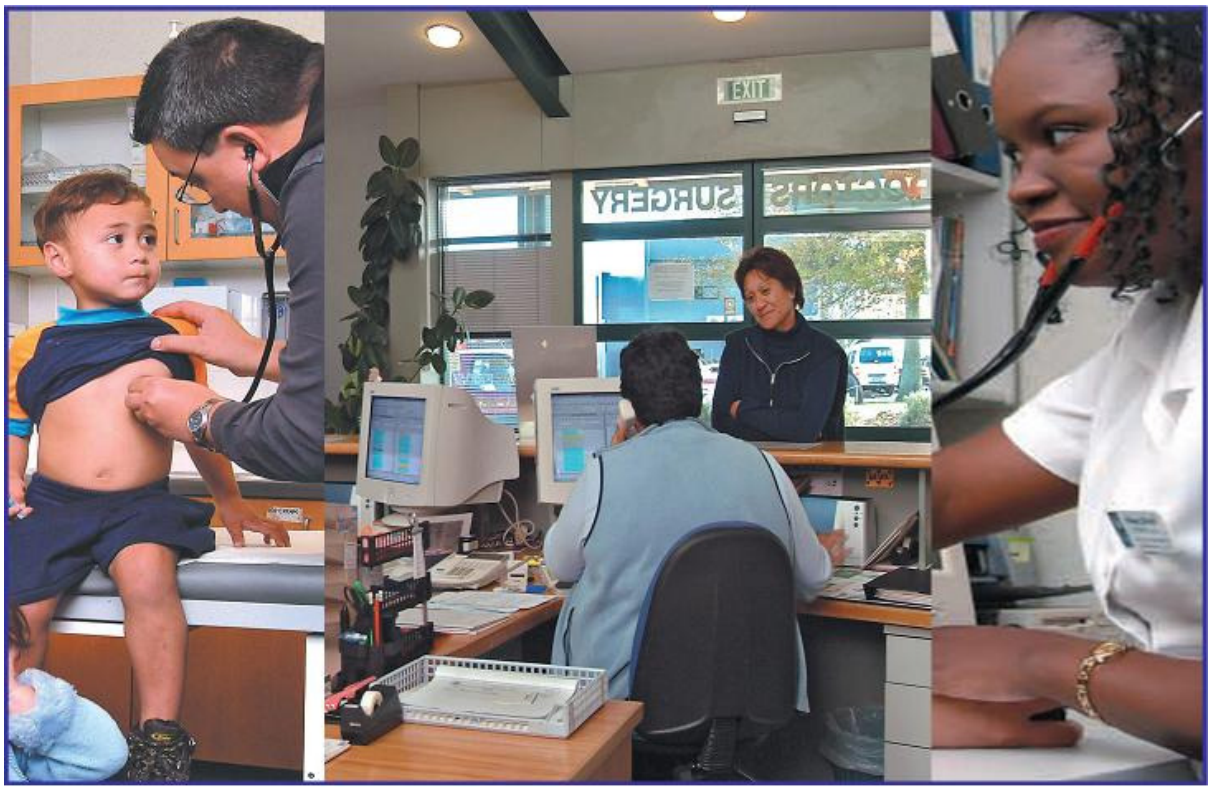
COUNTIES MANUKAU DISTRICT HEALTH BOARD

A Community Partnership

CMDHB: Changes in Primary Health Care between 2001 and 2009



June 2010

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Executive Summary

This report summarises the activity in Primary Health Care (PHC) in the Counties Manukau district from 2001 to 2009. The focus of this report is on PHC provided by Primary Health Organisations (PHOs), established under the Primary Health Care Strategy (subsequently referred to as the Strategy) from 2002. PHC is a comprehensive approach to improving health focussed on equity, active community participation and intersectoral integration; it includes primary care, which tends to focus on the provision of first contact health services. It is acknowledged that this report does not include exploration of all of the changes that have occurred in PHC provision in the district and tends to focus on the provision of primary care and the PHC activities in PHOs only. Further review of the district's non-PHO PHC organisations' activities is recommended.

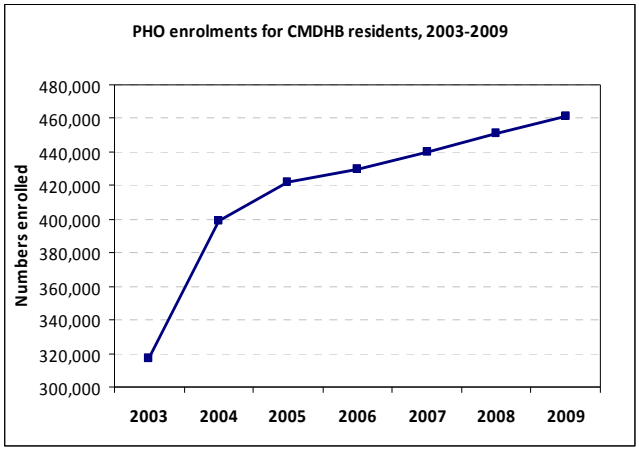
Both quantitative and qualitative data was used in compiling this report. In the majority of cases direct measures were unavailable for key indicators and the use of proxy measures was required. Fourteen interviews with key stakeholders in PHO PHC in Counties Manukau were undertaken along with a review of relevant local and national literature. The qualitative arm of this study helps bridge some of the gaps in the quantitative data and key themes are presented in text boxes adding further depth to the report. However there are limitations to the conclusions that can be drawn due to the absence of complete and continuous primary care data sets for the district in many areas of interest over the time period of the study.

The report is structured in alignment with the six key directions of the Strategy and reviews these in the context of Counties Manukau, dividing PHC changes under the Strategy into access, utilisation, prevention, health promotion, reducing acute demand and models of care. To 'set the scene' the report begins with a snapshot view of the health status of the Counties Manukau population in 2001, along with details on the development and funding of the PHOs in the district. The report concludes with a further snapshot of health status in 2009 and learning's relevant to CMDHB, PHC providers and the community.

Snapshot of Counties Manukau health status in 2001 and PHO development

In 2001 Counties Manukau was home to a relatively young and fast growing population. Over a third of the population lived in areas classified as the most socioeconomically deprived (defined as NZDep 9 and 10 decile areas). The district also had some of the most stark health inequalities in the country.

Research suggested that the Counties Manukau population did not appear to be accessing primary care in proportion to their recognised health need. The use of targeted primary care subsidies was of limited success with 30% of eligible residents not holding a Community Services Card (CSC). Cost was cited as the most common barrier to assessing primary care in the district.



The presence of growing health inequalities nationally along with the growth in acute demand in the hospitals led to a reform in primary care with the development and implementation of the Strategy.

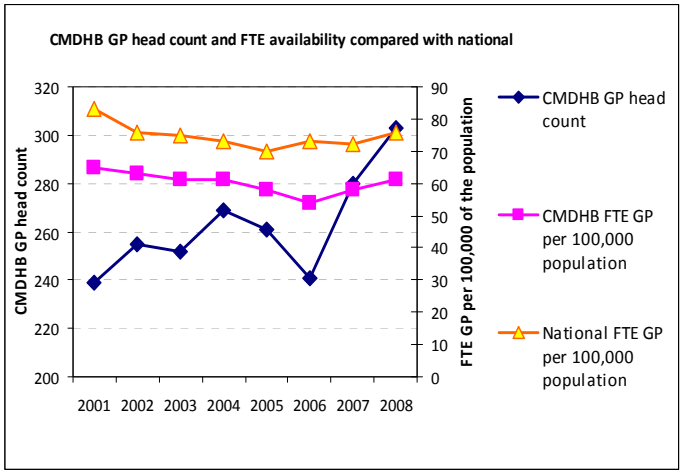
Eight PHOs were established in Counties Manukau between 2002 and 2009. At the end of 2009 95% of the district was enrolled with a PHO, having access to the additional funding that came with the Strategy. There

are insignificant differences in enrolment by ethnicity.

Under the Strategy funding for first contact services (essentially services provided by general practice teams) has increased by 43%, from $41 million in 2003/04, to $59 million in 2008/09. In total $92.5 million was spent in the last financial year in Counties Manukau on the main PHO PHC funding streams: capitation for first contact services, Health Promotion (HP), Services to Improve Access (SIA), Very Low Cost Access (VLCA), Care Plus and the Chronic Care Management (CCM) programme. An additional $94.9 million was spent on community pharmaceuticals and $25.7 million on community laboratory testing.

Access

Access to primary care can be divided into four aspects: geographical; cultural; functional; or financial. Barriers can therefore be due to one or a number of issues associated with these aspects.



Geographical barriers, including the amount and placement of general practice services, can create significant issues in accessing primary care. In 2001 Counties Manukau was 50 full-time equivalent (FTE) GPs short compared to the national average, with variable numbers of FTE GPs in different localities. Whilst data is incomplete, what is available suggests that while there has not been an increase in the ratio of 1 FTE GP to 1600 residents between 2001 and 2009, Counties Manukau has managed to maintain its GP workforce, on the background of rapid population growth, which was not guaranteed prior to the reform. The stable FTE ratio in the face of the increase in GP head count indicates an increasing number of GPs working less than full-time.

Nevertheless to meet the health needs created by population growth, an ageing population, and the burden of chronic disease, Counties Manukau will need at a minimum an additional 100 FTE GPs in the next 20 years to maintain 1 FTE GP:1600. Stakeholder interviews suggest there is also significant workforce capacity and related access issues for primary care nurses, community health workers, and allied health professionals but these needs are not currently well-documented.

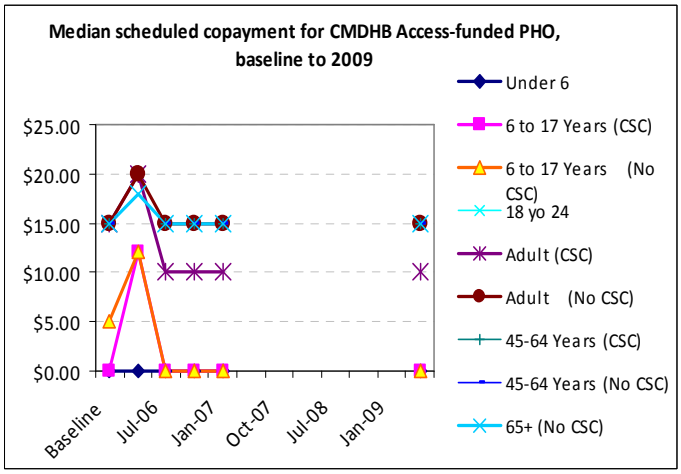
Further emphasis and study is also required to identify how best to meet the cultural needs of the Counties Manukau population. It is generally acknowledged that Maaori and Pacific peoples' utilisation of primary care is low in proportion to their recognised health needs. Whilst financial barriers are significant, the impact of having culturally competent primary care services was emphasised by many key stakeholders. Ensuring workforce cultural competency training and increased participation in the workforce by Maaori, Pacific peoples and other ethnic groups from the community will be important in removing this barrier.

Similarly making it functionally easy to access primary care is necessary to help reduce health inequalities in the district. Affordable after-hours care has been largely absent in Counties Manukau during the time period of interest and there has been no change in the proportion of people accessing care at the Middlemore Emergency care department (EC) between 6pm and 8am as a result. In 2010 an agreement was signed with four practices to ensure the provision of affordable accessible after-hours care up until 10pm each night which has the potential to improve the functional accessibility of primary care.

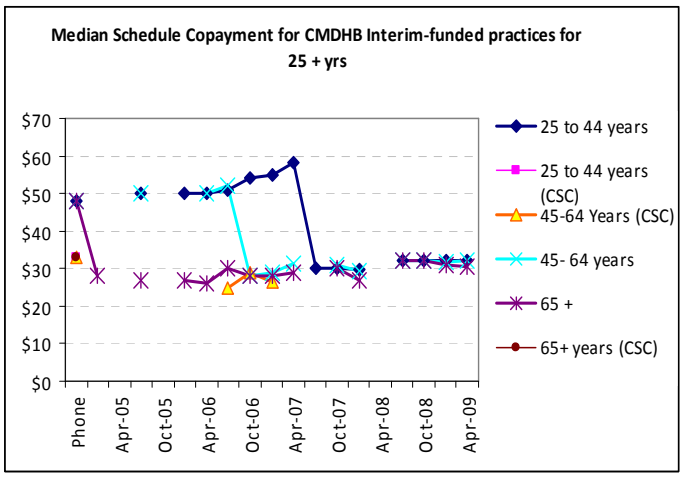
Whilst the barriers discussed so far are important to continue to focus on, a significant part of the Strategy was to ensure universal low cost copayments, in particular for those with high needs in order to reduce financial barriers.

In the implementation of the Strategy primary care general practices were divided into either the Interim or Access-funding pool. Access-funded practices were defined as those that had more than 50% high needs enrolled population (Maaori, Pacific, and others living in NZDep 9 and 10 decile areas) whereas Interim-funded practices had less than 50% high needs enrolled population. Access-funded practices received increased funding for first contact services via capitation from 2002, whereas Interim-funded practices received the additional funds in a staggered roll-out by age group between 2002 and 2007.

To assess the success of the Strategy in providing low cost copayments, the median scheduled copayment for Interim and Access-funded practices in the district has been analysed. Data about invoiced copayments would have been preferable but was unavailable and there are limitations to the use of scheduled figures. Data was also unavailable prior to 2005 and this misses the roll-out of funding to all Access-funded practices and to under-sixes, 6-17 year olds and 65+ year olds enrolled in Interim-funded practices. In addition CSC copayments are not routinely recorded and the exact reduction in fees (if any) cannot be determined.



From the data available, overall median scheduled copayments have trended down over time. Very Low Cost Access (VLCA) funded practices maintain low copayments regardless of CSC status, in line with government objectives. More than 50% of Counties Manukau residents are enrolled in these practices which are relatively evenly distributed in the most socioeconomically deprived areas of the district. Interim-funded practices showed a significant drop in scheduled copayments immediately after the additional subsidy was rolled out. However copayments have then trended up over time. The same is true for practices that remain under Access-funding rather than VLCA. Copayments for these practices have increased in the latter years of the time period of this study and increases sit above what one would expect from medical inflation.

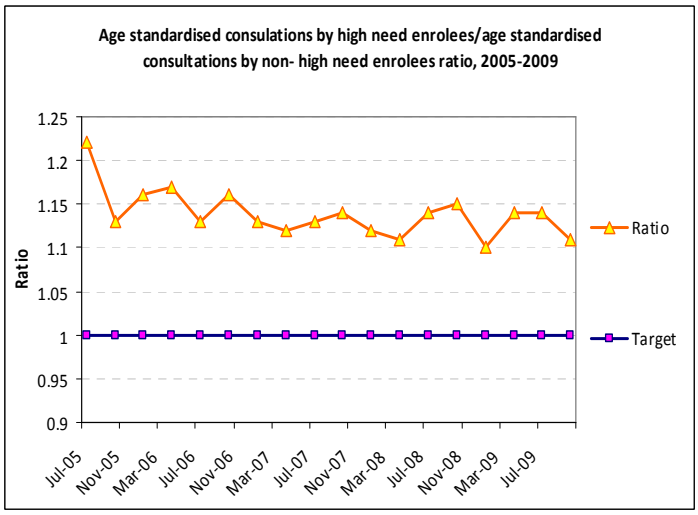


The Strategy also introduced the Services to Improve Access (SIA) scheme which is an important new source of funding for the district. SIA provides an additional $8 to $9 million per annum to Counties Manukau PHOs to ensure barriers to access are reduced for their high need populations with the goal being to reduce health inequalities. SIA funding has been used in a variety of ways by the PHOs in the district, focusing on financial, functional, cultural or geographical access barriers or a combination of these.

Utilisation

It was a challenging exercise to determine the utilisation of primary care by Counties Manukau residents between 2001 and 2009 due to the lack of complete primary care datasets.

There was only one direct measure of utilisation and this came from the PHO Performance Programme (PPP) data - the ratio of high needs consultations over non-high needs consultations. Since 2005 the high needs group in the district have been accessing primary care between 10-21% more than non-high needs groups.

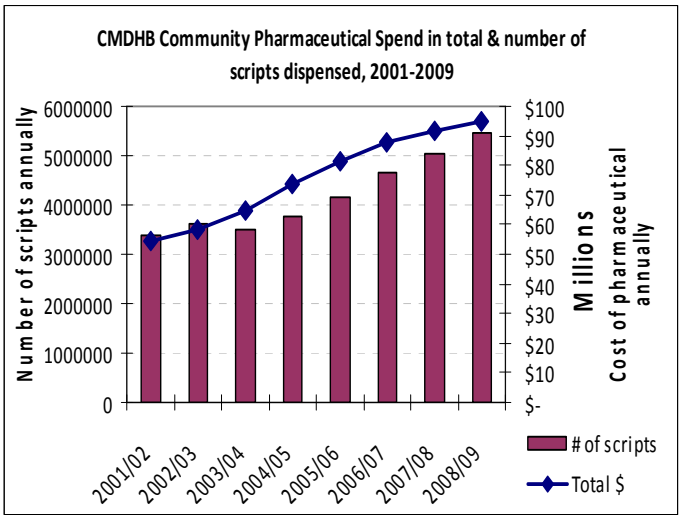


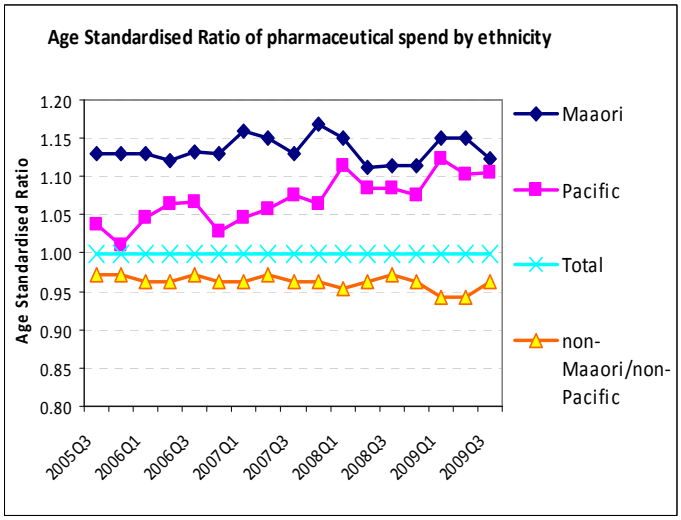
However the results of the high needs group were unable to be disaggregated by ethnicity so provide a rather crude measure of utilisation. The measure was further limited by only being available from 2005.

To determine if there was a change in utilisation from 2001 the use of proxy measures proved necessary. Community pharmaceutical expenditure is a reasonable measure of need. In 2001 Counties Manukau pharmaceutical spend was 15% below what would be expected based on health need. This figure is unable to be disaggregated by ethnicity.

In 2001/02 $134 per capita was spent on community pharmaceuticals. This increased to a $201 per capita by 2008/09 which is an increase of 50%, although the impacts of inflationary effects are not accounted for. The number of scripts dispensed increased from 8 per person in 2001/02 to 12 in 2008/09, an increase of 39% or 2 million scripts in total.

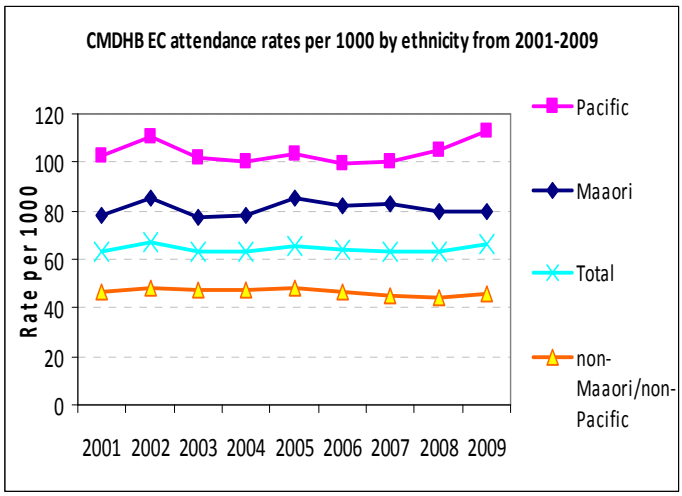
One would expect higher rates of expenditure for Maaori and Pacific peoples if they were utilising primary care proportionally to their health need. By the end of 2009 community pharmaceutical expenditure for Maaori and Pacific peoples compared to the total population had increased to 118% and 116% respectively which is an encouraging step to reducing the inequities in health outcomes in the district.





Emergency Care (EC) triage 4 and 5 categories are conditions that are seen as less urgent and presentations at EC for this level of care can be used as another proxy measure for primary care utilisation in Counties Manukau from 2001 to 2009 (expecting that increased primary care utilisation might lead to decreased EC 4-5 presentations).

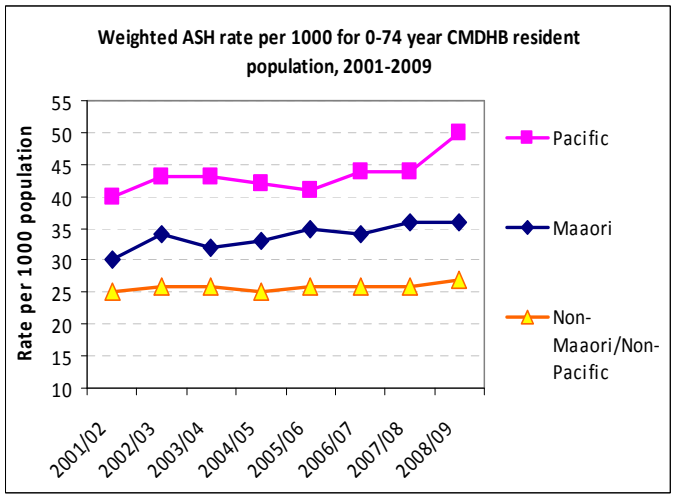
Overall, attendances to Middlemore EC for triage 4-5 cases increased by 5% between 2001 and 2009 but were relatively stable for all ethnic groups until 2006. From 2007 rates trended up by 5% for the total population with Pacific people's rates increasing by 12% in the same timeframe.



Unfortunately the gap between high need ethnic groups and non-Maaori/non-Pacific in Counties Manukau has not closed over this time. In 2009 Maaori were 50% more likely and Pacific peoples 90% more likely than non-Maaori/non-Pacific to utilise EC for conditions that could potentially be managed in primary care.

ASH rates are another proxy, measuring conditions that could potentially respond to interventions that are deliverable in the community in a primary care setting. Global ASH rates for 0 to 74 year olds in Counties Manukau were relatively stable over the period 2001-2006 but are now increasing and are higher than the national average.

Since 2001/02 Pacific ASH rates per 1000 of the population for 0 to 74 year olds have grown by 25%, Maaori by 20% and non-Maaori/non-Pacific by 8%. Of particular concern is the recent sharp trending up of rates for Pacific peoples, increasing by 14% in the last financial year. If the Strategy was having the desired effect, all things being equal, one would have expected a decrease in ASH rates, not an increase. The increase in Pacific peoples' utilisation of EC for less urgent conditions and ASH rates as a proxy for reducing utilisation of primary care is given further weight by the National Evaluation of the Strategy which reviewed GP consultation rates from 2001 to 2007. Pacific consultation rates are 27% less than 'others' and dropped off significantly in 2006/07.



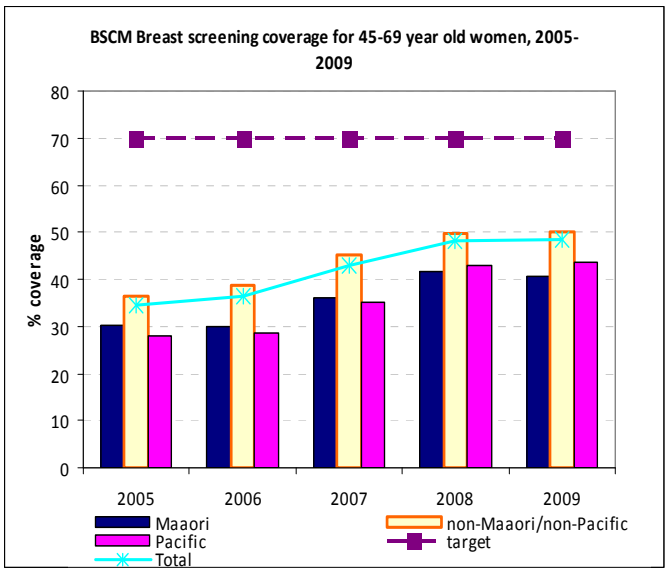
Overall the impression given is of gradually improving utilisation of primary care over the 2001 to 2007 period, with perhaps some reversals in 2008 and 2009 as copayments rise and effects of the national and global recession come into play. It is unclear if the trending up of EC triage 4 -5 rates for Pacific children (and adults to a lesser extent) will continue. The rates of attendance in 2009 are partially complicated by the impact of the "Swine flu" epidemic. Nevertheless the sharp rise in EC triage 4-5 attendance rates and ASH rates over time, particularly for Pacific peoples, is a cause for concern given that the economic circumstances of Counties Manukau families are likely to continue to be challenged in the coming years.

Prevention

A strategic shift was made in the Strategy to move the focus from the provision of acute care to an individual to providing preventive care and health-promoting activities for the entire enrolled population. Prevention is a key component in reducing health inequalities.

Cervical screening, breast screening, childhood immunisation and influenza vaccination were used as measures of prevention in primary care for this report. Overall there has been improvement in the coverage of these preventive interventions for Counties Manukau Maaori and Pacific peoples, especially with regards to immunisation rates. At the end of 2009, 78% of the total Counties Manukau 24 months of age population were fully immunised, with 79% of Pacific and 69% of Maaori.

However progress is still required to achieve the Ministry of Health's immunisation target of 95% coverage by 24 months of age along with improving the timeliness of immunisation, in order to have the maximum effect on reducing the burden of vaccine preventable disease in the community and reducing health inequalities.



In a similar fashion, although there have been recent gains and closing of the gaps in cervical and breast screening, coverage needs to increase markedly, especially for Counties Manukau Maaori and Pacific women, to reach the Ministry of Health targets and get the maximum health benefit from screening.

Health Promotion

This part of the report focuses on health promotion in primary care that originated from new health promotion funding provided by the Strategy. There are many other health promotion initiatives in the district that are important. However these are outside the scope of this report.

Many initiatives have a number of funding streams including the dedicated PHO health promotion funding, SIA funding and additional contracts from CMDHB and the Ministry of Health. Examples of health promotion initiatives by PHOs in the district include an oral health promotion programme focusing on Maaori tamariki and linking to dental health services through the use of koohanga reo, the piloting of a health-promoting practices framework in several general practices and the Healthy Kai Otara and Mangere programme which promotes the sale of healthy foods in their communities.

One of the Ministry of Health's aims with health promotion was for PHOs to align with other health promotion providers in the community. Interviews for the qualitative arm for this report suggested that whilst progress has been made, there is still improvement needed in the provision of multidisciplinary preventive care and health promotion to optimise the district's population health outcomes and to reduce inequalities.

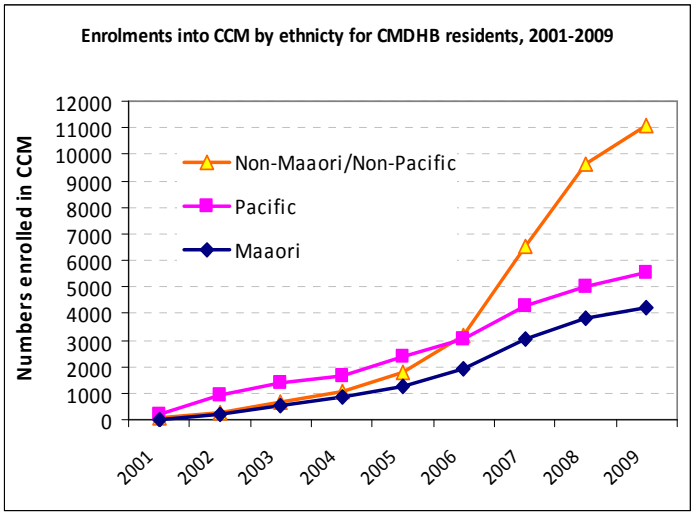
Reducing Acute demand

From the 1990s Middlemore Hospital faced significant growth in the number of acute medical admissions. The population of Counties Manukau was growing faster than the national average, particularly Maaori and Pacific communities. In 1999 the organisation identified that the majority of

the increased admissions to Middlemore hospital were avoidable admissions which could be sensitive to timely primary care intervention. The most significant contributors to acute demand were cardiovascular disease (CVD), congestive heart failure (CHF), diabetes and respiratory conditions such as chronic obstructive pulmonary disease (COPD).

The Chronic Care Management programme was developed as a response. Currently there are five CCM modules for the management of diabetes, COPD, CVD, CHF and most recently depression. Care Plus funding for additional chronic disease management was introduced nationally by the Ministry of Health in 2004 and in Counties Manukau has been used to supplement the CCM programme. There has been a rapid increase in enrolments onto CCM over time with 85% of the district's practices participating in at least one programme.

Some gains have been made in the proxy measures of outcome (key performance indicators), particularly for diabetes patients. However for the majority of indicators much of the gain in clinical parameters occurred early in the life of the CCM programme, with performance tending to level out in recent years.



In addition many of the CCM modules do not have the numbers of high needs patients enrolled as would be expected given their health status. This is particularly concerning for the CVD module given the morbidity and mortality impacts of this disease on Maaori, Pacific and South Asian adults in the community. The uptake of the CCM programme by relatively healthier populations can exacerbate health inequalities. The recent steep increase in enrolment of non-Maaori/non-Pacific populations relates to the introduction of the depression module. Therefore further effort needs to be made to engage more effectively with these higher need populations to ensure an appropriate degree of participation. This raises the question about whether there should be a tailoring of certain CCM modules to high need populations for key conditions given the recently introduced cap on enrolment volumes due to financial constraints.

Aside from chronic disease and long-term conditions, it was also identified that there were a number of other ambulatory sensitive hospitalisations in Middlemore that could be more cost effectively managed in primary care if financial and functional access could be improved. The introduction of guidelines and pathways with an increased focus on quality improvement, along with a desire to reduce acute demand, led to the introduction of Primary Care Options for Acute Care or POAC in 2001. Cellultis, DVTs, gastroenteritis and respiratory infections are typical examples of ambulatory sensitive conditions that are targeted by POAC for more effective care in the community. More than 5000 referrals are received for POAC annually, with 85% avoiding an EC attendance. Referrals to POAC have increased by 18% in the last year and specific work to increase Maaori use of the programme has begun in order to improve health outcomes.

Between 2001 and 2007 there was a slowing of acute demand with close to a zero percent growth rate in adult acute medical admissions on the background of a 3% increase in population growth plus ageing. It is hypothesised that both the CCM and POAC programmes along with reductions in copayments at primary care contributed to this.

However between 2008 and 2009 there has been an 8% growth in acute adult medical admissions which is 5% above expectations based on population growth and is in alignment with the trending up of ASH rates and EC rates since 2007. Therefore it is important that programmes such as CCM and POAC become as efficacious and cost efficient as possible in reducing acute demand and having a positive impact on health.

Models of care

There are many signals that a rethink of the delivery of primary care in the district is in order to meet the demands from the growing and ageing population and an increased burden of complex chronic disease. Qualitative interviews demonstrated that a locality based approach with greater integration between services is desired by the majority. The current "Better, Sooner, More, Convenient" business case process is potentially shifting the district closer towards the provision of this.

The potential PHC workforce is expansive. GPs, practices nurses, Community Health Workers (CHWs) and allied health professionals all have an important role to play. Roles new to primary care such as nurse practitioners and health care assistants (HCAs) are also being introduced into practices in Counties Manukau although are not yet widely used. CMDHB and several PHOs have chosen to be proactive in 'growing their own workforce', recruiting and supporting people from their own communities, with particular emphasis on Maaori and Pacific peoples. Those interviewed discussed a multidisciplinary team approach as being the most efficacious and cost effective way to deal with the provision of PHC to a population that is growing in number and in complexity of health needs, though how to ensure buy-in to this was acknowledged as a challenge. There is also an increased recognition of the impact of social determinants on health and the need to provide appropriate intersectoral links.

Another important part of the model of care and a key objective of the Strategy is to drive quality improvement in primary care in order to have the greatest impact on health outcomes whilst maintaining a sustainable service. Over the period 2001–2009 IT capabilities have improved and there is the ability to utilise primary care data to assess performance and develop strategies for more effective and efficacious care.

However key stakeholders interviewed felt that there are still substantial gains to be made in this area with the need for improved data collection and increased sharing of primary care data to help inform appropriate interventions for the population. Quality improvement was seen as being necessary by most interviewees in both the CCM programme and PPP along with maintaining up-to-date records of workforce numbers, to ensure resources are being utilised appropriately in order to maximise positive health outcomes for the community.

Conclusion

There has been useful incremental change in primary care in Counties Manukau since 2001. The development of PHOs, reductions in copayments, the continued development of the PHC workforce, the recognition of the importance of complete and accurate data collection in primary care, the introduction of POAC, CCM and Care Plus along with ring fenced funding for high needs populations, prevention and health promotion has started to move the model of care from the provision of acute episodic care to one with more of a population-based, preventive approach.

It is critical that the gains made so far are not lost going forward, particularly if the district is to make significant progress in reducing health inequalities. Health inequalities remain stark in Counties Manukau and as such a key focus should be on health equity, alongside system sustainability. These priorities are especially pertinent when reviewing the emerging trends of increasing acute demand, and the trending up of copayments in Interim and Access-funded practices.

To conclude this report has use the data and resources available to attempt to provide an overview of PHC in Counties Manukau since the development and implementation of the Primary Health Care Strategy in 2001. It raises key questions and issues that would benefit from wide exploration in order to ensure that PHC continues to provide the maximum benefit to the Counties Manukau population.

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Secondly I would like to thank all of the PHO managers and clinicians interviewed and the CMDHB Primary Health Care team for providing their valuable time to help provide additional depth to this report.

Finally I would like to thank Jackie Cummings from the Health Services Research Council for providing valuable peer review.

Abbreviations

ACC	Accident Compensation Corporation
ADHB	Auckland District Health Board
ASH	Ambulatory Sensitive Hospitalisation
BMI	Body Mass Index
BSA	Breast Screen Aotearoa
BSCM	Breast Screen Counties Manukau
BSMC	"Better Sooner More Convenient", current government health policy
CCM	Chronic Care Management, a CMDHB health programme
CHF	Congestive heart failure
CHW	Community Health Worker
CI	Confidence Interval
CMDHB	Counties Manukau District Health Board
COPD	Chronic obstructive pulmonary disease
CPI	Consumer Price Index
CSC	Community Services Card
CTA	Clinical Training Agency
CVD	Cardiovascular disease
DHB	District Health Board
DHBNZ	District Health Boards New Zealand
DNA	Did not attend a medical appointment
DVT	Deep vein thrombosis
EC	Emergency Care
EOI	Expression of Interest
FTE	Full time equivalent
GAIHN	The Greater Auckland Integrated Health Network, a primary care collective under the BSMC EOI process
GMS	General Medical Services
GP	General Practitioner
HbA1c	Haemoglobin A1C, a blood test measure of diabetes control
HCA	Health Care Assistant
HSRC	Health Services Research Centre
HUHC	High User Health Card
ICD	International Classification of Diseases, NZ on version 10 since 2000

KPI	Key Performance Indicator
LBD	Lets Beat Diabetes, a CMDHB health programme
MCHT	Mangere Community Health Trust PHO
MCNZ	Medical Council of New Zealand
MeNZB	Meningococcal B immunisation programme (ran 2004-2008)
MIT	Manukau Institute of Technology
NCNZ	Nursing Council of New Zealand
NDSA	Northern DHB Support Agency
NHI	National Health Identifier
NIR	National Immunisation Register
NMDS	National Minimum Dataset- public hospital data held by NZHIS
NRHS	Northern Regional Health Survey
NSU	Northern Screening Unit
NZDep	New Zealand Deprivation Index
NZHIS	New Zealand Health Information Service – a department in Ministry of Health
NZHS	New Zealand Health Survey
OHI	Otara Health Inc
PHC	Primary Health Care
PHCS	Primary Health Care Strategy
PHO	Primary Health Organisation
PMS	Patient Management System
POAC	Primary Options to Improve Acute Care
PPP	PHO Performance Programme
RNZCGP	Royal New Zealand College of General Practitioners
SIA	Services to Improve Access funding pool
Strategy	The Primary Health Care Strategy
THO	Total Healthcare Otara PHO
TKOH	Te Kupenga O Hoturoa Charitable Trust PHO
VLCA	Very Low Cost Access funding scheme
WDHB	Waitemata District Health Board
WHO	World Health Organization

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Introduction

This report reviews changes that have occurred in primary health care (PHC) in Counties Manukau DHB from 2001 to 2009. This time period coincides with the introduction and implementation of the Primary Health Care Strategy (the Strategy) which involved organisational restructure of primary care.

The Strategy aims were to:

- emphasise the importance of population health, health promotion and prevention
- utilise a broader multidisciplinary team in the provision of care
- have community involvement in primary health organisations (PHOs)
- improve access by lowering fees
- fund PHC according to population need [1].

PHOs were to be set up as non-governmental, not-for-profit organisations designed to provide an umbrella organisation under which individual general practices and other PHC providers sat. The newly formed District Health Boards (DHBs), acting as government agencies, would fund PHOs via capitation for caring for their enrolled population.

It is important to understand that there is a difference between PHC and primary care. PHC is a comprehensive, collective organisational approach to health and social improvement through the use of locally based, first contact health services. PHC comprises a range of services from health promotion and screening through to diagnosis and treatment of medical conditions, and is provided by a broad range of health practitioners and support workers. It is grounded in social justice, focussed on equity, active community participation and intersectoral integration [2, 3]. The success of PHC is heavily influenced by the relationships of health services with intersectoral agencies such as social services, education, justice and housing.

Primary care on the other hand focuses on the delivery of first contact health services that are coordinated, comprehensive and continuous over time. These services can be consistent with and contribute to the provision of PHC as articulated in the Strategy [2, 4]. However the majority of primary care in New Zealand, namely general practice, is not as wide-ranging as comprehensive PHC.

Whilst the report states it will review changes in PHC in Counties Manukau, the predominant focus is on primary care within the development and activities of the PHOs in the region. Attention is given to some of the broader aspects of PHC such as reviewing health promotion in PHOs and examining multidisciplinary workforce development. It is acknowledged that this is a significant limitation of the report but proved necessary given the availability of data and constraints on time and resources. There are many areas of broader PHC in Counties Manukau, particularly those that sit outside PHOs, which have not been covered in this report and further research into these areas would be recommended.

Nonetheless primary care has an important role to play in the broader PHC system. A health system strongly oriented to the provision of PHC improves overall health outcomes, reduces health inequalities and reduces the cost to the health system [5]. The health sector alone cannot reduce health inequalities but it is important for primary care to be able to identify and highlight these and provide the intersectoral links and advocacy that are needed for their population.

The report uses mixed methods combining quantitative and qualitative analysis. Quantitative data from a variety of sources was gathered specifically for this report and is substantiated with material from relevant existing evaluations, both national reports and reports specific to CMDHB. Semi-

structured interviews were undertaken with a selection of key stakeholders in PHC in CMDHB and themes arising from these are presented throughout the report in shaded text boxes.

The structure of this report follows the logic of the CMDHB PHC Plan and the Strategy's objectives which will be further elaborated on in this report. It begins by describing the environment of the late 1990s which gives context to the significant changes made to PHC policy by the Strategy that were pertinent for the Counties Manukau population. PHO set-up in Counties Manukau is then reviewed. Readers who are comfortable with their knowledge in both of these areas may choose to review the report's methodology then go straight to the major findings which begin in chapter 3 on page 23.

The findings of the report are then divided into six areas:

- access of primary care
- utilisation of primary care
- prevention
- health promotion
- reducing acute demand - the management of long-term conditions and Primary Options for Acute Care (POAC)
- models of care.

Significant points in each section are summarised in a white text box at the end of each chapter. The report then concludes with a snapshot view of the health status of the district in 2009 and with learning's relevant to CMDHB, PHC services and the local population.

Chapter 1. Methodology

This report aims to provide an overview of changes that have occurred in PHC in Counties Manukau between 2001 and 2009. In order to provide the most informed analysis mixed methods has been chosen. This involves having both a quantitative and qualitative arm.

1.1. Quantitative arm

Quantitative data sources used are listed in Table 2. Not all data was available for the entire time period of interest- 2001 to 2009. Where data is missing, the reasons for this are noted. Results are routinely provided by ethnicity where available and are reported for Maaori, Pacific peoples and non-Maaori/non-Pacific[1]. Rates, proportions and relative risks are utilised through out this document to report on the key indicators. A more detailed description of the calculation of these indicators is given in the relevant section of the report.

1.1.1. Issues with datasets

Quantitative data for this report utilises a number of datasets including hospital and PHO datasets. These come with some challenges relating to choice of denominator population and issues relating to ethnicity recording for both the numerator and denominator.

It is helpful to review how the CMDHB population is counted and ethnicity is recorded as these have an impact on indicators.

The CMDHB denominator population can be calculated in three ways.

- The New Zealand Census Estimated Resident Population: This is the official Statistics New Zealand estimate and is the most commonly used denominator population by the CMDHB Planning and Performance team. This is based on population projections taken from the latest Census in 2006. The Estimated Resident Population takes actual counts and adds those who were overseas and an estimate for undercounting.
- Constructed health care population: A constructed health care population can be created from all health data sets by constructing a list of every person with an NHI with a CMDHB domiciled address. This misses about 1% of the Census population as it cannot include those who have not been to their GP or used a public health service in the current year for 3 years or more.
- PHO registers: This is the main primary care dataset. A population is created from the dataset using all the NHIs that have a CMDHB domiciled address. This misses the 5% who are not enrolled in a PHO so is less accurate than the constructed and Census populations but is appropriate to use if the numerator relates to PHO enrolled patients.

The CMDHB denominator ethnicity can vary depending on which dataset is utilised for the denominator. Evidence suggests that PHO registers undercount Maaori by around 10% in CMDHB when compared to the Census (Jackson, G, internal CMDHB work). PHO registers have a tendency to record fewer ethnicities than the Census. Only 1-2% of records in PHO registers have more than one ethnicity recorded, whereas the Census has 12 to 14% recorded with more than one ethnicity (Jackson, G, internal CMDHB work). For most analyses in this report prioritised ethnicity is used. This involves recording individuals as Maaori, Pacific or South Asian if their last record in the last

[1] Non-Maaori/Non-Pacific is chosen to represent Paakeha, Asian and other ethnicities aside from Maaori and Pacific peoples in this report. It is acknowledged that not disaggregating data to a further level of ethnicity is a limitation. However ethnicity coding to this level was not consistently available throughout the time period.

three years is recorded as this. Otherwise ethnicity is recorded as 'Other'. Table 1 demonstrates the constructed population versus the PHO register population ethnicity recording when compared to the Census.

Table 1 Ethnicity analysis of the CMDHB denominator population datasets

	Constructed population (% of Census population)	PHO register population (% of Census population)
Maaori	95%	90%
Pacific	108%	110%
Non-Maaori/non-Pacific	95%	97%
Total	99%	95%

Source: CMDHB, 2008 data

It is important to avoid a numerator-denominator mismatch and therefore it is essential to ensure the appropriate denominator is used that aligns with numerator. For example using the PHO population denominator when the numerator is the number of high needs women screened in primary care. Normally the ethnicity supplied in the numerator data set is used.

