

The Health of Children and Young People in Counties Manukau

Executive Summary

Children and young people make up a third of the Counties Manukau population and collectively represent a taonga or treasure, whose health and wellbeing need to be safeguarded to ensure the future prosperity of the region. This report is the third on the health of Counties Manukau children and young people produced by the NZ Child and Youth Epidemiology Service, and the first to utilise the recently developed NZ Child and Youth Indicator Framework. Due to its large size, the report is presented as reference manual, which begins with a set of instructions outlining how the information contained within it might be used to inform planning in child and youth health. The report is divided into 3 sections as follows:

- 1. Introduction and Guide to Using the Indicator Framework:** This section introduces the NZ Child and Youth Indicator Framework, with its four hierarchically arranged domains and the indicators contained within them. It also provides a brief overview of the indicator grading system used in this report, which ranks each indicator on its ability to capture the issue it was designed to measure, as well as the quality of its data source(s).
- 2. Counties Manukau Child and Youth Health Statistics:** This section serves as a catalogue for all of indicators in the NZ Child and Youth Indicator Framework. In addition to providing national level data, each section (data permitting) provides an analysis of how Counties Manukau's rates compare with the New Zealand average, as well as the extent to which ethnic disparities are evident within the region.
- 3. Demography and Appendices:** This section provides an overview of the Counties Manukau child and youth population at the 2006 Census, as well as births in the region by ethnicity and NZDep decile. The section concludes with a series of Appendices outlining the datasets used to prepare the report and some of the limitations associated with each.

Introduction and Guide to Using the Indicator Framework

The NZ Child and Youth Indicator Framework was developed to assist those working in the health sector to consider all of the issues which need to be taken into account when planning services and strategies to improve child and youth health. The framework is based on a model which considers the causal pathways linking the wider social and political environment → health outcomes at the population level, and assigns each of the indicators in this report to one of four hierarchically arranged domains, which intersect with a horizontal life course dimension as follows:

Domain 1: The Historical, Economic and Policy Context

This Domain focuses on the factors which shape the underlying determinants of health including: 1) Historical Factors and in particular the role New Zealand's colonial history has played in creating health disparities for Maori children and young people; 2) Policy Factors including the role Government policies play in shaping the resources available to families; 3) Macroeconomic Factors including the role economic factors (e.g. unemployment rates, interest rates) play in determining a family's economic wellbeing.

Domain 2: Socioeconomic and Cultural Determinants

This Domain focuses on the role socioeconomic factors play in shaping child and youth health outcomes, as well as the ways in which cultural identity influences their wellbeing. The domain includes indicators spanning a range of areas including educational attainment, household crowding and the number of children and young people reliant on benefits.

Domain 3: Risk and Protective Factors

This Domain focuses on how risk and protective factors shape health outcomes for children and young people (e.g. second hand cigarette smoke → hospital admissions for respiratory infections). The domain contains a range of indicators including nutrition, exposure to second hand cigarette smoke and breastfeeding.

Domain 4: Individual and Whanau Health and Wellbeing

This domain provides information on a large number of child and youth health outcomes and is divided into 12 key streams including: Total Morbidity and Mortality; Whanau Wellbeing; Perinatal / Infancy; Well Health; Safety; Injury; Infectious Disease; Respiratory Disease; Chronic Conditions; Disability; Mental Health; Sexual and Reproductive Health.

The Life Course Dimension

The potential impact of each of the indicators in these domains needs also to be considered within the context of the life course (which within this framework spans 0 → 24 years). While the de-identified nature of the data used means it is impossible to track the trajectory of an individual child as they progress from birth to early adulthood, it is important to consider the serial consequences that negative exposures have as a child passes from birth → 24 years and the manner in which the wider socioeconomic determinants of health shape the likelihood that it will be the same child who is e.g. born with low birth weight → exposed to second hand smoke during infancy → admitted to hospital with pneumonia → fails school entry hearing screening → does poorly at school and leaves without formal qualifications.

Limitations of Current Indicators & Data Quality Issues

During the course of indicator framework development it became apparent that adequate data was available for only a fraction of the issues that those working in the health sector considered important to child and youth health. To prevent issues for which data was available from taking precedence over those for which data was lacking, a set of criteria were developed which awarded a high priority to public health importance. Where an issue met these criteria but where routine data sources were lacking, “non-traditional” data sources were used, to ensure the issue did not fall below the public health radar. Such an approach however, meant that many indicators may not have met the stricter data quality criteria utilised by other Government agencies. In order to highlight the impacts such data quality issues may have on the interpretability of the data, each indicator in this report has been graded on the degree to which it captures the issue it was designed to measure, as well as the quality of its data source:

1. Ideal Indicators which measure the total extent of an issue.
2. Proxy Indicators: While it is not always possible to measure the full extent of an issue, it is possible to monitor attendances at publicly funded services for its management (e.g. while injury admissions do not reflect all injuries occurring in a community, they are nevertheless useful for assessing the workload injuries create for secondary services).
3. Bookmark Indicators: In many cases there was a need for indicators in areas where no data existed (e.g. disability prevalence). While more traditional approaches might have excluded such issues from the monitoring framework until high quality data sources could be developed, such approaches may also have resulted in the needs of children and young people with these conditions slipping below the public health radar. Thus a number of “Bookmark Indicators” were created to highlight particular issues until such time as more appropriate data sources could be developed.

In addition, each of the indicators in the report has been assessed on the quality of its data source and graded as to whether this was Excellent (A), Adequate (B), or whether

Further Work (C) was required to ensure the indicator could be interpreted in an appropriate manner. A more detailed review of the data sources used is included in a series of Appendices at the back of this report and the reader is urged to be aware of the contents of these Appendices when reading the information contained in this report. The most important of these issues however, are highlighted in the text box below.

Data Constraints and the Use of Statistical Significance in this Report

Statistical Significance Testing

Because of the fragmented nature of NZ's national datasets, and the lack of population denominators in electronic format, in undertaking this analysis, the majority of rate calculations had to be undertaken manually in EXCEL. This meant that in allocation of resources to undertake this report, a choice needed to be made between providing information on as broad a range of indicators as possible, or providing a more detailed analysis (including relative risks, 95% confidence intervals and standardisation for ethnicity and NZDep) on a much more limited selection. Because this report forms the first in a cycle, in the first instance it was thought necessary to provide as broad as possible overview on the health status of children and young people in the region, and resources have thus been allocated to this end. Thus in interpreting the findings of this report, none of the comparisons made imply statistical or non-statistical significance (unless accompanied by tables containing confidence intervals) and thus the reader must take into account both the magnitude of the difference in regional and NZ rates, as well as the consistency of these on a year to year basis. For the majority of indicators contained in this report, a review of trends over time, particularly if they consistently exceed or are lower than the NZ average, will provide sufficient information for funding and planning purposes. In instances however where time series information is unavailable, or where numbers are small (e.g. infant mortality rates) and DHB figures deviate unexpectedly from the NZ average, DHB staff may wish to request more detailed statistical analysis on a case by case basis.

Changes in the Way in Which Emergency Admissions Have Been Coded Over Time

Appendix 1 outlines a number of issues with data quality in the Hospital Admission Dataset, and in particular how changes in the way in which emergency department cases have been uploaded to the national minimum dataset over time can profoundly affect time series data for a number of conditions commonly dealt with in the emergency department setting (e.g. injuries, asthma, gastroenteritis). This issue is complex and the reader is strongly urged to read Appendix 1 before considering any of the time series information contained in this report (this problem is of particular importance in the Auckland region).

