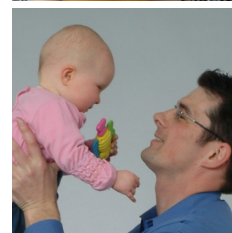


Child Health Strategy



August 2005



MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tairāroa

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Executive Summary

The New Zealand Health Strategy (2000) and the New Zealand Child Health Strategy (1998) describe national policies for the improvement of child health outcomes. This Child Health Strategy for MidCentral District will focus and coordinate local initiatives to promote child health in line with the objectives of the national strategies.

Because of the multiplicity of factors impacting on child health and the diversity of service providers both within and outside of the health sector, coordination, collaboration and planning are critical to achieving child health gains. An overarching framework is needed to focus attention on health outcomes for children in MidCentral District and to facilitate coordination of efforts. This will include identifying opportunities to enhance child health outcomes through the work of other sectors where factors impacting on child health are outside the direct control of the health sector. Within the health sector, the whole child approach involves coordination across the continuum of care. A key concern for this Strategy is achieving the level of coordination and planning in service delivery necessary to improve the health of our children.

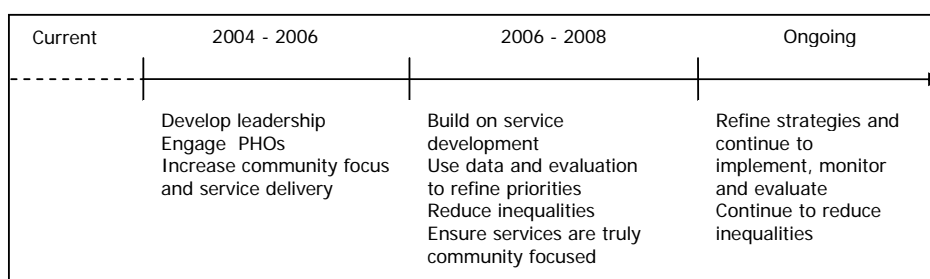
A reference group of local stakeholders was convened to provide input into the MidCentral District Health Board (MidCentral) Child Health Strategy. In addition, the views of a variety of people from across the District were sought. The resulting strategy is broadly based on the framework provided by the Government's 1998 Child Health Strategy.

The priority activity for the first years of this strategy is the development of the frameworks needed to provide coordination and planning of services, information and advice, and to raise the profile of child health across the District. In particular, this strategy recommends the establishment of three major new District roles:

- A Child Health Advisory Committee to provide coordination, planning and advice to MidCentral and the health sector on child health issues and priorities.
- A Child and Youth Health portfolio within MidCentral's Funding Division.
- A Community Paediatric Service to provide support for the primary health care sector and specialist input to planning and population approaches to issues.

In future years the priorities will be increasing community based services, access and family/whanau support. The pathway is summarised in the following figure.

Figure 1. Child Health Strategy Development Pathway



Introduction

1.1 Definition of “Child”

This document defines children as aged between 0 and 14 years in line with the New Zealand Child Health Strategy. A future strategy will focus on the needs of young people aged 15 to 24.

1.2 Why Do We Need a Child Health Strategy?

1.2.1 Alignment with the New Zealand Health Strategy (2000) and other policy

Policy documents looking forward to improvements in child health include the following:

- The New Zealand Health Strategy
- The New Zealand Disability Strategy
- The New Zealand Child Health Strategy
- The New Zealand Primary Health Care Strategy
- He Korowai Oranga: The New Zealand Maori Health Strategy
- MidCentral District Health Board District Strategic Plan
- MidCentral District Health Board District Annual Plan
- MidCentral District Health Board Primary Health Care Strategy
- Achieving Health for All People: Whakatutuki te oranga hauora mo nga tangata katoa: Public Health Strategy
- The Ottawa Charter for Health Promotion
- Te Tiriti o Waitangi
- Well Child Framework.

Access to appropriate child health care services is one of thirteen population health objectives under the New Zealand Health Strategy (Ministry of Health (MoH), 2000). Each of the remaining twelve population health objectives of the NZ Health Strategy addresses an area of health which affects children or where interventions in childhood can confer significant health benefits in later life. These objectives are to reduce smoking; improve nutrition; reduce obesity; increase the level of physical activity; reduce the rate of suicides; minimise harm caused by alcohol and drug use; reduce the incidence and impact of cancer; reduce the incidence and impact of cardiovascular

disease; reduce the incidence and impact of diabetes; improve oral health; reduce violence and improve the status of people with mental illness.

In order to reduce inequalities in health status, the NZ Health Strategy further identifies the need to ensure accessible and appropriate services for people from lower socioeconomic groups and for Maori and Pacific peoples. A significant proportion of New Zealand's children belong to these population groups and their health status is lower than the New Zealand average according to a number of measures (such as infant mortality and infant/child hospitalisation rates) (National Advisory Committee on Health and Disability (NACHD), 1998). In order to address health inequalities, initiatives to improve the health of children should consider services for children in these target populations.

MidCentral's Child Health Strategy will focus and coordinate local initiatives to promote the objectives of the NZ Health Strategy.

1.2.2 Investment in the health of our future adult population

The NZ Child Health Strategy (MoH, 1998a) makes the following observation.

Achieving good child health is vital for later adult health, as both the risk factors for many adult diseases and the opportunities for preventing these diseases arise in childhood. Poor child health and development also have an adverse impact on broader social outcomes, including sexual and reproductive health, mental health, violence, crime and unemployment.

This statement emphasises that an effective Child Health Strategy for MidCentral District will be an investment in the future health and wellbeing of the total population of the District. Improving children's health and health related behaviours may reduce future demand for health services in related areas of adult health. For instance, childhood health and learned behaviours are linked to the incidence and impact of diabetes, cardiovascular disease and oral health, each of which is addressed in a series of local health service plans developed by MidCentral as part of the local Primary Health Care Strategy.

1.2.3 The whole child approach

Key factors influencing health include genetic inheritance, age, gender, ethnicity, income, education, employment, housing, a sense of control over life circumstances and access to health care services (MoH, 2000). For children, socioeconomic risk factors for poor health include prolonged low family income; long term parental unemployment; residence in poor housing/poor neighbourhood; low educational attainment of parents; very young, unsupported parents; high residential mobility; parents' psychiatric illness; marital conflict/family breakdown; and drug and alcohol abuse (MoH, 1998a).

While targeting health care services to disadvantaged groups has been shown to have some effect in reducing socioeconomic inequalities in health, greater improvements in health are possible through measures that directly address socioeconomic determinants of health (NACHD, 1998).

The Ministry of Social Development (date unknown) defines a “whole child approach” to planning and provision of services for children, which addresses a child’s social and environmental circumstances as well as individual issues and incorporates interventions at multiple levels—the individual, family, friends and peers, school and community. Health services may be provided by community agencies, welfare, education, disability support services, Public Health services, Well Child providers, primary health care, hospitals and specialist services, iwi/Maori providers, mental health services, voluntary agencies, and housing agencies.

To maximise child health gains, an overarching framework is needed to focus attention on health outcomes for children in MidCentral District and to facilitate coordination of efforts across sectors and agencies. This will include identifying opportunities to enhance child health outcomes through influence on the work of other sectors where factors impacting on child health are outside the direct control of the health sector. Within the health sector, the whole child approach involves coordination across the continuum of care from disease prevention and health promotion through management of disease and restoration of health to research and monitoring. A key concern for this strategy is achieving the level of coordination and planning in service delivery necessary to improve the health of our children.

1.3 Methodology

Input and opinions were sought from a wide range of stakeholders throughout the District (including children and their families) through face to face interviews, telephone interviews, hui, and meetings between June and September 2004 (see Appendix 1). Statistical information was derived from local, regional and national databases including Statistics New Zealand 2001 Census data and data provided by the NZ Health Information Service and Central Region Technical Advisory Services.

A child health reference group comprising representatives from key stakeholder groups including health, education and social development professionals was established to guide the development of the strategy (see Appendix 2).

