
Before the Bough Breaks

Doing More for Our Children
in the 21st Century

Fiona Stanley AC

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CHILDREN IN THE 21ST
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Cunningham Lecture 2002

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**BEFORE THE BOUGH BREAKS
DOING MORE FOR OUR CHILDREN IN THE 21ST CENTURY**

Fiona Stanley



Much of the data in this article comes from a paper commissioned by the Australian Bureau of Statistics for the Millenium Year Book, entitled 'Child Health since Federation'.¹ This enabled me to compare the statistics on childhood deaths and diseases and investigate their trends over the last 100 years, and I believe that from this a clear message emerges for us now in the 21st century. The epidemics of infections which killed so many infants around 1900 were contained by a series of community based, social and physical environmental strategies. In spite of inadequate knowledge about the responsible organisms and without access to either antibiotics or vaccines, they were remarkably successful.

As we start a new century, in spite of the increases in wealth, and educational and technological advances compared with 100 years ago, we are challenged by alarming increases in childhood and adolescent problems in physical and mental health. Many arise in

social adversity and have coincided with recent profound social changes in society.

Will we as a nation respond to the challenges, as did our founding fathers (they were mostly men!) in public health 100 years ago, by acknowledging the social and ecological contexts in which causal pathways to these problems arise? The rates of problems are so high that they demand preventive, public health approaches. This is made difficult by the current medical, and resulting societal view, which promises and expects new drugs and treatments for most problems without thinking of the preventive strategies which are more cost effective. The undeniable successes of biomedical science in the 20th century may have contributed to unrealistic expectations from the public on an already overstretched health system.

What is meant by 'causal pathways'? They are the complex interactions between genetic and environmental risks over time which produce the outcome with which we are concerned. Such pathways can be networks of causal factors acting together, all of which are important to produce the disease/problem.²

In many child health problems, many causal pathways commence in social adversity with a cascade of events resulting in poor outcomes. Causal pathways can link across generations. There are a diversity of pathways to single outcomes (eg, otitis media in Aboriginal children, whilst 'caused' by an infection, has a multitude of antecedent pathways) as well as many outcomes resulting from single exposures (eg, parental smoking has many adverse effects, one of which is otitis media).

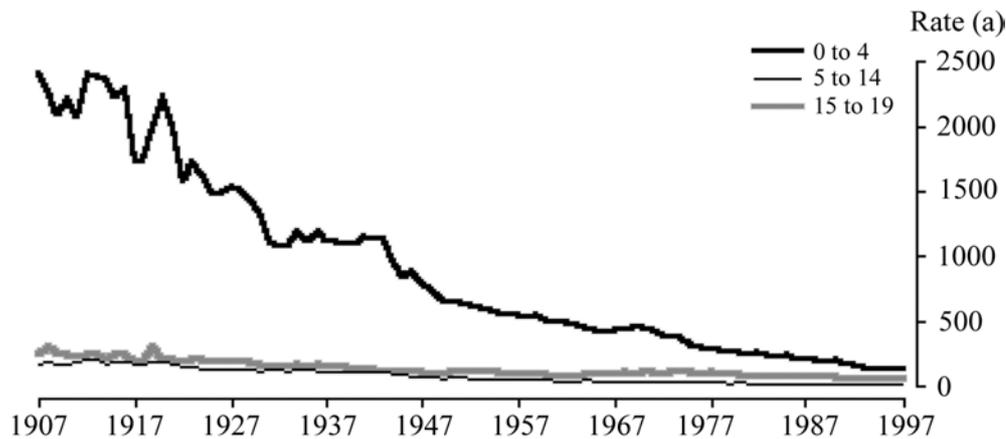
Thinking about causal pathways opens up many more strategies for early intervention and prevention which are likely to be more effective than waiting until late in the

pathway when associations are obvious but it's too late to do anything about prevention.

20th century death rates

Death rates in childhood in 1900 were dominated by those in infancy, with very high rates of infectious deaths from gastro-enteritis, pneumonia, diphtheria, tuberculosis. Once a child survived infancy, his/her chance of dying were low. Malnutrition, overcrowding and poor living standards were common and contributed to both susceptibility of the child and the spread of infections amongst families and communities. Over the next 30 years, the rates of infectious disease dropped dramatically and in 1930, still before antibiotics and modern vaccines, the infant death rates were half what they had been in 1900. (Figure 1)³

FIGURE 1: Death Due to All Causes, by Age of Child.



(a) Rate per 100,000 population.

Source: AIHW Mortality Monitoring System.

Under five and particularly infant (under one year of age) mortality rates continued to fall throughout the twentieth century. While the perinatal and infant period is still one of life's most risky, the chances of survival are now very high compared with a century ago. Once through infancy, the risk of dying in childhood is now extremely low with death rates only starting to rise again in older teenagers (15-19 year olds), particularly in males. These marked improvements in infant and child mortality over the last 100 years were a major contribution to the improved life expectancy in the non-Indigenous population in Australia, now one of the best in the world (males 76 years, females 82 years in 2000).⁴ For Indigenous populations in Australia, a major reason for their low life expectancy has been, until recently, the unacceptably high rates of infant and early child deaths. Aboriginal infant mortality has improved recently but life expectancy amongst both Indigenous males and females is worsening due to excessive premature mortality of young and middle-aged adults.⁵

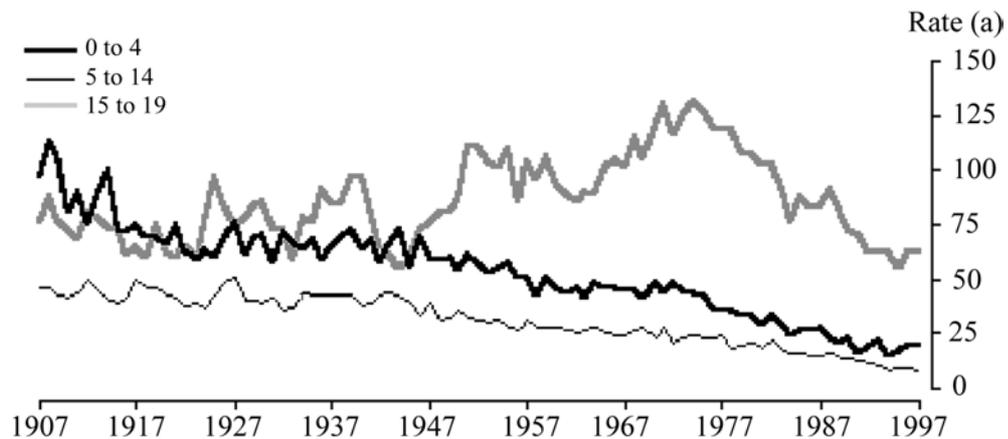
Infant mortality is made up of neonatal deaths (those in the first four weeks) and post-neonatal deaths (those from four weeks to one year). Most deaths from infectious diseases occurred *after* the neonatal period, and so it is with post-neonatal mortality that we have seen the most dramatic improvements, due to the fall in infectious diseases. In 1900, neonatal deaths were due to pregnancy problems, immaturity and birth defects. Reductions in deaths from these causes had to wait for the discovery of new treatments, as primary prevention was not possible in ignorance of causation.

