Te Ira Tangata
Maori Health Strategy
for Children Aged 0-14 Years

CENTRAL RHA
TE IHONGA HAUORA
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Part 4: External Influences

The Child Health Interface with Other Sectors

- What is the aim of interfacing with other sectors?
- Why is that obligatory?
- How do we decide which sectors to interface with?
- How do we implement this?

The National Scene

- Sector changes
- North Health
- Midland Health
- Southern Regional Health Authority
- Summary

Who are the Tamariki in the Central Region?

- Demographic profile of Maori children
- Socio-economic indicators related to child health
- Major causes of death
- Major health issues for tamariki

Conclusions

Appendix

Bibliography
E tipu e rea, mo nga ra o tou ao
Ko nga ringa ki nga rakau a te pakeha
He oranga mo to tinana
Ko to ngakau, ki nga taonga a o Tipuna
Hei tikitiki mo to mahuna
Ko to wairua ki to atua
Nana nei nga mea katoa.

Grow up o tender flower in this, your generation
Clasp those gifts from the modern world to sustain your body,
Your heart to the treasures of your ancestors as a plume for your head
Your spirit to the Lord above
The maker of all things.

I stand with the dreams and thoughts of mankind growing stronger
in the womb of the mother of the race
I shout with great hopes, I cry and shed tears of joy at the birth of man into this
turbulent world of great expectancy
Hail the awakening sneeze of the child.

I bow my head in gratitude to the Lord above, the maker of all things.
Glory to his name.

To our ancestors who have travelled away on the morning tide, rest in peace.
We are their representatives, the guardians of those treasures left behind.
Background

Health statistics have for many years shown a disparity in tamariki health for Maori. The results of comprehensive studies (Te Puni Kokiri, 1993) have shown that the health of Maori tamariki is subject to the wellbeing of their whanau. Therefore, it is important that whanau wellbeing is not viewed in isolation from the social, cultural and political position of Maori. Consequently, whanau health should be understood as inter-relating with all other major social indices including unemployment, housing, income and educational status (PHC, 1995).

Whanau are comprised of many and varied relationships, some of which may not be contingent upon common whakapapa. It is essential that a tamariki health strategy is developed within the context of the whanau.

Te Ihonga Hauora (Central RHA) has developed this Maori child health strategy, Te Ira Tangata, in response to the following:

- The Crown has an obligation under the Treaty of Waitangi (the terms of which have been articulated through the Crown's related policies on Maori health), to address the special needs of Maori. In recognition of the Crown's obligations and in partnership with Maori, Te Ihonga Hauora is committed to ensuring the specific needs of tamariki are identified and addressed through the purchasing of appropriate and effective services.

- Consultation carried out since 1993 with Maori and other interested health professionals working with Maori whanau has helped identify several areas where provision of services for Maori tamariki and whanau needs to improve, and raised a number of concerns as to the state of health of tamariki and the effect this has on the future of Maoridom.

- Many sources of research indicate that Maori tamariki experience poorer rates of health than non-Maori in most areas.

- Te Ihonga Hauora wishes to develop a comprehensive child health strategy which encompasses a clear strategic direction for the purchasing of appropriate, affordable and accessible health and disability services for tamariki.

- Maori have stressed their desire to play a greater role in the planning, provision and monitoring of health and disability services for tamariki, and Te Ihonga Hauora is required to address the needs and aspirations of Maori in its purchasing arrangements.

This strategy has been developed in response to these issues.
The Purchasing Framework

The structure of this strategy follows the pathway of purchasing – which begins with agreed Government policy directives, to development of policy by the Ministry of Health, through to purchasing strategies by RHAs, and shows where community input has an influence.

This can be seen in the following model:

- **COALITION POLICY**
  - NZ First and National
  - Coalition agreement sets policy directives

- **TE PUNI KOKIRI**
  - input into policy

- **MINISTRY OF HEALTH**
  - develops policy for the health sector

- **REGIONAL HEALTH AUTHORITIES (RHAs)**
  - develops & consults on strategies (eg child health strategy)
  - and purchases services for the community

- **MAORI VIEW**
  - incorporated into policy / strategies and services

- **OTHER SECTORS**
  - services for tamariki

- **HEALTH & DISABILITY PROVIDERS**
  - deliver services under contract to the RHA

- **TAMARIKI & WHANAU**
  - wellbeing

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Te Ira Tangata – Maori Health Strategy for Children Aged 0-14 Years
THE MAORI VIEW OF HEALTH
Maori Concepts of Health

Te Tiriti o Waitangi

The Government acknowledges the Treaty of Waitangi as the founding document of New Zealand, and Maori view the Treaty as the basis upon which all Maori matters should be negotiated between Maori and the Crown. For Maori, the Treaty espouses the right to tino rangatiratanga (self-determination), protection of taonga (treasures, including health) and the right to be treated equitably as New Zealand citizens.

The health sector as the Crown’s agent, must take the principles of the Treaty into account in consulting, purchasing and working with Maori in Maori health development.

Maori concept of health – the four cornerstones

The conventional western model of health has tended to deal only with an emphasis on the physical aspects of health. Maori view health as a taonga (precious treasure, god given gift) and as such take a holistic approach to health. That holistic view encompasses the four cornerstones of health (tapa wha):

• taha wairua (spiritual wellbeing – inner strength)
• taha hinengaro (mental wellbeing – storehouse of knowledge)
• taha tinana (physical wellbeing – body and soul)
• taha whanau (family wellbeing – togetherness, inter-dependence).

For this child health strategy, it will be important to integrate these cornerstones into the direction and the purchasing which occurs, and to ensure that services recognise the spiritual, mental and physical wellbeing of tamariki as well as the whanau.

Maori vision for health – national hui

Te Ara Ahu Whakamua

The Maori Health Decade hui of 1994, Te Ara Ahu Whakamua, set a number of goals for Maori health for the year 2000:

• Maori life expectancy to at least match that of non-Maori
• 100 percent immunisation of Maori children
• SIDS (cot death) rate for Maori to be no greater than that of non-Maori
• Maori in key decision-making roles
• Maori health service model inspiring the world
• positive images of Maori predominant in the media
• everyone wanting to speak Maori.
It is obvious from this that the health of tamariki is particularly important for Maori. Other key themes raised at the hui included views from Maori about how Maori health should be addressed. Some of these are summarised below.

*Tino Rangatiratanga – let Maori determine their own future*

This theme stressed the need for Maori to manage their own resources – Maori want to be included in the policy-making process, they want to deliver services and they want value for tax dollars.

*Strengthen Maori structures – particularly the whanau*

A greater commitment is needed to strengthen whanau and fresh approaches are needed that focus on ordinary Maori households and provide support for Maori women.

*Acknowledge the diversity of Maori*

Policymakers were urged to “get to know” their Maori clients. As Mason Durie reminded the hui, Maori live in “diverse realities” and different strategies are needed if all Maori are to be reached.

*Focus on outcomes*

Maori agreed that greater emphasis needs to be placed on monitoring the effectiveness of programmes and services delivered to Maori. The fact that services exist does not necessarily guarantee an improvement in health.

**Wananga Purongo Korerorero**

This hui held in February 1995 also discussed and agreed on similar issues as the 1994 Decade hui. These are summarised as follows:

*Diversity of Maori*

Maori agreed that the diversity of Maori is an issue and that good research is needed to define exactly who Maori are, where they live and that development of appropriate health outcomes measures is important.

*Place of the Treaty of Waitangi*

It was agreed that tino rangatiratanga is at the core of the Treaty and that health is the basis for Maori development. Issues around equity in funding and resourcing are a critical Treaty issue, as this impacts on the need to gain equitable outcomes for Maori who have greater needs.

*Workforce development*

Maori saw a growing need to train and develop a workforce to sustain Maori development in the future, in all sectors – not just health.

**What Maori in the Central region say about child health**

Te Ihonga Hauora is required to consult its communities on the strategies it produces for purchasing services in the Central region. Consultation since 1993 has found that Maori want this strategy to achieve certain outcomes for tamariki.
Views of the Maori community

Maori stressed that any strategy produced by Te Ihonga Hauora must ensure services are provided "for Maori by Maori", and that it is based on Kaupapa Maori philosophy. Any purchasing arrangements are to have greater participation by iwi and Maori groups at all levels.

Consideration must also be given to health services across the lifespan focusing on health for whanau. Tamariki health must always be addressed within the wider context of whanau health.

Rongoa medicine should be adopted, where at all possible, in any purchasing framework. How this fits within the health system processes needs to be established as soon as possible.

Lack of accessibility and affordability mean that tamariki are not utilising dental services well, and this is a concern for Maori.

Dissemination of information on all health services is not flowing out to Maori in the community in a manner which is appropriate for them to understand.

Maori do not access disability support services well, and the range of available services must be more appropriate, particularly home support and caregiving. It is critical that home caregivers are of appropriate age, gender and preferably Maori.

Views of the Maori health provider

A focus on Well Child comprehensive care is needed, rather than ad hoc servicing. This will address the problems with respect to coordination of services, networking and liaison amongst providers. Maori also believe the maternity and Well Child services should be more closely integrated.

Consideration must also be given to assigning key workers, eg case managers to work with the whanau. At present this does not happen and most clients find themselves not knowing who they need to contact in the first instance.

Providers would like to see an integrated approach to services, including budget-holding and collaboration, but they still wish to maintain their autonomy. There must also be a focus on whanau-centred services.

