

Infant Mortality

What this is about...

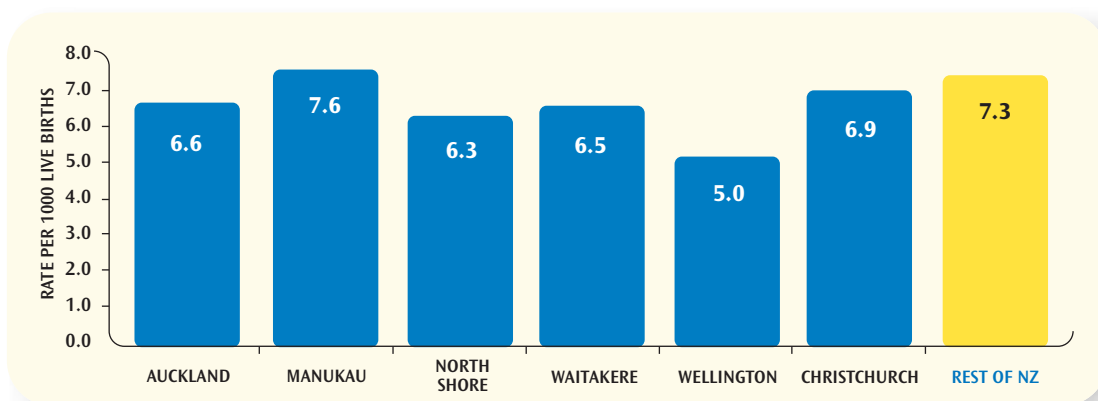
Deaths in infancy are recognised internationally as a sensitive indicator of social and economic conditions and the adequacy of health services.⁶⁶

The indicator used is the average annual rate of infant mortality per 1,000 live births by ethnicity (for 1996 and 1997 combined).⁶⁷ An infant death is defined as a live-born infant dying before their first birthday.

What did we find ?

- Overall, the New Zealand infant mortality rate (IMR) declined steadily until 1992 but has levelled off since. It has not improved at the same rate as in other developed countries. In 1960, New Zealand's infant mortality rate ranked sixth out of twenty-one Organisation for Economic Co-operation and Development (OECD) countries, but in 1995 our IMR dropped to fifteenth.⁶⁸
- Manukau City has the highest rate of infant mortality of 7.6 deaths per 1,000 live births. This is higher than the rate of 7.3 for the rest of New Zealand. This may be linked to the higher level of socio-economic deprivation that exists within the city.

INFANT MORTALITY RATE PER 1,000 LIVE BIRTHS, BY CITY (1996 AND 1997 AVERAGED)



Data Source: New Zealand Health Information Service

The rate of infant mortality is highest for Maori and Pacific Islands people across all the cities. The Maori IMR has declined but remains higher than that of non-Maori, mostly due to a higher rate of sudden infant death syndrome (cot death). The gap between Maori and non-Maori IMRs has widened since the mid-1980s. The IMR for Pacific Islands infants was consistently lower than the European rate until the mid-1980s, but it has been above the European rate for three out of five years since 1990.⁶⁹

Smoking is known to be strongly associated with socio-economic status, and has also been associated with sudden infant death syndrome. One in four New Zealanders smoke, and the young are more likely to smoke than older people. Maori smoking rates are almost twice those of non-Maori, and the prevalence of smoking among young women, particularly young Maori women, is of concern.⁷⁰

66 National Health Committee. 1998. The Social, Cultural and Economic Determinants of Health in New Zealand: Action to improve health.

67 Data for 1998 is unavailable due to 'unresolved data issues'. Owing to changes in the coding of ethnicity on birth and death certificates during 1995, pre 1995 data has not been included.

68 National Health Committee. 1998. The Social, Cultural and Economic Determinants of Health in New Zealand: Action to improve health.

69 The National Health Committee analysis of IMR by ethnicity is based on pre 1995 data. Due to changes in the coding of ethnicity on birth and death certificates during 1995 pre 1995 and post 1995 ethnicity data is not comparable. Data for this indicator is based on post 1995 data and serves as a baseline for future reporting.

70 Statistics New Zealand. 2000. Looking past the 20th Century, a selection of long - term statistical trends that influence and shape public policy in New Zealand.

