Chapter 10: Child Health

Introduction

Counties Manukau has 10% of New Zealand's children. Health professionals in Counties Manukau have felt for some time that the health of children in the area has remained poor with some deterioration in diseases such as meningococcal meningitis and tuberculosis. This perception resulted in the collation of a detailed report in 1999 entitled *The Health of Children & Young People in Counties Manukau*. This document in turn refers to the *Child Health Strategy, 1998* produced by the Ministry of Health and endorses its recommendations. The reader is referred to these two important documents in the first instance. Chapter 4 *The Life Cycle* from page 65 on also carries a great deal of information. In the brief overview of child health here we have provided some updated data including information on hospitalisation for both preventable causes and selected conditions.

Demography

There were an estimated 104,000 children (aged 14 or under) in Counties Manukau in the year 2000 (Table 84):

- This equates to 26% of the total Counties Manukau population.
- Just over a third of these children are less than 5 years of age.
- A further 14% of the total population are aged 15 to 24 years.
- Tamariki Maori (26%) and Pacific children (25%) make up over half the 0-14 year old population.

Table 84. Estimated Counties Manukau child population by age and ethnicity, 2000

	Maori	Pacific	Other	Total
0-4 yrs	9,900	9,700	15,800	35,300
5-9 yrs	9,300	8,700	17,400	35,400
10-14 yrs	7,900	7,500	17,700	33,100
Total 0-14	**27,100**	**25,900**	**50,900**	**103,900**
15-24	12,800	12,500	30,800	56,000

See Map 11 overleaf for the distribution of children in (the urban parts of) Counties Manukau.

Well Child Services

National Schedule

Every child and their family are entitled to receive a series of services within the community. These services are described in the Well Child/Tamariki Ora National Schedule (Ministry of Health, 1996). This schedule is forward looking and comprises three parallel strands which should be delivered as an integrated package of care - health education; health protection and clinical assessment; family or whanau care and support. The different components are contracted out to different professionals. As a result, integration of the three strands can be difficult. The people best placed to be aware of all the strands are the family themselves. As is often the case, the families most in need of support are the ones with the least resources to avail themselves of the services, or to coordinate them effectively.

In Counties Manukau there is a lack of co-ordination of Well Child Care services with fragmented and multiple providers having different contracts to cover different aspects of different population groups. In addition to general practitioners, there are now at least eight identified providers funded to provide Well Child Care services in the Counties Manukau area including: Awhitia, Health Star Pacific, Langimalie Tongan Health Centre, Papakura Marae, Plunket Society, Raukura Hauora 0 Tainui and South Seas Kids. The universal preschool Vision and Hearing Screening programme is provided by South Auckland Health. There is no system to ensure universal coverage without duplication, and immunisation schedules are separate from Well Child Care schedules. With such a diverse and fragmented cadre of providers, any attempt at a coordinated structured data collection of community health status information would need strong information technology infrastructure.

General Practitioners

The primary health care team are major providers of child healthcare, for both the well and ill child. The present Schedule and payment structures disincentivise general practice from providing good well child care. Information on all Well Child Care and immunisation services is hard to obtain. Well child care visits are not separately identified and immunisation data while collected is poorly analysed and used. NHI completeness remains a problem (NHI = National Health Index is the health system patient number collation). More information on general practitioners such as is available is given in Chapter 5 *Primary care*.

Maori and Pacific Providers

Awhitia, Health Star Pacific, Langimalie Tongan Health Centre, Papakura Marae, Putea O Pua and South Seas Kids are local culturally based health providers who provide Well Child Care services in the Counties Manukau area.

Plunket

Plunket is a universal service, but can target groups or areas. Plunket has a national contract that covers the percentage of children in the area expected to be seen at each of the visits in the Well Child care schedule. The percentage of children seen ranges from 92.7% at the first visit, to 50% at the "23 month old" visit. Plunket is not contracted to see all eligible children. There are issues in adequate follow up, especially for those children who are not brought to the Plunket Clinic for their checks, those who do not have a nominated GP, and for those who form part of the mobile, highly elusive population. It is estimated (locally) that 40% of tamariki Maori under 5 years old do not attend a pre-school facility and children who do not attend pre-school miss out on Plunket checks offered at these establishments. Given the limited contract, Plunket estimate that from the age of 3 to 5 years, there is a "gap" of children not being offered a service, of 40%.[1]

Child and Youth Community Services

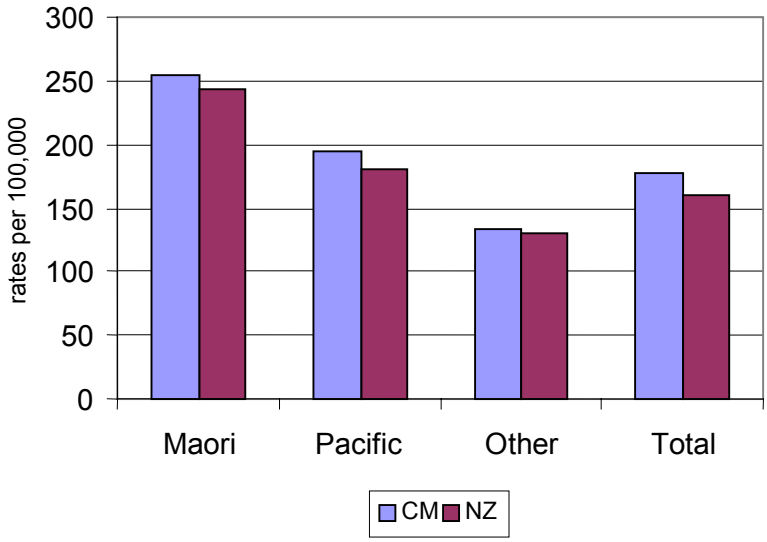
The Child and Youth Services of South Auckland Health provide 130,000 ante and post natal visits a year and testing. There are 104 full time equivalent people working with this service. Of these, 5% are medical, 18% nursing, 10% allied health, 8% social work, 12% clerical/admin and 17% other. The high volume services are school based nursing services, hearing and vision treating services, adolescent mental health services, and services to medically fragile children.