Small Number Reporting

Many of the causes of morbidity and mortality analysed in this report, while being of significant importance to child and youth health, are nevertheless only present in small numbers. In order to prevent, as far as possible, the identification of individual cases in the sections of the report that follow, in all tables the causes of morbidity / mortality have been aggregated up so that the smallest number reported is 5. For graphs, deaths are reported as rates per 100,000 rather than as individual numbers, and where very small numbers per year are involved, these are discussed only in the text. Where DHB staff feel they require more detailed information on particular causes of morbidity and mortality, additional (de-identified) information is available on request.

Counties Manukau Child and Youth Health Statistics

The tables which follow provide a brief overview of each of the indicators contained in this report, including their distribution nationally and (data permitting), within the Counties Manukau region. While it is possible to consider each of these issues individually, when considering the best way forward for Counties Manukau as a whole, a number of possible approaches to prioritising child and youth health needs are possible:

A Comparative Approach: When considering which issues should be awarded the highest priority in future strategy development, one potential approach would be to consider those areas where Counties Manukau differs from the New Zealand average. Such an approach needs to take into account the demographic profile of the Counties Manukau Region, which at the 2006 Census had a lower proportion of European children and young people than the New Zealand average and a much higher proportion of Pacific and Asian / Indian children and young people, as well as large numbers living in the most deprived areas. This demographic profile would potentially suggest that the Counties Manukau might as a result, expect higher rates for conditions for which disparities for Pacific children and young people were most marked (e.g. skin

infections, bronchiolitis), as well as higher rates for conditions for which socioeconomic disparities are most marked (e.g. respiratory infections, meningococcal disease teenage births). A brief perusal of the tables which follow indeed does suggest that Counties Manukau has higher rates for serious skin infections, meningococcal disease, respiratory infections (e.g. bronchiolitis, pneumonia), and teenage births and thus addressing factors in the higher levels in the framework which contribute to these outcomes (e.g. household crowding, exposure to second hand cigarette smoke, access to primary (antenatal) care) might be considered as high priorities when addressing child and youth health needs within the region.

An Absolute Approach: An alternative view of health need would be to consider those issues which, irrespective of their position with respect to the national average, made the greatest contribution to hospital admissions and mortality in the region. In Counties Manukau during the past 5 years, SIDS was the leading cause of infant mortality, while injuries (particularly from land transport accidents) were the leading causes of mortality for both children and young people. Suicide however also claimed the lives of a large number of Counties Manukau young people during this period. In terms of hospital admissions, injuries again made a significant contribution to morbidity for both children and young people, although infectious and respiratory conditions were also prominent for children, and reproductive health issues (particularly admissions for labour and delivery) were the leading cause of admissions for young people. While these findings would place SIDS, injuries and suicide towards the top of the priority list for addressing child and youth health needs, there are clearly overlaps with those issues emerging from the comparative approach (e.g. the considerable burden of morbidity attributed to infectious and respiratory diseases in children, the importance of teenage pregnancy / reproductive health issues in young people).

Consideration of Areas of Unmet Need: Finally, it is important to remember that hospital admission and mortality data does not fully capture all of the issues experienced by children and young people in Counties Manukau. In particular, there is a paucity of information on children and young people with disabilities and mental health issues. The available evidence nationally however would suggest that there may be considerable unmet need in these areas, particularly with respect to respite care for the families of children with disabilities and for services for children and young people with ongoing mental health issues. Thus in addition to the approaches outlined above, it is also necessary to consider whether similar areas of unmet need exist within the Counties Manukau region and if so, to consider the needs of these children and young people when allocating resources for future program development. (Note: Although the issue of a paucity of local data may also apply to issues such as nutrition, physical activity and overweight / obesity in children / young people, the health sector as a whole already appears to have awarded these issues a high priority in recent years).

Conclusions

It is hoped that this report will provide those planning health services in Counties Manukau with an understanding of the health needs of the children and young people within their region, as well as some insights into why these needs might conform to, or deviate from, the national average. This report however, makes no attempt to prioritise the health needs presented in sections which follow, or to offer any evidence based solutions to the many issues which are raised. Rather it is hoped that the report will provide DHB staff with sufficient information, so that such decisions can be made locally, taking into account some, or all of the suggested approaches outlined above. For those requiring more direction on evidence based solutions to some of the issues raised, the MOH's Child and Youth Health Toolkit (available on the MOH website) may provide a logical starting place, as it provides an overview of the MOH's suggested starting points in many of these areas.

Table 1. Overview of the Health of Children and Young People in Counties Manukau Report

Stream	Current Indicators: Type & Data Quality	New Zealand Level Distribution and Trends	Counties Manukau Distribution and Trends
Historical, Economic and Policy Context			
Historical Context	Guest Editorial (Bookmark B)	From a Māori worldview all objects, both living and nonliving have their own mauri or life force. Through this energy and the connections that exist between objects, there are interactions and reactions. The health of Māori children today is a reflection of previous and current interactions. Events that have occurred in the past affect the wellbeing of Māori children today. Looking at the past, the health of Māori children was affected by the wellbeing of their whanau, hapu, iwi and the interactions that took place between tribal groups prior to European contact and events that have taken place since.	
Macro-economic and Policy Environment	Guest Editorial (Bookmark B)	A large body of evidence now suggests that the socioeconomic environments in which children live significantly influence their health and wellbeing. Yet only recently has the health inequalities debate begun to focus on the underlying forces which shape the distribution of socioeconomic resources at a population level. In New Zealand there are 3 aspects of the economic / policy environment which shape the socioeconomic environments in which children live: 1. The effects of New Zealand's major reforms and adjustments to global economic conditions which began in the 1980s. 2. The potential for a future economic downturn, which would create fallout directly affecting children's health and wellbeing. 3. A changing policy context, which has increasingly placed work as the central element of welfare.	
Socioeconomic and Cultural Determinants			
Cultural Identity	Enrolments in Kura Kaupapa Māori (Bookmark C)	Cultural identity is a critical component of positive Māori development and has been positively linked with health, educational achievement and emotional and social adjustment. In New Zealand, kura kaupapa Māori are total immersion schools which follow a curriculum that validates Māori knowledge, learning styles and practices and are key to revitalising the Māori language. Since 1992, there has been a 5.7-fold increase in the number of kura kaupapa Māori and kura teina, with the number of children enrolled increasing from 4,964 in 2000 to 6,160 in 2006.	In Counties Manukau during 2007, there were 5 kura kaupapa Māori and 1 kura teina, which between them enrolled a total of 522 students.

Stream	Current Indicators: Type & Data Quality	New Zealand Level Distribution and Trends	Counties Manukau Distribution and Trends
Economic Standard of Living	Children in Families with Restricted Socioeconomic Resources (Bookmark B)	During 1988-2004, New Zealand saw large increases in the number of children and young people living below the poverty line and while improvements have occurred during the past decade, the proportion living below the poverty line has not yet recovered to its 1987-1988 levels. In addition, Māori and Pacific children, those living in sole parent families and those in families reliant on income tested benefits are much more likely to be growing up with restricted socioeconomic resources. While family resources in turn have a profound influence on many of the health outcomes highlighted in this report, the distribution of resources available to families is also profoundly influenced by the historical, economic and policy factors discussed in the sections above.	
	Children Reliant on Benefit Recipients (Ideal B-C)	During 2000-2007, the proportion of all New Zealand children <18 years who were dependent on a benefit recipient fell from 27.0% in 2000 → 19.3% in 2007. A large proportion of this decrease was due to a fall in the number relying on unemployment benefit recipients. While the proportion of children reliant on DPB recipients also fell, more rapid declines in those reliant on unemployment benefits saw the proportion of benefit dependent children relying on DPB recipients actually increasing during this period.	In April 2007, there were 35,969 children <18 years reliant on beneficiaries who received benefits from Service Centres in the Counties Manukau catchment. Of these, the majority were reliant on DPB recipients, with a smaller % reliant on unemployment, sickness and invalid's benefits & other forms of income support.
	Household Crowding (Ideal B)	The associations between substandard housing and poor health have been known for several centuries, with reports from as early as the 1830s attributing high rates of infectious disease to overcrowded, damp, and poorly ventilated housing. In New Zealand, crowding is strongly correlated with meningococcal disease, while overseas reports also demonstrate correlations with a number of infectious diseases and mental health issues.	In Counties Manukau during 2006, 30.3% of children & young people lived in crowded households vs.16.5% nationally. There were ethnic and socioeconomic differences in household crowding in Counties Manukau during 2006, with 56.8% of Pacific & 38.9% of Māori children & young people living in crowded households vs. 24.1% of Asian & 6.4% of European children & young people. Similarly crowding rates rose from 3.0% for those in the most affluent areas, to 56.3% for those in the most deprived areas. While similar disparities were seen for nationally, at each level of deprivation, crowding in Counties Manukau was higher than the NZ average.

