INTRODUCTION

In Australia and elsewhere there is an assumption that there are certain health benefits to living in the country: clean air, fresher food, better housing, less stress and a greater sense of community and support.\(^1,2\) Recent Australian statistics show otherwise. People in rural and remote areas suffer from a health differential that is skewed toward higher mortality and morbidity rates for some diseases and increased rates of hospitalisation.\(^3\) ‘Living and working in the country, especially the most remote parts of Australia, is a health hazard. The air may be cleaner than in the cities, the roads emptier, the noise levels lower, but the living is hazardous, especially for young men’ (p. 1).\(^3\) Other research shows that the health gains by indigenous Australians, the majority of whom live in rural and remote areas, are inconsistent and there appears little improvement in death rates.\(^4\)

While rural–metropolitan health variations are being documented, there is very little explanation of the differences. Given the explosion in interest in what are being called the social determinants of health, it seems timely to explore the range of factors that interact to produce rural health status. Very briefly, the social determinants of health refer to the economic, social and cultural factors that influence individual and population health both directly and indirectly, through their impact on psychosocial factors and biophysiological responses. This field of research departs from explanations of genetic inheritance, biomedical processes and behaviours to address the context in which individuals live, work and play.\(^5\)

The present paper uses insights from the social determinants of health literature to offer tentative explanations for the major health differentials between rural and metropolitan Australia. We conclude with several priorities for researching the rural–metropolitan health differential.
DESCRIBING RURAL–METROPOLITAN HEALTH DIFFERENTIALS

The National Rural Health Policy Forum argues that for some conditions and outcomes, the health of rural Australians is ‘substantially worse than for other Australians’ (p. ii). In particular, rates of death by suicide and injury, road vehicle accidents, asthma, diabetes and infant mortality are notably higher than those experienced in metropolitan areas. Higher rates of death are recorded for non-indigenous men in rural and remote areas than for those in metropolitan Australia. Cancer rates are also differentially distributed according to place of residence, with lower rates recorded for rural Australians. This section provides more detail for the major health status differences.

The statistics for diabetes show significant differences between metropolitan and rural areas. Hospitalisation data show that both males and females living in remote zones and males living in rural zones are hospitalised for diabetes twice as often as their metropolitan counterparts. Females in rural zones have a rate of hospitalisation for diabetes that is 25% higher than females in metropolitan areas. What is disturbing is the fact that the diabetes differential is growing. Deaths due to asthma are similarly skewed, with deaths occurring at higher rates in remote zones than in rural zones, which are in turn also higher than those in metropolitan areas.

Rates of injury are shown in Fig. 1 to be significantly different in metropolitan areas and rural and remote regions, with deaths per 100 000 population rising from 53 in capital cities to death rates at 77.5 deaths per 100 000 population in rural areas. Female rates are markedly lower overall but still follow the trend of more deaths due to injury as the geographical spread of population gets wider. ‘Overall, the rates increase with increasing remoteness, suggesting that those living in rural and remote zones are at greater risk of death from injury than are those living in the metropolitan zone’ (p. 17).

Suicide rates in Australia have remained relatively constant over the last 100 years, but the highest rates of male suicide and self-inflicted injuries are found in large rural centres and ‘other remote’ areas. An absence of national time series data precludes analyses of whether rural–metropolitan health differentials are increasing. However, in one state-based study, Burnley showed that while mortality rates from ischaemic heart disease (IHD) in NSW declined between 1969 and 1994, spatial variations were maintained and had increased among middle-aged men in some areas; specifically, the incidence of IHD had increased for men aged 40–64 years in inland small towns/rural areas but not in the coastal urban areas of NSW. Burnley could not explain this particular trend and surmised that lifestyle differences and a shortage of health services and health workers were responsible. He concluded, however, with a call for research to investigate the interaction between cultural/behavioural, social causation and structural/material factors.
EXPLAINING THE HEALTH INEQUALITIES BETWEEN RURAL AND METROPOLITAN AUSTRALIA

Considerable consensus exists among epidemiologists about the reasons for health differentials. In particular, lifestyle risk factors, physical environmental factors and health service access and utilisation are repeatedly cited. The social determinants of health literature nominates other relevant factors, namely, socioeconomic status, race and ethnicity, gender, sociocultural and psychosocial factors. The present paper uses an expanded view of the social determinants of health to suggest explanations for the poorer health status of rural Australians.