[1] *The Health of Children and Young People in Counties Manukau.* South Auckland Health, Oct 1999

Mortality

The under five mortality rate is an accepted indicator of a countries overall health status. New Zealand ranks 15th out of the 21 OECD countries that have reliable data available for comparison. New Zealand's international ranking has worsened over the last 25 years, in 1960 New Zealand ranked 6th amongst OECD countries. Mortality rates for people aged between 0-24 years are higher for Counties Manukau than for the rest of New Zealand (Figure 201). There are marked differences in mortality depending on ethnicity. and socio-economic status.

Figure 201. 0-24 year old mortality rates, Counties Manukau and New Zealand, 1996-7



More details about mortality rates by condition and ethnicity are given in Table 85. The tables relate to the ten conditions that contribute the most to potentially avoidable mortality. Despite the differences in rates none of these differences are statistically significant. Most deaths are in the under 1 age group.

Table 85. 0-14 year old mortality rates - top ten potentially avoidable mortality conditions, 1996-98

	Counties Manukau	New Zealand
SIDS	11.0	6.9
Low birth-weight babies	10.0	4.9
Motor vehicle crashes	7.3	5.7
Congenital anomalies	5.3	4.6
Other perinatal conditions	4.7	3.5
Birth trauma and asphyxia	4.3	4.1
Other external causes	3.0	3.8
Meningococcal infection	3.0	1.4
Brain tumours	1.7	1.6
Drowning	0.7	1.2

Note: 1998 mortality data is provisional. Age-specific rates per 100,000 0-14 year old. SIDS = sudden infant death syndrome = “cot death". No differences statistically significant.

Table 86 below describes the differences in mortality rates by area of deprivation (SES1 being the least deprived 20% in Counties Manukau, SES2 the next 20%, etc). The general trend in the data is for increased mortality among those living in more deprived areas but unfortunately the numbers are at times too small in each group to show trends accurately. Ethnicity is also a confounder.

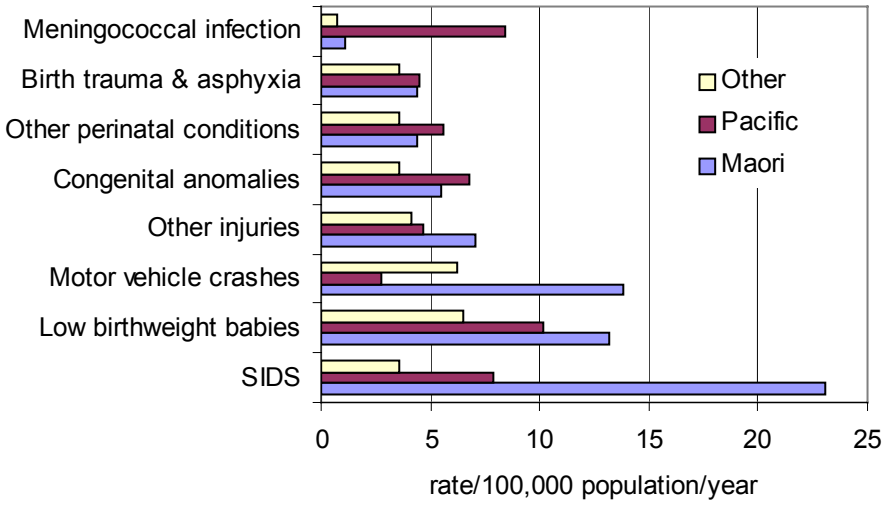
Table 86. Counties Manukau 0 – 14 mortality rates by NZDep96 Quintile. 1994-8

	SES1	SES2	SES3	SES4	SES5
Low birth weight babies	1.7	5.4	7.6	14.0	8.0
SIDS	6.6	4.0	14.2	16.3	18.0
Other perinatal causes	6.6	4.0	2.8	3.9	6.7
Motor vehicle crashes	1.2	3.8	6.2	7.8	13.5
Brain tumours	1.3	1.2	0.0	2.9	0.7
Congenital anomalies	0.0	7.9	5.7	4.8	8.8
Birth trauma and asphyxia	1.7	4.0	4.8	6.2	3.3
Other external causes	0.0	1.2	2.9	1.7	4.1
Drowning	0.0	0.0	2.0	1.6	0.0
Meningococcal infection	0.0	0.0	2.0	5.0	5.5

Note: 1998 mortality data is provisional. Rates ages standardised per 100,000 0-14 population. SIDS = sudden infant death syndrome = "cot death". SES1 = the 20% of people living in the least deprived areas to SES5 the most deprived areas

The socio-economic differences are also reflected in the mortality data analysed by ethnic group (Figure 202). The differences shown below are not statistically significant due to the wide confidence intervals (there are often only a small number of deaths), apart from the Maori rate of SIDS being significantly higher than the "other" rate.