MidCentral’s strategy is aligned with the intent of the NZ Child Health Strategy. This approach is expected to provide greater consistency with national initiatives and ease of evaluation than the continuum of care model commonly applied to District Health Board service plans.

Vision For The Future

Children/tamariki and their families/whanau are paramount in our community and we will work together to improve their health outcomes by considering their wairua (spirituality), and physical, mental and social wellbeing

2.1 Principles

The following principles underpin the recommendations of this strategy and should guide all health services for children/tamariki.

- Children/tamariki should have their needs treated as paramount.
- All health services should have a child/tamariki and family/whanau focus (whanau ora), with flexible, child centred and responsive services. All strategies and plans that can impact on child health should include a section addressing their application to child health including consideration of intersectoral links with other agencies.
- All work in child health should use a holistic approach.
- The provision of services should be characterised by collaboration, communication, integration, coordination, innovation and local solutions.
- Services should be community focused and delivered in a way that maximises accessibility.
- Services should address the “continuum of care”, incorporating: health education and health promotion; prevention of disease; surveillance, screening and early diagnosis; maintaining health; restoring health; research; monitoring and evaluation.
- The workforce delivering health services to children/tamariki throughout the community should be appropriately trained and experienced to deliver quality care.

2.2 Objectives

This strategy’s objectives, broadly based on the NZ Child Health Strategy, are as follows:

- Develop leadership and strategic direction in child/tamariki health services
- Improve health outcomes for children/tamariki
- Reduce inequalities in health outcomes for children/tamariki

- **Support families/whanau and communities in providing healthy environments for children/tamariki**
- **Improve collaboration and coordination in planning and provision of health services for children/tamariki**
- **Ensure equitable and timely access to health services for children/tamariki**
- **Develop information collection systems and research links.**

Our Children

3.1 Demographic Profile of MidCentral District

3.1.1 Geography

MidCentral District incorporates five Territorial Local Authorities (TLAs): Manawatu, Palmerston North, Tararua, Horowhenua and part of the Kapiti Coast. In the Kapiti Coast TLA, the Census Area units (CAUs) included within MidCentral District are Otaki, Otaki Forks and Te Horo. These CAUs bring 20 % of the population of Kapiti Coast TLA into MidCentral District.

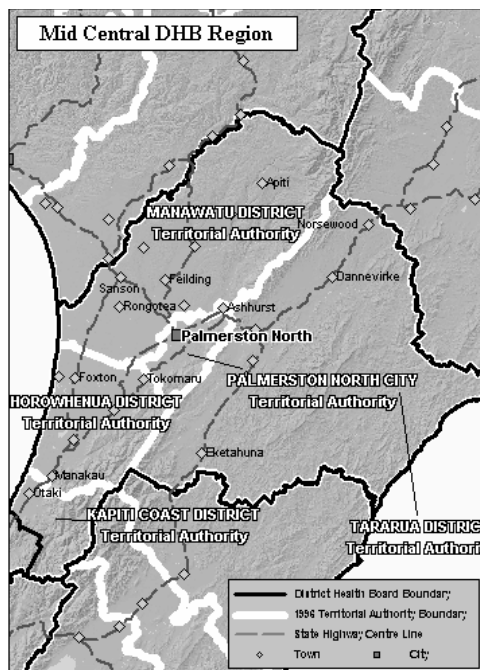


Figure 2. MidCentral District Territorial Local Authority boundaries

MidCentral District has a significant rural population; 28% of people in the District live outside a major urban or secondary urban area. Fifty seven percent of the District's children live outside Palmerston North city which is the main service centre for specialist health care. There are a significant number of children living in areas that are either rural or similar to rural in terms of their access to services. However, the majority of MidCentral District's population lives within 60 minutes of Palmerston North with exceptions being the communities in Otaki and beyond Pahiatua and Dannevirke.

While public transport is generally available in Palmerston North City and Feilding, public transport in the more rural areas is less available making it difficult to use public transport to access health services.

Of the District's 3 708 kilometres of roads, 35% are unsealed. This is lower than the national average of 43% unsealed and is an indicator of the travel time and cost to access services (Public Health Consultancy Wellington School of Medicine and Health Services (PHCWSM), 2001).

3.1.2 Population

In mid 2004, the population of MidCentral District totalled approximately 163 000, comprising 15% Maori, 1.7% Pacific peoples, 3% Asian people, and 80.3% Other (MoH, 2004). MidCentral District's population is evenly distributed across gender with males comprising 49% and females 51% of the population (PHCWSM, 2001). At the time of the 2001 Census there were 35 124 children normally resident in MidCentral District. The proportion of children in the MidCentral District population in 2001 was 22.7%; the proportion of children in the New Zealand population in 2001 was also 22.7% (Statistics NZ, 2001 Census). The population of children in MidCentral District was evenly distributed by gender, as was the national child population.

Ethnic groups in MidCentral District are distributed differently across age groups. Whereas Maori make up 15% of the total population in MidCentral District, 25.9% of all children and 29.0% of children under five years of age, are Maori. Similarly, Pacific peoples comprise 2% of the District's population but 3.1% of children and 3.6% of children under five years of age. (Statistics NZ, 2001 Census). Figure 3 illustrates the age composition of the Maori population compared to the non Maori population.

Figure 3. Age structure by ethnicity, MidCentral 2001

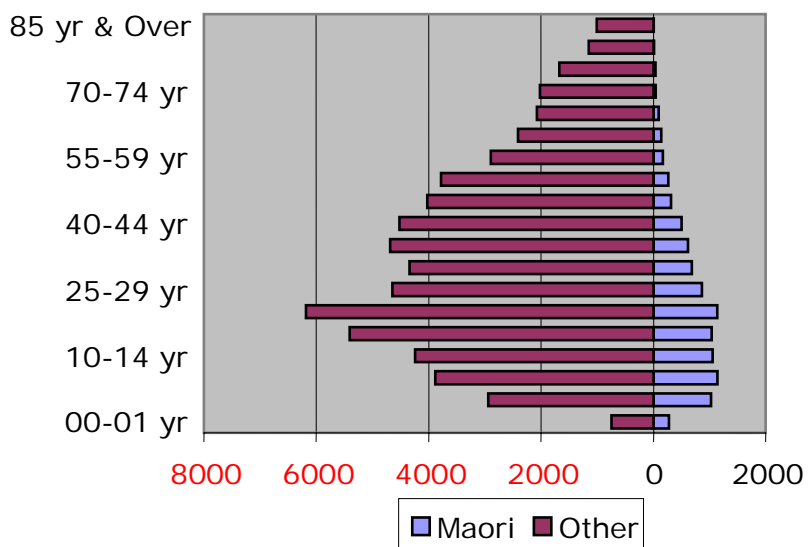


Table 1 below profiles the child population in each of the TLAs in MidCentral District. Just under 44% of children are concentrated in Palmerston North city while approximately 19% are resident in each of Manawatu and Horowhenua districts. Otaki and Horowhenua district demonstrate high proportions of Maori and Pacific children compared to MidCentral District's average.

In the next 10 years the overall population of MidCentral District is expected to increase by 4.5%, whereas the Maori population is predicted to increase by 20% in both total number and proportion in all age groups.

