greater social and economic resources. The association between socio-economic advantage and health status is one of the strongest, most durable and most universal in epidemiological research (Leeder 1993). Health inequalities related to social class or socio-economic status have been established in all countries that collect the data (for example, Commission of Inquiry into Poverty 1976; Kaplan et al 1996; National Health Committee of New Zealand 1998; National Health Strategy 1992; Wilkinson et al 1992; World Health Organisation 1997).

The link between poor health and poverty is strongest for developing countries. It is evident that the first basic commodity bought or produced by most households is food, and poor diet is undeniably linked to poor health (World Health Organisation 1997). Relatively poor households spend higher proportions of their incomes on food than wealthier households and small variations in income can have a substantial effect on the diet and health of individuals.

For developing countries, a relationship between increasing gross domestic product and improvements in indicators of health can be observed (World Health Organisation 1997). However, the relationship between income and life expectancy ceases to be strong among developed countries, as the proportion of income spent on food decreases (see figure 1).
Figure 1: As the level of absolute income poverty is surpassed, the relationship between income and life expectancy becomes less significant (Wilkinson 1992)

As economies grow, benchmarked levels of absolute income poverty are frequently surpassed without alleviation of the problems associated with poverty. The relationship between health and poverty is still pronounced in developed countries. It has been argued that the curvilinear relationship between life expectancy and poverty, represented in Figure 1, indicates a fall in the importance of the direct physical effects of material circumstances and a relative increase in the importance of factors such as psycho-social influences (see Wilkinson 1992). Clearly, in developed countries the association between poverty and health remains strong, but becomes more complex.

The complexity of the relationship between poverty and health in developed countries is heightened by the absence of a clear understanding of what constitutes poverty. This inevitably complicates the examination of how poverty then impacts upon health.

Accordingly, the nature of poverty must be clarified before its impact on health can be examined, and strategies for its alleviation evaluated or determined.

**Two Views of Poverty**

There is no universally accepted definition of poverty, or how it should be measured. Rather, debates about poverty are populated by an array of contested definitions – most of which are partnered with methodologies for the measurement of poverty, which are themselves vigorously debated (Alcock 1993; Fuchs 1992; Taylor and Challen 1998).

At the most basic level, the term ‘poverty’ refers to an inadequate standard of living (Brownlee 1990). Within the range of definitions of poverty available, there are two main groups of definitions: one where poverty is seen in terms of a lack of adequate income; and the other where poverty is seen as a more complex pattern of disadvantage.
Poverty Defined in Terms of Income

Measures of income poverty are traditionally discussed as being either relative or absolute. It should be noted, however, that many income-based definitions of poverty include both relative and absolute elements (Alcock 1993).

Absolute income poverty measures were originally introduced as an objective definition or measure of poverty, based upon a notion of subsistence (Alcock 1993). Absolute income poverty occurs where people fail to receive sufficient resources to achieve a minimum level of physical health and efficiency (Taylor and Challen 1998; Abercrombie et al 1988). It is defined according to a fixed level of income, so that those people living on incomes below the absolute level are in poverty and those earning above the level are not. Measures of absolute income poverty often make adjustments according to the size and composition of the household. They may also be determined in relation to the income distribution – half median income, for example, is a measure of absolute income poverty used widely in international comparisons (Bittman 1997).

Measures of absolute poverty are frequently used in international studies of developing countries. The World Health Organisation estimates, for example, that there were 1.3 billion people living in absolute poverty in 1993 – using an absolute poverty line of one American dollar (World Health Organisation 1997). Yet, as discussed earlier, it has become evident, that as economies grow, levels of absolute income poverty are frequently surpassed without alleviation of the problems associated with poverty.

The objectivity of absolute poverty measures has been widely criticised over the last few decades. It is evident that measures of absolute income poverty need to take into account more than just the level of financial resources required for subsistence. It is generally agreed that a subsistence minimum can only be defined in terms of the social context (Brownlee 1990), and that people’s needs can not be examined in isolation from the society being studied. Under these terms, relative income poverty measures have become more widely used.

Relative income poverty is the problem of poverty “in an affluent but unequal society” (Alcock 1993). Under this concept of poverty, while the basic needs of the most disadvantaged segments of the population may be met, other social expectations are not. This results in their exclusion from the customary living standards of the society (Alcock 1993). Relative income poverty measures are better able to take into account the social dimensions of poverty but are influenced by the degree of inequality within the income distribution. Standards of relative income poverty will vary between societies and over time.

Poverty as a Multi-Dimensional Concept

The other main group of definitions of poverty sees poverty as a more complex pattern of disadvantage.

Exponents of this view of poverty argue that measures of poverty defined solely in terms of income do not take into account the potentially substantial effects of other factors such as poor housing, restricted access to community facilities, or social exclusion (Brownlee 1993; Alcock 1993).
Even Professor Ronald Henderson specified, in his preface to all reports of the Inquiry into Poverty, that poverty is ultimately more than inadequate income:

...poverty in Australia is inseparable from inequalities entrenched firmly in our social structure. Inequalities of income and wealth ‘reinforce and are reinforced by inequalities of educational provision, health standards and care, housing conditions and employment conditions and prospects’. (Commission of Inquiry into Poverty 1975).

An alternative view of poverty, therefore, is as a more amorphous, multi-dimensional concept, representing broader facets of disadvantage and measured by a number of standards of living. An appreciation of the multi-dimensional nature of poverty allows a greater appreciation of the level and context of disadvantage faced by the ‘poorest’ members of our community.

The complexities of poverty can be appreciated through living standard studies such as that undertaken by the Australian Institute of Family Studies. The Institute has identified fourteen distinct categories of living standards that contribute to the overall basic well-being of an individual or a family. These include health, economic resources, employment, housing, education, recreation, the physical environment, community services, access to information, transport and personal well-being.

The categories of living standards also include social and political participation as well as family relationships (Brownlee 1990). Poverty is frequently associated with social isolation and exclusion from the mainstream of society (Taylor and Challen 1998) and the inclusion of social and relationship categories is, therefore, particularly important.

The view of poverty as a web of disadvantage or a restriction of choice across multiple socio-economic and other dimensions of life enables policy makers to have a better understanding of the degree of disadvantage faced by members of our communities. However, such definitions have been criticised as ill-defined and adding little to research into poverty. Fuchs, for example, suggests:

If we constantly redefine poverty to include anything and everything that contributes to poor health, we will make little progress in either theory or practice. (Fuchs 1992).

This argument highlights the importance of pursuing clarity in research into poverty given the highly interrelated nature of the socio-economic and other characteristics typically examined in poverty studies. It also illustrates the benefits of an income-based definition of poverty as a starting point in poverty research and benchmarking. Anthony King from the National Centre for Social and Economic Modelling suggests that poverty:

...is most commonly described in terms of income, where income poverty refers to the situation where a family's or person's income is not enough to allow them to achieve a basic standard of living. It is often used as a surrogate measure for all dimensions of poverty, on the basis that people's incomes provide a good, if imperfect, indicator of their standard of living. (King 1997)

Income is the one constant affecting all the other dimensions of poverty in terms of health (National Health Strategy 1992). It is not unreasonable, therefore, to use income based definitions for the purposes of research into poverty. Using income-based definitions of
poverty for the purposes of research, however, carries a risk that the complex interrelationships between other dimensions of disadvantage may be obscured.

For the purposes of this paper, and for the sake of clarity in discussion, the relationship between health and poverty will be undertaken as a study of the relationship between health and disadvantage in terms of specific socio-economic or related factors - rather than a general concept of poverty. The examination will provide a ‘map’ of the relationships between health and socio-economic disadvantage to both indicate the complex interrelationship of socio-economic disadvantages that together comprise what is referred to as poverty, and clarify the impact of this web of poverty on health status.

The Importance of Social Participation

As stated earlier, this paper attempts to provide an examination of the nature of poverty and its relationship with health in order to highlight areas for further research or policy development. Given the complexity of the patterns of disadvantage examined in this paper, it is appropriate to reflect on what this examination of socio-economic disadvantage/poverty is actually seeking to achieve – in order to provide a clear reference point for analysis.

The Commission of Inquiry into Poverty identified opportunity for personal development and participation in the community as one of the three important principles that guided their research into poverty (Commission of Inquiry into Poverty 1975). An examination of the distribution within the community of these opportunities remain important for policy makers today when considering the impact of health policy on poverty, and also when considering the effectiveness of health policies in addressing the needs of the poor.