Figure 202. Counties Manukau 0-14 mortality rates per 100,000, 1996-1998

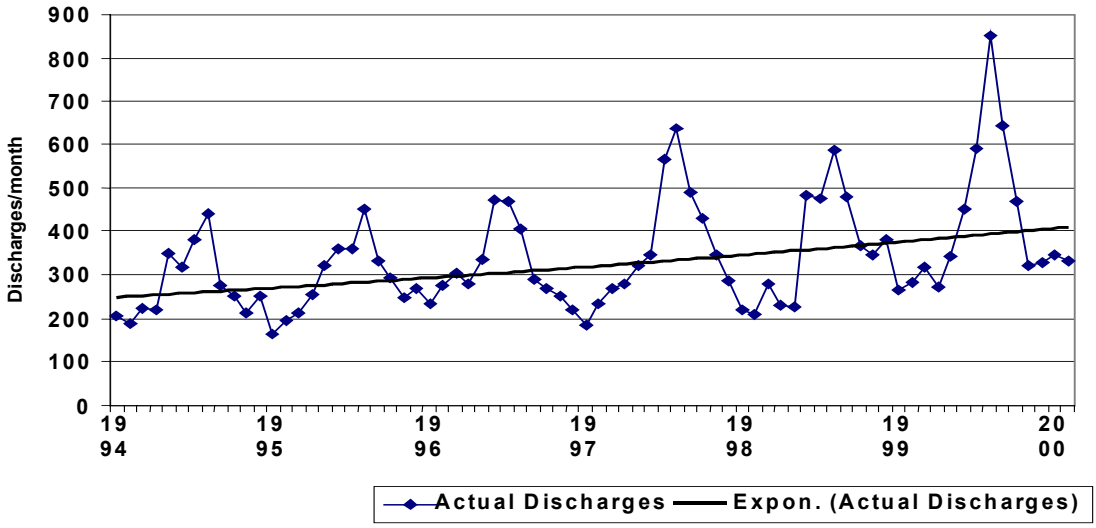


Source: NZHIS mortality data. 1998 mortality data is provisional. Rate age-standardised to NZ 1996 population. Top 8 causes of mortality, listed in order of total 0-14 mortality rate (highest at bottom). SIDS = sudden infant death syndrome = "cot death". Other injuries = all injury apart from motor vehicle-related

Hospital Utilisation

Counties Manukau children (0-14 years) have experienced a large increase in their risk of being admitted to hospital over the past few years (Figure 202). The discharge rate increased around 8% per year over the past 5 years. Also clearly demonstrated is the large seasonal fluctuation in child hospital discharges, with rates more than doubling in the winter months. Similar rises are described in general practice, creating large workforce and workload problem for the June – August period.

Figure 202. South Auckland Health child (0-14) discharge rates per month, 1994-2000



Source: South Auckland Health

Increasing population and the meningitis outbreak explain some of the increase in numbers, but the rest seems to be due mainly to respiratory and infectious diseases – particularly noticeable within the extraordinary winter peaks. These might be characterised as diseases of poverty, poor housing and overcrowding, and have a particular impact on the under 1s (see Tables 87 and 88 below, and Table 46, p68 in Chapter 4).

Table 87. Age-specific hospitalisation rates per 1000, 1995-9

	PAH		NON PAH		TOTAL	
	<1	1 to 14	<1	1to 14	<1	1to 14
Northland	203	43	230	63	433	106
North Shore	71	21	118	45	189	66
West Auckland	103	29	120	53	222	82
Central Auckland	122	31	120	54	242	84
Counties Manukau	**207**	**36**	**145**	**52**	**352**	**87**
New Zealand	162	37	166	57	328	94

Note: PAH = potentially avoidable hospitalisation as per *Our Health Our Future*, MOH 1999, chapter 10.

Counties Manukau children have a high rate of admission for potentially avoidable disease (Table 87). The most common condition that leads to hospitalisation are respiratory conditions with bronchiolitis being most common in the under 1's and pneumonia in the 1-14 year olds. Counties Manukau has higher rates of admission than New Zealand as a whole for the <1's but a similar rate for the 1-14 year olds.

Table 88. Potentially avoidable causes of hospitalisation, Counties Manukau and New Zealand, 1999

	Discharges				Rate/100,000 population/year				CM excess Disch-arges
	CM		NZ Total		<1		1 to 14		
	<1	1 to 14	<1	1 to 14	CM	NZ Total	CM	NZ Total	
Tuberculosis	2	7	5	30	29	9	7	4	5
Nutrition	2	2	13	34	29	23	2	4	-2
Gastroenteritis	204	379	1,453	2,802	2,917	2,570	398	345	75
Other infections	12	8	87	135	172	154	8	17	-7
Whooping cough	33	2	135	40	472	239	2	5	14
Hepatitis and liver cancer	0	3	0	24	0	0	3	3	0
Sexually transmitted disease	2	13	4	66	29	7	14	8	7
Diabetes	0	35	2	374	0	4	37	46	-9
Dehydration	2	2	17	33	29	30	2	4	-2
Epilepsy	53	235	375	1,986	758	663	247	244	9
ENT infections	67	1062	510	8,495	958	902	1116	1044	72
Rheumatic fever/heart disease	0	27	0	139	0	0	28	17	11
Acute bronchiolitis	734	39	3,769	380	10,497	6,667	41	47	262
Pneumonia	299	529	916	2,565	4,276	1,620	556	315	414
Respiratory infections – Other	198	234	1,282	1,963	2,832	2,268	246	241	44
Asthma	25	481	231	4,427	358	409	505	544	-41
Kidney/urinary infection	89	80	426	684	1273	754	84	84	36
Cellulitis	59	386	275	2,003	844	486	405	246	177
Meningococcal infection	25	86	103	304	358	182	90	37	63
All PAH	1,852	4,125	10,271	31,082	26,485	18,168	4,333	3,822	1,069
Other (non-PAH)	1,127	5,900	9,033	47,530	16,117	15,978	6,198	5,844	347
Total	2,979	10,025	19,304	78,612	42,601	34,145	10,531	9,665	1,416

Source: NMDS. PAH = potentially avoidable hospitalisation. "All PAH" includes all PAH categories, including the smaller categories not separately listed. CM excess discharges calculated by applying the difference in rates to the CM child popualtion.

Communicable Disease

Communicable disease is the major cause of hospitalisations for children. Counties Manukau children have higher hospitalisation rates than their Auckland and New Zealand counterparts for the infectious diseases shown in Table 89.