Table 1. Children by territorial local authority, MidCentral (Statistics NZ, 2001 Census)

Territorial Local Authority	Number of Children	Children as a % of total population of TLA	% of children in TLA who are Maori	% of children in TLA who are Pacific peoples	% of children in TLA who are aged under 5 years
Manawatu	6 726	24.5	20.4	1.3	29.6
Horowhenua	6 777	22.7	33.2	4.7	31.0
Palmerston North	15 288	21.2	22.8	3.8	32.5
Tararua	4 584	25.6	27.5	1.1	29.9
Otaki ward	1 749	22.5	42.4	3.3	30.0
All	35 124	22.7	25.9	3.1	31.2

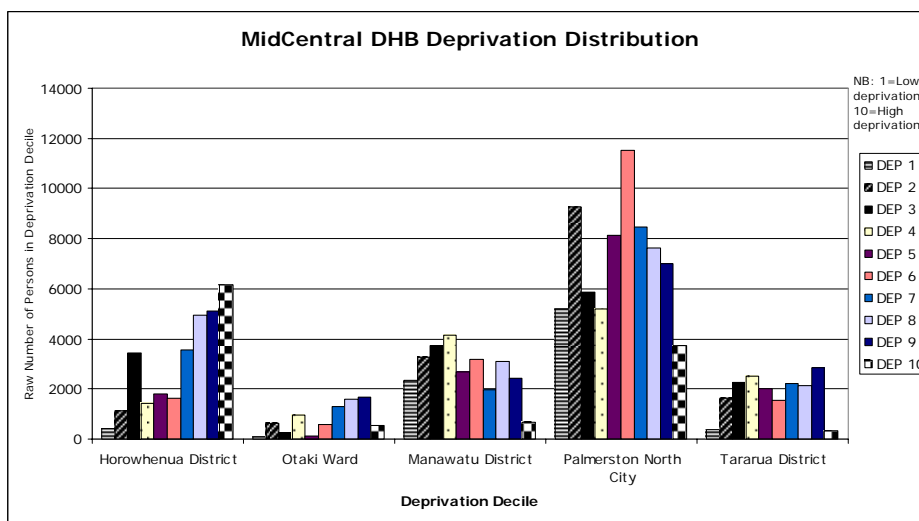
3.1.3 Deprivation

On average, lower socioeconomic status is associated with poorer health status and difficulties in accessing health (and many other services). The NZ Index of Deprivation uses Census data to rate the relative deprivation of small geographical areas compared to the whole of New Zealand. The NZDep scale ranges from least deprived at decile 1 to most deprived at decile 10. It is an indicator of the socioeconomic status of people resident in an area and has been shown to be a good predictor of health status and demand for health services.

Compared to the national pattern of even distribution across all deciles, MidCentral District shows an overall trend of higher than average deprivation, with a higher proportion in deciles 5 through 9, although a relatively low proportion in decile 10 (PHCWSM, 2001). While the NZDep index applies to areas rather than individuals or specific subpopulations, children in MidCentral District have a reasonable likelihood of living in decile 9 and 10 localities.

Figure 4 below shows a breakdown of NZDep01 decile by TLA in MidCentral District. Horowhenua district has the highest deprivation profile of the five TLAs, while Otaki and to a lesser extent Tararua also have significant proportions of their population living in more deprived domiciles. High deprivation in these areas serves to accentuate the barriers to accessing health services caused by their geographical isolation from the main health service centre in Palmerston North.

Figure 4. MidCentral District deprivation 2001

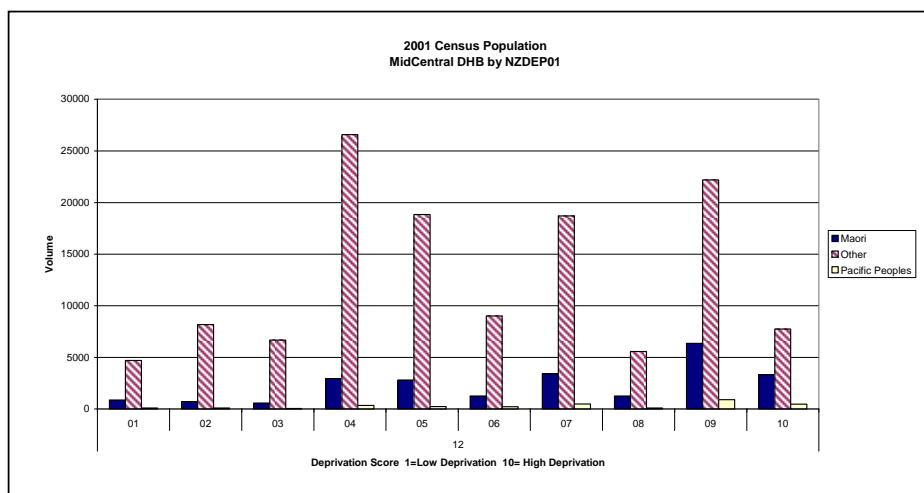


Source: Central Region Technical Advisory Services: District Health Board, Territorial Authority & Ward Deprivation Profiles (2001)

3.1.4 Maori and Pacific peoples

A greater proportion of Maori and Pacific peoples in MidCentral District live in higher deprivation areas than do other ethnicities (see Figure 5 below). For all TLAs in MidCentral District, the median Maori income at the 2001 census was lower than the median income of the total TLA population. The differential was least marked in Horowhenua TLA, where the median income for both Maori and the total population were well below the national median. Outside of Horowhenua TLA, the median income for Maori was at least as high as the national Maori median but well below the national total population median. The Maori unemployment rate in MidCentral District is two or three times higher than the non Maori rate. These indicators are suggestive of socioeconomic disadvantage for Maori in MidCentral District. (Statistics NZ, 2001 Census.)

Figure 5. NZDep01 index by ethnicity, MidCentral 2001



Source: 2001 Census Population Data by DHB

3.2 Child Health in MidCentral District

Available data describing children's health status in New Zealand and MidCentral District is fragmented and incomplete. There is currently no satisfactory way of analysing children's use of community based health services. A partial picture of children's health can be constructed using hospital discharge data, mortality statistics, cancer registrations, notifiable disease reporting and caries prevalence data. A task for the future will be to establish a set of criteria for data collection to facilitate a robust analysis of child health status in the District and to enable the monitoring and evaluation of service delivery.

3.2.1 Mortality

Infant mortality is considered a broad indicator of child health. Child and infant mortality rates in MidCentral District appear similar to the national rates.

The number of child deaths in MidCentral District each year is low. The incidence of Sudden Infant Death Syndrome has declined in the District in line with the national trend. As at 2001, injuries were the leading cause of death in the 1 to 14 age group nationwide. It has been estimated that nearly one third of child injury deaths are readily preventable (PHCWSM, 2001).

Table 2 below documents the number of deaths of children in MidCentral District over the three years 1999 to 2001 (Central Region Technical Advisory Services data).

Table 2. Mortality by paediatric age group and by ethnicity MidCentral District 1999 to 2001

Age	Maori		Pacific		Other		Total	
	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
Under 1	12		2		18		32	
1 to 4	2		1		4		7	
5 to 14	5		0		8		13	
Total	19	0.21%	3	0.28%	30	0.12%	52	0.15%

Note: For the purposes of this table, mortality rates for each ethnic group were calculated using the number of children in that ethnic group in MidCentral District's 2001 population as the denominator

Because the numbers of deaths are low, these figures cannot be used to generate reliable statistics. However, relative to the proportions of Maori and Pacific in MidCentral District's overall child population, child mortality rates for these ethnicities may be higher than for "other" ethnicities and for the District's overall child population. This would be consistent with national historical trends (MoH, 1998b). Infant mortality rates (that is live born children dying within the first year of life) for Maori and Pacific peoples across New Zealand in 2000 were higher than for the rest of the population at 8.5 per 1 000 births (Maori), 10.2 per 1 000 births (Pacific) compared to 4.6 per 1000 births (other) and 6.3 per 1 000 births (total population) (NZ Health Information Service data).

Community care

Most children's health issues are managed in community settings by general practice teams, community health providers and outpatient services provided by Palmerston North Hospital. There is currently no satisfactory way of analysing children's use of community based health services.

Notifiable diseases

Cases of a number of serious diseases must be notified to the Ministry of Health. Table 3 below lists notifiable diseases for which the greatest numbers of cases in children were reported from MidCentral District over the last three years.

Suspected under reporting of notifiable diseases and the low numbers of cases affect the relevance of these statistics. However, Maori represent approximately one quarter of MidCentral District's child population. On this basis, if all children had the same chance of being diagnosed with a certain disease, there should be three cases diagnosed in the non Maori group for every case among Maori.

The ratio of cases of campylobacteriosis and cryptosporidiosis in Maori compared to other ethnicities in MidCentral District was approximately 1:18, suggesting a disproportionately high incidence among non Maori ethnicities. These diseases are transmitted by food borne infection and incidence is affected by food hygiene practices.