INFANT MORTALITY RATE PER 1,000 LIVE BIRTHS, BY ETHNICITY (1996 AND 1997 AVERAGED)

	European	Maori	Pacific Islands	Other
Auckland	4.3	9.7	10.4	3.8
Manukau	2.9	10.4	7.2	11.6
North Shore	4.2	10.4	6.8	12.0
Waitakere	4.4	14.8	2.6	4.4
Wellington	4.8	9.7	7.9	0.0
Christchurch	5.7	11.6	17.5	3.3
Rest of NZ	5.0	11.2	8.0	6.2

Data Source: New Zealand Health Information Service

Low Birth Weight Babies

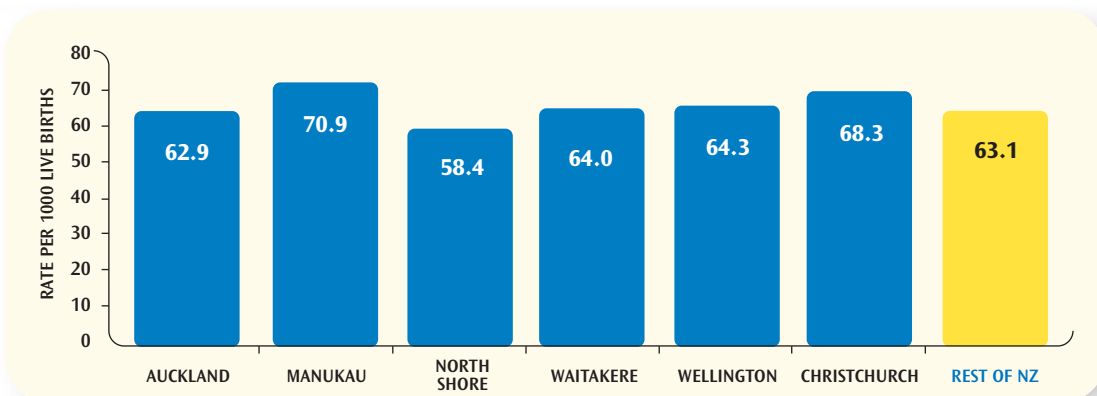
What this is about...

A low birth weight baby weighs less than 2,500 grams. Babies weighing 2,500 grams or less are at greater risk of death within the first month of life as well as increased risk of illness, disability and health problems in later life. Birth weight is affected by the overall health of the mother and her environment, and the quality of and level of access to prenatal care. This indicator measures the average annual number of low birth weight babies per 1,000 live births (1996 and 1997).

What did we find ?

- Manukau City has the highest rate of low birth weight babies compared to the other five largest cities. As for infant mortality, this may be linked to the higher level of socio-economic deprivation that exists within the city.

AVERAGE ANNUAL RATE OF LOW BIRTH WEIGHT BABIES PER 1,000 LIVE BIRTHS, BY CITY (1996 AND 1997 AVERAGED)



Data Source: New Zealand Health Information Service

Between 1980 and 1993 the proportion of low birth weight babies increased in New Zealand. The increase occurred predominantly among people of European ethnicity. This may be partly due to an increase in the survival of very low birth weight babies (under 1,500 grams) as a result of improved medical technology.⁷¹

However, the Maori rate of low birth weight is considerably higher than the European rate. Smoking is one of the most important preventable determinants of low birth weight babies. Proportionately more Maori women smoke during pregnancy and are more likely to have low birth weight babies.⁷²

The rate is lowest for Pacific Islands infants, remaining steady at around 43 per 1,000 live births during 1980 to 1993.⁷³ The table below shows a high rate of low birth weight babies amongst other ethnic groups which may reflect generally smaller babies, or a range of other issues such as access to prenatal care and socio-economic factors. However, as for infant mortality, the numbers are small.

