

UNDERSTANDING THE CAUSES OF HEALTH INEQUALITIES: INCORPORATING PERSONAL, LOCAL, NATIONAL, AND GLOBAL PERSPECTIVES

GUEST EDITORIAL

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Sometimes it can be difficult to ground, in easily understandable facts and ideas, the often detailed and complex statistics and theories about health inequalities. Some eyes glaze over when the 10-year changes in standardised mortality ratios in the first and tenth equivalised family income deciles are discussed. What, however, could be easier to understand, or closer to home, than the results of McCracken's statistical modelling, which suggests that in NSW each year almost 5000 premature deaths might be prevented if we could remove all inequality in our society. Put another way, if all of the people of NSW enjoyed health similar to that enjoyed by the people of Northern Sydney then one in four deaths would be avoided—and one in two of the deaths in the Far West would be avoided.

Such stark conclusions stimulate consideration of why inequalities exist, and the other four contributions in this issue take up the challenge of understanding the reasons. Awofeso and Eckersley discuss predominantly global matters. Picking up Stilwell's arguments from an earlier Bulletin (Volume 12, Number 7),¹ Awofeso highlights some of the ways in which globalisation has detrimental effects on health, particularly poor people's health, in poorer, internationally less powerful, countries. He calls for a new agenda involving intersectoral collaboration, engagement with civil society, responses to local concerns, and respect for human rights.

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Eckersley argues that, in developed nations, economic growth is no longer associated with improved social wellbeing (for instance, life satisfaction and happiness); people are concerned about unfettered materialism and individualism, and the pressures these place on individuals, and they want more balanced lives. Eckersley questions the commonly-held assumptions about growth that inform decision making and calls for a better balance between a 'wealth producing economy' and a 'health producing society'. The need for both, not one or the other, has also recently been voiced by Deaton who argues that 'individual welfare is neither health nor wealth but depends on both'.² Deaton, an economist, is critical of those in the public health community whose policy proposals 'emphasise health without adequate attention to the other aspects of wellbeing'.

Quiggin focuses our attention on changes in Australia over the last two or three decades: on the shift in the economy and employment patterns from primary production and manufacturing to personal and community services; and on the negative effects of microeconomic reform on publicly-financed human services, the emphasis on market forces, and 'managerialism'. Quiggin emphasises the well-established links between education and health, in developed as well as developing countries, and laments the cuts in Australian public expenditure for education and the consequences of these for children from low-income families.

Webster is critical of top-down 'tweak the knobs on the grand dial' approaches to health improvement, because they do not take account of the diversity within and between communities or the need for individuals and communities to use their own skills and resources to build resilience rather than just avoid disease. To be successful, Webster argues, public health programs must use community development and partnerships, and must focus on socially-excluded groups.

Global forces, national policies, local priorities, personal behaviours. How do we make any coherent sense of the many factors that influence health inequalities? (And the articles featured in this issue of the Bulletin focus on just a few.) It is important that we develop and make explicit our understanding of how inequalities arise, because our explanatory theories determine our preferred approaches to solutions. Those who believe that unhealthy lifestyles, arising from ignorance or wilful neglect, create inequalities in health will focus their action around behaviour change by, for instance, education, persuasion and legislation. Those who believe that health inequalities are caused by an inability to afford the basic essentials (for instance, nutritious food, safe shelter, and

basic health care) may favour welfare programs and safety nets. Those who believe that the existence of a social hierarchy creates health inequalities probably favour measures that will produce social and cultural change, possibly involving the redistribution of wealth and greater democracy.

On the evidence currently available, we believe that there are multiple causes of health inequalities; that the causes vary from place to place and over time; and that, whoever and wherever you are, global, national, local, and personal influences all play a part. Many authors have developed diagrammatic models to represent this complexity in a reasonably simple form.^{3,4} One of the more comprehensive models identifies three interacting levels of factors: upstream (global forces and government policies); midstream (psychosocial factors, health behaviours and the health care system); and downstream (physiological systems and biological reactions).⁵

Acceptance of such a broad ranging explanatory framework requires that action be taken at all of these levels to reduce inequalities. At the global, national, and local levels, we must ask: 'What sort of society do we want to live in?' We are all conscious of the difficulties involved in changing societies—for instance, vested interests, unequal power relationships, differing value systems, resource constraints and historical legacies—but most of us do not want to live in a world characterised by violence, dishonesty, environmental destruction, prejudice, and inequity. At the personal level, we must ask: 'What can I do to improve my own and my family's health?'; 'How do I want to relate to my family, friends and neighbours?'; and 'What contribution can I make to creating the sort of society I want to live in?'

But what can we do as public health professionals to reduce inequalities? Wise recently offered some suggestions about how to become active in our personal lives and through our professional associations and work places.⁶ We must, however, see the whole, not just the parts, in both the sites of action and the actors. We must find ways to change the upstream global and national influences on personal and population health while at the same time *working with* individuals and communities to alter midstream and downstream factors that directly affect our lives. We must also recognise and act with others who promote greater equity—for instance, the environmental movement, progressive movements in education, social welfare and employment, and human rights organisations. Understanding the pathways through which inequalities are created and maintained is, however, an essential prerequisite.

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WHAT IF NEW SOUTH WALES WAS MORE EQUAL?

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In the international health status 'league tables', Australia ranks among the best in the world. For example, on the measure of healthy life expectancy (that is, disability-adjusted life expectancy), the *World Health Report 2000* rated Australia second out of 191 countries.¹ However, as Sainsbury and Harris remind us in the guest editorial to the first issue in the health inequalities series of the *NSW Public Health Bulletin* (Volume 12, Number 5): 'there are substantial inequalities in health in NSW and Australia' and 'these inequalities translate into large differences in levels of mortality and morbidity'.²

This article describes an estimate of the excess mortality burden in NSW and focuses on the following questions: What if NSW was more equal? Each year, how many premature deaths might be prevented if we could remove all inequalities in our society?

Clearly, there is no unequivocal or precise answer to these two questions, as the answer depends on how 'excess' mortality is identified and measured. Despite the elusiveness of any definitive answer, the questions are worth posing because they remind us of the scope that still remains for reducing premature mortality across New South Wales.

BACKGROUND—APPROACHES TO MEASURING EXCESS MORTALITY

The notion of excess (or avoidable, unnecessary, and preventable) mortality has a lengthy history, dating back at least to the mid-nineteenth century in the work of the English statistician, William Farr.³ Concerted research interest in the topic, however, is more recent, developing over the past three decades or so.