Stream	Current Indicators: Type & Data Quality	New Zealand Level Distribution and Trends	Counties Manukau Distribution and Trends
Economic Standard of Living	Young People Reliant on Benefits (Ideal B-C)	<p>While adolescence is for many young people, a time for investing in learning and acquiring new skills, it is also a time of vulnerability. While the majority of young people successfully complete their years of secondary education and continue on to further training and employment, a significant minority are unable to support themselves financially for a variety of reasons.</p> <p>In New Zealand during 2000-2007, there was a rapid decline in the number of young people receiving unemployment benefits, although the numbers receiving the DPB declined more slowly and the numbers receiving sickness and invalid's benefits increased. Thus while in 2000, unemployment benefits were the most frequent form of income support received by NZ young people, by 2007 the DPB was the most common type of benefit received.</p>	<p>In Counties Manukau during 2000-07, there was a rapid decline in the number of young people receiving unemployment benefits, although the numbers receiving the DPB remained relatively static and the numbers receiving sickness and invalid's benefits increased. Thus while in 2000, unemployment benefits were the most frequent form of income support received by Counties Manukau young people, by 2007 the DPB was the predominant benefit type in the region.</p>
Education: Knowledge and Skills	Prior Participation in Early Childhood Education (Proxy C)	<p>Research suggests that participation in high quality early childhood education (ECE) has significant long term benefits. In New Zealand during 1990-2006, the number of children enrolled in ECE increased by 55.8%, with the largest increases being in Education and Care Services, Home Based Services and License Exempt Playgroups. In addition, during 1997-2006 the number of hours children spent in ECE increased for all Service types, with the exception of Playcentres and Te Kohanga Reo. In New Zealand during 2000-2006 the proportion of new entrants reporting prior participation in ECE increased from 91.0% to 94.5% and while rates remained higher for European > Asian / Indian > Māori > Pacific children and those attending affluent schools, in absolute terms rates increased most rapidly for Pacific children.</p>	<p>In Counties Manukau during 2000-06, there was a gradual increase in prior participation in ECE amongst school entrants which was consistent with national trends. During this period, prior participation in Counties Manukau was lower than the NZ average. In addition, prior participation was higher for Counties Manukau European > Asian > Māori and Pacific children during this period.</p>
	Educational Attainment at School Leaving (Ideal B)	<p>In New Zealand during the past decade, educational attainment at school leaving has fluctuated, in part as a result of changes in prevailing labour force conditions and the availability of alternative forms of tertiary education. While there have been marked increases in the proportion of students achieving a University Entrance Standard since the introduction of the NCEA, care must be taken when interpreting these trends, as the old and new qualification structures may not be strictly comparable.</p>	<p>In Counties Manukau during 1995-06, the % of young people leaving school with little or no formal attainment was higher than the NZ average, while the % leaving school with a UE Standard was lower. There were also ethnic differences, with the % of young people with little or no formal attainment being higher for Māori > Pacific > European > Asian young people. Rates for acquiring a UE Standard were higher for Asian > European > Māori and Pacific young people.</p>

Stream	Current Indicators: Type & Data Quality	New Zealand Level Distribution and Trends	Counties Manukau Distribution and Trends
Education: Knowledge and Skills	Senior Secondary School Retention (Ideal C)	While school retention rates for NZ young people have fluctuated in the past decade, socioeconomic and ethnic disparities have remained, with retention rates being lower for Māori students and those attending schools in the most deprived areas. These ethnic differences need to be viewed in the context of alternative educational opportunities available to students however. In NZ during 1998-05, there were large increases in tertiary participation rates, particularly for Māori students taking Certificate Level 1-3 courses. There were also longer term increases in Māori students participating in bachelor level study during 1994-05. While the majority of these increases were in the 25+ age group, such figures suggest that for many, participation in education does not cease at school leaving, although the income premiums achieved by various types of study need also to be taken into account in this context..	In Counties Manukau during 2002-06, school retention rates at 16 and 17 years were similar to the NZ average. Once retention rates were broken down by ethnicity, marked ethnic differences were evident, with retention rates at both 16 and 17 years being lower for Māori > Pacific and European > Asian / Indian students.
	Stand-downs, Suspensions, Exclusions and Expulsions (Proxy B)	In NZ during 2000-06, the number of suspensions, exclusions and expulsions declined, while the number of stand-downs increased. The main reasons for suspensions and exclusions were continual disobedience, physical assaults on other students or staff and drug use, with higher rates being reported amongst secondary school students, those aged 13-15 years, males and Māori students. In part, some of the decline in suspension rates during 2000-06 may be due to the Suspension Reduction Initiative, operating since 2001 in a number of secondary schools with historically high suspension rates.	In Counties Manukau during 2000-06, stand-downs, exclusions and expulsions were similar to the NZ average, while suspension rates were slightly lower. Once broken down by ethnic group, suspension rates were higher for Counties Manukau Māori > Pacific > European > Asian / Indian students.
Primary Health Care Provision and Utilisation	Primary Health Care Provision and Utilisation (Bookmark C)	<p>Primary Care: In NZ, PHOs are the primary vehicle through which first-level health services are accessed. In 2006, 98% of children and 93% of young people were enrolled with a PHO, with the lowest enrolment rates being in children <1 year and Asian/Indian young people 15-24 years. Survey data also suggest that up to 13% of children and 20% of young people experience problems accessing a GP, with the commonest barrier being cost.</p> <p>Well Child: At present no register of Well Child visits exists and thus the % of NZ children attending Well Child visits is unknown. Plunket enrolls >90% of births in NZ and of those enrolled who turned 1 in 2006, 98% attended at least 2 Core Visits, and 77% attended 4-5 of the 5 Core visits scheduled for their first year. Māori & Pacific children & those in the more deprived areas were less likely to attend core visits although those in the most deprived areas attended more additional visits, thus on average receiving a greater total number of Well Child visits than those in more affluent areas.</p>	