Socioeconomic status

In a recent Australian overview of the research on socioeconomic status (SES) and health, the authors concluded that ‘the evidence on socioeconomic status and health in Australia is unequivocal: those who occupy positions at lower levels of the socioeconomic hierarchy fare significantly worse in terms of their health’ (p. 33).8 Socioeconomic status is generally measured in one of three ways: (i) income; (ii) education; and (iii) occupation.

When SES is measured by income, clear associations are apparent with health: Australians living on low incomes are more likely to suffer disability, chronic illnesses or report recent illness.9,10 While it is difficult to compare rates of income across geographical boundaries because of the different make-up of income between rural and metropolitan areas, it is possible to argue that the different distribution of incomes in urban and rural Australia contributes to the health differential on the basis of: (i) mean annual taxable income; (ii) the proportion of families with dependent children receiving government pensions and benefits; (iii) the proportion of children living in low-income working families and adults aged older than 25 receiving labour market benefits.11 Non-metropolitan Australia contains a greater percentage of people who are significantly poorer than does metropolitan Australia. The exceptions are mining towns and wine producing regions.11

Similar findings arise when education and occupation are used as indicators of SES. While the number of people with tertiary qualifications in rural Australia has grown significantly, educational levels are still lower than for metropolitan Australia. Other research has shown that unemployment increases the risk of premature death from suicide, cardiovascular disease and respiratory disease, particularly among men.12 Longitudinal studies have also shown that unemployment causes mental ill health and the greater use of health services.12 Higher rates of unemployment in many rural and regional centres may exacerbate the poorer health status in those areas.

Race and the indigenous health differential

The health status of indigenous Australians is significantly worse than that of the non-indigenous population on every health indicator: life expectancy, maternal mortality, infant mortality, child mortality and childhood and adult morbidity.1,13 It is conceivable that the entire rural–metropolitan health differential could be attributable to the fact that indigenous Australians make up a greater proportion of rural populations. However, this is not the correct explanation. While in remote areas, the indigenous population makes up a greater percentage of the total population and therefore influences the lower health status of remote areas, the indigenous population is not large enough in metropolitan and rural zones to affect the health differential.1

Demographic composition aside, research conducted in the US does not support claims that race as a biological characteristic leads to health inequalities.14 Nor does the fact that racial minorities are generally poorer, because poverty is a predictor of mortality for all racial groups. Instead, those who have investigated the interplay between income, race and other factors show that perceived discrimination and race-related stress play a role. In other words, racism as a sociocultural characteristic is the health-damaging factor. Furthermore, contrary to popular opinion, behavioural risk accounts for only a small proportion of income-related health disparities across age, sex and race categories.14–16 Thus it is not possible to assert that the behaviours of particular races and ethnic groups are responsible for differential health status.

Environmental factors

Both the greater exposure to occupational injury and the poorer road quality in rural and remote areas possibly add to the rural health differential. Agriculture, as a singly rural industry, is one of the highest risk groups for occupational injury and disease. Both the farming environment itself and the diversity of production processes that are carried out daily on farms, contribute to the high rate of injury.17 Poor road quality combines with greater periods spent on the road to increase the potential for road accidents. A diminished police presence may compound the problem.3

Risk-taking behaviours

While the high rate of injury in rural and remote areas is partly due to environmental factors, behavioural factors
also play a role. A contributing factor in the high rate of injuries suffered by rural males is acknowledged as risk-taking behaviour, which in turn affects their driving. ‘Sensation seeking and aggression have been found to be the main reasons adolescent men drive recklessly’ (p. 2).3

Anecdotal evidence suggests that risk-taking behaviour has another dimension. An attitude is prevalent in rural areas that may not encourage preventive health behaviours and may in fact tolerate smoking and excessive drinking.5 Attitudes that emphasise the need to maintain the ability to perform one’s role and stoicism toward adversity, are common in rural communities.18 Regardless of involvement in the agricultural industry, attitudes such as self-reliance, independence and a reluctance to seek help, are displayed by residents of rural communities.19 Like the type A personality, the much admired rural personality may be a health risk factor.

