Part IV summary and conclusions

Intra-national comparisons of health outcomes reveal significant scope for improving equity and, in so doing, achieving improvements in levels of health for the New Zealand population as a whole. Particularly noteworthy are the ethnic gaps and socioeconomic gradients (and their interactions) in both fatal and non-fatal health outcomes. Māori life expectancy at birth is nine years lower than non-Māori for females, and eight years lower for males. After adjusting the groups for age, Māori are about one third more likely to be dependently disabled than non-Māori. The gap in health expectancy (as illustrated by independent life expectancy, or ILE) is thus wider than that in life expectancy: approximately 10 years for females and 8.5 years for males at birth. For most major diseases and injuries – including IHD, stroke, lung cancer, diabetes and road traffic injuries – Māori incidence, prevalence and mortality rates are 50 to 100 percent higher than non-Māori rates once adjusted for age. Turning to socioeconomic inequalities, the gap in life expectancy at birth between the most and least deprived NZDep96 deciles is about nine years for males and almost seven years for females. A similar socioeconomic gradient is seen with respect to disability.

Yet such within-population comparisons do not locate the New Zealand population as a whole in a global context. Unfortunately, international comparisons have had to be restricted to mortality outcomes because the measurement of disability or morbidity outcomes generally is poorly standardised. Within this limited frame of comparison, New Zealand appears below average on most indicators in comparison with other OECD countries. Although exact rankings vary, depending on the indicator and also from year to year, New Zealand males fare somewhat better in the rankings than their female counterparts. For example, male life expectancy at birth in New Zealand is about one third of a year below the OECD average and a little over one year below that of Australian males. But New Zealand females are placed lower on the OECD rankings for this indicator, and in 1996 had a life expectancy at birth approximately one year below the OECD average and over 1.5 years below that of Australian females. The relatively narrow gender gap in New Zealand (with respect to mortality) thus reflects poor female rather than good male performance in terms of longevity.

A similar story is revealed if other mortality indicators are examined: YLL or mortality rates, both age specific (for example, infant mortality rates) and age standardised, both all-cause rates and rates for most major causes (for example, chronic diseases and injuries). The historical trend over the past quarter century does show that New Zealand has achieved significant improvement (for most age, gender and ethnic subgroups) for all indicators over this period. However, many other OECD countries have improved even more rapidly, with the result that New Zealand has fallen from near the top in the early 1970s to below the middle of the countries examined in the mid 1990s. Countries such as Australia, which had life expectancies below those of New Zealand in the early 1970s, have now overtaken us. International benchmarking thus indicates that New Zealand has scope to improve overall, but the intra national inequalities suggest that such improvement will only result from greater equity of health outcomes within New Zealand.

One way to estimate this potential for improvement in equity and in whole-of-population outcomes is to categorise diseases and injuries as ‘avoidable’ and ‘unavoidable’ – the concept of avoidability being understood in terms of responsiveness to health sectoral intervention (whether through health promotion, disease prevention, or treatment). With increasing age, avoidability becomes difficult to assign, so an arbitrary age cut off is applied in this approach, usually 65 years. However, the analysis presented here extends the upper age limit to 75, and also extends the range of conditions considered avoidable to reflect recent developments in health promotion and health care technology.

Within the 0–74 age range, it is estimated that 70 percent of all deaths could be categorised as potentially avoidable (approximately 9000 deaths in 1996–97). About half of these deaths are responsive to primary prevention strategies (health promotion and disease prevention) and thus are described as 'primary avoidable mortality', or PAM; approximately one quarter are sensitive to early intervention (for example, screening, effective chronic disease management delaying disease progression), typically in the primary health care setting ('secondary preventable mortality' or SAM); and the remaining quarter (approximately) could be avoided by effective medical and surgical treatment of established disease ('tertiary avoidable mortality', or TAM).

Although primary prevention would have the biggest impact on avoidable mortality, the highest relative inequalities are found in secondary avoidable mortality rates. Improving access to effective primary health care services for ethnic and socioeconomic subgroups with poorer health status is therefore of particular importance.

Analysis of avoidable hospitalisations tells a similar story. In 1997–98, almost one third of total hospitalisations in the 0–74 age group (approximately 100,000 per year, excluding maternity, mental and disability support services) were assessed as having been potentially avoidable, about one third of these through population-based (health promotion) interventions ('preventable hospitalisations' or PH) and two thirds through more effective primary health care ('ambulatory sensitive hospitalisations', or ASH). Māori and Pacific people have rates of avoidable hospitalisations approximately 60 percent higher than European/Others: taking differences in ethnic group age structures into account, this corresponds to 6600 and 2800 excess hospitalisations in 1997–98 respectively.

People aged 0–74 living in the most deprived areas of New Zealand had twice the risk of being admitted to a hospital for an avoidable cause than their more advantaged counterparts in 1997–98. Had all New Zealanders experienced the avoidable hospitalisation rates of the least deprived subgroup, some 26,000 fewer avoidable hospitalisations would have occurred among those aged 0–74 years.