**AVERAGE RATE OF LOW BIRTH WEIGHT BABIES
PER 1,000 LIVE BIRTHS, BY ETHNICITY (1996 AND 1997 AVERAGED)**

	European	Maori	Pacific Islands	Other
Auckland	51.2	83.8	42.9	92.5
Manukau	75.2	82.4	45.2	105.4
North Shore	49.5	79.9	37.7	87.2
Waitakere	53.3	84.6	36.0	109.1
Wellington	53.9	96.7	49.4	84.3
Christchurch	63.2	82.2	31.5	108.8
Rest of NZ	55.1	68.9	45.6	137.6

Data Source: New Zealand Health Information Service

Other factors that may increase the likelihood of low birth weight babies is poor nutrition and drinking alcohol during pregnancy.⁷⁴ These are influenced by socio-economic status, access to prenatal care and information, and education levels.

71 National Health Committee. 1998. The Social, Cultural and Economic Determinants of Health in New Zealand: Action to improve health.

72 National Health Committee. Maternity services for 'hard to reach' women not so satisfactory. News and Issues 15, www.nhc.govt.nz

73 The National Health Committee analysis of low birth weight is based on pre 1995 data. Due to changes in the coding of ethnicity on birth and death certificates during 1995 pre 1995 and post 1995 ethnicity data is not comparable. Data for this indicator is based on post 1995 data and services as a baseline for future reporting.

74 National Crime Prevention Council. 2000. The Determinants of Health and Children. Canada. www.crime-prevention.org

General Practitioners

What this is about...

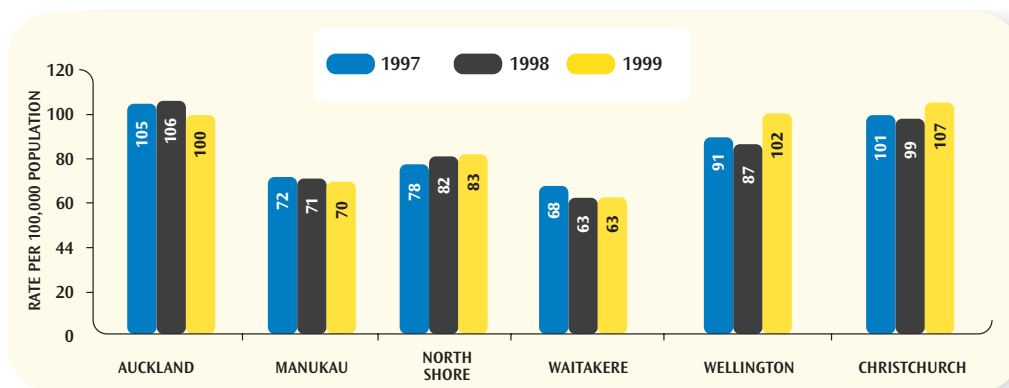
The number of General Practitioners (GPs) per city reflects accessibility to health services. A lower rate of GPs per population may indicate difficulty with accessing primary health care and may be associated with higher rates of hospitalisation.

This indicator uses the rate of full time equivalent GPs per 100,000 population within the six largest cities.

What did we find ?

- Waitakere and Manukau Cities have the lowest rate of GPs per population, with an average rate of 65 and 71 per 100,000 population respectively. In comparison, Auckland and Christchurch Cities have the highest rate of GPs, with averages of 104 and 102 per 100,000 population respectively. This is a significant difference, and suggests that areas of greatest need may not be adequately provided for in terms of primary health care.

RATE OF GENERAL PRACTITIONERS PER 100,000 POPULATION (1997 TO 1999)



Data Source: New Zealand Medical Council's Annual Workforce Survey

It is not clear how GPs are spread throughout the community - that is, whether practices are located close together or spread evenly throughout the city, or the number of GPs working in 'super clinics'.

Poor access to health care, especially preventative health and early intervention services such as those offered by GPs, partly explains the link between socio-economic status and health. Social, cultural and economic factors influence the use of preventive and treatment services and the more affluent generally have better access to high quality health services. New Zealand studies demonstrate that individuals in lower socio-economic groups use general practitioner services less than would be expected given their health status, and that financial constraints act as a deterrent to consultation for those with lower family incomes and from more deprived areas.⁷⁵ In particular, a considerable number of Pacific Islands people are admitted to hospital with conditions that would be largely preventable through access to primary care.⁷⁶ Therefore, improving the affordability of general practice services, and addressing issues of availability and appropriateness of services for different ethnic groups would assist with reducing socio-economic differences in health status.