The ratio of meningococcal disease cases in Maori compared to non Maori in MidCentral District was nearly 1.5:1, suggesting a higher incidence of this disease among Maori than among other ethnicities in the District. This is consistent with the national trend for Maori to experience meningococcal disease at twice the rate of other New Zealanders. Nationally, Pacific peoples contract meningococcal disease at four times the rate of other New Zealanders (MoH, Date unknown b). A significant risk factor for meningococcal disease is known to be residence in overcrowded accommodation; immunisation under the current programme is expected to provide protection against this disease.

Table 3. Reported cases of notifiable diseases in children MidCentral District, 2001 to 2003 (Central Technical Advisory Services data)

Disease	Ethnic Group			Total
	Maori	Other	Pacific peoples	
Campylobacteriosis	12	218	2	232
Cryptosporidiosis	5	109		114
Gastroenteritis		22		22
Giardiasis	4	38		42
Lead absorption		5		5
Measles	1	11		12
Meningococcal disease	18	11	2	31
Mumps	1	2		3
Pertussis	7	38		45
Rheumatic fever	1	1		2
Rubella		1		1
Salmonellosis	11	77	1	89
Tuberculosis disease		1	3	4
Typhoid			1	1
VTEC/STEC infection	3	4		7
Yersiniosis	2	13		15
Total	65	551	9	625

Immunisation

The Manawatu Independent Practice Association, the largest Independent Practice Association in the District, reports immunisation rates at around 90%. The proportion of children fully immunised at school entry is also reported at 90%. The District immunisation rate is higher than the nationally reported rate, although there may be pockets within the District with poor immunisation rates. There is no available breakdown of District immunisation data by ethnicity. Nationally, Maori and Pacific children and migrant groups tend to have low immunisation coverage and high hospitalisation rates for vaccine preventable diseases (Minister of Health, 2003). The hospitalisation rate for vaccine preventable diseases for the total MidCentral District population appears to be lower than the national rate (PHCWSM, 2001). The National Immunisation Register is expected to facilitate an improvement in immunisation rates.

Hospital Care

Inpatient care

Inpatient care is reported in terms of discharges from hospital rather than admissions, because the reasons for care are summarised at the conclusion of the episode. Over the three years 2001 to 2003 there were 9 323 discharges of children from Palmerston North Hospital. The crude discharge rate for MidCentral District child population for the 2001/02 and 2002/03 financial years was 22 147 per 100 000 children compared to the national rate of 27 187 per 100 000.

Five broad groupings of conditions (Major Diagnostic Categories) accounted for just

over 70% of all discharges from Palmerston North Hospital between 2001 and 2003. These are summarised in Table 4 below.

Table 4. The five most common Major Diagnostic Categories for child discharges from Palmerston North Hospital, 2001 to 2003

Major Diagnostic Categories	Number of discharges	% of total discharges
Ear Nose and Throat	2 324	24.9
Respiratory System	1 338	14.4
Musculoskeletal System	1 172	12.6
Digestive System	1 169	12.5
Nervous System	662	7.1
Total	6 665	66.3

At the next level of detail, 14 groups of ICD10 discharge codes in these five Major Diagnostic Categories each accounted for more than 100 discharges over the three year period 2001-2003 as shown in Table 5 below. Together these codes accounted for half of all discharges during the period.

Although not all data for every discharge are presented in Table 5, injuries and poisoning (S00-T79) appear to be the most common reason for care of children at Palmerston North Hospital. Unintentional injuries to children in MidCentral District are lower than the New Zealand averages for both the under 5 and 5 to 14 age groups. However, the hospitalisation rates for poisonings of children are higher than average (PHCWSM, 2001). Note that small numbers may mean this trend is not statistically significant.

Table 5. The most common ICD10 codes for child discharges by Major Diagnostic Category, Palmerston North Hospital, 2001 to 2003

	Number	% of all discharges
Ear Nose and Throat		
Non suppurative otitis media (H65)	532	5.7%
Chronic diseases of tonsils and adenoids (J35)	498	5.3%
Dental caries (K02)	263	2.8%
Acute upper respiratory infections of multiple and unspecified sites (J06)	191	2.0%
Suppurative and unspecified otitis media (H66)	160	1.7%
Respiratory System		
Asthma (J45-J46)	474	5.1%
Other acute lower respiratory infections (J20-J22)	420	4.5%
Influenza and pneumonia (J10-J18)	226	2.4%
Musculoskeletal System		
Injury, poisoning, and certain other consequences of external causes (S00-T79)	709	7.6%
Digestive System		
Intestinal infectious diseases (A00-A09)	329	3.5%
Symptoms, signs, and abnormal clinical and laboratory findings, not elsewhere classified (R00-R99)	286	3.1%
Hernia (K40-K46)	182	2.0%
Nervous System		
Symptoms, signs, and abnormal clinical and laboratory findings, not elsewhere classified (R00-R99)	250	2.7%
Injury, poisoning, and certain other consequences of external causes (S00-T79)	173	1.9%
	4 693	50.3%

Ambulatory sensitive admissions

Ambulatory sensitive hospital admissions are potentially preventable by primary health care (including outpatients services). The rate of ambulatory sensitive admissions thus provides an indication of access to and the effectiveness of primary health care. For MidCentral District in 2001/2002, discharge rates per 1 000 population for ambulatory sensitive hospitalisations of children were lower than the national average, apart from the rate for Maori children aged between 5 and 14 (MoH, 2003b).

Outpatient services

Each year approximately 4 500 children are seen by specialists at Palmerston North Hospital as “new patients” at outpatient clinics. These attendances are referred to as First Specialist Assessments (FSAs). The total number of attendances by children each year is about 13 500, indicating an average of three attendances for each patient.

Maori and Pacific children account for slightly fewer attendances than their proportion of the population would lead us to expect. The proportion of new child patients who are booked for FSA appointments but do not attend is higher for Maori and Pacific

peoples than for other ethnic groups. These observations are consistent with the hypothesis that Maori and Pacific cultural groups experience barriers to utilisation of health services. Table 6 below summarises the key statistics.

Table 6. Child attendances at Palmerston North Hospital Outpatients Clinics

	Percentage of child population	Percentage of First Specialist Assessments at Palmerston North Hospital	Percentage of New Patient attendances that Do Not Attend
Maori	25.9%	19.9%	17.8%
Pacific	3.1%	2.5%	16.9%
Other	71.0%	77.5%	10.3%

Children make use of a wide variety of outpatient services. Less than 30% of care is provided by the Children’s Clinic. Table 7 below identifies the five outpatient services most commonly used by children at Palmerston North Hospital.

Table 7. Children’s use of Outpatient Services Palmerston North Hospital 2001 to 2003

Outpatient Department	Percentage of total child FSAs
Paediatrics	26.7%
Ear Nose and Throat	20.3%
Dental	13.9%
Orthopaedics	13.8%
Eye Department	9.2%
Other	16.1%

3.2.3 Child health status

Cancer in children

In the three years 1998 to 2000 there were 14 child cancer registrations in MidCentral District, spread evenly across ethnicities. The small number of cases means that analysis is difficult.

The most common cancer category was leukaemia/lymphoma, which accounted for six cases. This reflects national and international trends where leukaemia diagnoses have increased over several decades and nationally account for about 30% of newly diagnosed cases (MoH, 1998b). Known causes of childhood cancer are ionising radiation, genetic factors and cancer chemotherapy drugs. Other environmental factors experienced in childhood may contribute to cancer in childhood or many years later. (MoH, 1998b).

Oral health of children

Dental caries is the most important cause of tooth loss in younger people. Caries rates in New Zealand children decreased steadily from 1978 to the early 1990s. Since then, rates have remained static for 12 year olds, but increased slightly for 6 year olds. Recent school dental service data indicate that, nationally, 53% of five year olds are caries free, while the national mean DMFT (decayed, missing, filled teeth) for five year olds is 1.8. Nationally, at year 8 (12-13 years), 42% of children are caries-free, and the mean DMFT for this group is 1.6. Dental health of children in MidCentral District may be slightly poorer than that of children in New Zealand as a whole (PHCWSM, 2001).