Collecting accurate information is a priority area for providers as this is part of their own ongoing quality improvement plan, and they have a desire to monitor health status.

Views of the Maori health professional

There must be an acceptance of Maori services by mainstream providers. The services must be accessible, affordable, acceptable and appropriate.

There are concerns that the Maori workforce lacks trained Maori registered nurses, in Well Child services and that this training need must be addressed by Te Ihonga Hauora.
Summary

Maori regard the Treaty as the basis for future development in Maori health, and the principles of the Treaty require the Crown to address Maori health status through Maori health development strategies (providers, services, consultation). Maori want to focus on outcomes and how effective services are.

Maori have stressed that services must address the holistic needs of tamariki and their whanau.
GOVERNMENT POLICY FOR MAORI CHILD HEALTH
Government's Expectations Regarding Child Health

The Coalition agreement

The Coalition Agreement signed by the National and NZ First parties includes a policy statement on health policy. The health policy itself makes reference to Maori health, as well as particular requirements for addressing child health. These are summarised below.

The Government has reaffirmed that the following are still Health Gain Priority Areas which RHAs must address when developing strategies, purchasing and monitoring services:

- Maori health
- child health
- mental health
- environmental health.

Coalition "Maori health" policy

Policy statements within the Coalition agreement which directly affect Maori health are as follows:

a) Development of competent Maori health providers is a critical requirement to support improvements in Maori health status. The following initiatives will be undertaken:

- accelerated development of the professional Maori workforce
- development of administrative and organisational expertise
- Maori leadership within the Ministry of Health with dedicated provider approval, monitoring and evaluation functions
- increased public health resources for Maori provider development both directly to Maori providers and as a service obligation of regional hospital and community services

b) Referred Maori service providers who meet minimum standards as set by the Ministry will be funded to provide a comprehensive range of primary health care, community-based health and disability support services, and identified secondary health and disability services.

To implement these policies, the Government is to allocate $10m per annum for the next three years (starting 1 July 1997) for “Maori health provider development”.

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**Coalition “child health” policy**

Policy statements which refer to child health are as follows:

**Key policy initiative**

Health and disability services for children will be boosted to ensure children receive the care and protection they need for the best possible start in life.

This will be achieved through the following initiatives:

a) providing free doctors’ visits and prescription medicines for children aged five years and under

b) establishing family health teams which will facilitate access for people needing hospital care...and which will be involved in some child health and disability services. They will act as a referral agency for other child health providers monitoring service delivery for at-risk children.

In order to ensure a greatly enhanced focus on health and protection of children, the Ministry of Health will be required to appoint a senior person whose responsibility will be to oversee, coordinate, motivate and lead in the area of health gain priority areas - including child health.

During 1997 all child health programmes currently in operation will be reviewed with a view to building on those that deliver the best health gain and improved family function, thus reducing risk to children.

The Government intends to allocate $30m per year for the next three years for establishing “safety net” child health and disability services. It is also allocating $65m per annum to fund free doctors’ visits and prescriptions for children.

**Coalition “Maori” policy**

The Coalition agreement also has specific policies related to Maori - most of which will be implemented through Te Puni Kokiri under the auspices of the Minister of Maori Affairs office. The underlying principle related to their Maori policy states that:

“The Treaty of Waitangi is fundamental to the relationship between Crown and Maori. Within that broad framework, Government is committed to working with Maori to achieve full and active participation in NZ society. Maori have dynamism and vitality to determine their own social and economic development. Justice and equity are over-riding principles in improving education, health, housing and economic outcomes, and in settling Treaty claims.”

The Coalition intends to establish a Maori Health Promotion Unit which has recently been renamed the Maori Health Commission. The Commission is intended to be a “think tank” to monitor progress, and design initiatives to graft onto mainstream departments. Structure and location of the Commission is yet to be developed, but early indications are that it will be set up by Te Puni Kokiri and funded from Vote: Maori Affairs.
Expectations of the Ministry of Health

The Ministry of Health develops policy to implement Government directives, and it has required a number of areas to be addressed by RHAs through an Accountability Framework. This framework includes requirements for specific Maori Health development, and for specific child health purchasing development. These are summarised below:

Critical factors which RHAs must consider when purchasing for Maori

The Government requires RHAs to:

"...develop, purchase and provide culturally effective purchasing systems and services that meet the special needs, expectations and aspirations of Maori. In this way Maori will have the opportunity to enjoy at least the same level of health as non-Maori”.

The following sets the parameters by which RHAs should strive to achieve the above goal.

1. The RHA will contribute to improve Maori health status in a way that meets the special needs, expectations and aspirations of Maori, and acknowledges and affirms the relationship between Maori as tangata whenua, and the Crown. This includes:

   • recognising and providing for Maori aspirations and structures
   • acknowledging diverse Maori realities by purchasing a range of services
   • ensuring active participation and involvement by Maori
   • reprioritising and shifting resources to address and provide for Maori health.

2. The RHA will purchase effective, affordable and accessible service delivery systems and decision-making systems that have the capacity to respond to the special needs of Maori health. This includes:

   • developing culturally effective practices and procedures
   • increasing participation of Maori at all levels in the health sector by ensuring that Maori have an explicit role to play in planning, purchasing and decision-making processes, and encouraging the same level of participation at the provider level
   • improving the collection, accuracy and management of health information for Maori, and about Maori, in order to provide valid evidence for the development of realistic purchasing criteria and performance measures.
Critical factors which RHAs must consider when purchasing for children

The Government requires RHAs to:

"...focus on improving service coverage, in particular by targeting people in need of additional services, and contribute to improving health status of children and adolescents through cost-effective services."

The following sets the parameters by which RHAs should strive to achieve the above goal.

Increase the purchase of Well Child/Tamariki Ora services for families and whanau with children and adolescents who are at higher risk of adverse health outcomes. Specifically:

- parenting support and skills development
- increase the proportion of children with completed early childhood immunisation by the time they are two years old, to contribute towards 95 percent coverage by the year 2000
- continue to implement population-based management systems, that provide for enrolment and recall for the coordinated delivery of Well Child/Tamariki Ora services to children, and follow-up of those not receiving services
- increase access to early (first trimester) antenatal care, reduce maternal tobacco smoking, and increase breastfeeding, in women who are at higher risk of adverse outcomes
- increase the purchase of public health services that promote the development of healthy and safe schools, early childhood services, and community environments
- increase the purchase of services that prevent tobacco uptake by children and adolescents, and promote smokefree families and whanau.

Summary

It is clear that the Government is seeking to accelerate the process of improving the state of child health, and particularly that of Maori.

There are clear accountabilities for the RHA which require the establishment of child health services which meet a wide range of needs, while targeting at-risk groups and ensuring there is comprehensive coverage.

Finally, the emphasis on recognising the needs and aspirations of Maori highlights the requirements for RHAs to ensure Maori organisations and providers are consulted and incorporated into the range of services which are purchased for tamariki.
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TE IHonga Hauora (Central RHA)
Strategic Direction for
Maori Health
Mission Statement

Our vision is to achieve and demonstrate continuing improvement in health and independence towards the highest sustainable level for the people of the Central region.

Purpose Statement

We will work towards achievement of our vision by:

- identifying and prioritising health and disability services appropriate to community needs
- purchasing accessible and quality services and monitoring performance
- fostering community relationships and improving community understanding of the services available
- providing opportunities for Maori to enjoy the same level of health as that of non-Maori
- promoting innovation and developing provider markets and networks in order to manage changes and risks
- obtaining value for money.

For Maori, good health embraces:

- recognition and demonstration of the principles of Te Tiriti o Waitangi:
  Article 1: Kawanatanga (Governance)
  Article 2: Tino Rangatiratanga (Self-determination)
  Article 3: Oritetanga (Protection of taonga)
- The holistic view of health adopted by Maori – Te taha hinengaro (mental wellbeing), Te taha wairua (spiritual wellbeing), Te taha tinana (physical wellbeing), Te taha whanau (wellbeing of the family).
Strategic direction

Te Ihonga Hauora has two key goals for the next three years:

- to integrate services to add value to the consumer
- to improve public confidence in the health system.

Government policy, community viewpoints and evidence on the status of tamariki health all support the need for better coverage of tamariki health services and more appropriate services to be delivered by Maori.

Te Ihonga Hauora will therefore be seeking to better integrate the range of tamariki health services, and to investigate the methods of further integration of that package of services with other inter-related services such as maternity care.

The goal of improving public confidence is to ensure involvement of the community in the development of our strategies, such as this strategy for tamariki health, and to ensure consumers are informed, given quality choices and are aware of their entitlements and rights.

Approach to purchasing from Maori

The late Dr Eru Pomare referred to the Treaty of Waitangi in relation to the poor standards of Maori health (Pomare 1988):

“For Maori people, the Treaty articulates their status as tangata whenua, guarantees their rights with respect to land, water, forests, fisheries and other treasures and confirms their rights to self-determination.... Implicit within the Treaty were the concepts of equity, partnership and economic and cultural security, all of which contribute importantly to Hauora (spirit of life/health).

In recent years, the concept of Maori health has been emphasised and health authorities are being urged to re-think basic attitudes to health and health care along cultural and ethnic lines. Tribal authorities have been advocated as custodians for Maori health... There have been strong calls too for more effective involvement of Maori people in health planning... Basic to this aim is the recognition that health cannot be imposed on a community, but must develop in an acceptable manner from within in response to problems perceived at a local level.”