There has been a restriction on the issuing of Section 51 notices by the Health Funding Authority (Section 51 of the Health and Disability Services Act (1993) enables GPs to claim payments from the government for consultations). This has limited the number of new GPs able to open up practices, especially in the Auckland area. These limitations have been strongly challenged by many GPs and communities who say that GPs need to be located where there are fast growing populations.

75 National Health Committee. 1998. The Social, Cultural and Economic Determinants of Health in New Zealand: Action to improve health.

76 Health Funding Authority. 2000. Improving our Health in Wellington – a discussion document for community involvement.

Incidence of Meningococcal Disease among Children

What this is about...

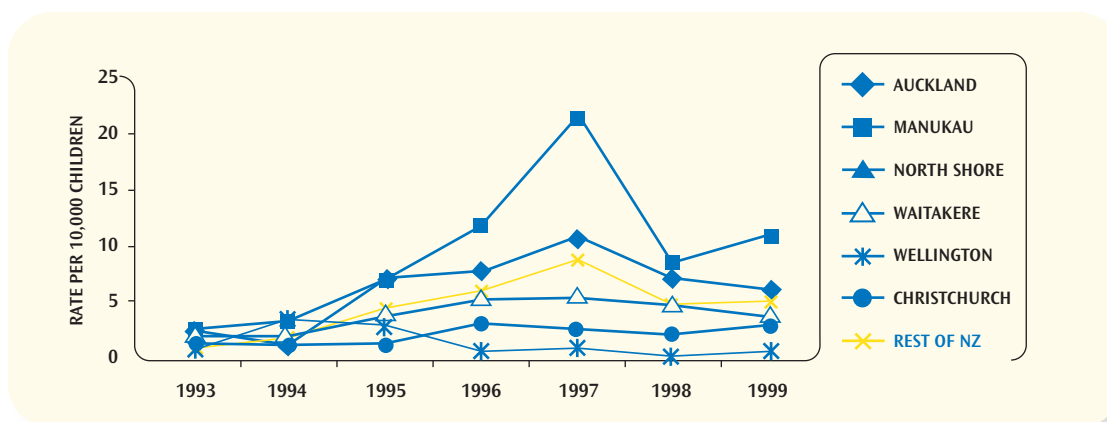
New Zealand is now in its tenth year of a meningococcal disease epidemic, which is showing no sign of decreasing. The epidemic has now resulted in a total of 3,300 cases and 150 deaths within New Zealand.⁷⁷ The Auckland Region continues to be the worst affected region in the country with a rate of 24 cases per 100,000 population, compared to 14.8 cases per 100,000 for New Zealand overall.⁷⁸

The indicator used here is the rate of notified cases of meningococcal disease (meningitis) per 10,000 children under 15 years.⁷⁹

What did we find ?

- The rate of meningococcal disease among children under 5 years is considerably higher than in any other age group.⁸⁰ This finding is consistent across all of the six largest cities.
- There was a steady increase in cases until 1997 when the epidemic peaked (particularly in Auckland and Manukau Cities).
- Christchurch, Wellington and North Shore Cities do not appear to have experienced the peak of the epidemic in 1997. Overall, the rates post-1997 are higher than pre epidemic rates (pre-1993).

RATE OF NOTIFIED CASES OF MENINGOCOCCAL DISEASE PER 10,000 CHILDREN AGED UNDER 15 YEARS, BY CITY (1993 TO 1999)⁸¹



Data Source: Environment Science and Research Ltd.

Between 1993 and 1999, the rate of total notified cases among children aged less than 15 years was highest among Pacific Islands people in all cities except Wellington, where it was highest among Maori.

The rate amongst both Maori and Pacific Islands communities has been highest in Auckland and Manukau Cities.

77 Institute of Environmental Sciences and Research (ESR), Auckland Health Protection Service and the University of Auckland. 2000. Household Crowding: A major risk factor for epidemic meningococcal disease in Auckland children. Press release 11 August 2000.

78 Public Health Quarterly Advice. July 2000. Meningococcal disease increasing again – Household crowding the most important risk factor. 6 (3).

79 Meningococcal disease is a notifiable disease, which means that a GP is required to notify their local Public Health Unit when a patient presents with the disease.