Two basic types of methodologies have been employed to estimate excess mortality. The first type of methodology has been based on identifying causes of death that supposedly can be prevented in various ways. Work in this methodology derives from a compilation of a list of 'unnecessary untimely deaths' (that is, 'sentinel health events') by a working group on preventable and manageable diseases in the United States.⁴ Subsequent researchers have used and extended this list in studies of avoidable mortality in a wide variety of geographic settings.^{5–10} Early work in this methodology tended to focus on mortality from conditions amenable to medical intervention (that is, secondary and tertiary prevention), but some of the more recent studies have extended the concept of avoidability to cover primary prevention (that is, reducing the incidence of the condition through individual behavioural change and population level interventions).^{11,12}

The second type of methodology has been based on the idea of selecting a favourable level of mortality as a standard and then defining excess deaths as those above that reference level. This, in fact, was the approach taken by Farr in the nineteenth century.³ Farr noted that, in districts in England with the most favourable sanitary conditions, the crude death rate did not exceed 17 per 1000 population; and, accordingly, he adopted this rate as representing 'natural' deaths. Any deaths above this rate were deemed to be 'unnatural'. Several variants of this 'best mortality' criterion have been used by modern researchers. One strategy has been to use the age-specific and sex-specific mortality prevailing in the highest social class as a benchmark.^{13,14} Another has been to assemble the lowest age-specific and sex-specific death rates recorded in selected geographic units as a benchmark.^{15–17} An interesting recent British study, meanwhile, has placed

the ‘best mortality’ approach in a government policy framework, by estimating the effect on death rates if life in Britain was changed through three successful government policy initiatives: the achievement of full employment, the eradication of child poverty, and a modest redistribution of income.¹⁸

METHODS AND DATA

For the analyses reported here, the ‘best mortality’ approach has been employed. Two geographic areas are used as ‘best mortality’ reference benchmarks, the Northern Sydney Area Health Service (NSAHS) and the Ku-ring-gai Local Government Area (KLGa). The NSAHS has the lowest age-standardised mortality rates for both males and females of the State’s 17 area health services,¹⁹ while the KLGa—which is located within the NSAHS—has the lowest age-standardised and sex-standardised premature mortality ratio of any large (that is, >100,000 resident population) local government area within NSW.²⁰ These ‘best mortality’ positions have been consistently held by both geographic units for many years.

Unpublished deaths tabulations by age (in five-year groups), and by sex and cause, for the years 1995–1997 (combined) for NSW local government areas were purchased from the Australian Bureau of Statistics. Average annual age-specific and sex-specific death rates for the NSAHS (Model A) and KLGa (Model B) were calculated from these data and from 1996 estimated resident population (ERP) figures. These rates were then applied to NSW’s ERP and the ERPs of each of the State’s area health services to calculate the number of deaths the

State as a whole (and each area health service) would have experienced if they had had the age-specific and sex-specific death rates of the reference populations.

Excess mortality was defined as the difference between the actual number of deaths experienced and the expected number, and excess deaths were expressed as a percentage of actual deaths to give an index of proportional excess mortality (PEMI). The procedure is thus simply indirect standardisation, but with selected ‘best mortality’ age-specific and sex-specific rates used as the standard, rather than the normal practice, in NSW Department of Health publications, of using rates for NSW as the benchmark.

To dampen the influence of random fluctuations in the data, three years of mortality statistics combined were used. To this end, one run of the NSAHS-based calculations of excess mortality (Model C) was conducted using the area’s specific rates adjusted up to the upper limit of their respective 95 per cent confidence intervals to give a more conservative estimate of avoidable deaths. A similarly-adjusted KLGa model (Model D) was also run.

The consideration of excess mortality was confined to deaths under 75 years of age. This is not to deny the occurrence and importance of avoidable deaths at higher ages. However, deaths before age 75 can be thought of as premature and thus of particular concern. Most of the previous work on excess (avoidable) mortality has used an upper age limit of 64 years; but, in recognition of improvements in life expectancy, the higher limit was chosen here.

TABLE 1

NUMBER OF LIVES POTENTIALLY ‘SAVED’, AND OBSERVED DEATHS, NSW*, 1995–1997

Age Group	Number of lives potentially ‘saved’ per year								Observed Deaths	
	Model A (NSAHS rates unadjusted)		Model B (KLGa rates unadjusted)		Model C (NSAHS rates adjusted)**		Model D (KLGa rates adjusted)**		New South Wales Average Annual Deaths 1995–1997	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
0–14	115	33	202	58	34	0	30	58	407	318
15–34	383	112	231	230	213	19	0	133	1098	373
35–54	720	311	1123	399	478	126	616	94	2199	1250
55–64	881	219	1097	465	689	92	641	90	2682	1534
65–74	1387	599	2787	1048	1067	349	2107	443	6137	3753
Total	3486	1274	5440	2200	2481	586	3394	818	12523	7228

* Based on New South Wales’ estimated resident population at 30 June 1996.

** For some age groups the confidence interval adjustment made the NSAHS and KLGa rates higher than the NSW ones. In such cases the number of lives potentially saveable was taken as zero.

TABLE 2**PROPORTIONAL EXCESS MORTALITY INDEX, IN PERCENTAGES, NSW*, 1995–1997**

Age Group	Model A (NSAHS rates unadjusted)		Model B (KLGA rates unadjusted)		Model C (NSAHS rates adjusted)**		Model D (KLGA rates adjusted)**	
	Males	Females	Males	Females	Males	Females	Males	Females
0–14	28	10	50	18	8	0	7	18
15–34	35	30	21	62	19	5	0	36
35–54	33	25	51	32	22	10	28	8
55–64	33	14	41	30	26	6	24	6
65–74	23	16	45	28	17	9	34	12
Total	28	18	43	30	20	8	27	11

* Based on New South Wales' estimated resident population at 30 June 1996.

** For some age groups the confidence interval adjustment made the NSAHS and KLGA rates higher than the NSW ones. In such cases the number of lives potentially saveable was taken as zero.

TABLE 3**PREVENTABLE MORTALITY BY AREA HEALTH SERVICE, NSW*, 1995-1997**

Area health service	Lives potentially 'saved'	PEMI (%)	Area health service	Lives potentially 'saved'	PEMI (%)
Central Sydney	486	30	Northern Rivers	211	23
Northern Sydney	0	0	Mid North Coast	210	21
South Eastern Sydney	369	17	New England	219	34
South Western Sydney	511	25	Macquarie	142	37
Western Sydney	489	27	Mid Western	195	33
Wentworth	190	25	Far West	122	49
Central Coast	289	27	Greater Murray	291	31
Hunter	514	28	Southern	194	29
Illawarra	304	25	NSW Total	4760	24

Note: The area health service lives that could have been 'saved' do not sum to the NSW total as area health service of residence details were not available for a small number of recorded deaths.

* Based on New South Wales' estimated resident population at 30 June 1996.

RESULTS**All-causes mortality in NSW**

Table 1 summarises the annual excess death toll for the State under the four models. Using the unadjusted NSAHS and KLGA age-specific and sex-specific rates, Models A and B, produce excess mortality figures of 4760 and 7640 people respectively. On the other hand, the more conservative confidence interval-adjusted NSAHS rates (Model C) gives a total of 3067, while the adjusted KLGA rates (Model D) yield an excess of 4212. The proportion of total actual deaths (males and females combined) identified as excess varies from 24 per cent (Model A), to 39 per cent (Model B), to 16 per cent (Model C) to 21 per cent (Model D).

In all four models, males dominate the excess figures, with a sex ratio ranging from 4.2:1 in the adjusted NSAHS model to 2.5:1 in the unadjusted KLGA model. The age group in which excess deaths are proportionately strongest varies among models (Table 2), though in absolute terms in each case the greatest number of such deaths is in the 65–74 year bracket.

All-causes mortality by area health services

Estimates of excess mortality in each of the area health services are given in Table 3. Only the unadjusted NSAHS rates (that is, Model A) were employed for these calculations. These figures give each area health authority a simple quantitative indication of the 'saveable lives'

TABLE 4

PREVENTABLE MORTALITY FROM SELECTED CAUSE OF DEATH, NSW*, 1995–1997

Cause of Death ICD9 Code	Name	Lives potentially 'saved'	PEMI (%)
153-154	Colorectal cancer	101	11
162	Lung cancer	531	35
410-414	Ischaemic heart disease	1113	30
430-438	Cerebrovascular disease	219	20
460-519	Respiratory diseases	575	41
E800–E949	Accidents	388	37
E810–E819	Motor vehicle accidents	210	41
E950–E959	Suicide	121	16
001-999	All causes	4760	24

* Based on New South Wales' estimated resident population at 30 June 1996.