1.1.2. Data sources

Table 2 outlines the data sources for the key indicators used in this report and the denominator population used where appropriate.

Table 2 Data sources for this report

Data Source	Indicator	Years available	Denominator population used
Breast Screen Aotearoa, CMDHB	• Breast Screening coverage	2005-2009	New Zealand Census Estimated Resident Population
Chronic Care Management Database, CMDHB	• CCM enrolments – total, by ethnicity and by programme • Engagement – total and by ethnicity • Clinical KPIs • Medical intervention KPIs	2001-2009	PHO register
CMDHB	Average Life expectancy from birth	1996-2009	
CMDHB	• Ambulatory Sensitive Hospitalisation (ASH) rates and standardised discharge ratios	2001-2009	New Zealand Census Estimated Resident Population
CMDHB	• Non-urgent EC attendances (triage 4-5) rates and relative rate of attendance by ethnicity	2001-2009	New Zealand Census Estimated Resident Population

CMDHB and PHO enrolment data	• Geographical access	2006 and 2008	PHO register

CMDHB from PHO reporting	• Median Scheduled Copayment in CMDHB
	  ○ Interim practices
	  ○ Access practices
		2005-2009	

Get Checked database, Ministry of Health	• % of diabetics identified using prevalence model • % with HbA1c < 8 • % with CVD risk assessment < 5yrs	2001-2009 2007-2009	New Zealand Census Estimated Resident Population
Health Services Research Centre, Wellington	• National Evaluation of PHCS- national fee changes and consultation rates	2001/2-2007	

Immunisation
• National Immunisation Register (NIR)
• Kidslink – CMDHB
• National Immunisation Surveys, Ministry of Health
• Northern Region Immunisation Survey – North Health
	• Immunisation coverage for 24 month milestone
	  ○ total
	  ○ by ethnicity
	• Timeliness of immunisation
	  ○ Total
	  ○ By ethnicity
		2006-2009
		2003
		
		1991 and 2005
		
		1996/1997
			NIR – All children on NIR who reach milestone age within time period of interest
			Kidslink - All registered births in CMDHB who reach milestone within time period of interest

National Screening Unit, Ministry of Health	• Cervical Screening coverage – non-adjusted for hysterectomy rate for continuity	2002-2008	New Zealand Census Estimated Resident Population
NDSA and CMDHB	• Community Pharmaceutical expenditure – total and per capita • Community Pharmaceutical expenditure by ethnicity using constructed population	2001-2009 2005-2009	New Zealand Census Estimated Resident Population
New Zealand Health Survey	• Unmet health need for general practitioner in previous 12months	1996/97 2002/03 2006/07	
Medical Council New Zealand PHO reporting to DHB	• GP numbers – Head count and FTE	2001-2008 2006-2007	

Northern DHB Support Agency (NDSA)	• PHO enrolments o total o by ethnicity o high needs	2003-2009	New Zealand Census Estimated Resident Population
PHO performance programme, CMDHB collated by DHBNZ	• 65 years and over influenza vaccination rate • Primary Care Utilisation, High needs:non-High needs consultation ratio • Cardiovascular risk assessment	2005-2009	PHO register

1.1.3. National Evaluation of the Strategy – Methodology

This report is latest in the series on the Evaluation of the Implementation and Intermediate Outcomes of the Primary Health Care Strategy undertaken between 2003 and 2009 by the Health Services Research Centre, Victoria University of Wellington, and CBG Health Research Limited, Auckland.

The latest National Evaluation of the Strategy includes interviews, surveys and the collection of data from practices' electronic patient management systems (PMS). The report is derived from the PMS data and examines the level and change in copayments and consultation rates from 2001 to 2007.

A national random sample of 99 practices was used, stratified by district with over 400,000 patients in total. The probability of selection was proportional to DHB population and Counties Manukau practices made up 21.1% of the sample with 87,502 enrolled patients.

Entries were considered to represent consultations if they were associated with an invoice, including invoices for $0. Therefore where invoices were not generated, which is often the case for 'frequent flyers', consultations were not recorded. Consultations with an invoice greater than $100 were also excluded as this suggested a non-standard visit. This reduced the total number of consultations but had no effect on the mean copayment.

The mean copayment invoiced was calculated for each age group overall, by ethnicity, by CSC status, and by area of deprivation for Interim and Access-funded practices.

1.2. Qualitative arm

Semi-structured interviews were undertaken as part of the qualitative arm. The goal of the interviews was not to represent in any statistical way the views of the entire PHC community in CMDHB. Instead the goal was to gain an understanding of common themes on how the Strategy and other DHB associated PHC programmes are perceived to have worked in the district.

Initially it was intended to undertake 5-10 semi-structured interviews with key informants from PHOs and the PHC team in CMDHB; a larger number of interviews were not possible due to the time intensity involved with this method. It was acknowledged that the actual number of interviews undertaken was going to be dependent on the availability of key informants over a six month period which was particularly busy due to ongoing reshaping of service delivery in the sector through the "Better, Sooner, More Convenient (BSMC)" EOI process. It was important to ensure small, large and ethnic PHO perspectives were represented and to interview those with longer institutional memory in the district. These interviews were to enable collection of additional information not available through the quantitative arm and to explore key issues relating to the Strategy in depth. This was

particularly important for areas such as Services to Improve Access (SIA) projects and health promotion initiatives in CMDHB.

Overall 14 interviews were performed and included both group and individual interviews. Interviewees involved PHO clinicians, nurse leaders, health promoters and senior management. Interviews at the CMDHB included members of the Breast Screening Aoteoroa team, the well child team and multiple members of the PHC team, including programme managers and nurse leaders. The interviews were semi-structured. Notes were taken by hand during the interviews rather than audio-taping and consequently extracts from the interviews presented in the grey text boxes through out the report are not verbatim.

In addition to the interviews, key national and Counties Manukau specific literature was analysed and relevant findings from these sources were included in the report. These themes were mirrored in the topics discussed in the interviews.

1.2.1. Limitations

There were a number of limitations with the methodology utilised in the report.

- The biggest limitation was non-continuous data sets/collections over the course of the decade.
    - Ethnicity data to include South Asian was not available for the first part of the time period and therefore this group is included in the non-Maaori/non-Pacific group. The Asian population is the fastest growing population in Counties Manukau and the South Asian population have significant morbidity and mortality from diabetes complications and cardiovascular disease [6]. In future work it would be useful to provide a more detailed ethnic analysis.
    - For a number of indicators there was not a complete dataset which limited analysis. For example in measuring the CMDHB primary care workforce, GP headcount and full time equivalent numbers from PHOs was not available prior to 2005 and from 2008. Data had to be taken from a number of data sets to create a complete record for the time period.
    - This limits what conclusions can be made from the data analysis. Consequently it was important to supplement the quantitative data with qualitative findings.
- The latest national evaluation of the Strategy analysed average copayments invoiced in Interim and Access-funded practices and the aim was to utilise the CMDHB component of this dataset. However a memorandum of understanding had been signed by participating practices prior to starting this evaluation that data would only be represented in an aggregated form. Therefore an alternative method was used to assess copayments in the district. The DHB receives the maximum scheduled copayment for all of the PHOs' practices every quarter and has done since 2005. However there are limitations to the use of this data to analyse changes in copayments:
    - Some of the practices did not consistently report scheduled copayments for every age group. For example some practices would record the copayment for 18-24 year olds but others would leave this box blank and one would assume they should be included in the adult age bracket. This made assessing changes in copayments for different age groups difficult and introduced an element of inaccuracy.
    - Similarly the records do not consistently show copayments for CSC holders as it is not a requirement for PHOs to do so, making it is difficult to determine what the current rates are for this group. This is a significant limitation in assessing the changes in financial accessibility.

- The analysis undertaken could only utilise scheduled copayments and not the actual copayment invoiced to patients in the district which may well be different[2].
- Finally the DHB only started regularly recording schedule copayments in 2005 and this misses assessing the initial impact that capitation had prior to 2005.

- Time and resource restrictions meant limiting the interviews to mainly PHO and DHB staff which does limit the findings in the qualitative arm as there are likely to be a number of other themes relating to the report that have not emerged. In addition the scope of the report did not allow for community consultation which would also have provided valuable information. National and Counties Manukau specific literature has been reviewed and included in this report in order to overcome some of these limitations and provide additional robustness to the interview findings.

[2] There is anecdotal evidence of GPs in CMDHB charging a reduced or no fee to patients who struggle to meet scheduled copayments. The NZHS in 2006/07 measured the last GP visit free by DHB area and CMDHB had significantly higher rates for children than nationally with 47% of children having a free last visit to a GP. This compares to 33% nationally. Adults in CMDHB were equivalent to the national rate, with 10% having a free last visit to a GP. Those defined as high need (NZDep 9 and 10, Maaori, Pacific) also had higher rates of a free last visit to a GP. The NZHS in 1996/97 and 2006/07 showed similar trends.

Chapter 2. The context of Primary Health Care reform in CMDHB

2.1. A snap shot of the health status of the Counties Manukau population at the turn of the 21st Century[3]

2.1.1. Demography

In 2000, Counties Manukau was home to 382,000 people. This population was relatively young and growing at a rate above the national average. The district comprised some of the wealthiest and some of the poorest people in the country, with statistics revealing a number of stark health inequalities.

Over a third of the Counties Manukau population lived in areas classified as the most deprived (defined as NZDep 9 and 10 decile areas[4]). This proportion of deprivation increased to 45% for children. Over two-thirds of the most deprived lived in Mangere, Otara and Papatoetoe, the majority being Maaori or Pacific peoples. This is in contrast to the proportion of Counties Manukau residents living in the least deprived circumstances, more socioeconomically advantaged than the national average.

2.1.2. Health Status

Socioeconomic deprivation impacts on virtually every aspect of health. Whilst life expectancy had been increasing in the 1990s for all ethnic groups in Counties Manukau, the gap in average life expectancy at birth for a resident in 2001 was still markedly different from national rates depending on area of abode and ethnicity.

There was a troubling 8 year difference between those living in the least deprived and most deprived areas. Maaori and Pacific peoples' life expectancy in CMDHB lagged significantly behind non-Maaori/non-Pacific people. In addition Counties Manukau Maaori and Pacific peoples' average life expectancy was less than the national Maaori and Pacific rates. This is in contrast to Counties Manukau non-Maaori/non-Pacific average life expectancy which was higher than the national average. These gaps are illustrated in Figure 1.

Similarly mortality rates for Maaori and Pacific peoples during the late 1990s were twice that of non-Maaori/non-Pacific with Maaori and Pacific peoples developing chronic diseases prematurely. Chronic conditions contributed significant morbidity and mortality to these two groups with cardiovascular disease the leading cause of death and largest cause of disability adjusted life years lost and potentially avoidable admissions.

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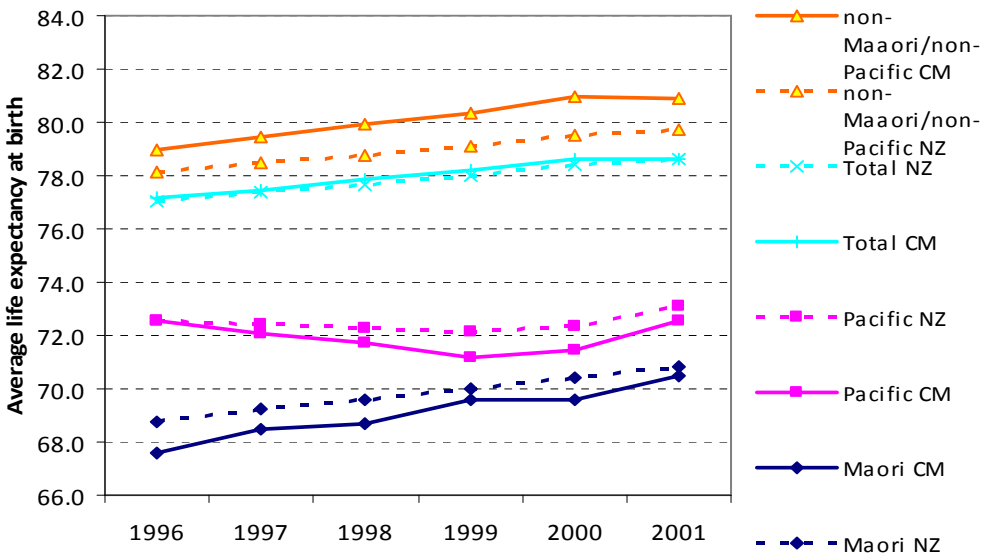
[3] The majority of the data in this section comes from internal CMDHB Health Needs Analysis reports. Other sources are referenced.

[4] The NZDep index includes the proportions at a small area-level (involving approximately 100 individuals) of census variables such as individuals with: no telephone access; no car access; receiving a means-tested benefit; being unemployed; having a low household income; single-parent families; having no qualifications; not owning own home; and household crowding. The score is usually ranked into deciles, with decile 1 representing the least deprived areas and decile 10, the most deprived. The ranking of individuals by the NZDep decile assigned to their neighbourhood is, on average, strongly and linearly related to health and other social outcomes. However it is an area or ecological measure, rather than reflecting the actual circumstances of the individual themselves, so will not be fully reflecting socioeconomic disparities.

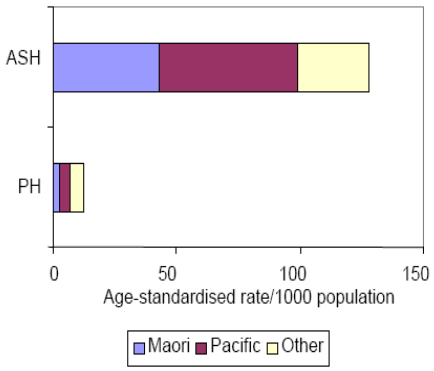
Figure 1 Average life expectancy at birth for Counties Manukau Residents and New Zealand by ethnicity, 1996-2001



Source: CMDHB analysis from NZHIS mortality collection.

Unsurprisingly given the degree of morbidity in the population, Counties Manukau age standardised hospitalisation rates increased between 1995 and 1999, having approximately 10 more hospitalisations per 100 than the national rate. There was a significant rise in potentially avoidable hospitalisations (PAH), with ambulatory sensitive hospitalisation (ASH) rates high, disproportionately so for Maaori and Pacific peoples (see Figure 2).[5] Infectious disease such as cellulitis was common in children and adults, with chronic disease affecting older age groups. Close to 90% of the top 20 causes of admission were considered to be potentially avoidable via population based interventions or through effective PHC services.

Figure 2 Preventable hospitalisations (PH) and Ambulatory Sensitive Hospitalisations (ASH) by ethnicity, 1999



Source: CMDHB analysis of NMDS

[5] Potentially avoidable hospitalisations (PAH) are those that could have been avoided by preventing the condition or treating it in the community. A subset of these is ambulatory sensitive hospitalisations (ASH). These conditions are thought to be potentially responsive to prophylactic or therapeutic interventions that are deliverable in the community in a PHC setting. Preventable hospitalisations (PH) are conditions that can be prevented via population level public health interventions (eg tobacco control).

2.2. The history of Primary Care and Primary Health Care in New Zealand as context to the implementation of the Strategy

Primary care in New Zealand has historically been provided by the private market with members of the public paying a fee to see the GP or practice nurse. In 1938 there was an attempt to create a fully tax-funded health system with the provision of primary and secondary health care free at the point of use. However the New Zealand branch of the British Medical Association at this time strongly objected to this and subsequently, a universal general medical services subsidy (GMS) was introduced in primary care as a trade-off [7]. GPs retained the right to charge a fee (a copayment) to patients.

The following outlines key events that occurred nationally and in CMDHB specifically leading up to the development and implementation of the Strategy.

- GMS originally made up 85% of the total fee charged to the patient but overtime this eroded as it failed to keep up with inflation [8]
- Union health centres and Maaori and Pacific providers of primary care began to develop in the district in the late 1980s to provide culturally appropriate and low cost health services. Additional funding was given to some of these providers by the Health Funding Authority then by DHBs in order to serve their higher need population [9-11].
- Independent Practitioner Associations (IPAs) formed in the early 1990s bringing independent operating GPs together in order to create a stronger negotiating body with the four Regional Health Authorities set up by the government [12]. Many were involved in clinical governance, budget holding for laboratory and pharmaceutical services, as well as reinvesting savings in continuing medical education and preventive activities [12-14]. There were a number of IPAs operating in CMDHB – Procare, East Health, South Med and a similar organisation, though not strictly an IPA, called First Health. A national Independent Practitioners Association Council (IPAC) was also formed to provide general oversight and guidance.
- In 1991, universal funding via GMS subsidies was eradicated. Government subsidies were instead targeted to:
    - Community Services Card (CSC) holders - eligibility dependent on level of income and family size
    - High User Health Card (HUHC) holders - eligibility dependent on the degree of chronic health needs.
- Children aged less than six years of age and youth aged 6-17 years had additional subsidies provided by the government in 1996/97.
- Under this targeted scheme:
    - Children under six years received a government subsidy of $32.50 a visit and free prescriptions.
    - Those aged 6-17 with a CSC/HUHC received a $20 subsidy per visit and prescriptions for $3 an item. Those without a card received a $15 subsidy per consult and prescriptions for $10 per item.
    - Adults with a CSC/HUHC received a subsidy of $15 per visit whereas non cardholders paid the full cost of the visit. Prescription items were reduced from $15 per item to $3 if the adult had a CSC/HUHC.
- However this method of targeting funding to individuals via CSC failed to capture all of those eligible [15]. In a survey undertaken in South Auckland general practices in 1996, nearly 30% of

patients eligible for a CSC did not hold one [16]. Of these 43% were Pacific and 27% were Maaori. The reasons that eligible people did not hold cards included:

- lack of knowledge and confusion over eligibility
- complex guidelines and instructions
- difficulties associated with 'family' used as unit of assessment
- an assumption that employed people are not eligible
- the view that the process was discriminatory.

The CSC is a poor measure of socio-economic status due to being based on income, whereas education and occupation are also socioeconomic determinants. Subsequently this results in the CSC being biased against Maaori, Pacific peoples, large families and young people. The abrupt cut-off for eligibility also creates a 'poverty trap' for those at the low end of the non-eligibility population [17].

- Consequently financial barriers were still significant despite the attempt to target subsidies.
  - The Commonwealth Survey of primary care in 1998 demonstrated that 20% of low income people in New Zealand had unmet medical needs, failing to fill a prescription or delaying consulting a GP [18].
  - The 1996/7 New Zealand Health Survey found that Maaori and Pacific peoples and those living in lower socioeconomic areas had higher unmet needs for GP services over the past 12 months, compared to non-Maaori/non-Pacific [19].
  - A similar pattern was seen in a survey on wellbeing conducted by Manukau City Council in the early 1990s with a clear ethnic differential present, with 66% of Pacific peoples and 40% of Maaori citing unmet health needs [20]. Cost was the major issue for the most part.
- Further research suggested that overall the Counties Manukau population did not appear to be accessing primary care at the same level as other districts. South Auckland was shown to have significantly lower community pharmaceutical spending, being 15% below the expected spend based on health need in 2001 [21]. Given the degree of health need in the district, it would be expected that Counties Manukau would have higher than average expenditure. Financial barriers and a shortage of GPs in the area were hypothesised to be contributors to this reduced level of expenditure.
- International evidence states that a strongly PHC oriented health system results in improved health outcomes, reduced health inequalities and reduced overall health care costs [22]. Whilst primary care in New Zealand was doing moderately well in some key areas in the 1990s, such as providing a comprehensive longitudinal service with gate keeping, there were deficits present in the system which were particularly relevant for the population of Counties Manukau [23]. These deficits included:
  - more cost sharing than was desirable to achieve equitable access
  - a shortage of GPs in the district
  - no requirement for primary care to have an enrolled population with the focus being on episodic services, rather than aiming to improve the health of their community.
  - considerably lower incomes for GPs compared to specialists which impacted on retaining and recruiting workforce [23].

In 1999 the government starting reviewing PHC in New Zealand in order to create a stronger PHC-oriented health system [24]. This led to the development and implementation of the Strategy.

Subsequently CMDHB began a reform of PHC in the district in alignment with these national changes to policy.

2.3. The Primary Health Care Strategy

2.3.1. An overview of the Strategy

A strong primary health care system is central to improving the health of New Zealanders and, in particular, tackling inequalities in health [1]

The Public Health and Disability Act (2000) charged the DHB to be responsible for the health of their entire population and subsequently the national Strategy attempted to reorient the system so that the provision of PHC services were organised around the needs of a defined group of people via implementation of Primary Health Organisations (PHOs). In February 2001, the government began to invest the first of $2.2 billion dollars that would be distributed over the next seven years into the reform of national PHC services [25]. There were six key directions of the Strategy

- work with local communities and enrolled populations
- identify and remove health inequalities
- offer access to comprehensive services to improve, maintain and restore people's health
- co-ordinate care across service areas
- develop the PHC workforce
- continuously improve quality using good information [1].

These directions led to three major changes in policy in order to implement the Strategy:

- The establishment of PHOs. These were not-for-profit, non-governmental organisations that were set up to provide for the needs of their enrolled population.
    - General practices and other PHC providers sat under these umbrella organisations in order to receive increased funding from the government via the local DHB and provide a range of services.
    - PHOs were required to demonstrate that their communities, iwi and consumers were involved in their governing processes and that the PHO was responsive to its community.
- Government funding was substantially increased in order to reduce the burden of cost sharing, with the intention being that copayments would decrease for those utilising primary care services.
    - High need populations received the additional funding first, with a staggered roll out of universal funding to other groups over time.
    - The Strategy signalled a move away from the targeted approach that had previously been used with CSCs and HUHCs, towards a universal approach where all New Zealanders were eligible for funding. New funding was also provided to expand PHC services.
- Government funding of primary care changed from a fee-for-service GMS subsidy at the practitioner level to population based capitation funding via PHOs.
    - This meant that funding was fairer as it was now allocated based on an assessment of population need rather than who was using the services.

- This was expected to help redirect the focus from episodic acute care to the provision of increased preventive approaches and proactive ongoing coordinated care for the enrolled population.
- However a fee-for-service GMS subsidy remained for non-enrolled patients, ACC and for additional primary care services such as excisions. Similarly a fee-for-service copayment remained for enrolled patients though at a lower level than previously.

2.3.2. Funding Streams

In order to undertake a staged roll-out of the increased investment into PHC, the government created two streams of capitation funding - Access and Interim.

Access-funded PHOs and practices generally served higher needs populations, and were defined as those where more than 50% of their enrolled population were Maaori, Pacific peoples, or from lower socio-economic areas (defined as those residing in NZDep 9 and 10 areas). This is a proxy for high health need rather than a direct measure. Not all of those classified in the group have poorer health and not all of those excluded from this group have good health.

Since 1 July 2002, all people enrolled with a general practice in Access-funded PHOs and practices have been eligible for subsidies to lower the cost of visits to primary care.

- The funding for under-sixes increased from $32.50 to $35 to adjust for inflation over the 1997 to 2002 period
- For 6-17 year olds the funding increased from $20 to $25 for CSC/HUHC holders and from $15 to $25 for non-cardholders
- Adult subsidies increased from $15 to $25 for card holders, and from $0 to $25 for non-cardholders [26].

All other PHOs and practices were defined as Interim and their new funding was provided in a staggered approach. As with the Access-funded practices, children under 6 received additional subsidies in 2002, increasing from $32.50 to $35 to adjust for inflation over the 1997-2002 period [27]. Increased funding for other age groups was rolled out for those aged:

- 6-17 years from 1 October 2003
- 65 + years from 1 July 2004
- 18-24 years from 1 July 2005
- 45-64 years from 1 July 2006
- 25-44 years from 1 July 2007.

Annual capitation rates for general practice services are based on the average number of visits that an individual of a given age and gender is expected to make in a year. The average expected visit rates are taken from GMS claiming data. The annual capitation amount is calculated by multiplying the average expected visit rate by a notional amount for each visit. The notional amount is based on a funding formula that takes into account: age; gender; ethnicity; NZ Deprivation Index; and HUHC/CSC status. The practice nurse subsidy and an adjustment to reflect expected increased visits rates because of reduced charges are also included in this adjuster [17]. The notional amounts are increased regularly in order to match inflation and retain the value of the subsidy.

Under the old fee-for-service scheme, a practice was only eligible for the GMS subsidy if a GP provided direct services to the patient. In many circumstances appropriately trained nurses are able to provide the needed services, thereby freeing the GP to handle more complex cases and improving the efficiency of service delivery. Switching to capitation theoretically allows this to occur.

Pharmaceutical subsidies, reducing the cost of a subsidised item from $15 to $3, were introduced on 1 April 2004 for all Access enrolled patients and for 0-17 year olds enrolled in Interim-funded practices. From then on each roll-out of funding to other age groups in Interim-funded practices came with the same increased pharmaceutical subsidy.

Both types of PHOs and practices were also eligible for other new funding: Services to Improve Access (SIA); management costs; and health promotion.

- **SIA funding:** This is to provide for PHO services designed to reduce health inequalities among those populations known to have the worst health status: Maaori; Pacific people; and those living in NZDep index 9-10 decile areas. The funding is provided to improve access to PHC services for these high need groups who are currently not accessing care or accessing it in a limited way relative to their health need. Funding is proportional to the number of high needs people enrolled in the PHO. Plans for SIA funding must be approved by the DHB before commencing a project to ensure it meets appropriate criteria.
- **Health Promotion funding:** This is provided to PHOs to provide appropriate health promotion activities for their enrolled population. Health promotion funding is calculated based on an amount per enrolee with different multipliers for differing groups of need (1.0 to 1.4 depending on ethnicity and socioeconomic status.) Again PHO health promotion plans are supposed to be approved by the DHB.
- **Management funding:** This money is used to ensure that the administrative responsibilities associated with running the PHOs are met. This includes the costs of community consultation and representation, processing patient registers, formal enrolment and reporting and monitoring requirements. Payments are calculated at a set value per patient and this figure depends on the numbers enrolled in the PHO. Smaller PHOs (under 40,000 enrolled) have higher payments per head up to 20,000 than larger PHOs then lesser amounts up to 40,000 [28].

Additional funding schemes were introduced later with Care Plus, Very Low Cost Access and Zero Fees for Under Sixes funding rolled out by the Ministry of Health from 2004.

- **Care Plus funding:** This was introduced in 2004 after concerns by IPAC over the funding formula used for enrolled populations, stating that there were identifiable patients with high health needs outside the targeted groups (Maaori, Pacific peoples and those living in NZDep 9 and 10 areas). Care Plus funding allowed additional funds to be utilised on the basis of individual health need at the discretion of GPs. This was a fundamental departure from the population-based approach intended by the PHCS.
- **Very Low Cost Access (VLCA) funding:** In October 2006 VLCA was introduced as a voluntary scheme to provide additional funding to PHOs and/or practices that have and would continue to maintain very low fees.
    - This was targeted to PHO practices that served high need communities though there was initially no minimum percentage of high needs patients enrolled. The majority of VLCA practices in CMDHB were previously Access-funded.
    - In the latter half of 2009 the Ministry of Health changed the eligibility of VLCA. Currently only practices with more than 50% high needs enrolled are able to join the scheme to access the additional funding. Those practices that are already part of the scheme are allowed to continue on the programme even if their enrolled high needs population is less than 50%.
    - As at the end of 2009 copayments needed to be maintained at zero fees for under-sixes, a maximum of $11 for 6-17 year olds and $16.50 for adults to remain eligible for the scheme.

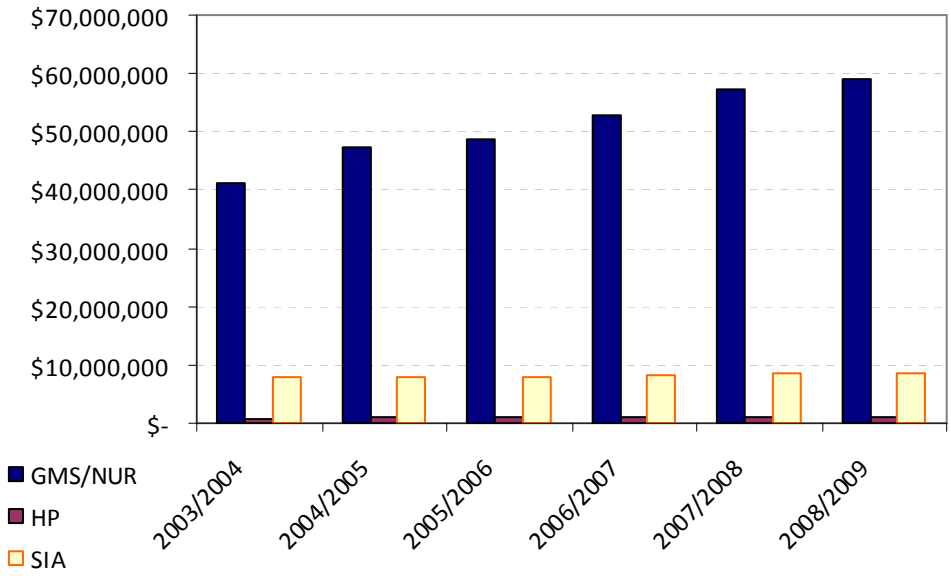
- **Zero Fees for Under Sixes:** This final subsidy was introduced on the 1 January 2008 to practices that provide free standard consultations to children under six. Like VLCA, this is a voluntary scheme. Practices participating in the VLCA scheme cannot claim this funding.

Other funding streams available to primary care in the district include CMDHB specific programmes - Chronic Care Management and Primary Options for Acute Care - and the national Diabetes Get Checked programme. These will be described later in the report. There were also three other national funding streams from the Ministry of Health: Reducing inequalities contingency funding; nursing innovation funding; and mental health innovation funding. Two practices in the district have been able to utilise the former two funding pools whilst the mental health innovation funding currently covers the full cost of the CCM Depression module.

2.3.2.1. Overview of core funding of PHOs in CMDHB

Over the time period of interest funding for first contact services has increased by 43% from $41 million in 2003/04 to $59 million in 2008/09. This equates to a 22% increase in spend per capita for those enrolled in PHOs, increasing from $101 to $123. In total $92.5 million was spent in the last financial year for first contact services capitation, health promotion (HP), SIA, VLCA, Care Plus and CCM for the PHO enrolled population in the Counties Manukau district. This is expenditure of $192 per PHO enrolee in the district[6]. Figure 3 represents some of this expenditure and GMS/NUR in the key refers to a combination of the new capitation funding and the old GMS and nursing funding prior to the Strategy. HP is the health promotion funding stream and SIA is Services to Improve Access.

Figure 3 Core funding of PHOs in CMDHB, 2003 to 2009



Source: NDSA

An additional $94.9 million was spent on community pharmaceuticals and $25.7 million on community laboratory testing bringing the overall spend per PHO enrolee to $447 per annum. The following sections will review what changes this $200 million + annual spend brought to primary care in Counties Manukau.

[6] These $ amounts per capita are adjusted for growth in PHO enrolment

2.4. The CMDHB Primary Health Care Plan

CMDHB developed a PHC plan in 2002 to describe a pathway for service development over a 10 year period with a review to take place in 2007. This provided guidance to the DHB and the wider sector and provided a necessary link between national policy and local health need.

Like the Strategy, the CMDHB PHC 2002 plan was initially focused on the establishment of PHOs, and moving from individual provider-focused episodic care to looking at the health of the whole population with an increased emphasis on education and prevention. Community participation was seen as key, as was focussing on equity. The introduction of a multidisciplinary team of professionals in the provision of care was also encouraged and workforce planning began along those lines.

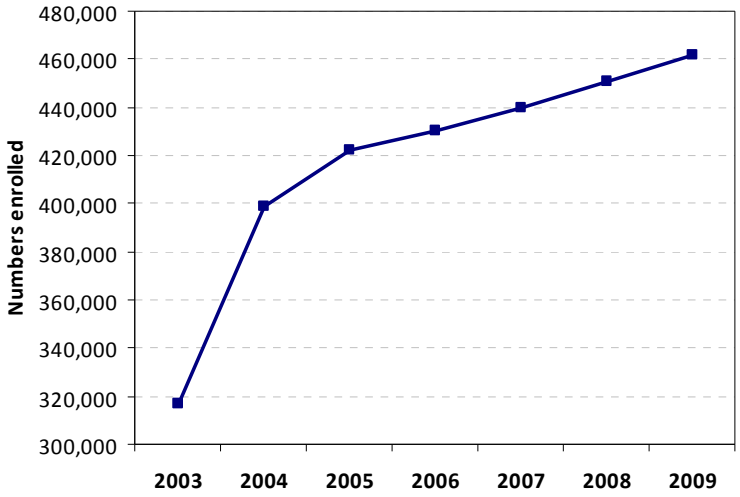
In 2007 the focus was still on the majority of the initial objectives but further attention was paid to the development of integrated models of care that are accessible and sustainable for the population. This included planned workforce development particularly 'growing our own', quality improvement and an increased focus on self-management and the management of long-term conditions.

This report will first look at PHO formation, enrolments and accessibility of primary care from 2001 to 2009. Later sections will review this plan in more detail, focusing on long-term conditions management, models of care, workforce planning and multidisciplinary team work.

2.5. Primary Health Organisation formation in CMDHB

The formation of PHOs occurred quickly in CMDHB in comparison to other parts of the country with the formation of Te Kupenga O Hoturoa Charitable Trust **(**TKOH) and TaPasifika in 2002. Subsequently eight PHOs formed, providing services to the Counties Manukau population. Overall enrolments have steadily increased with a few variations in enrolment numbers within individual PHOs as providers shifted between PHOs.

Figure 4 PHO enrolments in CMDHB-2003 to 2009



Source: NDSA

In July 2004 there were eight PHOs in existence.[7] Six of these PHOs were fully Access-funded with East Health Trust and some practices in Procare Network Manukau being Interim-funded. North

[7] Middlemore PHO was formed in April 2003 but stopped operating in July 2004. The practices belonging to this PHO went to on to join other PHOs - TaPasifika, Procare and Tamaki PHO.

Waikato PHO developed a Tamaki branch in 2008 and the Raukura o Tainui practices from TKOH shifted to this PHO.

Table 3 provides an overview of the history of each PHO including details on enrolment numbers and demographics. Further information and graphs can be found in the appendix. [8]

Table 3 Overview of the setup of PHOs funded by CMDHB

Set Up	PHO	Founding organisation	% High needs[9] as at 31 December, 2009	Population at initiation	Population as at 31 December, 2009
July 2002	**TaPasefika**	Started as a tripartite relationship between Health Star Pacific Trust, Bader Drive Healthcare (formerly Health Pacifica Doctors) and South Seas Healthcare and now includes Mangere Family Doctors and The Airport Doctors.	87%	19,689	23,459
July 2002	**Te Kupenga O Hoturoa Charitable Trust (TKOH)**	TKOH brought together three Maaori providers: an iwi provider (Raukura), an urban Marae based provider (Papakura Marae) and a Maaori midwifery service focused on mother and child (Turiki). In 2008 Raukura left and became part of North Waikato PHO	62%	13,277	32,915
January 2003	**Procare Network Manukau**	Procare PHO formed out of an IPA of the same name and is divided into three locality networks – North, Central and Manukau – the latter serving CMDHB	17% in interim practices, 56% in access practices, 46% overall	201,581	243,443
January 2003	**Total Healthcare Otara (THO)**	THO was formed from East Tamaki Healthcare, a group of 10 general practices and Otara Health Inc, a community development organisation	75%	68,065	84,579
April 2003	**Mangere Community Health Trust (MCHT)**	The MCHT was formed in 1992 and became a registered PHO in 2003	74%	11,575	9,088

[8] Data on Tamaki PHO and North Waikato PHO is not included as they are not funded by CMDHB – Tamaki PHO is funded through Auckland DHB and North Waikato PHO through Waikato DHB. Approximately 6,000 patients in Raukura Trust joined North Waikato from TKOH, with the vast majority classified as high needs.

[9] High needs are defined as all Maaori, Pacific peoples and others living in NZDep decile 9 and 10 areas.

April 2003	**Peoples Healthcare Trust**	The Peoples Centre was formed over twenty years ago as a registered non profit organisation to provide affordable PHC services to high need populations	60%	4,386	5,356
April 2003	**Middlemore PHO**	Established with four equal shareholders - three GP-owned general practices, and a union health centre - with practices in Papatoetoe, Mangere (2) and Otara. Closed in 2004 with practices moving to TaPasifika, Tamaki & Procare PHO.	n/a	62,037	nil

Source: NDSA

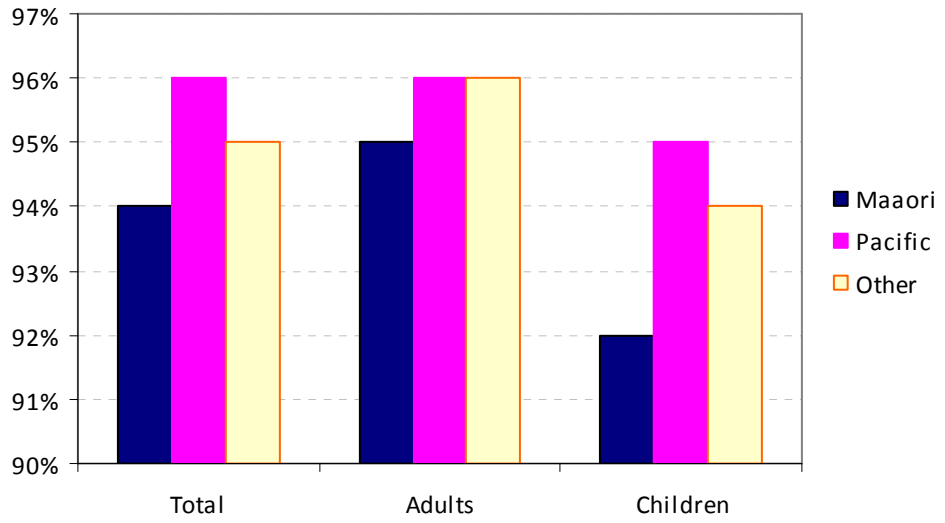
2.5.1. Current PHO Enrolments

The PHO enrolment level for the total population and by ethnicity can be calculated in a number of ways.

- The New Zealand Health Survey (NZHS) from 2006/2007 gives a sample estimate based on its survey findings. It found overall that 95% of the Counties Manukau population are enrolled with 93.9% of Maaori, 94.1% of Pacific and 96.1% of non-Maaori/non-Pacific (excluding Asians) [29].
- Enrolment coverage can be determined using PHO registers. The numerator consists of the number of people enrolled and their recorded ethnicity on the PHO register. This is divided by the denominator population which is generally based on the projected Census estimated resident population for the district.
    - The enrolment coverage using PHO enrolment data from the last quarter in 2009 as the numerator and the projected Counties Manukau 2006 Census population as the denominator calculates that 86.8% of Maaori, 112.7% of Pacific and 99% of non-Maaori/non-Pacific are enrolled in a PHO.
    - The PHO register is known to undercount Maaori and overcount Pacific ethnicity (G, Jackson, internal CMDHB report, 2009). In CMDHB the figures for Maaori in CMDHB are undercounted by at least 10% when compared with the Census. PHOs tend to only have 1-2% of ethnicity recordings containing more than one value compared to 12-14% of records in the NZHS and the Census (G, Jackson, internal CMDHB reporting, 2009). This is thought to explain the variance in enrolments from the NZHS data results.
- In order to overcome the issue with the ethnicity recording in the PHO register a constructed population can be created. Patients with a Counties Manukau address have their ethnicity on their PHO register overwritten by the ethnicity recorded on the combined health record. Prioritised ethnicity is utilised. If the individual has ever been recorded as Maaori, Pacific or South Asian in the last three years then the last recorded ethnicity is used. Otherwise it is listed as 'Other'. This method still misses about 1% of the population that hasn't attended any medical services during the previous three years. However it is more accurate than the PHO dataset and has the advantage of being more easily and quickly updated than Census data.

- Using this method 94% of Maaori, 96% of Pacific and 95% of non-Maaori/non-Pacific people in CMDHB are enrolled in PHOs (see Figure 5). They may be enrolled in CMDHB PHOs or in PHOs out of district[10]. This is very similar to the NZHS data.

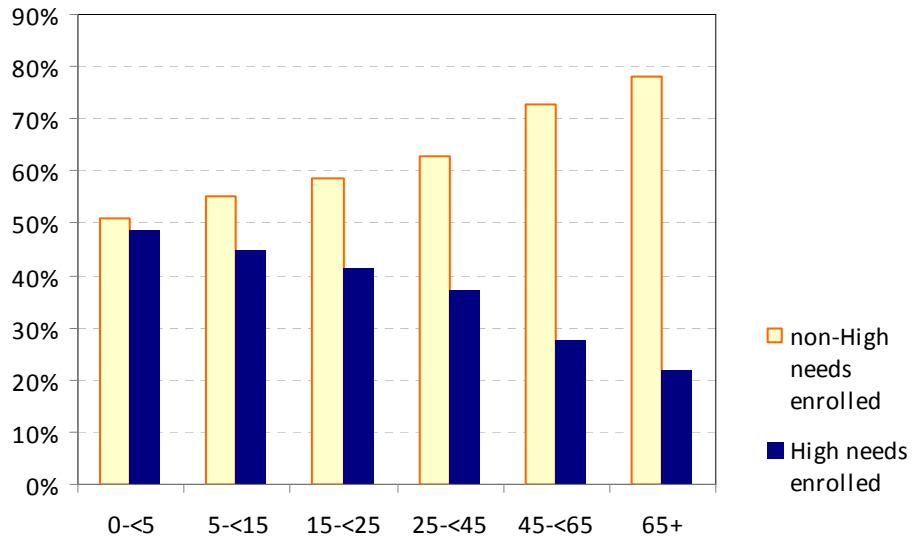
Figure 5 PHO enrolments of CMDHB residents by ethnicity, as at the end of Q4 2009



Source: CMDHB PHO enrolment data analysed by CMDHB

- NDSA also collects data on enrolments at PHO level for metro Auckland DHBs. In CMDHB Interim-funded practices 36% are high need enrolees with this percentage closer to 50:50 for youth (see Figure 6).

Figure 6 The percentage of high needs versus non-high needs enrolees in Interim funded practices in CMDHB, as at 31 December 2009

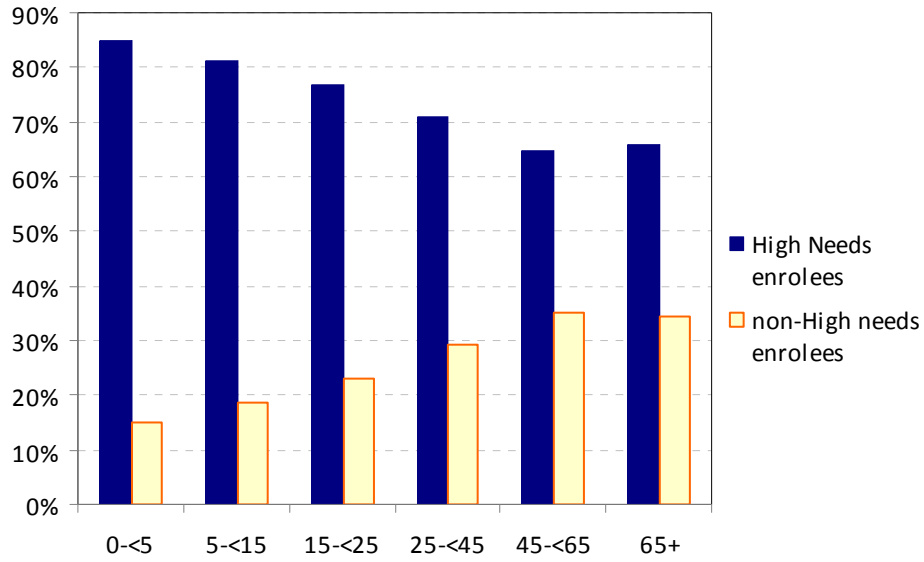


Source: NDSA with further analysis by CMDHB

[10] Enrolment for end of 2009 based on the most recently constructed PHO population undertaken in June 2010 was 96.6% of CMDHB domiciled enrolled in a PHO

- In Access-funded practices in CMDHB 74% of enrolees are classified as high needs and the proportion is higher for those under 25 years of age (See Figure 7).