The major causes of post-neonatal death today are very different, dominated by Sudden Infant Death Syndrome (SIDS), birth defects and perinatal conditions. With neonatal deaths, the causes are similar to those of 100 years ago, ie, extreme prematurity, poor fetal growth, congenital malformations and complications of pregnancy.¹ As most children born with these problems no longer die, but have significant morbidity, and often lifelong disabilities, knowledge leading to prevention is vital. The weight of a child at birth is one of the most important predictors of that child's health and well being throughout life and thus research aimed at reducing preterm and low birth weight births will have enormous impact.

Recently in Australia, there has been a tendency in the media to use infant mortality, as well as mortality at other ages, to measure the appropriate levels of expenditure on medical, particularly hospital, services. Mortality is an inadequate index as the antecedents and major contributors to mortality have little to do with hospital services. As in 1900, the causal pathways to infants dying in the 1990s commenced well before hospital services had any influence. Preventive solutions lie elsewhere and we need to invest in research to identify early causal pathways.

Death rates in older children, particularly teenagers, were dominated by 'external' causes – violent deaths. These were high in the early 1900s from a variety of accidents and homicides, in both male children under 5 years and in 15-19 year old males. (Figures 2 and 3)³

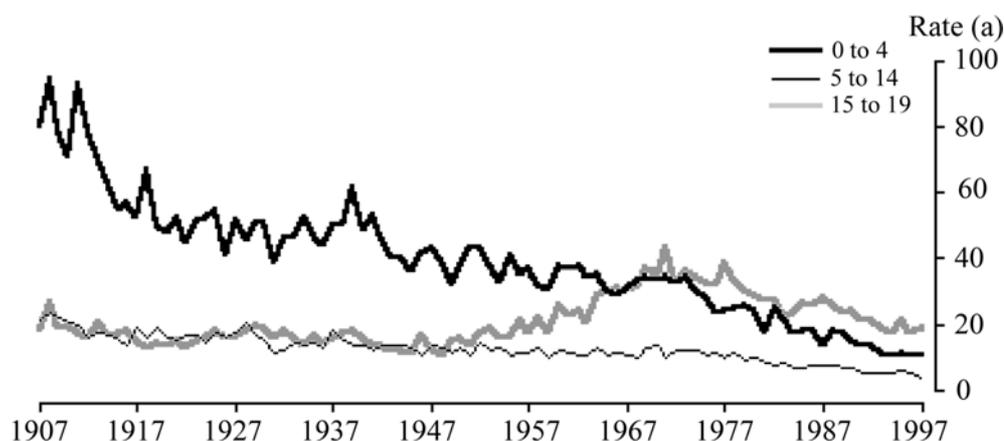
FIGURE 2: Deaths From All External Causes in Males, by Age.



(a) Rate per 100,000 population.

Source: AIHW Mortality Monitoring System.

FIGURE 3: Deaths From All External Causes in Females, by Age.



(a) Rate per 100,000 population.

Source: AIHW Mortality Monitoring System.

The increase and decrease in these death patterns reflect the two most important causes of death in young people over the last 100 years – accidents and suicides. Accidents, particularly road traffic accidents, influence the rise (in 1960s) and the fall (after 1970) of these violent deaths in both males and females. Successful preventive strategies (seat belts, drink driving campaigns, etc) were major contributors to these falls.⁴ Suicides however are increasing (see also Figure 6) and are now higher than they were in 1900. Whilst female rates are much lower than those for males, they have also increased and are four times higher than they were in 1900.⁶

Reasons for decline in mortality

While there is continuing debate about the relative contributions of improved environment versus medical knowledge, there is no doubt that the most dramatic early falls, particularly in infant mortality, resulted from environmental strategies rather than from specific treatments or medical knowledge. McKeown and Gordon have both written extensively on the importance of improved living conditions such as better nutrition (which would have increased child resistance to infection) and changes in hygiene (reducing contact with infecting organisms).^{7,8} Lancaster observed that these preventive strategies were powerful in reducing infectious deaths in infants and young children.^{9,10} Armstrong and Cumpston, along with Cilento, were the pioneers in early Australian public health, where the focus was clearly on 'infant welfare'.^{11,12,13} They describe the considerable impact on child survival of home visiting of new mothers, the encouragement of breast feeding, maternal education (an educated mother is knowledgeable and provides appropriate care), as well as improvements in material well being (more jobs and the capacity to provide for family welfare including food) and in hygiene (better facilities for sewerage disposal, uncontaminated water and safe storage for food). And as generations of children grew taller and healthier, when they

became mothers their risk of having problems in pregnancy reduced and their chance of having stronger infants themselves was markedly improved.

Armstrong reported

. . . the policies and legislation introduced to improve maternal and child health (MCH) were driven by a commitment to reduce the Australian infantile mortality rate which was greater than that of London and as high as in most of the world's great cities.¹¹

Concluding that 'there is no equal to breast feeding', his analyses showed that the mortality of infants under three months of age from diarrhoeal diseases was between 10-15 times as great among those artificially fed as among those entirely breastfed. The Maternal and Child Health movement which started after Federation resulted in infant welfare clinics springing up all over Australia, home visiting and encouraging of breast feeding for new mothers, free hospitalisation for all children, and the beginning of community child health in most states.

As Maternal and Child Health improved over the century, breastfeeding became less vital for survival. Artificial feeding was less worrying because special infant formulas became available and the water to make them up was clean. Cows' milk became safer when pasteurisation was introduced in the 1930s. While data on the prevalence of breast feeding at the time of discharge from the hospital of birth are fragmentary, it is recorded that only 40-45 per cent of mothers were initiating breastfeeding in 1970s, a fall from over 50 per cent in 1950s and much lower than the 90 per cent in Armstrong's day. Hospital staff were less educated about the importance of breastfeeding, and perhaps there was an influence of it not being fashionable as well! Following intensive community campaigns to re-educate women about breastfeeding, there has been a steady upward trend with recent figures in the 1990s of around 76 per cent of new mothers initiating breastfeeding, with over 50 per cent still fully breastfeeding at three months.¹⁴

The seminal work of Australian social demographer Caldwell and his colleagues at the Australian National University has described the important effect of parental, particularly maternal, educational level on improved outcomes for a child. Even when controlling for family income and access to health services, a child's chance of survival improves with higher levels of parental education, the relationship with maternal educational level being the strongest.¹⁵ Similar associations are seen with morbidity as well.¹⁶ An educated mother is one who is more rational, able to be informed about ways to improve child health, is likely to breastfeed and immunise her child, seek help early if the child is sick and follow instructions in terms of health care. Along with higher levels of education in the first 50 years since 1900 would have come an increasing knowledge about, and belief in, modern medical science and what it could deliver for health.