(per the chosen algorithm) within its bounds, with the NSAHS—by definition as the benchmark—having zero. They of course, though, reflect the population size as well as mortality level of each area health service, and so the proportional excess mortality index (PEMI) also needs to be considered. By this measure, the Far West Area has the highest degree of excess mortality in the State, just under half of total deaths in that area rating as such. The Macquarie Area (37 per cent) and the New England Area (34 per cent) have the next highest indexes.

Causes of death in NSW

The overall NSW results, disaggregated by leading causes of death, are presented in Table 4. Again only Model A (that is, NSAHS rates unadjusted) was used for these calculations. By this estimation, ischaemic heart disease offers the greatest absolute potential for 'saving' lives (1113 people), followed by respiratory diseases and lung cancer. Proportionally, respiratory diseases (41 per cent) and motor vehicle accident (41 per cent) deaths have the largest excess component. For some causes of death other area health services have lower rates than the NSAHS, and thus different cause-specific results would obviously be obtained if those areas were used as the standard.

DISCUSSION

The results reported above clearly show the scope that still remains for reducing premature mortality in NSW, despite a very favourable level of life expectancy overall. Employing the 'best mortality' approach is a useful variation from the norm in the NSW Department of Health publications of using the overall State rates of mortality as the comparative benchmark. Taking the State level as the benchmark usefully identifies areas with above average mortality and need for special attention, but carries the risk of glossing over the potential for still further improvement in areas with better than average rates. The

more rigorous best mortality criterion is a reminder of this potential.

Obviously, the assumption that all areas can achieve age-specific and sex-specific mortality rates as low as those in the 'best mortality' area does not completely hold. The higher mortality of some areas, for example, may reflect above average proportions of people exposed to determinants of health not amenable to prevention: for instance, genetic predisposition to certain diseases. However, the bulk of the inequality in mortality among population subgroups in NSW, and throughout Australia as a whole, is socially and behaviourally determined; and thus, at least theoretically, is open to improvement.

To return to the opening question of how many people in NSW each year go to unnecessarily early graves, the author's view is that the unadjusted NSAHS rates model (Model A) offers a reasonable working figure; that is, close to 5000 persons under the age of 75. The confidence interval adjustment (Models C and D) was introduced into the analysis in recognition of the fact that mortality rates comprise both random and systematic variation. That adjustment naturally reduced the identified excess toll. However, examination of area health service all-causes mortality patterns through the 1990s shows that:

- the NSAHS to have consistently had the lowest male and female rates;
- the relative mortality standing of the 17 area health services to have been very stable.

The correlation between the areas' 1990–1994 and 1994–1998 age-standardised and sex-standardised all-causes rates was $r = 0.98$. Hence the support for the unadjusted NSAHS model.

It might well be argued, though, that the feasible reduceable excess toll is even higher, as the unadjusted

KLGA model (Model B) suggests. While, theoretically, the smaller population and number of deaths involved makes those rates more sensitive to random fluctuation, the KLGA, like the overall NSAHHS of which it is part, has a consistent record of very favourable mortality and thus might be considered a proven achievable target level. Adopting the KLGA as the benchmark also has the benefit of identifying the scope for improvement that remains even within the area health service with the 'best mortality'. In turn, within the KLGA itself there are still deaths occurring that are avoidable.

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HEALTH, WELLBEING, AND PROGRESS

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Is it enough to say that, because we are growing richer and living longer, life is getting better? Wealth and health are the main indicators by which we judge progress, and by these measures Australia, and most of the rest of the world, are making good progress. So is all well and good? Not exactly. There is growing evidence that standard of living is not the same as quality of life, and that how well we live is not just a matter of how long we live, especially in rich nations such as Australia. This article describes the relationship between health, wellbeing, and progress.

The increasing interest in how we define and measure 'progress' has paralleled the resurgence of interest in the social determinants of health. Just as the literature on social determinants provides a larger context to the focus on 'individual risk factors' of much health research—and so improves our understanding of the causes and correlates of disease—so research related to measuring progress can enlarge our understanding of social determinants of health and wellbeing. This research spans several disciplines, including developmental studies, economics, environmental science, sociology, and psychology.

From a political perspective, progress is about chasing economic growth. It is striking just how much the political framework of growth is regarded as a 'policy constant' that is beyond scrutiny or debate. Political leaders explicitly state high growth as their prime objective, believing it to be the foundation on which social progress, including better health, is built (the Prime Minister, John Howard, once said that his Government's 'overriding aim' was to deliver growth of over four per cent per year).¹

What does the literature on social determinants reveal about this priority? Life expectancy rises with per capita income at lower income levels, but among rich nations, it is at best only weakly related to average income.² In these countries, health may be more strongly associated with income distribution, with more equal societies enjoying better health. However, this population-level association between inequality and health is contested.^{3,4} At the individual level, the findings are unequivocal: health inequalities exist in all societies. On average, people at any point on the socioeconomic scale enjoy better health than those below them, but poorer health than those above. Overall, the research suggests that increasing equality in Australia would do more for population health than increasing average income.

Doubts about the nexus between growth and progress have spurred the development of indices, such as the Index of Sustainable Economic Welfare and the related Genuine Progress Indicator, that attempt to correct some of the anomalies and omissions of Gross Domestic Product or GDP, by which we measure growth.⁵ The new indices adjust GDP for a wide range of social, economic and environmental factors, including income distribution; unpaid housework and voluntary work; loss of natural resources; and the costs of unemployment, crime and pollution. These 'GDP analogues' show that trends in GDP and social wellbeing, once moving together, are diverging in most, if not all, Western countries for which they have been constructed, including the United States, United Kingdom, and Australia.^{5,6}

The new indicators support a threshold hypothesis proposed by the Chilean economist Manfred Max-Neef.⁶ In the late 1980s, he and his colleagues undertook a study of 19 countries, both rich and poor, to assess the things that inhibited people from improving their wellbeing. They detected among people in rich countries a growing feeling that they were part of a deteriorating system that affected them at both the personal and collective level. This led the researchers to propose a threshold hypothesis, which states that for every society there seems to be a period in which economic growth (as conventionally measured) brings about an improvement in quality of life, but only up to a point—the threshold point—beyond which, if there is more economic growth, quality of life may begin to deteriorate.

International comparisons show a close correlation between per capita income and many indicators of quality of life, but the relationship is often non-linear: as with life expectancy, increasing per capita income confers large benefits at low income levels, but little if any benefit at high income levels. This is especially so with subjective indicators such as happiness and life satisfaction. Further, the causal relationship between wealth and quality of life is often surprisingly unclear. While surveys show most people are happy and satisfied with their lives, personal life satisfaction and happiness have not increased in Australia and other rich nations in recent decades (50 years in the United States) despite increasing average per capita income.⁷

People are more negative about social conditions and trends than they are about their own lives.^{8,9} Polls over the past four years have shown that, at best, less than one-third of Australians believe overall quality of life in Australia is getting better; as many as a half think it is getting worse. The research indicates many people are

concerned about the greed, excess, and materialism that they believe drive society today, underlie many social ills, and threaten their children's future. They want a better balance in their lives, believing that when it comes to things like individual freedom and material abundance, people do not seem to 'know where to stop' or now have 'too much of a good thing'. In one study, the most common reasons given for perceptions of declining quality of life were: too much greed and consumerism; the breakdown in community and social life; and too much pressure on families—factors linked to economic growth processes.¹⁰

The research on progress highlights the need to question the assumptions about growth that inform our politics. The first is that wealth creation comes first because it allows us to spend more on meeting social and environmental objectives. This is understandable: higher growth, more revenue, bigger budget surpluses, more to spend on new or bigger programs. However, if the processes by which we pursue growth do more damage to the social fabric and the state of the environment than we can repair with the extra wealth, then we are still going backwards. 'Efficiency' in generating wealth may well mean 'inefficiency' in improving overall quality of life.