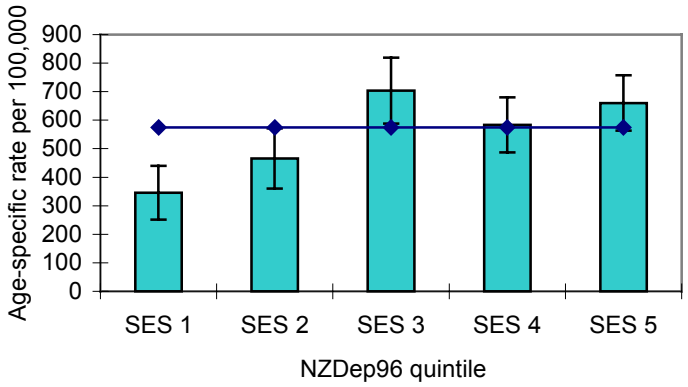
Table 89. Hospitalisation rates for selected infectious diseases, 1995-9.

	Gastro-enteritis		ENT infections		Kidney/ Urinary infections		Cellulitis		Other Infections	
	<1	1 - 14	<1	1 - 14	<1	1 - 14	<1	1 - 14	<1	1 - 14
Northland	2233	266	1320	1236	337	23	558	76	381	307
North Shore	1079	194	417	624	126	1	556	52	278	128
West Auckland	1433	195	401	975	63	4	476	44	401	241
Central Auckland	1456	223	519	785	100	4	722	45	442	281
Counties Manukau	**2537**	**307**	**841**	**754**	**164**	**8**	**988**	**64**	**628**	**356**
New Zealand	2462	325	942	975	128	16	629	84	328	187

Source: NMDS. Rates per 100,000 age-specific population.

For each of these infectious diseases the combination of ethnicity and socio-economic status are the most important determinants. Taking gastroenteritis as a example (and the majority of discharges for gastroenteritis are for children) the discharge rate for the 20% of Counties Manukau residents in the most deprived areas is significantly higher than the average, and significantly lower for the least deprived 40% (Figure 203).

Figure 203. Counties Manukau gastroenteritis discharge rates, 0-14 years by area of deprivation 1999.



Note: SES1 =20% of CM population living in the least deprived areas as measured by NZDep96, SES2 = next 20% etc.

Diseases such as respiratory disease, meningitis, tuberculosis, and rheumatic fever/rheumatic heart disease are examples where Counties Manukau children are well over-represented. More data about these conditions are given below.

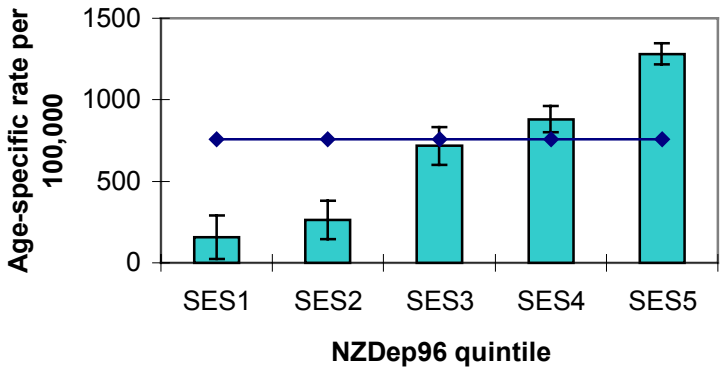
Respiratory disease

In the section on the Life Cycle we highlighted the importance of respiratory disease in contributing to admissions in the 0-14 year old age-group and particularly in the under ones. Respiratory infections in Counties Manukau account for 41% of admissions in the under ones and 8% in the 0-14 year old age groups. In New Zealand as a whole these figures are 31% and 6% respectively.

They are particularly important in the winter months – almost all the difference between winter and summer in paediatric medicine discharges is accounted for by pneumonia, bronchiolitis, and asthma and bronchitis. Diseases of the respiratory system (MDC 4) accounted for 40% of all paediatric medicine discharges, but 68% of winter discharges.

Discharge rates for respiratory disease are closely related to socio-economic status (Figure 204).

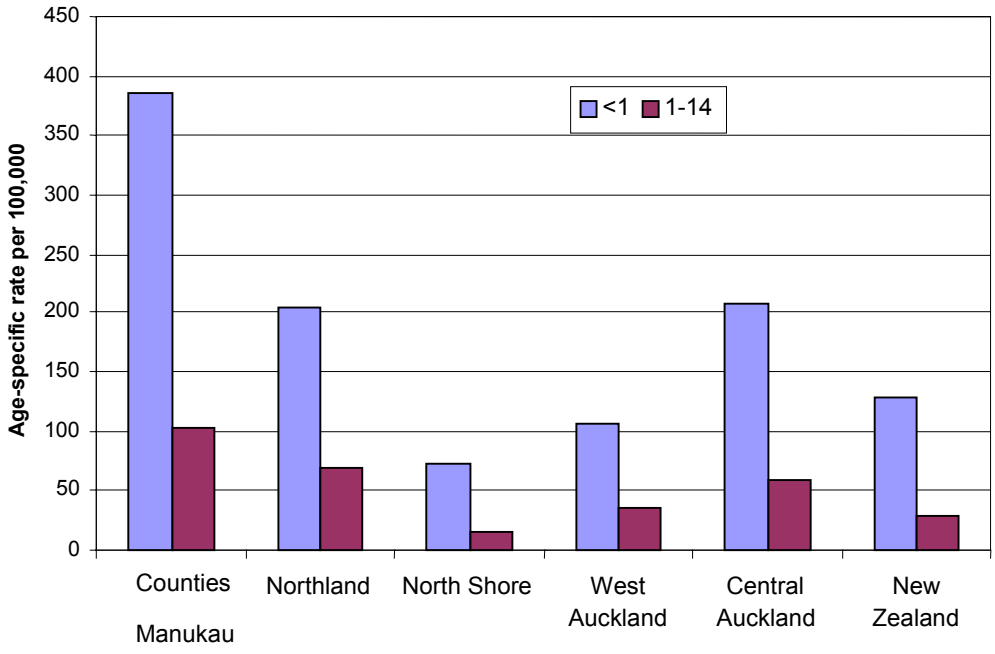
Figure 204. Discharge rates per 100,000 for acute bronchiolitis, 0-14 years By NZDep96 Quintile, 1999