Te Ihonga Hauora’s approach embodies the Treaty principles discussed by Eru Pomare, as well as those embodied in the Ottawa Charter – particularly “self-determination” and “involvement of Maori people in health planning with an emphasis on addressing problems at a local level”.

Te Ihonga Hauora has taken a “community development” (grass roots) approach – one which involves communities (rural and urban) in developing and managing their own health services, through organisations which they themselves endorse. The emphasis has been to follow the guide of the people, and not to assume a particular entity is acceptable because of its status or history.
Te Ihonga Hauora chose a direct approach with Maori groups for several reasons:

- the Treaty of Waitangi principles of Kawanatanga (Article 1 – Governance), Tino Rangatiratanga (Article 2 – self-determination, protection of taonga) and Oritetanga (Article 3 – equity) require that iwi self-determination is recognised while still ensuring all Maori have equal rights as citizens of New Zealand. The RHA must recognise iwi organisations while respecting that individual Maori have equal rights to non-Maori.

- it was unclear whether restricting purchasing and relationships to iwi- based groups only would also meet the wider needs of the diverse Maori community, many of whom do not affiliate to iwi.

- the Health and Disability Servies Act 1993 requires the RHA to address the special needs of Maori.

- the 1991 Census revealed that 26 percent of the Central region's Maori population did not know or affiliate to any iwi (and early information from the 1996 data indicates that this is now around 19 percent). This part of the population is likely to be that which has poorer health status, access to and knowledge of services. Mason Durie describes this issue as recognising the “diverse Maori realities”.

- Maori communities in the region indicated through extensive consultation that they wished to have a direct relationship with the RHA – this direct relationship applies equally to iwi groups and others.

- it was considered that to achieve real health improvement for Maori an approach will be needed which targets Maori at the ‘grass roots’ rather than the corporate level. Consultation needs to be carried out in rural and urban areas, in small and large communities, reaching into homes, schools, kohanga reo, marae etc.

- advice and expertise was received from Te Roopu Awhina, the RHA's Maori Advisory Group.

**Maori Aspirations to become Integrated Care Organisations (ICOs)**

Maori have stated that they wish to become ICOs where they can determine their own needs and manage their own services, believing this is their right under the Treaty of Waitangi. However, the philosophy of Maori health which embraces the four cornerstones of health (tapa wha) dictates that a Maori approach to integrated care must underpin all decisions made in relation to achieving this.

The internationally recognised model of general practitioner or clinically-focused budget-holding and integration of services (such as the IPA model) is inconsistent with the whanau-focused Maori approach to health.

This concept dictates that the purchasing arrangement focus on providing health care for families from the cradle to the grave, since Maori view the lifespan approach as the most appropriate way to deliver health care.
Given this fact, the Maori model of integrated care will focus on target population groups in geographic areas, rather than just one type of service. Maori Integrated Care Organisations (MICO) are likely to purchase services for consumers to meet needs from conception through to old age. While they will deliver and target their services for Maori, it is likely many non-Maori will utilise the services also if they find them more appropriate. Many non-Maori are using services today which are provided by Maori, and there are instances where up to 30 percent of the client base of given providers is non-Maori.

MICO will consequently seek to manage and provide a wide range of services to meet whanau needs – including sexual health, maternity, Well Child, mental health, dental health, health education/advice, treatments, rongoa Maori, disability support services, alcohol and drug services. Some of these services may be on-purchased from mainstream providers such as IPAs and CHEs, and independent providers operating in the community.

The model is likely to look like this:

<table>
<thead>
<tr>
<th>Maori Integrated Care Organisation (MICO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHANAU ORA</td>
</tr>
<tr>
<td><em>(representing an enrolled population in a geographic area and managing the financial and clinical decisions)</em></td>
</tr>
</tbody>
</table>

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Services to be integrated

↓

Maternity    Mental health    Primary Care    Health edn    Secondary care
Well Child   Alcohol & drug    Nursing/GP    Prevention    Tertiary care

These services would be bought from Maori and mainstream providers

↓

Services delivered to WHANAU

This model is based on the concept of integrating Well Child services with a whole range of other whanau health services, given that child health is not isolated from the wellbeing of the entire whanau. Te Ihonga Hauora is also keen to integrate services which will result in a better range of services for consumers, and improve access through more appropriate, more effective and better quality services.

Te Ihonga Hauora also realises that while Integrated Care Organisations which manage such a range of services will need to meet certain criteria, so also will providers of services who might contract to an ICO, or who might provide services themselves as an Integrated Care Organisation. Te Ihonga Hauora will therefore work with providers to improve their systems, procedures and skills to ensure quality standards are met.

Te Ihonga Hauora will continue to monitor key services utilised by Maori, and in 1997/98, the focus will be on reviewing services provided by Plunket, IHC and some GP services, to measure their appropriateness and effectiveness for Maori.

Issues about access are continually being assessed and monitored through feedback from consultation hui, individual consumer feedback, and reports from providers.
Our three key strategies for improving Maori health

Te Ihonga Hauora currently has three interlinked strategies for Maori health (in place since 1993):

1. Maori provider development

To ensure our purchasing arrangements enable greater participation by iwi and Maori groups at all levels. Consequently a range of services will be purchased from Maori for Maori.

To take account of the RHA's new strategic objective of integrating services this strategy was amended in December 1996 as follows:

To ensure our purchasing arrangements enable greater participation by iwi and Maori at all levels through progressively delegating purchasing to Maori (Integrated Care Organisations) wherever possible, and purchasing services from Maori providers to enable sustainable growth and development.

Te Ihonga Hauora believes that some Maori groups will establish up to six Maori Integrated Care Organisations (MICOs) in various parts of the region during the next 2-5 years. Smaller providers which choose not to become or belong to MICOs are likely to contract to mainstream Integrated Care Organisations as well as to MICO, however in the meantime they will retain their direct contract relationship with Te Ihonga Hauora.

2. Mainstream improvement

To ensure our purchasing arrangements with mainstream and community providers require them to provide culturally appropriate and effective services for Maori.

3. Access to services

To reduce barriers to accessing (Maori and mainstream) services by providing for mechanisms which ensure equitable access to services by Maori.

These strategies have been actively implemented throughout the Central region since 1993.
Summary of existing health and disability services purchased for tamariki

Well Child care is the delivery of health promotion and disease prevention services in the primary care setting. It includes immunisation, screening, parenting support and skills development, health protection and health promotion services for children (including young adolescents) and their families.

Primary care services

Maori providers

A range of primary health services are purchased by Maori for Maori within the Central region from Maori health providers, such as iwi, Maori Women’s Welfare League, community organisations, and a Tipu Ora programme delivered by a Maori provider. The services that the Maori providers deliver are: immunisation coordination, health education and promotion, Well Child care including screening and surveillance, maternity support, comprehensive whanau ora programmes, assessment, prevention, and support and liaison. Maori providers employ community health workers, midwives, registered nurses and general practitioners to undertake this range of activities.

Royal NZ Plunket Society

Plunket nurses, kaiawhina and community karitane from the Royal NZ Plunket Society provide screening and surveillance Well Child health checks for children under five years of age. Currently Central RHA purchases 100 percent coverage for all children for the routine Well Child checks which comply with the national Well Child/Tamariki Ora schedule. Plunket provides maternal support through home visiting, Well Child and family support units.

Dental therapists

Central RHA purchases universal coverage for every child to free dental care through school-based dental therapists. If the oral condition is beyond the scope of the dental therapist the child is referred to the principal dental officer who is a qualified dental surgeon.

GPs

General practitioners and practice nurses provide general medical and nursing services to children and their families. These services include education, assessment, treatment and referral for specialist care or diagnostic services.

Children’s Health Camps

Services for at-risk primary school students aged 6-12 years are provided by children’s health camps. They offer respite care and behavioural modification programmes as...
appropriate to promote behavioural change. The children’s health camps also offer six week intensive residential programmes or two week specifically focused programmes for children with special needs, for example asthma/diabetes/obesity management. There is an increasing emphasis on intensive parent support programmes which are provided on a residential five day basis.

**Maternity services**

Central RHA purchases services from independent and CHE midwives to provide maternity care to parents antenatally, through childbirth and postnatally, and to supervise mothers and newborn babies up to six weeks of age. Central RHA also purchases a support service for mothers and their pepi from two Maori providers – one in Hastings, the other in Whanganui. These services provide education, liaison, support and advocacy to women in addition to GP or midwifery care.

**Public health services**

**CHE Public Health Units**

Public health units employ public health nurses, hearing and vision testers and community health workers for preschool to adolescent children. The public health units’ work is primarily focused on health promotion/education and monitoring.

**Maori providers - health education and promotion TKR/Kura Kaupapa Maori**

Maori providers throughout the region deliver Well Child health education and promotion programmes and parenting programmes to whanau in a wide range of settings. The primary focus is on education for communities to enable informed healthy lifestyle choices and better access to services for whanau.

**Mental health services**

**CHE-based mental health services for children (Child, Adolescent and Family Services - CAFS)**

These services are provided for at-risk children and young people. The services include specialist assessment, treatment and services for children and adolescents with serious mental disorders, health education and promotion and specialist consultation and liaison services. Day hospital, inpatient treatment services and crisis intervention are also provided.
Secondary/tertiary services

Secondary and tertiary care services are purchased from CHEs, for example paediatric services which include neonatal and inpatient/outpatient medical and surgical services. Routine care is delivered within the Central region, but highly specialised medical and surgical procedures are purchased from hospitals such as the Starship Children’s Children’s Health Service (Auckland) and Green Lane hospital (Auckland). CHE services for children are purchased according to demand.