A second, related assumption is that increased income is better, 'all other things being equal', because it increases our choices, our 'command over goods and services'. Again, this view seems straightforward and compelling. But other things rarely if ever remain equal because the processes of growth tend inevitably and inherently to affect 'all other things'. If the pursuit of growth becomes so dominant that it crowds out or undermines the personal, social, and spiritual ties that underpin health and happiness, then 'more' is not better but worse.

What emerges from this broader view of progress—and what the literature on health inequalities pays scant attention to—is the importance of culture to health and wellbeing.¹¹ Culture refers to the webs of meanings, beliefs, and values that define how we see the world and our place in it, and so what we do in the world. Healthy cultures bind societies together; they allow us to make sense of our lives and sustain us through the trouble and strife of mortal existence.

Our focus on economic growth reflects defining cultural characteristics that include consumerism, individualism, and economism (regarding human societies primarily as economic systems in which economic considerations govern choice). There is growing evidence that these cultural factors can directly affect health and wellbeing. The complexities of the associations between sociocultural factors and health can be illustrated by

looking at psychosocial problems in young people, particularly youth suicide, which have increased in most developed nations in the past 50 years.

There is a clear socioeconomic gradient in suicide among young men (aged 15–24) in Australia—that is, rates decline with rising socioeconomic status—and the gradient increased (became steeper) between 1985–87 and 1995–97.¹² With death related to drug-dependence, however, the gradient apparent in the mid-1980s had almost disappeared a decade later—that is, there was little difference between groups. Among young women, the gradients for both suicide and drug deaths are reversed over this period—that is, deaths in the mid-1990s are higher in the high socioeconomic group than in the low. For all causes of death, the socioeconomic gradient increased for young males, but declined for young females. Clearly, factors other than socioeconomic status affect health.

In a cross-country analysis, a colleague and I found strong positive correlations between several different measures of individualism and youth suicide, especially for males.¹³ In contrast, socioeconomic factors—such as youth unemployment, child poverty, income inequality, and divorce—did not show significant correlations, which is not to say that these factors do not play a role. Individualism places the individual, rather than the community or group, at the centre of a framework of values, norms, and beliefs; and emphasises personal autonomy, independence, and 'self-actualisation'. Most of the measures of individualism used in our analysis were based on survey questions—for example, asking how much freedom of choice and control over their lives young people felt they had.

While individualism might affect health and wellbeing through specific effects on families and parenting, for example, it could also exert a more pervasive influence, contributing to a lack of appropriate sites or sources of social identity and attachment; and, conversely, a tendency to promote unrealistic or inappropriate expectations of individual freedom and autonomy. And individualism, when taken too far, may be more harmful to men than to women because men and women construe the self differently—men as independent, women as interdependent.¹⁴

CONCLUSION

Several observations flow from a broad perspective on progress, health, and wellbeing: our health is influenced by the most fundamental characteristics and features of our societies; these qualities are cultural as well as material

and structural, a question of subjective perceptions as well as objective realities; and the complexities and subtleties of the interactions between these factors make a mockery of our crude equation of growth with progress.

Further, a strategy that is beneficial at one stage of social development is not necessarily appropriate at another. Standard of living, measured as rising income, may once have been a useful, easily measured proxy for quality of life and wellbeing, and it may remain so today for developing countries. But in Australia and other rich countries, the pursuit of ever-greater wealth may now be becoming a health hazard. We need to pay attention to the content of growth—and the values and priorities it reflects and serves—not just to its rate.

We ought to think less in terms of a 'wealth producing economy' and more about a 'health producing society', where health is defined as total wellbeing: physical, mental, social, and spiritual.

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SOCIAL CAPITAL AND PUBLIC EXPENDITURE IN AUSTRALIA

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This article describes the effect of changes in public expenditure on health and education services in Australia, and draws international comparisons.

The structure of developed economies has changed radically in recent decades. As late as the 1960s, it was reasonable to describe the economy in terms of three stages of production: primary production—of agricultural and mineral raw materials; secondary production—a manufacturing industry that transformed raw materials into items of final consumption; tertiary production—a sector that provided transport, distribution, retail, and financial services to the primary and secondary sectors. Services such as health and education did not fit into this model, but since they accounted for less than 20 per cent of employment, they were commonly regarded as a kind of ‘overhead cost’ for the economy as a whole.

Although this three-stage model continues to dominate national accounts, and to inform the economic worldview of many policymakers, it has long since ceased to be appropriate. The primary and secondary production sectors (agriculture, mining and manufacturing) now account for less than 20 per cent of total employment (down from 35 per cent in the 1960s); while education, health, and other community and personal services account for nearly 30 per cent of employment (up from 20 per cent in the 1960s). There has also been strong growth in property and business services employment, which now accounts for 10 per cent of all employment. The share of the traditional tertiary sector (wholesale and retail trade, construction and financial services) has remained static at around 40 per cent.¹

This change in employment patterns reflects a more fundamental change, from an economy based on the use of physical capital to produce material goods to one based on the use of human and social capital to produce services. Three basic forces are at work here. First, rapid technological progress in agriculture and manufacturing has enabled a smaller number of workers to produce any given physical output. Second, the same technological progress has greatly reduced the demand for raw physical effort and increased the importance of skilled and motivated workers. Third, the resulting increase in income has enabled households to move up Maslow’s ‘hierarchy of needs’.² Consumption of material goods is crucial in meeting basic needs for food, clothing, and shelter. However, services are of greater importance in meeting higher-level needs for social interaction, self-

actualisation, and fulfilment.² Economists have a relatively good understanding of the physical goods economy. By contrast many issues remain unresolved in our understanding of the role of human and social capital and the services they generate.

The links between the various forms of human and social capital are complex, but nonetheless are crucial. There is a well-established link between higher levels of education and better health status.³ Higher levels of parental (particularly maternal) education also contribute positively to a range of measures of wellbeing. These links are strong even when the correlation between education and income levels is taken into account.⁴

Evidence on the consequences of improved health status is rather less satisfactory. In part, this reflects the fact that, whereas standardised measures of educational attainment are easily observable, measures of health status are still relatively crude and have not been standardised.

In this context, a notable development of the past two decades has been a dramatic increase in the proportion of the population, and particularly of men aged between 50 and 65, receiving various forms of invalidity benefits. There is no evidence to suggest that there has been an increase in morbidity among this group. Rather, the rise in official invalidity reflects the realities of the labour market. The probability of an unemployed male over 50 finding employment is small, even for the best-qualified. Health problems can reduce this probability to zero, even though they might not have been considered incapacitating in the past.

The direct effects of improvements in health and education status can be interpreted using the notion of human capital. The underlying metaphor is derived from the observation that improved health and education for an individual leads to a flow of benefits, including greater productivity capacity and improved wellbeing, in the same way as investment in an item of physical capital yields a flow of outputs over time.

More complex issues arise with the notion of social capital. The basic idea is to extend the metaphor of human capital to take account of the affect of the effects of social relationships and structures on productive capacity and wellbeing. Despite the difficulty of making this metaphor operational, there can be no doubt of the importance of these issues.