Educated people for most of the time up to the present have been more likely to use soap, to isolate family members with infectious diseases, to guard their children from danger, to use safe water or to boil it, to boil milk for babies use, to accept immunisation for their children, to take sick children for medical treatment and to follow the prescribed course of treatment.¹⁵

Education is now so widespread that its continued importance to child health and care is often taken for granted. More recently, more women being educated reflects female

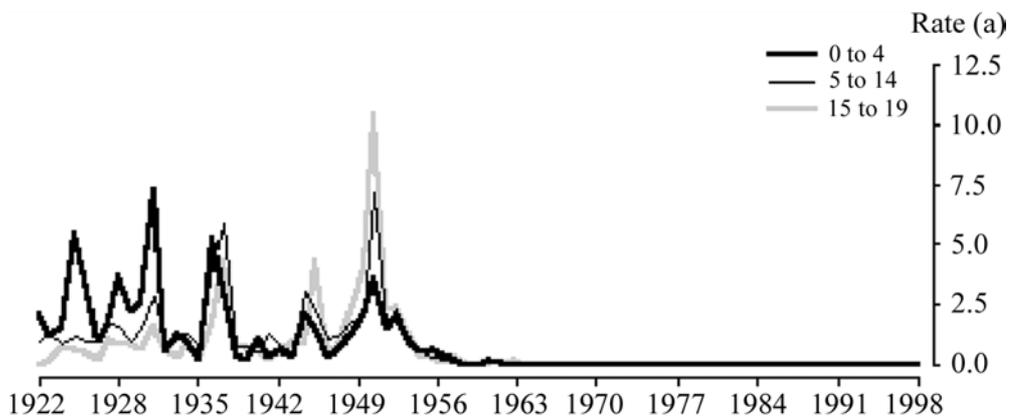
empowerment, which is associated with greater control over their own lives and better health for them and their children. This is particularly pertinent to today's Indigenous families in Australia.

There is a clear ecological relationship between material wellbeing, measured by income or disposable household income for families with children, and their health status. The extent to which one influenced the other and how more income translated into better outcomes is not known. More disposable income for families resulted in better food, clothes, education and better housing - all of which have been associated with improved child mortality and morbidity.

As the fertility of women decreased, the average number of births for women less than 45 years old fell from around seven before 1900 to three in the 1920s.¹⁷ This meant fewer children to look after, less crowded housing and better provision of those things essential for good health for the children. In the 1920s and 1930s, there were still many living in the crowded and poor industrial areas of large cities, and in poor rural areas in inadequate housing and conditions, and unemployment made it hard for families, even those of smaller size, to provide for their children.

Throughout the 20th century, biomedical research started to impact upon health and medical services. The most profound have been the development and widespread use of vaccines to prevent common and sometimes severe childhood infections such as diphtheria, tetanus, pertussis and polio.

FIGURE 4: Deaths Due to Poliomyelitis, by Age – 1922 to 1998.



(a) Rate per 100,000 population.

Source: AIHW Mortality Monitoring System.

The effects of the polio vaccine is shown in Figure 4³; it does not show the large numbers of healthy young people who were permanently paralysed from polio virus infections. How exciting it must have been both for anxious parents and the public health workforce to watch the eradication of this disease from Australia. Whilst infectious deaths fell before widespread vaccination was implemented (as mentioned earlier), since 1950 mass vaccination has been the single most effective public health

measure to reduce the occurrence of infections, to reduce child deaths and to improve child health.¹⁸

The sciences of physiology, biochemistry and pathology blossomed throughout the 20th century, following fast on the tracks of bacteriology. Knowledge about how the body worked and how diseases were caused meant that diagnosis became accurate and treatments more focused and effective. X-rays, surgery and anaesthesia, fluid and electrolyte metabolism, chemotherapy and other drugs such as those for epilepsy, pain relief and many disorders, have been so effective that many now believe that everything can be cured or will be very soon. Public health, once centre stage, is often ignored.

Caldwell and Cunningham¹⁹ developed a theory of 'health transition' to explain the changes taking place in traditional societies and communities with high mortality and high fertility to the low levels of both as countries develop. Mortality declined through improved public health, social and behavioural changes, and the use of medical and other technology. A change in the way death is viewed culturally has driven this commitment to survival, with death being viewed as the 'worst of all possible outcomes'.²⁰ In eras with high mortality rates, death was not regarded as unusual, whereas as the capacity to survive became possible, there was a strong commitment to reduce risks and to avoid death.

20th century illnesses

Compared with the 1900s, death rates today are not a good reflection on the burden of illnesses and disabilities affecting children as so few now die. Data on morbidity (illness) are harder to collect and are only really available for the last few decades, when regular surveys have been conducted and record linkage of data (such as we have in WA) was used.²¹

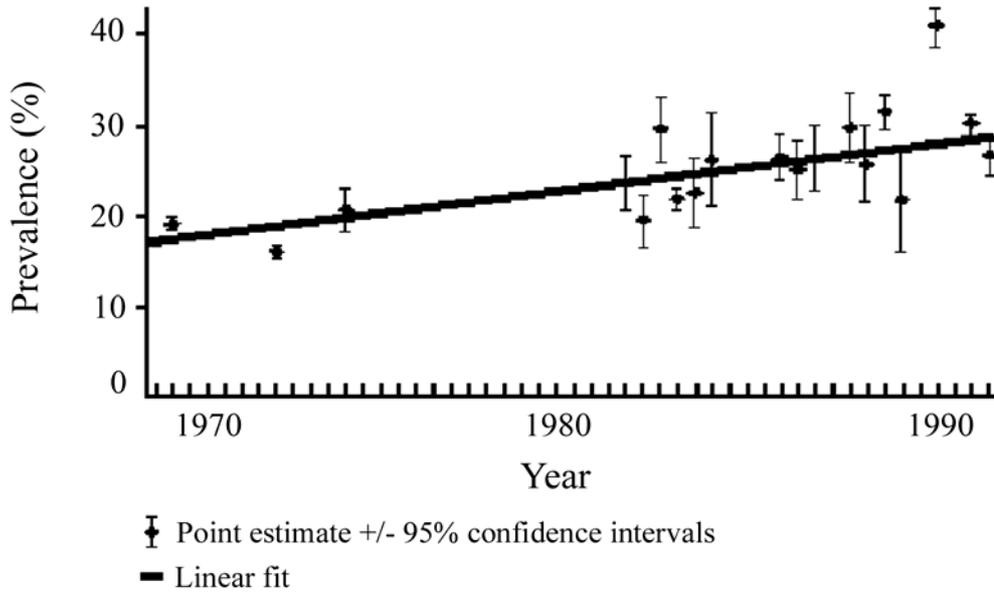
Improvements in social and economic conditions have changed the face of child health. After our successes in tackling infectious disease, we are now challenged by marked increases (called epidemics by some commentators) in complex diseases in the cohorts of children born in the last three to four decades. These include mental health problems (depression, anxiety, behaviour problems, aggression, autism, schizophrenia and suicide (Figure 6)³), asthma (Figure 5)²², juvenile diabetes, and a range of developmental conditions and disabilities.²³ Type II or adult onset diabetes and obesity are also increasing dramatically in both Aboriginal and non-Aboriginal children. Down Syndrome has doubled due to marked increases in the proportion of older mothers.^{23,24} (Figure 7)²⁵