Nationally, regions with the highest percentage of children receiving fluoridated water have lower overall caries rates and lower socioeconomic and ethnic differentials in dental health (MoH, Date unknown a). Another important source of fluoride to inhibit dental caries is fluoridated toothpaste. Factors associated with high prevalence of caries include Maori ethnicity, low socioeconomic status and frequent or high consumption of simple sugars (as provided by sweet drinks and snack foods) (MoH, 1998b). Socioeconomic differences in oral health reduce during school years when children generally have access to free dental care, but these inequalities reemerge in adulthood. This emphasises the impact and importance of access to free oral health services during school years (MoH, date unknown a).

In MidCentral District, the incidence of caries in children appears to follow national trends. Feilding and Palmerston North water supplies are fluoridated; dental health is poorer in the more socioeconomically disadvantaged areas within MidCentral District; and Maori children have poorer dental health than non Maori (PHCWSM, 2001). Oral health initiatives in MidCentral District are addressed under MidCentral's Oral Health Service Plan.

Asthma in children

It is estimated that 44% of all children in New Zealand experience asthma symptoms at some time before age 15. New Zealand's childhood asthma rate exceeds rates in most other OECD countries (MoH, 1998b).

Asthma and upper and lower respiratory infections accounted for 12% of hospital discharges of children at Palmerston North Hospital in the period 2001 to 2003. The asthma admissions rate in MidCentral District is higher than the national average. Nationally, Maori and Pacific peoples have much higher rates of admission for respiratory diseases than the population in general, but in MidCentral District the differential is not marked. This may be due to a number of factors including differences in the incidence of disease or differences in the way health care is provided.

Factors contributing to the onset of asthma include a genetic predisposition to the disease and several important allergens (house dust mites, cats and mould). These allergens may occur more frequently in substandard housing.

Tobacco smoke has been shown to have a significant impact on children’s respiratory health including a contribution to earlier occurrence and more severe symptoms of asthma (MoH, 1998b). Disease incidence in MidCentral District due to inhalation of secondhand smoke can be estimated from the findings of a 2001 study by Woodward and Laugesen (see Table 8 below).

Table 8. Morbidity related to exposure to secondhand smoke (MidCentral Public Health Services, 2004)

Number Per Annum	New Zealand ¹	MidCentral District ²
Hospital admissions for children < 2 years with chest infections	> 500	20
Episodes of childhood asthma	15 000	600
GP consultations for asthma and other respiratory conditions in children	27 000	1 080
Hospital operations to treat glue ear	1 500	60
Cases of meningococcal disease	50	2
Hospital admissions for ischaemic heart disease	1 200	48
Hospital admissions for people suffering from strokes	500	20

¹ Woodward & Laugesen 2001

² Crude estimate based on the proportion of the NZ population residing in MidCentral District, and the prevalence of smoking.

Mental health of children

Little information is available concerning the mental health needs of children or the extent to which children access mental health care. However, studies suggest that about one in four New Zealand children experience some kind of significant mental health problem before adolescence (MoH, 1998b). Inherited, socioeconomic, family, school, and peer group factors are all thought to be important contributors to mental health of children (MoH, 1998b).

Mental health issues for children include:

- Behavioural issues
- Attention Deficit Hyperactivity Disorder (ADHD)
- Depression
- Bipolar Disorder
- Suicide.

New Zealand has one of the highest suicide rates in the developed world and children involved with Child, Youth and Family Service are 15 times more likely to commit suicide than are other New Zealand children. Across all age groups, the mortality rate from suicide in MidCentral District during recent years has been similar to the national rate but the rate of attempted suicides was greater than average (PHCWSM, 2001).

In MidCentral District, children with moderate to severe mental health issues are cared for by the Child, Adolescent and Family Mental Health Service, while those with mild to moderate needs are managed by the primary health care sector. There are limited specialist care options available in the community.

Diabetes in children

During 2004, 73 under 18 year olds throughout MidCentral District were under the care of diabetes services. Care of this group requires integration of diabetes care and clinical management with the complicated physical and emotional growth needs of children, adolescents and their families.

Ninety eight per cent of people with diabetes aged under 18 years in MidCentral District currently have Type 1 diabetes. The causes of Type 1 diabetes include a significant genetic component.

While Type 2 diabetes was historically uncommon before middle age, the overall rate for new Type 2 diabetes cases in children is increasing worldwide and within New Zealand. Type 2 diabetes of children and youth in New Zealand children may account for nearly half of all newly reported diabetes cases in paediatric populations between the ages of 10 and 19. The majority of these cases occur in Maori and Pacific ethnic groups (MoH, 2003a).

Type 2 diabetes is more highly associated with obesity than with any other clinical condition. According to the American Diabetic Association, up to 85% of children with Type 2 diabetes may be overweight or obese. Diet and low levels of physical activity are important factors contributing to obesity (MoH, 1998b).

Rare and unusual conditions of children

In addition to the typical range of health concerns that children commonly encounter, a number of rare and unusual conditions sometimes occur in children. These can impose a significant burden on the child and the child's family, including the likely need to access services from a tertiary provider in Wellington or Auckland. Families caring for children with rare disorders often develop substantial expertise in the management of the child's condition and their knowledge can provide a resource for the community.

Children with disabilities

There are no data on the actual incidence of disability amongst children in MidCentral District. Statistics New Zealand undertook a national household survey of disabilities in 2001, which suggested that 11% of all children had a disability. On this basis it has been estimated that there are 3 895 children with disabilities in MidCentral District. The crude numbers for the District population in 2001 have been estimated and partially adjusted for the age and ethnicity structure of the population. These figures are provided to give some idea of the possible size of the relevant client groups within the District's population but should not be regarded as actual numbers (see Table 9 below).

Table 9. Estimated number of children with disabilities in MidCentral District, 2001

Ethnic Group	Estimated Number
Maori	1 324
Pacific	131
Other	2 439
Total	3 895

The 2001 national survey indicated that disability rates for each age group were similar to those observed in 1996-1997. Within each age group, the disability rates for Maori were higher than the overall national rates. Fifteen percent of Maori children reported a disability compared with 11% of all children. The disability rate for Pacific children was 8%, lower than the national rate for children (11%). Nationally, the prevalence of disability among boys aged 0-14 years (13%) is higher than for girls (9%) although this differential disappears in later age groups. The national study further identified that 41% of disabled children were disabled from birth. Subsequent disease or illness accounted for a further 33% of cases, and accident or injury for 3% (Statistics New Zealand, 2001).

Children with disabilities can have significant health needs in addition to the needs directly associated with their disability. This group has access to a number of specialist services as well as mainstream services. Families caring for children with severe disabilities often develop substantial expertise in the management of the respective disability and their knowledge can provide a resource for the community. It is important that their needs are well met, including particular attention to coordination between the various health professionals that may be involved in their care.

Stakeholder Input

A range of stakeholders provided input during the preparation of this strategy. These included providers, child health experts, parents and consumers. The following sections summarise feedback from stakeholders about child health issues and concerns in our District. No attempt has been made to list the issues in priority order.

Child centred services

Services need to be child centred and to address the needs of family in a holistic manner. This can include consideration of the ways in which services are provided and understanding by service providers of the ways in which the needs of children vary from those of adults.

Access

Getting to services—in terms of distance, time and cost—is an issue for many. This is a particular problem for people living outside of Palmerston North. For these people, having to travel to Palmerston North for health care may cause additional stress.

Parent knowledge

Knowledge about how to care for children was identified by some providers as a child health issue. This includes knowledge of nutrition, dealing with anger and violence in the home, managing health issues such as asthma and hygiene, caring for children in a car, and managing behavioural challenges.

Knowledge of what supports and entitlements are available to families with children and how to access them was also noted as an issue affecting child health.

Specific illness/disease

Specific health priority areas mentioned included oral health, diabetes, asthma, skin infections and the impact of smoking on child health.

Reducing inequalities

There are significant inequalities in health outcomes based on ethnicity. Reducing health inequalities for Maori and Pacific children is important. The data that are available show that Pacific children are over represented in hospital admissions for certain conditions, including respiratory illness. An emphasis on education and access to health services for these populations was proposed.