The response of Australian governments to the changing economic and social structure has been based on past experience rather than future needs. For the past two decades, the central focus of policy has been

'microeconomic reform', a policy agenda that begins with the perception that inappropriate policies and economic rigidities are imposing unnecessary costs on the primary and secondary sectors, which are seen as the engines of growth for the economy in general and exports in particular.⁵

The results of this agenda have been negative for human services. First, excessive veneration for the business methods of the private sector has led to the rise of 'managerialism'.^{6,7} Second, there has been a misguided attempt to let market forces determine the appropriate level and form of health and educational services. Finally, there has been continuing pressure to reduce what is referred to as 'public consumption expenditure', including health and education (this classification encompasses publicly funded private health and education as well as public health and education). As public expenditure has been constrained in the 1990s, so has the growth in employment in the human services sector.⁸

In this article, attention is focused on the effect of changes in public expenditure on health and education services. Australia's total expenditure on health care has remained roughly constant at around 8 per cent of gross domestic product (GDP) for the past two decades, comparable to most other developed countries with the exception of the United States. The mixture of public and private contributions has also remained broadly constant. The pressure to cut expenditure has been offset by steadily increasing demand for health services, leading to a situation of chronic strain, manifested in waiting lists and public dissatisfaction.

INTERNATIONAL COMPARISONS

The example of the United States, where large proportions of the population are effectively excluded from access to all but emergency care indicates that higher levels of health expenditure do not necessarily imply improved access to health services or better health outcomes. On the other hand, as personal income levels rise, the share of income allocated to basic needs such as food declines, and the share of income allocated to health care should rise.

However, the unsatisfactory experience of the United Kingdom, by comparison with higher-spending European countries, indicates the dangers of taking cost containment too far. The government of the United Kingdom has promised to improve British health care standards to those prevailing in other leading European countries, but has conceded that this goal is unlikely to be achieved before 2010. Economic analysts sympathetic to the current government's approach to health care reform have argued that substantial increases in expenditure will be required.⁹

EDUCATION

The situation is even less satisfactory with respect to education. Despite the fact that Australia has a relatively young population, and could therefore be expected to spend more on education, the ratio of expenditure on education to gross domestic product in Australia is below the Organization for Economic Cooperation and Development average, and reliance on private expenditure is well above the average.

The quality of education services available to children from low-income families has deteriorated as a result of cuts in public expenditure. This has been reflected in declining rates of school completion, and more recently, in declining university enrolments. The experience of South Australia provides a particularly striking example. Until the early 1990s, South Australia's performance on this criterion was strong. South Australia had a higher apparent retention rate (an estimate of the proportion of Year 8 students continuing to Year 12) than any other Australian state. Expenditure cuts introduced in 1994 by the newly-elected Liberal government had a severe impact on educational services and an almost immediate impact on educational outcomes. From July 1994 to December 1995 teaching staff positions in public schools were reduced by 1100 and non-teaching positions by 110.¹⁰ Over the same period, school retention rates dropped at a rate not equalled in any other Australian state, though the pattern elsewhere was broadly similar. In only two years, the school completion rate dropped by 10 percentage points, from 81.5 per cent to 71.6 per cent.¹¹ The completion rate for boys in South Australian government schools has fallen to 51 per cent, a return to the outcomes of the 1970s.

CONCLUSION

The recent federal election campaign represented a missed opportunity for Australia to address the issues raised by the transition to an economy based on human and social capital. The 'Knowledge Nation' report commissioned by the Labor Party raised some important questions,¹² but the Labor campaign platform offered only incremental changes in expenditure policy, while the government derided the report and offered no serious alternative. Issues relating to health and social capital were barely discussed. Despite this, the issue of social capital formation will dominate the political agenda of the 21st century.

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SOCIAL INCLUSION AND THE PUBLIC HEALTH: THE CASE FOR PARTNERSHIPS

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Governments of both the right and left espouse community participation as a means of engaging with their constituencies. Concepts such as social capital, social justice, social participation, social coalition,¹ equity, and communitarianism, are frames through which social policies are viewed. These directions in social policy ('whole of government') approaches in Australia; the 'third way' and 'joined-up communities' in the United Kingdom; and related concepts of 360° accountability,² are relevant to the way the health system will be organised in the future.

In the early 1980s, the commonwealth government established national health goals and targets.³ States too, defined targets, goals, and outcomes for health programs. These were managed approaches, suggesting that health improvement could be engineered. Tweak the knobs on the grand dial and health would then be distributed. Implicit in this thinking is the belief that the whole population is homogenous and that its health can be managed from the top down.

The community, however, is not so constructed. Rather, it is many communities—communities interacting with each other and within themselves—each with their own

patterns of health. Inner-city communities are different from outer urban communities, and both of these are different from rural communities. There are the marked differences between Aboriginal and non-Aboriginal communities, and between migrant groups. There are also masked differences. For example, in the South West of Sydney the health of the population is about the same as the average for New South Wales, but the massed data belie the poor health of the Australian-born residents locked into poverty. Their predicament is diluted by the better health of migrant populations.⁴

By attending to the health needs of particular communities, overall population health can be improved. This is not to deny the importance of mass campaigns such as immunisation, which depend on reaching into communities for their effectiveness.

Community participation and social inclusion are now ideas of good currency. They are intuitive ideas for many and influence the way politicians think. Communities think this way as they search for quality in communal life. With this emphasis on community, there is a shift towards young people and their development as the pivot for local initiatives. This shift in concern for young people is a threshold test for the capacity of our communities to be nurturing and protective environments.

A colleague questioned, ‘Has it ever been shown, by before-and-after studies, that community development or building community capacity has a beneficial outcome?’ This question causes us to take stock. It is a strongly held view in health and welfare that the nature of communities and the relationships they support are fundamental to social health and wellbeing. Theologians explore this very connection.⁵

There are data to show that communities with material resources, social and psychological support, shared values, reinforcing psychological and social networks, supportive family structures, teachers, physicians and health care, artists, and, some sense of purpose for living, have better health and wellbeing than those that do not.⁶ By creating these attributes in communities, we believe health will be improved.

Our knowledge of the relationship between community and health comes mainly from the evidence of negative effects, and historical precedents, such as the morbidity and mortality associated with extreme national poverty, social class, occupational health, indigenous peoples, fractured inner-city communities, homeless populations, marginalised groups and historical trends that show improvements with economic and social development.⁷

HEALTH DEVELOPMENT

David Legge describes health development in terms of conditions, pathways, agents and partnerships.⁸ The agents are the practitioners and organisations of public health, practitioners and organisations of health care, stakeholders, and policy makers in the ‘other sectors’ of social practice and citizens. The preconditions for health are access to basic material resources, security from material hazard, access to personal health care including personal preventive services and healthy and safe patterns of living. The pathways to health, he argues, are through partnerships including the people whose health is at stake. Thus the metaphor in health development is ‘partnerships’ and ‘strategies of practice’ rather than specific disease interventions characteristic of much public health. There are obvious synergies with community development.

The effectiveness of community development is most obvious in developing countries and in situations where marginalised groups can be assisted. This is being attempted in outer urban localities of South West Sydney.⁹ But the capability of communities to change must be treated cautiously. Tony Vinson, emeritus professor of social work, restudied the communities he researched in the 1970s and found the inequalities persisting 30 years later.¹⁰ A report of the health inequalities in the London Borough of Camden showed the differentials reported by Charles Booth in his survey of 1896 were exactly reproduced a century later.¹¹

Grand schemes

Western governments are to an increasing extent taking up social-health issues to do with social capital and connectedness. Public health concerns are moving beyond the issues of nutrition, shelter, health services, access to health care and protection against infection, to issues bound up with our modern existence, social and community objectives and our relationships. That is not to deny the importance of material welfare and equity, and the effect of epidemic diseases.