Meningococcal disease

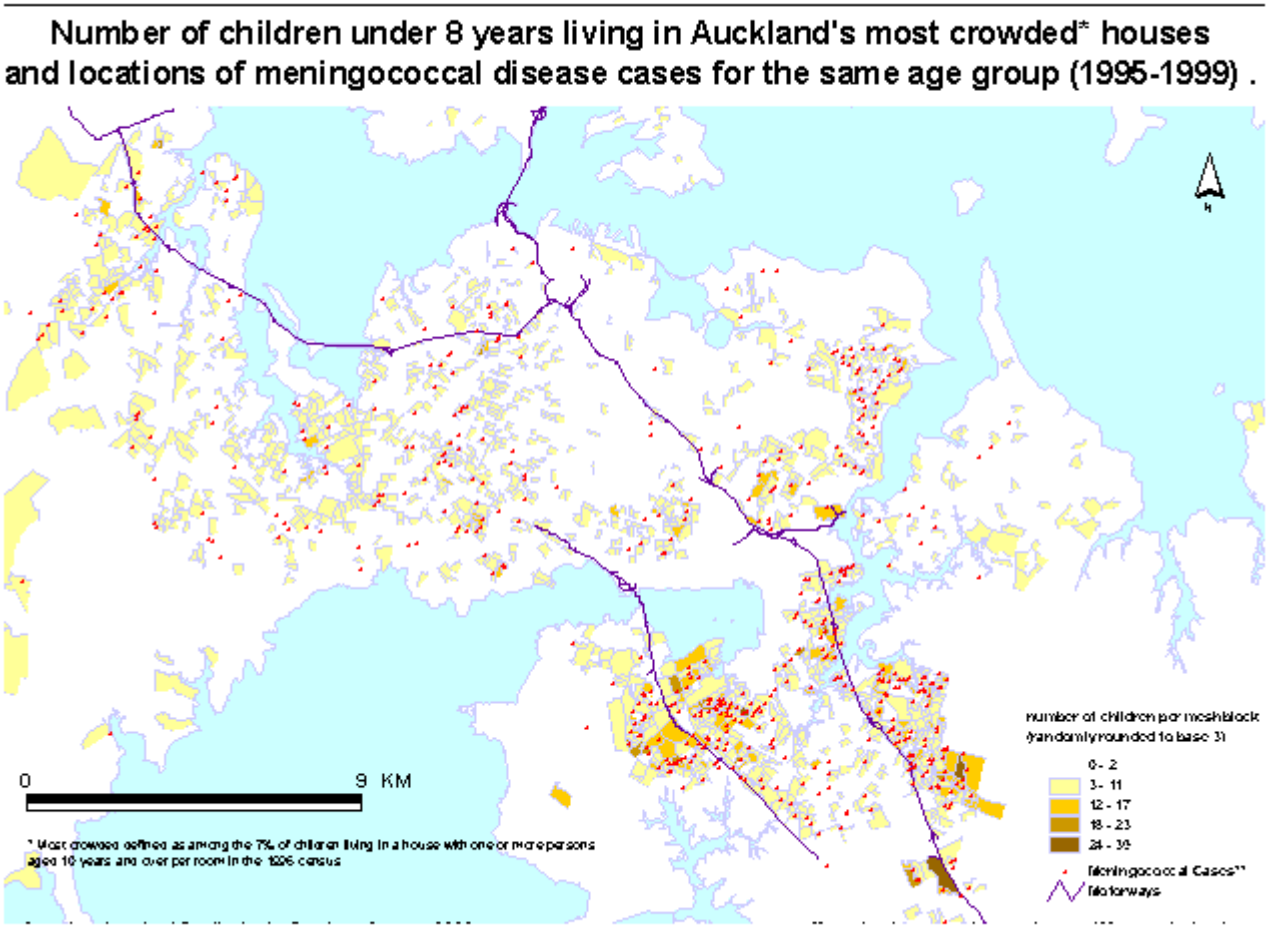
New Zealand is in its tenth year of a meningococcal serogroup B epidemic, which has seen 3 066 cases from 1991 to 1999 inclusive. The rates of meningococcal disease in Counties Manukau are extremely high compared to the rest of the country (Figure 205). Most of the excess hospitalisations are due to high rates of disease in the under one year olds.

Figure 205. Age-specific hospitalisations for meningococcal infection per 100,000 1995-9



Recently there has been increased interest in the links between housing and meningococcal disease and in particular overcrowding. Map 12 overleaf attempts to illustrate this link by overlaying notified cases on the number of children living in meshblocks selected as having the most children age 0-9 living in households with more than one person (aged 10+) per room in the 1996 census. It appears to be socio-economic status as much as ethnicity per se which is driving this health differential.

Map 12. Relationship between meningococcal disease and overcrowding in Auckland. 1995-9.