Government departments like the Department of Health and Aged Care and the Department of Family and Community Services (and arguably many more departments), have a broader function to lead in the development and delivery of policies that offer what international organisations like the Organisation for Economic Cooperation and Development (OECD) refer to as “social protection”.

The OECD suggests:

The objective of social protection must be to ensure each member of society has the possibility of an active role in that society. For most people, most of the time, this would be achieved through their own work and social activities. The role of public policy in the 1990s must be to design interventions so as to maximise both the number of people who have opportunities for active social roles, and the duration of their lives over which they can experience such activity.

The theme of an active society adopted by the OECD has been an important guiding principle for policy makers in Australia.

The relationship between participation (including social, cultural and political dimensions, and family relationships) and health is of particular importance. In later sections of this paper it will be demonstrated that barriers to social participation do not only result from poor health, they are also a major cause of poor health - and a potential source of explanation of the persistent relationship between ‘poverty’ and poor health in developed countries.
Socio-economic and Related Factors Impacting on Health

The broad range of socio-economic factors linked to poor health will now be examined.

Income

On a world scale, the gap between the incomes of the rich and the poor is acknowledged as being the single most important predictor of health status (for example, Davey-Smith 1996; Delamothe 1991; Kaplan et al 1996; Kennedy et al 1996; Mathers 1994; Wilkinson 1992; Wilkinson 1997). International comparisons of data have suggested that most of the variation in life expectancy can be related to differences in income distribution (Delamothe 1991; Wilkinson 1992). Societies with high levels of income inequality tend to have less social cohesion, more violent crime and higher death rates (World Health Organisation 1998).

In Australia, family income has been shown to be significantly associated with poor health, even when factors such as education, family composition, workforce status and risk factors, such as smoking and age, were held constant. Australians living on low incomes experience poorer health and are more likely to suffer disability, serious chronic illnesses, or report recent illness (National Health Strategy 1992).

As well as suffering poorer health, those living on low incomes also report themselves to be less happy than those people living on higher incomes (Mathers 1994; Saunders et al 1998). Men and women in low income families reported much worse self-perceived health status than adults in higher income families. Figure 2 shows that reports of fair or poor health were 2.7 times more frequent for men and 2.5 times more frequent for women in low income families (National Health Strategy 1992).

Figure 2: Self reported health status (fair/poor) by family income group (Mathers 1994)

Patterns of health service usage also vary by income. Research by the Australian Institute of Health and Welfare indicates that people in low income families report substantially more hospital episodes, outpatient visits and doctor visits. Individuals in low income families are also more likely to delay seeking medical treatment, and make use of fewer public health and
preventive, early intervention, screening, rehabilitation and after care services (Mathers 1994).

The direct impacts of low income on health are fairly obvious. Health inequalities may arise from low income through the associated inability to purchase goods and services that directly influence health – such as nutritious food, good housing, or quality medical care. Low income can also be related to employment in occupations that are more physically demanding and carry greater risks of injury and the greater likelihood of risk behaviours.

Low income can also be the result of poor health. A person with a substantial illness or disability, for example, can have an impaired ability to provide for him or herself, which can lead to a lower level of income (Commission of Inquiry into Poverty 1975; Cass, Gibson and Tito 1988).

However, the other mechanisms underlying the associations between income distribution and health are not well understood.

It has increasingly been argued that inequalities in the income distribution create comparative social and cognitive processes - the perception of relative deprivation - leading to increased stress (Davey-Smith 1996, Wilkinson 1992). Low income can reduce social participation, and lead to alienation, increased stress and then poor health (Mathers 1994; Wilkinson 1996). Australian research has confirmed a general pattern of decreased stress as income adjusted for need increases (Saunders 1996b) and significant differences between the reported incidence of stress for those whose incomes place them either side of a poverty threshold (Saunders et al 1998). Yet an independent and to a large extent unexplained effect of income on poor health remains in much of the existing research.

**Occupational Prestige/Social Class**

Marmot’s original study of British civil servants showed a steep inverse association between social class, as assessed by grade of employment, and mortality from a wide range of diseases. This relationship existed across all levels of the social gradient. In the second Whitehall study, 20 years after the first, no reduction in morbidity by social class was observed (Marmot et al 1991), indicating that the relationship between occupational prestige/social class and health is fairly robust. A number of other studies (Drever and Whitehead 1997) support the findings of the Whitehall studies, indicating the strength of the relationship between social class and health in the United Kingdom (see figure 3).
Although notions of social class structures do not readily apply to Australia, similar general patterns have been observed in this country. The Australian Institute of Health and Welfare (AIHW) has reported that Australian males aged 25-64 years in the lowest decile of occupational prestige had a death rate 2.2 times higher for specific diseases than that found for the highest decile (Mathers 1994).

It is apparent, however, that any impact social prestige has on health does not arise directly from lower social standing. Rather, lower social standing impacts on health via the effects of other factors. Such factors may include a lack of material resources leading to malnutrition, employment in hazardous occupations leading to injury, and the insidious impact of constant stress on health. It is significant that further analysis of the Whitehall II results indicated that, after factoring out the degree of control that civil servants had over their employment, the relationship between occupational prestige and health largely disappeared (Marmot 1997).

Further examination of the factors associated with disadvantage that impact on health, therefore, must be undertaken in order to determine more clearly why and how social disadvantage impacts negatively on health status.

**Employment**

It is widely accepted that unemployment is strongly linked to poor health (Davis and George 1993; Harris et al 1998; Mathers 1992 and 1994; National Health Strategy 1992; Schofield 1996b; World Health Organisation 1998). The results of the National Health Survey demonstrate that, even irrespective of the impact of income levels, unemployment is independently associated with poorer health. Men who are unemployed have a higher incidence of disability (66 per cent higher), serious chronic illness (26 per cent higher), recent illness (21 per cent higher), more days of reduced activity because of illness (101 per cent higher) and a greater likelihood of only reporting fair or poor health (110 per cent) (Mathers 1993; Mathers 1994; AIHW 1995). The pattern for unemployed women is slightly reduced (see table 1).
Table 1: Size of difference between incidence of morbidity for unemployed people relative to employed people, by gender, expressed as a per cent (Mathers 1994)

<table>
<thead>
<tr>
<th>Morbidity Differentials</th>
<th>Increase for Males (%)</th>
<th>Increase for Females (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>disability</td>
<td>66</td>
<td>29</td>
</tr>
<tr>
<td>serious chronic illness</td>
<td>26</td>
<td>42</td>
</tr>
<tr>
<td>recent illness</td>
<td>21</td>
<td>34</td>
</tr>
<tr>
<td>reduced activity due to illness</td>
<td>101</td>
<td>28</td>
</tr>
<tr>
<td>only fair or poor health</td>
<td>110</td>
<td>85</td>
</tr>
</tbody>
</table>

The effect of unemployment increases the risk of premature death from suicide, cardiovascular disease, and respiratory disease – particularly in men (AIHW 1995).

To the extent that participation in paid employment is the major determinant of income, unemployment can be linked to an inability to purchase goods and services that directly influence health. In addition, the increased stress, loss of control and social exclusion experienced by the unemployed population, have been closely linked to poor health outcomes (National Health Committee of New Zealand 1998; Mathers 1994, Schofield 1996b; Syme 1996). Figure 4 shows the odds ratio for unemployed Australians on selected health indicators. It shows, for example, that unemployed people are two times more likely to report poor general health and three times more likely to report depression.

**Figure 4: Poorer health status reported by unemployed compared with employed people, odds ratios for employed =1.0 (Harris, Lee and Fisher 1995)**

Unemployed people also engage in risk factors such as smoking and heavy consumption of alcohol more often than employed people (Mathers 1994; Schofield 1996b). In a recent Australian survey, the level of alcohol consumed was found to be significantly higher for
unemployed people than for people working less than 39 hours per week. The incidence of smoking among the unemployed was also significantly higher than for any other group (Schofield 1996b).

Patterns of work among employed people also seem to be related to the exhibition of behavioural risk factors associated with poor health. For people who are employed, longer average hours of work per week are associated with greater rates of smoking, lower rates of regular exercise and higher average alcohol consumption levels. In particular, people who work more than 40 hours per week drink substantially more on average than other employed people (Schofield 1996b).

Poor health appears to be associated with unemployment and longer than average working hours. It is interesting to note that a Japanese study found a ‘U-shaped’ relation between mean monthly working hours and the risk of heart attack. People working substantially lower than average hours per week, or substantially higher than average hours per week, demonstrated an increased risk of heart attack (Sokejima and Kagamimori 1998). Patterns of stress or social isolation may explain these findings.