Specialist services for children with specific conditions

Asthma

Central RHA purchases asthma education services from CHEs through the community health (health promotion) service. Organisations such as the Asthma Society, the Asthma Foundation and CORD (chronic obstructive respiratory disease) support groups work with CHE educators and Maori providers in health education and promotion. The Asthma Society also provides a nebuliser rental system at reasonable charge for families.

Disability support services

A diverse range of disability support services is available for children and their families. These services do not tend to be purchased separately by Central RHA but instead are part of the overall services available for people with disabilities. These services are provided from a range of providers including CHEs, specialists, local and national, and voluntary organisations. The education sector also provides a range of services for children with disabilities primarily through Special Education Service (SES). Central RHA collaborates closely with the education sector.

The broad groupings of services available include:

- assessment services
- service coordination
- family support, including
  - personal care
  - respite care
  - carer support
  - home help
  - home support
  - residential care - particularly for children with an intellectual disability
- social support
- specialised and intensive programmes to meet particular needs
- disability information advocacy services (DIAS).
Summary

There is a wide range of services currently purchased for health of tamariki. However, it is because of this diversity that tamariki often either fall through gaps, and miss out on necessary services, or are being over-serviced with more than one provider delivering services.

The aim will be to ensure the services provide better and more effective coverage; that there is better coordination and collaboration between providers; that choices for whanau continue to be provided and that services are of high quality.
4

EXTERNAL INFLUENCES
The Child Health Interface with Other Sectors

The health sector alone cannot ensure improved health of tamariki without similar development occurring in other sectors that will contribute to whanau wellbeing. The following briefly discusses the interfaces with other sectors.

What is the aim of interfacing with other sectors?

The difference in health between Maori and non-Maori reflects the overall differences in social and economic status, as well as differences in cultural circumstances. In turn this points to a strong correlation between the incidence of ill health and low income, high unemployment, inadequate housing and low educational achievement.

Therefore, initiatives to improve Maori health must link with the actions of other sectors that address social, cultural and economic conditions (Healthy New Zealanders Vol 1 1996). In doing so, we can further exemplify the commitment made by Central RHA to Maori health.

Why is that obligatory?

In Article Two of the Treaty of Waitangi, the Crown agreed to protect the rangatiratanga (chieftainship) of the Maori “over their lands, villages and all their treasures” (Office of Treaty Settlements, 1995: 33). As a result of this, the Crown has developed some basic principles for dealing with the Treaty, one of which is “to act in the best interest of all New Zealanders” (Office of Treaty Settlements, 1995: 6).

Herein lies the obligation to interface with other sectors. In the first place, it is in the best interests of New Zealand that Maori child health improves. The reason for this is that according to the World Health Organization, poor health statistics are indicative of a lower socio-economic grouping, and a large underclass would have serious ramifications for future New Zealanders. Secondly, Maori children are a taonga on the basis that they are the future of Maori themselves, and consequently are protected under Article Two. The best and most effective manner in which to do this is to deal on a cooperative front with the health issues that each sector covers.

How do we decide which sectors to interface with?

Issues like unemployment, housing, income and educational status are dealt with by many different agencies. It is important to identify the impact of those other sectors on health before attempting to coordinate services. Many publications (PHC, 1995) have already identified the effects these areas have on Maori whanau health. Below are the summaries of those findings:

Education:

“The level of education whanau have impacts directly on the earning power of the whanau which bears a direct relationship to the degree of access that whanau have to adequate health care, a balanced healthy diet and adequate housing. The low numbers of Maori achieving in education, limits the degree of access that Maori have to a reasonable income level.” (PHC, 1995)
Employment:
Over 50 percent of unemployed Maori have no formal qualifications, "thereby making it difficult... to take advantage of the areas of job growth in higher skilled occupations... [Therefore] it cannot be assumed that any improvement in the economy will fundamentally change... the imbalances currently being experienced by Maori... given that any labour market improvements are to occur only in those occupations characterised as high skill." (PHC, 1995)

Income:
"There are direct links between unemployment, poor housing, low incomes, and health. There is also a relationship between poverty and access to health care. Many Maori families are not able to pay for medical services or the transport costs to attend health services." (PHC, 1995)

Housing:
"Maori are disadvantaged... because of their lower incomes, higher level of unemployment and larger families, Maori are not able to exercise choice over their housing to the extent that non-Maori do, or experience the same degree of security which home ownership brings." (PHC, 1995)

The issues explained here need to be dealt with by collaborating with other agencies such as the Department of Social Welfare, Police Youth Aid, Department of Corrections, Ministry of Education and Te Puni Kokiri.

How do we implement this?

Healthy New Zealanders 1996 suggests that the way to improve collaboration between sectors is to:

• identify the impact of other sectors on health

• coordinate service delivery between sectors.

The mechanisms for improving collaboration could be achieved at the policy level of such agencies, and in the community where services are delivered.

A working example of this collaboration is the Tu Tangata programme. Tu Tangata is an example of heath promotion services delivered in the educational arena, whereby an iwi provider works in the school environment providing daily support to tamariki. This initiative has been driven by iwi and supported in the education environment, however the resourcing to operate it comes from a number of government agencies. Each agency contributing to the programme has helped establish a unique initiative as well as to satisfy the needs and aspirations of Maori whanau.

This strategy for tamariki supports interagency collaboration through the development of intersectoral policy, and through the funding of current services for tamariki and integrated care which demonstrate linkages with agencies that impact on the health of tamariki.
The National Scene

Sector changes

The Coalition agreement of 1996 stated that New Zealand would have one “funder” and consequently the four RHAs will cease to exist as separate entities. By June 1998, it is expected that there will be one national funder with existing RHA offices becoming regional offices.

Given this move, it is appropriate that consideration be given to assessing the child health strategies of the other RHAs in order to ensure that there is a “fit” between the directions in other parts of New Zealand, and the Maori child health strategy which is being developed for the Central region.

The following summarises the existing child health strategies of the other RHAs, and looks at how these impact and relate to the child health strategy of the Central region.

North Health - Mana Hauora A Rohe O Te Raki

North Health is seeking improvements in Maori tamariki and tai tamariki health by encouraging:

- the involvement of Maori in purchasing health services
- the development of more Maori who provide health care
- improving mainstream services (services available to the general public).

These general strategies will address the need to influence services through:

- greater participation of Maori at all levels of the health system
- realistic resourcing which takes account of Maori health needs
- the use of culturally appropriate practices and procedures in the purchase of health services and the way they are provided.

Their health priorities are:

Children/Tamariki

- Sudden infant death syndrome (SIDS)
- Respiratory diseases
- Injuries
- Glue ear
- Abuse and violence.
Youth/Tai Tamariki

• Injuries – accidental
• Mental illness.

What they intend to do:

North Health will co-purchase with Maori a range of services:

• a comprehensive tai tamariki health service in Northland that meets the needs of tai tamariki, with an emphasis on education and health promotion
• primary health services which promote awareness, provide information about positive parenting skills and practices, which are based on the “Healthy Homes” concept, in urban and rural areas
• crisis support to primary intervention services, which provide tamariki protection and offer crisis support to overburdened families for ‘most at-risk’ Maori tamariki
• specific health services for urban Maori tai tamariki, and purchase and assist in the development of such services
• the high incidence of many illnesses of Maori tai tamariki can be linked to the high use of tobacco by young Maori.

Midland Health

Midland’s goals for child health are as follows:

Key health gain targets

• reduced hospital admission rates for injury, accidents and preventable illness
• increased immunisation rates
• reduced mortality and morbidity rates
• improved quality of life and independence for children with special needs.

Key strategies

The following strategies will assist Midland Health to achieve the goals stated above and as such are key priorities for Midland Health. Midland Health will work to implement specific initiatives within Family Health Services, Support for Independence Services and Hospital and Specialist Services.

Child health policy development and advocacy

Midland will use the principles of the Ottawa Charter to focus the health sector on child health through:

• public policy, and
• advocacy at a Board of Directors level.
Midland Health will work with providers and reallocate resources to providers seeking to implement the following:

• effective intersectoral and intrasectoral collaboration
• developing healthy public policy in their communities
• strengthening Maori health structures
• focusing on effective health promotion strategies
• strengthening families, and
• new provider development and skill transfer.

**Integrated child health services**

Midland Health will work with providers to develop models of integrated service delivery, and reallocate resources to providers who are interested in providing an integrated child health service.

Key steps to achieving an integrated child health service will be:

• prioritise purchasing within child health services, reallocating resources to ensure equal access for equal need
• encourage providers to develop and contract in ways which improve integration of services
• continue to introduce best practice guidelines for Well Child services up to and including the age of 14 years
• providers will develop the ability to register children, using the NHI as a unique identifier
• providers will recruit skilled child health staff and ensure ongoing training
• providers will develop formal relationships across all services which define access and accountabilities for a continuum of child health services
• mainstream providers will develop links with iwi health organisations
• services provided by Maori for Maori will grow
• providers will establish family and whanau support services for children with special needs
• providers will ensure coordination of services for individual family and whanau.

**The role of specialist services**

In order to achieve an integrated child health service, specialist services (including mental health services) will have to refocus their approach to service delivery.

Midland Health will work with providers and reallocate resources to specialist providers seeking to implement the following:

• a regional specialist paediatric service
• all children admitted to hospital are in the care of a paediatric service
• specialist community outreach clinics which ensure children outside the main centres are able to access specialist services close to where they live
• knowledge transfer to community-based child nursing services and GPs (ie the family health team)
• best practice referral protocols, and
• individual service coordination to ensure easy access between specialist care and primary health care.