Violence and abuse

Stakeholders were concerned both about the incidence of direct violence, neglect and abuse of children and about whether the effects of violence in the home on children's health were adequately recognised.

Social supports and isolation

The availability of social supports and isolation (both geographic and social) can impact on coping strategies, identification of at risk situations and also parenting knowledge. Stakeholders reported that geographic isolation meant that children may not attend preschool or appropriate health services.

Coordination and leadership of child health

With so many factors impacting on child health, coordination, collaboration and planning are critical if there is to be improvement in the health of our children. Many commented on the desire to see an overarching framework in the District to provide coordination and to focus attention on health outcomes for children. Although not all things impacting on child health are controllable by the health sector there are often opportunities for promotion of child health through influence on the work of other sectors.

Workforce

Four key workforce requirements are:

- More Maori in mainstream services
- More community based paediatric expertise
- More child specific training for those working with children
- Support structures for those working in isolation and/or rural areas.

Information and data

Much of the currently available data and information concerning child health is questionable in terms of its robustness, currency and comparability. Better information would facilitate coordinated and prioritised planning in the future.

Overview of Current Services

5.1 Services and Supports for Children

A number of agencies provide child health care and support to children and their families in MidCentral District. These are variously funded through the MidCentral District Health Board, Ministry of Health, Ministry of Social Development, Ministry of Education, Territorial Local Authorities, and voluntary organisations.

One area of concern is the fragmentation of services for children. Many groups and support agencies may not be aware of each other's activities. The following is a list of some of the agencies, groups, roles and programmes involved with children's health in MidCentral District, that were identified during the project. This list is not exclusive.

- Maternity service providers
- Primary health care
- Specialist nursing services
- Secondary specialist care services—community, ambulatory care or inpatient
- Tertiary services—local or requiring travel within or outside MidCentral District
- Maori health providers
- Mental health
- Well Child/Tamariki Ora providers
- Education/support for families
- Pharmacy services
- Youth and community groups
- Health camps
- Epidemiology.

The services currently provided within MidCentral District are of a high standard and generally provide good cover across the continuum of care. There is, however, no overall coordination of child health services.

Provision of services and supports is not, and can never be, entirely equitable because of the District's geography. Throughout the District there are small relatively isolated rural communities to which it is harder to deliver care. Children in these communities generally need to travel to access care. Health professionals delivering local care in these communities may undertake multi tasking outside their defined scope of practice in order to meet the needs of individual children and their families.

5.2 Primary Health Organisations

Primary Health Organisations (PHOs) are the vehicle for implementation of the New Zealand Primary Health Care Strategy. PHOs are funded through District Health

Boards and are charged with working with their communities to plan and provide frontline primary health care services care for their enrolled populations.

The four PHOs in MidCentral District are:

- Tararua PHO
- Otaki PHO
- Horowhenua PHO
- Manawatu PHO.

PHOs have a unique opportunity to contribute to: improved information flow; integration of care between primary and secondary healthcare sectors; strengthening of community based services and links; health promotion; and development of local solutions to local health problems. PHOs will have access to a more complete overview of the health of their enrolled populations than has previously been possible. For these reasons, the developing PHO environment will be a key factor in improving child health in MidCentral District. MidCentral is committed to working with PHOs under the local Primary Health Care Strategy to develop primary health care services with the objective of improving the health of the community.

5.3 Funding Stocktake

The profile of child health services might be monitored through the level of spending on child health across all services including those dedicated to child health as well as general health services that children may access. Currently this information is not available.

Some services are directly funded as child health services, but most child health needs are met through mainstream services where child health inputs cannot be separately identified. Even where child services are directly funded there are barriers to analysis such as variation in the definition of a child; children are defined as ages 0 to 18 years for mental health, 0 to 16 years for disability, and 0 to 14 years under the Child Health Strategy.

Note:Health funds child health services via several funding streams. These include national funding from the Ministry of Health (for services such as Plunket, Disability Support Services, child development services and some Public Health Services); regional budgeting through MidCentral District Health Board; and, increasingly, funding directed through Primary Health Organisations.

The Way Forward

6.1 Objectives

This strategy identifies seven objectives broadly based on the national Child Health Strategy:

- Develop leadership and strategic direction in child/tamariki health services
- Improve health outcomes for children/tamariki
- Reduce inequalities in health outcomes for children/tamariki
- Support families/whanau and communities in providing healthy environments for children/tamariki
- Improve collaboration and coordination in planning and provision of health services for children/tamariki
- Ensure equitable and timely access to health services for children/tamariki
- Develop information collection systems and research links.

6.2 Initiatives

In planning to address the health needs of specific communities within MidCentral District, we will seek to learn from the experiences of other district health boards in implementing various initiatives, such as the Tipu Ora programme in Rotorua.

Initiatives to improve the health of children/tamariki in MidCentral District are presented below according to the objective served. Further prioritisation and development of initiatives will be undertaken in the implementation phase of this strategy.

Objective 1	Develop leadership and strategic direction in child/tamariki health services
Initiative 1.	<p>Establish a Child Health Advisory Committee</p> <p>Membership</p> <ul style="list-style-type: none"> • No more than 10 to 12 members who are fully representative of a greater number of child health organisations. <p>Purpose</p> <ul style="list-style-type: none"> • To advise MidCentral District Health Board (MidCentral/DHB) and the health sector on child health issues. <p>Responsibilities</p> <ul style="list-style-type: none"> • Meet regularly (at least four times per annum). • Provide expert advice to the DHB and Primary Health Organisations (PHOs) on child health issues. • Oversee the development and promulgation of district wide guidelines for child health. • Monitor child health status. • Child health mortality review, research, family violence. • Other issues as defined in MidCentral's current strategic priorities. • Keep the Child Health Strategy alive and updated. • Provide regional coordination and promote collaboration. • Provide a base for advocacy for child health issues within the District.
Initiative 2.	<p>Establish a Child and Youth Health portfolio in MidCentral's Funding Division</p> <p>Responsibilities</p> <ul style="list-style-type: none"> • Maintain an overview (and ownership where possible) of child health contracts, funding and outcomes. These will cover disability, personal, mental, public and Maori health services, and primary, secondary and tertiary services. • Work closely with the Child Health Advisory Committee. • Ensure that child health services and child health related contracts meet the intent and direction of this strategy. • Link across various silos in funding such as mental health, disability, primary care, secondary care. • Link with the Ministry of Health for centrally funded child health related contracts—for example child development services, public health. • Help coordinate planning for child health by managing the development of any plans specific to child health (such as those referred to in Objective 5).

Initiative 3.	Through the office of MidCentral's Child and Youth Health Portfolio Manager, ensure all relevant DHB and PHO plans and documents give due consideration to child health issues and wherever possible feature a separate section identifying child health initiatives consistent with the objectives, values and initiatives of this Child Health Strategy.
Initiative 4.	Through the office of MidCentral's Child and Youth Health Portfolio Manager, identify all funding for child health, create a notional budget and use this as a baseline for measuring investment in child health in future years.
Initiative 5.	<p>Establish a Community Paediatric Service for MidCentral District</p> <p>Purpose</p> <ul style="list-style-type: none"> • Provide leadership on child health issues, particularly in clinical guidance and planning. • Provide support to primary health care providers of front line health services for children/tamariki across the District. • Provide specialist clinical services in community settings. • Support population approaches to child health. • Promote and support the professional development of the District's child health workforce. • Link with primary care nursing, iwi/Maori services, Well Child/Tamariki Ora services, disability services, and Public Health services including health protection, promotion, public health nursing and vision and hearing screening services. • Foster coordination and community approaches to child health issues. • Support research and the dissemination of research findings. • Clarify roles and outcome objectives for child health services. • Take cognisance of the needs and priorities of the different PHOs and their enrolled populations and provide opportunities for engagement. <p>The Community Paediatric Service is not intended to duplicate existing services. It is intended to support and enhance current services and coordination of services.</p> <p>Children/tamariki will be given the opportunity to name the Community Paediatric Service.</p>