Figure 7 The percentage of high needs versus non-high needs enrolees in Access funded practices in CMDHB, as at 31 December 2009



Source: NDSA with further analysis by CMDHB

However enrolment is only the first step in assuring that there is some improvement in primary care access in the population. The following section reviews access in more detail, looking at financial, geographical, cultural and functional barriers to care.

Chapter 3. Access to Primary Care

3.1. Introduction

To improve population health outcomes and maximise the impact of PHC on improving health, reducing inequalities and improving cost effectiveness, it is important that all of the community is able to fully access care. Access to primary care means that the population is able to receive the care they require in the community. Barriers to improving access are multi-factorial. The Alma-Ata Declaration of PHC describes access as having four components:

- Geographical
- Financial
- Cultural
- Functional [4].

Geographic accessibility means that travelling for care, including the time taken, distance and transport required is acceptable. There is a strong correlation between availability of primary care providers in the community, expressed as population per full time equivalent (FTE), and the utilisation of services [30]. Financial accessibility translates to having primary care services that are affordable for all members of the community. Cultural accessibility means that the service provided is culturally appropriate and may include cultural specific services such as Maaori-for-Maaori providers along with generic care. Functional accessibility relates to having the type of primary care system that meets the needs of the community, providing appropriate services by appropriate team members at appropriate times. Similarly barriers can be classified in these categories and from the published literature there is evidence that all of these aspects of access are important.

The Northern Regional Health Survey (NRHS) undertaken in 1996/7 examined reasons for not seeing a health professional the last time the participant was unwell and helps illustrate some of the barriers to access for the local community prior to the implementation of the Strategy [31]. This survey covered greater Auckland and Northland and therefore includes a subgroup from South Auckland. Table 4 illustrates a snapshot of the major reasons divided into financial, functional, and geographical reasons. This table is taken from the findings of the NRHS which have been classified into these areas [32].

Table 4 Reasons for not seeing a health professional the last time unwell (weighted %), modified from NRHS data

	Financial	**Functional**		**Geographic**
Reason given	**Too expensive**	**Takes too long**	**Didn't know where to find**	**Transport problems**
Paakehaa	10.8	1.5	0.0	0.0
Maaori	13.3	8.4	1.1	1.8
Pacific	11.8	11.6	3.0	0.0
Other	11.3	1.1	8.8	0.0
South Auckland	14.5	6.8	0.0	0.0

- **Financial accessibility** remained the biggest barrier to all ethnic groups when the health issue was more than a mild ailment. For those surveyed in South Auckland, financial barriers were significant with 14.5% citing issues with cost [31].
- **Functional accessibility** was also a significant problem for those in South Auckland, especially for Maaori and Pacific peoples [33]. In another South Auckland study long waiting times for primary care services were also associated with lower utilisation of primary care[34].

Utilisation of primary care and other health care services are not shown to be substantially different between lower and higher socioeconomic groups [19, 20, 31]. The NZHS in 2006/07 showed no significant differences in the median number of visits by ethnic group or neighbourhood deprivation for children or adults [29]. However there are significant differences in health status between these groups and therefore one would expect higher utilisation of services in order for the health needs of lower socioeconomic groups to be met.

The following section reviews changes in access to primary care services in CMDHB between 2001 and 2009.

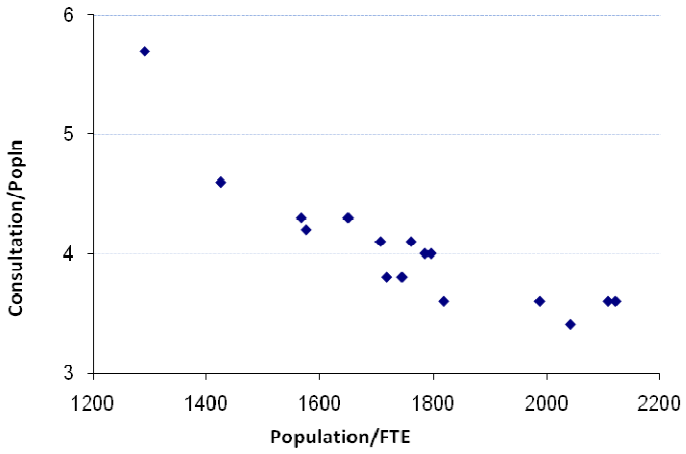
3.2. Geographical accessibility

Geographic barriers to accessing primary care are supposedly less important in an urban environment. However there is a reasonable rural population in Counties Manukau which makes up approximately 7% of the total based on the 2006 Census data (K Wang; internal CMDHB work, 2010). Port Waikato, Franklin and Pukekohe face issues specific to rurality such as increased travel times to care. There is a reasonable proportion of people in the latter locality from higher socioeconomic groups that choose to live in these areas as a life style choice. The implication of this is that these people have the financial ability to help overcome these rurality barriers.

3.2.1. GP numbers in CMDHB

Higher numbers of FTE GPs serving a population are in general associated with higher utilisation of primary care [30]. This is illustrated in Figure 8. Geographical access is also improved by increasing the use of nurses in primary care so GP numbers on their own only tell part of the story. However due to the unavailability of nursing FTE numbers, only GPs numbers have been used as a proxy for geographical access in this chapter.

Figure 8 General Practitioner availability (population per FTE GP) and utilisation (consultations per capita) in New Zealand, 1989/1990



Source: Malcolm, 1993

At present, New Zealand has an official 'GP per Population ratio' of 1:1,400 in Section 51 of the Health and Disability Services Act 1993, for the purpose of issuing a Notice to practise in a locality. The Ministry of Health uses this ratio as the recommended minimum requirement of FTE GPs to meet health need. It is acknowledged that this is a simplistic ratio and is hence 'a crude measure of geographical access' [35].

Population growth and the number of hours each GP works impacts on the availability of FTE GPs. Unfortunately Counties Manukau has been below the recommended ratio, sitting near the bottom nationally with an estimated 50 GPs short in 2001(G. Jackson from MCNZ data, 2001). The national average is approximately 1 FTE GP to 1300 people (K. Arcus, internal CMDHB work, 2009). This shortage is compounded by a trend seen in Royal New Zealand College of GP (RNZCGP) workforce surveys which suggest GPs are tending to work fewer hours [36] This is hypothesised to be due to the feminisation of the workforce and GPs seeking better work-life balance. Consequently this combined with population growth in the district has led to minimal growth in the number of FTE GP per 100,000 of the population over the period.

3.2.1.1. Methodology

Data collection of the actual head count of GPs working in CMDHB sourced from PHOs formally started in 2006. Previously the total headcount of GPs had been garnered from workforce surveys or in some cases estimated by using community pharmaceutical expenditure. None of the data sets are particularly accurate for the entire period of interest and not all of them give the number of FTE GPs in the district.

The most consistent dataset comes from the Medical Council of New Zealand (MCNZ) annual workforce surveys. The sampling frame is doctors with general, provisional general, general practice vocational, or provisional vocational scope of practice and a current Annual Practicing Certificate. Doctors must be actively working which is defined as working more than 4 hours per week in medical work. This includes non-clinical activities. One FTE is proportional to working a 40 hour week. The response rate over the time period has been very good, slightly up in 2008 at 87%.

The issue with this dataset is that some doctors in active employment may not have responded to the survey and no allowance can be made for this non-response. When compared with the actual head counts which are reported to the DHBs by the PHOs, which have been collected in the latter part of this time period, it seems that the MCNZ workforce survey undercounts active GPs working in the district. However trends are still able to be determined over time.

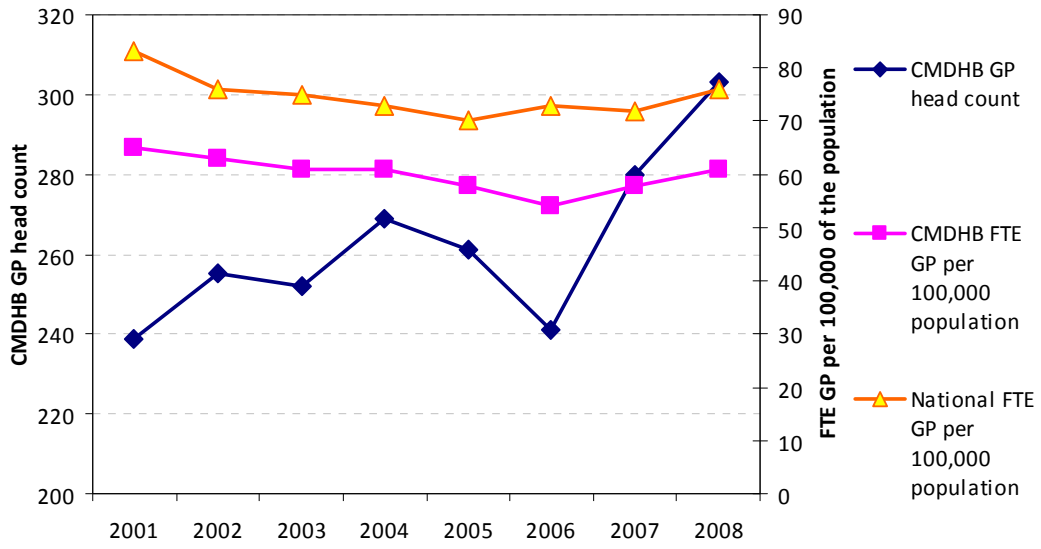
3.2.1.2. Results

The MCNZ data set demonstrates that whilst the total headcount of GPs working in Counties Manukau has increased by 27% from 2001 to 2008 (with a large increase from 2006 to 2008), the number of FTE GPs per 100000 of the population has fallen by 6% (see Figure 9). This is due to the rapid population growth in CMDHB and could also be hypothesised to be due in part to the national trend identified in RNZCGP workforce surveys which demonstrates that GPs are decreasing their clinical working hours [37].

Figure 10 attempts to summarise the number of FTE GPs available to the Counties Manukau population over the last eight years by combining 3 data sources:

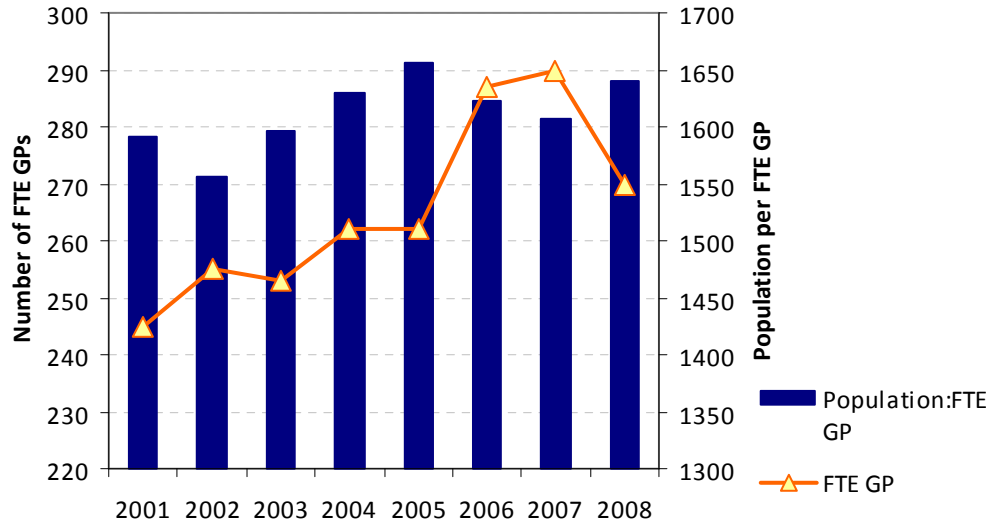
- early initial data from the MCNZ
- the middle data from population modelling by Planning and Performance in CMDHB
- the years 2006 and 2007 from CMDHB PHOs
- 2008 from MCNZ as PHO data unavailable

Figure 9 CMDHB GP headcount and FTE GPs per 100,000 population compared to national, 2001-2008 (MCNZ)[11]



Source: MCNZ, CMDHB

Figure 10 CMDHB FTE GPs and FTE GPs:Population, 2001-2008



Source: MCNZ (2001-2003), CMDHB (2004-2005), PHO reporting (2006-2007), MCNZ (2008)

Despite a degree of inaccuracy introduced by using three different data sources collected using differing methodology, it is clear from the graph that Counties Manukau has failed to reach the minimum recommended 1 FTE GP:1400 residents over the time period of interest and has in fact deteriorated when a trendline is applied. In 2008 1FTE GP was serving approximately 1640 Counties Manukau residents. This number was analysed using MCNZ data which tends to undercount FTE GPs in the district. However between 2001 and 2008, the ratio of 1 FTE GP to the population has remained around 1600.

[11] Data for 2009 was unavailable from the MCNZ at the time of writing this report

3.2.2. FTE GPs and GP headcount by locality in CMDHB

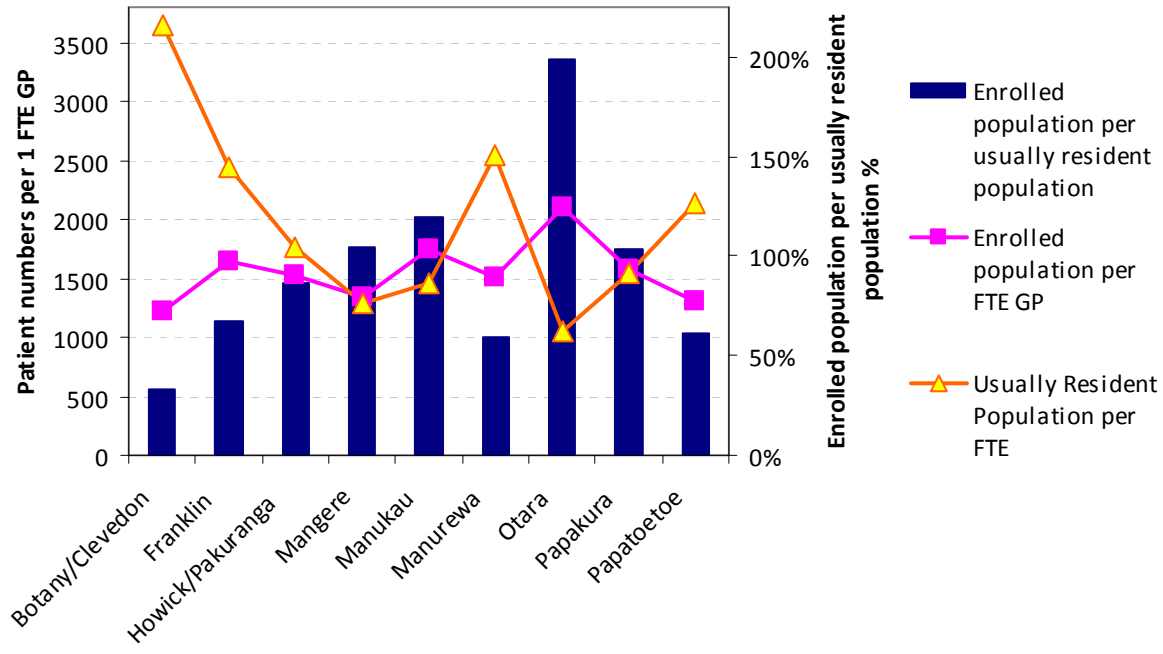
The number of general practices and distance to travel is considered part of geographical accessibility, along with FTE GP numbers. At the end of 2009 there were 109 general practices in CMDHB. Geographical access to general practice in CMDHB varies by locality and these include:

- Botany/Clevedon
- Mangere
- Papatoetoe
- Otara
- Franklin
- Howick/Pakuranga
- Papakura
- Manurewa.

Figure 13 on page 29 is a map of general practices in CMDHB. The colours of the circles relate to the PHOs they belong to. The size of the circles relate to the number of FTE GPs per practice. The population density of the area is represented by differing shades of red.

Enrolment data collected from PHOs relative to suburb and number of FTE GPs is illustrated in Figure 11.

Figure 11 Enrolled population per 1 FTE GP versus usually resident population per 1 FTE GP for CMDHB localities



Source: PHO enrolment data, 2006

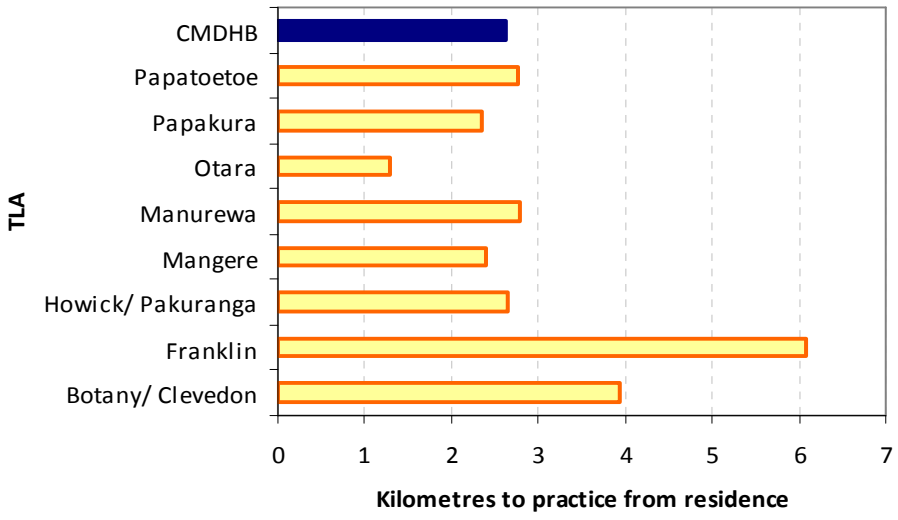
The data demonstrates that:

- Otara residents appear to have the highest level of geographical access to general practice given that they have the highest number of GPs relative to their population – 1 FTE GP:1053. (This is shown in Figure 11 as the triangle symbol and orange line.) Otara residents also travel the shortest distance to the practice they are enrolled with.
- Botany/Clevedon residents appear to have the lowest level of geographical access with the least number of GPs relative to their population – 1 FTE GP:3,646. They also travel further to their practice (second only to Franklin).
- However there is marked inter-locality flow with practice enrolments. Otara practices have almost twice as many patients enrolled relative to its population (199% - seen in Figure 11 as the solid blue bar). This reverses the trend in geographical accessibility. When considering enrolled patient numbers Otara in reality has the least number of FTE GPs per enrolled population (1FTE GP:2,096 shown in Figure 11 as the square symbol and pink line) which impacts on the ability of enrolees to utilise the service. Whereas when looking at enrolment numbers Botany/Clevedon are comparatively well served with 1FTE GP:1,221.

People from Franklin, Botany/Clevedon, Manurewa and Papatoetoe are more likely to enrol with a practice outside their locality of residence. The residents of Botany/Clevedon enrolling outside their locality tend to enrol with a general practice in Howick/Pakuranga or in the Auckland District Health Board area. A high proportion of residents in Papatoetoe also enrol with practices in the Auckland District Health Board area or in the immediate surrounding suburbs of Otara and Mangere.

Overall though, Counties Manukau residents tend to enrol with a general practice within a few kilometres of home. Fifty percent of all Counties Manukau residents travel less than 2.6 kms to the general practice they are enrolled with and 75% travel less than 5.6kms. As expected, the distances are greater in the more rural areas of Franklin and Clevedon and lowest in areas of high practice concentration such as Otara. These differences in distances covered are highlighted in Figure 12.

Figure 12 Distance in kilometres between a patient's place of residence and their choice of enrolment compared to CMDHB average

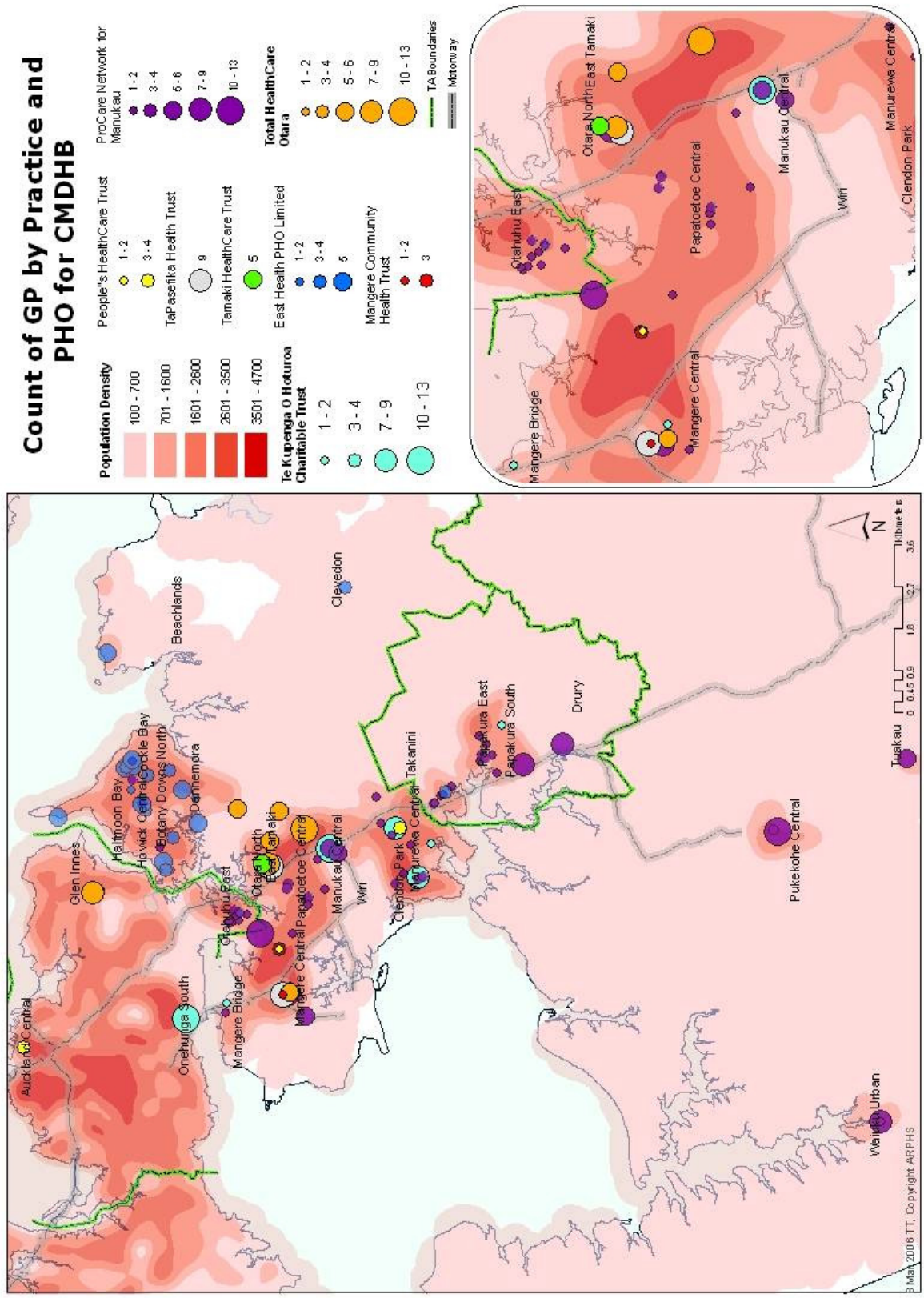


Source: 2008 PHO Enrolment Data, NDSA analysis

Analysis of the current GP workforce has calculated that an additional 100 GPs will be required over the next 20 years if the projected population growth continues (K. Arcus, internal CMDHB work 2009). This equates to Counties Manukau needing an additional 40 general practices with 2.5 FTE GPs in each if the current median of 2.5 FTE GPs per practice remains unchanged. This would only maintain a low access ratio of approximately 1700 residents enrolled with each FTE GP rather than meeting the New Zealand average of 1 FTE GP to 1300 enrolled residents. That would require another 40 practices. In the last five years only two additional practices have opened in the district – one in Mangere and one within the Airport complex - despite there being similar levels of growth to that predicted for the next 20.

The highest areas of future growth are expected to be in Manurewa and Botany/Clevedon, both of which already have poorer access relative to other localities when reviewing resident populations. However it is important to note the significant difference in deprivation between the two localities, with residents in Botany/Clevedon having markedly better socioeconomic circumstances than those in Manurewa.

Figure 13 GP practices by PHO in CMDHB



Source: NDSA

3.3. Financial Accessibility

3.3.1. The impact of copayments in primary care

Cost sharing in the form of copayments is supported by many economists as a way of improving the overall efficiency of the health system [38]. This argument is dependent on a number of assumptions holding true which include the patient being well-informed and able to accurately judge when they need to utilise health care. However, in many situations this is not the case with many patients unable to differentiate in which circumstances they should consult a health professional.

Therefore increasing copayments will result in decreases in both useful and non-useful visits. This tends to impact more on lower socioeconomic groups and children which has worrying implications for equity [38-40].

In order to avoid cost sharing, patients may use "free" services such as the Middlemore Emergency care department (EC) services rather than community primary care services. Not only is this a more expensive option for the DHB costing a minimum of $300 per case, but it may also be less beneficial for the patient due to lack of preventive services offered and lack of continuity of care.

Part of the Strategy's objective was to introduce universal reductions in cost sharing to ensure that lower copayments were available to everyone given the partial failure of targeting subsidies to CSC and HUHC holders. The following section will review the median scheduled copayments in CMDHB general practices.

3.3.2. Copayments in CMDHB primary care practices

3.3.2.1. Introduction

As at the end of 2009, 481,228 Counties Manukau domiciled residents were registered with PHOs. Only 1% of the total enrolled population held a HUHC and 28% a CSC. Out of entire enrolled population, 48% were considered to have high health needs with fairly equal numbers enrolled in both Interim and Access-funded practices (NDSA Q2 reporting 2009).

As required by the Ministry of Health, the DHB has been collecting schedules of copayments from the PHOs on their practices since 2005 and publishing current scheduled copayments on the Counties Manukau website. These are the maximum copayments that can be charged for a standard GP consultation. Practices may charge less than the maximum and what is defined as a standard consultation may vary between practices. Copayment schedules are only valid for patients enrolled at that practice.

This section will review the median copayment scheduled for what were originally known as CMDHB Interim and Access-funded practices to determine what the impact of this additional funding has been and to calculate if any trends are developing.

A complicating factor has been the addition of the voluntary Very Low Cost Access (VLCA) funding scheme introduced in July 2006. This additional stream of revenue is given to practices with the proviso that the government fixes the maximum copayment that can be charged in order to ensure low cost access.

- At the end of 2009 the majority of practices in fully Access-funded PHOs in CMDHB are under the VLCA scheme which equates to approximately 155,000 people (CMDHB internal work, 2010)
- In addition 29 of the 52 original Access-funded practices in the Procare Manukau Network PHO and 2 East Health Trust practices are currently VLCA funded. The remaining 23 Access-funded practices in Procare have chosen not to sign up to the VLCA scheme though they receive higher

levels of capitation than the remaining 12 Interim-funded Procare practices due to their high needs enrolled population.

In the latter half of 2009 the Ministry of Health changed the eligibility of VLCA. Only practices with more than 50% high needs enrolled patients can apply to join the scheme. This is unlikely to affect the majority of CMDHB Access-funded practices should they wish to join given that more than 50% of their enrolees will be considered high needs. It may however impact on the Interim-funded practices who might have considered joining the scheme where a significant proportion of high needs patients are enrolled but fail to meet the 50% requirement.

3.3.2.2. Methodology

The original plan was to use Counties Manukau specific copayment data collected from the National Evaluation of the Strategy. This reviewed the average invoiced copayment for each age group in Interim and Access-funded practices as well as the differential fee paid by CSC holders. However due to the parameters set down during the ethics approval process for the national evaluation, this was unable to be reanalysed for CMDHB. Instead the scheduled copayments given to the DHB by the PHOs has been used in this section of the report.

The median copayment has been calculated for the different age bands from 2005 to the end of the first quarter in 2009. Copayments are required to be reported to the DHB quarterly however there are instances during this time period where data was unavailable. A phone survey of CMDHB practice schedule copayments undertaken in March 2005 prior to the rollout of capitation to 18-24 year olds enrolled in Interim-funded practices was also included in the analysis.

The median copayment was chosen as it displays the middle fee and is not as affected by missing data or outlying fees as the mean.

Unfortunately there are limitations to this data analysis:

- The scheduled copayment is the maximum fee that can be charged by practices and therefore does not allow an insight into actual copayments invoiced at practice level so the level of further discounting is unknown.
- Copayment information is unavailable from the DHB database prior to 2005 and therefore the changes in copayments cannot be accurately calculated for Access-funded practices and for under-sixes, 6-17 year olds and 65 years plus enrolled in Interim-funded practices as these subsidies were introduced earlier than this.
    - To overcome this limitation, an attempt has been made to establish copayments charged in these practices prior to the Strategy in order to calculate the degree of fee changes.
    - Information was received from several PHOs on the scheduled copayment prior to the Strategy's capitation funding being rolled out. However it is unclear if this is the median, average, lowest or highest scheduled copayment in these practices. It does provide some important information however and will be included in the findings.
- Missing data is a frequent issue, with the copayment schedule for each age group not always completed in every quarter by providers. In addition every quarter between 2006 and 2009 has not been consistently collected by the DHB. The most current data recorded is the quarter starting April 2009.
- Similarly the scheduled copayments for CSC holders are not recorded consistently for all practices by the DHB as it is not a requirement of practices to do so.
    - This makes it difficult to determine the degree of fee changes for CSC holders compared to non-CSC holders.

- A significant proportion of Counties Manukau residents enrolled in the areas PHOs hold a CSC – approximately 28% or 136,000.
- This is a significant limitation to the analysis; particularly in Interim-funded practices where the scheduled maximum copayments are considerably higher than in Access-funded practices.
- However it should be noted that the policy aim of the Strategy was for copayments to be the same for CSC and non-CSC holders once the funding roll-out was complete. Anecdotal evidence says this is not true for Counties Manukau and evidence from the NZHS demonstrates a degree of discounting nationally, particularly for high need groups [19, 29, 41, 42].

3.3.2.3. Median scheduled copayment in CMDHB Interim-funded practices

Table 5 on page 34 provides a summary of the median copayments scheduled for Interim-funded practices in CMDHB practices and PHOs. The initial median copayment just prior to the subsidy is the recorded copayment in the quarter prior to the roll-out of funding for that particular age group. The median copayment after the subsidy is that recorded in the immediate quarter after the roll-out. The median copayment in 2009 is that recorded at the beginning of April. The next column gives the percentage change in copayment between its highest point just prior to the subsidy and April 2009. The final column gives the percentage change in copayment after the subsidy to April 2009. The CSC status is unavailable for most age groups so the percentage change is calculated on both CSC/non-CSC having the same copayment which would be in line with the Strategy's policy aim.

Narrative

The median copayment for under-sixes has remained at zero between 2005 and 2009. The voluntary additional subsidy (Zero Fees for Under-sixes) was made available in 2008.

It is unclear how much the median scheduled copayment for 6-17 year olds has changed overall since the subsidy was introduced in September 2003. From March 2005 the copayment has increased from $25 regardless of CSC status to $28 for CSC holders and $28.50 for non-CSC holders.

Prior to receiving the additional subsidy in July 2005, the median scheduled copayment for 18-24 year olds in Interim-funded practices was $33 and $48 for CSC holders and non-CSC holders respectively. Copayments fell by 34% for non-CSC holders from March 2005 to April 2009. Despite this fall, the copayment has increased by 26% from July 2005 to 2009. A CSC holders' median scheduled copayment fell a minimum of 4.5% over the same time period if one assumes they were paying the same fee as non-CSC holders at the end of the first quarter of 2009. Less than a quarter of this age group enrolled in Interim-funded practices hold a CSC. Figure 14 illustrates the median copayment for those under 25 years of age.

Figure 15 illustrates the median copayment for those aged 25 years and over in Interim-funded practices. Those aged 65 + years had their scheduled median copayment increase since July 2005 by nearly 18% to a median of $31.65. Again it is also unclear if there is any reduction in copayment for CSC holders as this was not recorded. This is significant as nearly half of the Interim-funded enrolees in this age category have this subsidy card.

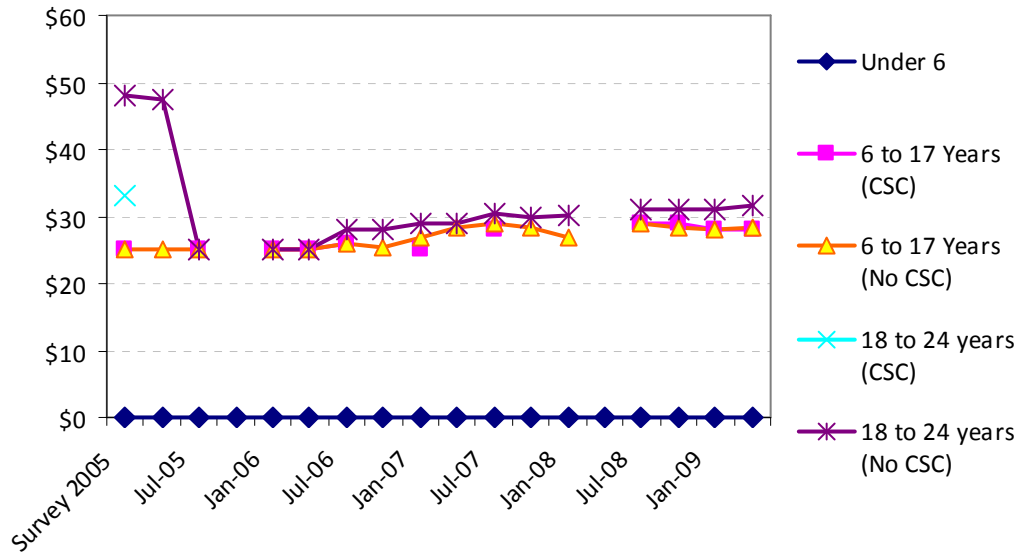
The next group of adults to receive a subsidy in July 2006 were those aged between 45-64 years. The median scheduled copayment in 2006 had risen by over 8% since the 2005 phone survey to $52 for non-CSC holders. On receiving the subsidy the median scheduled copayment fell by 38% to $32 from July 2006 to 2009. Again it is unclear how much CSC holders median copayments fell but it was by a minimum of 3%. Approximately 16% of 45-64 year olds enrolled in Interim-funded practices held a CSC at the end of the first quarter of 2009.

Table 5 Summary of median schedule copayments in CMDHB Interim-funded general practices

CSC Status	Initial median copayment just prior to subsidy	Median copayment straight after subsidy	Median copayment in 2009	% change pre-subsidy to April 2009	% change post-subsidy to April 2009
Under sixes					
	Subsidy introduced prior to 2005	$0	$0	0% change between March 05 April 09	n/a
6-17 year olds					
CSC	Subsidy introduced prior to 2005	$25	$28	12% ($3.00) increase between March 05-April 09	n/a
No CSC	Subsidy introduced prior to 2005	$25	$28.50	14% ($3.50) increase between March 05-April 09	n/a
18-24 year olds					
CSC	$33		$31.50	4.5% ($2.50) decrease from March 05 -April 09[8]	
No CSC	$48	$25	$31.50	34% ($16.50) decrease from April 05- April 09	26% ($6.50) increase between July 05–April 09
25-44 year olds					
CSC	$33		$32	Minimum of 3% ($1.00) decrease between April 07-April 09[8]	
No CSC	$58	$28	$32	48% ($26.00) decrease between April 07-April 09	14% ($4.00) increase between July 07-April 09
45-65 year olds					
CSC	$33		$32	Minimum of 3% ($1.00) decrease from 06 to 09[8]	
No CSC	$52	$28	$32	38% ($20.00) decrease from 06 to 09	14% ($4.00) increase between April 06-April 09
65 years +					
CSC					
No CSC	Subsidy introduced prior to 2005	$26	$30.65		18% ($4.65) increase from March 05-April 09[12]

[12] Assuming the scheduled median copayment is the same as that recorded in the adult category in the phone survey undertaken in March 2004.

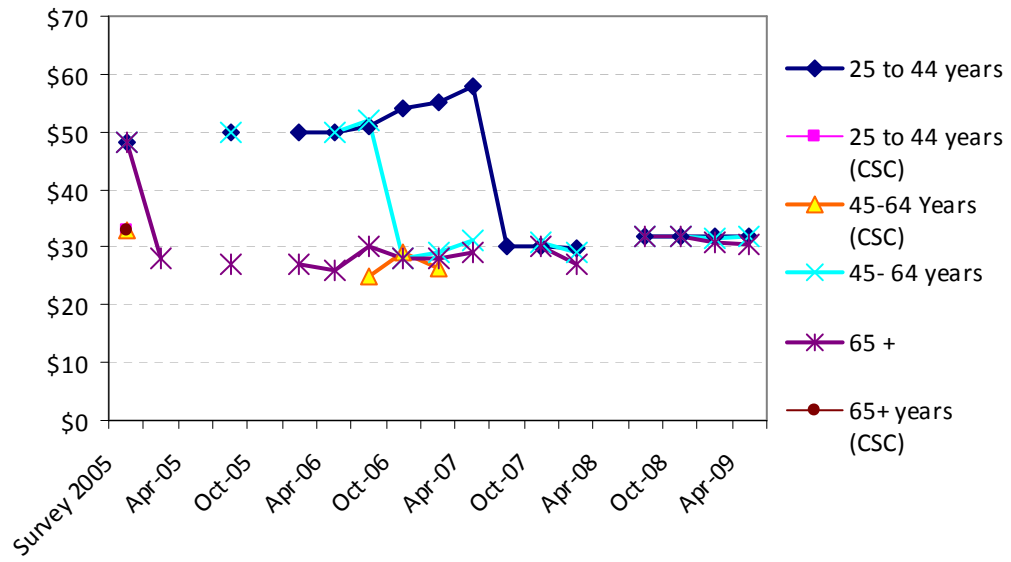
Figure 14 Median Copayments for Interim-funded practices in CMDHB from 2005 to 2009 for age groups under 25 years of age



Source: PHO data analysed by CMDHB

The final group to receive a subsidy were 24-44 year olds in July 2007. By then the non-CSC holders' median scheduled copayment had increased from the $48 noted in the March 2005 survey to $58, a rise of 21%. Since the subsidy the median copayment has fallen to $32, a significant 48% reduction from July 2007 to April 2009. The CSC median copayment is again a minimum of 3% decrease since the subsidy if one assumes there is no differentiation of copayment in 2009. In this age group 18% held a CSC.

Figure 15 Median Copayments for Interim-funded practices in CMDHB from 2005 to 2009 for age groups over 25 years of age



Source: PHO data, analysed by CMDHB

During 2001-2009, inflation based on the Consumer Price Index (CPI) increased by an average of 2.7% per year [43]. Medical practice costs are said to increase more than this. Research by Cumming and Stillman showed that fees paid by patients across all population groups rose by

around 5.76% per year (J Cumming, personal communication, 2010). In 2008/09 the maximum increase in copayments allowed before requiring a fees review process was set at 4.7% by the Ministry of Health [44].

There have been increases in the scheduled median copayments for all age groups (aside from under-sixes) enrolled in Interim-funded practices, particularly for those having received their subsidy earlier in the roll-out. The copayment post-subsidy increased by 14% for 25-44 year olds and 45-64 year olds. This equates to an annual increase of around 7% for 25-44 year olds and approximately 5% for 45-64 year olds. From July 2005 the copayment for 18-24 year olds increased by 26% which equates to an annual increase of 6.5%. These increases are higher than CPI, though the 45-64 year age group is under the average percentage increase quoted by Cumming (personal communication, 2010). Equivalent calculations cannot be performed for 65 + years and 6-17 year olds as the immediate post-subsidy copayment is not available. However from March 2005 both have increased – 14% for 6-17 year olds and 18% for 65 + years. This is an increase of 4.5% and 6% respectively.

3.3.2.4. Median scheduled copayments for CMDHB Access-funded practices

Access-funded practices received increased funding from government in July 2002 with additional pharmaceutical subsidies in July 2004. Unfortunately the formal recording of copayments by the DHB did not start earlier than 2005 so it is difficult to determine the true change in fees for those enrolled in Access-funded practices.

Moreover prior to the implementation of the Strategy several high needs practices in the CMDHB area were receiving additional funding streams in the form of case management contracts which allowed for the provision of low cost copayments for their populations. These included the Raukura o Tainui practices, TaPasifika practices and Turuki (A Moffitt; personal communication, 2010). Consequently, not all of the practices, defined by the Ministry of Health as high needs, started on an even playing field with regards to funding.

The National Evaluation of the Strategy does provides some information on the mean copayment for Access-funded practices prior to the roll-out of funding which could be cautiously applied to the CMDHB Access enrolled population, if one remembers the presence of these case management contracts in the district. The evaluation results are summarised after this section.

As with the Interim-funded practices, the median scheduled copayment has been calculated for Access-funded PHOs in CMDHB along with practices in Procare Manukau Network that were eligible for Access funding. This equates to 52 out of the 64 Procare practices in the district.

Given that the subsidies occurred prior to DHB recording, a table has not been included as it was for Interim-funded practices. Pertinent points are described in the narrative and well illustrated in Figure 16 and Figure 17.

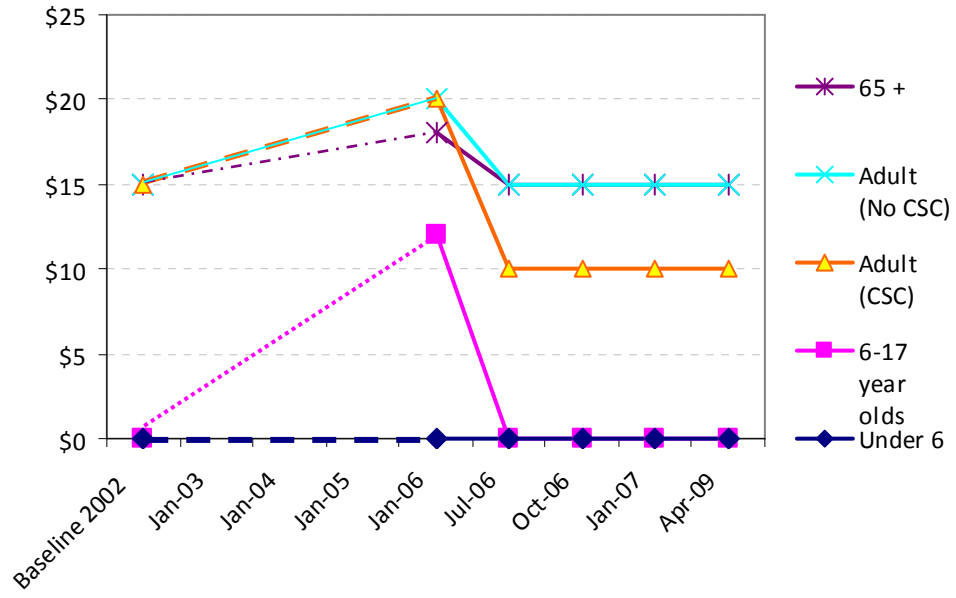
Narrative

Overall the scheduled median copayments have stayed low in Access-funded practices in CMDHB and in general have reduced further from July 2006 with the introduction of the VLCA subsidy. Under-sixes median copayments have remained at $0.00 over the time frame of interest, with children up to the age of 18 paying between $0.00 and $10. Adult copayments have also been low varying between a median of $10 to $20 with some practices having a koha as payment, particularly for 65 + years.