There are many national and state initiatives in Australia that exhibit the themes of community partnerships, particularly in regard to young people—their future and their connectedness:

- National Mental Health Plan;
- Mental Health Promotion and Prevention National Action Plan;
- National Health Outcomes for Young People;
- National Aboriginal and Torres Strait Islander Health Strategy;
- Stronger Families and Communities Strategy;
- National Injury Prevention Strategic Framework;
- National HIV–AIDS and hepatitis C strategies;
- Putting Families in the Picture: Early Intervention into Youth Homelessness;
- Reconnect—Youth Homelessness Strategy (Department of Family and Community Services);
- Youth Pathways;
- Pathways to Prevention: Developmental and early intervention approaches to crime in Australia, part of the National Campaign Against Violence and Crime;
- National Public Health Partnership;
- Partnerships against domestic violence;
- National Drug Strategic Framework: Building Partnerships;
- National Framework for Suicide Prevention LIFE: Living Is For Everyone.

To take a few examples from these, the National Anti-Crime Strategy says:

‘Only in recent years has much scientifically persuasive evidence emerged that interventions early in life can have long term impacts on crime and other social problems such as substance abuse.’¹²

‘At a broader level, protective factors can be enhanced by strengthening the capacity of a community to intervene positively in the lives of children, and by building facilities or social structures that support involvement and attachment, that help maintain a civil society rather than an oppositional culture.’¹³

The Prime Minister's Task Force on Youth Homelessness says:

'The Taskforce believes that prevention approaches work most effectively when directed to building resilient families and communities. Resilient families are those with access to the skills and resources needed to withstand individual stresses and conflict. Similarly, resilient communities are those that can pull together and share resources so as to provide a better response to those most in need.'¹⁴

The Mental Health Promotion and Prevention National Action Plan says, for children aged 5–11 years:

'... effective prevention of mental health problems can be achieved through: positive parenting, mental health promoting school programs that enhance life skills and resilience, foster a supportive school environment, support a school culture which links the community and school communities, that promote optimistic thinking, and which promote self efficacy and reduce aggressive behaviours.'¹⁵

Early life

The above strategies and programs emphasise the influence of early life events and nurture in childhood on outcomes in adolescence and adult life. Indeed, they frequently draw on the same research evidence.

The New South Wales' Government's Plan of Action following the Drug Summit in 1999 invested strongly in the *Families First* program. *Families First* aims to support parents expecting or caring for a new baby, infants and young children and to assist families build connections with their communities. It involves home visiting by volunteers and professional personnel and it is a universal program.¹⁶

Such simple and sensible interventions, which build on mutual support, have wide benefits and lessen inequalities. This must mean that human services at the local level should be run as partnerships. Further, central government initiatives such as drug strategies or policies to deal with youth unemployment or school retention, with overlapping goals, are more sensibly run together as 'whole of government' programs.

Health initiatives

In 1999–2000 the Ministerially-appointed Health Council reviewed New South Wales' health services. An important result has been the new arrangements of clinical governance involving partnerships between clinical service providers, managers and government. Another highly significant partnership is the greater community participation with area health services.¹⁷

The New South Wales directions for public health—*Healthy People 2005*—point to actions based on

partnerships between health services and other agencies to develop and enhance community capacity.¹⁸ There are five principles: a population focus, a focus on prevention, promotion and early intervention, working in partnership, reducing health inequalities and effective and sustainable action.¹⁸ The NSW Department of Health proposes that this can be achieved through a Framework for Action divided into three streams for health improvement: healthier people, healthier places, and reducing health inequalities (Table 1).¹⁸

TABLE 1

FRAMEWORK FOR ACTION FOR HEALTH IMPROVEMENT IN NSW:

1. Healthier People
 - Chronic Disease Prevention
 - Healthier Childhood
 - Mental Health Promotion
 - Oral Health Promotion
2. Healthier Places
 - Indigenous Environmental Health
 - Fall Prevention among Older People
 - Health Promoting Schools
 - Regional Public Health Plans
 - Smoke-Free Public Places
 - Controlling Communicable Disease
3. Reducing Health Inequalities
 - Health Improvement Planning
 - Community Partnerships and cross-agency collaboration

Source: Public Health Division. *Healthy People 2005—New Directions for Public Health in NSW*. Sydney: NSW Department of Health, 2000.¹⁸

Thus state-sponsored public health takes a strong stand on community development and partnerships to improve health outcomes for the state as a whole.

CONCLUSION

There are political and social policy movements which aim to promote community development at the local level. These approaches offer real hope that socially excluded groups can be incorporated into modern public health. Many initiatives pivot around young people and their futures and can be regarded as true prevention and public health. As society deals with the existential fall-out from modern life, these ideas should be seized by the public health community as a paradigm consistent with their health objectives, including the promotion of equity. Strong cooperation across disciplines will be required for implementation and research.

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LETTER TO THE EDITOR: GLOBALISATION AND HEALTH

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I read Professor Stilwell's article 'Globalisation: Where do we go from here' (*NSW Public Health Bulletin*, Volume 12, Number 7) with great interest. Not unexpectedly, this article was written largely from a socioeconomic perspective. I would like to elaborate on the health consequences of globalisation highlighted in the article. As well as describing current world economic trends, the term 'globalisation' prescribes a strategy for development based on the liberalisation of markets, and on an assumption that the free flow of trade, finance, and information will produce the best outcome for economic development.¹ Although peripheral to the major driving forces of 'globalisation', as stated in Stilwell's article, the health of populations provide a reliable barometer for measuring its global effects.

Globalisation has serious implications for the nation-state, particularly for developing nation-states like Nigeria, where the imperative of liberalisation has led to reduced involvement in social sectors, with particular reference to the ability of governments to subsidise health services for the poor. When combined with Structural Adjustments Programs, many poor nation-states become too weak to resist powerful international groups, in an era that demands stronger nation-states to preserve people's rights and to maintain equity of access to the social sector—particularly to health services and to drugs.

The advantages of globalisation to health are unremarkable. In Britain, from the Industrial Revolution to the current era, it has been shown that the single best predictor of a person's health status is their socioeconomic status:^{2,3} 'the very fact of being poor is an independent risk factor for getting sick.'⁴ As the Human Development Report for 1997 pointed out,¹ 'globalisation has its winners and losers ... poor countries often lose out because the rules of the game are biased against them, particularly those relating to international trade. The Uruguay Round [of negotiations on multinational trade that led to the creation of the World Trade Organization] hardly changed the picture.' Thus, the rich, the minority, who already have access to the means for maintaining good health have more resources to do so, which leads to negligible incremental gains for the additional cost input. On the contrary, the majority poor are deprived of government

subsidies, are unemployed, underemployed, or underpaid, and are often unable to adequately fund their health care.