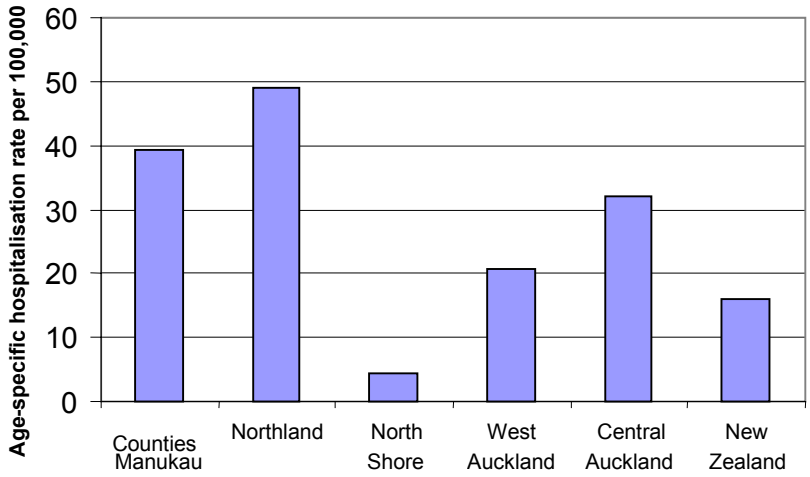


Source: Dr Nicholas Jones Public health physician, submitted for publication, 2000.

Rheumatic Fever

Acute rheumatic fever is a serious but preventable disease. There were no recorded admissions for rheumatic fever under the age of one but Figure 206 shows hospitalisations in the 1-14 age range. Rates for Counties Manukau were much higher than other parts of New Zealand with the exception of Northland. A large primary prevention trial is underway in Manukau City to try to reduce the incidence of this debilitating condition.

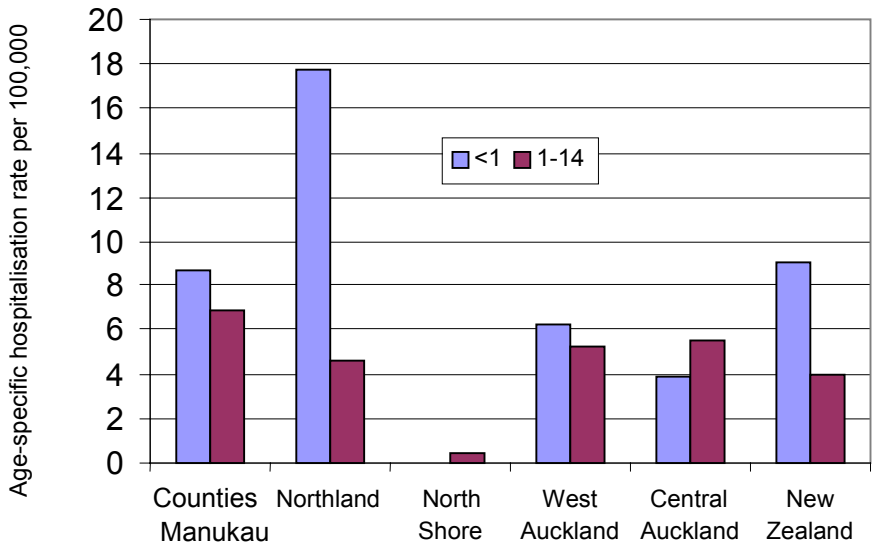
Figure 206. Age-specific hospitalisation rates for rheumatic fever, 1995-9.



Tuberculosis

Tuberculosis (often called TB) is an infectious disease that usually attacks the lungs, but can attack almost any part of the body. Tuberculosis is spread from person to person through the air. It is not easy to become infected with tuberculosis. Usually a person has to be close to someone with TB disease for a long period of time. TB is usually spread between family members, close friends, and people who work or live together. TB is spread most easily in closed spaces over a long period of time and is associated with poverty and overcrowding. Counties Manukau 1-14 rates are higher than anywhere else in New Zealand (Figure 207).

Figure 207. Child hospitalisation rates for tuberculosis, 1995-9.



Non-communicable Disease

The non-communicable disease hospitalisation rates for Counties Manukau are similar to the rest of the country. Epilepsy and asthma are conditions responsible for the bulk of admissions for non-communicable disease (Table 90).

Table 90. Hospitalisation rates for selected non-communicable diseases, 1995-9

	Diabetes		Epilepsy		Asthma		Failure to thrive	
	<1	1 to 14	<1	1 to 14	<1	1 to 14	<1	1 to 14
Northland	9	50	877	268	1019	622	346	16
North Shore	7	26	470	110	172	346	232	6
West Auckland	19	31	325	148	382	427	150	14
Central Auckland	4	24	473	140	323	546	161	12
Counties Manukau	**14**	**23**	**726**	**265**	**481**	**532**	**276**	**8**
New Zealand	10	40	738	282	718	627	816	22

Immunisation

The ongoing monitoring of the uptake of recommended childhood immunisations, sounds an ideal way of assessing the community health status of young children. However existing mechanisms for measuring coverage are less than perfect:

- each child requires a series of immunisations over a relatively long period of time
- there is no specific enrolment with any one child care/immunisation provider - many different people can potentially deliver immunisations
- there is no installed information system to provide immunisation-specific information to health providers, or to give coverage data
- community-based immunisation coverage surveys then become the only way to provide accurate estimates of coverage, but are relatively costly to run.
- estimation of immunisation status using immunisation benefit claim forms is dependent on the quality of the information provided/not provided by an increasing variety of sources.

New Zealand's most recent immunisation coverage survey was conducted in Northland and Auckland in 1996.[2] Full immunisation coverage at age two years for the Counties Manukau area overall was 64.0% [CI 56.3% - 71.7%]. The sample size was too small to generate useful statistics for catchments within Counties Manukau. For ethnic groups in Northland and the wider Auckland combined, figures were Maori (44.6% [CI 35.5% - 53.7%], Pacific people 53.1% [CI 43.7% - 62.5%] and Others 72.3% [CI 67.5% - 77.1%], for all groups combines 63.1% [CI 59.1% - 67.1%]. The same study reported coverage of immunisations of Counties Manukau children to age eight months at around 80%. The coverage was very similar to a separate study published in Christchurch around the same period, which name-matched immunisation benefit data to a cohort birth register.[3] Routine immunisation benefit monitoring does not include this name-matching process, which in any case has problems when handling immigrant infants.