Physical and cultural access to services
The reality of living in rural and remote areas of Australia is that there are fewer health-care services.1 However, it should be noted that geographical distance to a practitioner has been found to be neither the sole nor the most important determinant of choice of general practice care.20

Geographic isolation and problems with access to and shortages of providers and services are multidimensional problems. For instance, the quality of roads not only contributes directly to higher incidences of injury it also compromises access to health services. Bond noted the difficulties in utilising services in rural and remote areas because of poor quality roads and the added expense of travel because of the high cost of petrol.21 A lack of transport is a further barrier to services22 and while various types of government assistance in the form of reimbursing costs of utilising a service do help, the reality is that allowances fall short of the true cost of taking time off work and associated social costs.1 Moreover, difficult economic circumstances indisputably impact upon access to and demand for health services, particularly rehabilitation services.17 This is especially relevant during the economic downturn that rural areas have been subject to lately.10,23

A difficulty in meeting the health-care service needs of people in rural areas is their high expectations of what a health service should comprise. These expectations appear to be media-driven24 and have, in some cases, been fuelled by rural health policies that promote doctor shortages and hospital closures as the only concern for rural health.25

Medicare data indicate that rural people utilise health services less than people in metropolitan areas do.1 The question of whether this is solely because of a lack of quality services or because of behavioural or sociocultural factors that inhibit utilisation is yet to be answered. Some light is shed on what may be considered sociocultural factors by research which reveals the different understandings that rural people have of health. It appears that ‘the potential consumer’s willingness to seek care depends, in part, on an individual’s attitudes towards health, knowledge about health care, learned definitions of illness (social and cultural) and perceptions of need for health care service’ (p. 61).20 Rather than concerns over pain or cosmetic attractiveness, ‘maintaining performance or productivity, despite adversity, is an important concept for well-being amongst rural dwellers’ (p. 63).18

Definitions of health and wellness subsequently affect the utilisation of health-care services. People in rural areas commonly describe health in the negative, as an absence of disease.26 If one understands health to be an absence of disease, the main concern becomes the cure of illness as opposed to the maintenance of good health. Therefore, curative treatment becomes the focus of a health-care system20 and demand is made for acute and chronic disease management as opposed to primary care and health promotion.27 Moreover, a demand for preventive services is negligible and this is evidenced in much dental and oral health research.20–30

Psychosocial factors
A psychosocial factor has been defined as ‘a measurement that potentially relates psychological phenomena to the social environment and to pathophysiological changes’ (p. 1460).31 In relation to coronary heart disease (CHD), psychosocial factors have been argued to operate along three pathways. First, they may catalyse health-related behaviours such as smoking, diet, alcohol consumption and physical activity. Second, they may act directly on pathophysiological pathways. Third, they may mediate responses to assistance (as illustrated previously in relation to consumer understandings of health and wellbeing).

Because they have been implicated in CHD, one disease that may be increasing in rural Australia,6 we offer some speculative comment about the potential for the psychosocial factors of social support and social status to assist in the explanation of health inequalities.

Social support can be defined as a social resource provided by another person, or the degree to which the comfort and esteem needs of a person are met.32,33 Such support can come from a variety of sources, including family, friends, workmates, the family doctor and community nurse or community organisations.33 A well-known study demonstrates the benefits of social support to health.
status. Based in Alameda County, California, Berkman and Syme randomly sampled 6928 adults and followed up the study 9 years later. Their findings indicated that people who lack ties to the community were more likely to die than those with support networks.\(^3^4\)

Figures 1 and 2, which were used earlier to illustrate unequal health outcomes in rural and urban Australia, offer indirect credibility for the importance of social support. The data indeed revealed a more stark differential, namely a gender divide. Part of the explanation for the gendered injury gradient could be the more hazardous occupations undertaken by men. The glaring suicide differential cannot be so explained but nor can the fact that the rural–urban gradient is reversed for women, with city women being more at risk than women in rural and remote zones. It is tempting to invoke social support mechanisms to explain women’s better health outcomes and to suggest that female appropriate social support is stronger in rural Australia. In short, ‘what has value as support can vary according to situations, categories of people, contexts and cultural values’ (p. 290).\(^3^5\)

However, while rural communities are often known for their relatively high levels of cohesion and support, this can be reflected in a negative way. If social support offers a protective advantage, the question remains as to why suicide rates in large rural towns and the remotest parts of Australia are so high. Stevens asks whether it is possible that social rules operate to limit people’s behaviour and to diminish opportunities for support.\(^1^9\) In illustration of this point, Brown and co-authors describe difficulties with health service providers being personally known by consumers,\(^3^6\) while Warr and Hillier identify privacy issues over accessing adolescent sexual information in a small town.\(^3^7\)