Lifestyle factors for poor health

A major change over the last 20-30 years in Australia has been the availability and abuse of cigarettes and alcohol and more recently, illicit drugs by children and young people. And of major concern is the participation of females in this abuse. (Figures 8 and 9)²⁶

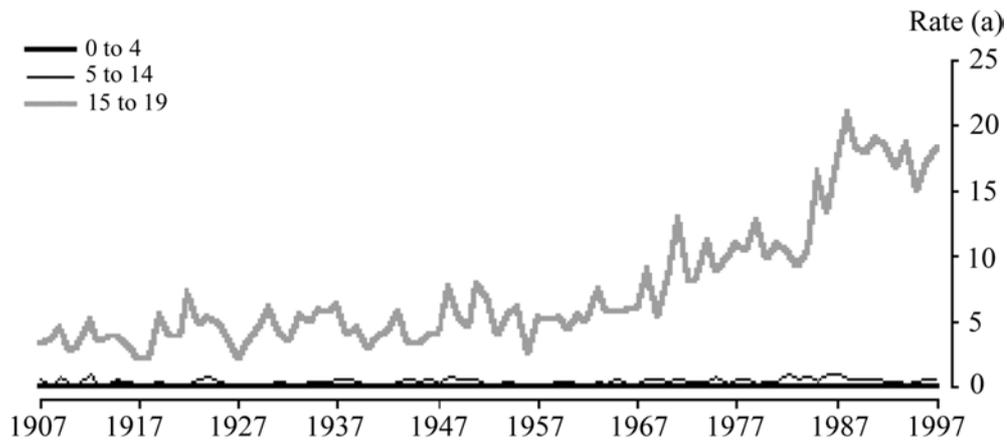
Smoking rates for teenage girls 13 and over are higher than for boys.²⁷ Once addicted, lifelong health consequences will result and also impact on their children's health as exposure to smoking and alcohol have adverse effects in utero and in early life on a range of problems (fetal growth, fetal anomalies, SIDS, respiratory illnesses and cancers).

FIGURE 5: Trends in Cumulative Lifetime Wheeze Prevalence in Primary School Children.



Source: Bauman 1993.

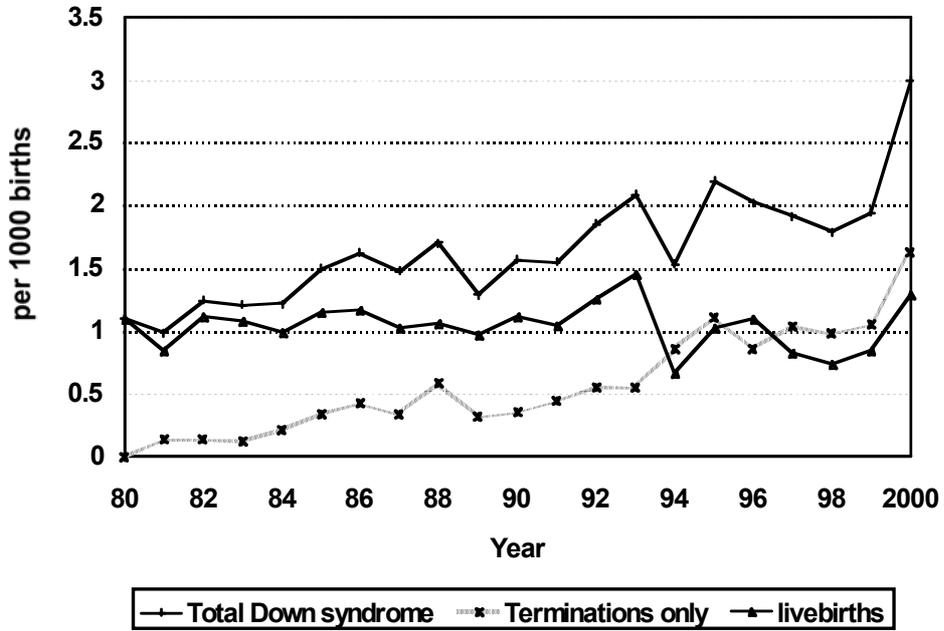
FIGURE 6: Suicide Rates in Males, by Age – 1907 to 1998.



(a) Rate per 100,000 population.

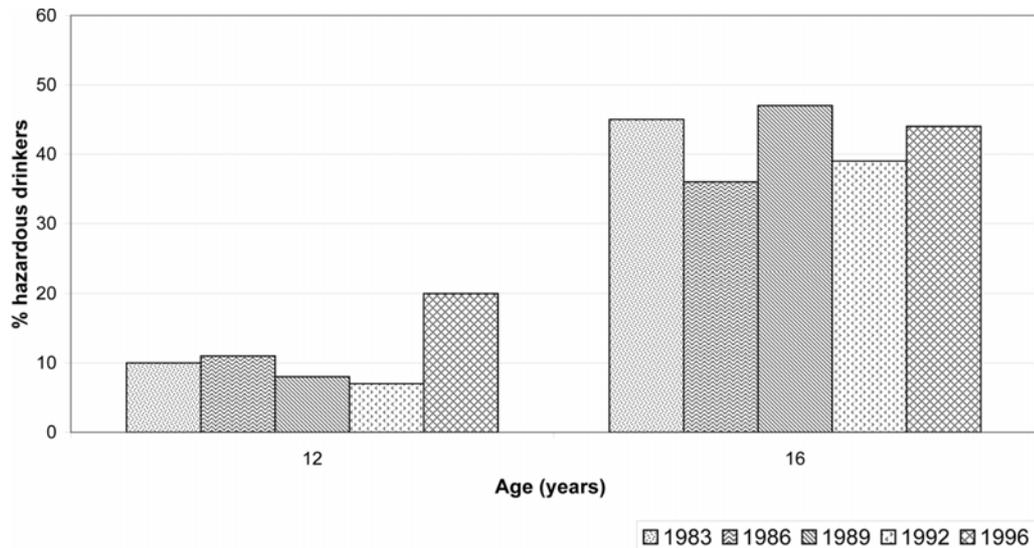
Source: AIHW Mortality Monitoring System.

FIGURE 7: Down Syndrome 1980 – 2000. Western Australia.