Stream	Current Indicators: Type & Data Quality	New Zealand Level Distribution and Trends	Counties Manukau Distribution and Trends
Risk and Protective Factors			
Nutrition, Growth and Physical Activity	Breastfeeding (Proxy C)	Breastfeeding meets a term infant's nutritional needs for the first 4-6 months of life, as well as providing protection against a wide range of infections and non-infectious diseases. In New Zealand during 1999-2006, while the % of babies who were exclusively / fully breastfed at < 6 weeks remained relatively static, there were small increases in the % of babies still breastfed at 3 and 6 months. During 2006, breastfeeding rates at <6 weeks were highest amongst European / Other women and lowest amongst Asian women. At 3 and 6 months however, breastfeeding rates were highest for European / Other women and lowest for Māori women, with a marked tapering off in exclusive / full breastfeeding rates for all ethnic groups as infants age increased. There were also marked socioeconomic differences in the % of babies exclusively or fully breastfed during this period, with rates at all three ages being higher for babies living in the most affluent areas.	During 2005-06, while breastfeeding rates at <6 weeks, 3 months and 6 months in Counties Manukau were higher amongst European women, the breastfeeding rates of each of Counties Manukau's largest ethnic groups were lower than their respective NZ ethnic specific averages. Thus during 2005-06, none of Counties Manukau's largest ethnic groups achieved the MOH's 2005 breastfeeding targets of 74% at 6 weeks, 57% at 3 months and 21% at 6 months of age.
	Overweight and Obesity (Bookmark B)	<p>While no regional data was available, a review of the available New Zealand data on overweight and obesity suggested:</p> <ol style="list-style-type: none"> Prevalence: While estimates vary, NZ data collected since 2000 suggests that ≈ 20% of NZ children are overweight and ≈10% are obese. Trends over Time: Of the 2 studies tracking the pace of the obesity epidemic amongst NZ children, both suggest that it is progressing relatively rapidly, with the proportion who are overweight or obese increasing 2-3 fold over the past decade. Ethnic Disparities: All of the NZ studies reviewed noted higher rates of overweight and obesity for Pacific > Māori > European children and adolescents. These findings must be viewed in the context of an earlier average age of puberty for Pacific and Māori girls, as well as ethnic differences in the ability of BMI to approximate total body fat composition. Socioeconomic Disparities: The NZ Children's Nutrition Survey suggests that obesity may exhibit a modest socioeconomic gradient, with rates being higher amongst those in the most deprived areas. <p>These findings suggest that the current levels of overweight and obesity amongst NZ children are a significant public health concern and that unless sound policies and strategies are put in place to address this issue, the socioeconomic and ethnic disparities seen will lead to disparities in chronic diseases such as diabetes and CVD as this generation reaches maturity.</p>	

Stream	Current Indicators: Type & Data Quality	New Zealand Level Distribution and Trends	Counties Manukau Distribution and Trends
Nutrition, Growth & Physical Activity	Nutrition (Bookmark B)	<p>The Children's Nutrition Survey provided a number of insights into the nutritional intake of NZ children. These included:</p> <ol style="list-style-type: none"> 1. Total energy intake, when broken down by ethnicity and socioeconomic status, did not mirror current disparities in obesity, with Māori children having higher total caloric intakes than European children, yet Pacific children having the highest obesity rates. In addition, while socioeconomic gradients in obesity were prominent, socioeconomic gradients in total caloric intake were not. In contrast, the % of daily intake derived from fat did correspond more closely with ethnic and socioeconomic gradients in obesity, with Pacific and Māori children and females in the most deprived areas having a higher % of their daily intake derived from fat. 2. While the majority of children brought the food they ate at school from home, this declined as children grew older. In addition, a higher % of Pacific > Māori > European / Other children and those in the most deprived areas relied on school canteens or local food outlets. 3. Food security remained an issue for larger families, those in the most deprived areas & for Pacific & Māori families, with many saying that they could not always afford to eat properly, and that they often or sometimes ran out of food. 	
	Physical Activity (Bookmark C)	<p>Physical activity remains one of the mainstays of NZ's current Healthy Eating, Healthy Action Strategy and understanding its determinants is of value in identifying intervention points for the current obesity epidemic. The NZ Children's Nutrition Survey provides limited information on physical activity in children, while the NZ Sport & Physical Activity Surveys have monitored participation in active sport and leisure since 1997. While methodological differences prevent direct comparisons, a number of themes emerge:</p> <ol style="list-style-type: none"> 1. Approximately 32% of NZ children 5-17 years are inactive. 2. Girls are more likely to be inactive than boys. 3. The % of inactive children and young people increases with age. 4. The physical activity levels of children and young people are influenced by the activity levels of their parents. 5. During 1997-2001, the overall physical activity levels of NZ children and young people may have declined. <p>Ethnic differences in physical inactivity levels however were more difficult to interpret due to methodological differences between these two surveys.</p>	

Stream	Current Indicators: Type & Data Quality	New Zealand Level Distribution and Trends	Counties Manukau Distribution and Trends
Substance Use	Exposure to Cigarette Smoke in the Home (Proxy B)	<p>ASH Data: In NZ during 2006, ASH Surveys suggested that 39.9% of Year 10 students had a parent who smoked and that parental smoking rates were higher for Māori > Pacific > European / Other > Asian students and those attending schools in the most deprived areas. While socioeconomic and ethnic disparities were also observed for exposure to smoke in the home, exposures were lower than parental smoking rates might predict, potentially suggesting the presence of in-house non-smoking policies among families of all socioeconomic and ethnic groups. Census Data: Data from the 2006 Census suggested that 35.3% of New Zealand children 0-14 years lived in a household with a smoker, with exposures being higher for Māori > Pacific > European > Asian / Indian children and those in the most deprived NZDep areas.</p>	<p>ASH Data: In Counties Manukau during 2001-06, the % of Year 10 students with at least one parent smoking remained static (41.7% in 2001→ 41.9% in 2006), while the % living in homes where people smoked inside declined (29.8% in 2001→ 26.5% in 2006). Rates for both outcomes were similar to the NZ average and trends were consistent with those nationally. Census Data: During 2006 40.1% of Counties Manukau children lived in a household with a smoker, with exposures being higher for Maori > Pacific > European > Asian children and those in the most deprived areas.</p>
	Tobacco Use in Young People (Ideal B)	<p>ASH Data: ASH Surveys suggest that in NZ during 1999-06, daily smoking rates among Year 10 students were highest amongst females, Māori > Pacific > European / Other > Asian young people, those in the most deprived areas and those for whom one or both parents smoked. During 1999-2006, daily smoking rates declined for all ethnic and socioeconomic groups, although declines were less rapid for students attending schools in the more deprived areas and for those for whom both parents smoked. Census Data: Data from the 2006 Census suggested that 21.8% of young people (15-24 yrs) were regular smokers, with rates being higher for Maori > > Pacific and European > Asian / Indian young people and those in the most deprived areas.</p>	<p>ASH Data: In Counties Manukau during 1999-06, the % of Year 10 students who were daily smokers declined, from 17.2% in 1999→ 9.0% in 2006, while the % who had never smoked increased, from 37.7% in 1999→ 53.4% in 2006. For the majority of this period, smoking rates in Counties Manukau were similar to the NZ average, while the % never smoking was higher. Census Data: During 2006, 21.5% of Counties Manukau young people were regular smokers, with rates being higher for Māori > Pacific > European > Asian / Indian young people and those in the most deprived areas.</p>

Stream	Current Indicators: Type & Data Quality	New Zealand Level Distribution and Trends	Counties Manukau Distribution and Trends
Substance Use	Alcohol Related Harm (Bookmark C)	In NZ during 2002-06, alcohol related hospital admissions were highest for those in their late teens / early 20s, for Māori young people and those in the most deprived areas. Reasons for admission included acute intoxication, mental health issues and injuries, with the latter commonly arising from episodes of self harm, assault or motor vehicle accidents. Significant methodological constraints must be taken into consideration when interpreting these findings, as with the removal of emergency department cases, these figures reflect the more severe end of the spectrum.	
Individual and Whanau Health and Wellbeing			
Individual and Whanau Health and Wellbeing	Most Frequent Causes of Hospital Admission (Proxy B-C) Mortality (Ideal B)		In Counties Manukau during 2000-04, SIDS was the leading cause of post-neonatal mortality, while injuries were the leading causes of death for both children and young people. For Counties Manukau children during 2002-06, the most frequent reasons for acute hospital admission were injuries and bronchiolitis; for arranged admissions they were cancer / chemotherapy and injuries; and for waiting list admissions they were grommets and dental procedures. For Counties Manukau young people, pregnancy and childbirth were the leading causes of hospital admission. In terms of other hospital admissions, injuries followed by abdominal / pelvic pain were the leading causes of acute admissions, while injuries followed by cancer / chemotherapy were the leading reasons for arranged admission. Procedures on the skin and subcutaneous tissue followed by surgery on the tonsils and adenoids were the leading causes of waiting list admissions for those 15-24 years.