Objective 2	Improve health outcomes for children/tamariki
Initiative 6.	Fully implement the national Well Child/Tamariki Ora Framework within the District
	Investigate possible improvements in: <ul style="list-style-type: none"> • Referral and transfer between Lead Maternity Carers and Well Child/Tamariki Ora providers. • Links between Well Child/Tamariki Ora and maternity services. • Transfer between Well Child/Tamariki Ora providers. • Networking and joint problem resolution among Well Child/Tamariki Ora providers. • Links with health education and health promotion services. • Identification of at risk children/tamariki and families/whanau. • Links with other home visiting services. • Links with and referral to Fit for School assessment services. • Transition between all services such as Lead Maternity Carers to Well Child/Tamariki Ora providers, Child to Youth, Youth to Adult.
	Ensure that each child/tamariki has a named health care provider who has overall responsibility for his/her health care.
	Ensure (via evaluation and monitoring) that services are achieving the national guidelines.
	Provide resources and workforce to achieve all of the above.
Initiative 7.	Increase the level of expertise in child health by supporting and promoting professional development.
	Invest in training in child health, paediatric and disability issues and service provision.
	Plan forward to 2010 with identified resources and funding.
Initiative 8.	Increase access for children/tamariki to specific health services with a priority being community based health and disability services
	<ul style="list-style-type: none"> • Identify the child health needs of different communities (including rural and isolated communities) in MidCentral District. • Put mechanisms in place to increase services or access to service as appropriate to the needs of each community. • Integrate with other sectors.

Initiative 9.	<p>Reshape service agreements</p> <p>Reshape service agreements to achieve the following:</p> <ul style="list-style-type: none"> • Support for child focused outcomes. • Coordination and collaboration between agencies. • Identification and removal of contractual barriers or disincentives preventing improvements in child health. • Collaboration between hospital based specialist medical and nursing services, PHOs and the Community Paediatric Service for identified child health issues, such as asthma.
Initiative 10.	Implement MidCentral's Oral Health Service Plan as it relates to children's oral health.
Initiative 11.	Implement national Ministry of Health child health guidelines in a planned and coordinated manner using the offices of MidCentral's Child Health Advisory Committee, Community Paediatric Service, and Child and Youth Health Portfolio Manager.
Initiative 12.	Implement the Health and Disability Sector Standards and the related child focused workbook across all required services in the District.
Initiative 13.	Identify local gaps in coverage by national Guidelines and develop and implement local solutions, using the offices of MidCentral's Child Health Advisory Committee, Community Paediatric Service, and the Child and Youth Health Portfolio Manager.
Initiative 14.	Ensure specialist secondary care services for children/tamariki are provided in a child focused environment.

Objective 3	Reduce inequalities in health outcomes for children/tamariki
Initiative 15.	Ensure that MidCentral's Maori primary health care plan gives consideration to child health issues and includes strategies to reduce health inequalities for Maori children.
Initiative 16.	Allocate 15% of any additional investment in child health initiatives to Kaupapa Maori programmes.
Initiative 17.	Include a child health focus in initiatives to develop the capacity and capability of the Maori health workforce as detailed in MidCentral's Maori Health Workforce Strategy.
Initiative 18.	Improve the cultural sensitivity of mainstream health services by providing opportunities for health professionals and support staff to train in tikanga Maori.
Initiative 19.	Provide specific programmes targeted to Maori and Pacific peoples, rural and isolated communities and other high needs, high risk groups to address their top health concerns.
Initiative 20.	Enhance home visiting for at risk families/whanau. Target those who are: <ul style="list-style-type: none"> • vulnerable • young families/whanau • isolated • no support networks • previous or current mental health clients • unsupported single parent families/whanau • transient • have a child/children with disabilities.
Initiative 21.	Develop a system that enables Lead Maternity Carers to flag to Well Child/Tamariki Ora providers those families/whanau likely to need more support into the future.

Objective 4	Support families/whanau and communities in providing healthy environments for children/tamariki
Initiative 22.	Establish a Well Child/Tamariki Ora Health Promotion position.
	Purpose <ul style="list-style-type: none"> • To network with existing health promotion¹ positions. • To develop and implement opportunities to promote child health.
	This position should be located where it is accessible to providers, the community and intersectoral agencies.
Initiative 23.	Improve child health through health education as part of health promotion programmes for families/whanau and caregivers.
Initiative 24.	Reduce the health and psychological effects of child abuse, including sexual abuse.
	Fully implement the Family Violence Intervention Guidelines, linking with providers, especially Well Child/Tamariki Ora providers.
	Link with other child abuse prevention agencies (Child, Youth and Family Services, Police).
	Implement MidCentral Health's child abuse policy within MidCentral Health and make the policy available to other providers as appropriate.
	Develop strong links with PHOs and iwi/Maori providers.
	Prevent and manage child abuse through parenting education and support and home visiting for those at risk.
	Establish the district wide role of Child Protection Coordinator to develop a non accidental injury systems flag across the hospital system and within primary health care services if possible.
	Develop a coordinated service for child sexual abuse, involving primary and secondary services, using DSAC² trained doctors, nurses and social workers.
	Develop district wide guidelines for child sexual abuse.
Initiative 25.	Increase participation by health professionals in Strengthening Families Network meetings.

¹ For a definition of health promotion refer to Appendix 3

² Doctors for Sexual Abuse Care is a professional organisation of doctors from many disciplines whose prime focus is education and support of medical practitioners to ensure maintenance of internationally recognised standards of best practice in the medical and forensic management of sexual assault.

Initiative 26.	Investigate a home based service to support and advocate for children/tamariki and families/whanau, irrespective of age.
Initiative 27.	Investigate options to encourage and support families/whanau to create healthy environments for children/tamariki. (These may be intersectoral initiatives.)
Initiative 28.	Establish and fund a position of Integrated Care Coordinator to work with families/whanau who use multiple services and agencies in primary health care.
Initiative 29.	Invest in parenting programmes targeted to high needs groups, to be run in a variety of settings such as marae, parent clubs, schools. Assist parents to attend these programmes through child care assistance, taking services to parents, transport assistance etc.
Initiative 30.	Implement the Baby Friendly Hospital initiative to foster good parenting skills and breastfeeding.
Initiative 31.	Develop an information strategy for families/whanau. This information strategy might include: <ul style="list-style-type: none"> • Involvement of agencies/organisations such as PHOs, iwi/Maori, Education, Work and Income NZ. • Information about advocacy, rights, entitlements, education, Well Child/Tamariki Ora providers, complaints procedures.
Initiative 32.	Develop and maintain a comprehensive and holistic directory of child health and disability and support services.
Initiative 33.	Provide support for families/whanau of children/tamariki with disabilities, chronic illnesses and significant rare conditions. Develop a range of respite care options for families/whanau of disabled and chronically ill children/tamariki. The options are to: <ul style="list-style-type: none"> • Be linked with the Ministry of Health and Supportlinks • Involve families/whanau as advisors. Investigate ways of improving continence services to disabled children/tamariki and their families/whanau.

Initiative 34.	Continue to invest in smoking cessation education programmes targeting parents, potential parents and children/tamariki.
Initiative 35.	Increase investment in public health programmes for the promotion of healthy eating and physical activity in pre-schools, schools and the general community, targeting children/tamariki.
Initiative 36.	Support the implementation of the Health Promoting Schools initiative.
Initiative 37.	Improve housing options for families/whanau with children/tamariki through collaboration between MidCentral's Community Paediatric Service and Child and Youth Health Portfolio Manager, and Housing New Zealand.

Objective 5	Improve collaboration and coordination in planning and provision of health services for children/tamariki
Initiative 38.	<p>Mandate and support a minimum of two district wide Community Child Health forums per year for providers and stakeholders interested in child health.</p> <p>Purpose of forums:</p> <ul style="list-style-type: none"> • To share information • To network and learn about others' roles • To provide education and training • To contribute to the work of the Child Health Advisory Committee • To promote collaboration • To achieve joint resolution of issues • To expose local teams and professionals to wider views, debate and educational material.
Initiative 39.	Where possible, link with agencies in other sectors such as education, housing, police, justice, councils, welfare and youth aid.
Initiative 40.	<p>Support leadership and collaboration in child health activities.</p> <p>Develop:</p> <ul style="list-style-type: none"> • A communication strategy • An information strategy • A health promotion strategy.