80 Public Health Quarterly Advice. July 2000. Meningococcal disease increasing again – Household crowding the most important risk factor. 6 (3).

81 Rates have been calculated using 1991 census data for 1993 to 1995 and 1996 census data for 1996 to 1999, for the population aged under 15 years.

RATE OF NOTIFIED CASES OF MENINGOCOCCAL DISEASE PER 10,000 POPULATION OF CHILDREN AGED 15 YEARS AND UNDER, BY ETHNICITY (1993 TO 1999 TOTAL)

	European/Asian/Other	Maori	Pacific Islands
Auckland	17.3	56.1	118.7
Manukau	19.2	76.9	122.8
North Shore	6.6	24.9	50.1
Waitakere	16.5	18.0	63.4
Wellington	4.8	40.4	22.9
Christchurch	14.0	19.0	33.1
Rest of NZ	13.6	48.0	102.7

Data Source: Environment Science and Research Ltd.
Rate calculated using 1996 Census data.

Household crowding is a significant risk factor for meningococcal disease in children. A three-year study shows that while household crowding is unlikely to have caused the meningococcal disease epidemic in New Zealand, crowding has almost certainly intensified its effect among the most vulnerable, notably Maori and Pacific Islands people living in Auckland.⁸² For example, if a family living in an average sized house of six rooms increased the number of adolescents or adults by two, there would be a doubling in risk of meningococcal disease for any child living in the household.

Incidence of Tuberculosis

What this is about...

Tuberculosis (TB) is one of the more common of the notifiable infectious diseases. It is a disease of poverty and the risk of transmission is inversely related to socio-economic status.⁸³ As a result, the cities with the lowest socio-economic status are at greater risk of TB. While TB was more common during the depression, the incidence declined as New Zealand became more affluent. TB is usually associated with underdeveloped countries, and the data suggests that New Zealand is demonstrating increasing levels of underdevelopment. The indicator presents the notification rate of TB per 100,000 population in New Zealand's six largest cities and for the rest of New Zealand.

What did we find ?

- In 1999 there were 451 notified cases of TB nationally. Of these, 58% were in the six largest cities. The number of notifications within the cities increased from 67 in 1993 to 261 in 1999.
- Notification rates were variable between 1993 and 1999 but indicate overall increases in Auckland, Manukau, Wellington and Waitakere Cities.
- There were significant increases in notification rates between 1993 and 1994 in Auckland and Manukau.
- Notification rates in the North Shore and Christchurch Cities and the rest of New Zealand were lower compared to the other cities and remained fairly static between 1993 and 1999.

82 Institute of Environmental Sciences and Research (ESR), Auckland Health Protection Service and the University of Auckland. 2000. Household Crowding: A major risk factor for epidemic meningococcal disease in Auckland children. Press release 11 August 2000.

83 Public Health Quarterly Advice. 2000. Tuberculosis increasing in young Aucklanders. (6) 1.

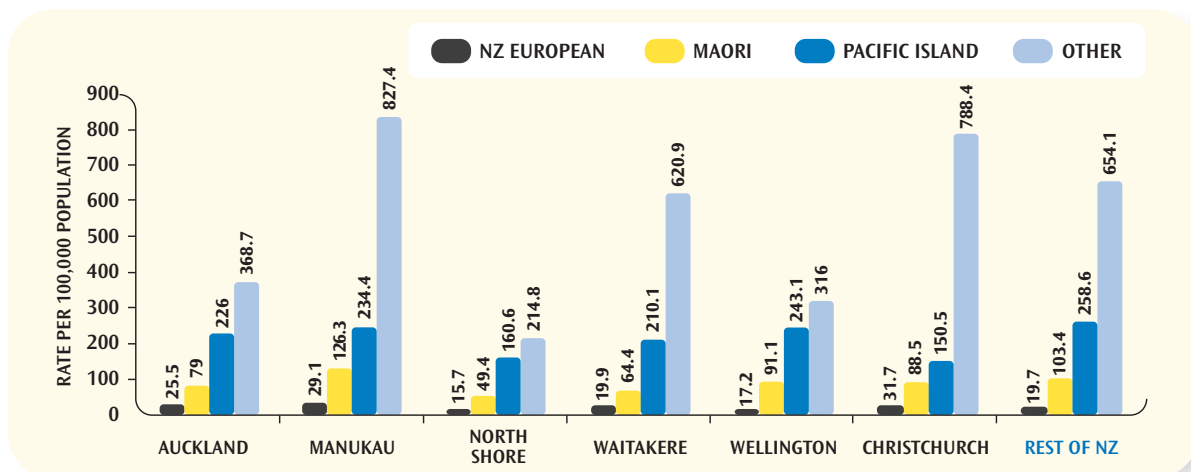
RATE OF NOTIFIED TUBERCULOSIS CASES PER 100,000 POPULATION,⁸⁴ BY CITY (1993 TO 1999)