**Children with disabilities**

Midland Health will work with providers to ensure:
• children with disabilities are linked to an integrated child health team
• individual assessment and service coordination will be provided
• appropriate resources are allocated, and
• the national definition of disability is adopted.

**Southern Regional Health Authority**

The Maori Health Strategic Plan proposes the achievement of five goals:
• to determine the resources needed to address the health needs of Maori, and on this basis allocate funds for the purchase of Maori health initiatives
• to provide opportunities for increased numbers of Maori to be engaged in the provision of services in the southern region
• to ensure that the services purchased by Southern RHA are delivered in a manner that meets the needs of Maori
• to ensure that Southern RHA's internal processes facilitate an increased understanding of Maori health issues so that staff are encouraged and enabled to contribute to an improvement in Maori health
• to continue to consult with Maori on how Southern RHA can assist in enhancing their health and independence.
### Summary

The following table is a summary of the direction taken by the other three RHAs:

<table>
<thead>
<tr>
<th>Goals &amp; Objectives</th>
<th>North Health</th>
<th>Midland Health</th>
<th>Southern Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>• involvement of Maori in purchasing health services (co-purchasing)</td>
<td>• reduction of hospital admission rates for injury, accidents and preventable illness</td>
<td>• increased immunisation rates</td>
<td>• to determine the resources needed to address the health needs of Maori</td>
</tr>
<tr>
<td>• the development of more Maori who provide health care</td>
<td>• increased morbidity and mortality rates</td>
<td>• reduced morbidity and mortality rates</td>
<td>• to provide opportunities for increased numbers of Maori Health providers</td>
</tr>
<tr>
<td>• improving mainstream services (services available to the general public)</td>
<td>• improved quality of life and independence for children with special needs</td>
<td></td>
<td>• to ensure that the services purchased are delivered in a manner that meets the needs of Maori</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• to ensure that Southern RHA's internal processes facilitate an increased understanding of Maori health issues to consult with Maori</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Key Priorities</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• SIDS</td>
<td>• child focused family health network</td>
<td>• SIDS</td>
<td></td>
</tr>
<tr>
<td>• respiratory diseases</td>
<td>• home visiting support person</td>
<td>• hearing</td>
<td></td>
</tr>
<tr>
<td>• injuries - accidental</td>
<td>• children in hospital</td>
<td>• injury</td>
<td></td>
</tr>
<tr>
<td>• glue ear</td>
<td>• children with disabilities</td>
<td>• low birthweights</td>
<td></td>
</tr>
<tr>
<td>• abuse and violence</td>
<td>• mental health issues</td>
<td>• mental illness</td>
<td></td>
</tr>
<tr>
<td>• mental illness</td>
<td>• suicide</td>
<td>• abuse</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Principles</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• greater participation of Maori at all levels</td>
<td>• strengthening Maori health structures</td>
<td>• holistic view of health</td>
<td></td>
</tr>
<tr>
<td>• realistic resourcing, taking into account Maori health needs</td>
<td>• developing links with iwi health organisations</td>
<td>• whanau plays a central role in the wellbeing of Maori individually and collectively</td>
<td></td>
</tr>
<tr>
<td>• culturally appropriate practices and procedures</td>
<td>• services provided by Maori for Maori will grow</td>
<td>• involvement and commitment of the Maori community, existing and potential Maori providers</td>
<td></td>
</tr>
</tbody>
</table>
Who Are the Tamariki in the Central Region?

Demographic profile of Maori children in the Central region

Introduction

This section and the following two sections have been drawn from other RHA publications, that were based on analysis of 1991 Census data. More detailed and up-to-date information will be presented in Central RHA's Maori Health Profile, which will use 1996 Census data and is scheduled for publication toward the end of 1997. The Appendix to this document contains more detailed information.

Central region population

At the 1991 Census there were a total of 856,629 people living in the Central region. 12.5 percent (107,250) of the region’s population were Maori. There were 198,123 children aged 14 years or younger in the Central region, and one-fifth (40,428) of them were Maori.

Sub-regional differences

More than a quarter of Maori children in the Central region live in the Hawkes Bay. Wanganui, Manawatu, Porirua-Kapiti and Hutt also have relatively large numbers of Maori children.

Table 1: Children aged 0-14 years in the Central region

<table>
<thead>
<tr>
<th>Age group</th>
<th>Maori</th>
<th>Non-Maori</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Percent</td>
<td>No.</td>
</tr>
<tr>
<td>0-4</td>
<td>15,339</td>
<td>38</td>
<td>54,987</td>
</tr>
<tr>
<td>5-9</td>
<td>12,714</td>
<td>31</td>
<td>50,736</td>
</tr>
<tr>
<td>10-14</td>
<td>12,375</td>
<td>31</td>
<td>51,972</td>
</tr>
<tr>
<td>0-14</td>
<td>40,428</td>
<td>100</td>
<td>157,695</td>
</tr>
</tbody>
</table>

The demographic profile presented here was constructed primarily from Statistics New Zealand’s Supermap 2 database, drawn from the 1991 Census of Population and Dwellings. Population growth projections have been drawn both from Supermap 2 and from special projections prepared by Statistics New Zealand.

There are several ways of defining the Maori population for statistical purposes. In this report the term Maori usually refers to people who identified themselves as belonging to the New Zealand Maori ethnic group in the 1991 Census, as either their sole ethnic group, or as one of the ethnic groups to which they belonged. This is sometimes referred to as the ‘inclusive’ definition, and is becoming the New Zealand standard for analysis of data relating to Maori.
Table 2: Children aged 0-14 years in sub-region as a proportion of children in the Central region by ethnic group

<table>
<thead>
<tr>
<th>Sub-region</th>
<th>Maori</th>
<th></th>
<th>Non-Maori</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Percent</td>
<td>No.</td>
<td>Percent</td>
<td>No.</td>
<td>Percent</td>
</tr>
<tr>
<td>Hawkes Bay</td>
<td>10,785</td>
<td>27</td>
<td>23,832</td>
<td>15</td>
<td>34,620</td>
<td>17</td>
</tr>
<tr>
<td>Wanganui</td>
<td>5,049</td>
<td>12</td>
<td>12,060</td>
<td>8</td>
<td>17,109</td>
<td>9</td>
</tr>
<tr>
<td>Manawatu</td>
<td>6,843</td>
<td>17</td>
<td>26,994</td>
<td>17</td>
<td>33,837</td>
<td>17</td>
</tr>
<tr>
<td>Porirua-Kapiti</td>
<td>4,725</td>
<td>12</td>
<td>16,257</td>
<td>10</td>
<td>20,982</td>
<td>11</td>
</tr>
<tr>
<td>Hutt</td>
<td>5,814</td>
<td>14</td>
<td>25,134</td>
<td>16</td>
<td>30,948</td>
<td>16</td>
</tr>
<tr>
<td>Wellington</td>
<td>2,904</td>
<td>7</td>
<td>24,531</td>
<td>16</td>
<td>27,435</td>
<td>14</td>
</tr>
<tr>
<td>Wairarapa</td>
<td>2,061</td>
<td>5</td>
<td>7,878</td>
<td>5</td>
<td>9,939</td>
<td>5</td>
</tr>
<tr>
<td>Nelson-Marlborough</td>
<td>2,265</td>
<td>6</td>
<td>20,994</td>
<td>13</td>
<td>23,259</td>
<td>12</td>
</tr>
<tr>
<td>Central region</td>
<td>40,446</td>
<td>100</td>
<td>157,683</td>
<td>100</td>
<td>198,129</td>
<td>100</td>
</tr>
</tbody>
</table>

In different parts of the Central region the proportion of Maori children in the population differs dramatically (see Appendix). For example, more than two-thirds of children in Wairoa are Maori, while less than one in ten children in Tasman are Maori. It should be noted though that even where there are relatively small percentages of Maori children in the population there can still be significant numbers, such as in Wellington where roughly a tenth of the children are Maori, but there are still half as many more Maori children than in Wairoa.

**Expected changes to the child population**

There is a much higher proportion of children in the Maori population (38%) than among non-Maori (21%). In the future the proportion of children in the population can be expected to change in response to the number of women of child-bearing age, and fertility rates\(^3\). While death rates and overseas migration, which affect the adult population, have relatively little impact on the child population, internal migration will have an impact on regional and sub-regional child populations.

The number of children in the Central region is expected to increase at a slow rate until the year 2001 when it is projected to peak at around 209,000. For Maori, numbers of preschoolers are expected to decline from the present time. There will have been a substantial increase in the numbers of 5-9 year-olds since the 1991 Census, which is expected to flow through into the 10-14 year old age group by the year 2001.

See Table A2 in the Appendix.

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\(^3\) That is, the typical number of babies per woman.
**Socio-economic indicators related to child health**

The following social indicators have all been found to be related to poor health status. The way that these factors impinge on health is complex and many people affected by one or several of the indicators listed below still enjoy a reasonable level of good health. They are indicators only, and could lead to the following situations that would have an impact on health:

- unsafe, crowded housing could increase the number of accidents and incidence of communicable disease
- lack of money for transportation and child care could affect access to health services
- inadequate parental supervision resulting in increased risk-taking behaviour in children may result from parents having to work long hours
- low quality food may lead to poor nutrition
- stress may lead to, or exacerbate, a variety of physical and mental health problems
- poor parenting skills may lead to inappropriate treatment of health problems
- financial barriers, real or perceived, may limit access to support services.