**Occupation**

Some occupations carry with them greater risks of injury and illness (National Health Committee of New Zealand 1998; Mathers 1994; Delamothe 1991; Fuchs 1992). In Britain, the death rates are higher for manual workers for most causes of death and in almost every age group when compared to non-manual workers (Delamothe 1991; Fuchs 1992).

The 1995 National Health Survey (Australian Bureau of Statistics 1997) found that among employed males aged 25 to 54 years, those in occupations classified as ‘professional’, ‘technical’ or ‘administrative’ have the lowest death rate (156 per 100,000) while those classified in ‘trades’, ‘transport’ and ‘labour’ have the highest (248 per 100,000). Equally, it is significant to note that, in Australia, two thirds of recipients of Disability Support Pension who had formerly been employed had worked in ‘blue collar’ occupations such as tradespeople, labourers or drivers/machine operators (Hupalo 1996).

Some types of employment are also associated with lifestyle factors that are detrimental to health. For example, people employed in ‘blue collar’ occupations are more likely to smoke and report higher patterns of alcohol consumption (AIHW 1992, National Health Strategy 1992). Unsatisfactory or insecure employment can also negatively impact on health through the generation of greater levels of stress.

It is evident that health suffers when people have little opportunity to use their skills, and low authority over their decisions, and jobs with both high demand and low control carry special risk (World Health Organisation 1998). In the Whitehall II study, Marmot et al found that fewer people in low status jobs report control over their working lives, involvement in hobbies, or having a confidante in whom they could entrust their problems (for men). More people in lower status jobs reported stressful life events in the previous year, and difficulties with paying bills and money in general (Marmot et al 1991).

It is interesting to note that evidence of bipolarity with rates of incidence for some cancers was observed in a recent Australian study. People in less skilled occupations and in
managerial and administrative occupations had higher incidence rates for some cancers than people in intermediate status occupations (Burnley 1997).

**Education**

Education is critical in determining a person’s social and economic position and through this their health (National Health Committee of New Zealand 1998; Fuchs 1992; etc.). Evidence, in developing countries in particular, is that the education of women is particularly important in improving health outcomes for children and families (Payne 1991).

Education is a strong predictor of morbidity in Australia. Individuals with higher levels of education report fewer serious chronic and recent illnesses and better mental health than individuals with lower levels of education, even when controlling for the effects of other socio-economic factors. Relatively poorly educated men are 23 per cent more likely to have serious chronic illnesses and 90 per cent more likely to perceive their health as only fair or poor. Similarly, relatively poorly educated women are 15 per cent more likely to have serious chronic illnesses and twice as likely (i.e., 101 per cent more) to perceive their health as only fair or poor (National Health Strategy 1992).

To some extent this pattern reflects the relationship between education and income, where education can be an indicator of income and/or wealth. But it is also evident that education can mean an increased capacity to assimilate information, access health services, and make better decisions about lifestyle factors influencing health (Leeder 1993). Marmot found that a significant proportion of the inverse association between socio-economic status and health can be explained by the variable of “control” a person has over their life (Marmot 1997). In this way, concepts like self-efficacy (the capacity to control own circumstances) explain the close relationship between health and education (Fuchs 1992).

**Housing**

Inadequate housing can lead to poor health (National Health Strategy 1992). In Australia, community groups have stressed the negative impact on health that poor quality housing can have, because of overcrowding, damp, the presence of toxins, infections, and infestations. Poor living conditions also contribute to higher levels of stress (ACOSS 1993; UK Dept of Health 1998).

Locational disadvantage can also have negative impacts on the resources of individuals to improve their life situations, access social support, or even purchase healthy food. Even small distances can make accessing care difficult for people without adequate and secure transport (Leeder 1993; World Health Organisation 1998).

**Social Isolation**

Social isolation and exclusion are associated with increased rates of premature death and poorer chances of survival after a heart attack. People who get less emotional social support from others are more likely to experience less wellbeing, more depression, a greater risk of pregnancy complications and higher levels of disability from chronic disease (World Health Organisation 1998).
People with strong social ties have better health than people who are socially isolated (National Health Committee of New Zealand 1998; Davis and George 1993). Strong social ties reduce the impact of stress on health (Davis and George 1993; Boyden 1993).

In this context, the concept of mutual obligation is a constructive one that recognises the importance of belonging, sharing roles in our communities, and of mutual support.

**Deprivation in Childhood**

Important foundations of adult health are laid in prenatal life and early childhood. The quality of nurturing seems to have long term effects relevant to health inequalities (Brunner 1997; World Health Organisation 1998; Marmot et al 1991; Davey-Smith 1996). Poor social and economic circumstances, poor or inappropriate nourishment, parental poverty and smoking all lead to impaired health and a chain of social risk (World Health Organisation 1998).

The 1995 National Health Survey (Australian Bureau of Statistics 1997) found that children with no parent in paid employment are over 25 per cent more likely to have a serious chronic illness (National Health Strategy 1992). The presence of persistent or chronic patterns of family poverty may particularly influence the health, and particularly the mental health, of children. In a recent Australian longitudinal study, families with low incomes were found to exhibit a higher rate of child behaviour problems at age five. Such patterns were stronger where patterns of low income within a family were persistent or chronic, and partially related to levels of prenatal smoking and maternal depression (Bor et al 1997).

Studies of the attachment patterns of parents and their children also indicate that early experience of care-givers may contribute to the inter-generational transmission of physical and psychological vulnerability (Brunner 1997).

The impact of poverty on health, academic performance and control over aggression can be reduced by high quality early childhood care and education, which promotes social, emotional and cognitive development, as shown in Table 2. High quality early childhood care and education has been shown to be the most effective determinant of resiliency in children from a disadvantaged background. Unfortunately, while children in poverty have the most urgent requirements for high quality childcare and education, they are also the least likely to be able to afford, and thus benefit from, quality care (Steinhauer 1998).
Table 2: Effects of high versus poor quality early child care and education (Steinhauer 1997)

<table>
<thead>
<tr>
<th>High Quality</th>
<th>Poor Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Increased social competence</td>
<td>• Decreased social competence</td>
</tr>
<tr>
<td>• Better language and play development</td>
<td>• Poorer language and play development</td>
</tr>
<tr>
<td>• Better control over aggression</td>
<td>• Poorer control over aggression</td>
</tr>
<tr>
<td>• Increased compliance with adults</td>
<td>• Decreased compliance with adults</td>
</tr>
<tr>
<td>• Fewer behaviour problems in grade 1 as</td>
<td>• More behaviour problems in Grade 1 as</td>
</tr>
<tr>
<td>reported by teacher.</td>
<td>reported by teacher.</td>
</tr>
<tr>
<td>• Better learning orientation (the skills/will</td>
<td>• Poorer learning orientation(the</td>
</tr>
<tr>
<td>to learn)</td>
<td>skills/will to learn)</td>
</tr>
<tr>
<td>• Better school readiness</td>
<td>• Poorer school readiness</td>
</tr>
</tbody>
</table>

It should be noted that socio-economic disadvantages do not just appear together, but they also have the potential to replicate and reinforce themselves over time. Parental poverty starts a chain of social risk, beginning in childhood with reduced readiness for school, going on to poor performance at school, and eventually leads to a raised risk of unemployment or low control jobs in later life – with the associated impact on health (World Health Organisation 1998).

Regional Disadvantage

Ben-Shlomo et al (1996) and Kaplan et al (1996) among others have argued that the level of deprivation/structural disadvantage within a community will exert an independent effect on the health of the community. A lack of access to medical care for particularly poor segments of the population, for example, may partly mediate the relationship between low socio-economic status and health (Kennedy et al 1996). Equally, areas of high disadvantage may have higher levels of pollution or other hazards in the physical environment that will negatively impact on health.

Australian research has demonstrated that males aged 25-64 years living in areas classified into the worst quintile of socio-economic disadvantage had death rates 68 per cent higher than those in the least disadvantaged quintile (AIHW 1992). A recent Australian study found evidence of higher incidence of several types of cancer in disadvantaged regions (Burnley 1997).

Duckett has argued that health problems are caused by a complex of factors in the physical, socio-economic and family environments and by individual behaviour, and that the interrelatedness of these factors means that an increasing emphasis on environmental factors and community involvement is required in health strategies (Duckett 1998).

Lifestyle Factors and Addiction

Stress arising from disadvantage may lead to an increased likelihood of engaging in risk behaviours, thus exacerbating poor health (McClelland and Scotton 1998).