Figure 16 illustrates the trending down of schedule median copayments in a PHO switching to VLCA funding in July 2006. Baseline data was provided by the PHO prior to the Strategy's introduction of capitation. Dotted lines are extended on the graph from baseline data to join up with the first recorded fees in January 2006. It is clearly seen that copayments trended up over this time, aside from under-sixes where the median fee has stayed at zero.

In July 2006, due to the introduction of VLCA funding, the median scheduled copayments fell for this PHO from $20 to $10 for adults with a CSC, and from $20 to $15 for adults and 65 years + without a CSC. These are falls of $10 (50%) and $5 (25%) respectively and have been maintained at these low levels in line with government policy. Similarly the 6-17 year olds scheduled copayment increased from zero fees to a median of $12.50 but in July 2006 fell to zero fees again. This is a 100% reduction.

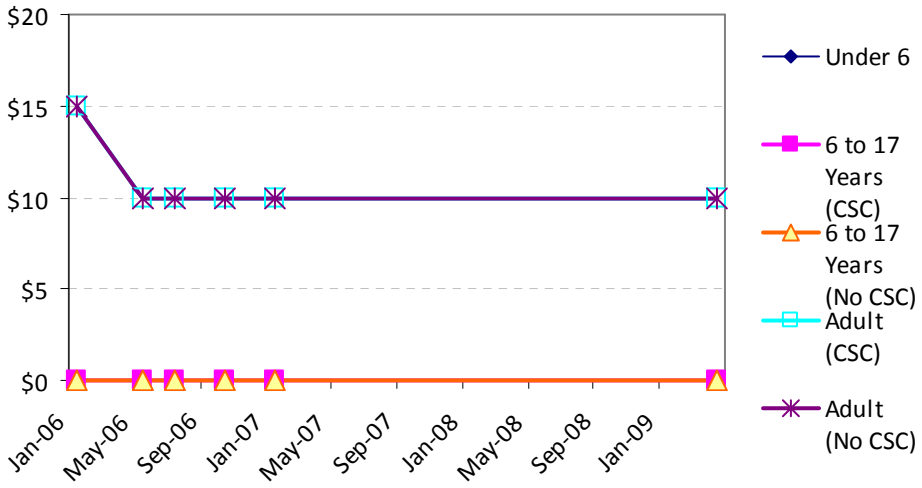
Figure 16 Median scheduled copayment changes in CMDHB Access-funded PHO from baseline to 2009, VLCA funded from July 2006



Source: PHO data analysed by CMDHB

Figure 17 illustrates the median scheduled copayment in another Access-funded PHO in CMDHB without the baseline data and shows similar results.

Figure 17 Median Scheduled Copayments for Access funded PHO, VLCA funded from July 2006

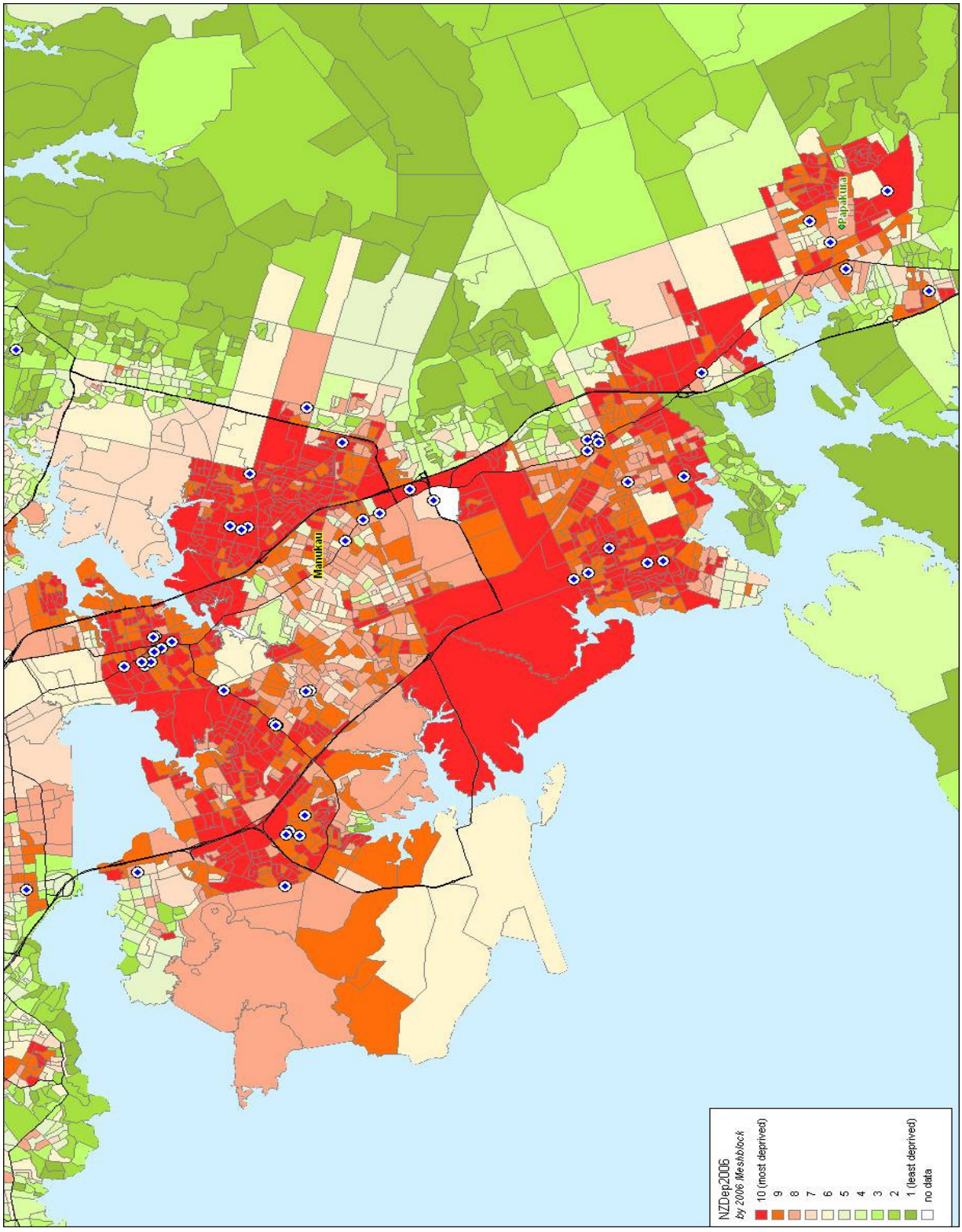


Source: PHO data analysed by CMDHB

To remain eligible for VLCA funding the maximum scheduled copayments as at the end of 2009 are as follows: zero fees for under-sixes, $11 maximum for 6-17 year olds and $16.50 for adults [45].

Figure 16 and Figure 17 illustrate that the median copayment for Access and VLCA practices combined in Counties Manukau have scheduled copayments below these amounts. More than 50% of the Counties Manukau population are enrolled in VLCA practices and hence have access to low fees regardless of CSC status. Figure 18 demonstrates the relatively even distribution of these VLCA practices in the district, with high deprivation areas well served.

Figure 18 Location of VLCA practices in CMDHB with shading for deprivation



Source: CMDHB

However if Access-funded practices (excluding VLCA practices) are examined the maximum scheduled median copayment is substantially higher for most of the age groups. Data was available on scheduled copayments from the March phone survey in 2005 to 2009. The changes in the scheduled copayment for each age group are illustrated in Table 6. The inter-quartile ranges are also included as these provide valuable information between which values the majority of copayments lie.

Table 6 Changes in the median scheduled copayment in remaining CMDHB Access-funded practices with inter-quartile values, from March 2005 to April 2009

Age group	Median copayment in March 2005	Median copayment in April 2009	Change in copayment $/%
Under sixes	$0.00	$0.00	nil
6-17 year olds	$10 ($10.00-$15.00)	$14.00 ($10.63-$18.75)	$4.00 or 40% increase
18-24 year olds	$20.00 ($20.00-$23.50)	$27.50 ($25.25-$29.75)	$7.50 or 38% increase[13]
25-64 year olds	$22.00 ($20.00-$25.00)	$27.50 ($25.25-$29.75)	$5.50 or 25% increase
65 years +	$20.00 ($18.00-$21.75)	$25.00 ($20.25-$28.00)	$5.00 or 25% increase

Source: PHO data analysed by CMDHB

This data is taken over a four year period. This equates to inflation of the scheduled median copayments for the remaining Access-funded practices being more than would be expected according to both the CPI and the maximum medical inflation (5.76% quoted as an average inflation rate in general practice and the 4.7% maximum allowed in 2008/09 by the MOH).

3.3.2.5. National Evaluation of the Strategy data on mean invoiced copayments[43]

The National Evaluation provides information on the changes in mean invoiced copayments between 2001/02 and 2007 [43].[14] A summary of the mean copayments is provided in Table 7 and distinguishes practices by funding formula. Key points are listed below:

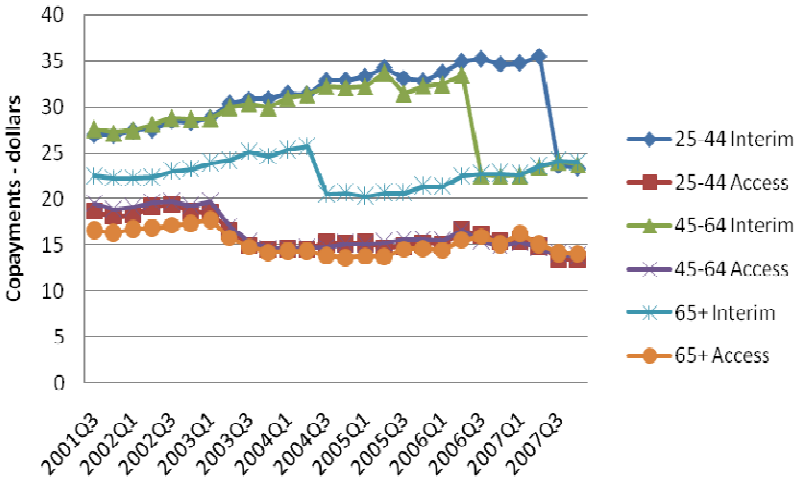
- Copayments between 2001/02 and 2007 have generally trended down for those aged between 18 and 64 years of age.
- At Access-funded practices copayments have fallen progressively and are notably lower than at Interim-funded practices (see Figure 19). In addition the mean copayments charged were within the range aimed for by government. These were zero fees for under-sixes, $7-$10 for 6-17 year olds and $15-$20 for adults. Over the time period Access-funded practices have shown a 5% annual reduction in invoiced copayments.
- Interim-funded practices had a substantial drop in the copayments charged when the additional funding came through for each age group (illustrated well in Figure 19). This was mainly for those

[13] There was no separate median copayment that was able to be calculated for 18-24 year olds in 2009, hence the adult median copayment was used

[14] See Chapter one for methodology used

without a CSC as CSC holders were already receiving a government subsidy. The aim of the Strategy's policy was to achieve reductions in Interim-funded practices scheduled copayments of around $25 for non-CSC/HUHC holders and of $10 for CSC/HUHC holders. The evaluation shows that this has not been the case, with the drop off in copayments being followed by incremental increases in copayments of around 4.5% annually.

Figure 19 Mean Co-Payments for Older Age Groups, 2001-2007 (by quarter and by funding formula)



Source: HSRC

- Maaori, Pacific peoples and those from NZDep decile 9 and 10 areas were charged less throughout the time period though this difference decreased over the study period.

Table 7 Summary table of mean copayments charged in Interim and Access-funded practices by age group in 2001/02 and in 2007 with % change

	Mean Copayments		
	2001/02	**2007**	**% change**
Interim-funded practices			
0-5	1.17	1.91	62.8
6-17	12.19	15.4	26.3
18-24	26.08	22.55	-13.6
25-44	27.26	23.54	-13.7
45-64	27.62	23.9	-13.5
65+	22.33	24.06	7.8
Access-funded practices			
0-5	0.58	0.64	10.4
6-17	9.06	6.42	-29.2
18-24	17.06	13.33	-21.9
25-44	18.56	13.43	-27.7
45-64	19.27	13.91	-27.8
65+	16.58	14.03	-15.4

Source: Health Services Research Centre

3.4. Functional accessibility

Functional accessibility refers to the ease in which people are able to attend health care services in the community and consists of such things as opening hours, appointment systems and the closing of GP books in the area. In Counties Manukau many families have only one car which may not be available until after usual working hours. Therefore accessing primary care services proves difficult when their normal provider shuts at 5pm or only provides immunisations up until 4pm for example. The following discusses after-hours care in CMDHB which is a key component of functional accessibility.

3.4.1. After-hours service to improve access to primary care

After-hours services provide care to meet the needs of patients which cannot be deferred until regular care is next available. Services are expected to deliver diagnosis and treatment or referral for semi-acute to acute illness and accidents, but not necessarily to deliver preventive health services [46].

After-hours care can be broken down into extended hours and overnight care. Extended hours care is the provision of regular care beyond the usual working hours; i.e. 5pm to 10pm weekdays, 8am to 10pm weekends/public holidays. Extended hours are usually, but not necessarily, provided by the practice or provider with whom the patient is enrolled.

Overnight care is care provided between 10.00pm and 8.00am daily. Services provided during this period are intended to ensure that an appropriate level of care is available for acute illness, accidents and emergencies.

Research from Tamaki PHO[15] demonstrates that visits to White Cross accident and medical facilities have peaks just prior to 10pm and in the morning at the opening of practices. The majority of attendees are children under six [47]. This raises two points – affordable extended after-hours could potentially capture many of the patients using the Middlemore Emergency Care department (EC) in Counties Manukau and secondly, more acute appointments/walk-in clinics in primary care may improve functional access especially in managing the early morning rush.

Prior to capitation, GMS payments covered first contact services, palliative care and after-hours care. The Strategy brought in capitation funding which was expected to cover the cost of all first contact services. However there was disagreement over the definition of first contact services between PHOs and the Ministry of Health. PHOs believed that capitation did not cover after-hours services; the Ministry of Health believed it did. The PHO/provider arm felt they were legislated to provide "access" 24/7 by the provision of information about where to seek after-hours care to their patients whether by phone or on posters in the practice for example. This was felt to meet contractual obligations.

During 2001 to 2005 accident and medical clinics grew in number as primary care providers providing extended hours dwindled [46]. There was a lack of knowledge and frustration by the public in how to access after-hours care and variations in copayments charged created financial barriers for some high needs groups. This led to inefficient use of services; with hospital based EC attendances slowly trending up for ambulatory sensitive conditions (see section 4.5).

There was an attempt to rectify these issues with the provision of a National After-Hours framework in June 2005 in order to:

- provide information to patients

[15] Tamaki PHO is funded by Auckland District Health Board, though one of its practices sits in CMDHB.

- create a formal link with accident and medical clinics and/or primary care providers to provide these extended hours
- review and ensure appropriate levels of copayments are charged for visits during this time, particularly for children under the age of six [48].

Some PHOs and primary care providers had already started to provide an extended hours service using SIA funding targeted to their high needs population after consultation with the DHB. There was still only one provider of over night services aside from Middlemore Hospital and this was not centrally located in the district. Given the small volumes overnight a single overnight service provider is desirable so the CMDHB EC has remained the default option.

CMDHB formed a working party in 2005 to help construct and implement an after-hours plan based on the national framework for the district. The goal was to ensure that all patients are able to afford to access after-hours care while ensuring a sustainable service. However, little progress was made for the overall district until the introduction of further funding by government in 2008.

The government provided national funding with $1.4 million of funds allocated to CMDHB for an 18 month pilot to assure the supply of after-hours care to the district. A Request for Proposal (RFP) for the region was put out in March 2009 for the provision of a network of after-hour providers to supply services until 10pm. The focus was on the high needs population. This funding is expected to contribute to the provision of an additional GP, practice nurse and administration for the practices. In 2009 two PHOs with two providers each were chosen to deliver this service with contracts being signed in 2010.[16]

3.5. Cultural accessibility

It is generally acknowledged that Maaori and Pacific people's utilisation of primary care is low in proportion to their recognised health needs [19, 29, 41, 49]. In both the Northern Health Survey in 1996/7 and the New Zealand Health Survey 1996/7, Maaori and Pacific people's likelihood of having seen a general practitioner in the last 12 months was similar to Paakehaa rather than higher [19, 31]. However unmet need for both Pacific peoples and Maaori nationally and in CMDHB has been reported in the NZHS as consistently higher than non-Maaori/non-Pacific [19, 29, 41].

This may be partly due to cultural barriers along with other barriers that have been discussed. Cultural barriers are those present when service delivery practices or providers are considered inappropriate or unacceptable to particular ages, gender or ethnic group [50].

In New Zealand cultural barriers in the past were found to be present in the way providers framed issues, with a tendency towards victim-blaming of Maaori and Pacific peoples for their health status rather than the structure of the system [33]. However cultural accessibility was considered to be a high priority for improving health outcomes for Maaori and Pacific people in Counties Manukau and

[16] The final agreement for the after-hours care network was signed off in April 2010 with THO practices in Mangere and Otara, along with Takanini Accident and Emergency and Pukekohe Family Medical Centre offering after hours care. These practices provide after-hours care to 10pm (Pukekohe til 9pm) and are not able to actively enrol patients. They are required to develop a triage framework and report certain minimum KPIs to the DHB in order to assess if extended hours are having an impact on the population. For example: reporting on numbers seen, ethnicity of patients, presenting complaint, triage level, % transferred to EC and % of medical notes forwarded to normal provider. The maximum copayment for patients from Mangere and Otara is $45 for adults, $25 for youth and free for under-sixes. High need patients at Takanini Accident and Emergency have copayments slightly higher at $50 for adults, $25 for youth and $5 for under-sixes with standard copayments for non-high needs at $65-70 for an adult, $30 for youth and $10 for under-sixes.

nationally and led to the development of ethnic specific providers in the 1980s and 90s [10, 51]. Three Pacific providers in Counties Manukau became the Ta Pasifika PHO and three Maaori providers became TKOH in 2002.

Ethnic specific providers have the potential to reduce cultural barriers. One of the Maaori providers, Raukura Hauora o Tainui, in Clendon was evaluated in 2003. More than 70% of the patients were Maaori and the cultural appropriateness was one of the key reasons for choosing the provider along with proximity and cost [50]. Another qualitative study of Maaori recruited from urban marae-based health services reiterated the importance of practitioners taking a holistic approach when providing health care for Maaori.

Similarly the National Primary Medical Care survey of primary care organisations and providers in 2000 found that providers who were more culturally accessible to Maaori had significantly higher utilisation amongst Maaori than Paakehaa[52]. However, like the review of Raukura Hauora o Tainui in Clendon, what to conclude from this is difficult given that these organisations also had very low cost services.

Along with the development of ethnic specific providers there has been both national and regional recognition of the need to improve cultural competency overall. The CMDHB PHC plan makes a commitment to ensure that cultural competency is present in PHOs and their providers [53]. If more than 10% of the enrolled population is Maaori and/or Pacific then there is an expectation that practitioners will attend Tikanga Best Practice training and/or Pacific cultural competency in health workshops. The uptake of this has been variable in the district. SIA funding has also used by some PHOs to provide cultural competency skills to staff and providers.

The Royal New Zealand College of GPs (RNZCGP) has also made a commitment to improve the cultural competency of their practitioners [54]. The RNZCGP Cultural Competence document was released in 2007. The aim of this document is to provide a framework and guidelines to assist GPs to create and/or maintain culturally competent practices in New Zealand. This framework states that a culturally competent doctor will acknowledge:

- that New Zealand has a culturally diverse population
- that a doctor's culture and belief systems influence his or her interactions with patients and accepts this may impact on the doctor-patient relationship
- that a positive patient outcome is achieved when a doctor and patient have mutual respect and understanding [54].

Workforce planning is also focused on increasing the low numbers of Maaori and Pacific peoples training and working in the health system with many PHOs having initiatives to 'grow their own' staff.

This is some evidence of improvements in primary care utilisation by Maaori and Pacific peoples in CMDHB (refer to section 4.2) but whether this is due to improved cultural access is unknown. Further emphasis and study is required to identify how best to meet the cultural needs of the Counties Manukau population. Obligatory cultural competency training for the primary health care workforce and increased participation in the workforce by Maaori and Pacific peoples and other ethnic groups will be an important start in removing this very real barrier.

3.6. Services to Improve Access funding

A key priority for implementation of the Strategy is to reduce barriers for the groups with the greatest need. This includes the reduction of financial, cultural, functional and geographical barriers.

Services to Improve Access (SIA) funding is a new funding stream available in all PHOs to reduce barriers to access for populations that are known to have the worst health status. This includes all

Maaori, Pacific peoples and others living in NZDep 9-10 decile areas. Funding is in addition to the main PHO capitation for first contact general practice services.

Funds are allocated to the PHOs according to the number of people enrolled from high need groups. Rates are calculated using the first contact rates for access practices for non-HUHC holders with a range of different multipliers used for differing needs. For example a Maaori adult living in NZDep area 8 is multiplied by 0.2, but if living in NZDep area 9 or 10, is multiplied by 0.4.

Between $8 and $9 million is allocated to SIA funding for CMDHB PHOs annually. A CMDHB review of PHO SIA projects and processes undertaken in 2006 identified four key issues experienced by both PHO and DHB personnel [55]. These included:

- The ongoing need to identify what the access issues for the high needs populations in CMDHB actually are. These needs often differ by PHO and targeting of SIA funding to these issues is important. It is also particularly important to differentiate between high clinical need and high need demographically when designing SIA projects. PHOs with smaller numbers of high needs enrolled have reduced SIA funding which does make it difficult to target to a population rather than providing programmes to meet high individual clinical need.
- A greater appreciation is required for the incremental shift that has started to take place with more primary care providers moving from viewing their role as providers of acute individual care to understanding and undertaking a population health approach to caring for their enrolled population.
    - A great deal of investment has been required by PHOs and practices in order to implement these programmes such as investing in appropriate workforce, upskilling staff and ensuring the right IT requirements.
    - The additional service requirements from SIA funded projects on top of other initiatives means that pressure has been put on the capacity of primary care. There is also an issue of sustainability of projects particularly when PHOs were utilising accrued funds to finance projects.
    - The capacity of primary care currently and the shift to a population health approach raises the question if the current model of care is the most appropriate. This will be reviewed further in chapter 8.
- There is a need for consistency and transparency across DHB and PHO activities related to the use of SIA funding. There was concern over what was an appropriate use of SIA funds with many differences of opinion between the CMDHB and PHO staff. In addition there was a lack of agreement over what reasonable costs would be involved in providing certain SIA projects. A common issue raised in the qualitative interviews was the amount of time it took to get a project approved and running and the lack of trust.

> We felt that there have been major issues with bureaucracy with the Strategy's implementation especially with middle management at DHB level. It took forever to get SIA projects approved and there appeared to be a feeling of distrust towards practices. However in the last 12 months there has been an improvement, with an increased level of independence.
>
> CEO, medium PHO

The revised CMDHB SIA policy has attempted to clarify some of these issues and a copy is included in the appendix.

SIA projects are usefully categorised according their impact on reducing barriers to access. These include addressing financial barriers, cultural barriers, functional barriers and geographical barriers to access. These categories are not mutually exclusive so projects may be entered under more than

one category. Current examples of SIA projects are demonstrated in Table 8, along with the access barrier targeted. A full record of current SIA projects in CMDHB is included in the appendix.

Table 8 A selection of current SIA projects in CMDHB PHOs

SIA project name	Brief description	Access barrier targeted
Emergency Ambulance and Taxi	Ambulance memberships and taxi chits provided to patients requiring transport to health services	Financial and Functional
After hours settlement	Funding to cover additional costs for extended hours provided by 3 practices so copayments remain low	Financial and Functional
Discharge Care project	Registered nurse employed in discharge coordinator role to facilitate better health outcomes for recently discharged enrolees	Functional and potentially cultural
Kaumatua/Cultural advisor	Provides training and cultural support to PHO staff in developing relationships with Maaori and non-Maaori providers who have Maaori enrolees.	Cultural
School based health services	Fully serviced school-based health service on campus targeting young people 12-18 years who attend school provided by school nurses and youth health workers. Free consults provided by local GP	Financial, cultural, functional
Community Health Workers	CHWs trained and employed to work in PHO practices to provide integrated care, improving access to health and community services	Cultural and functional
Flu vaccination programme	Free flu vaccinations given to 19-64 year olds	Financial
Mental health – Engage	Funding available for extended GP consults for high needs with psychological issues	Financial
ProExtra	Provides a set of difficult to access and proven effective services to high needs enrolees that are accessed via general practice. Eg ECGs, home visits	Financial, functional
Pharmacy Facilitation	Pharmacist contracted to assist GPs in meeting their pharmacy performance targets and offers reviews, brief interventions to encourage compliance and pharmacy-based patient interviews	Functional
Access to dietician and self management facilitation services	Half day clinics with dietician services run in conjunction with CCM CVD/Diabetes programme. Enrolled high risk programmes are referred to dietician	Financial, cultural, functional
CCM Diabetes CHW subsidy	Part time CHW provides services to hard to reach patients, providing culturally appropriate services including home visits, assessments on bed bound patients, taking bloods and assisting with transport	Financial, cultural, functional

Source: PHO reporting analysed by CMDHB

Overall PHOs have made increasing efforts to target SIA funding to address the requirements of high needs populations. SIA funding is focused on reducing health inequalities for Maaori and Pacific peoples and those living in NZDep 9 and 10 areas and therefore PHOs need to continue to specifically target services to these populations, especially focusing on barriers other than financial issues, such as improving cultural competency of providers and extending opening hours.

The multidisciplinary team is becoming an increasingly important part of providing sustainable and accessible primary care and it is expected that a higher proportion of SIA funds will be allocated to

providers other than GPs and nurses. In addition sharing ideas and collaborating with other PHOs to provide appropriate services collectively would improve access for the Counties Manukau population.

No specific evaluation of the effectiveness of the SIA spend has been undertaken up to this point as the diverse use in different PHOs makes this difficult. In addition the review of SIA funding in 2006 by CMDHB found that insufficient reporting and lack of baseline data made evaluation impossible. However an evaluation of this important funding pool may be appropriate project going forward.

3.7. Summary

Geographical Access

- GP FTE numbers have remained the same between 2001 and 2008. For every 1600 residents there is 1 FTE GP compared to national average of 1:1300 despite increases in the head count of GPs working in the district. This is due to population growth and may also be partly to do with GPs seeking better work-life balance and reducing clinical working hours.
- GPs are maldistributed in the district. Botany/Clevedon has the lowest number of FTE GPs for its normally resident population and Otara the highest number. However when looking at the enrolled population per FTE GP this reverses. Most residents enrol in a practice within 5km of their home.
- In the next 20 years, a further 100 FTE GPs will be needed to maintain 1FTE GP to every 1600-1700 residents. That equates to an additional 40 practices at 2.5FTE GPs under the current model. To achieve the national average ratio with the projected population growth, a further 40 practices will be required.

Financial Access

- The fall in copayments over the time period for CMDHB is consistent with the National Evaluation, though data available is not as robust. Interim-funded enrolees achieved the biggest drop in copayments with the 24-44 and 44-64 year old age groups dropping their copayment the most, achieving the government's goal of a drop of $26 for those without a CSC. However after the subsidy the scheduled median copayments have trended up with annual inflation around 4-7% depending on the age group.
- Overall the original Access-funded practices in CMDHB have lower median scheduled copayments than Interim-funded practices. This is also seen in the National Evaluation. VLCA funded practices have maintained very low copayments in line with government policy. These are zero fees for under-sixes, $7-$10 for 6-17 year olds and $15-$20 for adults. In many PHOs under-18 year olds are free. The majority of Access-funded practices in CMDHB, which have more than 50% high needs enrolled, are now VLCA. From 2006 with the introduction of VLCA, copayments fell with adults paying no more than a fee of $16.50. More than half of the districts population is enrolled with these practices. However when the remaining Access-funded practices are analysed separately from VLCA practices, the median scheduled copayment is trending up with inflationary increases of 6.5-10% per annum depending on the age group which is a concern given more than 50% enrolled in the practices are high needs.
- The National Evaluation and the findings in this report suggest that there needs to be continued support by government for VLCA practices to remain sustainable and provide very low cost care.
- It is important to reemphasise that the data analysed was the maximum median scheduled copayment and therefore the degree of discounting given through CSC or HUHC status or other such methods is not known and a significant limitation to this analysis.
- It would be beneficial to ensure complete recording of copayments in the district for all age groups as well as the differential fee (if any) for CSC and HUHC holders. Invoiced rather than scheduled fees would be preferential as only then will it be possible to obtain a more accurate picture of the financial accessibility of primary care in Counties Manukau for the entire population.

Cultural access

- It is generally acknowledged that Maaori and Pacific people's utilisation of primary care is low in proportion to their recognised health needs.
- Further emphasis and study is required to identify how best to meet the cultural needs of the Counties Manukau population. Cultural training as a competency and increased participation in the workforce by Maaori and Pacific peoples and other ethnic groups will be important in removing this barrier.

Services to Improve Access

- Between $8 and $9 million is allocated to SIA funding for CMDHB PHOs annually. Overall PHOs have made increasing efforts to target SIA funding to address the requirements of high needs populations. PHOs need to continue to specifically target services to these populations, especially focusing on barriers other than financial issues. Sharing ideas and collaborating with other PHOs to provide appropriate services collectively would improve access.
- The multidisciplinary team is becoming an increasingly important part of providing sustainable and accessible primary care and it is expected that a higher proportion of SIA funds will be allocated to providers other than GPs and nurses.

Functional Access

- Through out the time period of interest there has not been affordable after-hours care supplied across the district.
- There was strong disagreement between PHOs and the Ministry of Health over first contact services capitation covering after-hours care.
- The government provided national funding with $1.4 million of funds allocated to CMDHB for an 18 month pilot to assure the supply of after-hours care to the district. The goal was to ensure that all patients are able to afford to access after-hours care while supporting a sustainable service.
- In 2009 two PHOs with two providers each were chosen to deliver this service with contracts signed in 2010.

Chapter 4. Utilisation of Primary Care services in CMDHB

The aim of the Strategy was to ensure that those with the highest health needs were able to access primary care services. A significant part of the Strategy was to ensure universal low cost copayments but in particular for those of high needs in order to help reduce health inequalities. Whilst the previous section demonstrates that the median scheduled copayment has remained relatively low in Access-funded practices and has fallen considerably in Interim-funded practices, this section will review changes in utilisation of primary care services. This will be done directly by reviewing data from the PHO Performance Programme (PPP) on consultation rates for high needs versus non high needs populations. However data is only available from mid 2005 when the PPP started. Therefore this section will also look at proxy measures of utilisation which include community pharmaceutical expenditure, New Zealand Health Survey (NZHS) data, Emergency Care (EC) attendance for triage 4 to 5 conditions and Ambulatory Sensitive Hospitalisation (ASH) discharges in order to obtain an overview for the timeframe of interest.

4.1. PHO consultation data

PHO consultation data is collected by the PPP and demonstrates the age standardised rate of consultations using the ratio of high needs to non-high needs populations. The target is for the result to be equal to or over 1.0. By meeting this goal it means that the high needs population is utilising primary care as much as, if not more than, the non-high needs population. This is an important part of reducing health inequalities. No attempt has been made by the Programme to calculate how much higher utilisation might be expected to be for high needs groups given their health status (i.e. to relate utilisation to 'need').

4.1.1. Methodology:

For this indicator consultation rate results of the high needs groups are combined which include all Maaori, Pacific peoples and non-Maaori/non-Pacific living in NZDep 9 and 10 areas. This enables issues with PHO ethnicity recording to be largely overcome as the under and over count of Maaori and Pacific peoples respectively tend to cancel each other out.

To determine the age standardised consultation rate for high needs and non-high needs:

- The consultation numerator was sourced from PHO service utilisation reports for consults with GPs only[17] for both high need and non-high need groups from the beginning of the PPP on 1/7/05 to 31/12/09.
- The denominator is the enrolled CMDHB PHO population for high needs and non-high needs.
- The number of consultations for the high needs group were combined and then divided by the number of high needs enrolled in the CMDHB PHOs. The same thing was done for the non-high needs group.
- Direct age standardisation was undertaken using the New Zealand Census 2006 estimated resident population as the standard.
- The age standardised rate of GP consultations for high needs was then divided by the age standardised rate of GP consultation for non-high needs in order to determine a ratio.

[17] Consultation numbers are also available for nurses but this data is less reliable

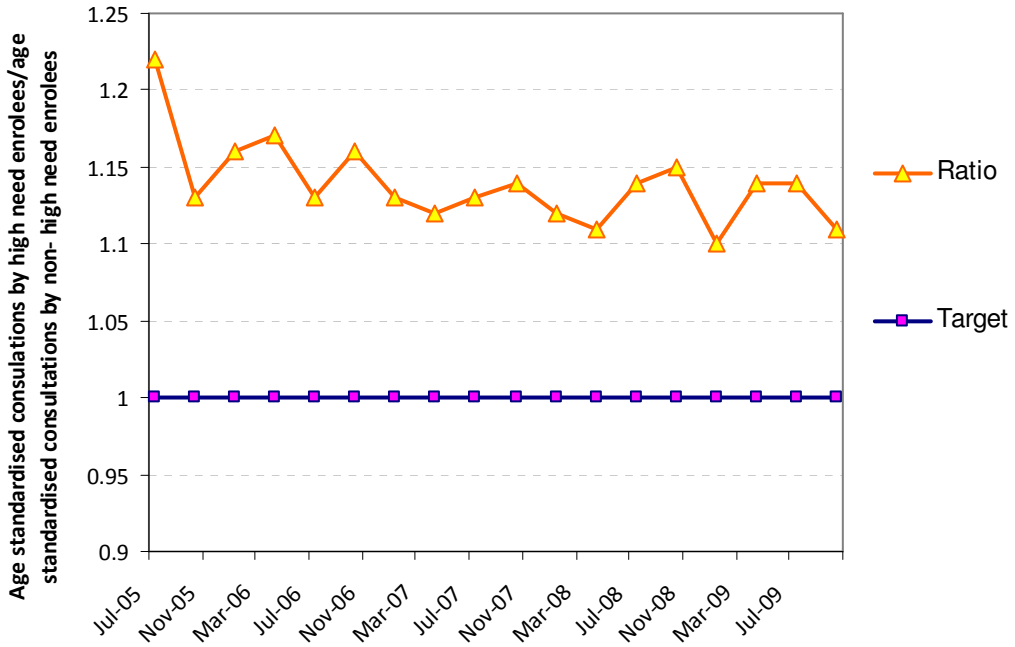
In the data available, the CMDHB total GP PHO consultations and total PHO enrolled population are a sum of those PHOs funded by CMDHB and does not necessarily reflect the CMDHB domicile population. Those not enrolled in a CMDHB funded PHO are excluded. For example this includes all enrolled in North Waikato and Tamaki PHO despite several practices being located in the district.

4.1.2. Trends in utilisation of primary care in CMDHB

Since the establishment of the PPP in 2005, the ratio of high needs consultations to non-high needs has been over 1, achieving the national target. The ratio for CMDHB PHOs, 1.10 – 1.22, has also been above the national average which has tended to sit between 1.04-1.05 during this time period.

Figure 20 illustrates that the high need population enrolled in a CMDHB funded PHO have had 10-22% more GP consultations than non- high needs over this time period depending on which quarter is examined. High need groups are expected to have a greater degree of health need and this increase in consultations over non-high need group is an encouraging sign that this group is accessing primary care in CMDHB.

Figure 20 Ratio of the rate of consultations for high needs enrolees to the rate of consultations of non-high needs for CMDHB funded PHOs (age standardised), 2005 to 2009



Source: DHBNZ

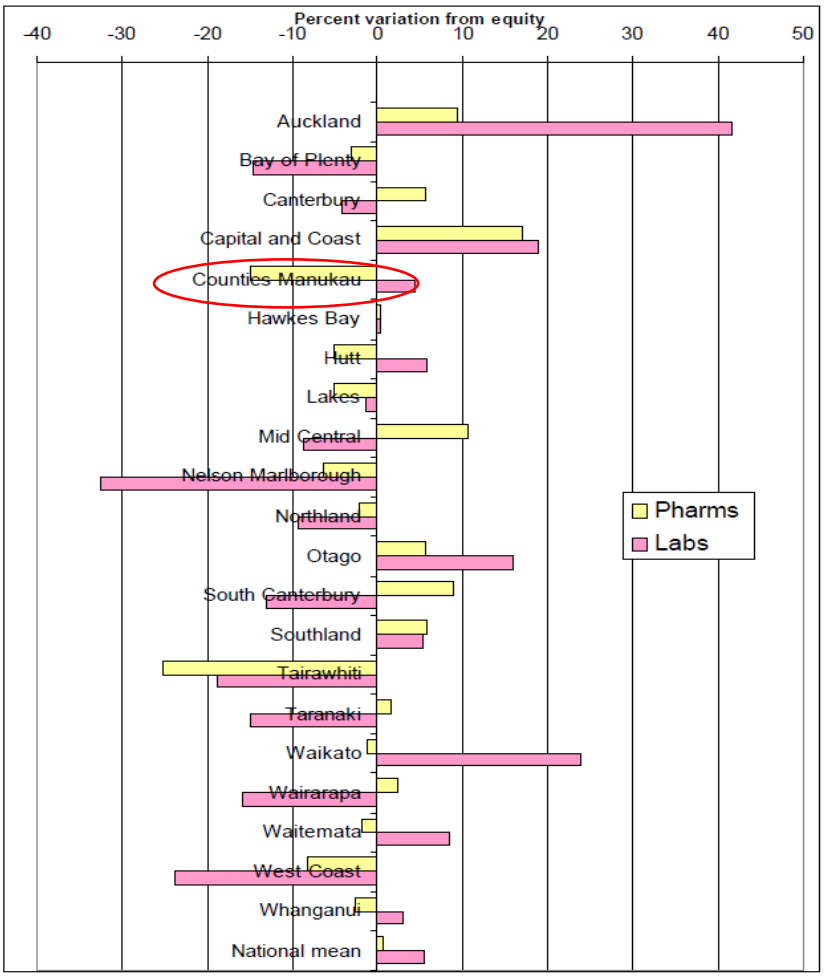
However when a trend line is applied to the graph, it appears that there is a downwards trend in this ratio. The ratio has fallen by 2% in this time frame if the first data point is excluded. The actual picture is difficult to interpret given that data on consultations is unavailable prior to mid way through 2005 (with the July quarter having a particularly high value) and additional funding having been in place much earlier for the majority of high needs people. Therefore it is challenging to tell from this data alone if utilisation increased markedly with this additional funding in 2002 or has always been at this higher level. In addition aggregating the data into high needs may also hide differences between groups, e.g. Pacific people's utilisation may be low and Maaori high. Reviewing another proxy measure of utilisation – community pharmaceutical data- helps provide some context to this situation.

4.2. Community pharmaceutical expenditure as a proxy measure for primary care utilisation

Community pharmaceutical expenditure data is a reasonable proxy for primary care utilisation. Low pharmaceutical expenditure is closely associated poor utilisation of primary care and represents the inverse care law with populations in the greatest need being the least likely to receive the services they need [21]. Community laboratory expenditure is also a good proxy but is not included due to an incomplete dataset at the time of completing this report.

In the late 1990s CMDHB's spend on community pharmaceuticals was 15% less than that expected based on estimates using the primary care funding formula [21]. Given that this is a good proxy for utilisation it can be assumed that the CMDHB population were not accessing primary care as often as others in the country. This is illustrated in Figure 21.

Figure 21 Variation from equity between DHBs in pharmaceutical and laboratory expenditure, 2001



Source: Malcolm, 2002

The following section calculates the community pharmaceutical expenditure[18] in CMDHB since 2001 in order to find out if expenditure has increased in accordance with the health need in the population.

[18] Pharmaceutical expenditure refers to the cost of medicines prescribed and dispensed by health carers working within DHB regions

4.2.1. Methodology

Community pharmaceutical expenditure data for CMDHB were obtained from the NDSA. Expenditure per capita was calculated using the projected population per year based on the Census 2006 as the denominator.[19]

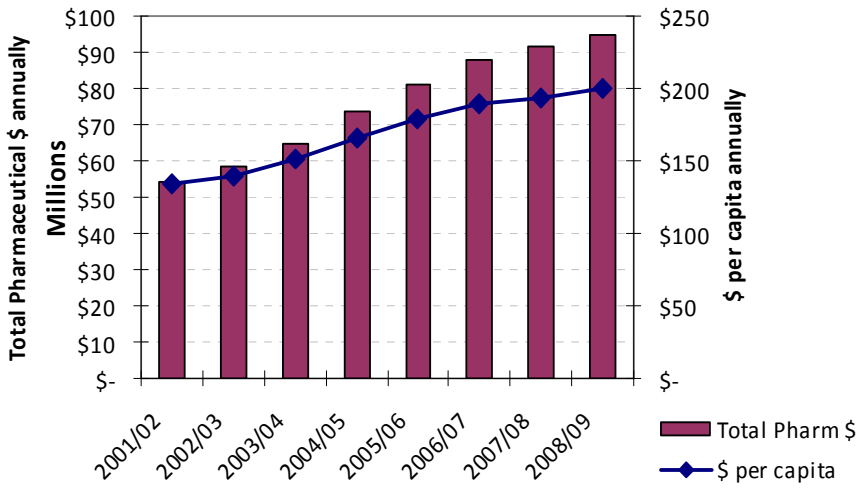
Age standardised ethnic specific rates of expenditure were calculated from 2005 to 2008 and have been used to calculate an age specific ratio of pharmaceutical spend for Maaori and Pacific peoples compared to the average spend for the total population. Ethnicity was obtained by matching the NHIs on the pharmaceutical dataset to the NHI recorded on the hospital dataset. [20]

Prior to half way through 2005, NHIs were not routinely available through community pharmaceutical prescribing so ethnicity could not be obtained. However from 2006 the dataset is near complete as NHI recording had improved markedly.

4.2.2. Trends in community pharmaceutical expenditure in CMDHB

Total community pharmaceutical expenditure in 2001/02 was $54.4 million or $134 per capita[21]. This increased to a total of $94.9 million in 2008/09 which equates to $201 per capita. This is a 74% increase in nominal expenditure overall and an increase of 50% per capita if inflationary effects are not included. This increase is illustrated in Figure 22.