The best opportunity for reducing both the ethnic and the socioeconomic gaps (which, of course, interact) in avoidable hospitalisations can be found in the subcategory of ASH. ASH has both the highest rate differentials and accounts for the largest share of avoidable hospitalisations. This mirrors the findings in regard to SAM. Indeed, the high ethnic and socioeconomic inequalities in both ASH and SAM rates indicate only limited success of the health sector (and especially of primary care) in mitigating the impact of socioeconomic and ethnic inequalities on health outcomes. At the same time, these findings also indicate the considerable scope for gains in both fatal and non-fatal health outcomes potentially available through improvements in primary health care services. A number of innovative developments in primary and integrated care are already in progress, but have not yet had sufficient time or become sufficiently diffused nationwide to influence outcomes at the population level. Both the Ministry of Health and the National Health Committee are currently consulting widely on strategies to improve primary health care.

In the final analysis, however, the scope for health gain through the agency of health sector organisations is limited, even if the sector is broadly defined (as here) to include a range of health promotion, health protection and disease prevention services in addition to treatment and rehabilitation services. Individuals, families, communities and all sectors of government at both local and central levels can act to reduce exposure to known chronic disease and injury risk factors. The analysis of 'population attributable risks' (PARs) presented here – albeit univariate, decontextualised and restricted to the major chronic disease risk factors – reveals that major gains are still possible through lifestyle modification.

Smoking rates appear to have stabilised at around 24 percent of the population overall, but with particularly worrying trends among youth. Total elimination of smoking would prevent approximately 4300 deaths each year. More realistically, a 10 percent reduction in smoking prevalence (from 24 percent to 21.5 percent approximately) over the next decade, assuming no change in smoking intensity, would reduce mortality by approximately 70 deaths per year in the short run, and much more in the long run once the excess risk of ex-smokers has had time to dissipate.

Alcohol consumption has both positive and negative effects on health. Overall, the negative consequences outweigh the positive, at least in terms of years of life lost. In 1996–97 a net loss of approximately 4000 years of life* is estimated. If the prevalence of hazardous drinkers declined by 10 percent from this level (without any change in the proportion of abstainers) by 2006, the net loss of life years would be decreased by approximately 700 each year.

The impact of diet is difficult to estimate from available data. Energy intake is partly captured in obesity rates, fat intake in blood cholesterol, and salt intake in the prevalence of high blood pressure. The only dietary variable measured directly was fruit and vegetable consumption. If everyone ate five or more helpings per day, mortality would reduce by over 800 deaths per year. More realistically, if the proportion of the population consuming at this level increased by 10 percent from the 1996–97 rate, then by 2006 about 90 fewer deaths would occur each year.

Improvements in physical activity levels would have direct benefits as well as acting indirectly through obesity and diabetes. Although New Zealand already has relatively high rates of participation in leisure time physical activity, at least one third of adults are currently insufficiently active. If all adults enjoyed at least the recommended minimum level of 2.5 hours per week of moderate intensity physical activity, approximately 2200 fewer deaths would occur per year. More realistically, if physical activity levels could be increased by 10 percent by 2006, mortality would decline by about 260 deaths per year.

Obesity rates have been increasing over the past decade (if not longer), as has the prevalence of type 2 diabetes. At present, obesity is conservatively estimated to be associated with at least 1000 deaths per year. If the rate of increase in the prevalence of obesity could be reduced by 10 percent by 2006, it is estimated that about 190 deaths per year would be prevented.

For type 2 diabetes – for which physical activity and obesity are major modifiable risk factors – stabilising prevalence at current levels would prevent approximately 50 deaths per year. At present, diabetes is estimated to be directly associated with approximately 1200–1400 deaths per year (over twice the number actually coded to diabetes on death records).

High blood pressure and high blood cholesterol are major cardiovascular risk factors, with very high prevalences in the older age groups. In both cases, there is some evidence that prevalence may be falling slowly as more older people are screened and appropriately managed, and as food choices and cooking practices are becoming healthier. Nevertheless, at current prevalence levels, total elimination of these risk factors would reduce mortality by about 2400 and 1600 deaths per year respectively. The more realistic scenario of a further 10 percent reduction in prevalence by 2006 would be associated with reductions in mortality of approximately 260 and 150 deaths per year respectively.

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* measured by the remaining life expectancy method using West level 26 model life table as the standard, and discounted at 3 percent per year

Such reductions in risk exposures could therefore make major contributions to population health gain. Nevertheless, it should not be forgotten that these behavioural (lifestyle) and physiological risk factors operate at the level of the individual and are based on studies that have examined inter individual differences in health outcomes. Thus they tell us who will develop the outcome, but may not identify the major causes of differences in the rates of these outcomes between social groups. That is, at the group level, other factors – the social, cultural and economic determinants of health – may be more relevant as the focus of policy intervention. Such determinants may operate by shaping social norms of behaviour or constraining lifestyle choices, or may act independently of the behavioural and biological risk factors that are so important at the individual level. Future editions of this report may be able to include analyses of these major group level variables alongside the individual level lifestyle (behavioural) and physiological risk factors.