Stream	Current Indicators: Type & Data Quality	New Zealand Level Distribution and Trends	Counties Manukau Distribution and Trends
	Family Composition (Proxy C)	In NZ during the past 25 years, there has been a marked shift away from two-parent families, with the proportion of single parent families increasing from 10.4% in 1976 to 29.2% in 2001. During 2006, while the proportion living in sole parent households increased with increasing NZDep deprivation for each of New Zealand's largest ethnic groups, at nearly every level of deprivation, ethnic differences remained, with the proportion living in sole parent households being higher for Māori > European and Pacific ≥ Asian / Indian children.	In Counties Manukau during 2006, 28.2% of children lived in a sole parent household vs. 25.2% nationally. There were also ethnic and socioeconomic differences during 2006, with 46.9% of Māori & 31.3% of Pacific children living in sole parent households vs. 16.7% of European & 16.2% of Asian children. Similarly, the % of children in sole parent households rose from 7.1% for those in the most affluent areas, to 43.2% for those in the most deprived areas.
Perinatal and Infancy	Low Birth Weight: SGA and Preterm Birth (Ideal B-C)	Low Birth Weight (a birth weight <2,500g), is determined by two factors, the duration of gestation and fetal growth. Babies are born LBW either because they are preterm (<37 weeks) or because they have failed to grow adequately in utero. In NZ during 1980-06, rates of preterm birth increased and then reached a plateau, while rates of small for gestational age (SGA) declined. During 1996-06, rates of preterm birth were higher for Māori babies, males and those in the most deprived areas, while rates of SGA were higher for Asian / Indian and Māori babies and those in the most deprived areas. While low birth weight infants have higher mortality and morbidity, it is difficult to determine whether NZ's recent rise in preterm birth will have detrimental impacts, as it is unclear whether they are due to increasing obstetric intervention or whether they reflect a true rise in spontaneous preterm birth.	In Counties Manukau during 1980-06 rates of SGA declined, while rates of preterm birth increased and then reached a plateau. While for the majority of this period, rates of SGA in Counties Manukau were higher than the NZ average, rates of preterm birth were similar during the last 15 years.
	Infant Mortality (Ideal B)	In NZ during 1988-04, mortality from SIDS & congenital anomalies continued to decline, while mortality from extreme prematurity & other perinatal conditions increased during the past 3-4 years. During 2000-04, the most frequent causes of neonatal mortality were extreme prematurity and congenital anomalies, with mortality being highest during the first week of life. In contrast, the most frequent causes of post-neonatal mortality were SIDS, followed by congenital anomalies. In addition, a large number of babies died from suffocation in bed, although it is possible that some of these deaths may have been coded as SIDS in previous years. Mortality was greatest during the first 6 months of life, with progressively fewer deaths occurring as infants approached 1 year of age. Risk of SIDS was significantly higher for Māori and Pacific infants and those in the most deprived NZDep areas.	In Counties Manukau during 1988-04, while small numbers make precise interpretation difficult, total, neonatal and post-neonatal mortality rates all declined. For the majority of this period, rates for all 3 outcomes were higher than the NZ average.

Stream	Current Indicators: Type & Data Quality	New Zealand Level Distribution and Trends	Counties Manukau Distribution and Trends
Well Health	Immunisation (Proxy B-C)	Immunisation is among the most successful and cost-effective public health interventions and access to immunisation is a priority population objective of the NZ Health Strategy. Immunisation coverage rates have increased in recent years, with the % of children fully immunised at 2 years increasing from <60% in 1991/92 to 77% in 2005. Immunisation programme initiatives including the formation of immunisation outreach services and the implementation of the National Immunisation Register are likely to result in continued improvements and are necessary, if the Ministry of Health's target of 95% of children fully immunised at 2 years is to be achieved.	During the second quarter of 2007, 56.2% of Counties Manukau children were fully immunised at 6 months of age, as compared to 59.3% nationally. Similarly 77.7% of Counties Manukau children were fully immunised at 12 months, and 60.4% at 18 months, as compared to national coverage rates of 81.0% and 63.7% respectively.
	Hearing Screening (Ideal C)	Hearing in infants and young children is essential for speech and language development and its loss during early life may lead to disability, the extent of which depending on the severity and timing of the loss. While there has been a gradual decline in the % of New Zealand children failing their school entry audiometry tests during the past 14 years, large ethnic disparities remain, with failure rates being higher for Pacific and Maori children.	In Counties Manukau during 1993-2006, while there were large year to year fluctuations, overall audiometry failure rates at school entry were higher than the New Zealand average.
	Oral Health (Ideal C)		In Counties Manukau during 2002-06, the % children caries free at 5 years was similar to the NZ average for those in areas with fluoridated water supplies, as were mean DMFT scores at 12 years. In non-fluoridated areas, the % of children who were caries free at 5 years was higher than the NZ average, while mean DMFT scores at 12 years were lower. However, only children who have been assessed, completed treatment, and who are still 5 yrs or 12 of age at the end of their treatment contribute data to this analysis. In 2006, coverage in Counties Manukau was 54.9% at 5 years and 74.7% at 12 years, potentially suggesting that the numbers of children with poorer oral health outcomes may be underestimated in this analysis.