Alcohol dependence, illicit drug use and cigarette smoking are all closely associated with markers of social and economic disadvantage (World Health Organisation 1998). For
example, people living on low incomes are more likely to engage in high risk activities that contribute to poor health such as smoking (41 per cent higher), and low physical activity (30-40 per cent higher) (Mathers 1994; National Health Survey 1992; Schofield 1996b). Higher fat diets and cholesterol are also measurably higher in lower socio-economic groups (Leeder 1993). Similar differences have been observed internationally (e.g., Marmot et al 1991; Marmot 1997; Wilkinson 1992; etc.).

While a significant increase in mortality risk is associated with lower income, the influence of major health risk behaviours explains only a small proportion of this relationship (Marmot et al 1991; Lantz et al 1998; Duckett 1998). Marmot found that less than 50 per cent of the inverse association between socio-economic status and health could be explained by risk factors such as smoking, alcohol consumption, diet and exercise. He concluded that a significant proportion of the balance can be explained by the variable of “control” over the forces impinging on their lives (Marmot 1997).

Studies of rates of smoking support this view. In the United Kingdom, in the 30 years from 1961 to 1991, smoking declined more sharply in higher socio-economic groups than lower socio-economic groups (Marmot 1997). Similar patterns have been observed in Australia (Duckett 1998). Marmot’s 1997 study indicates that the determinants of the social gradient are of important social health concern, and that strategies for the reduction of risk behaviours need to vary according to group on the social gradient targeted. Higher socio-economic groups appear to be more sensitive to health publicity in contrast to the higher sensitivity of lower socio-economic groups to changes in price (Marmot 1997).

Accordingly, many authors have argued that strategies targeting lifestyle factors such as drug addiction or smoking will not succeed if the social and economic factors that breed them are left unchanged (Duckett 1998; World Health Organisation 1998; Marmot 1997; Lantz et al 1998). Trying to shift the whole responsibility on to the user is clearly an inadequate response.

**Psycho-Social Factors**

**Stress**

Stress is increasingly being suggested to be a major cause of ill health in affluent countries (McClelland and Scotton 1998). Low control, insecurity, and loss of self esteem are among the psychological risk factors known to mediate between health and socio-economic circumstances (Wilkinson 1997). These factors combine with the emotional and psychological stresses associated with coping in deprived circumstances to manifest as a range of stress related illnesses. It is of considerable concern, for example, that Australian men and women from the lowest socio-economic grouping are, respectively, 77 per cent and 46 per cent more likely to commit suicide than their counterparts from the highest socio-economic grouping (Macklin 1993).

Saunders' (1996a) analysis of the relationship between poverty and stress based illness utilised the incidence of tension (nerves, emotional problems); insomnia; headache; and depression. The significant degree to which the incidence of these conditions varies according to poverty status is shown in figure 5.
It has long been believed that stress has a negative impact on health, but there has historically been little agreement about the mechanisms that make stress a risk factor (Davis and George 1993). The mechanisms through which stress impacts on health have only recently begun to be clarified.

A whole new area of research is now emerging that shows the link between a wide range of psycho-social factors and immunologic function (Syme et al 1996). These studies in psychoneuroimmunology have provided evidence that the central nervous system and psychological state modulate immune function. In this way, chronic stresses associated with social position may be translated into modified neuroendocrine and physiological functioning, with consequences on susceptibility to disease (Brunner 1997).

It is now generally recognised that continuing anxiety, insecurity, low self-esteem, social isolation and lack of control over work and home life have powerful effects on health (World Health Organisation 1998). Prolonged stress carries multiple costs to health, such as depression, increased susceptibility to infection and diabetes, harmful patterns of cholesterol and fats in the blood, high blood pressure and all the attendant health risks (Brunner 1997; World Health Organisation 1998).

**Attribution Style**

The degree of “control” a person perceives that they have over their life has been identified as crucial factor in determining their physical and mental health (Marmot 1997). More specifically, the reasons that people assign to explain why a life event occurs (known as "attribution style") can accurately predict a range of depressive disorders and associated physical illnesses. Seligman (1979) describes how those people with a negative attribution
style believe that they have no control over making positive events occur (such as getting a job) but that they blame themselves for negative events (such as the illness of a child).

It has been suggested in the literature that when a person with a negative attribution style is placed in a situation of poverty and disadvantage, the result is a rapid demise into chronic depression and a state of learned helplessness that prevents escape from the poverty situation. Alternately, a positive attribution style, or attributing desirable events to personal effort/skill, has been found to act as a buffer against the symptoms of poverty (Seligman 1979).

There are numerous therapies and training techniques that can alter attribution style and dysfunctional beliefs in individuals (Gregory 1996). These techniques can be utilised to successfully treat the chronic depression and learned helplessness of many vulnerable groups, such as the long term unemployed, domestic violence victims and the homeless. Regaining a sense of control can offer the individual protection against the stress-related aspects of poor health associated with poverty.

**Special Needs Groups**

Because disadvantages like low income, insecure employment, poor housing and poor health are cumulative, they tend to concentrate among the same people (World Health Organisation 1998). In addition to the health needs of the general population, health policies must recognise and target the health needs of especially disadvantaged groups.

**Indigenous People**

Indigenous Australians are very much poorer, on average, than non-Indigenous Australians, whether Indigenous groups reside in rural and remote areas or urban areas.

Despite improved access to health services in the past two decades, the health status of Indigenous Australians still rates worse than non-Indigenous Australians on every indicator: life expectancy, maternal mortality, infant mortality, childhood morbidity and adult mortality (Miller and Torzillo 1996).

For example, in 1992-94, life expectancy at birth in Western Australia, Northern Territory and South Australia was approximately 14-18 years lower for Indigenous Australian males and 16-20 years lower for Indigenous Australian females than for their non-Indigenous Australian counterparts (AIHW 1988).

Indigenous Australian men die at 3.5 times the rate of non-Indigenous Australian men; Indigenous Australian women at 4 times the rate of non-Indigenous Australian women. Deaths from infectious/parasitic diseases are 14.7 times higher for men, and 17.6 times higher for women, from Indigenous Australian backgrounds. The vast gap between Indigenous and non-Indigenous health is illustrated in the comparative death rates for a range of disorders, as seen in figure 6.

In fact, after adjusting for age, death rates are higher for Indigenous Australians both overall and for almost every specific cause of death (see figure 6), and patterns of hospital use by Indigenous Australians are about twice the rate of the rest of the population.
Indigenous Australians leave school earlier, have almost three times the rates on unemployment, and are under-represented in private sector and skilled occupations.

They are more than twice as likely to be in after-housing poverty and have a level of home ownership of 26 per cent, compared to 70 per cent for all Australians. These patterns have a substantial impact on their health status (Miller and Torzillo 1996).

*Figure 6: Age-Standardised death rates by cause, 1992-1994: Indigenous and non-Indigenous Australian Females (AIHW 1998)*

Indigenous people are more likely to be classified as obese, about twice as likely to smoke, and although they are less likely to drink, they are more likely to drink at unsafe levels (Australian Bureau of Statistics 1997).

It should be pointed out, however, that while the gap between the health of Indigenous and non-Indigenous Australians has not generally declined, the health of Indigenous Australians has improved. For example, death rates from all causes declined among indigenous males by an estimated 1.5 per cent per year between 1985 and 1994 (AIHW 1998).

There have also been reductions in infant and maternal mortality figures for Indigenous Australians. The rate of infant deaths has dropped from over 20 times the non-Indigenous rate to be now more than 3-5 times higher.
People with Illness and Disabilities

While it has been demonstrated that the experience of poverty adversely affects health status, (Committee of Inquiry into Poverty 1975), it is also evident that the experience of chronic ill health, disability or mental illness can directly lead to extreme poverty.

Chronic Illness/Mental Illness

Severe mental illness or chronic health problems (including those caused by alcohol or other drug abuse) may compound existing financial or housing difficulties that individuals may have, leading to homelessness and extreme poverty. A lack of financial resources and family support often results in the effects of poverty and the illness compounding each other in an increasing downward spiral, with little chance of rehabilitation or remedy (Interagency Council on the Homeless 1994).

The 1993 Burdekin Report into the human rights of people with mental illness found that there were 250,000 people suffering from a mental illness in Australia. There are 200,000 Australians who have been diagnosed with schizophrenia and 240,000 people with dementia (Hatfield 1996). Approximately half of those with dementia have been classified as having a moderate to severe level of dementia, with a predicted rise of 175,000 persons in the severe category by the year 2006 (Society of St Vincent de Paul 1995).