	1993	1994	1995	1996	1997	1998	1999
Auckland	0.3	23.8	27.8	18.8	21.1	24	28.3
Manukau	7.1	22.1	25.2	20.1	15.3	24.8	25.2
North Shore	6.6	7.9	10.5	10.5	7.6	4.1	7.6
Waitakere	10.2	5.8	8.8	13.5	14.1	12.2	15.4
Wellington	4.0	14.2	18.9	10.2	14.6	15.9	22.9
Christchurch	7.0	12.1	9.3	5.2	6.8	11.3	8.4
Rest of NZ	12.1	7.2	7.0	7.6	6.0	6.1	8.5

Data Source: Environment Science and Research Ltd.

Rates calculated from the total number of notifications between 1993 and 1999 indicate that rates are significantly higher amongst ‘Other’ ethnic groups. This is largely due to the arrival of visitors, immigrants and refugees from countries where there is a high incidence of TB, such as the Pacific, Asia and Africa.

RATE OF NOTIFIED TUBERCULOSIS CASES PER 100,000 POPULATION, BY ETHNICITY (1993 TO 1999)⁸⁶



Data Source: Environment Science and Research Ltd.

In Auckland, the proportion of TB among New Zealand born, particularly young people, has increased since 1998.⁸⁵ TB has also been linked to overcrowded housing.⁸⁷

84 Rate calculated using 1991 Census data for 1993 to 1995, and 1996 Census data for 1996 to 1999.

85 Public Health Quarterly Advice. 2000. Tuberculosis increasing in young Aucklanders. (6) 1.

86 Rate calculated using 1996 Census data.

87 Institute of Environmental Sciences and Research (ESR), Auckland Health Protection Service and the University of Auckland. 2000. Household Crowding: A major risk factor for epidemic meningococcal disease in Auckland children. Press release, 11 August 2000.

Immunisation

What this is about...

Improving immunisation coverage to levels that will be protective for both the individual child and the whole community is probably the most cost-effective treatment available in the health sector, especially as it costs more to care for sick children in hospital than it does to vaccinate them.⁸⁸

What did we find ?

Reliable regional or city wide data of incidence of immunisation is not available, highlighting a significant gap in data. However, in 1996 the Northern Regional Health Authority commissioned an immunisation coverage survey in Auckland and Northland.⁸⁹ The survey estimated that 63.1% of children were fully immunised by age 2 years; a modest but not statistically significant increase on the 55.4% coverage estimated in a 1992 survey. It also found that Maori and Pacific Islands children were less likely to be fully immunised at age 2 years compared to other children (44.6% and 53.1% respectively, compared to 72.3%).

The survey results indicate that immunisation coverage may be improved by measures which facilitate physical access to immunisation services, promotion of the first immunisation event, promotion of the use of Well Child Health Books and Immunisation Certificates, and greater use of opportunistic immunisation.

Factors which reduce immunisation coverage include transience of families, access to, affordability and appropriateness of primary health care, awareness and education, and socio-economic status. Immunisation programmes which have successfully targeted 'hard to reach' children have the following features in common:

- provider commitment
- a locally developed, systematic approach
- good information systems
- well developed teams
- culturally appropriate workers, or the ability to link with appropriate community workers
- a capacity to visit children at home.