Stream	Current Indicators: Type & Data Quality	New Zealand Level Distribution and Trends	Counties Manukau Distribution and Trends
Safety	Total and Unintentional Injuries (Admissions Proxy C Mortality Ideal B)	<p><u>All Injuries:</u> In NZ during 2000-04, vehicle occupant accidents were the leading cause of injury related mortality for those 0-24 years, although suicide deaths were of prominent for those 15-24 years and accidental threats to breathing were prominent for those <1 year. <u>Unintentional Non-Transport Injury</u> (e.g. falls, mechanical forces, drowning, burns, poisoning) admissions were highest for those 1-2 years, with males being overrepresented in both admissions and mortality, particularly during their late teens and early 20s. When broken down by cause, admissions for falls peaked at 5 years, while accidental poisoning, inanimate mechanical forces and exposure to electricity / fire / burns were highest for those 1-2 years. Admissions were also higher for Pacific and Māori children and young people, males and those in the more deprived areas. <u>Land Transport Accidents:</u> During 2002-06, the majority of admissions for vehicle occupant injuries were traffic related (90.7%), in contrast to only 67.3% of pedestrian injuries, 43.9% of cyclist injuries and 37.1% of motorbike injuries. Admissions increased throughout childhood, reaching a peak in the late teens / early twenties and thereafter declined. With the exception of the first 2 years of life, admissions were higher for males. Mortality was also higher for those in their late teens / early 20s and males.</p>	<p><u>All Injuries:</u> In Counties Manukau during 2002-06, falls followed by inanimate mechanical forces were the leading causes of injury related hospital admission for children, while the order was reversed for young people. Transport related injuries as a group however made a significant contribution in both age groups.</p> <p><u>Unintentional Non-Transport Injuries:</u> In Counties Manukau during 1990-04, 103 children and young people died as the result of a non-transport related accident.</p> <p><u>Land Transport Accidents:</u> In Counties Manukau during 1990-04 a total of 343 children and young people died as the result of a land transport accident.</p>
	Injuries Arising from Assault (Admissions Proxy C) (Mortality Ideal B)	<p><u>Children 0-14 Years:</u> Research suggests that 4-10% of NZ children experience physical abuse and 11-20% experience sexual abuse during childhood and that the long term consequences are significant. In NZ during 2002-06, hospital admissions for the assault, neglect or maltreatment of children exhibited a U-shaped distribution, with rates being highest for those < 2 years and those > 11 years of age. In contrast, mortality was highest amongst children < 1 year. While the gender balance was relatively even during infancy and early childhood, admissions for males became more prominent as adolescence approached. Admissions were also higher for males, Māori and Pacific children, and those in the most deprived areas.</p> <p><u>Young People 15-24 Years:</u> In NZ during 2002-06, hospital admissions for assault in young men increased with age, reaching a peak in the mid-late teens and thereafter declining. In contrast, admissions for young women varied less with age and in addition, were lower than for males at all ages from 15-24 years. Hospital admissions were also higher for Māori and Pacific young people and those in the most deprived areas.</p>	<p><u>Children 0-14 Years:</u> In Counties Manukau during the past 13 years, admissions for the assault, neglect or maltreatment of children remained relatively static. For the majority of this period, rates were higher than the NZ average. During 1990-04, 11 Counties Manukau children died from assault.</p> <p><u>Young People 15-24 Years:</u> In Counties Manukau during 1990-06, admissions for assault in young people steadily increased. During the last 9 years, admissions were higher than the NZ average. In addition, during 1990-04 a total of 25 Counties Manukau young people died as the result of an assault.</p>

Stream	Current Indicators: Type & Data Quality	New Zealand Level Distribution and Trends	Counties Manukau Distribution and Trends
Safety	CYF Notifications (Proxy C)	<p>During the 1990s New Zealand ranked 3rd highest amongst rich nations for its child maltreatment death rates. In New Zealand, the agency with the statutory responsibility for protecting children from recurrent abuse is Child Youth and Family (CYF), who receive notifications from a variety of sources including the police, the education and health sectors, families / whanau and the general public. Since 2001, notifications recorded by CYF have doubled and while it is often assumed that this reflects an increase in the rate of child abuse, recent research suggests that changes in the behaviour of the child protection system itself may also have played a role.</p>	<p>In Counties Manukau during 2006 there were 8,949 notifications recorded by CYF Offices, with 71.4% requiring further investigation. While these figures reflect an increase since 2001, when 2,227 notifications were recorded, the % requiring further investigation declined (92.7% required further investigation in 2001). Nevertheless, in absolute terms the number of notifications requiring investigation increased, from 2,064 in 2001 to 6,392 in 2006. Of those investigated further during 2001-2006, a large % resulted in no abuse being found, with the numbers in this category increasing as the period progressed. Nevertheless, recent evidence suggests that only 20% of avoidable child deaths in NZ are known to CYF and it is likely that many of the victims of child abuse presenting to health care settings each year remain undetected.</p>
	Family Violence (Proxy C)	<p>For children, exposure to family violence is of concern, not only because of the long term consequences such exposures have for psychological wellbeing, but also because of the potential overlaps between child abuse and partner abuse in families. In NZ during 2006, children were present at 51.5% of the family violence incidents attended by Police. In 50% of cases, the victim was the spouse / partner of the offender, with a further 23% having been in a previous relationship and in 15% of cases the conflict was between a parent and child. Overall, 39% of victims were Māori, 38% were Caucasian, 10% were Pacific and 2% were Asian and Indian respectively. While in 82% of cases injuries were not reported, in 526 cases (0.85%) a hospital attendance was required and in 23 cases (0.04%) the incident resulted in a death.</p>	<p>While it is difficult to use Police data to comment on trends in the prevalence of family violence due to changes in the way in which the Police have recognised and recorded family violence over time, what Police data does suggest is that a large number of family violence incidents are occurring in the Counties Manukau region each year and that children are likely to be present at a large proportion of these.</p>

Stream	Current Indicators: Type & Data Quality	New Zealand Level Distribution and Trends	Counties Manukau Distribution and Trends
Infectious Diseases	Serious Bacterial Infections Admissions (Proxy B) Mortality (Ideal B)	In NZ during 1990-06, there were large increases in the number of children and young people admitted to hospital with serious bacterial infections. In absolute terms, much of this increase was due to a large rise in admissions for serious skin infections, with admissions for all other causes either remaining static or increasing (with the exceptions of meningococcal disease and meningitis, which both exhibited a downward trend during the early-mid 2000s). During 2002-06, admissions for serious bacterial infections also varied with age, with admissions for meningitis being highest <1 year, admissions for osteomyelitis being more common during the childhood years and admissions for septic arthritis and mastoiditis being more common <5 years of age. Admissions were also higher for Pacific > Māori > European > Asian / Indian children and young people, males and those living in the most deprived areas.	During 1990-2006, hospital admissions for serious bacterial infections in Counties Manukau increased, reached a peak in 2000-01 and thereafter began to decline. Throughout this period, admissions in Counties Manukau were higher than the NZ average. During 2002-06 the most common reason for a serious bacterial admission in Counties Manukau was for a skin infection, with serious skin infections accounting for 74.1% of admissions in this category.
	Meningococcal Disease Admissions (Proxy B) Mortality (Ideal B)	During the 1990s NZ experienced a large increase in the number of hospital admissions and deaths from meningococcal disease, although numbers have tapered off markedly since 2002-03. During 1996-06, while admissions for meningococcal disease declined for all ethnic groups, in absolute terms reductions were greatest for Pacific children and young people. Despite this, during 2002-06 hospital admissions for meningococcal disease were higher for Pacific and Māori children and young people, males and those in the most deprived areas. In addition, admissions and mortality were also higher amongst children <5 years of age, although a smaller peak also occurred amongst those in their mid to late teens.	In Counties Manukau, meningococcal disease admissions increased rapidly during the early 1990s, reached a peak in 1996-97 and thereafter declined. Admissions during 2006 were the lowest for 12 years. Admissions in Counties Manukau were higher than the NZ average throughout the duration of the epidemic. During 1990-04 26 Counties Manukau children and young people died as the result of meningococcal disease.
	Rheumatic Fever Admissions (Proxy B) Mortality (Ideal B)	In NZ during the past decade, hospital admissions for rheumatic fever and rheumatic heart disease remained relatively static, while mortality averaged 1-3 cases per year. During 2002-06, rheumatic fever admissions peaked in late childhood / early adolescence, while rheumatic heart disease admissions were relatively constant >5 years of age. In contrast, deaths due to acute rheumatic fever and rheumatic heart disease were most frequent during the teenage years. Admissions for rheumatic fever were also higher for Pacific and Māori children and young people, males and those in the most deprived areas.	During 1990-06 hospital admissions for acute rheumatic fever and rheumatic heart disease in Counties Manukau were higher than the NZ average. In addition, during 1990-04 a total of 11 children and young people in Counties Manukau died as the result of rheumatic fever or heart disease.