Policies of deinstitutionalisation have altered the direction and accessibility of services for the mentally ill. In the USA, the mentally ill are 50 times more likely than the general population to experience homelessness. Mental illness forms a direct link to poverty and also has a compounding effect on social isolation, unemployment and poor life skills, all of which are factors leading to poverty (Lawson and Perese 1996).

Individuals who suffer from a chronic illness are also at a high risk of experiencing poverty as a direct result of their illness. A recent study by La Trobe University found that a third of Australians infected with the HIV/AIDS virus, are living below the poverty line. Sixty two per cent of those surveyed reported that they had left paid employment for HIV/AIDS related reasons and that this was the main cause of their current poverty (Toy 1999).

Discrimination on the grounds of HIV status can operate within the fields of employment and housing. Denial of, or reduced access to, employment based on HIV status can compound poverty and reduce self-esteem, leading to sub-optimal health maintenance. In addition, the isolation and depression associated with poverty have a double impact on HIV/AIDS sufferers as they remove the important social support networks that are vital to physical health and social well being of the chronically ill.

Disability

People with disabilities frequently lack many of the basic material and cultural resources needed to sustain a healthy existence and social participation. A 1993 Australian Bureau of Statistics survey found that 3,176,700 people (18 per cent of the population) have a disability, and almost 500,000 of these people always need help from another person to perform daily tasks (Australian Bureau of Statistics 1995). It is widely recognised that people with disabilities must bear extra costs that people without disabilities do not have (Cass, Gibson and Tito 1988). The costs of disability can also be substantial. For many individuals, these
effects can compound, where reduced economic resources mean a poorer quality of life, which in turn impact on their illness or disability (Commission of Inquiry into Poverty 1975; Cass, Gibson and Tito 1988; Hupalo 1997).

Disability related poverty exists in terms of employment exclusion, shortages of social services, income deprivation (from exclusion from the labour force and the extra costs of disability), and the barriers to social participation associated with many types of disabilities.

Generally, as the severity of handicap increases, the main source of income changes from wages and salary to Government pensions or benefits.

**Carers**

There are over 1.5 million carers in Australia who are caring for those with chronic illness, mental illness or a disability. Half of all carers earn less than $200 per week and many live in poverty, unable to access respite or emergency care. Financial hardship effects a carers’ emotional well-being and reduces the capacity to buy services and other practical items required for caregiving, as well as the social, therapeutic and recreational resources which enhance the quality of life for the carer, care-recipient and other family members (Schofield et al 1998).

High intensity carers are most often excluded from workforce due to the demands of their caring role. Exclusion from employment over an extended period of time has adverse effects on the finances, future career prospects and reported health of carers (Beresford 1994). Two thirds of those who care for the frail aged reported that they suffered from social and emotional isolation and recognised changes to the detriment of their physical and emotional health. More than seventy per cent of carers of the frail aged regarded themselves as living in poverty (Fitzgerald 1994).

**Homeless**

Access to adequate housing is an important prerequisite for a healthy life. Poor living conditions lead to increased stress, social isolation, and an unhealthy and unsafe environment and increased susceptibility to disease or injury. People who are homeless frequently do not access income support and other mainstream facilities, including mainstream health facilities, and frequently need more targeted services. Women and children who are homeless as a result of domestic violence are among the most economically disadvantaged in the community.

Homeless people frequently demonstrate additional barriers to participation such as mental illness or other disability and negligible levels of income. They can also be a difficult population to deliver health services and health promotion programs and messages to.

**Social Mobility and Intergenerational Poverty**

Conventional poverty profiles and statistical snapshots of poverty can provide a detailed picture of who the poor are, but offer limited directions in how the problems associated with poverty can be eased. Essentially this is because the correlates of poverty status are quite distinct from the dynamic processes that lead households to fall into, or escape from poverty.
There is a popular perception in both developing and industrialised countries of intergenerational poverty, where an individual is trapped from birth in a situation of poverty from which it is extremely difficult to escape. Being born into poverty increases the chances that the person will be affected by disability, illness, malnourishment, substance abuse and crime while limiting the chances that the individual will have access to enriched education, employment opportunities and social support networks (Johnson and Dawkins 1998). There is evidence to suggest that these disadvantages of poverty tend to concentrate among certain groups of people, for example Indigenous groups, and remain constant throughout the lifecycle and into the next generation (Johnson and Dawkins 1998). However, evidence from longitudinal household surveys in industrialised countries such as the UK and the USA, indicated that poverty is largely a temporary phenomenon (Duncan 1993).

Families are often pushed below the poverty line in reaction to adverse life events, such as illness, unemployment or marriage break-up, only to experience a reversal of circumstance within the following few years. Likewise, a percentage of individuals who escape poverty, only do so for a set time before events force them back beneath the poverty line again. Baulch and McCulloch (1998) describe this mobility within poverty:

_viewed within this light the poverty problem is one involving a large turnover of vulnerable people rather than a hard-core of the chronically poor._

Social mobility and poverty dynamics have specific implications for Government policies aimed at direct poverty reduction rather than lessening the symptoms of poverty. Identification of the circumstances and factors that lead to households moving in and out of poverty allows specific anti-poverty measures to be targeted towards vulnerable groups. To illustrate, Baulch and McCulloch (1998) suggest that if childbirth, divorce or unemployment are identified as key factors preceding a period of poverty then labour market placement programs and family support initiatives would be priority anti-poverty measures. In addition, the amount of time that different types of households spend in poverty, and the frequency of recurrence, can determine the nature of such interventions. For example, frequent, brief recurring instances of poverty indicate interventions such as safety nets, insurance schemes and short term emergency supports would assist vulnerable households during a poverty spell. Alternatively, long term periods of poverty experienced by specific groups would indicate suitable anti-poverty interventions would be aimed at increasing the assets, entitlements and opportunities of the poor. For example, this may include education initiatives, pension increases and labour force training.

The dynamics of poverty and social mobility are highly relevant in the Australian context. A study by Erikson and Goldthorpe (1992) compared the social mobility of men in eight classes of employment across nine European countries, Australia, the United States and Japan. Findings from the study showed Australian men having the highest degree of social mobility, suggesting fewer constraints preventing movement both in and out of episodes of poverty. There is, however, a lack of longitudinal data alluding to dynamic poverty episodes for Australian households over extended periods of time.

In the absence of Australian longitudinal data, Johnson and Dawkins (1998) make use of a study (Johnson et al 1995) analysing the average income of several different household types at various life cycle stages over a ten year period. While it is recognised that the results of the
analysis may have been confounded by age, cohort and time effects, some trends affecting vulnerability were reported.

Average real private income of those in the 15-24 years age group has fallen sharply since the early eighties, making individuals in this group vulnerable to a period of poverty. This trend is attributed to a decrease in workforce participation, partly due to unemployment levels and partly due to "voluntary poverty", whereby an individual voluntarily accepts a period of poverty while pursuing further education or training to reap future benefits.

Results also indicated that although those in the retirement age group had the lowest average private income of all groups, they benefit considerably from pensions and non-cash benefits. In addition, the study showed that for those in the retirement group, home ownership and occupational superannuation could act as a buffer against poverty.

While these results have identified some vulnerability apparent in different life stages, longitudinal studies are needed to specifically identify the circumstances under which Australian families move in and out of episodes of poverty.

Likewise, longitudinal data is essential for examining the impact of periods spent in poverty on health. These impacts may relate to the duration of a period of poverty, the timing of a period of poverty (e.g., deprivation in childhood versus deprivation in adulthood) or even the number of periods of poverty experienced. While it is conceivable that self report measures of health taken during a brief poverty phase may focus on stress related symptoms (such as tension, insomnia and headaches), it is unclear how rapidly, and under what circumstances, these symptoms become chronic (for example, leading to depression or coronary heart disease).

Further research is also needed to establish the long term health consequences that may be faced by a child who is exposed one or more periods of poverty before experiencing improved circumstances.

Alleviating Poverty and Improving Health Status

As previous sections have shown, there is an abundance of evidence to suggest that a wide range of socio-economic and related factors impact on the health of individuals and communities. Illness can also be attributed to environmental and lifestyle factors as well as genetic factors and access to services.

This section will attempt to clarify and summarise current thinking about directions for strategies to alleviate the impacts of poverty on health.

Social structures that promote and enhance inequality, and place people in situations that are hazardous to their health and wellbeing, have a profound influence on health (McClelland and Scotton 1998; Davis and George 1993). There is abundant evidence about the need to address factors such as low relative income in order to improve the health of the community and stop cycles and spirals of disadvantage. Many studies have concluded that inequalities in the distribution of income alone have an effect on health inequalities when the effects of other factors are controlled for. The inability to purchase adequate food, health care or housing remains a significant cause of poor health in developed countries. Reducing income
inequality can, accordingly, be expected to have some effect in reducing health inequalities (McClelland and Scotton 1998).