[2] Rainger W et al. Immunisation coverage and risk factors for immunisation failure in Auckland and Northland. *NZ Public Health Report*, July 1998. Details of this survey as related to Counties Manukau are republished in *The Health of Children and Young People in Counties Manukau*. Oct 1999

[3] Bell DW, Ford RP, Slade B, McCormack SP. Immunisation Coverage in Christchurch in a birth cohort. *NZ Med J* 110(1056):440-2, 1997 Nov 28.

Immunisation-preventable disease

New Zealand continues to experience periodic measles and whooping cough epidemics. These epidemics are directly related to the low rates of vaccination. Admissions for immunisation-preventable disease are presented in Table 91. Counties Manukau has the highest rates of admission for both whooping cough and measles in both age-ranges. In the case of measles the excess rate in Counties Manukau was due to an outbreak in 1997. A further smaller outbreak occurred in Jan-Feb 2000.

Table 91. Hospitalisation rates/100,000 for immunisation preventable disease, 1995-9.

	Haemophilus Influenza		Measles		Whooping Cough		Other Imm.-preventable	
	<1	1 to 14	<1	1 to 14	<1	1 to 14	<1	1 to 14
Counties Manukau	3	**0**	**107**	**11**	**417**	**6**	**6**	**1**
Northland	0	1	62	5	390	5	62	1
North Shore	20	1	13	1	245	0	0	0
West Auckland	13	0	38	5	269	4	0	0
Central Auckland	0	1	77	4	288	2	0	1
New Zealand	7	1	34	3	272	6	3	1

Breast feeding

Monitoring breastfeeding rates should be equally as important as monitoring immunisation rates. The Ministry of Health does not discriminate against those mothers who choose to feed their babies by bottle, but it certainly does advocate breastfeeding as best for mothers and babies – "*the nutritional benefits of breastfeeding babies are well known; breast milk is low cost, comes at the right temperature, is readily available and has a low risk of contamination.*"[4] The World Health Organisation and the American Academy of Paediatrics recommend that mothers exclusively breastfeed babies until at least four months of age, and if possible six months. WHO also recommends that where needed, mothers and families must be given objective and consistent advice on the proper use of infant formula.

As with immunisation, the problem lies in the collection of data. What constitutes breastfeeding - that is definition of the terms partial and full breastfeeding, generates further difficulties. The best available information on breastfeeding patterns in New Zealand comes from a longitudinal study of a 1990-91birth cohort of over 4000 children.[5] Maori infants were less likely to be fully breastfed at 3 months of age compared to infants of other ethnicities. Around 39% of Maori infants were fully breastfed at the age of 3 months compared to 44% of Pacific and 55% of "other" infants.

Routine 1999 statistics provided by Plunket's Northern Regional Office show about 30% of South Auckland mothers 'exclusively' breastfeed their babies to age three months, with a further 40% being partially breastfed to varying degrees.[6] Comparing experience at infant age six weeks and three months across Plunket's six Auckland areas suggests a socio-economic bias towards sustained breastfeeding in more affluent areas, though experience across South Auckland's three Plunket areas was relatively homogeneous.

[4] Ministry of Health Media Release: October 1998.

[5] Essex C, Smale P, Geddis D. Breastfeeding rates in New Zealand in the first 6 months and the reasons for stopping. *NZ Med J* 1995, 108: 355-7. Also as reported in *Progress on Health Outcome Targets 1999.* Ministry of Health.

[6] Personal communication, November 1999. Regarding data quality, it is encouraging to observe that both the national cohort study and the routine data collect are consistent in their reports of approximately 30% artificially-fed infants by age three months.

A 1998, N.Z.-wide, non-random survey of 1247 mothers with babies of six months or younger found that 97% of mothers intended to breastfeed prior to birth of their babies.[7] Comments from respondents in this survey would support the notion that there is potential for improving breastfeeding patterns, though targeted strategies should obviously be employed.

Public Health Nursing Service

The Public Health Nursing Service provides a wide range of services to Counties Manukau children. Among these are catch-up immunisations for new school entrants and MMR immunisation for Form 1 (Y7) students. Table 92 presents information on Counties Manukau new school entrants, including the number of assessments completed and immunisations given. The number of catch-up immunisations given does not equate to the number of children who are not fully immunised. This is because parents can choose to have the immunisation done by their general practitioner. Also note that one child can receive more than one vaccine.

Table 92. New school entrants and immunisations, July 1999 to June 2000

New school entrants	7334
Assessments completed	7249
Immunisations given	207

Table 93. Preschool hearing screening, July 1999 to June 2000

	Screened	Failed	Failure rate
Maori	1,840	302	16.4%
Pacific	3,168	401	12.7%
Other	6,929	327	4.7%
Total	11,937	1,030	8.6%

The Public Health Nursing Service also provides a comprehensive hearing and vision screening service. Preschool hearing screening involves using tympanometry on all 3-4 year olds in early childhood facilities. The results of this screening for the year July 1999 to June 2000, by ethnicity, are presented in Table 93.

New school entrants are screened using pure tone audiometry and tympanometry. These results are presented by ethnicity in Table 94. Maori and Pacific children are far more likely to fail hearing screening than their European and other counterparts.

Table 94. New school entrant hearing screening, July 1999 to June 2000

	Screened	Failed	Failure rate
Maori	1,672	394	23.6%
Pacific	1,889	502	26.6%
Other	3,913	514	13.1%
Total	7,474	1,410	18.9%

[7] Adair V *Report to the National Council of Women of New Zealand on the results of the Maternity Services Questionnaire.* Wellington: N.C.W.N.Z, February1999.

Vision screening is performed on all new school entrants and all Form 1 pupils (10-11 year olds). Table 95 shows the results of vision screening for the year July 1999 to June 2000.