Parents' opposition to immunisation also impacts on immunisation coverage. However, successive surveys show that less than 5% of parents are opposed to immunisation. Therefore, it is possible that there is a big group of people who would agree to immunisation but who are not being offered the service in ways that encourage uptake.⁹⁰

88 National Health Committee. Action on immunisation of New Zealand's 'hard to reach' children. News and Issues 15. www.nhc.govt.nz

89 Rainger, W., Solomon, N., Jones, N. et al. 1998. Immunisation coverage and risk factors for immunisation failure in Auckland and Northland. The New Zealand Public Health Report. 5 (7).

90 National Health Committee. Action on immunisation of New Zealand's 'hard to reach' children. News and Issues 15, www.nhc.govt.nz

Suicide

What this is about...

The increase of psycho-social disorders across all OECD countries is also reflected in New Zealand statistics. Suicides are one measure of such disorders, and while the earlier statistics may be marked by a tendency to call suicides 'accidents', the number of suicides among young people aged 15 to 24 years has trebled from 1948 to 1997.⁹¹ To assess the significance of this, we have measured the number of suicides by city and age.⁹²

What did we find ?

- New Zealand has the highest suicide rate in the world for males between 15 and 24 years old.⁹³ The high rate of suicide for this age group may be under-represented, as some suicides may be identified as road deaths where this age group is over-represented. While considerable attention has been given to youth suicide in recent years, it is also a concern amongst other age groups. For example, the last few years have shown a marked trend for 25 to 39 year olds to suicide, with rates within that age group doubling.
- European and 'Other' males and females have considerably higher rates of suicide compared to Maori and Pacific Islands groups. In addition, there is a considerably higher rate of suicide among males than females.
- Suicides and attempted suicides are usually the result of a complex interplay of longer-term risk factors and stressful immediate events. Research has identified four main factors that distinguish young people who make suicide attempts from other young people.⁹⁴ These include social and education disadvantage, and a history of exposure to multiple family and parental disadvantages during childhood and adolescence. The development during adolescence of significant mental health problems or adjustment and exposure to a serious or stressful life event immediately prior to the suicide attempt are also factors.

TOTAL SUICIDES, PER CITY, BY AGE (1993 TO 1997)

	10-14 yrs	15-24 yrs	25-39 yrs	40-59 yrs	60 yrs and over
Auckland	1	51	91	45	29
Manukau	3	49	47	34	19
North Shore	0	14	32	31	20
Waitakere	0	40	44	22	19
Wellington	0	34	39	36	16
Christchurch	1	79	91	65	33

Data Source: New Zealand Health Information Service

NUMBER OF SUICIDES, BY CITY (1993 TO 1997)

	1993	1994	1995	1996	1997
Auckland	42	40	53	36	46
Manukau	21	31	34	39	27
North Shore	9	17	22	24	25
Waitakere	17	19	38	21	30
Wellington	27	23	29	31	15
Christchurch	49	54	50	52	64

Data Source: New Zealand Health Information Service

91 Statistics New Zealand. 2000. Looking past the 20th Century, a selection of long - term statistical trends that influence and shape public policy in New Zealand. Wellington.
 92 Suicide is a statistically rare event and differences between cities are not significant. Any differences between cities will be attributable to different demographic characteristics.
 93 Injury Prevention Research Centre. Suicides: Fact Sheet 1. The University of Auckland.
 94 Beautrais, A. 1997. In Our Hands: The Research Evidence. Ministry of Health.

Physical Activity

What this is about...

The importance of being active has been well documented, with some of the attributes of an active life being identified as:

- A better quality of life - getting more people active saves lives and money. In New Zealand, around a third (just over 7,800) of adult deaths in 1994 were from coronary heart disease, colon cancer and diabetes. Around a fifth of these deaths can be attributed to physical inactivity. Even a modest increase (10%) in physical activity levels among adults could prevent over 300 of these premature deaths and save around \$55 million a year in health costs.
- Young people who are active are healthier and perform better at school.
- Active communities are more unified, more likely to share an identity, and experience less anti-social behaviour, especially among young people.
- Active lifestyles bring tangible benefits to the economy. The sport and active leisure sector contributes over \$1.7 billion to GDP and supports 31,000 people in employment.⁹⁹