Figure 22 Community Pharmaceutical expenditure for CMDHB per capita and in total, 2001/02 to 2008/09



Source: NDSA with further analysis by CMDHB

The number of scripts dispensed has increased by 2,099,190 scripts between 2001/02 to 2008/09, a 62% increase with a noticeable trending up in 2003/04 which corresponds with the formation of PHOs in the district, the rolling out of increased pharmaceutical subsidies and the increased

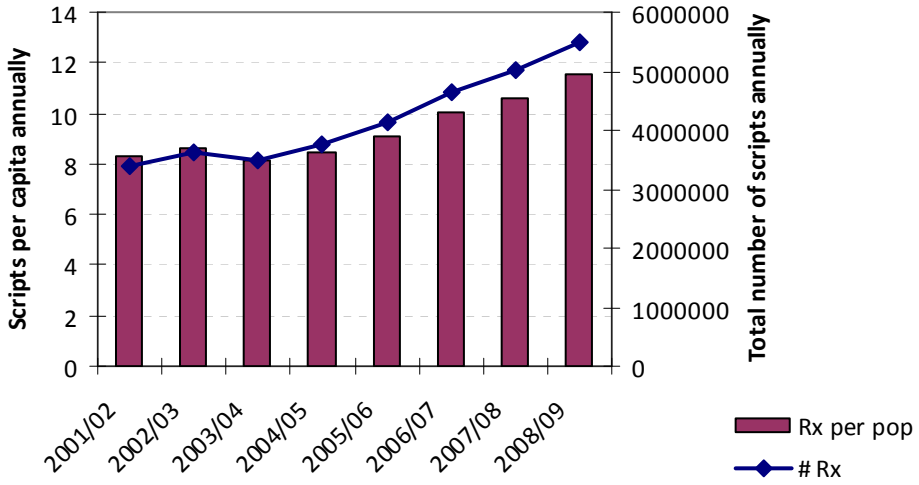
[19] The projected Census 2006 population is the official Stats NZ estimate, based on population projections from 2006 Census. Note that the Census estimate is just that an estimate - it takes actual counts, adds in those that were temporarily overseas at the time of Census, and adds in an estimate for the undercount. This is the population routinely used in the DHB planning processes.

[20] This method uses prioritised ethnicity. If an individual is ever recorded as Maaori, Pacific or South Asian in the last three years in their hospital records then take the last record, otherwise ethnicity is recorded as "Other". For example if the individual is identified as Maaori but later Pacific, then they are counted as Pacific. This method will miss 1% of the population who are not seen by the health system in the previous three years.

[21] The per capita expenditure adjusts for population growth

enrolments in disease management programmes. The number of scripts dispensed in the district has increased from 8 per person in 2001/02 to 12 in 2008/09, an increase of 39% (see Figure 23).

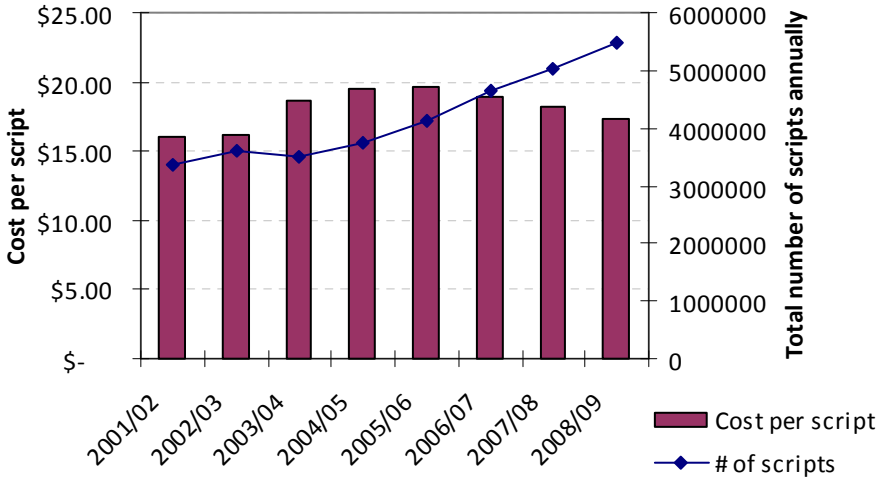
Figure 23 Community Pharmaceutical scripts dispensed for CMDHB total population and per capita from 2001/02 to 2008/09



Source: NDSA analysed by CMDHB

The cost per script increased between 2001/02 to 2004/05 then started to decrease. Over the time period costs have increased by 8% from $16.10 to $17.33 per script (see Figure 24). PHARMAC has made a large contribution to this fall in pharmaceutical expenditure through their negotiations for sole suppliers of drugs at best price. Key drugs beta blockers, omeprazole and statins have significantly fallen in price over this time. In addition all enrolled patients now pay $3 per item versus $15.

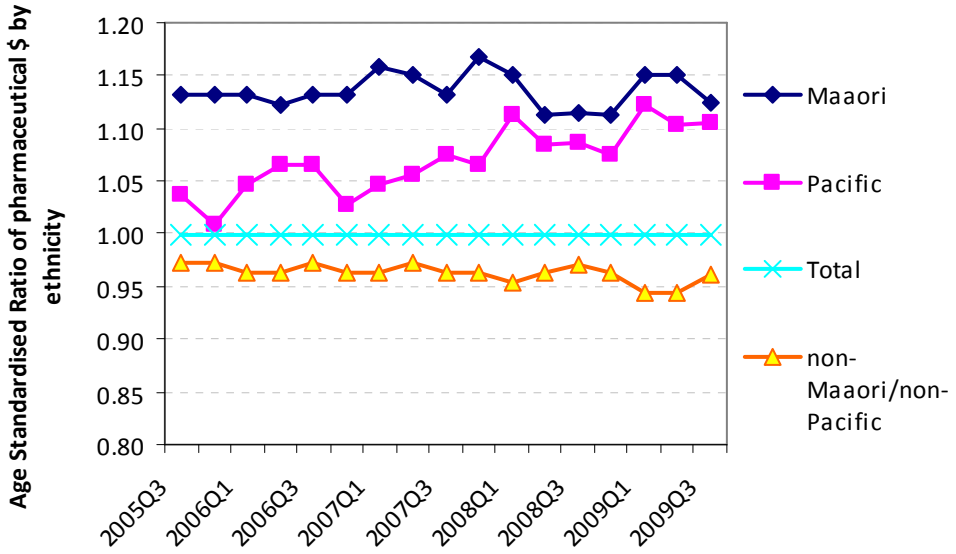
Figure 24 Community Pharmaceutical expenditure per script versus the number of scripts dispensed annually in CMDHB, 2001/02 to 2008/09



Source: NDSA with further analysis by CMDHB

At the end of 2005 Maaori had a 13% and Pacific a 3% higher age-specific dollar value of pharmaceutical expenditure than the average whereas non-Maaori/non-Pacific had 2.3% less expenditure than average. One would expect higher rates of expenditure for Maaori and Pacific peoples if they are utilising primary care proportionally to their health need. This is illustrated in Figure 25.

Figure 25 Community pharmaceutical expenditure by ethnicity in CMDHB, 2005 to 2009: age-standardised ethnic specific expenditure ratio



Source: NDSA Pharms dataset analysed by CMDHB

By the end of Q3 2009 expenditure for Maaori had increased to an 18% and for Pacific peoples a 16% higher age specific dollar value than the total population.[22] This degree of increased age-specific pharmaceutical spending is suggestive of increased utilisation of primary care by Maaori and Pacific peoples which is a good step forward in achieving more equitable health outcomes.

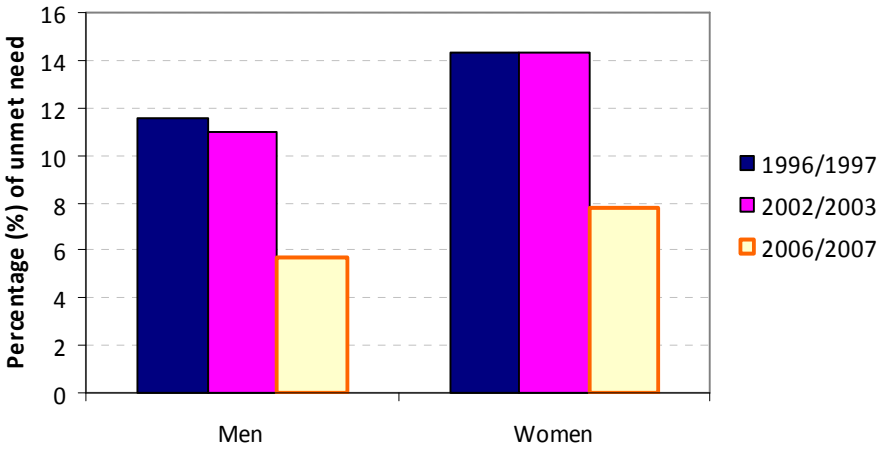
Overall community pharmaceutical expenditure is also closer to that expected based on health need using the primary care funding formula. CMDHB PHOs achieved community pharmaceutical spending at 93.9% of the expected expenditure at the end of 2009, which is much improved on the 15% gap experienced in 2001. Counties Manukau PHOs are collectively spending less on pharmaceuticals than the national average but at a provider level there is still a lot of variation and much room for improvement in prescribing patterns.

4.3. New Zealand Health Survey unmet need –from 1996/97-2006/07

The New Zealand Health Survey (NZHS) provides an additional measure of utilisation of primary care in the district by providing an indication of unmet need. Unmet need equates to the individual surveyed not having seen a general practitioner in the past 12 months when they felt they should have. Cost is the most frequent barrier to seeing a GP, followed by other issues associated with accessibility, appropriateness of care and the individuals own priorities and motivations [29]. Figure 26 illustrates the changes in unmet need on a national level from the NZHS undertaken in 1997/97 through to 2006/2007 when the majority of the Strategy funding had been rolled out. There has been considerable improvement in unmet need, having nearly halved between 2002/03 and 2006/07.

Figure 26 Unmet need for a GP in the last 12 months by gender, NZHS 1996/97, 2002/03 & 2006/07

[22] Q4 dataset was not complete at the time of analysis so excluded.

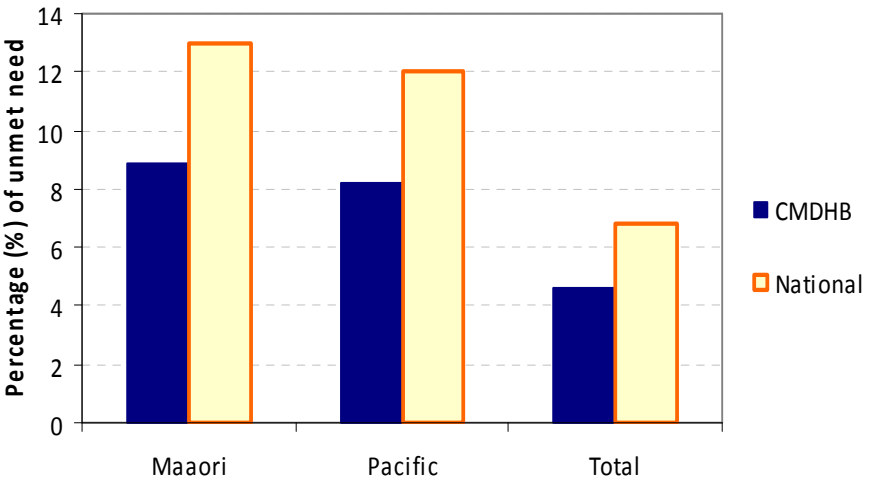


Source: NZHS analysed by the MOH

For each NZHS undertaken there have been significant ethnic disparities in unmet need with Maaori and Pacific peoples' rates higher than non-Maaori/non-Pacific. The 2006/07 NZHS findings were disaggregated for Counties Manukau and this demonstrated considerable improvement in unmet need by ethnicity. Maaori and Pacific peoples' unmet need was lower than the national average. This result is illustrated in Figure 27. The proportion of unmet need for CMDHB Pacific people and Maaori is around 8% compared to over 12% nationally.

This gives weight to the premise that the lowering of copayments in the district has played an important part in increasing utilisation of primary care.

Figure 27 Unmet need for a GP in the last 12 months by ethnicity, from the NZHS 2006/07 for CMDHB and New Zealand



Source: NZHS analysed by the MOH

4.4. EC triage 4 to 5 as a proxy measure for primary care utilisation

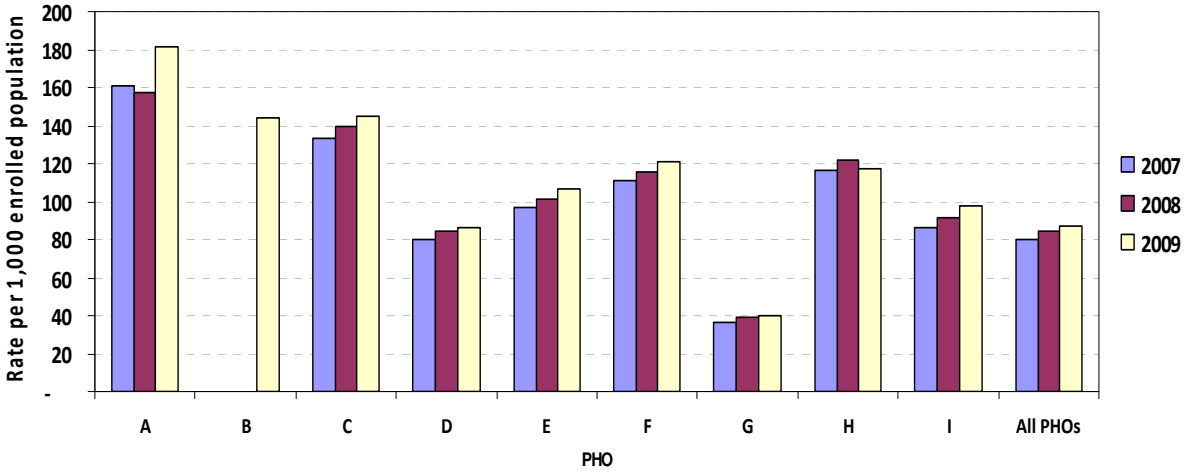
4.4.1. CMDHB EC attendance overall[23]

The new Emergency Care (EC) Facility at Middlemore Hospital opened in November 2000. As expected there was an initial increase in attendance. Thereafter there was a gradual trend upwards rising to just over 85,000 visits at the end of the 2008/2009 fiscal year. The growth in attendance between 2001 and 2006 was 1%, less than what would be expected (3%) due to aging and population growth. Primary Options for Acute Care (POAC) and changes in primary care with the implementation of PHOs with subsequent reductions in copayments are thought to have contributed to this stabilising of EC growth.

However since 2006 there has been an increased growth of 2% per annum. Whilst this is still within what is expected from ageing and population growth, the increase since 2006 is concerning. General practice referrals have remained static during this time period. After-hours EC attendance (defined as attendance between 6pm-8am) has also been static at around 47% of total visits. However the proportion of self-referrals to EC has increased from 58% to 67% between 2000/01 and 2008/09 (see Figure 29). The majority of this increase occurred after 2005/06 with a 7 percent point growth in self referrals from 2007 to 2009. More than 70% of self-referrals are discharged, demonstrating that they could likely be managed in primary care.

There is great variation in EC attendances through self-referral between the populations of the PHOs in the area. This is illustrated in Figure 28.

Figure 28 EC self-referral rate per 1000 for PHOs in CMDHB, 2007 to 2009

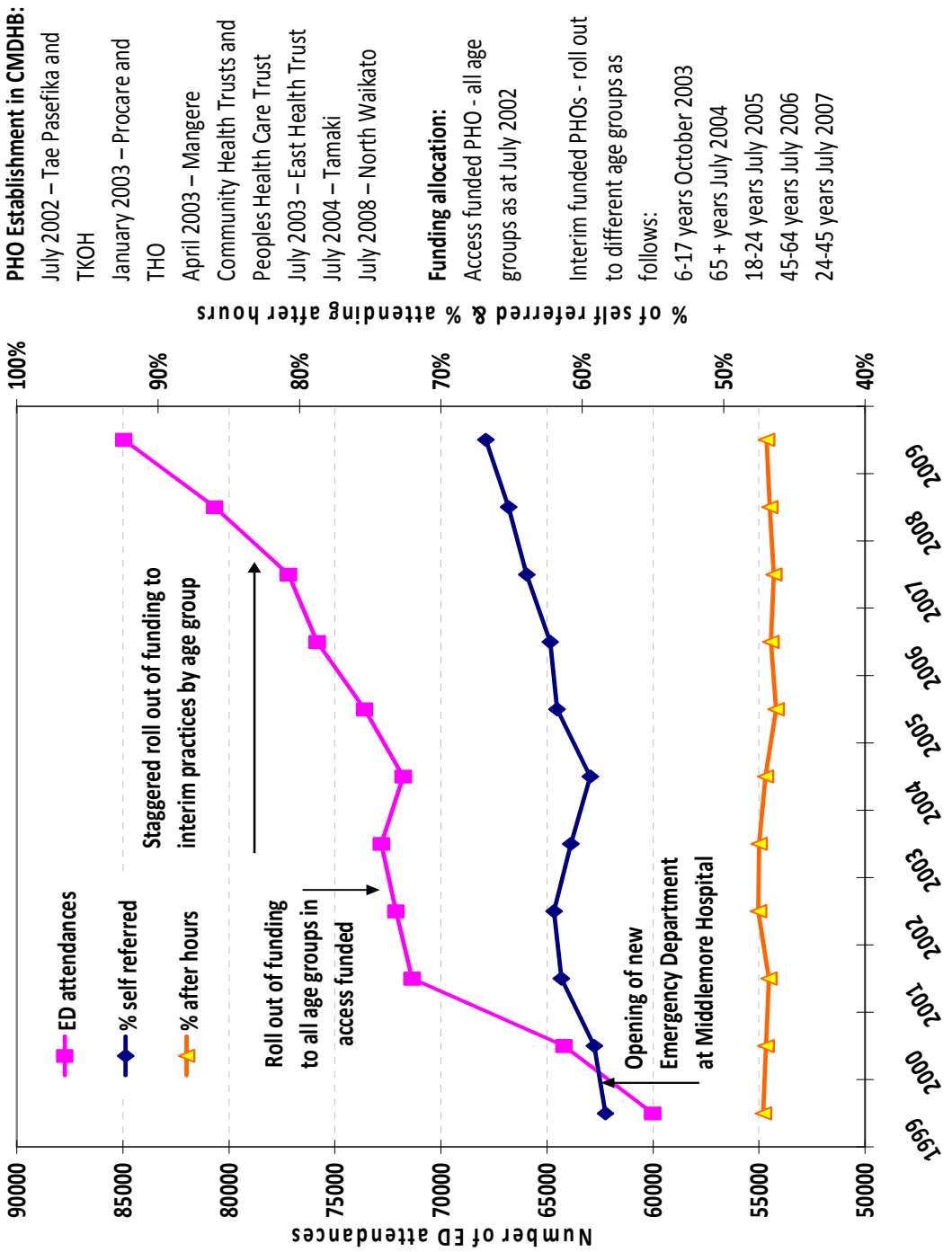


Source: CMDHB Decision support

It is difficult to interpret this variation. Some PHOs with a higher percentage of high needs appear to have higher rates of self-referrals and this could be due to financial barriers experienced by their enrolees. Another theory is that those living near Middlemore EC are more likely to go to the hospital as it is the nearest facility as well as being "free" of charge. Overall EC self-referrals have risen for most PHOs since 2007. This discussion is taken further in the learning's chapter.

[23] This data is from CMDHB decision support with additional analysis by planning and performance

Figure 29 EC attendances and percentage after-hours and self-referrals from FY 1999 to 2009



Source: CMDHB Decision Support

4.4.2. Methodology for EC triage 4 to 5

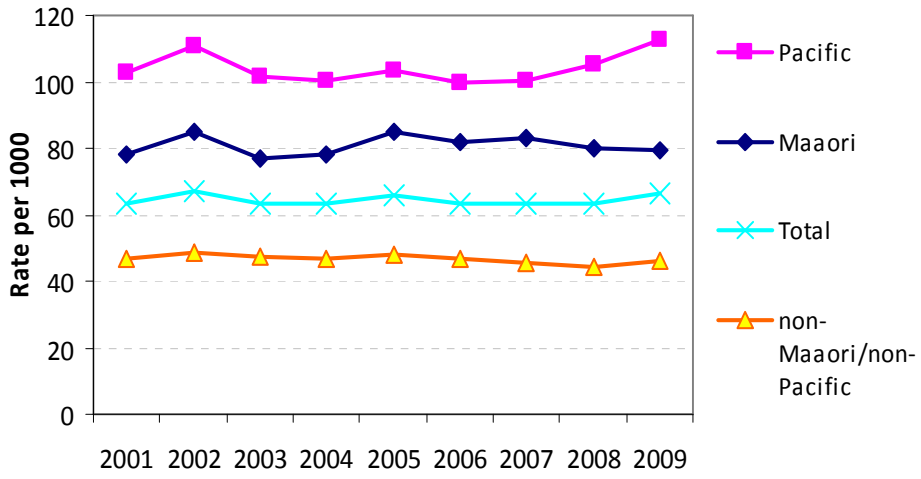
EC triage 4 to 5 data has been sourced from Clinical Decision Support at CMDHB. The triage category relates to how long the patient should wait before being seen by a clinical member of staff and is ranked from 1 to 5. Conditions categorised as triage 4 and 5 are seen as less urgent and are used as a proxy measure for conditions that could potentially be managed in primary care. Rates and relative rates were calculated as were triage 3-5 rates to account for variance in triaging. Triage 3-5 rates showed a similar pattern to triage 4-5 and are not included in this analysis.

The rates of presentations are calculated per 1000 of the population and are analysed for the total population rate per 1000 and by ethnic specific rates. Rates are also provided for adults and children separately as well as combined. Relative rates of attendance are also calculated by ethnicity for both children and adults together and separately. This involves dividing the ethnic specific rate of attendance by the total population rate of attendance.

4.4.3. Trends in EC Triage 4 to 5 attendances from 2001 to 2009

Up until 2006 overall attendances to the EC for less urgent conditions (defined here as triage 4-5 cases) have been reasonably stable for all ethnic groups. Between 2001 and 2009 Maaori less urgent EC usage has increased by 2% (1.5 cases per 1000), Pacific peoples by 9% (10 cases per 1000) and non-Maaori/non-Pacific rates have fallen by 1% (0.5 cases per 1000). Since 2007 rates have been trending up overall by 5% (3 cases per 1000). Pacific people's rates have increased by 12% in the same timeframe whereas Maaori rates have fallen by 4% (see Figure 30). Similar results are seen when triage 3-5 attendances are analysed.

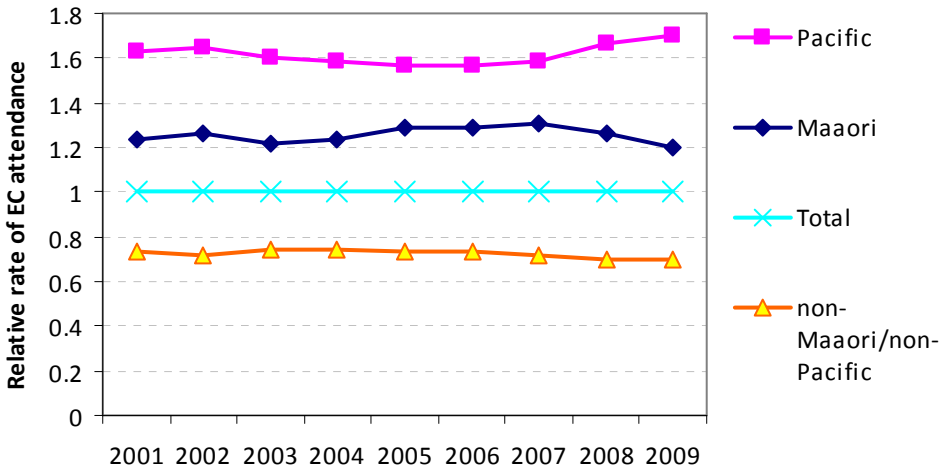
Figure 30 Less urgent EC attendance rate per 1000 for the CMDHB population by ethnicity, from 2001-2009



Source: CMDHB Decision Support

However the gap between these high need ethnic groups and non-Maaori/non-Pacific has not closed between 2001 and 2009 as demonstrated in Figure 31. In 2009 Maaori are 23% more likely to attend EC for a less urgent condition than the total CMDHB population and Pacific people a noteworthy 70%. In contrast non-Maaori/non-Pacific are 30% less likely than the total population to attend EC less urgent care which means the gaps between this group and Maaori and Pacific peoples are 50% and 90% respectively.

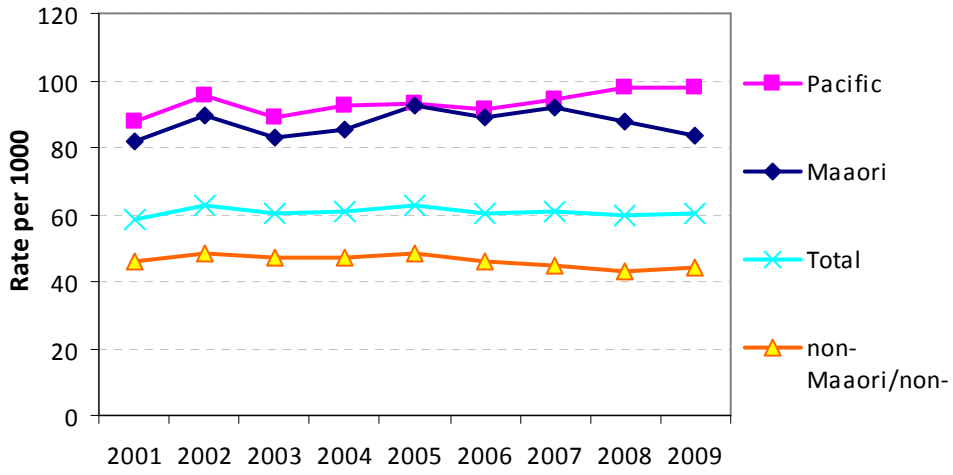
Figure 31 The age standardised relative rate of less urgent EC attendance for the CMDHB population, by ethnicity from 2001-2009



Source: CMDHB

Figure 32 illustrates adult presentations to EC for triage 4-5 conditions. Adult less urgent presentations for all ethnic groups have been relatively stable until 2006 and since then have trended up for Pacific adults, with Maaori rates and to a lesser extent non-Maaori/non-Pacific rates decreasing. Overall rates have increased by 3% or 1.5 cases per 1000 since 2001. Maaori adult rates have increased by 3% (2 cases per 1000) since 2001, Pacific adult rates by 12% (11 cases per 1000) and non-Maaori/non-Pacific rates have fallen by 5% (1.5 cases per 1000). After 2006 however Maaori rates have trended down by 6% whereas Pacific adults have trended up by 8%.

Figure 32 Less urgent EC attendance rate per 1000 for CMDHB adult population by ethnicity, from 2001-2009



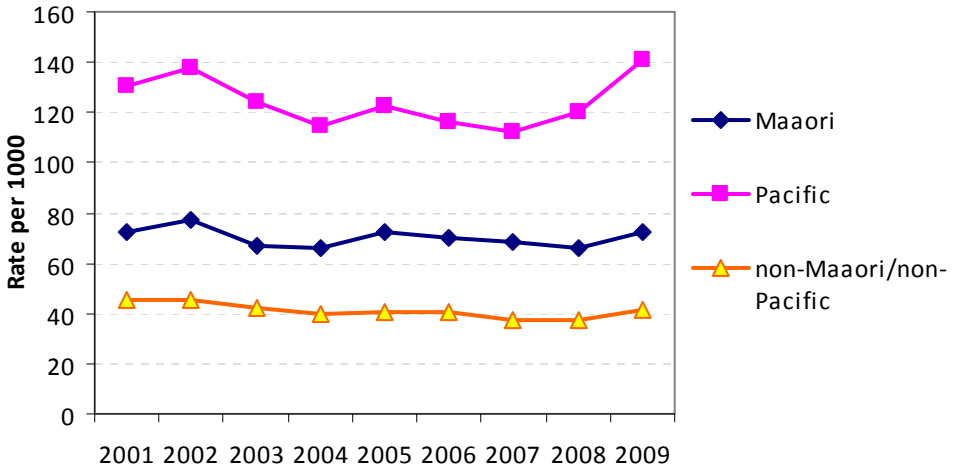
Source: CMDHB Decision Support

In 2009 Maaori adults were 39% more likely, Pacific adults 64% more likely and non-Maaori/non-Pacific 27% less likely to use EC for less urgent care than the total CMDHB adult population. Again the gap between Maaori, Pacific and non-Maaori/non-Pacific has not closed between 2001 and 2009. In fact it has increased with Maaori 66% more likely to attend EC and Pacific adults 91% more likely to attend EC than non-Maaori/non-Pacific adults for triage 4-5 conditions.

Child (under 15 years) triage 4-5 EC attendance has increased by 11% between 2001 and 2009 (9 cases per 1000). The rate of attendances by ethnicity is shown in Figure 33 and illustrates a trending

down of rates until 2006 then an increase between 2007 and 2009. Overall Maaori child rates have not changed between 2001 and 2009, Pacific child rates have increased by 8% (11 cases per 1000) and non-Maaori/non-Pacific rates have fallen by 9% (4 cases per 1000). Since 2007 Pacific child rates have increased by 26% (11 cases per 1000), Maaori by 6% (4 cases per 1000) and non-Maaori/non-Pacific by 10% (4 cases per 1000). The impact of the "Swine flu" epidemic in 2009 does need to be considered in the interpretation of these figures.

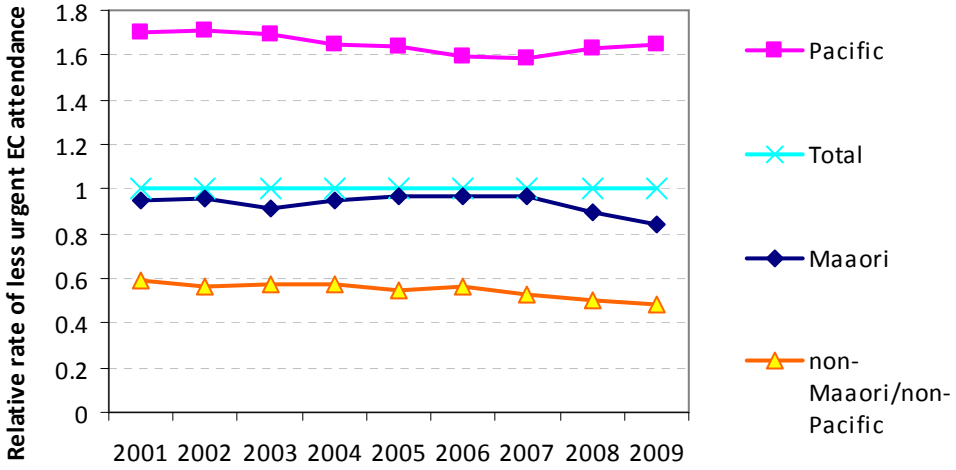
Figure 33 Less urgent EC attendance rate per 1000 for CMDHB children < 15 by ethnicity, from 2001-2009



Source: CMDHB Decision Support

The gap between Maaori and Pacific children versus non-Maaori/non-Pacific children has not closed over the time period (see Figure 34). In 2009 Pacific children are 65% more likely than the total child population of CMDHB to utilise EC for less acute conditions. The rate for Maaori children however is 15% lower than the total child population though the same gap of 36% remains between Maaori and non-Maaori/non-Pacific rates in 2009. The gap between Pacific children and non-Maaori/non-Pacific children has increased slightly from 111% in 2001 to 116% in 2009.

Figure 34 The age standardised relative rate of less urgent EC attendance for CMDHB children < 15 by ethnicity, from 2001-2009



Source: CMDHB

It is unclear if this trending up of EC triage 4 -5 rates for Pacific children (and adults to a lesser extent) will continue. When triage 3 to 5 attendances are combined, a similar trend is

demonstrated. The rates of attendance in 2009 are partially complicated by the impact of the "Swine flu" epidemic. However it has been said that Pacific child rates of admission are often a barometer of what is to come. (Liz Craig, personal communication, oral presentation, 2010) This is a cause for concern given that the economic circumstances of Counties Manukau families are likely to continue to be challenged by the rate of unemployment in the district and the advent of increased GST in October 2010.

4.5. ASH data as a proxy measure for primary care utilisation

Potentially avoidable hospitalisations (PAH) are those that could have been avoided by preventing the condition or treating it in the community. A subset of these is ASH – ambulatory sensitive hospitalisations. These conditions could potentially respond to prophylactic or therapeutic interventions that are deliverable in the community in a primary care setting.

PAH → Injuries

→ Population-Preventable Conditions

→ Ambulatory Sensitive Conditions

The current definitions of ASH from the Ministry of Health are included in the appendix. They exclude neonates under 29 days of age, elective surgery except for dental conditions and same day EC cases meeting the three hour rule. Some examples include angina and chest pain, cellulitis, kidney/urinary infections and vaccine preventable diseases.

Three percent of the New Zealand population have an ASH each year, making up 30% of all hospitalisations (G Jackson; internal CMDHB work, 2007). The highest rates occur in young children and the elderly with higher rates in Maaori and Pacific peoples. Rates are strongly associated with deprivation and this is reflected in the variation of ASH rates in the different districts of Counties Manukau. Close to two-thirds of ASH for adults are related to chronic diseases, the other third for acute health problems (G Jackson; internal CMDHB work, 2007).

Measuring and monitoring the trends in ASH in CMDHB is a reasonable proxy for the population's utilisation of primary care services. Hospitalisation data is readily available and relatively robust in comparison to some primary care data so ASH is considered to provide a cheap and useful outcome indicator for measuring primary care utilisation.

ASH data is also able to be analysed by PHO allowing the differences in health needs to become apparent and help in planning services that meet the demographics requirements.

4.5.1. Methodology

Discharges of persons living within Counties Manukau from New Zealand public hospitals were analysed, using data from the New Zealand Health Information National Minimum Dataset (NMDS). Discharges are coded using the International Statistical Classification of Disease and Related Health Problems (ICD-10AM) as shown in Appendix 2. Only the principal diagnosis is used for these analyses. Rates were calculated using denominators from the projected New Zealand 2006 Census population. Direct age standardisation was undertaken of the rates also using the projected New Zealand Census 2006 population as the standard.

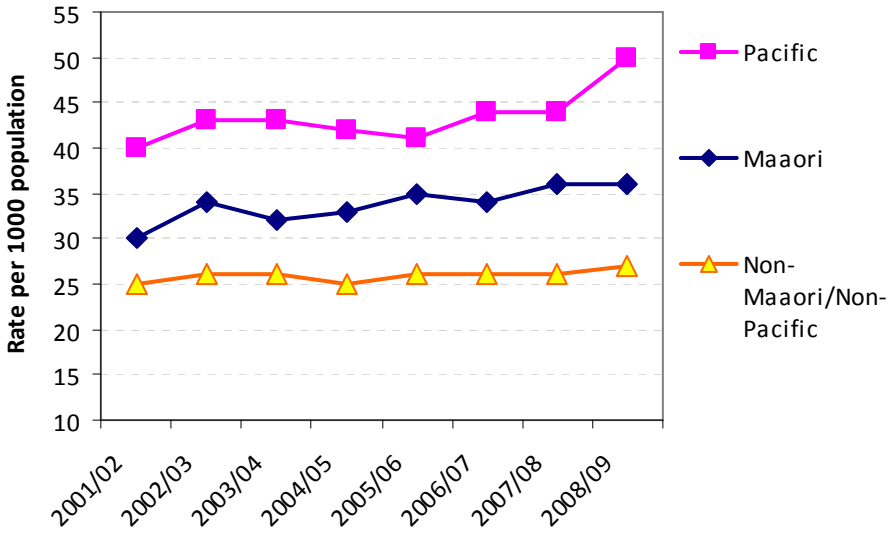
The Ministry of Health definition of ASH includes weightings of 0.5 for specific ASH conditions which are considered only partially amenable by primary care. These are angina/chest pain, myocardial infarction, other ischaemic heart disease and stroke. The total ASH rates presented in this section use these weightings.

The age standardised discharge ratio is also calculated and divides the ethnic specific weighted ASH rates by the total weighted ASH rate.

4.5.2. Trends in ASH rates for CMDHB from 2001 to 2009

Global ASH rates for 0 to 74 year olds in Counties Manukau have been increasing over the time period of interest. Overall Pacific ASH rates per 1000 of the population for 0 to 74 year olds have grown by 25%, Maaori by 20% and non-Maaori/non-Pacific by 8% since 2001. Of particular concern is the sharp trending up for Pacific peoples, increasing by 14% in the last financial year 2008/2009. These results are illustrated in Figure 35. If the Strategy was having the desired effect, all things being equal, one would have expected a decrease in ASH rates, not an increase.

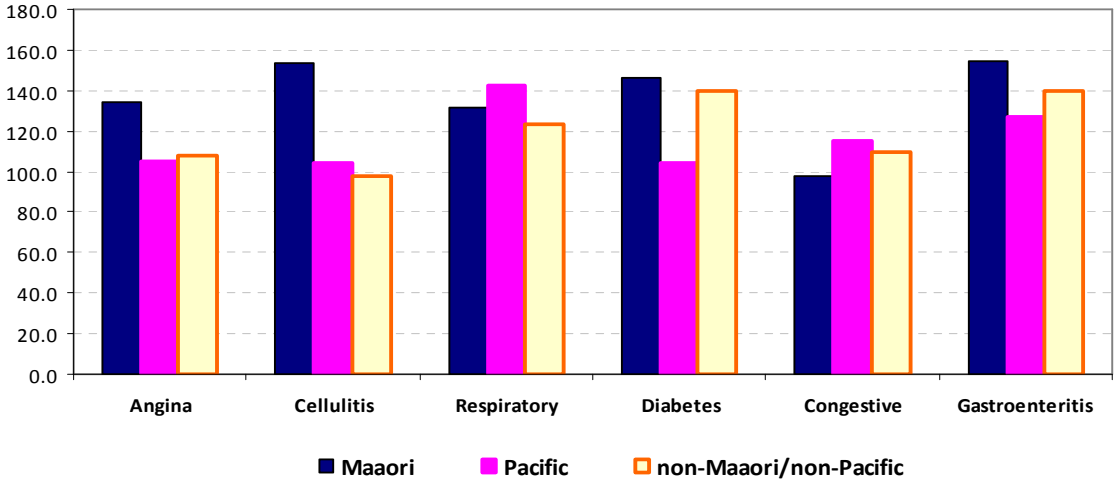
Figure 35 ASH rates per 1000 for Counties Manukau domiciled 0-74 year olds, by ethnicity for FY 2001-2009



Source: CMDHB analysis of NMDS

Overall for Maaori; cellulitis, pneumonia, asthma, angina and gastroenteritis scored the highest ASH ratings in 2008/2009. For Pacific peoples; pneumonia, followed by cellulitis, angina, dental conditions and asthma were the highest ranked conditions. The "Swine flu" epidemic in 2009 impacted heavily on Pacific and Maaori adults with an additional 47 cases and 32 cases of pneumonia reported respectively than expected in the 45-74 year old age group.

Figure 36 ASH indirectly standardised discharge ratios for the top 6 conditions for CMDHB domiciled patients, 45 to 74 year olds, year ending 30 June 2009

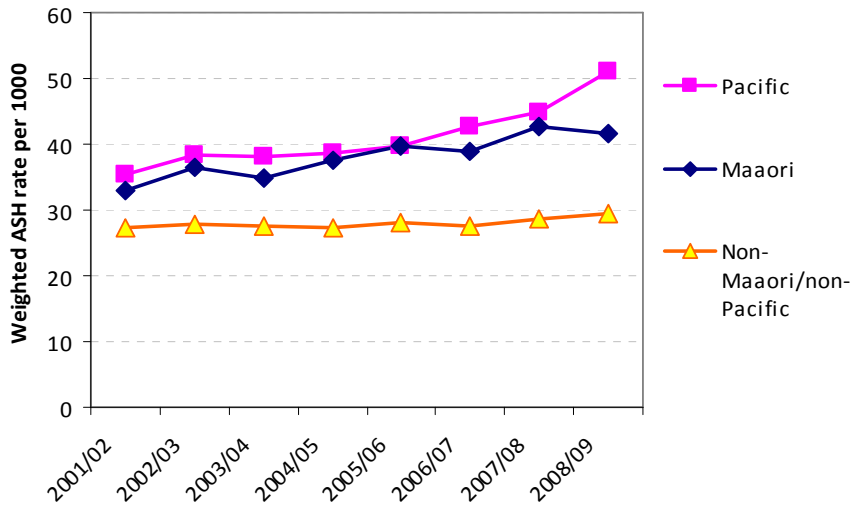


Source: CMDHB from NMDS

Adults have a different range of ASH conditions than children. Figure 36 demonstrates that chronic diseases such as diabetes and cardiovascular disease have a great impact whereas children have a greater burden of infectious diseases (see Figure 39).

If trends over time are examined (see Figure 37) there has been a 20% (or 4.5 cases per 1000) increase overall in weighted ASH rates for adults from 2001/02 to 2008/09[24]. Maaori adult rates have increased from 32.9 cases per 1000 to 41.5 cases per 1000, an increase of 26% (or 8.6 cases per 1000). Pacific adult rates have increased from 35 per 1000 to 51 per 1000. This translates to an increase of 44% or 15.7 cases per 1000. The non-Maaori/non-Pacific adult rate has increased by 8% (or 2.29 cases per 1000) from 27.1 per 1000 in 2001/2002 to 29.5 per 1000 in 2008/2009. The bulk of the increases have occurred after 2006/07 particularly for Pacific adults with a 19% increase in ASH rates in the last 3 years.

Figure 37 ASH Admission Rate per 1000 of CMDHB domiciled 15 to 74 years, by ethnicity for FY 2001-2009



Source: CMDHB analysis of NMDS

Figure 38 illustrates the gaps that exist by ethnicity with ASH rates in CMDHB. In 2001/02 Maaori and Pacific adults had a weighted ASH Standardised Discharge Rate (SDR) of 1.69 and 1.64 respectively.[25] This means that Maaori and Pacific adults were 69% and 64% as likely to go to EC for an ASH related condition as the total adult population.

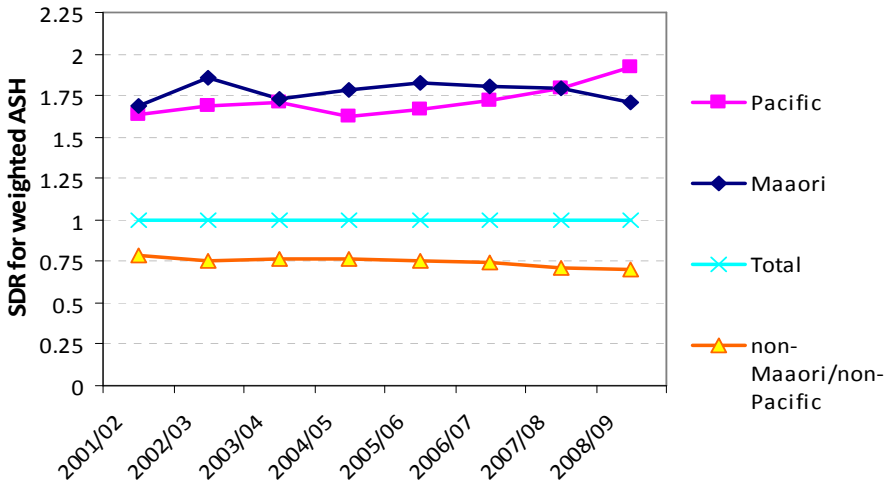
In 2008/09 this had increased to 1.92 for Pacific adults and 1.71 for Maaori adults whereas for non-Maaori/non-Pacific adults this had fallen from 0.78 to 0.70. This equates to a 17% increase in ASH discharges for Pacific adults, a 15% increase for Maaori adults and an 11% decrease for non-Maaori/non-Pacific. Pacific adults had the majority (12%) of that increase occur after 2006/07.