Further, a potentially important health-related advantage of globalisation—widespread availability and affordability of essential drugs—remains an illusion. Since its inception in 1995, the World Trade Organization has supervised a number of international agreements, such as the Agreement on Trade-Related Intellectual Property Rights (TRIPS). Unfortunately, the TRIPS Agreement appears to request member nation-states to treat pharmaceuticals like any other technological products, insofar as the granting of patent protection is concerned.⁵ However, drugs are not ordinary consumer products. As the current debate over the patenting of drugs for the treatment of Acquired Immune Deficiency Syndrome clearly shows, the new international economic and social context is having significant adverse effects on the equitable access of populations to health and drugs.⁶

In contrast to the uncertain advantages, globalisation has significant negative effects on health. Stilwell rightly mentioned the anti-ecological consequence of capital accumulation as one of the contradictions of globalisation. Specifically, poor nation-states, and poor communities within rich nation-states—who are already at risk locally from inadequate water, poor sanitation, and inadequate food—are faced with a 'double burden' of adverse environmental and health conditions as multinational industries relocate to such societies. The economically weak governments of these nation-states are more likely to value short-term capital investment at the expense of long-term health-promoting environmental standards. A large share of the burden of disease in developing countries—about a third—is related to environmental conditions, and children are the worst affected.⁷

Admittedly, globalisation has its winners and losers, but in relation to health, the major winners are probably the multinational corporations and their shareholders, not the vast majority of the earth's population. The adverse health effects of globalisation are closely related to poverty and exploitation, a point that was understated in Stilwell's article. Efforts to improve the public's health, locally and globally, must therefore address the problem of poverty. This requires not an 'old' agenda, requiring 'more of the same' but new challenges that call out for innovative forms of intersectoral collaboration, engagement with civil society, and an international agenda that responds to local concerns and priorities.

As part of the paraphernalia for ameliorating the adverse health effects of globalisation, a human rights perspective that, for example, advocates for equitable access by the poor for the benefits of globalisation, needs to be promoted by public health workers.

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H I V A N D A I D S

WHAT ARE HIV AND AIDS?

Acquired immunodeficiency syndrome (AIDS) is caused by infection with HIV (human immunodeficiency virus). AIDS occurs some time (often years) after an infection with HIV.

AIDS includes a number of illnesses that a person can develop because his or her immune system is weakened by HIV infection. The more common of these are: pneumocystis pneumonia, Kaposi's sarcoma, cytomegalovirus infection, tuberculosis, oesophageal candidiasis, cryptococcosis, cryptosporidiosis, and HIV encephalopathy.

HIV destroys a type of blood cell (CD4+ or helper T cells). These cells help the immune system fight infections and cancers.

HIV and AIDS were first identified in the early 1980s in the United States and soon after in Australia. Several hundred new infections of HIV occur in NSW each year. While the epidemics are stabilising in western countries, they are uncontrolled in many poor countries, particularly countries in sub-Saharan Africa and Southeast Asia.

HOW IS HIV SPREAD?

HIV is present in blood and other body fluids including semen, vaginal fluid, and breast milk. A person who comes into contact with the blood or body fluids of a person infected with HIV may be at risk of infection. HIV can be passed on from one person to another through:

- unprotected sex (anal and vaginal intercourse);
- shared injecting equipment;
- pregnancy, birth, or breastfeeding (from mother to child);
- contaminated blood or blood products;
- contaminated piercing and medical equipment used on the body.

In Australia, screening of donated blood and blood products has protected the blood supply since 1985. Medical equipment is sterilised or disinfected before use.

HIV is not spread through casual contact at school, home, or the work place. HIV is not transmitted through air or water, sharing cups or cutlery, touching, kissing or hugging, or through bites of mosquitoes and other insects.

WHAT ARE THE SYMPTOMS?

A person infected with HIV may initially develop a mild illness (known as a seroconversion illness) consisting of

muscle aches, low grade fever, headaches, and sometimes a rash. Swelling of the lymph glands may also occur. This flu-like illness usually subsides within a few weeks. Most people infected are then free of any symptoms for many years until they develop AIDS. When a person develops AIDS, symptoms may include a loss of appetite, diarrhoea, weight loss, fever, lethargy, fatigue, or the specific symptoms of a number of illnesses that define AIDS.

HOW IS HIV DIAGNOSED?

The only way to know whether you are infected is to be tested for HIV infection. The test is a simple blood test for HIV antibodies that can be done by your doctor. Tests can also detect the virus in the blood, and other tests are used to monitor the amount of HIV in the blood (that is, the viral load). Other special tests are usually required to diagnose an AIDS-defining illness.

HOW ARE HIV AND AIDS TREATED?

There have been major breakthroughs in treating HIV and AIDS. Most people with HIV infection in Australia are treated with drugs known as antiretrovirals. These drugs are important for slowing down the effect of HIV on the immune system. Other treatments can prevent or cure some of the illnesses associated with AIDS. However, these treatments do not cure HIV. The early diagnosis of HIV infection allows more options for treatment and prevention.

HOW IS HIV PREVENTED?

To avoid coming into contact with HIV:

- practise safe sex. Use a condom and a water-based lubricant each time you have vaginal or anal intercourse;
- use sterile equipment if you inject drugs. Do not share needles, syringes, filters, spoons, swabs, or tourniquets;
- dispose of used injecting equipment in a Fitpack® or other approved containers for sharps. Containers can be collected and returned to a Needle Syringe Program (NSP) outlet or selected pharmacies (contact the Alcohol and Drug Information Service on the number listed below). You can also contact your local council for information about disposal in your area;
- use disposable impermeable gloves when cleaning up blood spills or giving first aid;
- wipe any blood spills with an absorbent paper towel and use detergent and water to clean up the site of the spill;

- cover any sores and cuts or wounds with a waterproof dressing;
- make sure that body piercing and tattooing is only done at shops that use new disposable equipment for each customer and proper methods of sterilisation.

IF YOU HAVE HIV

Do not donate blood, organs or other tissues.

You must tell your partner if you are infected with a sexually transmissible infection (including HIV) before sex and always engage in safe sex.

IF YOU THINK YOU HAVE BEEN EXPOSED TO HIV

After contact with the virus, taking special HIV drugs may prevent infection. If you believe you have had a high-risk

exposure, you can call 1800 737 669 for advice as soon as possible after the exposure.

FOR MORE INFORMATION

- AIDS Council of New South Wales (ACON) Telephone 9206 2000
- NSW Users and AIDS Association (NUAA) Telephone 9557 1476
- NSW HIV–AIDS Information Line 93324000 Free call 1800 451600
- Alcohol and Drug Information Service (ADIS) 9361 8000 (Sydney Metropolitan) 1800 422599 (other NSW residents)
- Your local sexual health clinic (look under S in the White Pages).

June 2002 ☒

COMMUNICABLE DISEASES REPORT, JUNE 2002

TRENDS

Notifications of communicable disease through to April were largely within seasonal expectations. Cases of **cryptosporidiosis**, **pertussis**, and **shigellosis** appear to be declining.

FIGURE 1

REPORTS OF SELECTED COMMUNICABLE DISEASES, NSW, JANUARY 1996 TO APRIL 2002, BY MONTH OF ONSET

These are preliminary data: case counts for recent months may increase because of reporting delays. Laboratory-confirmed cases, except for measles, meningococcal disease and pertussis.