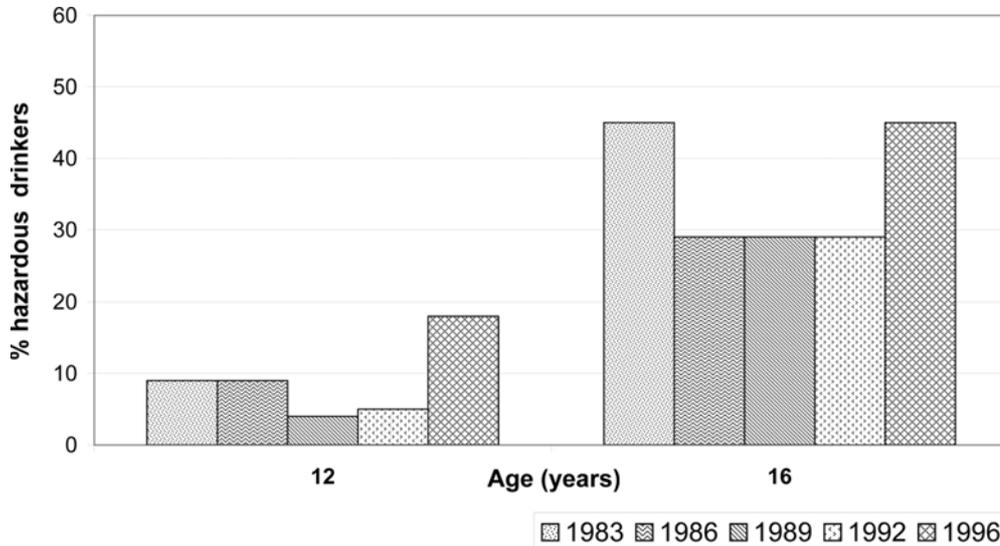
Source: Bower 2001.

FIGURE 8: Alcohol Use – Boys.



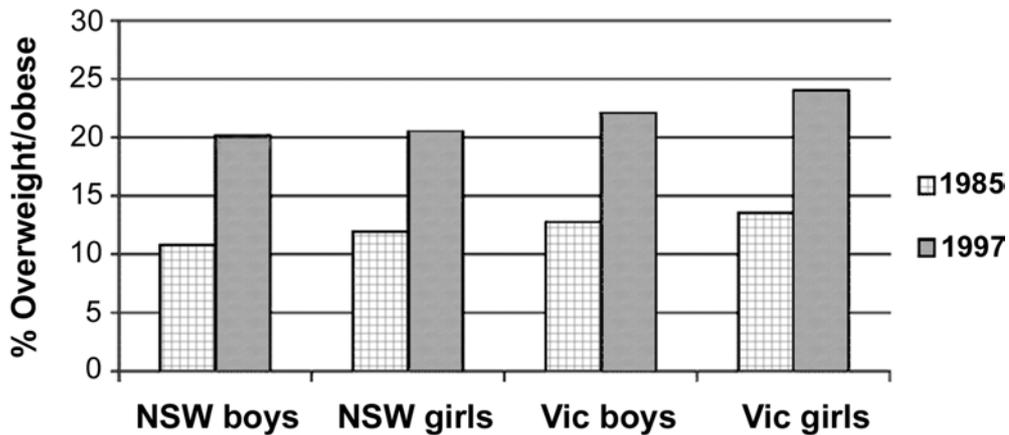
Source: White 2003.

FIGURE 9: Alcohol Use – Girls.



Source: White 2003.

FIGURE 10: Prevalence of overweight/obesity 1985 - 1997.



Source: Booth 2003.

The increased proportions of children and adolescents classified as obese has been a recent phenomenon.²⁸ The causes are multiple and include eating and exercise habits and the ecological aspects of these in modern society. At the other extreme, there is an epidemic of eating disorders and concerns about weight with a desire for thinness among girls and increasingly among boys as well. In one study over 30 per cent of 8-

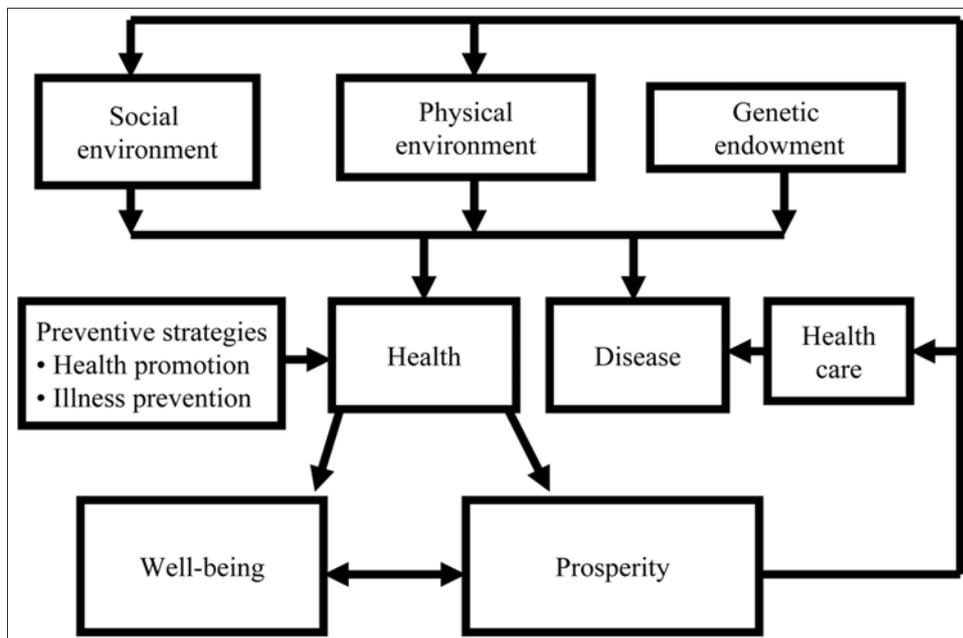
12 year old girls reported already trying to lose weight.²⁹ The longer term effects of either obesity or eating disorders on health and well being are well described and thus these trends are of major concern.

Social factors in child health

There have been changes in our communities in the last 100 years which have had a profound impact on child and adolescent health and well being.

A simplistic but useful view of the determinants of health and disease is shown in Figure 11. It highlights the importance of both genes and environment (physical *and* social) in influencing health or disease status. What it does not portray is the complex vital interactions of these during development and across the life span.

FIGURE 11: Determinants of Health and Disease.

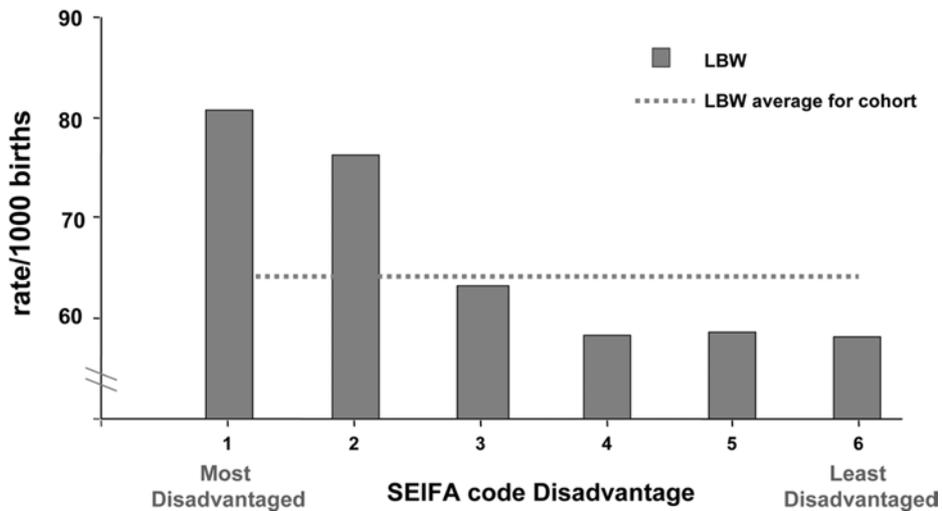


Source: Stanley 1994.