The gap between Maaori and Pacific and non-Maaori/non-Pacific ASH rates has grown over the timeframe of interest. Maaori adults have gone from having an ASH rate 91% above non-Maaori/non-Pacific in 2001/02 to 101% in 2008/09, a total increase of 11%. Pacific adults have increased from 86% above non-Maaori/non-Pacific rates to 122% above in 2008/09 – a 42% increase in the gap overall.

[24] In this section adults refer to 15 to 74 year olds unless specifically stated otherwise.

[25] A weighted ASH standardised discharge ratio refers to the weighted and age standardised ASH discharges by ethnicity divided by the overall weighted and age standardised ASH discharge rate. This gives a ratio which compares the different ethnicities to the total population. For example if Maaori have a weighted ASH standardised discharge ratio of 1.5 it means that Maaori have 50% more ASH discharges than the total population.

Figure 38 Weighted ASH SDR for CMDHB domiciled 15 to 74 years, by ethnicity for FY 2001-2009

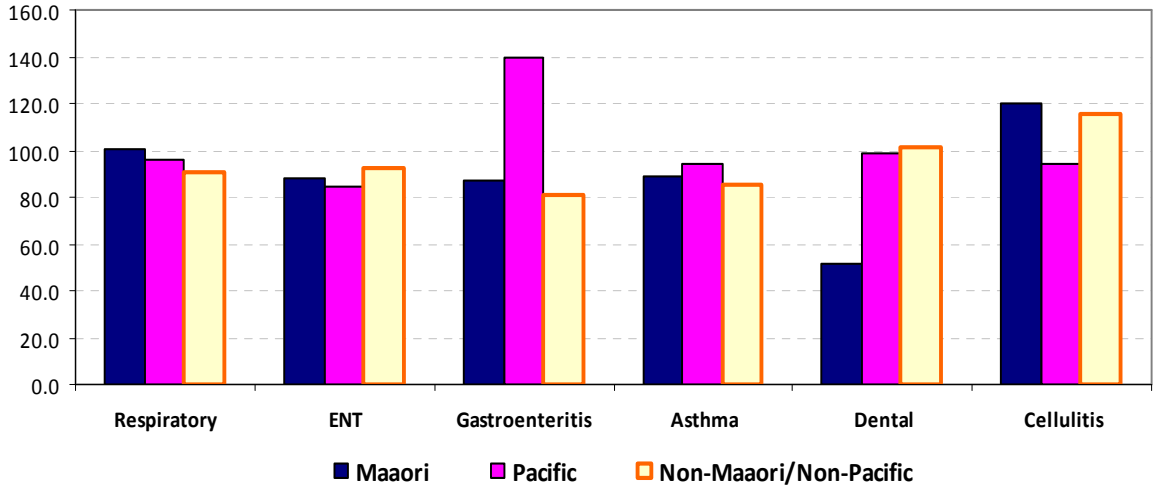


Source: CMDHB

Therefore it can be concluded that inequalities in ASH rates for Counties Manukau adults have actually grown during this period with Maaori and Pacific adults experiencing a worsening of rates whilst non-Maaori/non-Pacific adults made a small improvement. The "Swine flu" epidemic may have impacted on the 2009 rates.

The most common ASH categories for children are slightly different from adults. In 2009 the top 6 conditions for 0 to 4 year olds were respiratory infections, ENT conditions, gastroenteritis, asthma, dental conditions and cellulitis and reflect the increased burden of infectious disease (see Figure 39).

Figure 39 ASH indirectly standardised discharge ratios for the top 6 conditions for CMDHB domiciled patients, 0 - 4 year olds, for the year ending 30 June 2009

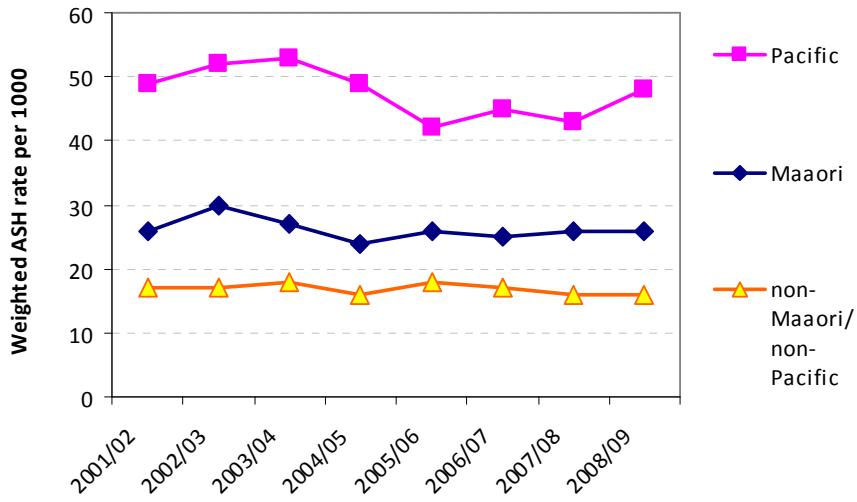


Source: CMDHB from NMDS

Fortunately there is a slightly better result for children when examining their ASH rates per 1000. Rates for Maaori children remain the same as those in 2001/02 with 26 cases per 1000 in 2008/2009. Pacific child rates fell by 2% to 48 cases per 1000.[26] Non-Maaori/non-Pacific child rate fell by 6% between 2001/02 and 2008/09 to 16 cases per 1000 (see Figure 40).

[26] Children in this section refer to 0 to 14 year olds unless stated otherwise

Figure 40 ASH admission rate per 1000 for CMDHB domiciled children < 15 years, by ethnicity for FY 2001-2009

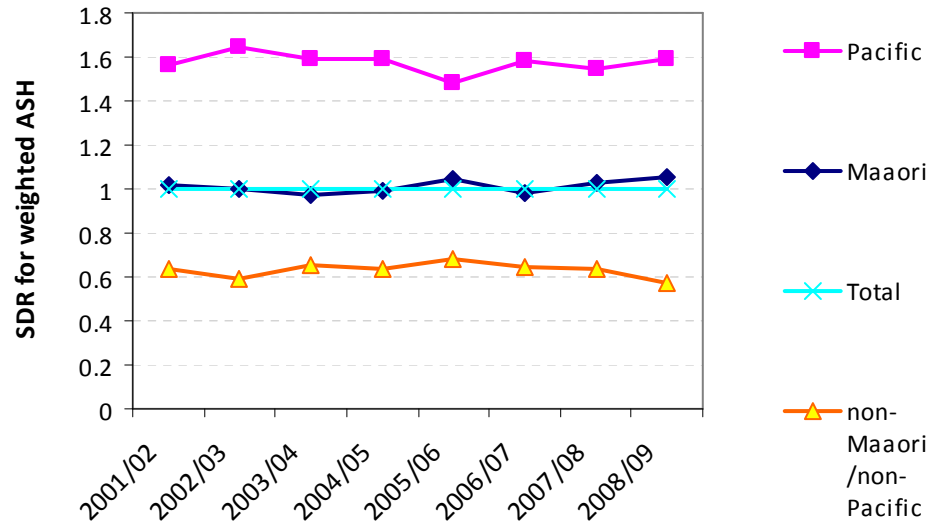


Source: CMDHB from NMDS

ASH SDRs fell for non-Maaori/non-Pacific children from 0.63 in 2001/02 to 0.57 in 2008/09. Pacific child SDRs rose slightly from 1.56 to 1.59. Maaori children had a similar increase, going from 1.02 in 2001/02 to 1.05 in 2008/09. This equates to a 3% increase for Maaori, a 2% increase for Pacific children and a much more significant 11% decrease for non-Maaori/non-Pacific children. These are illustrated in Figure 41.

When the gaps between ethnicity groups are calculated it is clear that, as with adults, the inequalities in ASH rates have not improved during this time period. In fact the gap between Maaori children and non-Maaori/non-Pacific children has widened from 39% higher in 200/02 to 48% in 2008/09, an increase of 23%. Pacific children continue to have a considerable gap with ASH rates a substantial 102% higher than non-Maaori/non-Pacific children in 2008/09, an increase of 23% since 2001/02.

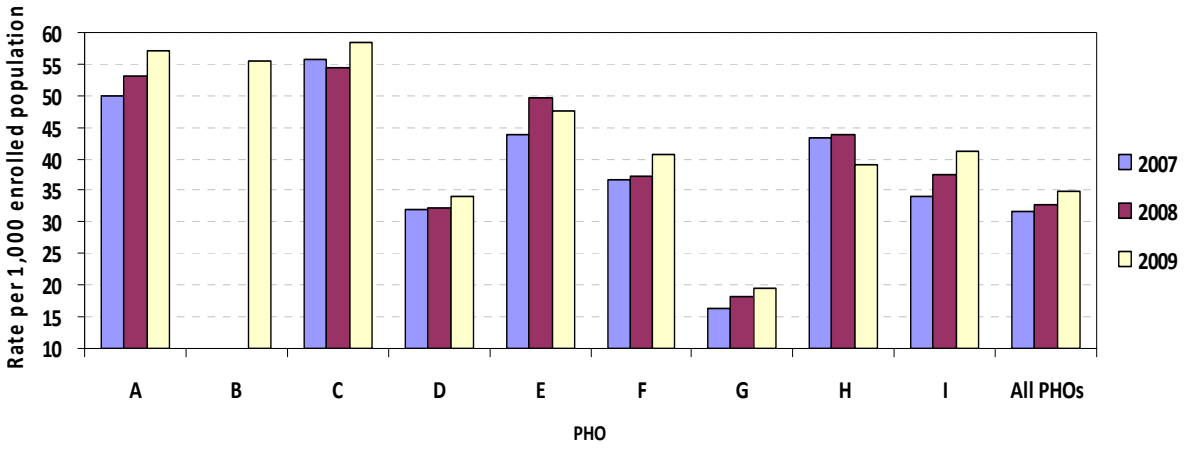
Figure 41 Weighted ASH SDR for CMDHB domiciled children <15 years, by ethnicity for FY 2001-2009



Source: CMDHB

ASH data is also analysed by PHO. This demonstrates differing health needs depending on the demographic mix enrolled in the PHO. The PHO dataset also demonstrates that ASH rates are increasing. Looking at 2007 to 2009 the average ASH rate for the CMDHB PHO enrolled population had increased from 32 to 35 per 1000 enrolled, with rates varying between PHOs (see Figure 42.) A large component of this variance reflects the degree of health need in the enrolled population.

Figure 42 ASH rate per 1000 of PHO enrolled population, 2007 to 2009



Source: CMDHB Decision Support

The total ASH admissions per PHO have been calculated as per total PHO-enrolled patients and used as a tool to assist in setting priorities for ASH reduction interventions. The data expresses the number of admissions, not rates, and therefore gives an indication of areas to target interventions for reduction of ASH and the size of the issue for each PHO. Table 9 shows this variation in the different CMDHB PHOs. The top 5 categories for CMDHB are highlighted in yellow, the next 5 in flecked blue.

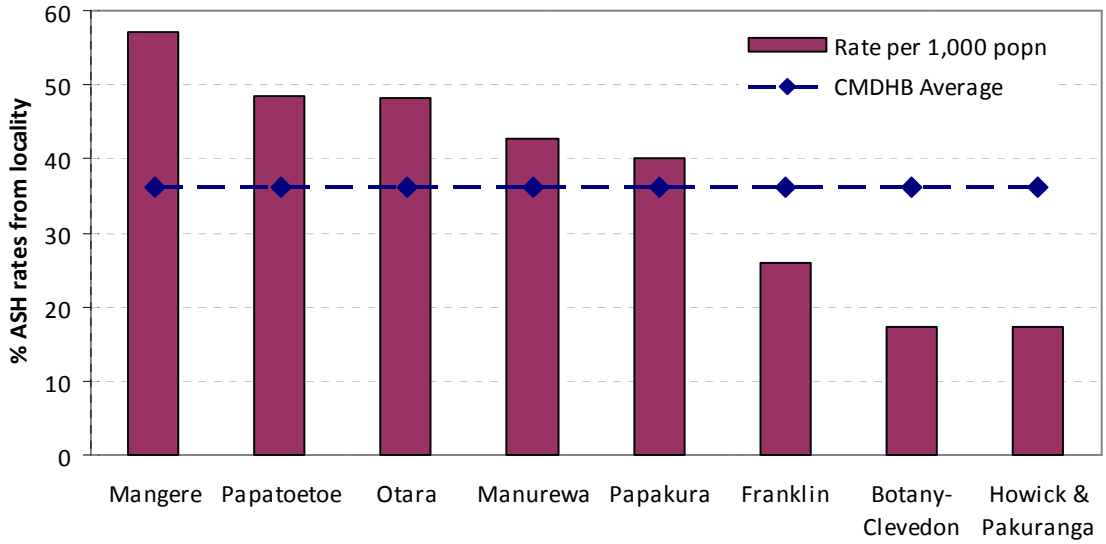
Table 9 CMDHB and PHOs ranking of ASH Categories, 2008

ASH Categories - Ranking by PHO	CMDHB	PHO A	PHO B	PHO C	PHO D	PHO E	PHO F	PHO G	PHO I	PHO K
Angina and Chest Pain Age 45+	1	1	2	4	3	1	4	1	3	3
Respiratory Infections Age 0-4	2	10	4	2	1	3	1	3	1	2
Cellulitis	3	3	3	1	2	2	3	2	2	1
Respiratory Infections Age 5+	4	4	1	5	8	4	2	4	5	4
Diabetes Age 25+	5	7	5	3	3	5	5	7	4	6
Kidney/Urinary Tract Infections	6	2	6	7	5	7	7	7	6	5
CORD Age 45+	7	5	13	8	7	6	5	6	7	11
ENT Infections Age 0-14	8	6	9	12	10	8	10	12	11	9
Epilepsy	9	9	7	10	5	9	14	9	9	7
Asthma Age 0-14	10	12	10	5	9	12	8	5	8	13
Gastroenteritis Age 0-14	11	14	8	14	12	12	9	10	10	11
Asthma Age 15+	12	13	10	9	11	11	13	12	12	8
CHF Age 45+	13	8	12	11	12	10	12	12	14	14
Sexually Transmitted Infections	14	11	14	12	12	14	11	11	13	10

Source: CMDHB Decision Support

There are also geographical differences in ASH rates which relate to the health needs of the locality. In Figure 43 the blue line represents Counties Manukau's average ASH rate whilst the bars represent ASH rates per TLA district.

Figure 43 ASH rates by locality in CMDHB, for 2007 financial year



Source: CMDHB Decision Support

Whilst the data is from 2007, it is apparent that the largest volume of ASH admissions come from certain areas in the district, those with high socioeconomic deprivation. However there should also be investigation of other barriers to access such geographical access, cultural barriers etc which may exacerbate the financial barriers.

4.6. National Evaluation of the Strategy data on consultations

Table 10 displays the changes in consultations nationally between 2001/02 and 2007 from the latest National Evaluation of the Strategy [43].

Table 10 Comparison of annual GMS consultation rates for all age groups in Interim and Access-funded practices for 2007, with percentage changes in consultation rates 2001/02 to 2007

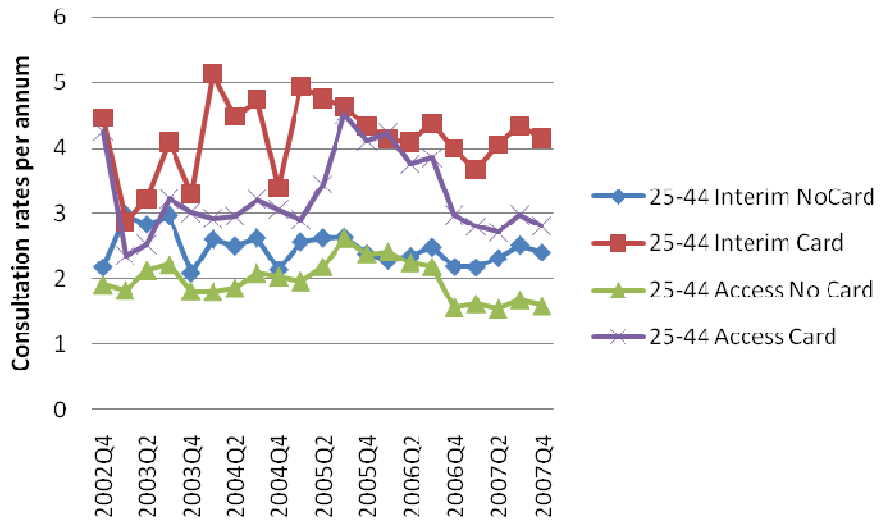
	Interim		Access		Access vs. Interim	
	2007 consultation rate	% change 2001/02-2007	2007 consultation rate	% change 2001/02-2007	Difference in rates	Difference as %
0-5	3.90	-11.2	2.39	-6.1	-1.51	61.3
6-17	1.81	-4.4	1.05	-3.2	-0.76	58.0
18-24	2.35	19.2	1.22	10.2	-1.13	51.9
25-44	2.74	2.4	1.99	9.6	-0.75	72.6
45-64	4.77	13.0	3.76	17.6	-1.01	78.8
65+	8.57	29.2	6.03	21.4	-2.54	70.4

Source: HSRC

At Interim-funded practices, the overall rates of consultation have increased for 18-24 year olds by 19%, 45-64 year olds by 13% and 65+ years by 29%. Under 18 year's consultation rates decreased between 4-11%. When the data is disaggregated by CSC status, only patients with a CSC experienced an increase in consultation rates. This is seen in Figure 44.

At Interim-funded practices, the overall rates of consultation have increased for 18-24 year olds by 19%, 45-64 year olds by 13% and 65+ years by 29%. Under 18 year's consultation rates decreased between 4-11%. When the data is disaggregated by CSC status, only patients with a CSC experienced an increase in consultation rates. This is seen in Figure 44.

Figure 44 GMS Consultation Rates for Age Group 25-44, 2002-2007 (by quarter, funding formula and CSC status)



Source: HSRC

At Access-funded practices the overall rates of consultations have increased for those aged 18 years and over (between 10-21%). However the rates of consultations were lower at Access-funded practices in comparison to Interim-funded practices. Rates were approximately 57% of Interim-funded practices for 0 to 24 year olds and about 74% for 45 years +. There was also an unexplained drop-off in consultation rates in 2006/07.

Consultation rates were also affected by ethnicity and deprivation.

- Compared with those of "other" ethnicity, Maaori consultation rates were higher (mean 113%) and increased significantly overtime (by 30%). Pacific peoples' rates were lower (mean 74%) and decreased overtime (by 14%). Asian rates were lower (mean 59%) but increased significantly over time (by 35%).
- Those living in NZDep 9 and 10 areas aged 0-24 years had lower rates of consultation (with a mean of around 80%) than those living in the other decile areas. Consultation rates for those aged 24 years + were comparable between the two groups. The increase in consultation rates was slightly greater for those living in NZDep 9 and 10 areas and aged between 6 and 64 years (mean 6.5% vs. 2.5% for those living in lower decile areas).

It appears that the government's aim of increasing consultation rates for primary care is being achieved only for those with CSCs who are enrolled at Interim-funded practices. Reduced fees do not seem to have been associated with increased rates of consultation. Access-funded practices with ongoing lower fees have not achieved consistently greater growth in consultation rates than Interim-funded practices; and those without CSCs who have experienced the biggest reduction in fees have shown no consistent growth in utilisation.

In CMDHB there is not a comparable dataset to analyse. However the PPP consultation data has demonstrated higher utilisation of primary care for high needs populations compared to non-high needs which is encouraging. Whilst this data is only available from 2005, proxy measures such as community pharmaceutical spending suggest there has been a real increase in utilisation since 2001 for this group. Unfortunately though, it appears that CMDHB may also be experiencing a drop off in consultation rates in this high needs group as the PPP high needs:non-high needs ratio has fallen from 22% higher in 2005 to 10% in 2009 and there have been increases in ASH rates and self-referrals to EC for less urgent conditions, particularly for Pacific peoples.

4.7. Summary

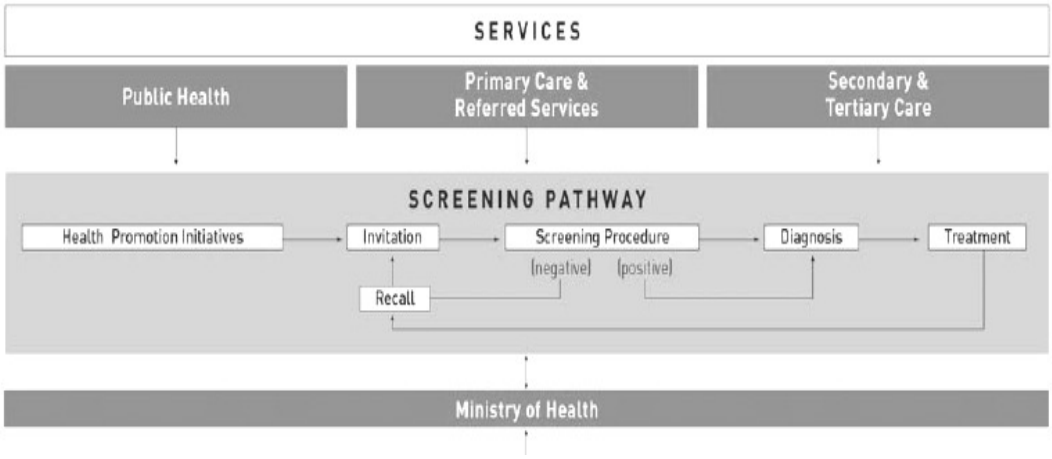
- The rate of consultations for high needs people in Counties Manukau has been 10-22% higher than non-high needs between 2005 and 2009. However this appears to be trending down.
- Community pharmaceutical expenditure has increased from 15% below equity in 2001 to approaching 100%, sitting at 93.9% in 2009. Maaori and Pacific peoples' per capita pharmaceutical expenditure is 18% and 16% higher respectively than the average.
- Overall EC attendance at Middlemore hospital is growing. Up until 2006 the rate of growth was below population growth at 1% per annum. Now it is increasing by 2% a year. Attendances to the EC for less urgent conditions (defined here as triage 4-5 cases) up until 2006 have been reasonably stable for all ethnic groups. Maaori less urgent EC usage has increased by 2% between 2001 and 2009, Pacific peoples by 9% and non-Maaori/non-Pacific rates have fallen by 5%. However from 2007 rates have been trending up by 5% overall. Pacific people's rates have trended up by 12% in the same timeframe whereas Maaori rates have fallen by 4%.
- Rates of self referrals to EC are increasing. Between 2001 and 2009 rates have increased by 9% but 7% of this occurred between 2007 and 2009. There is marked variation in the rate of self referrals between PHOs in the district.
- There has been no closure of the gap in less urgent EC attendance between 2001 and 2009. In 2009 Maaori were 23% more likely to attend EC for a less urgent condition than the total CMDHB population and Pacific people a noteworthy 70%. In contrast non-Maaori/non-Pacific are 30% less likely than the total population to attend EC for less urgent care which means the gaps between this group and Maaori and Pacific are 50% and 90% respectively.
- Less urgent EC attendance has increased for both Pacific children (26%) and adults (4%) since 2007 which has widened the gap between Pacific peoples and non-Maaori/non Pacific.
- Overall ASH rates per 1000 in Counties Manukau are increasing for 0 to 74 year olds. Pacific rates have increased by 25% between 2001/02 and 2008/09, Maaori by 20% and non-Maaori/non-Pacific by 8%. Of concern, is the sharp trending up of Pacific peoples ASH rates from 2007.
- Whilst the 2009 rates may be partially raised by the impact of the "Swine flu" epidemic, it has been said that Pacific child rates of admission are often a barometer of what is to come. This is a cause for concern given that the economic circumstances of Counties Manukau families are likely to continue to be challenged by the rate of unemployment in the district and the advent of increased GST in October 2010.
- Overall the impression given is of gradually improving access to primary care over the 2001 to 2007 period, with perhaps some reversals in 2008 and 2009 as copayments rise and recessionary effects come into play.

Chapter 5. Prevention

A strategic shift was made in the Strategy to move the focus from the provision of acute care to an individual to providing preventive care and health-promoting activities for the entire enrolled population. Prevention is a key component in reducing the health inequalities experienced by Maaori and Pacific peoples.

Screening is an important part of prevention. The National Health Committee defines screening as: "a health service in which members of a defined population, who do not necessarily perceive they are at risk of, or are already affected by, a disease or its complications, are asked a question or offered a test to identify those individuals who are more likely to be helped than harmed by further tests or treatments to reduce the risk of disease or its complications [56]."

Figure 45 The Cervical Cancer Screening Process in New Zealand as an illustration of screening in prevention



Source: NSU

Equity of access to quality screening is central and programmes need to be culturally accessible to all those who are eligible. New Zealand has national programmes for cervical screening and breast screening and data from these is provided in this report.

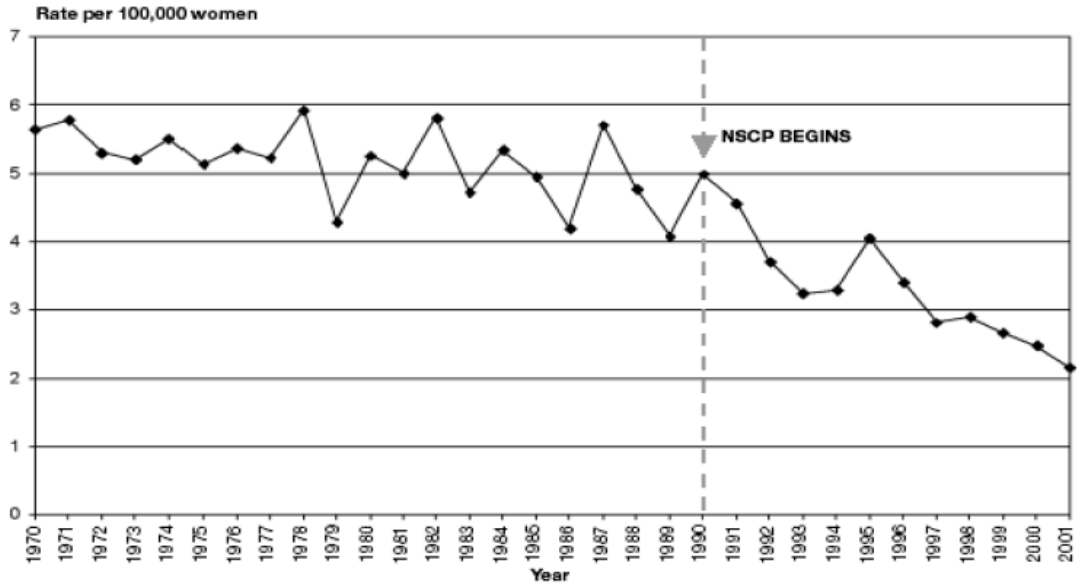
Immunisation is another important preventive strategy and has the ability to reduce socioeconomic disparities that are evident for many infectious diseases. Immunisation rates for CMDHB children up to the age of two are reviewed along with influenza vaccination coverage in the 65+ age group.

Each of these preventive strategies are indicators in the PHO Performance Programme, with high levels of performance rewarded by payment to PHOs. All of these specifically include targets for high needs groups.

5.1. Cervical Screening

Nationally cervical cancer incidence and mortality fell dramatically over the 1990s for both Maaori and non-Maaori women, coinciding with the introduction of the National Cervical Screening Programme (NCSP). The incidence of cervical cancer had decreased from approximately 12 cases per 100,000 in 1991 to below 7 cases per 100,000 in 2002, a 40 percent decline [57]. During the same time frame, mortality fell 60% from 5 per 100,000 to 2 per 100,000 [57]. The decline had been more marked for Maaori women [58].

Figure 46 Cervical Cancer mortality in New Zealand, 1970 to 2001, age standardised (Segi) per 100,000 women



Source: NZHIS data analysed by the NCSP Statistical Review, 2005

Coverage is related to protection: a woman who is covered (that is has had a cervical smear in the past 36 months) has her risk of cervical cancer reduced by about 90 percent [58]. If a smear is abnormal, the woman is referred onto secondary and tertiary care to receive further investigation and treatment if required (see screening process in Figure 45).

5.1.1. Methodology

The Ministry of Health National Screening Unit collects the country's cervical screening data. This report uses unadjusted coverage which is different from the currently reported adjusted coverage for the reasons discussed here.

Unadjusted coverage is defined as the number of women aged between 20 and 69 years, alive at the end of the reporting period, who have had a smear or histology result recorded on the NSCP Register in the preceding three years. The Ministry of Health target for unadjusted coverage is 80%. The coverage indicator is a proportion, where the numerator comes from the NCSP Register and the denominator from a population projection based on the 2001 Census population.[27]

There is an issue with the denominator being based on population projections from the 2001 Census. There are instances where this data is likely to be inaccurate if population growth has been different from projections. The extent to which such errors occurred cannot be estimated. For the Counties Manukau population, with its additional population growth, particularly for Maaori and Pacific peoples from 2001, it can be hypothesised that the denominators for these groups are likely to undercount eligible women. Therefore coverage is likely to be lower than what is shown

Ideally hysterectomy-adjusted coverage should be used to provide better accuracy as these women normally do not require further cervical smears. If using hysterectomy-adjusted coverage, consideration needs to be given to whether to include or exclude women who have had a

[27] The population used in the denominator is based on the projected population using the results from the New Zealand 2001 Census. This is unusual given that there has been a more recent Census in 2006 that provides more accurate population estimates. Coverage using the 2006 Census could not calculated as the actual numbers of screens were not easily available.

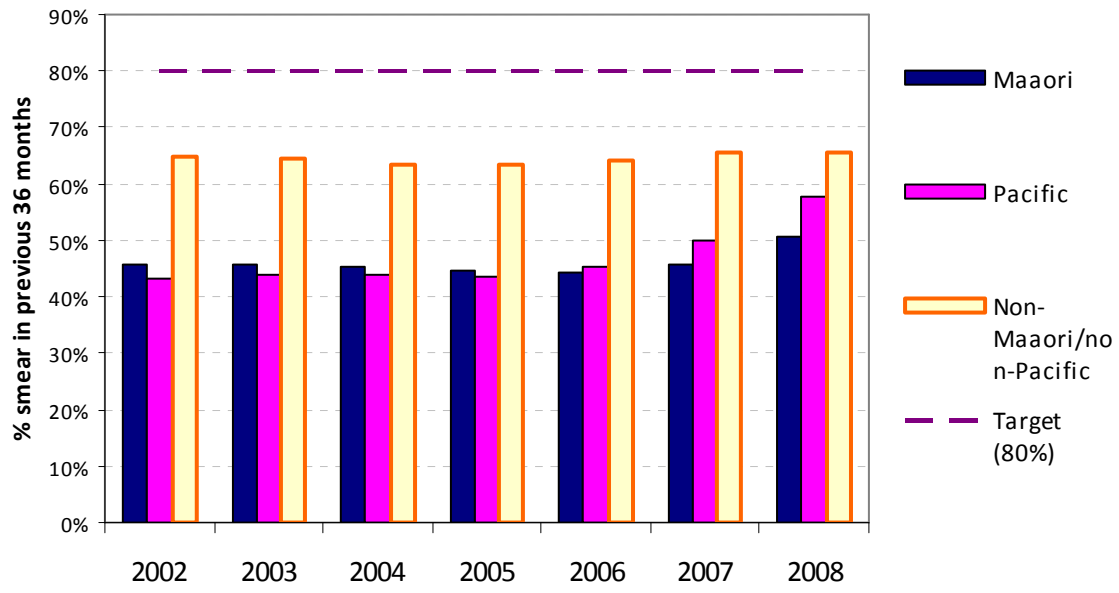
hysterectomy, from both the numerator (from the NCSP register) and the denominator (number taken from the whole population) or just the numerator alone.

This is complicated by the fact that some women may require ongoing cervical smears depending on why their hysterectomy was performed. Unfortunately there is insufficient data to determine this so all women who have had a hysterectomy are excluded from the numerator and denominator. In previous years, hysterectomy adjustment involved the removal of all women from the denominator who had had a hysterectomy but the numerator from the NSCP remained unadjusted. This methodology was deemed to be incorrect and changed in later years. Due to this complexity, unadjusted coverage was chosen for this report as it was available using consistent methodology from 2002 to 2008. Data from 2001 was excluded due to the use of quarterly reports and the presence of an error extracting ethnicity data. Unadjusted coverage for 2009 was unavailable from the NSU at the time of this report.

5.1.2. Cervical Screening coverage in CMDHB

In 2002 46% of Maaori women, 43% of Pacific women and 65% of Non-Maaori/non-Pacific women had had a cervical screening test in the previous 36 months. These rates are well below the national target of 80% coverage (see Figure 47).

Figure 47 Cervical screening coverage in CMDHB women aged 20-69 years by ethnicity, from 2002 to 2008, unadjusted for hysterectomy

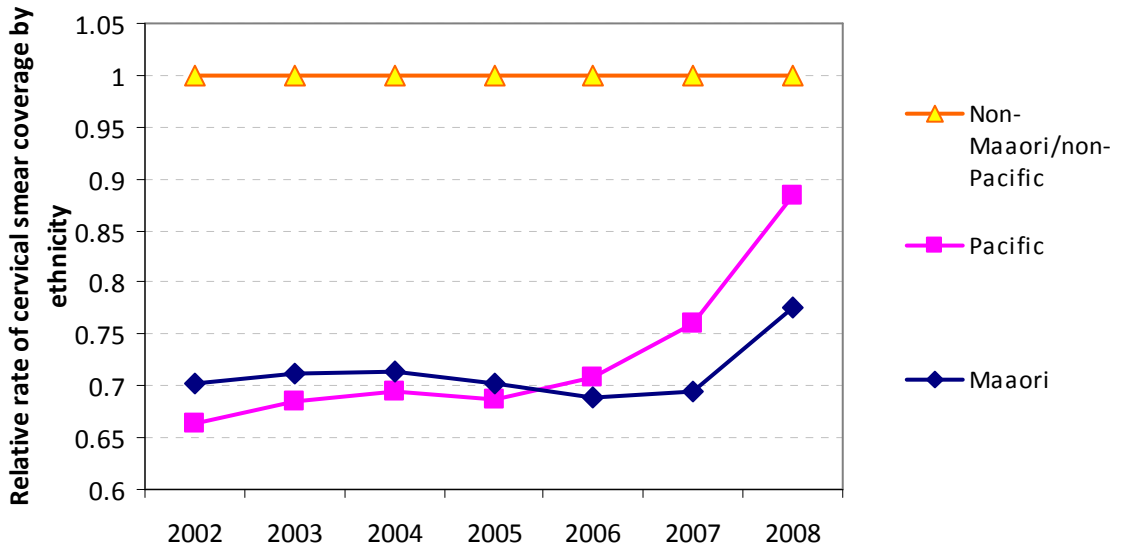


Source: NSU, with 2008 analysed by CMDHB

Though still well below the national target of 80%, coverage rates for both Maaori and Pacific women had improved by 2008, particularly in the period 2006-2008 – Maaori by 11% and Pacific women by 34% (see Figure 47).

In addition the gap between the rate of Maaori and Pacific screening compared to non-Maaori/non-Pacific screening has started to close and this is seen in Figure 48. In 2002 Maaori and Pacific women in the district were 30% and 34% less likely respectively to have had an up-to-date smear than non-Maaori/non-Pacific women. In 2008 the gap had improved with Maaori 22% less likely and Pacific 12% less likely to have had a cervical smear in the last 36 months compared to non-Maaori/non-Pacific.

Figure 48 The relative difference in cervical screening coverage by ethnicity, 2002 to 2008, unadjusted for hysterectomy



Source: NSU analysed by CMDHB

Improvement is still required to continue closing this gap as well as reaching the population target of 80% coverage. During this timeframe overall coverage for the eligible population has only increased by 7% to 62%. Therefore Counties Manukau women in the pre-HPV vaccine cohort are not experiencing the maximum benefit available from cervical screening.[28]

5.1.3. Efforts to improve cervical screening rates

The following two case studies examine successful strategies that have been used in the PHO setting in CMDHB to improve cervical screening coverage.

Case history 1

Practice nurses were taught by PHO employed nurses to take smears. The PHO employed nurse acted as a champion and really helped get the service going. Now practice nurses will do the smears and the PHO supplies disposable speculums to the practices. If practices require a nurse, the PHO is also able to provide cover for a set period of time.

Cervical coverage rates for the PHO have increased from 47.2% in January 2007 to 64.5% in July 2009.

Nurse leader, small PHO

[28] Two forms of Human Papilloma Virus (HPV) are linked to causing cervical cancer. In 2008 the government added this vaccine to the National Immunisation Schedule to reduce the incidence of cervical cancer further. Twelve year old girls receive three injections over a six month period to protect them from four HPV strains, including the two cancer causing strains.

Case history 2

Nurses in the practices work opportunistically and do smears for patients without appointments. A good IT system means that nurses are able to see the health records of the patients waiting and see what screening needs to be done as well as providing some health education. In addition, cervical smears can be done up until half an hour of closing. This PHO has two practices that have extended hours to 11pm, seven days a week which improves accessibility for their large proportion of high needs enrolees.

Cervical screening rates have been slowly increasing for this high needs PHO, rising from 46% in January 2007 to 58% in July 2009.

CEO, medium PHO

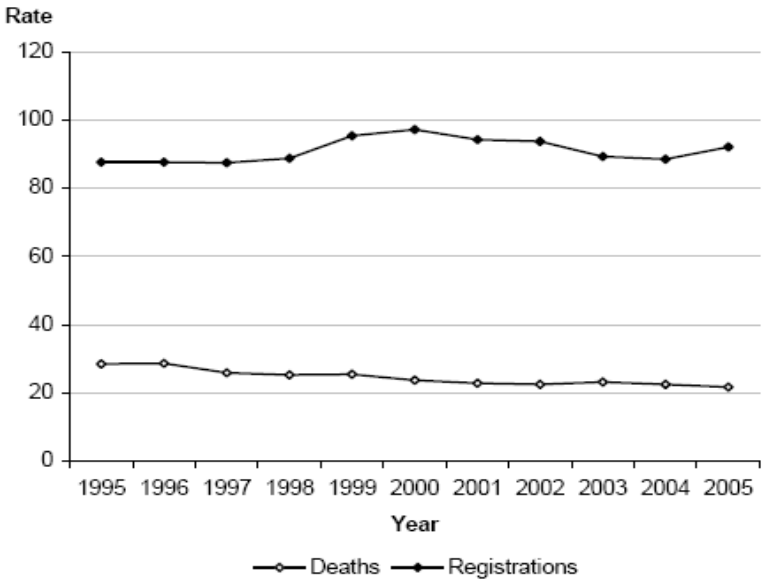
CMDHB has recently negotiated new contracts with three local PHOs in order to achieve higher cervical screening volumes for the high needs population. This contract provides funding for free cervical smears so no copayment is charged by the practices providing the service.[29]

[29] CMDHB has also been involved in an Auckland regional RFP process to deliver cervical screening to high need populations in metro Auckland. An NGO was successful and will provide free cervical screening to women of high needs in the community.

5.2. Breast Screening

In New Zealand breast cancer is the most common cancer in women and the leading cause of cancer deaths. The annual national age standardised incidence rate of breast cancer has been increasing overtime, from 59 cases per 100,000 in 1956 to 117 cases per 100,000 in 1996 [59]. Over 2,300 New Zealand women develop breast cancer every year and 640 will die from it [59].

Figure 49 Breast cancer registrations and deaths in New Zealand, 1995 to 2005, age standardised to the WHO world population, per 100,000 females



Source: MOH from analysis of the New Zealand Cancer Register

Breast cancer incidence and mortality rates are currently unequal. Nationally Maaori women have an 8% higher incidence of breast cancer and a 66% higher risk of dying from disease than non-Maaori [59]. Pacific women also have a 8.8% higher mortality rate than the total national rate despite having a similar incidence to the national average [59].

Table 11 and Table 12 show the figures for Counties Manukau women and comparative national figures [60]. These differences are largely due to later diagnosis and treatment rather than socioeconomic disparity [60].

An age appropriate mammogram is the only screening test shown in randomised controlled trails to reduce breast cancer mortality, likely due to its ability to detect cancer early prior to regional and systemic metastatic spread [61]. International evidence has shown that 70% coverage in a population can reduce mortality from the disease by 30% in women aged 50-65 years and by approximately 45% for women aged 65-69 years [61]. The use of screening could eliminate the mortality disparity for breast cancer experienced by Maaori and Pacific women which is a significant issue for Counties Manukau.

Table 11 Female breast cancer registrations for 25 years +, age-standardised rate per 100,000 with 95% CI, 2003 to 2005

		Maaori	Pacific	Non-Maaori/non-Pacific	Total
CMDHB	Female	128 (96-167)	141 (110-178)	146 (132-161)	136 (125-148)
New Zealand	Female	170 (157-184)	149 (130-169)	153 (149-157)	152 (148-155)

Source: CMDHB Health Needs Assessment with data sourced from NZHIS

Table 12 Female breast cancer mortality, 25 years +, age-standardised rates per 100,000 with 95% CI, 2003 to 2005

		Maaori	Pacific	Non-Maaori/non-Pacific	Total
CMDHB	Female	66 (41-101)	41 (25-63)	30 (24-36)	32 (27-38)
New Zealand	Female	56 (49-64)	46 (36-59)	36 (34-38)	37 (36-39)

Source: CMDHB Health Needs Assessment with data sourced from NZHIS

5.2.1. BSA screening programme

Breast Screen Aotearoa (BSA), the publicly funded national breast cancer screening programme, aims to reduce breast cancer mortality in New Zealand by providing free mammograms every two years for women aged 45 to 69 years. Currently New Zealand's overall coverage rate for non-Maaori/non-Pacific women is approaching the target of 70% to reduce breast cancer mortality[62]. However for Maaori and Pacific women rates still lag behind, even though there have been increases since the implementation of screening. Nationally in 2009, 56% of eligible Pacific women and 52% of eligible Maaori women were screened by BSA (Borich, A, Ministry of Health, personal communication by email).

National campaigns by BSA have run since 2002 to strengthen the message that breast screening can reduce deaths from breast cancer. A new campaign started in 2008. The goals are to raise awareness, increase calls to the BSA 0800 number to enrol and to support the programme and providers in their efforts to reduce the number of women dying from breast cancer, with a particular focus on Maaori and Pacific women who are at higher risk.

Counties Manukau women were included in Breast Screen Auckland and North Ltd prior to 2005 and had low screening rates. In 2000 a year after the programme was established, only 25% of the targeted population of 50 to 64 years had had a mammogram [49]. This rate excluded the higher socioeconomic localities of Howick and Pakuranga. The Breast Screen Counties Manukau (BSCM) programme began at the end of 2005 with a mobile unit being added to the programme in 2006. Currently 50% of women are screened at Manukau Super Clinic, 25% at contracted Auckland Radiology Group practices and 25% are screened by the mobile unit (Pritchard, K, personal communication). The mobile unit locations include Otara, Mangere, Pukekohe and Botany.

Breast screening coverage prior to the set up of the Counties Manukau specific BSA screening programme in 2005 are not included in this report due to changes in the age restrictions for screening and different methodology used in calculating coverage.

5.2.2. Methodology:

All coverage rates are proportions expressed as percentages. The numerator is obtained from BSCM and includes all women between 45-69 years who have had a mammogram in the 24 months prior to the end of the reporting period.