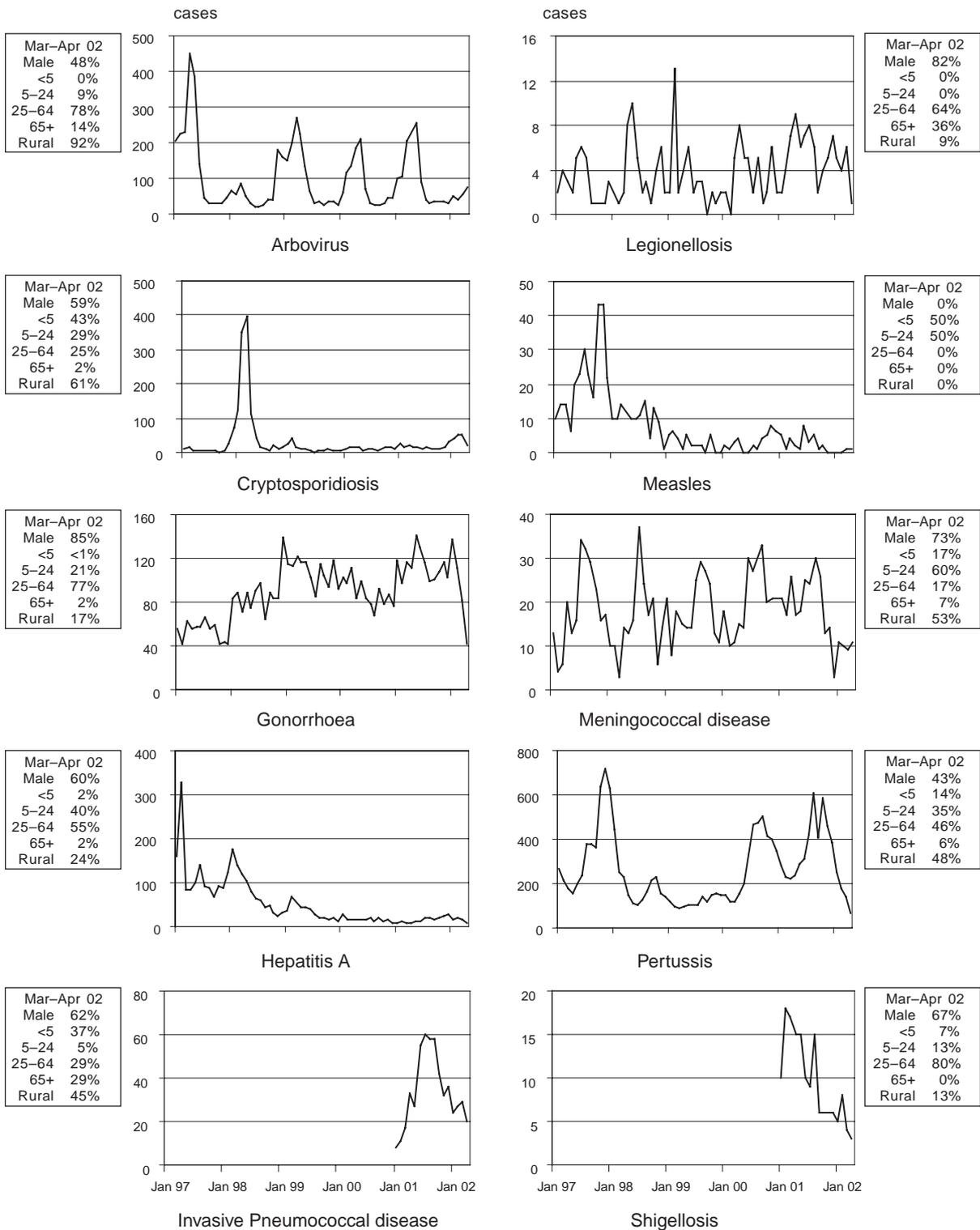


TABLE 1 REPORTS OF NOTIFIABLE CONDITIONS RECEIVED IN APRIL 2002 BY AREA HEALTH SERVICES

Condition	Area Health Service														Total For April*	To date†			
	CSA	NSA	WSA	WEN	SWS	CCA	HUN	ILL	SES	NRA	MNC	NEA	MAC	MWA			FWA	GMA	SA
Blood-borne and sexually transmitted																			
Chancroid*	-	1	11	38	11	-	15	25	13	91	16	3	6	10	14	15	5	9	1
Chlamydia (genital)*	1	1	1	8	1	-	3	5	1	51	3	2	4	1	-	1	-	2	-
Gonorrhoea*	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	4	-
Hepatitis B - acute viral*	1	9	-	7	1	7	1	5	1	39	1	1	4	1	4	1	2	2	-
Hepatitis B - other*	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Hepatitis C - acute viral*	64	12	90	17	-	45	45	24	70	8	4	13	6	17	4	10	15	-	-
Hepatitis C - other*	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hepatitis D - unspecified*	34	-	4	2	-	1	1	1	-	20	-	-	9	-	1	4	-	1	-
Syphilis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vector-borne																			
Barmah Forest virus*	-	-	1	-	-	7	31	3	3	-	5	6	2	-	-	1	-	1	-
Ross River virus*	-	-	-	-	-	2	3	2	-	-	2	1	-	5	-	2	1	2	-
Arboviral infection (Other)*	-	-	1	-	-	-	1	1	1	1	-	-	1	-	-	-	-	7	-
Malaria*	-	-	-	-	-	-	-	3	-	-	2	1	-	-	-	-	-	2	-
Zoonoses																			
Anthrax*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brucellosis*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leptospirosis*	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Lyssavirus*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Psittacosis*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Q fever*	-	-	-	-	1	-	-	-	1	-	3	-	-	10	1	1	-	1	-
Respiratory and other																			
Blood lead level†	-	-	-	1	-	1	2	5	2	2	-	-	-	-	-	-	-	-	-
Influenza*	-	1	1	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-
Invasive pneumococcal infection	3	3	5	2	-	1	3	3	3	-	-	-	2	2	1	-	1	-	-
<i>Legionella longbeachae</i> infection*	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Legionella pneumophila</i> infection*	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Legionnaires' disease (Other)*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leprosy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Meningococcal infection (invasive)	-	3	1	-	2	2	1	-	-	-	-	-	-	1	-	1	-	-	-
Tuberculosis	5	-	-	1	2	2	1	-	14	1	1	-	-	-	-	-	-	-	-
Vaccine-preventable																			
Adverse event after immunisation	-	2	3	-	-	-	-	-	-	6	-	-	-	-	-	-	1	-	-
<i>H. influenzae b</i> infection (invasive)*	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Measles	-	-	-	1	1	-	-	-	-	1	-	-	-	-	-	-	-	3	-
Mumps*	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Pertussis	11	18	19	2	6	4	19	7	21	11	3	8	7	2	2	2	4	-	-
Rubella*	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-
Tetanus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Faecal-oral																			
Botulism	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cholera*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cryptosporidiosis*	1	1	5	-	2	1	-	3	5	8	1	3	-	-	-	4	1	-	-
Food borne illness (not otherwise specified)	4	-	-	-	-	-	-	20	-	1	-	-	-	-	-	-	7	-	-
Gastroenteritis (in an institution)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giardiasis*	3	2	11	7	2	3	11	10	8	1	-	2	7	1	1	5	-	-	-
Haemolytic uraemic syndrome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hepatitis A*	2	1	1	1	-	-	-	1	3	-	-	-	-	1	1	-	1	-	-
Hepatitis E*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Listeriosis*	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Salmonellosis (not otherwise specified)*	23	7	27	18	26	8	14	7	9	31	9	11	-	10	1	10	10	-	-
Shigellosis*	1	-	-	-	-	-	-	-	4	-	1	-	-	-	1	-	-	-	-
Typhoid and paratyphoid*	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Verotoxin producing <i>E. coli</i> *	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* lab-confirmed cases only + includes cases with unknown postcode * HIV and AIDS data are reported separately in the NSW Public Health Bulletin each quarter

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NSA = Northern Sydney Area	SWS = South Western Sydney Area	MNC = North Coast Area	MWA = Mid Western Area	SA = Southern Area
WSA = Western Sydney Area	CCA = Central Coast Area	NEA = New England Area	FWA = Far West Area	CHS = Corrections Health Service

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References should be set out in the Vancouver style, described in the *New England Journal of Medicine*, 1997; 336: 309–315. Send submitted manuscripts on paper and in electronic form, either on disc (Word for Windows is preferred), or by email.

The manuscript must be accompanied by a letter signed by all authors. Full instructions for authors are available on request from the managing editor.

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