**Single parent families**

Families headed by a single parent accounted for slightly more than 40 percent of families among Maori, twice the proportion among non-Maori. This finding was relatively uniform throughout the Central region.

**Income and employment**

Incomes of single parent families tended to be between a third and a half that of two parent families on average. Among Maori, incomes of single parent families are remarkably similar throughout the Central region, possibly indicating a high rate of income support utilisation.

Maori tend to earn considerably less than non-Maori in most sub-regions although the difference is more marked in some sub-regions than others.

In 1991, 10 percent of Maori in the labour force were unemployed, compared to 5 percent for non-Maori. Of those who were employed, 7 percent were professionals, compared with 14 percent for non-Maori. See Table A3 in the Appendices.

**Transport**

Maori people are significantly disadvantaged by poor access to private transport. While this may not affect access to emergency treatment to the same extent, it is likely to greatly affect the extent to which families can access a range of health and disability services.

Between a third and a half of Maori single parent families have no access to a motor vehicle, while almost all non-Maori two parent families have access to a motor vehicle. See Table A4 in the Appendix.


**Education**

Participation in early childhood education programmes provides opportunities for health promotion and early intervention, as well as fostering development. Maori children who attended kohanga reo and kura kaupapa are likely to demonstrate a stronger sense of cultural identity and self-confidence. There was considerable variation in the proportion of Maori children under the age of 5 years who were enrolled in kohanga reo in the Central region. The majority of Maori children do not attend kohanga reo at present, which has implications for programmes based in them.

*Table 3: Kohanga reo and kura kaupapa enrolments in the Central region*, 1996

<table>
<thead>
<tr>
<th>Sub-region</th>
<th>Number of kohanga reo</th>
<th>Total children enrolled</th>
<th>% of Maori &lt; 5 years</th>
<th>No. of kura kaupapa</th>
<th>Total children enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawkes Bay</td>
<td>98</td>
<td>1,636</td>
<td>41</td>
<td>2</td>
<td>33</td>
</tr>
<tr>
<td>Manawatu/Wanganui</td>
<td>78</td>
<td>1,642</td>
<td>36</td>
<td>3</td>
<td>218</td>
</tr>
<tr>
<td>Wellington</td>
<td>51</td>
<td>1,173</td>
<td>19</td>
<td>4</td>
<td>296</td>
</tr>
<tr>
<td>Nelson-Marlborough</td>
<td>10</td>
<td>178</td>
<td>22</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Central region</td>
<td>237</td>
<td>4,629</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

In general, school attendance is compulsory for the 6 to 14 year olds covered by this study. However, it is believed that absenteeism is relatively high among Maori children. This has implications for health, in that it cannot be assumed that all children will be reached through school-based programmes, and those least likely to be reached will be those at greatest risk.

**Major causes of death**

The death rate for Maori infants in the Central region in 1992 was 15 per 1000 live births, almost three times that of infants from ‘other’ ethnic groups. While the death rate for non-Maori infants has dropped dramatically between 1988 and 1992, the rate for Maori has not shown the same decline. Many Maori infant deaths are potentially preventable. See Table A5 in the Appendix.

**Sudden infant death syndrome (SIDS)**

SIDS was the main cause of death for infants in the Central region. While the national rate of SIDS dropped by 62 percent for non-Maori and 15 percent for Maori since 1983, the Maori SIDS rate actually increased by approximately 50 percent in the Central region between 1988 and 1990, although it then dropped slightly in 1991.

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4 Source: Ministry of Education

5 No data was available on this at the time of writing.

6 Excludes Pacific Islands infants.
Maternal smoking, low rates of breastfeeding, and sleeping the baby in the prone position are among the factors contributing to SIDS. While educational programmes designed to reduce SIDS would seem to have had some success with non-Maori, the failure to show a reduction in Maori death rates suggests that new strategies are required for reaching Maori families.

**Major causes of death in preschool children**

Maori death rates in this age group tend to be lower than those for non-Maori, with the exception of pneumonia and influenza. See Table A6 in the Appendix.

**Major causes of death in school-aged children**

The number of Maori deaths in the 5 to 14 year age group within the Central region were too small for meaningful calculation of rates. See Table A7 in the Appendix.

Homicide was the leading cause of death of Maori children aged from 5-14 years in the Central region between 1988 and 1992. Three Maori children aged 5-14 years died by homicide in the period between 1988 and 1992. This gives a death rate from homicide for Maori children in this age group of 3.6 per 100,000 in that period. This compares with four deaths by homicide (a rate of 0.7 per 100,000) for non-Maori children in the same age group in the same period.
Major health issues for tamariki

Overview: infants less than 1 year old

Maori hospitalisation rates are consistently higher than non-Maori rates.

*Figure 2: Central region hospitalisation of children aged under one 1990-1994 (rates)*

Maori infants were hospitalised at higher rates for all causes. The Maori rate for asthma was 10 times greater than that of the ‘Other’ ethnic group. The Maori rate for acute respiratory infections (such as acute bronchitis), and pneumonia and influenza, was more than five times that of the ‘Other’ ethnic group. See Table A8 in the Appendix.

Overview: 1 to 4 year olds

Between 1990 and 1994 rates of hospitalisation for Maori children aged between 1 and 4 years (2,442/10,000) were much higher than for non-Maori (1,505/10,000). Hawkes Bay and Wanganui had higher hospitalisation rates in this age group than other sub-regions.

Maori and Pacific Islands children were most often admitted to hospital for asthma and acute respiratory infections; they were three times as likely to be admitted to hospital with asthma as children from other ethnic groups. The third major cause of admission for Maori and Pacific Islands children was accidental injury or poisoning.

Maori children also had high rates of admission for disorders of the ear (largely otitis media, commonly known as ‘glue ear’).

Maori children had higher rates of admission for all injuries and poisoning than either Pacific Islands or other children. Maori children with fractures were admitted at over twice the rate of children from other ethnic groups. See Tables A8 and A9 in the Appendix.

Overview: 5 to 14 year olds

Maori children had much higher overall rates of hospitalisation than non-Maori.

The rates of hospitalisation for Maori children in this age group are higher than for other children for five out of six major causes. Rates for Maori children are particularly high for asthma and disorders of the ear. See Tables A10 and A11 in the Appendix.
Asthma

It is thought that higher rates of hospitalisation among Maori may be related more to medical management patterns than genetic or socio-economic factors. The Maori Asthma Review Team (1992) suggested that Maori people did not receive the same access to health care and asthma education as non-Maori. Lower levels of access to education about asthma are likely to be associated with failure by parents and other caregivers to recognise early symptoms of an attack. However, there was little difference in the average length of stay for Maori and non-Maori once hospitalised. See Table A12 in the Appendix.

Acute respiratory infections

Rates of admission for acute respiratory infection are relatively high for Maori children, especially in the 1 to 4 year age group. See Table A13 in the Appendix.

Again, many of these admissions might be avoided if earlier diagnosis and treatment were obtained. A reduction in parental smoking would also improve the incidence of respiratory disease in children. Overcrowding may be another factor contributing to the spread of respiratory infection.

Ear disorders

Ear disorders (including glue ear and ear infections) were a major cause of hospitalisation for Maori children. Also, screening tests of school entrants have shown that nationally Maori failure rates are around one and a half times higher than non-Maori. During 1992/93 insertion of grommets were carried out at similar rates for Maori and non-Maori in the Central region, although in the rest of New Zealand rates for Maori have been higher since 1984. Wanganui and the Hawkes Bay have particularly high rates of admission for ear disorders. See Table A14 in the Appendix.

The levels of glue ear among Maori are likely to be affected by low rates of breastfeeding among Maori, together with high incidence of smoking.
The preceding chapters tell us that currently there is a range of services provided by multiple providers, which are not well coordinated and which in many cases do not reach the Maori population, or are inappropriate and fail to be accessed by Maori whanau. Evidence of poor health status amongst Maori tamariki proves that.

A model of the current care arrangements could be presented in pictorial form as follows:

It is obvious from this model that a strategy is needed to better coordinate services to stop tamariki missing out on services and to ensure there is no over-servicing and duplication of services. A system of tracking tamariki as they move through services is needed in order to coordinate their care.

The preferred model of care for Maori would look something like this:
A summary of the findings of this document is given below:

**Comparison of Maori and Crown aspirations**

This analysis also shows where Maori and Crown aspirations align and reveals a close fit between the desires of both Maori and the Crown.

<table>
<thead>
<tr>
<th>What Maori Want</th>
<th>What the Crown Wants</th>
</tr>
</thead>
<tbody>
<tr>
<td>- workforce development, training</td>
<td>- development of Maori providers' expertise</td>
</tr>
<tr>
<td>- whanau wellbeing - not individual focus</td>
<td>- focus on family health (teams)</td>
</tr>
<tr>
<td>- improved access to services</td>
<td>- free doctors' visits/ prescriptions</td>
</tr>
<tr>
<td>- Maori to provide &amp; manage own services</td>
<td>- Maori provider development</td>
</tr>
<tr>
<td>- services must reach Maori households</td>
<td>- purchase more services from Maori</td>
</tr>
<tr>
<td>- immunisation &amp; SIDS high priority</td>
<td>- recognition of Maori structures</td>
</tr>
<tr>
<td>- focus on outcomes</td>
<td>- recognition of Maori aspirations</td>
</tr>
<tr>
<td>- collect accurate information about Maori</td>
<td>- active participation &amp; involvement of Maori</td>
</tr>
<tr>
<td></td>
<td>- recognise the diverse realities of Maori</td>
</tr>
<tr>
<td></td>
<td>- immunisation &amp; SIDS high priority</td>
</tr>
<tr>
<td></td>
<td>- focus on outcomes</td>
</tr>
<tr>
<td></td>
<td>- improve collection and accuracy of information</td>
</tr>
</tbody>
</table>

The Crown has specified that it expects RHAs to:

- increase purchase of Well Child services, particularly for those at risk
- purchase more services focused on parenting
- promote breastfeeding, immunisation and smokefree
- ensure population-based enrolment and follow-up to track children
- purchase more antenatal services.