The denominator is the projected eligible population and is calculated using the projected population based on the 2001 Census population. This is done by the Ministry of Health. This denominator differs from what would normally be used by CMDHB.[30] Given the population growth in CMDHB, particularly for Maaori and Pacific, there is the potential for the denominator to be

[30] Normally the more up-to-date and accurate 2006 Census is used to determine projected populations. Coverage using the 2006 Census was unable to be calculated as the number of screens undertaken in the time period was not available at the time the report was being collated.

inaccurate and potentially overstate coverage overall. In addition women who decline and women with mastectomy remain in the denominator, although they would not necessarily appear in the numerator.

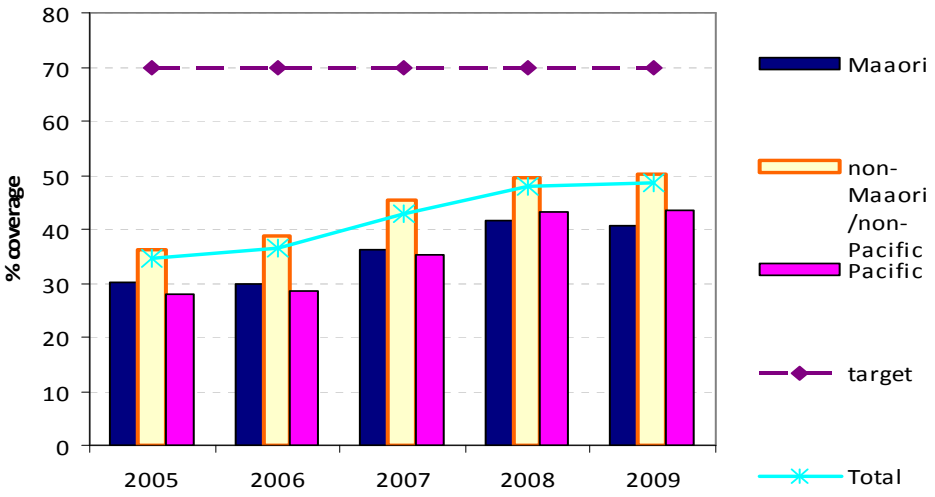
The monthly coverage rates are displayed from 2005 to 2009 along with an annual coverage rate. The annual proportion of screening coverage was calculated by taking the mean percentage of women screened over the year for each ethnic group. 95% confidence intervals were also calculated and show that the differences in screening coverage by ethnicity are statistically significant. However this method is likely to overstate coverage somewhat as coverage is described as the % of eligible women who receive a screen within the programme in the most recent 24-month period. If a woman is recalled and screened at 23 months after her last screen she could be counted twice. The national guidelines for breast screening state that more than 85% of women who are eligible for rescreen should be re-screened within 27 months and that more than 75% of women who return for a screen are re-screened between 20 to 24 months of their previous screen.

Coverage rates from BSCM do not include mammograms for this age group that are done in private practice. However the demography of CMDHB would suggest that it is likely that only a small percentage of women would access mammography in this way. A survey undertaken in 2009 by East Health Trust PHO of practices in their district, which mainly cover a higher socioeconomic population, showed that only 8% of the total number of eligible women undergoes private mammography, with another 44% undergoing public BSA screening.

5.2.3. Coverage rates for CMDHB

Figure 50 and Figure 51 show breast screening coverage rates in the district. In 2005 coverage rates for BSCM were low as the service had only recently started and needed to grow in capacity. In 2005 30% of Maaori women aged 45-69 years had had a mammogram in the previous 24 months, along with 28% of Pacific and 36% Non Maaori/non-Pacific.

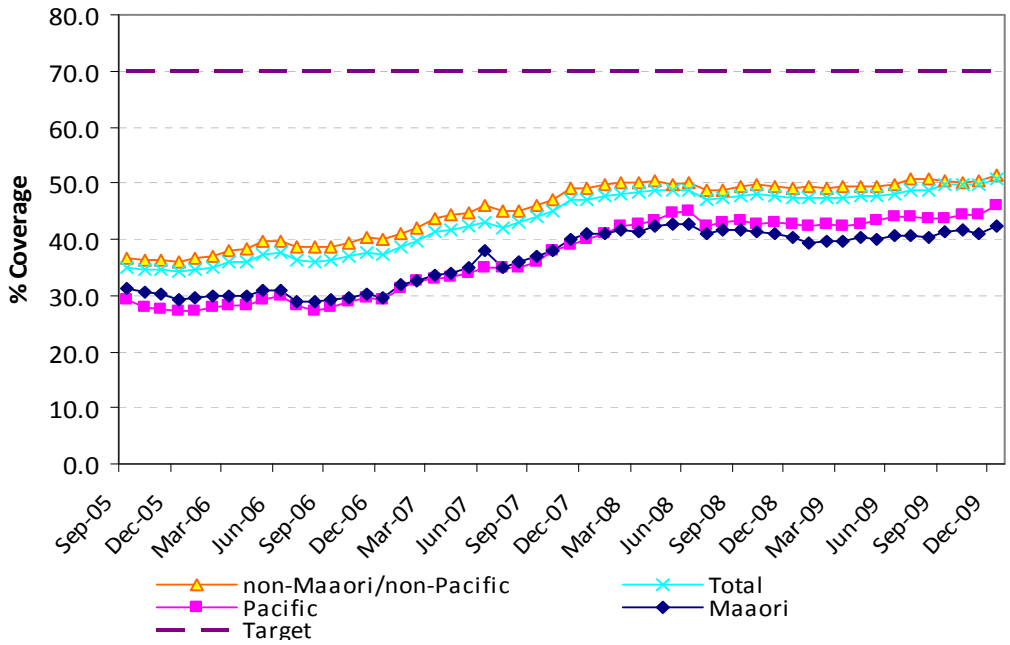
Figure 50 BSA annual breast screening coverage for CMDHB women 45-69 years, from 2005 to 2009



Source: BSCM analysed by CMDHB

At the end of 2009, the overall breast screening coverage was 51%, well below the Ministry of Health national target of 70%. Maaori and Pacific women had lower rates at 42% and 46 % respectively. This level of coverage is well below the national average which was 64% in July 2009 (A Borich, personal communication by email, 2010).

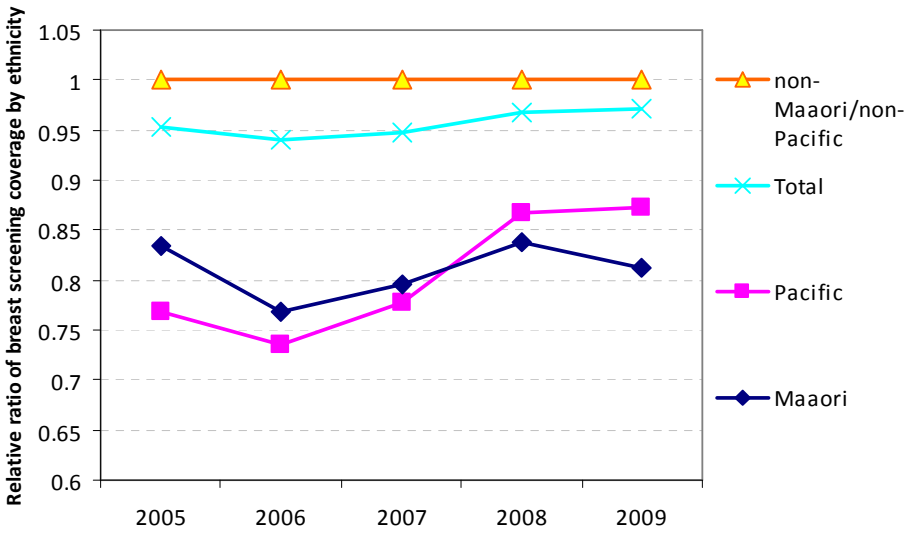
Figure 51 BSA monthly breast screening coverage for CMDHB women aged 45 to 69 years by ethnicity, 2005 to 2009



Source: BSCM

Maaori and Pacific women's screening rates when compared to non-Maaori/non-Pacific women are shown as standardised rates in Figure 52. Maaori women were 17% less likely to be screened than non-Maaori/non-Pacific in 2005. Unfortunately this gap has not closed in 2009 increasing by a further 1%. Pacific women were 24% less likely to be screened than non-Maaori/non-Pacific in 2005 but this disparity has fallen to 13% in 2009.

Figure 52 Difference in BSA breast screening coverage by ethnicity from 2005 to 2009



Source: BSCM analysed by CMDHB

More work is required to ensure increases in coverage levels overall to 70% + of the eligible population. More importantly additional work is required to close the gap in screening coverage

between non-Maaori/non-Pacific and Maaori and Pacific women in Counties Manukau, given their higher mortality from breast cancer.

5.2.4. Issues for breast screening in CMDHB:

Initially national targets could not be met due to capacity issues. However there are now enough Medical Radiation Technologists and mammography machines to be able to screen referred patients in a timely fashion. To meet target BSCM requires another 400+ women to be screened monthly. Therefore to be effective and increase coverage rates the programme needs to be able to easily identify and invite unscreened women. The current system used to identify unscreened women is labour intensive and inefficient.

Currently BSCM does not have a population register to allow direct invitations to be sent to eligible women. Ideally, there should be a specific mechanism to identify all eligible individuals in any screening programme. Most women wishing to have a mammogram have to request an enrolment by ringing the BSA 0800 number or are invited through contact with primary care services.

To assist the identification of unscreened women in Counties Manukau, a practice liaison person employed by the BSCM screening programme goes into primary care practices and attempts to data match women in the age range, to see if they are enrolled on the BSA programme and if they have an up-to-date screen. The service often works with practices in this manner prior to the mobile moving to their area. Practices are then asked to follow up those women who are not enrolled. In addition BSCM has contracts with several of the PHOs to increase coverage by giving each a list of 'did not respond' (DNR) women to follow up. Once a target is met (that is a certain number of the women are contacted and receive mammograms) a payment is made. The PHO performance programme also focuses on achieving higher coverage for high needs women aged 50 to 69 years. The screening target is a 10% increase from the PHO's baseline. If this target is reached, a payment is made to the PHO. Currently this target is not being met by the majority of PHOs.

In addition some practices use a similar recall system to cervical screening, inviting women to visit the GP for a breast examination prior to having their mammogram. This is seen by many interviewed as creating an additional barrier for high needs women because there is usually a charge for the visit, the time needed for the visit and they may uncomfortable about the idea of a breast examination.

> Not only is a fee often charged for what is essentially meant to be a free service, there are other barriers. Often women are working full time with many Pacific women having more than one job and there may be only one car in the household. This is on top of cultural barriers to screening, with there still being poor perceptions of breast screening in many parts of the community
>
> Small PHO nurse leader

> The system would work more effectively if there was better integration with primary care providers. Whilst invitation letters will increase coverage overall, additional measures are required especially for Maaori and Pacific women.
>
> BSCM Programme Manager

One PHO CEO interviewed felt strongly that service delivery needs to be reconfigured with more accessible screening sites in the community that offer prompt and flexible appointments along with greater collaboration with local health providers.

You need all screening services to be in the community. You can't expect Mangere women to go to Manurewa for mammography. There needs to be delivery of services in the community with integration of private and public providers into BSA for example.

CEO small PHO

Some individual practices do extremely well and use innovative methods with a commitment to improving Maaori and Pacific woman's coverage rates. The following case history describes several methods that have been utilised in a Counties Manukau PHO to increase breast screening for their high need populations.

Case Study

One small PHO got the list of 'did not responds' from BSCM and their own GPs. Personalised letters from the doctors were sent out to each woman and this was followed up by door knocking by the PHO community health workers (CHWs). The CHWs were Maaori and Pacific women who lived in the area and understood the "lay of the land".

The PHO block booked a number of appointments on the BSCM mobile unit when it was next in the area. The CHW then booked the local women one of these appointments and facilitated the women in attending by helping with transport and childcare.

This approach was successful. Screening rates for their high needs population have improved from 38% in January 2007 to 51% in July 2009 and the PHO wants to trial the use of a free minibus to the mobile screening unit to see if this will improve coverage further.

This kind of approach is similar to that used in the successful Te Whanau a Apanui Community Health Service (TWAACH) initiative [63]. This service provides primary care to a rural predominately Maaori community in the Eastern Bay of Plenty. The area is serviced by a mobile breast screening unit that comes to the district every two years and stays in two locations in the area for a total of 8 days. Women can also attend screening in Whakatane. In 2003 it was estimated that less than 43% of eligible women had a mammogram when the mobile unit visited. Strategies were put in place to increase coverage. The strategies can be divided into two areas: increasing the local communities' involvement in the issue and increasing participation at screening.

Increasing the local communities' involvement

TWAACH provided education and information about breast screening and the mobile unit visit and delivered this message using already established community forums and community networks. Specific breast screening promotion was not undertaken as it was felt that information would reach the women better in conjunction with other events. Registration forms were taken to all community events allowing women to enrol at the time. In addition well known and respected individuals in the community advocated for screening and the dates of the mobile units visit were repeatedly advertised in many places including PHOs, the shops and the local pub. Community health workers (CHWs) located in the PHOs as well as practice staff were also used to advocate for screening and help facilitate the booking of appointments.

Increasing participation

TWAACH got permission from the local BSA provider to provide the appointment times to their eligible population. The Service created a list of eligible women in the district and notified them that breast screening was due. They then followed up women who had not responded to the notification and CHWs were predominately used for this. The service also had a system in place that reminded women the day before their appointment, immediately contacted women who did not arrive for their appointment, and made alternative arrangements for screening for these women. Woman

who “dropped in” were enrolled and screened if they agreed. Group booking of appointments, travelling together, and providing a cup of tea after screening to enable a ‘debrief,’ helped make the process more acceptable.

In 2005 and 2007 screening coverage increased markedly for this population with more than 98% of Maaori women in the district receiving screening. Non-Maaori women also achieved high rates, with 91% undergoing screening.

Other practices in CMDHB use similar methods to TWAACH, utilising the CHW and block booking with the mobile screening unit. The mobile unit when placed in key areas such as Mangere and Otara works well for Pacific women. Whilst good numbers of Maaori women are screened when the mobile is on the marae in Counties Manukau, not all Maaori women are linked to marae and other strategies need to be implemented to capture eligible urban Maaori women.

There are plans nationally to develop a population register and implement an automated health matching database to identify and invite eligible women. Women will also be able to make appointments via a link from the National Screening Unit website. In addition BSCM intends to implement electronic messaging in primary care from March 2010, to provide electronic results to practices and enable electronic enrolments to the programme. Previously these processes have been paper based.

5.3. Immunisation

Improving childhood immunisation is one of the six national health targets set by the Ministry of Health. The target is for 95% of children to be fully immunised at 24 months by 1 July 2012 in order to prevent the spread of vaccine preventable diseases (VPD). Scheduled immunisations are provided free of charge by the Ministry of Health. The current schedule (Table 13) protects against diphtheria, tetanus, pertussis, poliomyelitis, hepatitis B, Haemophilus influenaze type b, measles, mumps, rubella and now pneumoccocal disease. To be considered fully immunised at 24 months means having had all of the 6 week, three month, five month and 15 month vaccinations. Fully immunised status does not include bacillus Calmette-Guérin (BCG) vaccination which is offered through a public health programme to many 'high risk' CMDHB births in the neonatal period.

Table 13 The current National Immunisation Schedule[64]

Source: MOH

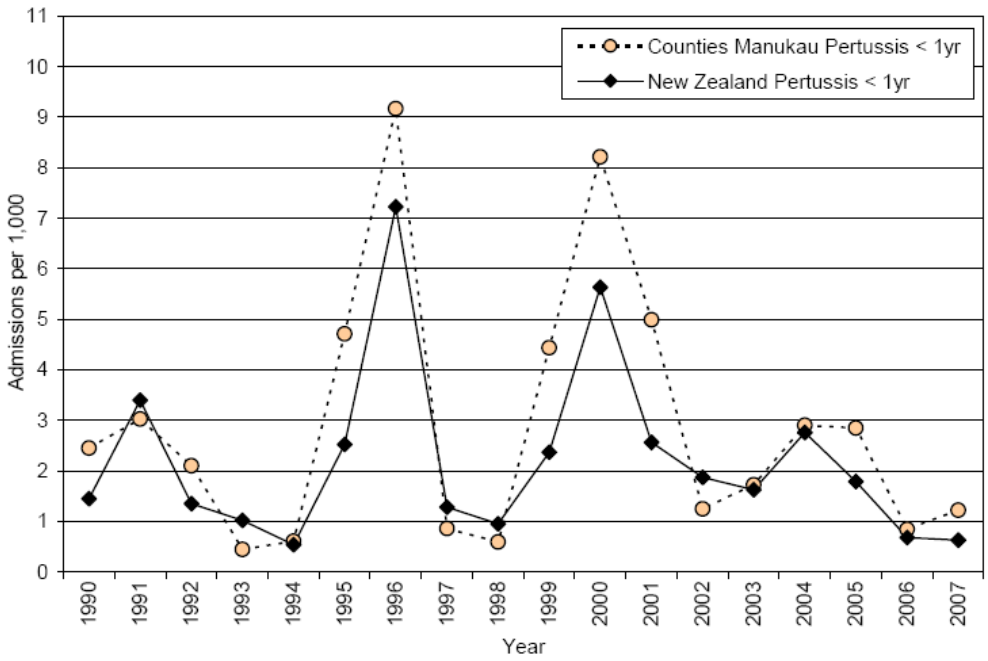
Immunisation is among one of the most successful and cost effective public health interventions [65, 66]. Immunisation protects the individual directly and the community indirectly through herd immunity [66]. Immunisation has the ability to reduce the socioeconomic disparities that are evident in many infectious diseases such as meningococcal disease [66]. In addition immunisation provides a marker or proxy for all well-child care. For immunisations to be up-to-date means that the scheduled well child visits should have occurred and other less easily measured activities have taken place.

Approximately 45% of children in Counties Manukau live in the most deprived areas and experience higher rates of infectious diseases without high immunisation coverage[49]. For example, pertussis,

a highly contagious bacterial respiratory infection, occurs most commonly in non-immunised infants with the highest morbidity and mortality occurring in this age group [67]. Despite the pertussis vaccination having been part of the New Zealand immunisation schedule since 1960, New Zealand hospital admission rates for pertussis are five to tens times higher than the USA and England [68]. Pertussis admissions in Counties Manukau are also higher than the New Zealand average with significantly higher rates in Maaori and Pacific infants (see Figure 53) [67].

Improving on-time delivery of immunisation to children especially for Maaori and Pacific children and others living in socioeconomically deprived circumstances has the potential to reduce the burden of VPD and reduce health inequalities.

Figure 53 Hospital admissions for pertussis in infants < 1 year, Counties Manukau vs. New Zealand, 1990-2007



Source: CMDHB with numerator from NMDS, denominator from Birth Registration Dataset

5.3.1. Methodology

It is not a straight forward exercise to present accurate historical immunisation data from 2001 to 2009 for the district due to the methods of data collection utilised over this time. Prior to 2002, CMDHB had no formal immunisation data collection. Coverage was determined by intermittent national surveys and it was up to individual practices to collect and monitor their immunisation rates. However two coverage surveys undertaken in 1991 and 1995/6 used robust methodology involving random sampling of geographical clusters to determine children's immunisation status. These provide the "best guess" for coverage prior to the 2001.

In 2002 CMDHB started to develop the Kidslink database to record well child checks and immunisations. It took some time to develop a system that was satisfactory with good recording of pertinent and accurate data.

However by 2003 it allowed the following of CMDHB cohorts so those children not immunised within an 11 week period could be given to the Outreach immunisation service to follow up. Kidslink also gave information on the timeliness of the cohort's vaccinations along with overall coverage rates. The data was collected by ethnicity and also by provider, allowing the identification of primary care practices that needed to focus more attention to the programme in order to increase their immunisation rates.

It also reported on enrolments and tried to ensure each child had a GP from birth which is known to help increase immunisation by increasing the likelihood of attending for the 6 week vaccinations [65]. In addition reasons why vaccination was not done was recorded. For example declined, refused etc.

The National Immunisation Register (NIR) came into effect in 2004 when it began collecting information for MeNZB campaign. The NIR is a computerised system designed to hold immunisation details of all New Zealand children, and works on an 'opt-off' basis. It is designed to measure coverage levels by age, birth cohort, ethnicity and area with implementation being progressive across different parts of the country. In April 2005 it was extended to include the collection of routine immunisation information on all individuals born after a specified date in Counties Manukau.

The NIR can be seen as an instrument to achieve complete immunisation by two years of age for those children not yet fully immunised, such as children from very mobile families or those using multiple primary health care providers. The NIR does this through the provision of provider reminders, client reminders and recall and allows for co-ordination between services. In addition, the NIR aids opportunistic vaccination as all providers are able to check immunisation status, and helps with the identification of populations with the lowest immunisation coverage in order to target resources more effectively. Unfortunately there were implementation issues that meant data accuracy was a significant issue, detracting from the usefulness of the register, until 2008/09.

The NIR measures the proportion of children fully immunised at 6, 12, 18 and 24 months, at 5 years and 12 years. The numerator comes from children on the NIR who reach the milestone age within the specified time frame and are fully immunised. The denominator is all of the children on the NIR who reach the milestone age within a specified time frame.

If a caregiver decides to opt off the NIR, their child's NIR, date of birth, DHB of residence, date of opting off and immunisation events prior to opting off are retained in order to maintain a consistent denominator. This is mentioned by a number of key people interviewed as a significant issue due to children remaining in the CMDHB/practice denominator despite having moved out of the district thus lowering coverage.

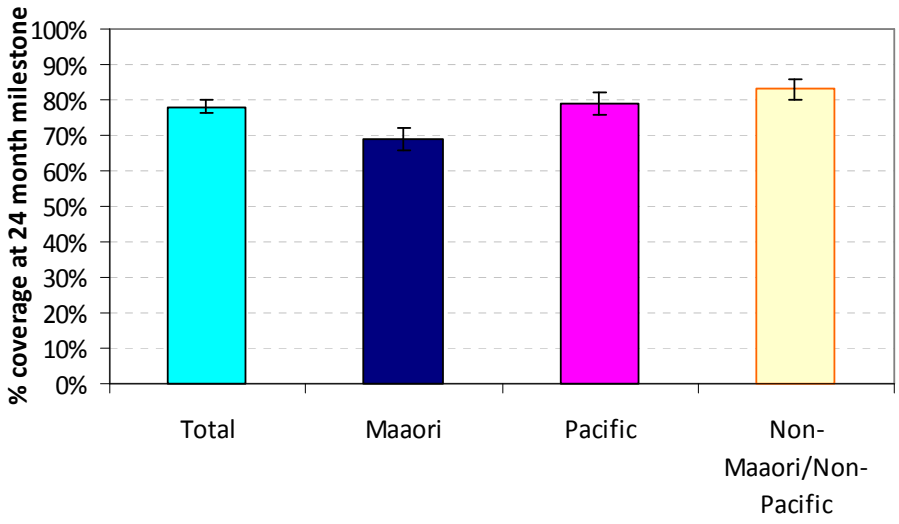
5.3.2. Immunisation trends in CMDHB between 2001 and 2009

Table 14 (on page 88) outlines the immunisation results from various sources that are available for the 24 months milestone for Counties Manukau children over the last 12 years.

Looking at the cohorts going through Kidslink there was a definite trend for increased immunisation coverage as Counties Manukau children aged. By 3 to 4 years of age, data from Kidslink demonstrated that for the first few cohorts had immunisations rates of 80-90% for Maaori and Pacific children. Unfortunately reports are not available past 2004 as the NIR took over.

As discussed in the methodology, the NIR has had a number of data issues over the first few years of operation. However by 2008/2009 the coverage rates were relatively complete for the population due to the effort put into cleaning up data at practice, PHO and DHB level. Overall 78% of the cohort of children aged 24 months in the 12 months ending 30 June 2009 were fully immunised with ethnic specific rates of 69% for Maaori, 79% for Pacific and 85% for New Zealand European children (data shown graphically in Figure 54).

Figure 54 Immunisation coverage at 24 month milestone for CMDHB children, year ending 30 June 2009



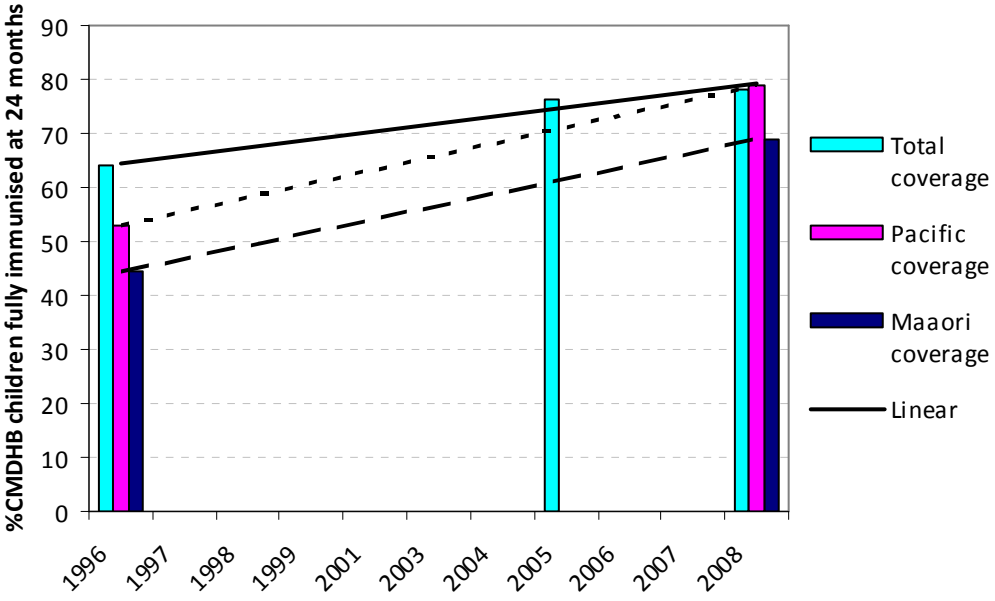
Source: NIR

Table 14 Counties Manukau children fully vaccinated at milestone age 24 months, 1996-2009

Year	Total coverage	Maaori coverage	Pacific coverage	NZE coverage	Asian coverage	Other coverage
1996 North Health Serum survey	64% (for South Auckland)	44.6 Northern region	53.1 Northern region	72.3 (others) Northern region		
Kidslink Data as at 1/5/05	42% received 15mth imm by 24 months	35% received 15mth imm by 24 months	45% received 15mth imm by 24 months	As cohorts aged the coverage rates increased to 80-90% for all ethnic groups by 3-4 years of age. Thus timeliness of vaccination was an issue. Also data issues as not all providers were entering immunisation data to provided an accurate cohort		
2005 National Survey	76.3 (68.8-83.8) for CMDHB 45% timely adjusted	65% Maaori for northern region				79% non Maaori for northern region
NIR 06-07	62	51	58	71	70	67
NIR 07-08	74	64	71	82	81	72
NIR 08-09	78	69	79	85	86	76

There has been a closing of the gap in immunisation coverage between Maaori and Pacific children and non-Maaori/non-Pacific children. Whilst some of this increase in coverage will be due to better data collection, it would seem that some of the closing of the gap is due to improved coverage, particularly for Pacific children. Significant inequalities still remain for Maaori children. The trend in coverage over the past 14 years is illustrated in Figure 55.

Figure 55 Trends in immunisation coverage for CMDHB children aged 24 months in the previous 12 months, 1996 to 2008/2009



Source: North Health Serum Survey 1996/97, National Survey 2005, NIR 2008

CMDHB immunisation coverage at the 24 month milestone is compared with Auckland metro DHBs and the national rate in Table 15. Maaori coverage is less than the national average and the lowest in metro Auckland. Pacific rates are slightly less than the national average and are again the lowest in metro Auckland.

There are however significant differences in socioeconomic status for Maaori and Pacific peoples living in CMDHB, compared to Auckland District Health Board (ADHB) and Waitakere District Health Board (WDHB). Based on a health needs assessment undertaken for Maaori in Counties Manukau, 57% in CMDHB live in NZDep 9 and 10 areas whereas in ADHB and WDHB only 36% and 17% of Maaori respectively live in these same deprived areas (CMDHB internal work, 2008). The difference is similar for Pacific peoples with 73% in CMDHB living in NZDep 9 and 10 areas. This compares to 52% of Pacific people in ADHB and 30% of Pacific in WDHB (Wang, K, CMDHB internal work, 2010).

Table 15 Immunisation coverage at the 24 month milestone for Auckland metro DHBs and nationally, year ending 30 June 2009

DHB	Total Coverage (%)	Maaori Coverage (%)	Pacific Coverage (%)	Non-Maaori/non-Pacific Coverage (%)
Counties Manukau	78	69	79	83
Auckland	80	73	81	82
Waitemata	80	77	84	81
National	80	73	81	83

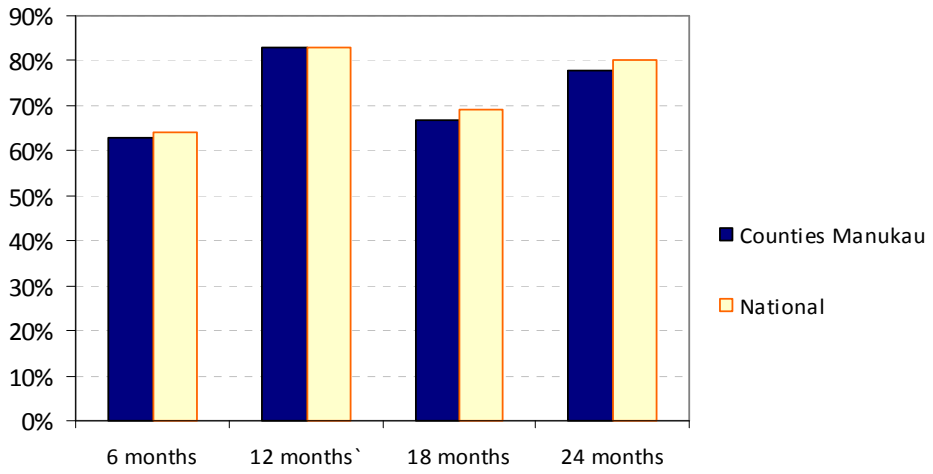
Source: NIR

An important issue for Counties Manukau aside from increasing coverage is achieving timeliness with immunisation. Achieving good disease control requires not just high coverage, but immunisation events to be delivered on time. Delay in receiving the first immunisation in the

primary series (i.e. the 6 week immunisation) is one of the strongest predictors of subsequent incomplete immunisation [69, 70]. Also a delay in timeliness affects disease control. For example a child with delayed immunisation in the primary course has a 4.5 times increased risk of being admitted to hospital with pertussis [68].

The CMDHB population tend to be late with immunisation. At the six month milestone, infants should have received their 6 week, 3 month and 5 month vaccinations to be considered fully immunised. Figure 56 illustrates that only 61% of CMDHB children are receiving these immunisations in a timely fashion. However at the 12 month milestone, coverage increases to 83% as parents have had a further six months for their infants to catch up late immunisations.

Figure 56 Immunisation coverage by milestone for CMDHB and New Zealand children for the year ending 30 June 2009



Source: NIR – all due immunisations to that point completed

The next immunisation scheduled is at 15 months. The reported coverage at the 18 month milestone indicates a degree of timeliness for the 15 month immunisation and a similar phenomenon occurs with CMDHB coverage falling to 67%, increasing again to 78% at the 24 month milestone. Coverage rates tend to be higher in general for Paakehaa and Asian children than Pacific and Maaori children for each milestone (see Figure 57, page 91). CMDHB is consistently below the national average at each milestone though non-Maaori/non-Pacific coverage is similar or better.

This timeliness issue is reflected nationally as illustrated in both Figure 56 and Figure 57. However it is more marked in Counties Manukau for some of the ethnic specific rates.

Whilst coverage rates have improved over time for all ethnic groups much work needs to be done to reduce the inequitable gap in immunisation for Maaori children in particular and work towards the 95% coverage target set by the Ministry of Health in order to prevent the recurrence of VPD in Counties Manukau.

5.3.3. Outreach Services

Outreach has been important part of the immunisation programme in CMDHB though is expensive to run. Up to 70% of children will get immunised with use of a precall and recall system and having an organised primary care practice [65]. The remainder however will require time to track and recall and outreach services are utilised for approximately 10% of the total number of children due for immunisation. In 2007 the outreach service had 2550 referrals. Of these 25% were immunised, 25% were 'Gone, No Address', 25% were non responders and the remainder had declined, were ill, or overseas (P, Sole, personal communication, 2010).

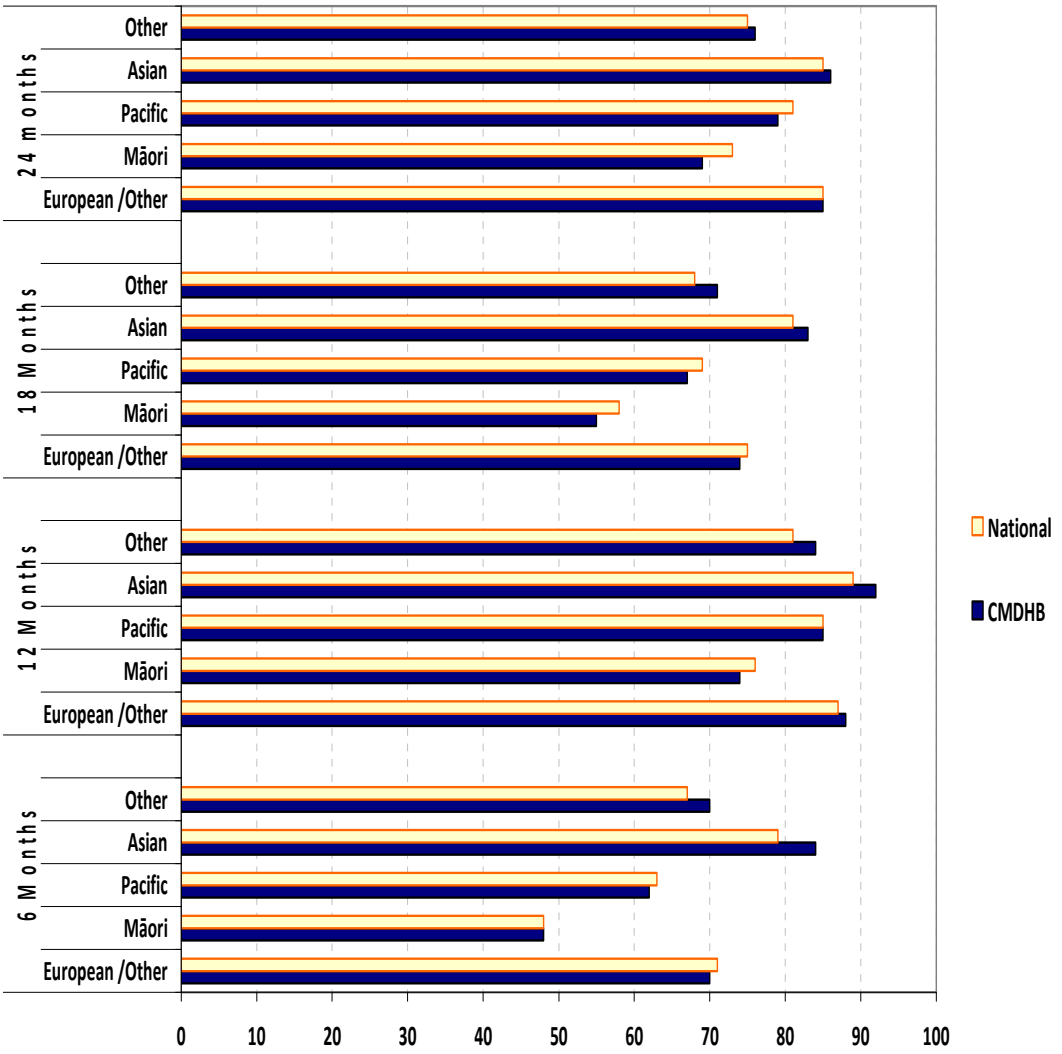
CMDHB has two Outreach providers. There are a large group of non-responders to precall and recall methods who are offered assistance by Outreach with transport or providing child care. Outreach services facilitate getting the child to the vaccinator; they do not currently provide the service themselves.

The families who are decliners have not necessarily made a decision to decline immunisation. They may wish to do so and may not wish to say so, but often are other life issues that make immunisation insignificant.

A considerable number of children referred to Outreach have moved out of the Counties Manukau area leaving no forwarding address. This becomes an issue for CMDHB immunisation statistics as these children remain in the denominator until they appear in another DHB, lowering overall coverage.

There is discussion about introducing a vaccinator to the Outreach service to provide more efficiency to the programme. This may be done by providing equipment and workforce to Outreach with PHOs allocating nurses to work with Outreach services to cold-call on all non-responders and offer immunisation then and there.

Figure 57 Immunisation coverage for children on the NIR by age and ethnicity, Counties Manukau vs. New Zealand, 12 months ending 30 June 2009



Source: NIR

5.3.4. Outpatient Clinic pilot

CMDHB trialled an immunisation pilot programme at Manukau Superclinic in 2007. A dedicated nurse was placed at the outpatients' clinic to opportunistically immunise children due or overdue for scheduled immunisations.

Unfortunately this was an expensive pilot with only 25% of eligible children receiving their immunisations. This is an equivalent level to the success of the outreach services. The programme has not been continued due to issues with cost efficiency.

5.3.5. Strategies to improve immunisation coverage in CMDHB

The major factors leading to incomplete immunisation are socioeconomic factors, provider and system factors and parental/community attitudinal factors [65].

International and local evidence suggests that primary care can achieve good immunisation uptake even in the face of socioeconomic deprivation [65, 66]. More than 70% of children will get immunised with the use an effective precall/recall system in primary care [65]. Unfortunately a recent audit of medical records in primary care revealed that 30% of children had missed opportunities for immunisation [71]. Similarly the 2005 national immunisation survey revealed significant knowledge gaps around false contraindications to immunisation [72].

There are a number of strategies under discussion nationally and in Counties Manukau that have been put forward to increase coverage in primary care. These strategies are based on international as well as local evidence:

- Education for midwives on the importance of immunisation in order to provide accurate information to pregnant women in order for them to make an informed choice.
- A clear enrolment policy from birth with a more robust handover system from the Lead Maternal Caregiver to primary care. Early enrolment helps increase the proportion of infants receiving a timely first immunisation.
- Accurate data entry into the PMS for all immunisation events. Unfortunately a significant number of errors occur when entering immunisation data at practice level. Training and a standardised approach to entering data with checks on accuracy through regular audit, and a focus on timeliness as well as coverage will improve this.
- Enthusiastic and committed staff – the use of champions and incentivising practice nurses and staff.
- Systematic precall and recall are important. Some successful strategies involve:
    - attractive, engaging precall and recall postcards or letters. CMDHB sends postcards to the families of all newborns in the district
    - early and systematic recall follow up, first recall within 2 wks of the due date
    - a broad recall approach – letters, phone, having a CHW call on family.
- Provide immunisations at all times, do not turn children away
    - all clinical staff available to immunise including GPs
    - extended opening hours
    - taking every opportunity
        - flags, electronic reminders on notes
        - high staff awareness with regular awareness raising

    - immunise children with mild illness.

- Providing funding to primary care that meets the cost of providing immunisations. Currently government fund primary care $18 per immunisation event whereas the true cost is calculated to be $25 [65, 73].
- Improve knowledge base. A knowledgeable, committed and confident provider with a good relationship with their parents is likely to overcome many parental myths and concerns [65, 71, 73, 74].
- Regular feedback of results to practice level has been shown to improve performance. This is currently unavailable through the NIR.

In addition to supporting these strategies CMDHB is considering other options to improve immunisation coverage in order to reach the Ministry of Health's target which is achieving 95% coverage of all children by 24 months of age by July 2012:

- Well Child/Outreach services offering vaccinations – PHOs and GPs to collaborate with these providers to offer this service
- Exploring the possibility of immunising opportunistically in Middlemore EC – awaiting results from a Waikato pilot
- Running a social marketing campaign in conjunction with the other Auckland DHBs
- Incentives to complete vaccination for families such as petrol vouchers
- Personalised family record on completion of immunisation.

5.3.6. A success story

The following story demonstrates how one PHO in the district has incorporated a number of these strategies to improve the immunisation rates for their population.

> We aim to build up a relationship with the mother in the last few months of pregnancy, to help encourage early engagement at the practice so baby gets their 6 week immunisation on time. We do not do precalls as CMDHB provides this after the discharge of every newborn baby in the district.
>
> We immunise up until half an hour of closing (11pm), 7 days a week. All nurses can immunise. In addition to this we opportunistically immunise. Alerts pop up on the PMS if an immunisation is due for anyone in the family that comes in to the practice. The receptionist will then remind the parent/care giver.
>
> Our Community Health Workers visiting patient's homes will check on the immunisation status of all children and facilitate getting this done for the family. We will send the CHW out to that family with a car seat to bring that family in.
>
> Similarly our discharge care coordinator phones all patients discharged from hospital within 24 hours and whilst doing that will check the family tree to see if any immunisations are due or late and remind the family.
>
> Primary Care nurse educator, medium PHO

5.4. Influenza immunisation

5.4.1. Introduction

Influenza continues to be a major threat to public health world wide because of the ability of the virus to spread rapidly through populations [72]. Epidemics of influenza typically occur during the winter months in New Zealand. Whilst influenza can affect all age groups the greatest burden is among children. People at increased risk of complications and death from influenza are those 65 years of age or older, and those with certain medical conditions [72, 75]. The complications of influenza in these people can be serious or life threatening.

Influenza vaccination is the primary method for preventing influenza and its complications. As a result, the Government funds the cost of influenza vaccines and their administration for people aged 65 and over and for all people with certain chronic conditions (outlined in Table 16).

Table 16 Eligibility criteria for funded influenza vaccination

A – All people over 65 years of age
B – People under 65 years of age, including children with: • Cardiovascular disease - IHD, CHF, Rheumatic heart disease, Congenital heart disease, Cerebrovascular disease • Chronic respiratory disease – asthma on regular preventive therapy, other chronic lung disease with impaired lung function • Diabetes • Chronic renal disease • Any cancer excluding non-invasive basal and squamous skin cancers • Other conditions – autoimmune disease, immune suppression, HIV, transplant recipients, neuromuscular and central nervous system diseases, haemoglobinopathies, children on long term aspirin

Influenza viruses can also cause pandemics, during which the rates of illness and mortality can rise dramatically and effect additional groups [72, 75].[31]

5.4.2. Methodology

The PHO Performance Programme started in 2005 and the proportion of 65 year and over receiving influenza vaccination is one of the key performance indicators.

The target denominator population is all people aged 65 years and over at the end of the influenza vaccination season (usually the 30 June). Also separately measured are people aged 65 years and over whom are considered high needs (identified as Maori, Pacific Island and/or living in NZDep 9 or 10). The target is to vaccinate more than 75%.

[31] In 2009 New Zealand experienced the "Swine flu" pandemic which increased the morbidity and mortality during the influenza season. This H1N1 influenza strain tended to create greater morbidity in younger people with pregnant women, obese people and young children under five most at risk. For the 2010 influenza season, the national influenza strategy has changed to ensure that people most at risk have the greatest access to influenza prevention, which includes vaccination with a pandemic monovalent (H1N1) influenza (Swine flu). Consequently the eligibility criterion for free immunisation has been extended for 2010 only to include: pregnant women; morbidly obese individuals; and all children aged from 6 months to their fifth birthday.