Other aspects of poverty including poor education, lack of work and social alienation, also contribute to health status. Socio-economic advantage and health are best understood as elements in a wider system, and not as linear derivatives or antecedents of one another (Leeder 1993). The independent and inter-woven effects of income, occupation, education, or other disadvantage reinforce one another. Even when income is adequate to ensure satisfactory diet or housing, however, the psycho-social effects of relative disadvantage seem to have a substantial impact on health through complex mechanisms related to stress.

Empowerment and social participation are key aspects of any policy aimed at improving the health of low-income groups, particularly as weapons against the negative effect on health of stress. Incentives and opportunities for generating creative behaviour, a sense of personal involvement in the affairs of daily life, and a sense of belonging must be an essential part of future policy formulation if we are to alter the health imbalance brought about by poverty in the broadest sense (Boyden 1993).

Good health involves reducing levels of educational failure, the amount of job insecurity, and the level and scale of income differences in society. Societies that enable all their citizens to play a full and useful role in their social, economic and cultural life will be healthier than societies where people face insecurity, exclusion and deprivation (World Health Organisation 1998).

The World Health Organisation recently (World Health Organisation 1998) identified 10 different but interrelated aspects of the social determinants of health that must be addressed in order to provide a framework for higher standards of health in the population. They relate to:

- the need for policies to prevent people from falling into long term disadvantage;
- the importance of an understanding of how the social and psychological environment affects health;
- the importance of ensuring a good environment in early childhood;
- the impact of work on health;
- the problems of unemployment and job insecurity;
- the role of friendship and social cohesion;
- the dangers of social exclusion;
- the effects of alcohol and other drugs;
- the need to ensure access to supplies of healthy food for everyone; and
- the need for healthier transport systems.
Providing social protection policies to ensure the delivery of these social determinants of health is a responsibility of a number of government departments. However, there is clearly a lot that the Department of Health and Aged Care can do to alleviate poverty and its negative effects on health.

What the Department of Health and Aged Care is Doing

Medicare Directions

The health care system in Australia offers a range of programs to all Australians, including universal access to doctor of choice for out-of-hospital care, free public hospital care, and subsidised pharmaceuticals.

The Medicare system is largely financed from general taxation revenue, and supplemented by a Medicare levy which is also fairly progressive. Accordingly, greater contributions toward the costs of health care are made by people on higher incomes. An additional Medicare levy surcharge also applies to high-income earners who do not have private hospital cover through private health insurance.

The rate of benefit for out-of-hospital medical services, such as visits to a doctor in his/her rooms, is 85 per cent of the Medicare Schedule fee, with a maximum gap (currently $50.10) between Schedule fee and benefit. Where one person’s or a family’s gap payments exceed a certain amount in a year, all further benefits in that year are paid at up to 100 per cent of the Schedule fee. (Note - the rate of Medicare benefit for medical treatment provided at approved day surgeries or while the private patient is in hospital is 75 per cent of the Medicare Schedule fee).

Under Medicare, there is a patient/family safety net to limit annual expenditure on pharmaceuticals covered under the Pharmaceutical Benefits Scheme (PBS). After reaching the safety net threshold, general patients pay for further PBS prescriptions at the concessional copayment rate for the rest of the calendar year while concessional patients are supplied free. The benefits of concessional pharmaceuticals are also extensive, for people with high health costs and on low incomes.

It is widely recognised that the Medicare system has been tremendously helpful for people on low incomes:

*By reducing the out-of-pocket costs of care and transferring a greater share of the overall cost burden to middle and higher income earners, Medicare has not only conferred a direct financial benefit on people in lower income groups but has also added to their financial and psychological security.* (McClelland and Scotton 1998)

Prior to the introduction of Medicare, many low-income families faced health related financial difficulties, with debts to hospitals that could not be paid. Cost was a major disincentive to seeking urgent medical treatment (Taylor and Challen 1998). Under Medicare, actual and perceived barriers to poor people seeking and obtaining mainstream hospital services and medical care are clearly much lower than faced thirty years ago. Despite continuing advantages for people on higher incomes, the gaps in their favour have clearly narrowed (McClelland and Scotton 1998).
While Medicare has been successful in increasing access to health services for people living on low incomes, through reductions in the costs of health care (McClelland and Scotton 1998), this pattern of access is essentially limited to general medical services or specialist services received through outpatient facilities at hospitals. In a recent study by the Centre for Health Program Evaluation (Scott 1996), some evidence of inequality in the use of specialist services in favour of higher income groups was observed. The general conclusion of that study was, however, that there is little evidence of a bias in favour of high-income groups in the distribution of the main types of health care services in Australia.

In these terms, the Australian universal system of basic medical services can be seen to provide more than just equity in terms of access to basic medical services, but also a major contribution to the redistribution of wealth and the alleviation of poverty.

But there are also important weaknesses in Medicare. In particular, the inflexibility in historically determined health budgets has been identified as a major barrier to health policies designed to alleviate poverty (Leeder 1993). Recent Health Care Agreements with the States and Territories set out a framework under which the Commonwealth and States can pool money across programs if better ways of treating particular patient groups or providing particular services are identified. This flexibility of funding and care builds on the Coordinated Care Trials and other initiatives and offers a mechanism through which the impact of poverty on health can be ameliorated if appropriate policies and targets can be determined.

There are also a number of initiatives currently underway to explore options for making Medicare more of a patient-oriented health care system, and a population-oriented health outcomes system. The Coordinated Care Trials are aimed at people with complex or chronic conditions. These trials involve pooling funds for the services otherwise available, and having care coordinators for the patients who can assist in ensuring they have appropriate and most effective care. Within the funds available, there is no particular restriction on the services that might be provided.

The report of the General Practice Strategy Review Group (1998) has also identified options that might reward general practitioners for quality services, not just quantity of services, including prevention measures and continuity of care. The report has also made suggestions to strengthen linkages between general practitioners in joint practices and in Divisions, and to improve their linkages with hospitals.

Divisions of General Practice are already being supported to address the needs of their specific communities through such things as:

- funded programs of activity based on a detailed assessment of the needs of disadvantaged groups in their area;
- providing a network of peer support; and
- providing a corporate focus for consultation with other sectors of the health and community services system as well as consumers.
These various initiatives offer the capacity to continue the advantages of our fee-for-service system with population approaches, on both a geographic and disease group basis.

As this direction is pursued, it is anticipated that there will be increased opportunity to identify and address groups and communities with inadequate access to health services, including, for example, people in rural areas and disadvantaged areas. Improved information management should facilitate the delivery of better care and more effective integrated care for individuals and communities.

**Acute Care**

It is widely argued that reductions in public hospital funding over the last decade have restricted the free services available from public outpatient departments and have extended waiting lists for public inpatient admissions (McClelland and Scotton 1998). Yet the debate about hospital waiting lists obscures the tremendous contributions the acute care sector makes to the social protection of people facing disadvantage.

In terms of public expenditure on hospitals, the AIHW found that such expenditure is heavily in favour of people on low incomes (Schofield 1997). This research found that those on higher incomes received a relatively low proportion of benefits on all measures. People in the upper income quintile received about one fifth of the public hospital benefits received by those in the lowest income quintile. In terms of benefits allocated to people actually admitted to hospitals (i.e., excluding hospital outpatient services), people in the top income quintile receive about one third of the benefits allocated to those in the lowest income quintile.

In fact, when average hospital benefits allocated to people were calculated net of revenue raised through the Medicare levy (not intended to cover all medical expenses), it was found that people on high incomes receive negative benefits. People in the top income quintile receive less than they paid through the Medicare levy. Medicare levy contributions made by people in the third income quintile represented about 17 per cent of the benefits they received. And people in the lowest income quintile – paying little or no Medicare Levy – derived considerable benefit from public hospital expenditure.

But to some extent at least, this pattern reflects the poorer health of people on low incomes.

**Health Insurance**

Community rating principle specified in the *National Health Act 1953*, specifying that the premium for any given insurance table not be discriminatory on the basis of age, race, sex, sexuality, health status, benefits claimed or family size, have allowed some cross-subsidisation from low to high health service users (Schofield 1996). Community rating enables a redistribution of resources from the rich to the poor – people from the lowest income group receiving about three times the benefits of people from the highest income groups.