**Child health strategies of other RHAs**

The child health strategies developed by other RHAs also emphasise:

- coordination and integration of services
- registration of tamariki (and collection of NHI) to monitor utilisation and ensure tamariki accessing services
- services aimed at whanau
- acknowledgement of the role which specialist services play and the need for these services to be part of the “package” of services for tamariki
- focus on parenting, health promotion and education.
What the evidence revealed

The evidence highlighted in this report reveals that:

• there are over 40,000 Maori tamariki in the Central region, about one-third of whom attend kohanga reo

• approximately 38 percent of Maori tamariki are aged 0-4 years

• the greatest numbers of Maori tamariki reside in Hawkes Bay (with higher concentrations in Wairoa), Manawatu and Hutt Valley

• the four key health issues for Maori tamariki are asthma/respiratory conditions, hearing disorders (glue ear), SIDS (cot death) and injuries.

Important future considerations for purchase of services for tamariki

Strategies to address the aspirations of Maori and the Crown, and to address health status of tamariki will need to include:

• a focus on asthma/CORD, SIDS, injury prevention and Well Child services

• coordinated and comprehensive health care coverage for Maori tamariki including those in kohanga reo

• a focus on health education and promotion services in the areas of breastfeeding, smokefree (maternal & parental smoking)

• a focus on services targeted at whanau at risk

• trained Well Child providers

• ongoing development, integration and improvement of services for tamariki and whanau through monitoring and setting of appropriate quality standards

• an increase in the number and range of trained Maori Well Child providers

• more parenting programmes for whanau at risk

• ensuring information is collected accurately, managed in a coordinated way, monitored and includes NHI.

Te Ihonga Hauora will consult further with Maori and other health providers, to develop further details and implementation plans, and to plan a pathway of development for the successful integration of Well Child services for tamariki, with other services for Maori whanau.

In the meantime Te Ihonga Hauora is interested in feedback from Maori and others, as to the general direction being proposed.
# Table 1A: Distribution of children aged 0-14 years throughout the Central region

<table>
<thead>
<tr>
<th>Sub-region</th>
<th>Maori</th>
<th>Non-Maori</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>No.</td>
<td>Percent</td>
</tr>
<tr>
<td>Wairoa District</td>
<td>1,929</td>
<td>1,080</td>
<td>3,009</td>
</tr>
<tr>
<td>Hastings District</td>
<td>5,217</td>
<td>11,205</td>
<td>16,422</td>
</tr>
<tr>
<td>Napier City</td>
<td>2,655</td>
<td>8,838</td>
<td>11,493</td>
</tr>
<tr>
<td>Central Hawkes Bay District</td>
<td>885</td>
<td>2,604</td>
<td>3,489</td>
</tr>
<tr>
<td>Chatham Islands County</td>
<td>99</td>
<td>108</td>
<td>207</td>
</tr>
<tr>
<td>Hawkes Bay</td>
<td>10,785</td>
<td>23,832</td>
<td>34,620</td>
</tr>
<tr>
<td>Waimarino/Waiouru</td>
<td>789</td>
<td>1,029</td>
<td>1,818</td>
</tr>
<tr>
<td>Wanganui District</td>
<td>2,892</td>
<td>8,076</td>
<td>10,968</td>
</tr>
<tr>
<td>Rangitikei District</td>
<td>1,359</td>
<td>2,961</td>
<td>4,320</td>
</tr>
<tr>
<td>Wanganui</td>
<td>5,049</td>
<td>12,060</td>
<td>17,109</td>
</tr>
<tr>
<td>Manawatu District</td>
<td>1,068</td>
<td>5,901</td>
<td>6,969</td>
</tr>
<tr>
<td>Palmerston North City</td>
<td>2,649</td>
<td>11,955</td>
<td>14,604</td>
</tr>
<tr>
<td>Tararua District</td>
<td>1,191</td>
<td>4,188</td>
<td>5,379</td>
</tr>
<tr>
<td>Horowhenua District</td>
<td>1,935</td>
<td>4,950</td>
<td>6,885</td>
</tr>
<tr>
<td>Manawatu</td>
<td>6,843</td>
<td>26,994</td>
<td>33,837</td>
</tr>
<tr>
<td>Kapiti Coast District</td>
<td>1,203</td>
<td>6,360</td>
<td>7,563</td>
</tr>
<tr>
<td>Porirua City</td>
<td>3,522</td>
<td>9,897</td>
<td>13,419</td>
</tr>
<tr>
<td>Porirua-Kapiti</td>
<td>4,725</td>
<td>16,257</td>
<td>20,982</td>
</tr>
<tr>
<td>Upper Hutt City</td>
<td>1,440</td>
<td>7,200</td>
<td>8,640</td>
</tr>
<tr>
<td>Lower Hutt City</td>
<td>4,374</td>
<td>17,934</td>
<td>22,308</td>
</tr>
<tr>
<td>Hutt Valley</td>
<td>5,814</td>
<td>25,134</td>
<td>30,948</td>
</tr>
<tr>
<td>Wellington</td>
<td>2,904</td>
<td>24,531</td>
<td>27,435</td>
</tr>
<tr>
<td>Masterton District</td>
<td>1,353</td>
<td>4,440</td>
<td>5,793</td>
</tr>
<tr>
<td>Carterton District</td>
<td>255</td>
<td>1,551</td>
<td>1,806</td>
</tr>
<tr>
<td>South Wairarapa District</td>
<td>453</td>
<td>1,887</td>
<td>2,340</td>
</tr>
<tr>
<td>Wairarapa</td>
<td>2,061</td>
<td>7,878</td>
<td>9,939</td>
</tr>
<tr>
<td>Tasman District</td>
<td>585</td>
<td>7,362</td>
<td>7,947</td>
</tr>
<tr>
<td>Nelson City</td>
<td>600</td>
<td>6,798</td>
<td>7,398</td>
</tr>
<tr>
<td>Marlborough District</td>
<td>1,080</td>
<td>6,834</td>
<td>7,914</td>
</tr>
<tr>
<td>Nelson-Marlborough District</td>
<td>2,265</td>
<td>20,994</td>
<td>23,259</td>
</tr>
<tr>
<td>Central region</td>
<td>40,446</td>
<td>157,683</td>
<td>198,129</td>
</tr>
<tr>
<td>New Zealand</td>
<td>163,044</td>
<td>620,598</td>
<td>783,642</td>
</tr>
</tbody>
</table>
### Table A2: Estimated changes to the number of Maori children in the Central region

<table>
<thead>
<tr>
<th>Year</th>
<th>0-4 years</th>
<th>5-9 years</th>
<th>10-14 years</th>
<th>Total 0-14 years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>% change</td>
<td>No.</td>
<td>% change</td>
</tr>
<tr>
<td>1991</td>
<td>15,384</td>
<td></td>
<td>12,741</td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>15,960</td>
<td>+4</td>
<td>14,180</td>
<td>+11</td>
</tr>
<tr>
<td>2001</td>
<td>15,370</td>
<td>-4</td>
<td>14,880</td>
<td>+5</td>
</tr>
<tr>
<td>2006</td>
<td>14,370</td>
<td>-7</td>
<td>14,320</td>
<td>-4</td>
</tr>
</tbody>
</table>

### Table A3: Median income for families with dependent children aged between 0 and 14 years

<table>
<thead>
<tr>
<th>Sub-region</th>
<th>Single Parent</th>
<th>Two Parent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% difference</td>
<td>% difference</td>
</tr>
<tr>
<td></td>
<td>Maori</td>
<td>European</td>
</tr>
<tr>
<td>Hawkes Bay</td>
<td>87</td>
<td>12,262</td>
</tr>
<tr>
<td>Wanganui</td>
<td>89</td>
<td>12,081</td>
</tr>
<tr>
<td>Manawatu</td>
<td>89</td>
<td>12,232</td>
</tr>
<tr>
<td>Porirua-Kapiti</td>
<td>88</td>
<td>12,392</td>
</tr>
<tr>
<td>Hutt</td>
<td>88</td>
<td>12,670</td>
</tr>
<tr>
<td>Wellington</td>
<td>70</td>
<td>12,955</td>
</tr>
<tr>
<td>Wairarapa</td>
<td>88</td>
<td>12,160</td>
</tr>
<tr>
<td>Nelson-Marlb</td>
<td>88</td>
<td>12,094</td>
</tr>
</tbody>
</table>

### Table A4: Percentage of families with dependent children aged between 0 and 14 years, who have no access to a motor vehicle