Socio-economic gradients in health and disease/disability are pervasive, powerful and are paradoxically stronger (greater) in wealthier than in poorer countries.³⁰ Interestingly there has been little change in social gradients in disease status (deaths, illness, disability) over the last 100 years in spite of the marked improvements in death rates and the very different causes of diseases. Around 1900, dominated by infections and around 2000 dominated by chronic, complex diseases and mental ill health, the gradients still show much higher rates amongst the disadvantaged and much lower rates amongst the advantaged, however advantage is measured.³¹

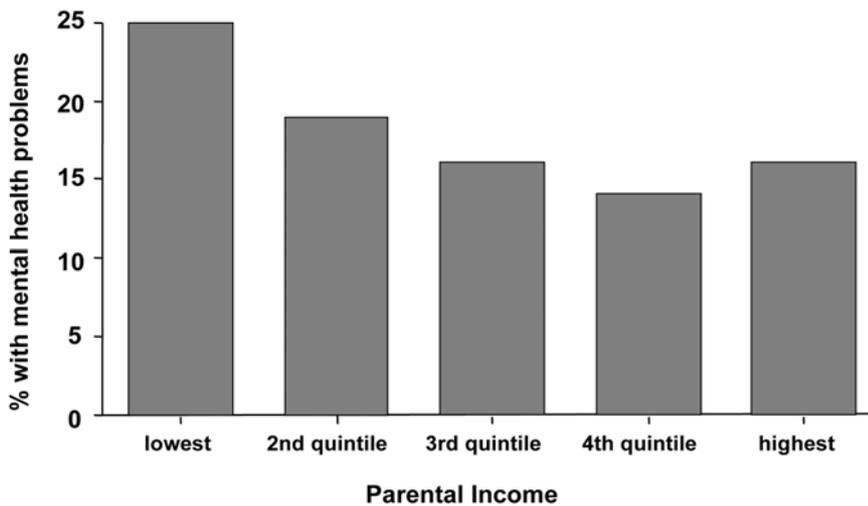
Data from Western Australia show the very strong associations between disadvantage and low birth weight (Figure 12) and mental health (Figure 13).³²

FIGURE 12: Low Birth Weight and Socio-economic Background WA 1989-93.



Source: Stanley unpublished data.

FIGURE 13: Parental Income and Mental Health Problems in 4-16 Year Old Children. WA Child Health Survey.



* Each quintile represents 20% income distribution across families.

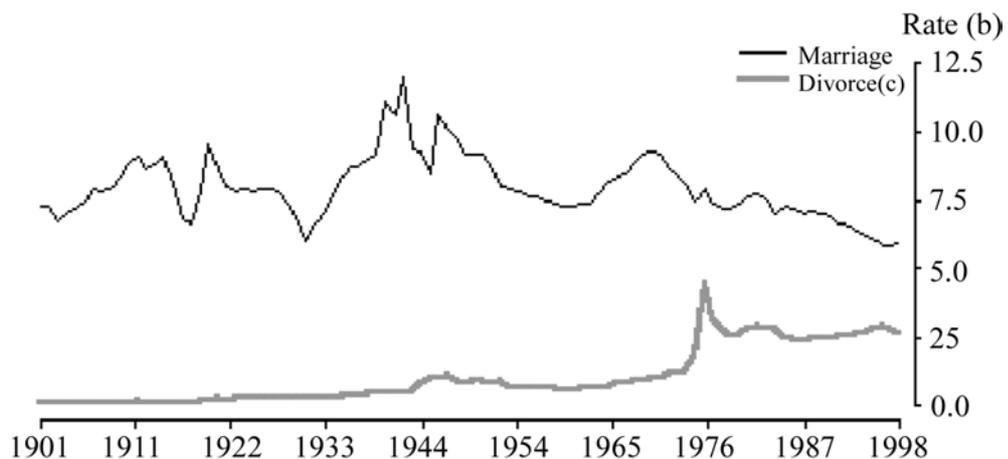
Source: Zubrick 1995.

Wilkinson, Marmot, Evans and James Grant have shown that these persistent unequal gradients in health (and in other poor outcomes such as educational success, employment and crime) are not related so much to overall wealth in a country but to how wealth, resources and opportunities are distributed within countries.^{33,34,35,36,37,38}

Causal explanations of the socio economic determinants to poor health include at risk life styles, physical environments and poor socio-economic conditions (with some parallels to those seen in 1900 particularly for some Indigenous communities), as well as psychosocial capacity (social capital, resilience) and differential access to services. Observations of these differences in Indigenous communities highlight the multi-factorial and pervasive impact of social disadvantage not only on health but on a range of other outcomes for children and youth.

Major changes to the structure of families, with increases in divorce and remarriage in families with children, have also been powerfully negative influences on child and adolescent health, including (but not exclusively) mental health. Higher rates of *all* causes of poor health were observed in single parent families in the WA Child Health Survey.¹⁶

FIGURE 14: Crude Marriage and Divorce Rates, Australia(a) – 1901 to 1998.



(a) Excludes full-blood Aborigines prior to 1966. (b) Rate per 1,000 population.
(c) The peak is due to the introduction of the Family Law Act in 1976.

Source: Marriage registrations; divorce registrations.

Divorce rates have risen markedly since 1901; now nearly 50 per cent of Australian marriages end in divorce and in 1999 there were nearly 1 million children in single parent or blended families. (Figure 14)³⁹

An ABS survey (1988) gave reasons for divorce; many of these (listed below) have been shown in most studies to have significant adverse effects on child health, including mental health and future well being.^{16,40}

- unemployment and work related problems;

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- high risk factors within marriages such as addictive behaviours, chronic illness, or death of a child;
- blended families;
- marriage and relationship breakdown in the extended family;
- a redefinition of gender roles and the feminist agenda of equality;
- the growth of individualism;
- poor communication skills;
- poor parenting skills;
- domestic violence; and
- social isolation.

These data suggest that community support systems for families may be less available or less used than in the past.