In her study, Schofield also found that people at high risk of hospitalisation receive substantial benefits from community rating, including the elderly, people on low incomes, and the unemployed. Not surprisingly, people in poor health were estimated to receive about 15 times the benefits of people in excellent health (Schofield 1996).
Despite being the greater beneficiaries from private health insurance, people on low incomes are the least likely to be insured (Schofield 1996; McClelland and Scotton 1998). While only 16 per cent of people from high income families ($70,000 or more in family income) have no private health insurance, for people from low income families ($10,000 to $19,000 per year in family income) this figure is 76 per cent (Schofield 1996). While the introduction of the Coalition Government’s 30 per cent private health insurance premium rebate in 1999 has increased overall health fund membership, people from high income families are still more likely to have insurance for both hospital and ancillary services (Kerin 1999).

**Population Health Strategies**

Population health is the organised response by society to protect and promote health and to prevent illness, injury and disability. Population health covers a spectrum from modifying the human environment through to influencing services for individuals, with the aim of improving the health of the population.

Governments play an important role in the policy and practice of population health. They have a role in the provision of basic population health services, such as infectious disease surveillance and control through quarantine and the supply of clean water. They regulate individual behaviour in the interests of population health, as in seat belt and smoking legislation and implement programs which attempt to influence individual behaviour, for example in sexual practices, food choices and exercise. Population health activities are complemented at the clinical level, especially at the primary health care level.

In general terms, States and Territories have primary responsibility for the provision of health services and, through individual Public Health Acts and other legislation, have powers to implement population health activities. The role of the Commonwealth Department of Health and Aged Care is to provide leadership in population health policy and programs, to facilitate national standards and uniformity, and to facilitate a national approach to priorities and strategies. The Commonwealth funds population health initiatives both directly and through States and Territories.

While these roles can be seen to be distinct, however, States and Territories and the Commonwealth have been collaborating for many years on population health initiatives. This collaboration has resulted in a number of successful population health outcomes for Australia including, for example, a reduction in the incidence of HIV-AIDS in a number of at-risk populations, a decrease in cigarette smoking and a decrease in mortality from road traffic accidents.

The evidence suggests, however, that these outcomes are more usually observed in those at the higher end of the socioeconomic spectrum. This can have the effect of actually increasing health inequalities across the population. The challenge is to enhance the capacity of all members of the population to benefit from all population strategies aimed at increasing health and well being.

Within the Department, work has commenced on a number of initiatives which will assist in better identifying issues relating to socioeconomic inequalities and health and in developing strategies to address these issues at a population level.
Central to this work is the need for strategic approaches to population health policy and action, the collection of accurate and timely information, the utilisation and commissioning of quality research and improved targeting of population health interventions. The following section will outline some of the Department's current activities in these areas, and areas identified for further work.

It is recognised that challenges and possibilities facing this work include developing strategic cross-sectoral collaboration to address structural issues relating to housing, employment, education, income support, transport, homelessness and domestic violence which, as indicated earlier in the paper, are key factors influencing population health. This cross-sectional collaboration is necessary across Commonwealth portfolios, within the health portfolio and across levels of government, and it must involve communities. Consideration should also be given to private sector involvement, where this is relevant and feasible.

**A Strategic Approach to Population Health Policy and Action**

To be fully effective, population health policy and action needs to be cognisant of the broader determinants of health. This includes an understanding of the impact of economic and other policies. There is a need to document and understand the impact of economic and social policies (for example, downsizing, changes to income support, globalisation, changes in work practices, changing roles of women) on the health of the Australian population, and for this knowledge to be disseminated and to take these factors into consideration when developing population health policy.

Collaboration within the population health sector is also essential for the successful implementation of population health policy and action. The National Public Health Partnership, established by the Australian Health Ministers' Conference in 1996, enables such collaboration and coordination between State, Territory and Commonwealth governments across a range of population health functions and infrastructure areas.

The Partnership work program includes responding to population health issues that benefit from a national approach and a range of priorities in systems improvement, including population health legislation reform, information collection; research and development; workforce development; planning and practice improvement, and national strategies coordination. This work is oversighted by the Partnership Group comprising members from the Commonwealth and State/Territory health departments, the National Health and Medical Research Council (NHMRC) and the AIHW.

The Department's role in the National Public Health Partnership includes, *inter alia*: facilitating the development of national population health policy in collaboration with government, non-government, professional and community organisations; advocating at the national level for population health and building and strengthening a population health constituency with key players and with the public; and facilitating the development of national consistency in areas where there is agreement that this is needed (e.g., policy standards, legislation and regulation, workforce competencies, environmental protection, disease prevention and outbreak control methods).

The Department's key objective in the population health area is to promote and protect the health of all Australians and minimise the incidence and severity of preventable illness, injury and disability. Through the Population Health Division, the Department funds activities
aimed at understanding and controlling the determinants of disease, promoting good health and reducing public exposure to lifestyle and environmental risks.

The Division provides national leadership and coordination in population health through the provision of resources for:

- national population health strategies in priority areas;
- strengthening the infrastructure and response capacity of the national population health system;
- health and medical research; and
- regulation with respect to food, therapeutic goods and chemicals.

To strengthen Australia's capacity in health promotion and disease prevention at the Commonwealth level, the 1998-99 Budget established the infrastructure to improve the population health information and evidence base. This builds on the Government's national leadership role in terms of its capacity to forecast diseases; monitor health trends; research and develop cost-effective health initiatives; report on health issues; conduct national disease surveillance; and establish and promulgate best practice population health measures. The introduction of the Population Health Evidence Base Advisory Mechanism in the 1999-00 Budget consolidates initiatives in this area.

The Department is also developing strategies to improve the integration of this work within the portfolio to broaden the population health activities of Divisions of General Practice and individual general practitioners (GPs).

An example of an initiative currently being developed in this area is the Postgraduate Public Health Program for Clinicians. This Program is aimed at enhancing the role and contribution of doctors in population health, with the development of the rural population health workforce as a priority. A range of courses will be developed and piloted, which will:

- expose trainees and existing general practitioners to population health concepts;
- develop skills in integrating population health work with clinical practice;
- enhance the capacity of general practitioners to provide leadership in population health work in their local community;
- develop the capacity of rural health practitioners to participate in and support health research in rural areas; and
- enhance general practitioner access to information to improve their practice.

More specifically, Divisions of General Practice and individual GPs are increasingly becoming involved in issues relating to disadvantaged and high-risk groups. Work has been undertaken by three Support and Evaluation Resource Units to increase GPs awareness of the complexities of these issues and to assist them to develop strategies to address health inequalities in their local regions.
Information Collection

Accurate, reliable and timely information is essential to create the evidence base necessary to develop appropriate health policy and better target population health interventions.

Australia has good information systems for medical clinical care and health status. This type of information has been useful in allowing the Department to report on activities undertaken, the dollars spent, people employed, rebates made and a host of other practical matters, which form the basis of good management information.

Australia also has a number of systems of surveillance for communicable and non-communicable diseases, including the National Notifiable Diseases Surveillance System, National Influenza surveillance and immunisation, breast and cancer registries.

However, the Department does not have a comprehensive picture of the scope of populations’ and individuals’ patterns of health care usage, including changes in these patterns, linked with their health outcomes. This would enhance our ability to develop strategies to address the broader determinants of health.

The Department also needs a better understanding of, and information on, the social and economic determinants of health described in the World Health Organisation and the Australian Institute of Family Studies papers (see bibliography for references). While the importance of these factors for good health at the individual level have been recognised, they have yet not been comprehensively built into the Department’s information strategies, policies and initiatives.

To achieve this, the Department will need to work cooperatively with other portfolios to identify and utilise existing data sources which can contribute to this knowledge and, where there are gaps, work towards establishing new data collections.

The Department has, for a number of years, supported initiatives, which have contributed to the knowledge base in this area, including the HealthWiz database and the Social Health Atlas of Australia. The Department is currently funding two major information projects which will substantially add to this knowledge base and guide our future directions in this work:

- a major national project to map, monitor and report on the burden of disease in Australia, with particular reference to the burden borne by particular sub-groups, and to the burden of disease attributable to social and economic disadvantage; and

- a project which will explore possible links between income and health status over time, and the impact of changes in income to health status using computer modelling.

In addition, the Department is also involved in developing indicators for social and family functioning. Disturbances in social and family functioning underlie many of the problems experienced by children and young people, yet there is no routine national collection of any specific measures in this area. It was a key recommendation of the Workshop on Child Health Information, convened by the AIHW in March 1998, that an audit of current research around the country be undertaken from which a national set of indicators could be developed.
Subsequently, with the strong support of the Population Health Division, funding has been provided by the Department of Family and Community Services for the "Collaborative Development of Indicators of Social and Family Functioning" project. The challenge for researchers, policy makers and those allocating resources is to develop an agreed set of indicators that are most useful in interpreting the impact of changes on young Australians and for ongoing monitoring child and youth health and wellbeing.