<table>
<thead>
<tr>
<th>Sub-region</th>
<th>Single Parent</th>
<th>Two Parent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maori</td>
<td>European</td>
</tr>
<tr>
<td>Hawkes Bay</td>
<td>34</td>
<td>19</td>
</tr>
<tr>
<td>Wanganui</td>
<td>39</td>
<td>23</td>
</tr>
<tr>
<td>Manawatu</td>
<td>36</td>
<td>21</td>
</tr>
<tr>
<td>Porirua-Kapiti</td>
<td>45</td>
<td>24</td>
</tr>
<tr>
<td>Hutt</td>
<td>44</td>
<td>25</td>
</tr>
<tr>
<td>Wellington</td>
<td>47</td>
<td>20</td>
</tr>
<tr>
<td>Wairarapa</td>
<td>44</td>
<td>26</td>
</tr>
<tr>
<td>Nelson-Marlb</td>
<td>34</td>
<td>16</td>
</tr>
</tbody>
</table>

7 Based on the assumption of medium mortality, fertility and migration.

8 The median is an average calculated as the point where half of the population fall below, and half fall above.
### Table A5: Major causes of death of infants less than 1 year old in the Central region for 1988 to 1992

<table>
<thead>
<tr>
<th>Cause</th>
<th>Maori no</th>
<th>rate</th>
<th>non-Maori no</th>
<th>rate</th>
<th>Total no</th>
<th>rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIDS</td>
<td>12.6</td>
<td>7.8</td>
<td>32.8</td>
<td>2.5</td>
<td>45.4</td>
<td>3.0</td>
</tr>
<tr>
<td>Perinatal conditions</td>
<td>2.6</td>
<td>1.6</td>
<td>35.4</td>
<td>2.7</td>
<td>38.0</td>
<td>2.6</td>
</tr>
<tr>
<td>Birth defects</td>
<td>4.6</td>
<td>2.8</td>
<td>30.6</td>
<td>2.3</td>
<td>35.2</td>
<td>2.4</td>
</tr>
<tr>
<td>Pneumonia and influenza</td>
<td>1.2</td>
<td>0.7</td>
<td>3.6</td>
<td>0.3</td>
<td>4.8</td>
<td>0.3</td>
</tr>
<tr>
<td>Acute respiratory infections</td>
<td>1.0</td>
<td>0.6</td>
<td>1.4</td>
<td>0.1</td>
<td>2.4</td>
<td>0.2</td>
</tr>
<tr>
<td>Infectious diseases</td>
<td>0.2</td>
<td>0.1</td>
<td>2.2</td>
<td>0.2</td>
<td>2.4</td>
<td>0.2</td>
</tr>
<tr>
<td><strong>All causes</strong></td>
<td>25.0</td>
<td>15.4</td>
<td>118.0</td>
<td>8.9</td>
<td>143.0</td>
<td>9.6</td>
</tr>
</tbody>
</table>

### Table A6: Major causes of death of children aged 1 to 4 years

<table>
<thead>
<tr>
<th>Cause</th>
<th>Maori no</th>
<th>rate</th>
<th>non-Maori no</th>
<th>rate</th>
<th>Total no</th>
<th>rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>All accidents, excluding motor vehicle crashes</td>
<td>0.8</td>
<td>10.4</td>
<td>7</td>
<td>14.7</td>
<td>7.8</td>
<td>14.2</td>
</tr>
<tr>
<td>Birth defects</td>
<td>0.4</td>
<td>5.1</td>
<td>4.8</td>
<td>10.1</td>
<td>5.2</td>
<td>9.4</td>
</tr>
<tr>
<td>Cancers</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>8.4</td>
<td>4</td>
<td>7.2</td>
</tr>
<tr>
<td>Motor vehicle crashes</td>
<td>0.2</td>
<td>2.6</td>
<td>3.6</td>
<td>7.6</td>
<td>3.8</td>
<td>6.9</td>
</tr>
<tr>
<td>Other heart disease</td>
<td>0</td>
<td>0</td>
<td>1.4</td>
<td>2.9</td>
<td>1.4</td>
<td>2.5</td>
</tr>
<tr>
<td>Hereditary &amp; degenerative diseases of CNS</td>
<td>0</td>
<td>0</td>
<td>1.2</td>
<td>2.5</td>
<td>1.2</td>
<td>2.2</td>
</tr>
<tr>
<td>Pneumonia &amp; influenza</td>
<td>0.2</td>
<td>2.6</td>
<td>0.8</td>
<td>1.7</td>
<td>1</td>
<td>1.8</td>
</tr>
<tr>
<td>Homicide &amp; injury purposely inflicted by other persons</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2.1</td>
<td>1</td>
<td>1.8</td>
</tr>
<tr>
<td><strong>All causes</strong></td>
<td>1.8</td>
<td>23.2</td>
<td>28.8</td>
<td>60.5</td>
<td>30.6</td>
<td>55.3</td>
</tr>
</tbody>
</table>

---

9 Average number of deaths per year 1988-1992

10 Age-specific rates per 100,000 population

11 All causes includes causes other than those identified in the table, and is therefore not the sum of the column

12 All accidents consists of aggregated data including 7 categories of accidental injury & poisoning (accidents excluding motor vehicle and pedal cycle crashes; medicinal substances and biologicals; accidental poisoning by other solid or liquid substances, gases and vapours; accidental falls; accidents caused by fire and flames; accidents caused by submersion, suffocation and foreign bodies; other accidents; and late effects of accidental injury.)
Table A7: Major causes of death of children aged 5 to 14 years

<table>
<thead>
<tr>
<th>Cause</th>
<th>Maori</th>
<th></th>
<th>non-Maori</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>no</td>
<td>rate</td>
<td>no</td>
<td>rate</td>
<td>no</td>
<td>rate</td>
</tr>
<tr>
<td>Motor vehicle crashes</td>
<td>0.4</td>
<td>2.4</td>
<td>6.8</td>
<td>6.1</td>
<td>7.2</td>
<td>5.6</td>
</tr>
<tr>
<td>Cancers</td>
<td>0.2</td>
<td>1.2</td>
<td>4.4</td>
<td>4</td>
<td>4.6</td>
<td>3.6</td>
</tr>
<tr>
<td>Drowning</td>
<td>0</td>
<td>0</td>
<td>2.6</td>
<td>2.3</td>
<td>2.6</td>
<td>2</td>
</tr>
<tr>
<td>Birth defects</td>
<td>0.2</td>
<td>2.4</td>
<td>2.2</td>
<td>2</td>
<td>2.6</td>
<td>2</td>
</tr>
<tr>
<td>All causes</td>
<td>2.8</td>
<td>16.9</td>
<td>30.8</td>
<td>27.7</td>
<td>33.6</td>
<td>26.3</td>
</tr>
</tbody>
</table>

Table A8: Major causes of hospitalisation of infants less than 1 year old in the Central region for 1990-1994 (rates)

Table A9: Major causes of hospitalisation of children aged 1 to 4 years in the Central region for 1990-1994 (rates)
Table A10: Hospitalisation rates of children aged 5 to 14 years in the Central region for 1990-1994 (rates)

Table A11: Major causes of hospitalisation of children aged 5 to 14 years in the Central region for 1990-1994 (rates)
### Table A12: Central region hospitalisations for asthma for 1990-1994 (rates per 10,000)

<table>
<thead>
<tr>
<th>Sub-region</th>
<th>1-4 years</th>
<th></th>
<th>5-9 years</th>
<th></th>
<th>10-14 years</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maori</td>
<td>non-Maori</td>
<td>Maori</td>
<td>non-Maori</td>
<td>Maori</td>
<td>non-Maori</td>
</tr>
<tr>
<td>Hawkes Bay</td>
<td>558</td>
<td>175</td>
<td>114</td>
<td>53</td>
<td>77</td>
<td>31</td>
</tr>
<tr>
<td>Wanganui</td>
<td>508</td>
<td>188</td>
<td>120</td>
<td>52</td>
<td>52</td>
<td>45</td>
</tr>
<tr>
<td>Manawatu</td>
<td>280</td>
<td>132</td>
<td>81</td>
<td>44</td>
<td>84</td>
<td>27</td>
</tr>
<tr>
<td>Porirua-Kapiti</td>
<td>418</td>
<td>200</td>
<td>110</td>
<td>41</td>
<td>39</td>
<td>27</td>
</tr>
<tr>
<td>Hutt</td>
<td>253</td>
<td>107</td>
<td>63</td>
<td>37</td>
<td>29</td>
<td>30</td>
</tr>
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<tr>
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### Table A13: Central region hospitalisations for asthma for 1990 - 1994 (rates per 10,000)

<table>
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<tr>
<th>Sub-region</th>
<th>Maori</th>
<th>Non-Maori</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Wanganui</td>
<td>356</td>
<td>118</td>
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</tr>
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<td>127</td>
<td>144</td>
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<tr>
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<td>117</td>
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<td>171</td>
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<tr>
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<td>434</td>
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<tr>
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<td>142</td>
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<td>97</td>
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<tr>
<td>Central region</td>
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</tr>
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</table>

### Table A14: Central region hospitalisations for ear disorders for 1990 - 1994 (rates per 10,000)

<table>
<thead>
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<th>1 to 4 Years</th>
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<th>5 to 9 Years</th>
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<td>Non-Maori</td>
<td>Total</td>
<td>Maori</td>
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<td>134</td>
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<tr>
<td>Central region</td>
<td>233</td>
<td>122</td>
<td>138</td>
<td>165</td>
</tr>
</tbody>
</table>


Central RHA 1997. *Te Ira Tangata: Health and Disability Profile of Children Aged 0-14 Years*. Wellington: Central Regional Health Authority.