Stream	Current Indicators: Type & Data Quality	New Zealand Level Distribution and Trends	Counties Manukau Distribution and Trends
Infectious Diseases	Skin Infections Admiss (Proxy B-C) Mortality (Ideal B)	During the past decade, New Zealand's hospital admission rates for serious skin infection have risen progressively, with the most rapid increases occurring during the mid-late 1990s. During this period however, only one death was attributed to a serious skin infection in this age group. During 2002-2006, hospital admissions for serious skin infection had a bi-modal distribution, with the highest rates occurring amongst children <5 years, followed by young people in their late teens and early 20s. Rates were also higher for Māori and Pacific children and young people, males and those in the most deprived areas.	In Counties Manukau during 1990-06, admissions for skin infections increased for both children & young people. While admissions for children were higher than the NZ average, admissions for young people were similar. During 1996-06, while admissions increased for all ethnic groups, rates remained higher for Pacific and Māori children and young people.
	Tuberculosis Admiss (Proxy B-C) Mortality (Ideal B)	In NZ during the late 1990s-early 2000s, hospital admissions for TB gradually increased, although more recently they have begun to taper off. In addition, during 1990-04, 3 NZ children / young people died from TB. During 2002-06, TB admissions were higher for young people in their late teens / early 20s, those in the most deprived areas, females and non-Europeans.	During 1990-06, TB admissions in Counties Manukau were higher than the NZ average. There were 2 deaths from TB in Counties Manukau children and young people during 1990-04.
	Gastroenteritis Admissions (Proxy C) Mortality (Ideal B)	In NZ hospital admissions for gastroenteritis in children and young people have increased in recent years, while deaths have remained static at ~1-2 cases per year. During 2002-06, admissions for gastroenteritis were highest for children during their first year, while mortality during 2000-04 followed a similar pattern. Admissions for children 0-14 years were also higher for those in the most deprived areas & Pacific and Asian / Indian children, with hospital admissions for those 0-24 years increasing for all ethnic groups in 1996-06.	During 1990-06, gastroenteritis admissions in Counties Manukau children and young people steadily increased. While admissions for young people were similar to the NZ average, admission rates for children were higher during the last 9 years. During 1990-2004 there were 3 deaths from gastroenteritis in Counties Manukau children and young people. During 1996-2006 gastroenteritis admissions were highest for Counties Manukau Pacific children and young people.
Respiratory Diseases	Lower Respiratory Morbidity & Mortality Admiss (Proxy B-C) Mortality (Ideal B)	In NZ, a large burden of morbidity and mortality during childhood is attributable to respiratory diseases. During 2002-06, asthma and bronchiolitis were the leading causes of lower respiratory admissions in NZ children, accounting for 65.7% of lower respiratory admissions in this period. In contrast, pneumonia accounted for 63.6% of lower respiratory deaths during 2000-04. During 2002-06 admissions for lower respiratory conditions in NZ were higher for those <5 years, Pacific & Māori children and those in the most deprived areas.	In Counties Manukau during 1990-06, admissions for asthma and lower respiratory infections both increased, with rates for both outcomes being higher than the NZ average during the past 5 years.

Stream	Current Indicators: Type & Data Quality	New Zealand Level Distribution and Trends	Counties Manukau Distribution and Trends
Respiratory Diseases	Bronchiolitis Admiss (Proxy B-C) Mortality (Ideal B)	In NZ, hospital admissions for bronchiolitis in infants <1 year rose steadily during the 1990s and early 2000s, although data for 2004-06 suggest that rates may be beginning to taper off. In contrast mortality, which initially decreased during the early 1990s, has remained relatively static at 1-2 deaths per year, during the last 12 years for which data was available. Bronchiolitis is predominantly a disease of infancy, with the majority of hospital admissions and deaths occurring during the first year of life. In addition to young age, hospital admissions for bronchiolitis are higher for Pacific and Māori infants, males and those living in the most deprived areas.	During 1990-06, bronchiolitis admissions in Counties Manukau increased, reached a peak in 2002-03 and then declined. During this time, admissions were higher than the NZ average. During 1990-04 there were 5 deaths from bronchiolitis in Counties Manukau. During 1996-06, admissions were higher for Pacific >Māori >European >Asian infants.
	Pertussis Admiss (Proxy B-C) Mortality (Ideal B)	During the past 17 years, pertussis epidemics have occurred in NZ at regular 3-5 year intervals, with hospital admissions for children <1 year following a similar pattern. In addition, during the past 5 years for which data was available, a total of 4 deaths were attributed to pertussis. While pertussis may affect any age group, it is among children <1 year of age that the disease is most severe, with the majority of hospital admissions and all recent deaths occurring in this age group. In addition, during 2002-06 admissions for pertussis were highest for Pacific and Māori infants and those in the most deprived areas.	During 1990-06, Counties Manukau experienced episodic epidemics of pertussis which occurred in conjunction with the larger national epidemics. During the last 2 epidemics, Counties Manukau's admissions were higher than the NZ average. During 1990-04 there were 2 deaths from pertussis in Counties Manukau.
	Pneumonia Admiss (Proxy B-C) Mortality (Ideal B)	In NZ during the past 16 years, both pneumonia admissions and mortality have remained relatively static. During 2002-06, pneumonia admissions were highest for infants and children 1-2 years of age, Pacific and Māori children, males and those in the most deprived areas. Mortality was highest for those <1 year of age.	During 1990-06, pneumonia admissions in Counties Manukau children increased, reached peak in 2002-03 and then declined. Admissions in both age groups were higher than the NZ average during this period. During 1990-04 there were 28 pneumonia deaths in Counties Manukau. During 1996-06, admissions were higher for Pacific>Māori> European & Asian children & young people.
	Bronchiectasis Admiss (Proxy B-C) Mortality (Ideal B)	In NZ hospital admissions for bronchiectasis have increased dramatically during the past decade, while deaths have remained more static. Care must be taken when interpreting these trends, as it remains unclear whether they represent an increase in the underlying burden of disease, or an increase in the use of High Resolution CT to diagnose bronchiectasis in this population. During 2002-06, hospital admissions were highest for children 0-14 years, Pacific & Māori children & young people and those in the most deprived areas.	During 1990-06, bronchiectasis admissions in children & young people in Counties Manukau increased rapidly, reached a peak in 2004-05 and thereafter declined. During this period, admissions in Counties Manukau were higher than the NZ average.

Stream	Current Indicators: Type & Data Quality	New Zealand Level Distribution and Trends	Counties Manukau Distribution and Trends
Respiratory Diseases	Asthma Admiss (Proxy B-C) Mortality (Ideal B)	In NZ during the past decade asthma admissions amongst children and young people have gradually declined, although 2004-06 saw an increase in admissions amongst children 0-14 years. In contrast, mortality remained relatively static during this period. While hospital admissions during 2002-06 were highest amongst children <5 years of age, mortality during 2000-04 was highest amongst adolescents and those in their early 20s. Hospital admissions were also higher for children in the most deprived areas, males and Pacific, Māori and Asian / Indian children.	During 1990-06, asthma admissions in Counties Manukau children & young people gradually increased, with rates in both age groups being higher than the NZ average during the last 7 years. There were 17 deaths from asthma during 1990-04. During 1996-06, asthma admissions were higher for Counties Manukau Pacific > Māori > European and Asian children and young people.
Chronic Conditions	Diabetes & Epilepsy (Bookmark C)	Type 1 diabetes and epilepsy are two conditions which impact significantly on the health and wellbeing of children and young people. They also have significant implications for health care resourcing. In NZ during the past two decades, the incidence of Type 1 diabetes has increased, and while less time series information is available for epilepsy, analysis of mortality data during 2000-04 suggests that it a significant cause of mortality in this age group.	During 2002-06, the most common reason for a epilepsy admission in Counties Manukau was for generalized idiopathic epilepsy, while the most common type of diabetes admission was for Type 1 (Insulin Dependant) diabetes.
	Cancer (Ideal B)	Cancer in NZ children is relatively rare, with just over 1/3 of cases being attributed to leukaemia. Other types, in descending order of frequency are brain, bone and connective tissue, non-Hodgkin's lymphoma and kidney. These 5 sites account for >80% of childhood cancer registrations and >70% of childhood cancer deaths. From a population health point of view, while further research is necessary before evidence based primary prevention strategies can be developed to address the incidence of childhood cancer, ensuring the equitable access to specialist services, family support and the reimbursement of travel / associated costs remains of considerable importance in reducing the burden cancer places on the families of children and young people.	In Counties Manukau during 2000-04, the cancer most frequently notified to the NZ Cancer Registry in children was lymphoid leukaemia, followed by tumours of the brain. In the 15-24 year age group, cervical carcinoma in situ was the leading cause of notification to the NZ Cancer Registry, while melanoma was the leading form of malignancy. In both age groups, small numbers made regional cancer mortality data difficult to interpret.
Disability	Disability Prevalence (Bookmark B-C)	In 2001, the Household Disability Survey estimated that 11% of NZ children (0-14 yrs) had a disability. While little information was available on the precise nature of these disabilities, in general terms they included chronic health problems, sensory impairments, psychological problems, intellectual disabilities, speech, learning and developmental problems and the need for special education or technical equipment. Of those with a disability, 41% had existed from birth, 33% were caused by an illness and 3% resulted from injury.	