The Department is also working to gather information about socio-economic status and health outcomes through strengthening the National Health Priority Areas process and machinery. Within the five National Health Priority Areas the key stakeholders are jointly reporting on progress against national targets, as well as jointly working on strategies and interventions at the national level to achieve those targets. This will include increased clarity of thought and action aimed at tackling the common risk factors underpinning the National Health Priority Areas, for example, diet, physical activity, tobacco and alcohol consumption – there are, of course, close connections here with the national primary prevention strategy.

In addition, there has also been a significant body of work undertaken by the National Public Health Partnership Information Working Group, a sub-group of the Partnership. The information working group has completed a national population health information development plan to identify the information priorities which the Partnership should explore over the next few years.

A final, but by no means minor, role for information is the crucial role it plays in empowering individuals and populations to make decisions about their health and other social and economic areas of their lives - the "control" factor identified by Syme and others. To be effective, however, this information needs to be accessible and understandable and easily located by individuals in the range of media that they commonly use.

**Research and Development**

Quality and timely research and development is essential to increase our understanding of the relationships between socioeconomic status and health inequalities in the Australian context, and to improve our approaches to reducing these health inequalities.

The Department is currently supporting a number of initiatives directed at enhancing Australia's research and development effort in this area.

- The establishment of the Health Inequalities Research Collaboration. The Collaboration, which is located within the National Centre for Epidemiology and Population Health in Canberra, and brings together networks of researchers and practitioners from a wide range of disciplines as well as other stakeholders with the aim of developing a better understanding of the relationship between socio-economic status and health in Australia and effective methods of intervention.

Linked with this initiative, the Department commissioned the School of Public Health at the Queensland University of Technology to undertake a critical review and mapping of Australian research in this field.
• Another major activity is the review of the Public Health Education and Research Program, established in 1987 to encourage collaboration across institutions for research workforce education, thereby improving research networks and the base level education across research areas of needs. The review will be making recommendations about investment in population health workforce development and population health research infrastructure. How to improve the links between researchers, policy makers and practitioners will also form part of the review.

This is an important issue for all research activities funded through the Department – that is, a focus on research to provide the evidence that Australian governments and practitioners need to make decisions about cost effective interventions as well as broader policy directions for inter-sectoral action on health inequalities.

• The National Public Health Partnership has established a task group to clarify the role and activities of the Partnership in population health research. Because of its cross-sectoral nature, this group will be well placed to progress collaborative aspects of work in this area.

There is clearly a strong need for research on the specific issues identified earlier in this paper in an Australian setting including: the pathophysiological mechanisms relating to workplace stress and cardiovascular disease; the concept of control in the workplace and elsewhere; the concept of social capital; the health effects of income inequality.

This work, and other work identified as being important in the Australian context, is being undertaken to clarify the economic, behavioural, social, psychological and community dynamics that underlie inequalities in health. We need to know not only the mechanisms and pathways which link the socioeconomic gradient to different health outcomes, but also interactive effects between the social and economic determinants and their impact on health. Without this knowledge, it will be difficult to develop appropriate interventions to address these inequalities.

It is important that research in this field is strategically planned, that research outcomes are well disseminated and, where appropriate, taken up into policy and program development. The initiatives outlined above should substantially contribute to this process.

Population Health Interventions

As indicated above, while Australia has been successful in population health interventions, these have not always been effective in reaching members of the community who are at the lower end of the socioeconomic spectrum. There is a need to examine our approach to interventions, taking into account not only the nature of the intervention itself but the target group and the context in which it is implemented — that is the social, cultural, environmental and economic factors impacting on the lives of people within the targeted population group. Equally, the multi-dimensional nature of poverty and health issues indicates a need to provide and assess clusters of interventions, rather than rely on an approach based on single interventions.

This multifaceted and integrated approach is being utilised in the development by the Department of a nationally coordinated primary prevention strategy targeting the burden of chronic, non-communicative disease. The National Primary Prevention Strategy includes...
initiatives relating to improving food quality and nutrition, increasing physical activity, and preventing overweight and obesity. A major challenge for the strategy will be to establish more effective approaches to reducing the impact of socioeconomic disadvantage on health status. This will require new ways of thinking about the design, delivery and evaluation of population health interventions.

The Population Health Evidence Base Advisory Mechanism will go some way towards addressing this need for better information on the effectiveness and cost-effectiveness of population health.

While population health strategies are vital in improving the health of the community, they must be supported by independently acting on circumstances such as low income which underlie many health problems.

*Future Population Health Directions*

The study of disease based on clinical classifications has been criticised in recent times because of the strong tendency to think of disease in individual rather than group terms. A wide variety of disease outcomes are related to similar circumstances – a pattern that is masked by the focus on single clinical entities (Syme et al 1996).

Several psycho-social factors are related to many different diseases, yet most well-recognised, disease-specific risk factors are only moderately predictive of these diseases (Syme et al 1996).

Similarly, an emphasis on particular risk factors handicaps the ability of health planners to appreciate the complex, multi-causal nature of illness and leads to an automatic focussing of policy and research on a mono-causal approach, often emphasising individual choices and risk factors (Duckett 1998).

In the future, health promotion strategies will not only draw more heavily on GPs in line with directions outlined in the GPs Strategy Review but also on a community development approach. Effective strategies will come about through changing structures and processes in such settings as schools, workplaces and the neighbourhood.

Equipping people to deal with the forces that impact on their lives is in fact an essential component of health promotion. This involves much more than the simple provision of information. New population health initiatives will increasingly focus on more clearly understanding the relationship between socio-economic status and morbidity/mortality. This includes an understanding of mediating factors and what can be done to effectively intervene in the Australian setting.

*Indigenous Health Programs*

Indigenous health programs provide an example of health programs targeting groups within the community facing special disadvantage. For Indigenous Australians in particular, cultural and structural factors effect health outcomes as well as affecting and being affected by income status. In remote communities there are major difficulties around administration of the PBS and MBS that impact on access to health services; for example, difficulties in keeping records of Medicare and pharmaceutical benefits eligibility.
Most importantly, there is no doubt that services have to have a high degree of community control if they are to be effective. The most important component of health services in many of these communities are population health measures – dealing with environmental issues of water, power, and housing and behavioural issues such as nutrition, smoking and alcohol. These require not just money, but a culturally appropriate approach.

The Aboriginal and Torres Strait Islander Health Program with its focus on community control is recognised by the Department as being critical to success in responding to the needs of Aboriginal communities.

A Strategic Framework Agreements now exists with the States, the Aboriginal and Torres Strait Islander Commission and the community controlled health sector to pursue improvements through integrated planning and development. These Agreements are linked also to a framework of clear goals and targets against which all governments will have to report.

**Conclusion**

Complex problems require complex solutions. The analyses of socio-economic forces influencing health indicate that poverty is a multi-dimensional concept, and its impact on health is varied. Solutions for the minimisation of such harmful impact, accordingly, must be equally multi-dimensional in approach.

As McClelland and Scotton (1998) argue, it has been much easier to remove financial and other barriers to health service use than to reduce health differentials associated with low socio-economic status. More work on this is required. The multi-dimensional nature of poverty necessitates the integrated delivery of social protection policies, and the increasing recognition of the importance of factors such as income, education and social participation in determining health status. Population health programs are a vital dimension in the strategy to minimise the impact of poverty on health.

Health policies play a key role in redistributive policies in Australia – a fact which is often neglected through the dominant focus on income support policies as weapons against poverty. This suggests that a stronger Commonwealth role in health and aged care is required, in keeping with Government income support/redistributive responsibilities and policies. This need not occur at the expense of the delivery of effective health care services.

Current health policies have gone a long way to minimising the effect on health of poverty, but more fine-tuning is required. Current research into the mechanisms through which socio-economic and environmental factors negatively impact on health offer promising directions for new policy, particularly in the population health area. These include an increased focus on the need to combat stress, facilitate individual control over life circumstances, encourage social participation, and generate a sense of ownership of health issues at a community level.

Population health projects outlined in this paper offer opportunities to take a world lead in clarifying the mechanisms through which poverty impacts on health in developed countries, further exploring the relationship between poverty and health, and minimising the effects of poverty on health on individuals and communities in Australia.
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