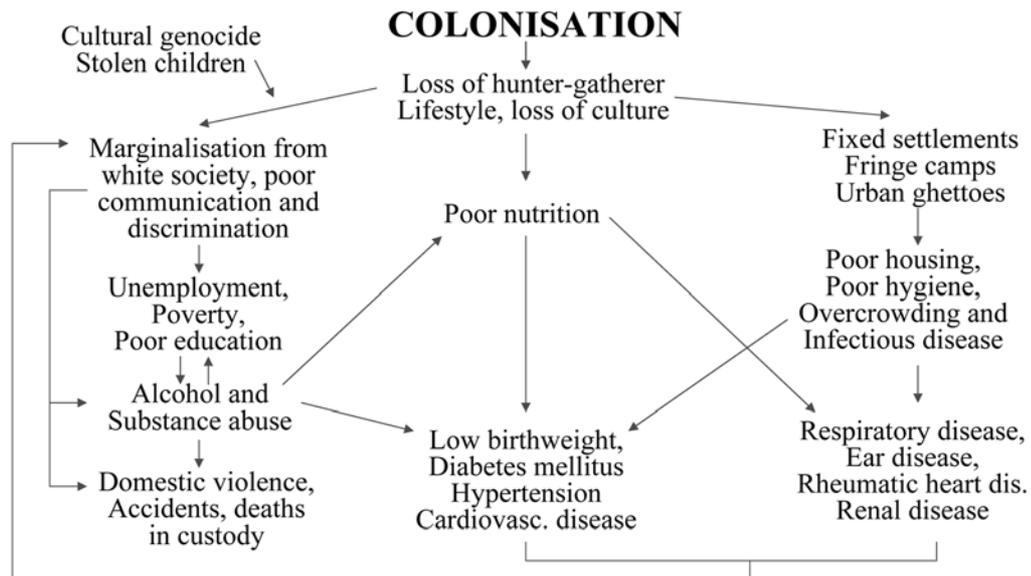
The cost to Australia of family breakdowns was assessed at about \$3 billion per annum in 1990s (legal and support schemes), but this does not take into account the cost and personal and emotional trauma to children, which would increase this figure to enormous levels. The impact on their future parenting may also mean inter-generational effects, similar to those now being observed in those Indigenous parents who were part of the stolen generations.^{41,42} Child abuse and neglect is believed to be more common than 100 years ago in spite of the appalling conditions in which families lived then. Accurate data are hard to obtain, and it may well be that it is now more openly recognised or recorded. In any event the numbers (91,000 in 1995/6 and 115,000 in 2000/1) are of huge concern. The lifelong impact of abuse is now starting to be documented. Rates amongst Indigenous and other disadvantaged children are much higher than in those from advantaged situations.⁴³

There were positive influences of fuller employment throughout the 1900s with the recognition that employment is strongly related to better health of families. After this, apart from the periods of unemployment in the depressions and recessions of the 20th century, significant influences of employment on children have been increases in women working. Whilst in many situations this liberation of women has been associated with better outcomes, more education and other beneficial effects on children, the issues of affordable, good child care are crucial to the successful employment of a female workforce. In the WA child health survey, 73 per cent of children under 3 years of age had attended day care.¹⁶ It is paramount that the quality of this care must be of the highest standards, is readily available and affordable, as happens in many European countries.⁴⁴

I want to make a specific comment about the health of Indigenous Australian children. As a group they suffer higher rates of almost all childhood illnesses and problems than non-Indigenous children. They also have higher rates of child abuse and neglect, poor educational achievements, mental health problems, substance abuse and juvenile incarceration for crimes. The diagram⁴⁵ attempts to show that the causal pathways to these problems are multi-factorial, intergenerational and relate *more* to cultural and social poverty and poor environments in early life than to anything else. It also highlights that unless we urgently intervene to improve child health and well being by community development and empowering Aboriginal controlled solutions, the rates of disease are set to increase even further. Such programs are starting to have significant effects.^{46,47} The relationship of poverty and social adversity to child health is clearly demonstrated in Australian Indigenous child health statistics. There are here

clear comparisons back to the conditions and resulting poor child health status of 1900s.

FIGURE 15: Impact of White Colonisation on Aboriginal Health Today.



Source: Mathews 1997.

Governments and child health in the 20th century

Politics and health systems are inter-related, as legislation and government funding have been influential in the overall approach, strategies and management of health care as well as influencing the roles of the different professions in its provision. Knowledge of the political system remains important if people are to be effective in influencing child health policy and allocation of resources. As a researcher dedicated to improving child health I feel that it is vital to ensure that good research in child health gets funded and that it is used to improve services. Given how much we now know about the relationship of income, employment, child care provision, family support, educational level and housing to the general health and welfare of our children, policies at all levels of government are important including Commonwealth, State/Territory and local.

How has the unique Australian Federal system influenced the delivery of health care and other policies affecting children? Federalism, the constitutional division of power between the Commonwealth and State Governments, has affected all aspects of Australian life. Throughout the 20th century, there has been an increase in the power of the Commonwealth Government, but the States have also become increasingly independent, with resulting multiplying and complex inter-governmental arrangements which have not always served the health care system well.

Cunningham Lecture, 2002

As mentioned earlier, Cumpston, as our first Commonwealth Director-General of Health, was a strong supporter of social medicine and was convinced that unemployment, poor housing and inadequate social security were detrimental to health.⁴⁸ The era of infectious disease public health broadened under his influence, in the first few decades since 1900, to include the new knowledge of physiology and biochemistry which underpinned the nutritional solutions to prevent and treat diseases such as pellagra and anaemia.

Cumpston and others responded to the new public health by replacing the ineffective Federal Health Council with a stronger and more independent National Health and Medical Research Council (NH&MRC) in 1937. This was both to fund the nation's fledgling medical research and to drive decision making in the States about public health. Medical care (hospitals and private practice) was kept closely within the medical profession and within State jurisdictions. Attempts to bring in national health insurance were strongly opposed by doctors and other groups. Initial funding for the NH&MRC came from the Commonwealth Jubilee Fund Appeal for Maternal Welfare and Lord Nuffield's Gift for Crippled Children. By 1938 the allocation was £30,000.⁴⁸

The council was dominated by the Heads of State Health Departments and chaired by Cumpston who said,

. . . preventive health is the centre of the NH&MRC's program leading to a widespread national campaign which will ensure complete and adequate supervision of an intelligent kind over the bodily health of infants, pre-school children and school children, over the physical culture of the school child and over the diet of the community.⁴⁸

However there was obviously a difference of opinion between the public health advocates in schools and the teachers, highlighted in a quote from JW Springthorpe who, in 1914, attributed the decline in the physique and health of the current generation to

. . . teacherdom which neglected the bodies, which never qualified itself to impart the knowledge of protection from health and disease ... the same teacherdom is with us now, resisting the medical inspection of schoolchildren... prattling of child-soul gardens, and manufacturing child-body cess-pools; spending years in teaching how to model baby-elephants in plasticine, and never an hour on how to use a toothbrush; dawdling over book-learnt nature study, in dark, overcrowded classrooms, redolent with the air-sewage of unwashed children.⁴⁹

This commitment to school health reflected the medical feeling of the time about the close relationship between environment, health and disease (both mental and physical), and a rapidly growing interest in preventive medicine.

W Hughes as Federal Minister of Health from 1934 to 1937 actively promoted the concept that Australia had to 'populate or perish'. Thus maternal and infant welfare was a top priority. Lady Gowrie centres were established to train mothers in the care and instruction of the preschool child. They also provided samples of children for surveys of nutrition and growth!

NH&MRC had both nutrition and physical fitness as its major national thrust in the 1930s. Malnutrition was of major concern, with mention of rickets in urban slums and goitre in rural areas as well as the rapid deterioration of the health of Indigenous people in contact with

whites.⁴⁹ The main activities of the NH&MRC were dominated by the political program of national hygiene and, as the threat of war deepened, the NH&MRC launched a national fitness campaign. They strongly influenced physical education in schools with the aim of producing 'a race of strong, virile, stalwart individuals who would provide an invincible bulwark for defence at times of crisis or emergency...'.⁴⁸ Thus it seems that a major reason for growing healthy children was to ensure they could fight in a war!