Stream	Current Indicators: Type & Data Quality	New Zealand Level Distribution and Trends	Counties Manukau Distribution and Trends
Disability	Congenital Anomalies Evident at Birth (Proxy B-C)	In NZ the number of children born with Down Syndrome has remained relatively static during the past 25 years, while the number with Neural Tube Defects has declined dramatically. In reality, both trends reflect the complex interplay between opposing factors including access to prenatal diagnosis and the selective termination of pregnancy, the personal choices of parents and population level shifts in known (e.g. maternal age) and unknown risk factors.	In Counties Manukau during the past 10 years, on average 8 babies per year were identified as having Down Syndrome at the time of birth.
	Blindness and Low Vision (Ideal B-C)	While it is difficult to precisely estimate the number of NZ children and young people with visual impairments, the Vision Education Agency suggests that in 2006 1,323 children and young people in NZ required educational support as a result of a visual impairment. These students had a variety of impairments, ranging from low vision → blindness → deaf-blindness → cortical visual impairments and used a variety of communication modalities (e.g. large print, visual aids, Braille and signing systems). In addition, 60.4% had other disabilities which had minor → major impacts on their functional ability.	In the Northland / Auckland region a total of 403 children and young people were enrolled at the Auckland Visual Resource Centre and 17 at Manurewa High School, with 88 being involved in early childhood education, 271 being at primary school and 115 attending schools at the secondary level.
	Permanent Hearing Loss (Ideal C)	Hearing loss during the early years is of significant concern, as delays in intervention may lead to impaired language development and long term, may impact negatively on cognitive development, academic performance and subsequent career choice. In NZ each year, approximately 120 children meet the inclusion criteria for the Deafness Notification Database and 20 are admitted to hospital for cochlear implant surgery. Evidence would suggest however, that NZ's current high risk approach to detection is resulting in significant delays, with the average age of detection of moderate or greater loss in 2004 being 45.3 months. It is hoped that the roll out of the Universal Newborn Hearing Programme will lead to a reduction in the age at first detection of hearing loss and better outcomes for these children.	In the Auckland Region during 1998-2004, on average, 42 children per year met the inclusion criteria for the Deafness Notification Database, although as notifications were not broken down by DHB, precisely estimating of the number of children with permanent hearing loss by DHB is difficult.
Mental Health	Issues Experienced by Callers to Telephone Counselling Services (Bookmark / Proxy C)	In New Zealand, the need for child and youth mental health services can be seen as spanning a continuum, with the types of issues being dealt with by child and youth telephone counselling services, at one end reflecting the everyday issues and concerns experienced by many New Zealand children and young people. Analysis of the calls received by the 0800WHATSUP telephone counselling service and Youthline's Youth Help Line Service during 2006 suggests that many of these concerns relate to issues with peer relationships and bullying, although relationships with family and partners (girlfriends and boyfriends) also feature prominently. The large number of calls which were unable to be answered also potentially suggests that there may be a large amount of unmet need in this area.	

Stream	Current Indicators: Type & Data Quality	New Zealand Level Distribution and Trends	Counties Manukau Distribution and Trends
Mental Health	Mental Health Inpatient Admissions (Bookmark / Proxy C)	In NZ during 2002-06, the most common reasons for hospital admissions with mental health issues in young people were for schizophrenia, followed by depression and bipolar affective disorder. The risk factor profiles for these inpatient mental health diagnoses varied markedly, and while the majority of admissions were higher for those in the most deprived areas, admissions for schizophrenia were also higher for males and Māori and Pacific young people. In contrast, admissions for depression were higher for females and European young people, while admissions for bipolar affective disorder were higher for Māori and European young people. Hospital admissions for eating disorders however, while being higher for females and European young people, were significantly lower for those in the most deprived areas.	In Counties Manukau during 2002-06, the most common reason for an inpatient mental health admission was for schizophrenia, followed by schizotypal / delusional disorders. While rates for a number of these categories appear to be lower than the NZ average, such figures are difficult to interpret, as many mental health services in NZ are offered on an outpatient basis, and thus access to inpatient mental health services may fail to accurately reflect the true burden of disease, or access to such services in an ambulatory care setting.
	Self Harm and Suicide (Admiss Proxy B-C) (Mortality Ideal B)	Suicide rates for NZ young people increased during the early 1990s, reached a peak in 1996, and thereafter began to decline. During 2004 however, there was again an increase in suicide mortality in this age group. While suicide rates during 2000-04 were highest for young men in their early 20s, hospital admissions for self-inflicted injuries during 2002-06 were highest for young women in their mid to late teens. In addition, self inflicted injury admissions were also higher for European and Māori young people, females and those in the more deprived areas. In contrast, during 2000-04 suicide mortality was higher for Māori young people, males and those in the more deprived areas.	During 1990-06, hospital admissions for self inflicted injuries in Counties Manukau declined, while suicide mortality remained relatively static. Despite this, during 1990-04 a total of 207 Counties Manukau young people (15-24 years) died as the result of suicide.
Sexual and Reproductive Health	Teenage Pregnancy (Ideal B)	Teenage pregnancy encompasses births, terminations and miscarriages amongst women <20 years. While NZ's teenage birth rates declined during 1980-04, teenage pregnancies did not, with a gradual increase in the number of teenagers seeking an abortion. Thus by 2003, for every teenage birth, there was one corresponding therapeutic abortion. During 2002-06, teenage births in NZ were highest for Māori and Pacific women and those in the most deprived areas. Higher teenage birth rates for Māori and Pacific women resulted from both a shift to the left in the maternal age distribution, as well as from higher overall fertility for Māori and Pacific women.	During 1990-06, Counties Manukau's teenage birth rates were consistently higher than the NZ average. During 1996-06, teenage birth rates in Counties Manukau were higher for Māori > Pacific > European > Asian / Indian women.

Stream	Current Indicators: Type & Data Quality	New Zealand Level Distribution and Trends	Counties Manukau Distribution and Trends
Sexual and Reproductive Health	Sexually Transmitted Infections (Bookmark C)	National laboratory based surveillance during 2001-06 suggested that chlamydia and gonorrhoea were both relatively common infections amongst those aged <25 years and that rates for both conditions were exhibiting a general upward trend.	While no rate data was able to be extrapolated from Sexual Health and Family Planning Clinic data during this period, notifications from these clinics also suggested that chlamydia, gonorrhoea, genital warts and genital herpes were relatively common amongst the Counties Manukau youth population.