Social status is another psychosocial factor that is receiving epidemiological attention. In cross-national comparative work, Wilkinson concluded that over a certain threshold, income levels are not related to health status in OECD countries. Instead, income as a proxy for social status is the important factor.\(^3^0\) Much interest in social status derives from research on the physiological consequences of social hierarchy among monkeys. At least two different research teams have demonstrated a link between low social status and raised levels of basal cortisol leading to atherosclerosis, the precursor to CHD. Subordinate monkeys also suffered obesity, depression and poorer immune function. Being low in the status hierarchy of the monkey colony is a health hazard; and so it is in humans. In research on homicide in US cities, a clear link was made to the relative deprivation and poor social status of the assailants. The researchers concluded that:

‘The most pressing aspect of relative deprivation and low relative income is less the shortage of the material goods which others have, as the low social status and the desperate lack of sources of self-esteem which usually goes with it. If social cohesion matters to health, then perhaps the component of it which matters most is that people have positions and roles in society which accord them dignity and respect … Respect affects how we are treated, what help from others is likely, what economic arrangements others are willing to engage in with us, when reciprocity is to be expected’ (p. 34).\(^3^9\)

In a provocative treatment of whether political or economic equality matters, Anne Phillips argues that respect increasingly arises from definitions of economic location.\(^4^0\) Phillips finds that, as well as pursuing access to resources and influence over political decisions, groups are increasingly pursuing claims for recognition. What groups want recognised is the equal worth of their ways of doing things, their value systems and contributions to the society. Phillips describes status injuries ‘that arise out of being denied the status of full partner in social interactions or being prevented from participating as a full equal in social life’ (p. 88).\(^4^0\) Status injuries have most often been associated with sexism, heterosexism and racism. Perhaps status injuries need to be extended to places. Rather than classifying people according to high and low status occupations, researchers might consider ranking places according to media coverage, in-migration and business relocation and popular perceptions of the reputation of the town or area. High and low status places could then be correlated with differential health status.

**IMPORTANCE OF PLACE AND OF RURALITY**

While place of residence has been used as a proxy for SES, particularly in Australia, it has been itself researched to a lesser degree than the other factors. This has obscured the rural–urban dimension to health inequalities. A place may be thought of as a location in which social relations are constituted.\(^2\) Indeed, instead of thinking about the rural personality as a risk factor, on the basis of differential health status it is more plausible to opt for rural place as a risk factor.

Macintyre (quoted in Curtis) has summarised how she sees the influences of place on health.\(^2\) The components of place are the physical environment, availability of healthy environments, services provided, sociocultural factors of the locale, representation of locale, lay systems of beliefs and behaviours and labour markets.\(^2\) They are a mix of economic, physical, social, environmental and
sociocultural factors. The experience of these factors is increasingly shown to have psychosocial repercussions and to mediate how different groups define health and subsequently engage in health-promoting behaviours.\(^{41}\)

What few have done is to tease out the various dimensions to place, whether rural or urban. Does, for example, place refer to area effects, community effects or the effects of social practices engaged in by an area’s residents? What is it about rural places or the rural experience that contributes to differential health outcomes? How is rurality embodied, resulting in various physical and mental states of health and wellbeing? These questions need to be answered before we can explain the rural–metropolitan differences that have been described in this paper.

**CONCLUSION**

This paper raises a number of issues with regard to the current status of health experienced by people in rural and remote areas. With researchers asserting that shame, respect and self-esteem impact on individual health status, it is possible that the health status of rural communities is not improving as fast as that of metropolitan Australia because of relativities in community social status. Is it not plausible that whole rural communities feel shamed and low in self-esteem because they are represented as having value only as contributors to the GDP?

Such questions highlight the importance of adequately resourced research and development to inform rural health policy. The call for establishing a set of benchmarks against which urban–rural differentials in health status can be monitored is imperative.\(^{24}\) Other researchers see the need for more research into definitions of health, specifically how different groups define health. In order to tease out the important pathways to health, we also require multilevel analytic techniques, using models that can incorporate qualitative as well as quantitative data. Furthermore, if place is a determinant of health, we need to identify how individuals embody aspects of place, including rural places. Answering this question would require interdisciplinary teamwork that has, to date, been missing in much health research.

**REFERENCES**


Rosenfeld E. *Social support and health status: A literature review*. Adelaide: South Australian Community Health Research Unit, 1997.