The Commonwealth became increasingly dominant due to the 'power of the purse'; in 1926 the Loan Council helped to ensure dominance with grants to the States, and in 1933 the Commonwealth Grants Commission was established to continue and expand the trend. However Australia throughout the last century was a nation of States, and continues to function with very few truly national organisations or institutions in the health area. The supposedly ideal model of Federalism is one in which each level of government acts independently of the other. This does not exist in practice: working for and representing the same groups means overlap and one impinging on the other. Modern transport and technology means that communications and collaborations between States are facilitated, resulting in more uniform legislation across Australia including policies relating to children, families and health. However, the Federal government makes and enforces social and some health policy with varying degrees of 'cooperation, conflict and competition with the states. There has been frequent duplication, bureaucratic rivalry, buck passing and lack of accountability'.⁵⁰

Attempts by several Labor governments to implement a national health service were opposed by doctors, and so a system of universal health insurance was not signed up by all States until 1975 when Medibank was created. This, to satisfy the doctors, retained the concept of fee-for-service for general and specialist practitioners, with salaried staff in public hospitals (which were free) and in community health.

The complexities of State-Commonwealth services funding and control remain today, with little hope of any great simplification of government roles. Some would say that this situation is a considerable impediment to effective health policy in Australia.

Local government has played a crucially important role in preventive MCH over the last 100 years. While local government has been mentioned in a somewhat derogatory manner as dealing with 'roads, rates and rubbish or ditches, dunnies and drains',⁵¹ in the late 19th and early 20th centuries the role of ensuring a safe and healthy environment was paramount. The fall in infant and child mortality, as mentioned earlier, was in major part initially a result of improved hygiene.

Infant welfare was the first human (rather than property) service in which local government became involved, establishing Baby Health centres or Infant Welfare clinics staffed by nurses. These focused on keeping children healthy with advice to, and support for, parents. This movement commenced at the beginning of the 20th century, aimed at reducing infectious diseases and improving the nutritional and physical condition of children, and was one of the most successful public health initiatives, being the forerunner of our current child and family health services.

Immunisation clinics were almost totally run by local government until relatively recently, when there has been a shift to State and Commonwealth funding of specific programs (such as the 1998 measles vaccination campaign), with increasing use of State government personnel and of local general practitioners.

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The role of local government in public health could become as important in the 21st century as it was at the beginning of the last century. Public health again is being perceived as requiring an intersectoral response with the development of healthy public policy, involving work, education, town planning and community services as well as health. Thus local government programs and facilities, which might lure children to exercise, watch less TV and participate in activities which build self-esteem, could be powerful in improving child and adolescent health in 2000 and beyond. Local government might also be best placed to provide support for high-risk families such as safe, cheap, enriched childcare or parenting programs.

The close relationship between Local government and public health in Australia is seen in their origins and historical development. The new understanding of health, rather than simply illness, may require a further examination of this relationship and the development of a new framework'.⁵¹

Perhaps the only area where local government has failed public health has been in the provision of basic services to Indigenous communities.

In many of these, particularly in remote areas, conditions are reminiscent of 19th century poverty with the resulting disease patterns described earlier.

What about the 21st century?

As we begin a new century, certain problems in child and adolescent health are presenting us with a set of challenges similar to those of the social and environmental situations in 1901. Coincident with the changes in our modern society in family life, in employment and in the economy, and the inequalities in wealth which have occurred particularly over the past four decades, we are observing epidemics of mental health problems such as suicides, risk taking behaviours, depression and eating disorders in our young people. As families break down and reform, we are seeing increases in violence against and abuse of children, which resonates with the abuse of children 100 years ago. More and more young people are seduced to watch television, sit at computers, eat and drink unhealthily, smoke cigarettes, drink alcohol excessively and drive dangerously, and so we have the adverse effects of these lifestyles to combat as well.

Issues in relation to poverty and child health have not left Australia's shores in the new century either, in spite of us being one of the most developed countries in the world. Many Indigenous families with children are living in conditions of real deprivation, not unlike those in the 19th and beginning of the 20th century. Their rates of death and illness are higher than those of non-Indigenous children, although there have been improvements recently. This is a uniquely Australian problem, which other colonial powers, New Zealand, USA and Canada, have handled better, with increased life expectancies in their Indigenous groups although still facing considerable problems. And we are faced with more children of all kinds living in relative poverty, with observable disparities in health status between the 'haves' and the 'have-nots'. This is a common problem in wealthier countries all over the world.

Today's social and environmental influences, as with those 100 years ago, are far more powerful in child health and disease than are the drugs or medical care facilities we have at our disposal to treat them. Are we going to respond to change our social, emotional and economic environments to improve child health as effectively as did our

forebears in the years after Federation? There are changes starting to happen generally in society as a reaction to the excesses of this era, such as the desire of the people to protect the environment, to be better parents and value families, to work less for our own income and more for the community. Will these start to improve child health the way that decreases in poverty, better food and access to fresh water and sewage disposal affected malnutrition and infectious disease in the 1900s? We must all work to make it happen.

Current social and economic policies are not effective to tackle these major complex problems in child health, development and well being. They tend to be developed in silos, focus on the end of pathways, are not evidence based (informed by research), nor properly evaluated and the dollar costs are more readily measured than the benefits.

The new Australian Research Alliance for Children and Youth is a national collaboration whose purpose is to facilitate the generation and translation of knowledge to enhance the well being and life chances of children and young people.⁵² It has been established to influence the movement we believe is vital for the future health, development and well being of our children and thus the future of our nation.

There can be no keener revelation of a society's soul than the way it treats its children. (Nelson Mandela, 1995)⁵³

Notes:

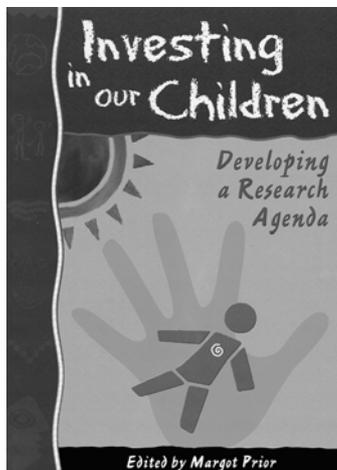
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Investing in our Children: Developing a Research Agenda

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Investing in our Children is the outcome of a workshop in the Academy of the Social Sciences program. The aim was to elucidate a set of key questions which could form the basis for a research agenda for the next decade and to offer pointers to future directions and synergies for research focused on children and families.

This publication brings together knowledge from experts from across many disciplines to suggest a research agenda to influence and guide Australian researchers in their efforts to better understand the genesis of problems in child and family domains, and to identify ways in which we might more effectively research the processes which affect good and poor psychosocial outcomes. *Investing in our Children* emphasises the need to build an evidence base to drive intervention policy and practice and explores means by which research findings can be communicated to policy and decision makers as well as professionals.

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