Table 95. Vision screening, July 1999 to June 2000

	Screened	Failed	Failure rate
New school entrants	7,028	415	5.9%
Form 1 students	6,557	453	6.9%

Chronic Illness

Kidz First Home Care Nursing Service

The Kidz First Home Care Nursing Service provides community-based follow up for both acute referrals and patients with chronic illnesses. *The Health of Children & Young People in Counties Manukau* contains a more detailed description of the services that are provided.

Follow up for children with acute illnesses includes referrals from Middlemore Hospital Emergency Department, Acute Assessment Unit and the paediatric medical wards. Table 96 presents information about this service for the year from July 1999 to June 2000.

Table 96. Acute referrals, children 0-14 years of age, July 1999 to June 2000

Clients seen	2204
Discharged to GP	2058
Home visits	3287
Planned readmissions	49
Unplanned readmissions	22
Telephone reviews	784

The team also provides nursing services to medically fragile children in the community. There were 9,657 home visits to these children in the year from July 1999 to June 2000.

Oral Health

An oral health survey of 5 and 12 year old children in Counties Manukau was conducted for the Health Funding Authority in June 1998[8]. It was designed to assess children's oral health needs in the region, and provide evidence for the planning of future strategies and services. A random sample totalling 1324 was chosen from schools from Manukau City (which has fluoridated water), the (then) recently unfluoridated Papakura City, and the rural areas around it. The survey examined 5 and 12 year-old children in line with international "marker" ages designated for comparison across time. Around 25% of all Counties Manukau 5 year olds and 20% of 12 year olds were covered in the survey.

The standard way to measure dental health is to count the number of decayed, missing and filled teeth (dmft). One can also describe the percentage of children who have caries-free teeth (ie no decayed, missing and filled teeth). In a flouridated area 66%

[8] McKegg B. *An oral health survey of 5 and 12 year old children in Counties/Manukau*. HFA unpublished report 1998.

might be expected to be caries-free, according to the report. The results of the survey are summarised in Table 97. Apart from European/Pakeha children, all ethnic groups had significantly lower caries-free rates than would be expected. The survey noted that dental services appeared to be concentrating on restorative rather than preventive work, and on permanent teeth rather than deciduous. Pre-school children are not being seen to any great extent by providers. There was a low rate of use of fissure sealants. Maori had particularly high numbers of dmft, around three times the rate of European children, while Pacific and Asian had around twice the rate of Europeans. Even higher rates were seen in rural Maori children receiving unflouridated water (not shown here). The report also notes "Decay levels were surprisingly high in 5 year olds, showing the expected curve from high levels amongst low socio-economic groups, to low levels amongst high socio-economic children". McKegg ibid p10.

Table 97. Oral health status, Counties Manukau 5 and 12 year olds, 1998

	Maori	Pacific	Asian	European	Total
Five year olds					
dmft	3.1	2.6	2.1	1.2	2.0
% caries free	36%	34%	58%	64%	51%
Twelve year olds					
dmft	1.3	1.2	1.1	0.6	1.0
% caries free	40%	44%	45%	44%	43%

Source: McKegg B. Ibid

DMFT rates are also measured by the school dental service, and provide an interesting comparator to the survey (Table 98). For 5 year olds the range is from 44% in Mangere to 65% in Howick, yet Mangere is the best area for 12 year olds.

Table 98. Percentage of children caries-free 1999-2000

Area	5 year olds	12 year olds (permanent teeth only)
Howick	65%	47%
Mangere	44%	50%
Manurewa	55%	42%
Otara	49%	40%
Papakura	59%	48%
Pukekohe	54%	49%

Source: School dental service

The oral health survey noted:

> "when children leave school dental services at 13 years of age and go on to dentist-managed adolescent services, their teeth will be well filled with virtually no decay. However, the price of this lies in the loss of caries-free status. Instead of addressing caries as a preventable problem and using clinical preventive methods to solve it, the main weapons deployed are high-speed drills and amalgam." McKegg ibid p13.

Also worrying in the oral health area is the number of adults getting dental clearances for caries-destroyed teeth. We were unable to source Counties Manukau-wide data, but note that the means-tested "relief of pain" clinic run by dentists at South Auckland Health sees around 5 000 new patients a year – many of whom have total clearances. A further 4 500 new patients a year are seen in regular dental outpatient clinics.

Mental health

Campbell Lodge

Campbell Lodge is the Child and Adolescent Mental Health Service of South Auckland Health. It provides specialist outpatient services to children and youth with severe emotional/behavioural and mental health problems. In the year from July 1999 to June 2000, an average of 352 children and youth were receiving active intervention per month. Table 99 contains information on interventions carried out during this period.

Table 99. Interventions by Campbell Lodge, July 1999 to June 2000

Outpatients (first visit)	969
Outpatients (follow-up)	5,943
Crisis interventions	794
Group sessions	149
Attendants at group sessions	769

The Centre for Youth Health

The Centre for Youth Health, South Auckland Health, has a number of different roles and operates on a local, regional and national basis. The Youth Outreach Team runs family clinics, outreach assessment and consultation services. The centre provides regional specialist adolescent clinics, which are multi-disciplinary and focus on a wide range of adolescent health issues. Also, one of the major activities undertaken by the Centre for Youth Health is the provision of education and training programmes for a number of different audiences. As at 30 September 2000, the specialist adolescent clinic had 60 current clients from South Auckland, while the Youth Outreach Team had 77 clients. During the period from July 1999 to June 2000 the centre saw 1,111 outpatients of whom 405 were attending for the first time. They also undertook 166 case consultations.

Summary

Low birth-weight babies, SIDS (cot death) and peri-natal factors remain important contributors to mortality in children in Counties Manukau. Potentially avoidable hospitalisations in Counties Manukau are particularly high in children under one year of age. This picture is also clearly seen in the section on the Life Cycle. Respiratory infections account for the bulk of this excess. Epilepsy and asthma account for a large percentage of the admissions for non-communicable disease. Addressing socio-economic and ethnic differences in child health status will make the largest health gains for Counties Manukau children.