Objective 6	Ensure equitable and timely access to health services for children/tamariki
Initiative 41.	Ensure the needs of children/tamariki regarding access to services are considered and addressed as identified in MidCentral's review of transport services.
Initiative 42.	Investigate which current secondary services can be delivered in a more child centred manner closer to the patient, such as through outreach clinics, mobile services or primary healthcare services, and implement findings.
Initiative 43.	Work with PHOs and general practice teams to address primary health care workforce needs in rural areas.
Initiative 44.	Investigate improved discharge procedures and transfer arrangements between services including referral to tertiary care, incorporating timely information exchange and an improved patient focus.
Initiative 45.	Implement MidCentral's Diabetes Service Plan across paediatric diabetes community nursing and diabetes prevention and management services for children/tamariki. Ensure that a child focus and paediatric specific training feature in the implementation of this strategy.
Initiative 46.	Improve behavioural and mental health outcomes for children/tamariki. <ul style="list-style-type: none"> • Establish coordinated community based child mental health and behavioural assessment and support services. • Implement MidCentral's for Mental Health and Addiction Services Strategy as it applies to child mental health. • Link to adolescent/youth mental health initiatives. • Investigate opportunities for early identification and intervention to prevent development of more severe mental health and behavioural problems. • Address waiting times for children/tamariki to access mental health services.

Initiative 47.	Collaborate with education services, PHOs and Public Health Services to develop/expand health services in schools.
	Use evidence based models.
	Consider multi disciplinary health clinics (social worker, GP, nurse, public health etc) at target schools (high health risk students).
Initiative 48.	Support revision of the hospital outpatient booking system to increase patient friendliness in terms of geographic, demographic and transport considerations, as indicated in MidCentral's transport review.
Initiative 49.	Consider mechanisms by which the DHB can provide transport assistance or pay transport costs other than through retrospective refunds.

Objective 7	Develop information collection systems and research links
Initiative 50.	Establish a group to take ownership of district wide child health data scoping, collection and analysis. This group might function within the Community Paediatric Service or under the Child and Youth Health Portfolio Manager, or both.
Initiative 51.	Identify and utilise health indicators for monitoring child health.
Initiative 52.	Utilise the National Immunisation Register database. Link with any national child health data development initiatives at the earliest stage possible.
Initiative 53.	Participate in external peer review processes to ensure wider debate and input into the development of child health services in MidCentral District.
Initiative 54.	Establish and maintain an information directory in both paper and electronic forms that is accessible to families/whanau and stakeholders.
Initiative 55.	Establish a Child and Youth Mortality Review Committee as one of the portfolios of the Child Health Advisory Committee.

6.3 Funding

MidCentral District Health Board has a nominal budget of \$1.5 million per annum in sustainable new funding for child health initiatives.

Implementation of many of the proposals outlined in this strategy will involve financial investment in new service agreements or extension of existing services. As projects based on this strategy are developed, projected costs will be measured against the annual budget for child health investment. Further prioritisation of initiatives may be necessary.

Some initiatives are expected to demand new or additional investment.

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- Representatives of the Housing Sector (2002) New Zealand Housing Strategy: Reports from stakeholders September 2002
- Standards New Zealand (2004) Health and Disability Sector Standard (Children and Young People) Audit Workbook Draft
- The Paediatric Society of New Zealand (2004) Community Paediatric Service: Notes for Purchasers March 2004
- The Paediatric Society of New Zealand and the Health Funding Authority (Date unknown) Child Abuse Services Report Summary: A National Review of Paediatric Speciality Services

APPENDIX 1: STAKEHOLDERS

The assistance of the following people is acknowledged.

Stakeholder Group	Organisation	Person	Position
Families and Children	Parent to Parent	Group of five families	Parents, caregivers, advocates
	Parent Centre		Coordinators
Tararua District	Te Kohanga Reo		Regional Coordinators
	Public Health Nurses		Nurses
	REAP		Parenting and early childhood educators
Funding Division	MidCentral DHB	Craig Johnston	Senior Portfolio Manager, Primary Health Care
		Gordon Ngai	Finance Manager
		Richard Fong	Disability Support Services Researcher
		Rebecca Hanna	Secondary Services Portfolio Manager
Community Providers	SupportLinks Needs Assessment Agency	Peter Grey	Manager under 65s
	Youth One Stop Shop		Advisory Group
Education	Tararua Schools	Mike Stone	Resource Teacher Learning and Behaviour
		Ruth Usher	Resource Teacher Learning and Behaviour
		Mary Dries	Resource Teacher Learning and Behaviour
		Cathy Boyden	Dental Nurse
		Maureen Anderson	Resource Teacher Learning and Behaviour

Stakeholder Group	Organisation	Person	Position
Primary Health Care	Whakapai Hauora	Pam Newland	Tamariki ora nurse
		Virginia Jones	Manager
	Te Runanga O Raukawa	Aroha Elwood	Health Services Manager
	MIPA	Barbara Bradnock	Immunisation Nurse Coordinator
	MidCentral Health	Jan Guppy	Team Leader Primary, Public Health
		Mary Yiannoutsos	Diabetes Service
	Te Wakahuia	Jackie Foss	Tamariki Ora nurse
	Group Medical Chambers	Matthew Claridge	General Practitioner
Plunket	Keren Lusty	Operations Manager	
Secondary Care	MidCentral Health	Renee Clements	Clinical Nurse Specialist, Child Health
		Robyn Williamson	Team Leader, Child Health
		Gabrielle Scott	Manager, Child Development Unit
		Lindsey Bates	Group Manager Internal Medicine, Women's and Child Health Services
		Giles Bates	Paediatrician
		Jeff Brown	Paediatrician
		Caroline Dodsworth	Team Leader, Women's Health
Welfare	Strengthening Families	Karen Shepherd	Coordinator
Child Health Expertise	Contractor	Veronica Casey	Contractor in Child Health
City Council	Palmerston North City Council		Youth Council

APPENDIX 2: REFERENCE GROUP

Name	Role	Organisation
Aroha Ellwood	Health Services Manager	Te Runanga O Raukawa
Barb Bradnock	Immunisation Nurse Coordinator	MIPA
Caroline Dodsworth	Team Leader, Women's Health	MidCentral Health
Craig Johnston	Senior Portfolio Manager, Primary Health Care	Funding Division, MidCentral DHB
Frances Guthrie	Project Manager	MIPA
Gabrielle Scott	Manager, Child Development Unit	MidCentral Health
Giles Bates	Paediatrician	MidCentral Health
Jan Guppy	Team Leader Primary, Public Health	MidCentral Health
Jeff Brown	Paediatrician	MidCentral Health
Kelsey Smith	Clinical Leader Manawatu	Plunket
Keren Lusty	Operations Manger	Plunket
Mary Yiannoutsos	Diabetes Service	MidCentral Health
Oriana Paewai	Maori Health Advisor	MidCentral Health
Pam Newland	Tamariki Ora nurse	Whakapai Hauora
Peter Grey	Manager: Under 65s	SupportLinks Needs Assessment Agency
Renee Clements	Clinical Nurse Specialist, Child Health	MidCentral Health
Robyn Williamson	Team Leader Child Health	MidCentral Health
Matthew Claridge	General Practitioner	Group Medical Chambers
Denise Lane	Reaccredited Practice Nurse	Highbury Medical Centre

APPENDIX 3: HEALTH PROMOTION

Health promotion is a combination of educational, organisational, economic and political actions designed with community participation to enable individuals, groups and whole communities to increase control over and improve their health through attitudinal, behavioural, social and environmental changes. While health promotion recognises that personal lifestyle factors have an important impact on the health of the individual, it places emphasis on changing the environment to enable optimum conditions for health and for behaviour change.

Health promotion is more than health education. Health education focuses on health information and behaviour change and is just one strategy of health promotion. Health promotion strategies include policy, community action and environmental changes.