This indicator presents the percentage of active adults and young people within New Zealand, on a regional basis ('activity' is defined as doing 2.5 hours or more of sport and active leisure a week). Data for this indicator is drawn from research conducted for the Hillary Commission's Push Play Campaign which aims to get all New Zealanders enjoying the benefits of healthy active lifestyles.¹⁰⁰

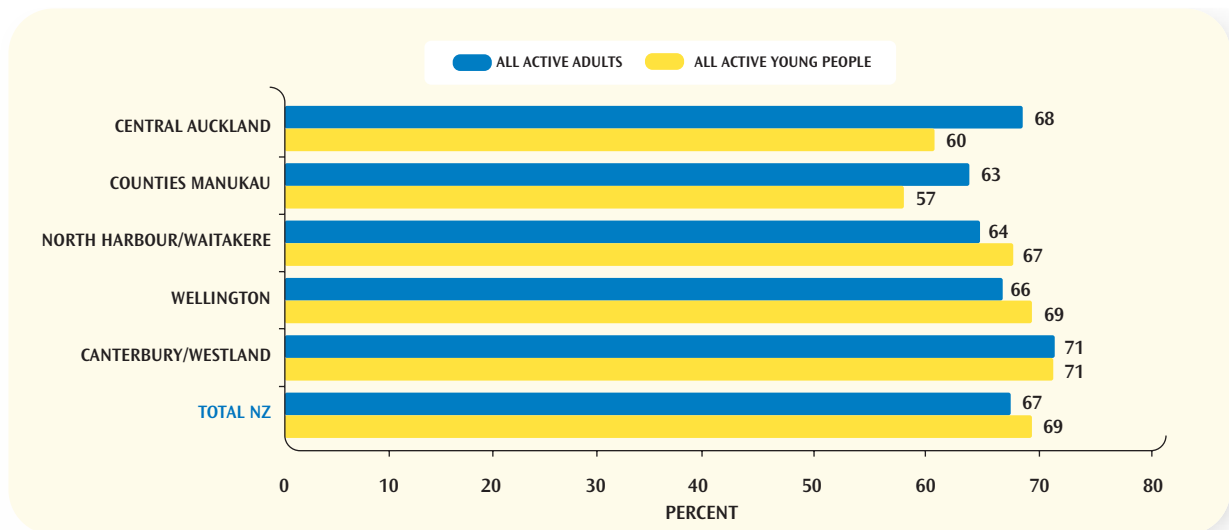
What did we find ?

- Young people's involvement in sport and active leisure is high in all areas of the country, but there are differences in their activity levels and the way they play sport. Young people in the Auckland region were less active than those in the rest of the country, while those in the far south are the most active. Their involvement in club sport varies. Almost a half of the young people in the Canterbury/Westland area play sport with a club, compared with only 30% of those in Wellington and Auckland.
- Adults living in different parts of the country are equally active and have similar rates of participation in sport and active leisure. For adults regional figures reflect national ones.
- In all regions, more than 50% of the population is engaged in physical activity of some type. Types of activity may range from gardening and fishing to netball and badminton.

99 Hillary Commission. 1999. Push Play Facts. Report published by Hillary Commission for Sport, Fitness and Leisure.

100 Regional data was available from the Sport and Physical Activity Survey carried out by the Hillary Commission (1999) which formed the basis of their Push Play campaign. The survey was carried out from May 1997 to April 1998 during which over 5,400 adults and 1,700 5 to 17 year olds living in 12 regions of New Zealand were surveyed.

PERCENTAGE OF ACTIVE YOUNG PEOPLE (AGED 5 TO 17 YEARS) AND ACTIVE ADULTS (1997 TO 1998)



Data Source: Hillary Commission, Sport and Physical Activity Survey

One of the trends currently occurring in relation to sports clubs is amalgamation, especially in the Auckland Region. As a result, a range of small clubs offering particular sports are being replaced by multi-sport facilities. This will increase the range of sports opportunities for people. However, accessibility and affordability of such facilities may need to be monitored to ensure they provide sporting opportunities for a range of community members.

By international standards, New Zealand is an active nation. However, inactivity and obesity are on the increase in the western world, and the number of people who are obese or overweight is increasing in New Zealand. Obesity is influenced by poor diet and physical inactivity.¹⁰¹