Claims for giving the vaccination are sent by practices to the Ministry of Health/DHBNZ as a record of the vaccination. DHBNZ then produce the proportion of eligible people who are covered for the practices and PHO overall. The numerator comes from the number of those eligible vaccinated as documented by claims sent in by the practices. The denominator is the number of those eligible within the DHB based on PHO registers. Decliners are not removed from the denominator so populations with large numbers declining may score poorly. Often there is a data lag due to late claiming by practices.

5.4.3. Trends in influenza vaccination coverage

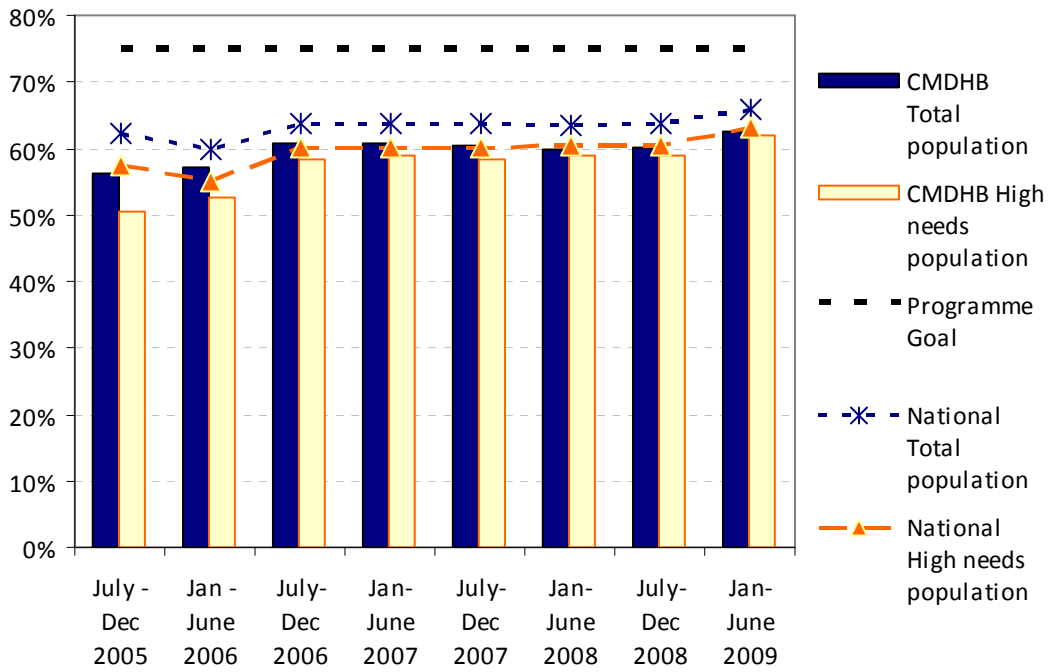
Coverage data prior to 2005 comes from multiple sources. Coverage from 1999 to 2001 is provided from a report provided by CBG, 2002/2003 from estimates provided by CMDHB primary care liaison and 2004 from NDSA. Methodology utilised for all of these estimates was not available.

Coverage estimates from these various sources have been incorporated into Table 17 along with the October to December PPP coverage figures for 2006 to 2009. There is variance in these particular tabulated results from the six monthly reported PPP data from July 2005 to June 2009 illustrated in Figure 58.

Table 17 Influenza vaccination coverage for > 65 year olds in CMDHB, 1999 to 2009

1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
45%	46%	46%	51%	54%	56%	55%	53%	59%	59%	62.64%

Figure 58 CMDHB and national influenza vaccination coverage for 65+ year olds, total and high needs



Source: PPP data from DHBNZ

Based on the PPP data, Counties Manukau PHOs started off with a total of 56.3% of the total 65 years and older population receiving influenza vaccinations by the end of 2005. This has increased by 11% to 62.6% for the six months ending 30 June 2009. The high needs vaccination coverage was

50.7% in 2005 and has increased by 22% and is now 62%. CMDHB PHOs are achieving greater equity in coverage as well as achieving coverage closer to the national average [32]

As mentioned in the methodology, coverage is based on claims sent. Often there is some lag with the collection of vaccination data as it is based on claiming so actual coverage in the district may be slightly better.

5.5. Summary

- Prevention is an important part of primary care and key in helping decrease inequalities in health outcomes for the Counties Manukau population.
- Cervical screening rates have improved over this time frame: increasing to 62% overall; 65% for non-Maaori/non-Pacific; 51% for Maaori; and 58% for Pacific women. The gap between Maaori and Pacific women and non-Maaori/non-Pacific women has closed by 22% for Pacific and 12% for Maaori women. Social marketing, opportunistic screening, extended hours, free cervical smears for high needs women and good IT systems to provide a reminder at practice level have proven useful.
- Breast screening has improved in Counties Manukau as the capacity of the local programme has increased between 2005 and 2009. At the end of 2009 48.6% of women between the ages of 45-69 years had had an up-to-date mammogram with coverage of 40.6% for Maaori, 43.6% Pacific and 50% non Maaori/non-Pacific women. Disparities still exist though the gap has started to close for Pacific women, now only 13% less likely than non-Maaori/non-Pacific to be screened. Areas that have been highlighted to help coverage are the development of a population register, making it easier for women to self-enrol, electronic messaging to remind practices of due dates and the continuation of the use of the mobile screening unit in key areas along with utilisation of CHWs.
- Immunisation has improved markedly in the CMDHB district though data collection has been fraught with issues. At the end of 2009 the total immunisation coverage for the 24month milestone was 78% overall with 69% and 79% achieved for Maaori and Pacific children respectively. Like the rest of New Zealand, Counties Manukau has an issue with the timeliness of immunisation and this tends to be more of an issue for Maaori and Pacific children. Accurate information about immunisation needs to be provided in the antenatal period, as does early enrolment with a primary care provider in order to increase the chance of immunising on time. Extended hours and opportunistic immunisation also provide a great chance to increase coverage.
- Influenza vaccination coverage for those aged 65 years and older has increased since 2005, particularly in 2009 with the “Swine flu” epidemic. The high needs population coverage is encouragingly close to the total population.

[32] There was a significant improvement over the last 6 months between January and June 2009. This is possibly due to the impact of H1N1 Flu (“Swine flu”) and the extended vaccination season. Given the attention given to the H1N1 last year, it is expected that there will a higher uptake of vaccination in 2010 especially given the broadening of eligibility for free vaccines by government.

Chapter 6. Health Promotion in Primary Care

This section focuses on health promotion in primary care that originated from new funding provided by the Strategy. There are many other health promotion initiatives in the district that are important. However these are outside the scope of this report.

Health promotion was seen as a fundamental aspect of the Strategy as PHOs were given the mandate and some funding to provide appropriate interventions for their enrolled population. *A Guide to Developing Health Promotion Programmes in Primary Health Care Settings* written by the Ministry of Health suggested that PHO health promotion programmes should:

- utilise the principles of health promotion practice using a recognised health promotion planning approach such as the Ottawa Charter
- provide Maaori health gain and involve whaanau and the community
- involve Maaori and Pacific communities in the decision-making, planning, development and delivery of health promotion programmes in PHC settings
- positively influence the social determinants of health and strengthen protective factors, reduce risk factors and reduce health inequalities
- collaborate with existing health promotion providers to build on existing programmes and services
- align with local, regional and national strategic goals and priorities
- ensure the quality and evaluation of health promotion services [76].

In the Auckland region these principles were reinforced in regional *Health Promotion in PHO* guidelines developed by the Auckland Regional Public Health Service and other key stakeholders in 2005 [77].

PHO health promotion funding is calculated based on $2.02 per enrolee with different multipliers for differing groups of need: Maaori/Pacific 1.2; high needs Maaori/Pacific 1.4; non-Maaori/non-Pacific 1.0; and high needs non-Maaori/non-Pacific 1.2. The areas of primary focus for the Ministry of Health when this funding was introduced included:

- oral health
- smoking
- healthy eating and healthy activity.

However the understanding of what health promotion entailed and how it related to GPs and practice nurses in a primary care setting underwent much debate in the early years of PHO formation with discussions over the type of activities this pool of money should fund. Health promotion in general practice has been described as “lifestyle advice/education” by the RNZCGP [78]. The focus is on clinical preventive activity such as promoting screening, immunisations and health education for the individual. In contrast health promotion is defined by the World Health Organization as “enabling people to increase control over, and improve their health and determinants of health by the process of empowerment”. This is embodied in the Ottawa Charter for Health Promotion [79]. The Ottawa Charter aims for health promoters to work with communities to enable, advocate and mediate in order to:

- achieve healthy public policy
- create supportive environments

- strengthen community action
- develop personal skills
- reorient health services.

A health promoter works as a facilitator in this process to assist their clients, usually communities or populations, in gaining increased power over their lives and utilises a number of strategies to achieve this including communication, capacity building and politically oriented approaches [80].

To help PHOs plan appropriate health promotion activity the guidelines developed for the Auckland region are helpful. These focus on a spectrum of health-promoting population health activities which highlight that a variety of integrated approaches are important in achieving positive health outcomes for both the individual and the wider community [77]. These are illustrated in Table 18. Individual primary care by the GP/practice nurse is towards the left of the spectrum and is a complement to the shaded areas which are activities seen as appropriate for PHO funded health promotion.

Table 18 The range of potential activities which could be adopted by PHOs to address population issues [77]

Individual focus ⟵ ⟶ Population Focus

Screening, individual risk assessment, immunisation	Health information	Health education, counselling, and skill development	Social Marketing	Organisational development	Settings and supportive environments	Community action	Economic and regulatory activities
	(person to person communication about health, illness, health services and supports available)	(delivered to individuals or groups, aims to improve knowledge, attitudes, and individual capacity to change)	(persuasive programmes designed to influence the voluntary behaviour of the audience, and/or raise awareness about a health issue, often using media in various forms)	(building the capacity of the PHO to be a health promoting organisation,[II] includes practice systems, workforce development and strategic allocation of resources to support health promotion)	(aims to improve local living and working conditions so they are more conducive to health)	(working with a community to achieve health outcomes for specific health issues, e.g. diabetes)	(policy and systems support for promoting health, including financial and legislative incentives or disincentives)

Source: Winnard, 2006 adapted from the MOH and Department of Human Services, Victoria State Government

Health education efforts in the general practice environment can be ineffective if patients are living in challenging circumstances of socioeconomic deprivation, making healthy choices more difficult to make. Therefore the PHO health promoter plays an important part in facilitating better connections with the community, building community capacity, influencing social and physical environments, and empowering these patients in order to help them achieve healthy lifestyle changes. Many NGOs (non-government organisations) are also seeking ways to strengthen their relationships with primary care, and health promotion resources in a PHO have the capacity to help facilitate this.

6.1.1. Examples of health promotion in PHOs in CMDHB

A recent stock take of health promotion and health education initiatives in Counties Manukau, which included PHO programmes, divided programmes into a number of areas: tobacco control; nutritional services and physical activity; long-term conditions; specific disease prevention/health promotion; and antenatal/postnatal/ well child initiatives. The report also looked at how specific programmes

addressed the principles of the Ottawa Charter with a focus on community development, creating supportive environments, organisational development and reorientation of health services.

Table 19 A selection of health promotion initiatives in CMDHB PHOs

Name of initiative	Purpose	Goal	Eligibility
Tobacco initiatives			
Otara Smokefree initiatives	To offer brief, opportunistic advice & NRT to all clients of OHI services and to establish & sustain a smokefree Otara Town Centre	To reduce the harm caused by tobacco for Otara people	All clients of OHI services are offered brief advice (A, B and NRT) and NRT through a standardised assessment process. Local community organisations have also been trained by OHI to deliver the smokefree messages in designated smokefree areas in the Otara Town Centre
Nutritional Services/Physical activity			
Healthy Eating Active Lifestyles (HEALs)	To reduce obesity and CVD by improving nutrition and encouraging physical activity	1/ Increase number of people achieving 30 minutes of exercise a day , 5 days a week 2/ Increase awareness about healthy eating	People with identified risk factors for CVD or diabetes
Getting Started - Otara	To increase levels of physical activity for inactive adults. Weight management for obese and overweight people	1/ To increase levels of physical activity for inactive adults. 2/ To increase the level of community action and capacity to increase levels of physical activity & support healthy food choices & increase physical activity	Inactive people over 18 years of age referred by a health professional or community health worker. Focus on Maori and Pacific. Adults who are allocated to two groups: BMI range of 43-60 and BMI range of 27-42.9. This is the target group, with a focus on high needs.
Walking School bus	To establish walking school buses in the local area in conjunction with the Auckland regional transport authority (ARTA)	For young people to be physically active	Children attending schools where buses have been established
Active Families - Manurewa, Mangere, Otara	To increase physical activity levels and improve healthy eating habits for children who are inactive and their families.	1/ To increase PA levels for children who are inactive by involving the family in fun activities 2/ To address obesity indicators for children including: decreased screen time; decreased take away fast foods; family meal times; packed lunches; increase physical activity	Inactive children aged 8-12 years referred by health professional or school or social agency. Focus on Maori and Pacific.
Environment			
Healthy Kai - Otara and Mangere	To increase the availability of healthy ready to eat food choices in the Mangere and Otara Town Centres.	1/ To maintain and extend the number of retailers actively involved in the programme. 2/ To increase the number of healthy food options available in the Mangere and Otara Town Centre 3/ Promote Mangere and Otara Healthy Kai within the community	Shoppers in the Mangere and Otara Town Centres
Community garden	To encourage people to eat healthy food	To enable people to grow their own vegetables and increase exercise	All Mangere residents

Many PHO health promotion initiatives have a number of funding streams including the dedicated PHO health promotion funding, SIA funding and additional contracts from CMDHB and the Ministry of Health. Table 19 provides an overview of a selection of health promotion programmes in CMDHB which involve PHOs.

6.1.2. Case study of a health-promoting organisation in CMDHB

Otara Health Inc (OHI) is a grass roots community owned and governed multicultural NGO established twelve years ago with the aim to "create good health for our (Otara) communities". Through community governance the organisation is able to identify gaps and need in the community via the community leaders on its board and respond to this via advocacy with other agencies or the creation of community programmes. OHI is a partner with East Tamaki Health Care in the Total Healthcare Otara (THO) PHO. Through this partnership, OHI is contracted to provide health-promoting activities for enrolees using the PHO health promotion funding available. TOHI are also able to obtain/maintain contracts with other agencies such as the Ministry of Health, Manukau City Council, CMDHB and Procare Manukau Network.

Along with its contracts with other agencies, its relationship with East Tamaki Healthcare has enabled the organisation to grow in capacity and better meet the needs of their community.

One of the Ministry of Health's aims with health promotion was for PHOs to align with other health promoting providers in the community. It was suggested during an interview that there is still much improvement needed in this area if one wants to provide multidisciplinary preventive care to optimise the populations' health outcomes. As mentioned previously some PHOs were unaware of how to focus on health promotion per se, and integrating with an NGO would offer this link.

The following text box illustrates a highly successful health promoting initiative undertaken by OHI – a nine month oral health promotion pilot. This outlines some of the strategies utilised to improve the oral health of children in Otara and Papatoetoe.[33]

[33] The Otara Maaori Forum are now developing a plan for Maaori diabetes prevention using similar concepts and principles utilised in the oral health pilot.

Tamariki Hauora Niho o Otara

A nine month oral health promotion pilot was undertaken by OHI from May 2008 to January 2009 focusing on Maaori tamariki oral health. The pilot involved 11 koohunga reo and 10 early childhood centres in Otara and Papatoetoe. All received oral health promotion and the pilot has now been extended for a further 6 months.

There were four important aspects to the success of this pilot:

- Recruiting and training local community – this builds capacity and enables sustainability of the programme with community connections allowing for wider engagement
- Cultural competence
- Professional training and supervision whilst carrying out programme to ensure ongoing competency and quality
- Formation of partnerships with clinical services.

Two years ago, OHI liaised with the Otara Maaori Forum to discuss their collective concerns over poor oral health in tamariki in the area. OHI through its facilitation and project management role became a vehicle for this group to put its goals and objectives into action. Three kuia with connections to koohunga were trained in oral health by OHI health promoters and delivered the programme to the koohunga and childhood centres under supervision. They were also able to identify whaanau not connected to the koohunga or early childhood centres and deliver the programme in the home as well as promoting oral health to local community organisations. In addition they developed a "train the trainer" programme, training koohunga staff to continue to deliver the oral health once the kuia left the centre. This focused on brushing and nutrition with each programme tailored to fit in with the tikanga of the koohunga. This enables the programme to be sustainable.

In addition an important partnership was formed with the clinical provider, the Auckland Regional Dental Service (ARDS). This allowed the use of the mobile bus to provide screening of the children and as importantly, the collection of data that enabled evaluation of the pilot as well as providing a safety net by collecting Did Not Attends (DNAs) to the clinics, allowing further follow up by community health workers. Data collected included attendances for treatment pre and post pilot for Otara/Papatoetoe tamariki, pre and post plaque scores and intervention surveys.

Fifty community organisations in Otara and 55 whaanau homes were visited to promote oral health. Over 84% of parents/caregivers showed an improvement in their oral health knowledge, 57% increased their knowledge in nutrition and 79% increased their knowledge on the importance of dental clinic attendance. Overall the DNA rate for treatment at the ARDS fell for children in the Otara/Papatoetoe area as well as reductions in pre and post plaque scores and intervention rates. In addition data on DNAs at school dental clinics is now collected allowing a CHW to follow up the child and ensure treatment has taken place. Previously this information was not recorded.

The programme has been so successful that the CMDHB is interested to see if the strategies and learning's from this extended pilot can be worked into a RFP process and rolled out to the entire district. This is a great example of the use of health promotion principles utilised in a PHO setting with the creation of supportive environments, strengthening community action, facilitating the development of personal skills and by reorienting health services to fit community need.

6.1.2.1. Case study of the Health-Promoting Practices initiative

Procare's health promotion team has been working to develop a quality framework to help primary care to more effectively deliver prevention and health promotion to their enrolled populations. This provides an opportunity to provide a better quality service in primary care which can reduce health inequalities in the practice, better manage the social determinants of health and subsequently provide better links to community support systems.

A toolkit has been developed for this quality framework and has been piloted in some Procare practices including practices in the CMDHB area. It moves the practice through six levels starting from level one which involves developing the practice-patient relationship to level six where the practice becomes involved in local and national policy. Level one and two are often readily achievable if the practice has completed the RNZCGP Cornerstone accreditation programme.[34]

Table 20 Health-Promoting Practice Framework

Individual/family ⟷ Community/population

Level One Practice/ patient relationship	Level Two Cornerstone Standards	Level Three The practice as role models	Level Four Social Marketing	Level Five Community Action	Level Six Involvement in local/national policy
Health Information, education, counselling, skill development	Cornerstone Standards	Organisation development, the practice as a workplace	Health Education campaigns Social marketing in the practice setting	Community action and linkages	Public policy
Verbal advice, Self management Inequalities Social determinants of health	Indicator Group 6 Indicator Group 7 Indicator Group 8	Walk the talk Practice challenges, nutrition policies, smoke free, Workforce development	Support national advertising, Pacific/Maori radio and media, Health TV	Collaborate on health plan for the community, Community links and relationships, Outreach clinics	Involvement in local policy eg. gambling venues, tobacco, food environment

Source: Procare PHO

To start at level one every practice needs a health-promoting champion to drive the framework and to link with the PHO health promotion advisor at Procare. Evidence based resources are supplied along with a health-promoting calendar so practices can identify when to promote certain activities. For example October is breast cancer awareness month. An increased awareness of the patient's social determinants of health is encouraged as is linking them to appropriate health and intersectoral agencies such as referrals to smoking cessation and social services.

Level two relates mostly to areas which are Cornerstone accreditation indicators. Practices are required to identify their high risk populations, review screening coverage and smoking

[34] The Cornerstone accreditation process was introduced by the RNZCGP. It requires general practices to review themselves against a set of quality indicators established by a multidisciplinary group and undergo external validation. See Models of Care chapter for further detail.

interventions. Disease prevention and health promotion is then targeted to high risk patients. Level three involves building the practice into a health-promoting environment through initiatives such as social marketing displays, smoke free signage and introducing the Push Play Practice Challenge.

Level four involves the practice supporting national social marketing campaigns especially for the 13 New Zealand health priorities and this is assisted through the use of the health promotion calendar supplied. Linking to the local community is level five and involves forming relationships with and working with local organisations and NGOs to provide links for patients into their community. Finally Level six is for the practice to become involved in local or national level policy such as attending council meetings and advocating for positive changes to policy that will impact on the health of the community such as supporting the ban on tobacco display units.

The pilots have been received positively however challenges do remain. Shifting individuals and the practice teams' mindset from individual care to adopting a preventive and population based approach is difficult and can feel overwhelming for many. There is also a large time commitment required to work through this framework which can be a barrier given the many other priority areas in general practice.

6.1.3. Health promotion collaboration between PHOs and CMDHB

In CMDHB there is a PHO Health Promotion working group where all parties from PHOs and the DHB come together to form a collaborative district plan. This has allowed for the building of relationships and enabled health promoters to work more effectively with each other and primary care providers. However it was noted during interviews for this report that there is a need for an improved locality approach to plan and deliver services in order to get maximum efficiency and effectiveness gains. This has been recognised as an issue for primary care. The recent GAIHN EOI business proposal aims to develop locality networks over greater Auckland in order to help achieve better planning and delivery of services.

6.2. Summary

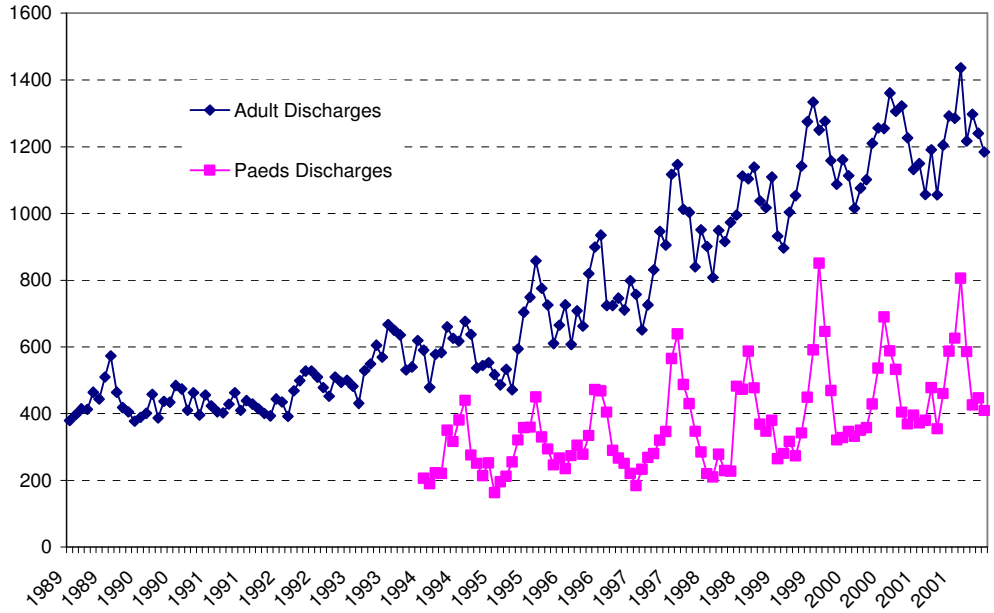
- The PHO health promoter plays a key role in facilitating better connections with the community, building community capacity, influencing social and physical environments, and empowering these patients in order to help them achieve healthy lifestyle changes.
- One of the Ministry of Health's aims with health promotion was for PHOs to align with other health promoting providers in the community. It was suggested that whilst progress has been made, there is still improvement needed in the provision of multidisciplinary preventive care to optimise the health of the population.
- There are a number of successful health-promoting initiatives being run in CMDHB PHOs such as the Otara Health Inc Maaori oral health pilot for tamariki.
- Procare's health promotion team has been working to develop a quality framework to help primary care to more effectively deliver prevention and health promotion to their enrolled populations. This provides an opportunity to provide a better quality service in primary care which can reduce health inequalities in the practice, better manage the social determinants of health and subsequently provide better links to community support systems.

Chapter 7. Reducing Acute Demand – Primary Options for Acute Care and Long-Term Conditions Management

7.1. Introduction

From the 1990s Middlemore Hospital faced significant growth in the number of acute medical admissions. The population of Counties Manukau was growing faster than the national average with increases particularly in the number of Maaori and Pacific peoples.

Figure 59 Increases in acute demand based on adult and paediatric medical discharges from Middlemore Hospital, 1989 to 2001



Source: CMDHB Decision Support

Along with this rapid growth, the population was ageing and a significant proportion of people were living in deprivation in Counties Manukau which has a negative impact on virtually every chronic health condition. Chronic and long-term conditions were contributing significantly to the health inequalities experienced by Maaori and Pacific peoples and had become the largest health burden on CMDHB's population.

In 1999 the DHB identified that the majority of the increased admissions to Middlemore hospital were avoidable admissions which would be sensitive to timely primary care intervention (G Jackson, internal work, 1998-99). The most significant contributors to acute demand were cardiovascular disease (CVD), congestive heart failure (CHF), diabetes and respiratory conditions such as chronic obstructive pulmonary disease (COPD).

Therefore it was important for CMDHB to develop programmes that reduced this burden of chronic disease as well as reducing growing acute demand. This led to the development and piloting of the Chronic Care Management (CCM) programme in CMDHB in 2000 and 2001. This pilot was deemed to be a success by an evaluation that was undertaken of the programme [81]. Key points from the evaluation are outlined below.

- The pilot targeted high risk patients

- The programme provided an organised set of cost effective interventions for chronic care based on internationally accepted best practice and incorporated this into a system that was linked to a data warehouse that provided automatic flags, reminders and recalls
- There was a predicted positive return on investment (ROI). For every $1 spent on the programme, there was a ROI of $1.70 with variations on this amount dependent on the particular module. CHF gave the lowest ROI at $1.49, COPD the highest at $3.63.

CCM was introduced as a permanent programme into the Counties Manukau district in 2001. Currently there are five CCM modules for the management of diabetes, COPD, CVD, CHF and most recently depression.

Along with the locally developed and locally funded CCM, the Ministry of Health introduced two additional long-term condition programmes:

- The Get Checked diabetes programme was launched in June 2000 to help people diagnosed with diabetes to better manage their disease (and reduce the risk of complications) by providing them with a free annual review from their medical practitioner.
- Care Plus was introduced in 2004 and provides additional funding to PHOs for people with a chronic condition. This funding was provided to PHOs for patients requiring more frequent visits to general practice because of a long-term condition such as diabetes or an acute medical or mental health need, or a terminal illness. Overall funding allows for five percent of the New Zealand population to be Care Plus patients.
    - The number of eligible Care Plus patients in each PHO varies according to age, gender, ethnicity and socioeconomic status of the enrolled population of the PHO, and the number of the PHO's patients that hold a High User Health Card (HUHC). Funding is based on the number of eligible Care Plus patients less the actual number of HUHC patients.
    - The level of funding for Care Plus services that a PHO receives increases as the PHO enrols more Care Plus patients.

PHOs in CMDHB currently have both CCM and Care Plus funding for the management of long-term conditions in Counties Manukau, along with the Get Checked funding stream for diabetes.[35] There are a variety of ways in which these funding streams are utilised by the different PHOs.

Aside from chronic disease and long-term conditions, it was also identified that there were a number of other ambulatory sensitive hospitalisations in Middlemore that could be more cost effectively managed in primary care if financial and functional access could be improved. For example, in many instances treating cellulitis in primary care with IV antibiotics would be appropriate. The introduction of guidelines and pathways with an increased focus on quality improvement, along with a desire to reduce acute demand, led to the introduction of Primary Care Options for Acute Care or POAC in 2001. Cellultis, DVTs, gastroenteritis and respiratory infections are typical examples of ambulatory sensitive conditions that are targeted by POAC.

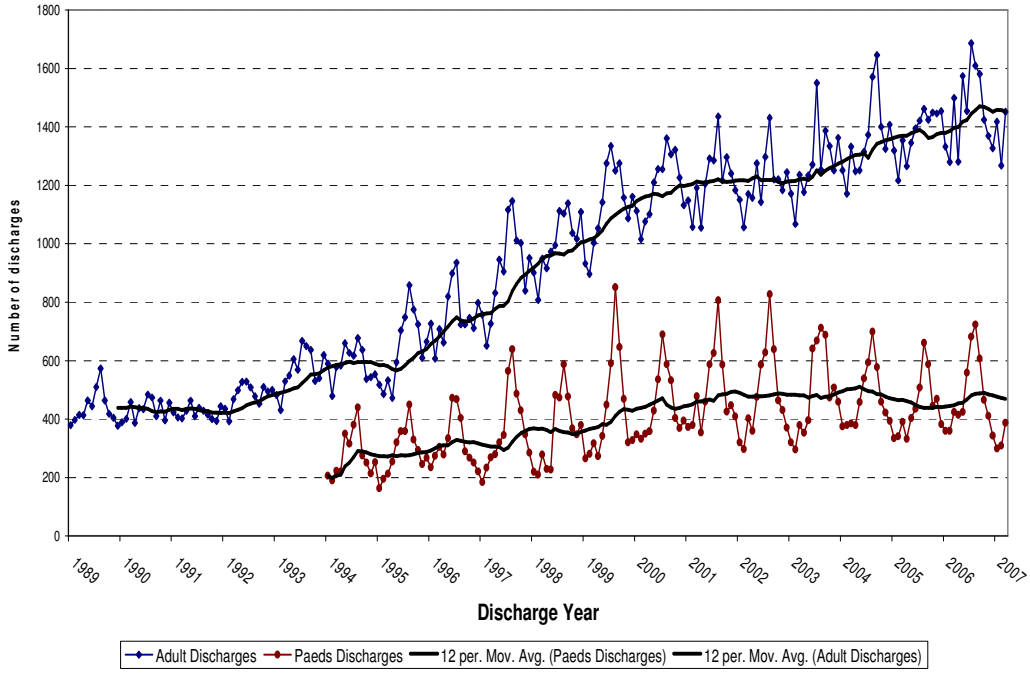
Between 2001 and 2007 there was a slowing of acute demand with close to a zero% growth rate in adult acute medical admissions on the background of a 3% increase in population growth plus

[35] CCM patients are automatically funded as Care Plus patients, with the CCM funding topping up the Care Plus payment from the MOH. This is done to maximise the available funds for CCM. The CCM programme provides free visits to primary care whereas the Care Plus funding is only required to reduce the copayment. In addition CCM diabetes patient's first visit in the financial year is considered their Get Checked annual visit and data from this is incorporated into this national programme.

ageing. This is reflected in the EC attendance rates detailed in Chapter 4. They show a stabilisation in growth between 2001 and 2007. It is hypothesised that both the CCM and POAC programmes along with reductions in copayments at primary care have contributed to this.

However between 2008 and 2009 there has been an 8% growth in acute adult medical admissions which is 5% above expectations based on population growth (D Wilson, internal CMDHB work, 2010). ASH rates and EC rates have also trended up overall since 2007.

Figure 60 Growth in acute demand for medicine (based on number of discharges for adults and children) at Middlemore Hospital, 1989 to 2007



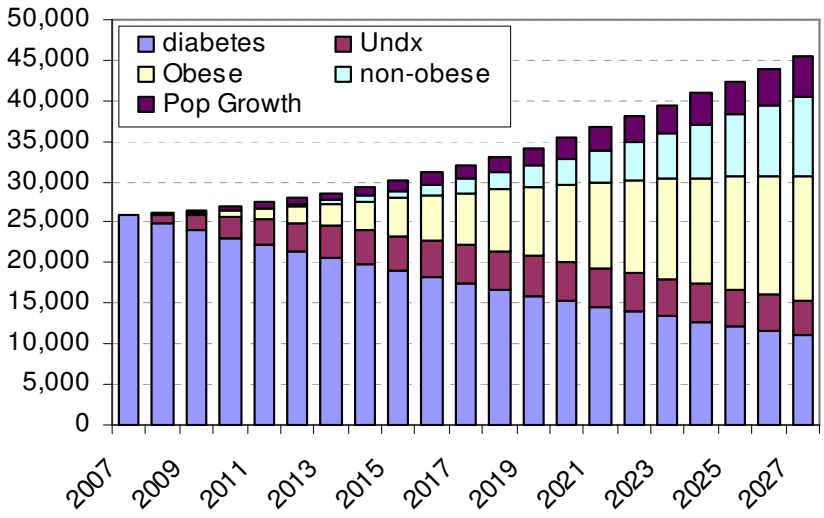
Source: CMDHB Decision Support

In addition the Counties Manukau population is expected to grow by more than 50% over the next 20 years, with a staggering 170% increase in those aged over 65 years of age. This is likely to further increase acute demand and the burden of chronic disease. A growth in risk factors, such as obesity, is also expected, with BMI projected to be increasing at 4.2% per annum. Figure 61 overleaf illustrates this growth in risk factors, by modelling the large increase in obesity and diabetes expected in 2027 in CMDHB.

The estimated burden in 2027 is shown by their characteristics in 2007. For example the 'obese' cohort are those with a BMI>30 in 2007, but are not yet diabetic. With this comes complications such as renal failure which is estimated to increase by 10% per annum.

Therefore it is important that programmes such as CCM and POAC become as efficacious and cost efficient as possible in reducing acute demand and having a positive impact on health. The following two sections will review these programmes in detail.

Figure 61 Modelling of predicted increase in diabetes in CMDHB from 2007 to 2027 based on expected population growth, rise in obesity and current cohort of diabetics



Source: G Jackson, K Wang, CMDHB diabetes modelling 2009

7.2. Primary Options for Acute Care (POAC) to reduce acute demand

7.2.1. Introduction

Primary Options for Acute Care was established in Counties Manukau in 2001 with the purpose of allowing GPs to access funds to allow investigations, levels of care and treatment not generally available or affordable to the patient in primary care. General practice can spend up to $300 per patient for each acute episode to obtain investigations or care in the primary care setting rather than admitting them to hospital thus reducing acute demand.

7.2.2. Services provided by POAC

A wide range of services are provided as shown in Table 21. The most common services are further GP evaluation, nurse follow up or observation, IV administration, chest x-rays and ultrasounds.

Table 21 Services provided by POAC in CMDHB

Therapeutic	
• **Medical** ○ IV antibiotics/fluids ○ Nebulisation ○ Observation ○ Review	• **Social** ○ Dinner, Bed and Breakfast ○ Personal care and Home help ○ Early discharge scheme
Investigative	
• **Laboratory** ○ Troponin ○ D-dimer	• **Radiology** ○ X-ray ○ Ultrasound ○ Doppler
Logistical	
• Transport	• Service Coordination

Table 22 POAC Diagnostic Categories for the year ending 30 June 2009

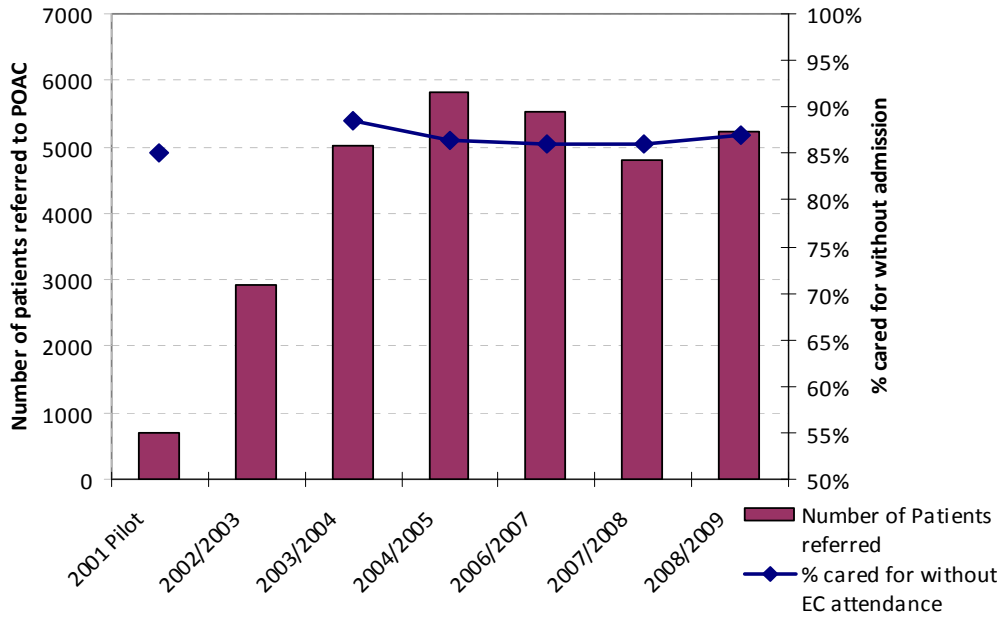
Condition	**Percentage of POAC referrals (%)**
Cellulitis	36%
Respiratory	16%
DVT	9%
Other	6%
Dehydration	5%
Abdominal Pain	4%
Gastroenteritis	2%
Asthma	2%
Total Referrals	5243

The most common reasons for use of POAC are treatment of cellulitis, suspected pneumonia, suspected DVT and dehydration. Cellulitis referrals have increased markedly from 18% to 36% of total referrals since the introduction of POAC (see Table 22). The proportion of other types of referrals has stayed fairly consistent.

7.2.3. Trends in POAC use in CMDHB from 2001 to 2009

Referrals to POAC have grown markedly since it was piloted in 2001, growing from 700 to 5,200 in 2009.[36] For the year ending 30 June 2009, 5,243 patients were referred to POAC with 87% avoiding an EC attendance. The proportion of patients avoiding EC has remained consistently around this figure since POAC was introduced. The average cost per patient in 2009 was $207 excluding GST and the management fee.

Figure 62 Number of patients referred to POAC and % not attending EC, for FY 2001 to 2009



Source: CMDHB Primary Health Care Team

Approximately 15-18% of POAC referrals have been for Maaori patients over this time, with slightly more referrals for Pacific people (22-25%). This is proportional to the CMDHB population demography but does not necessarily reflect the proportion one would expect to meet the increased level of health need in these two groups.

7.2.4. Clinical governance

Clinical governance processes were established to ensure that the programme is used appropriately and safely. POAC claims go the programmes coordinator to ensure they meet the comprehensive set of guidelines for conditions appropriate for the programme. For example there are written clinical pathways for managing a DVT or kidney stone in primary care under the POAC programme.

There are two key questions that must be answered to ensure the appropriateness of the referral:

- would the patient have otherwise been admitted to EC without POAC?
- was the case managed for less than $300?

[36] For the year 1 July 2009 to 28 February 2010, referrals to POAC have increased by 18%

The clinical director reviews any claims falling into a grey area and claims that need further discussion go to the governance board. Procedures have been developed for managing any irregular claiming which ultimately results in the provider having restricted access to POAC services for a period of time and closer oversight of its use.

7.2.5. Audit/evaluation of POAC in CMDHB

POAC has been evaluated twice since its conception in CMDHB – after the pilot in 2002 and again in 2007.

- The 2001 evaluation of the effectiveness of the pilot programme found that POAC was successful in avoiding an EC assessment [82]. The major objective for this evaluation was to determine if the claimed avoided admissions really were avoided admissions. Four independent clinicians reviewed the referral letters and over 90% of the referrals were reported to be truly avoided EC admissions. In addition patient satisfaction was considered important for the sustainability of the programme and was evaluated using qualitative methods which demonstrated high levels of approval of the POAC service, particularly from Maaori users.
- The audit in 2007 aimed to review clinical oversight procedures, and ascertain whether they are effective. This involved qualitative interviews with programme staff, review of programme processes and examples of how they had been used. A random audit of 150 referrals by 5 reviewers was also undertaken to ascertain whether EC attendances and hospital admissions had been avoided [83].

Both evaluations found that for the majority of situations POAC is being well utilised to avoid EC assessments [82, 83]. On the other hand POAC is less effective in actually preventing overnight EC admissions. For example POAC is usually very successful in avoiding EC admissions for conditions that only require assessment such as a patient with an uncomplicated DVT. However POAC is less successful for conditions that often require overnight assessment such as the diagnosis and treatment of chest pain.

Clinical governance processes were considered reasonably sound with inappropriate use of POAC being identified and addressed. However no random audit of referrals was undertaken by the Clinical Director, only reviewing of cases referred by the nurse coordinator [83].

The 2008 evaluation made the following recommendations to the POAC programme:

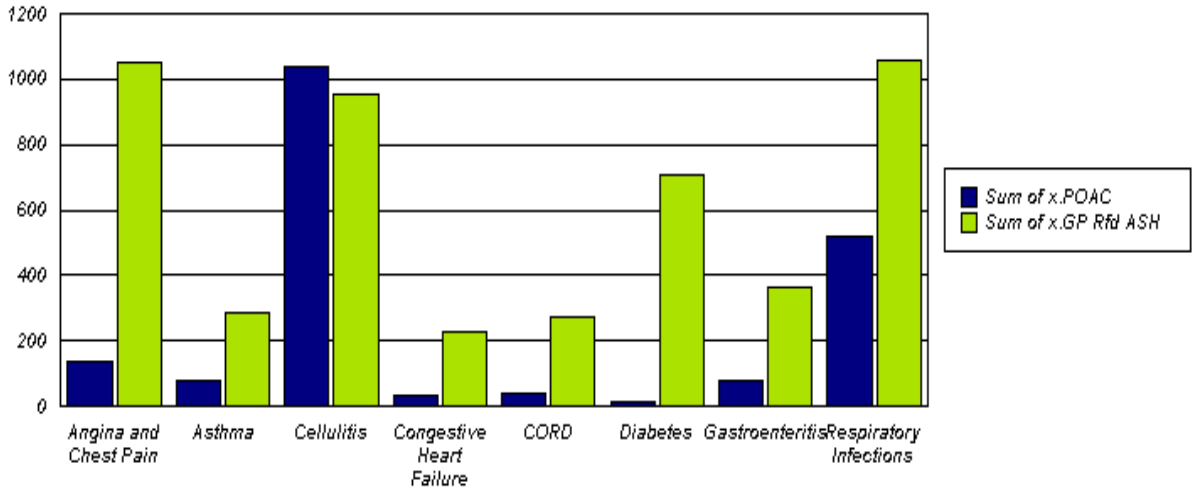
- Improving guidelines for common conditions such as cellulitis, pneumonia, dehydration and appropriate use of imaging in DVTs as well as the development of guidelines for physiologically unstable vital signs to guide referral to EC instead of POAC. These guidelines should be implemented initially in practices that utilise POAC the most.
- That the level of clinical information required on POAC referrals is extended to include clinical history, regular medications, results of investigations ordered under POAC and case notes from previous consultations for the same illness prior to enrolling in POAC. This will facilitate the assessment of the appropriateness of referrals.
- That the Clinical Director reviews a random selection of POAC cases with the nurse coordinator as a form of audit and follow up those deemed to be inappropriate.
- That variation of practice is addressed in the way POAC is used by providers [83].

7.2.6. Where to from now for CMDHB POAC

CMDHB has taken on board many of the recommendations by the evaluation. Random audits of referrals are undertaken along with increasing the DHB interaction with providers.

CMDHB is currently working on linking primary care data at a practice level with hospital data. For example Figure 63 refers to practice specific GP-referred ASH rates and POAC utilisation rates for different conditions. This allows the identification of practices that over or under-utilise POAC or GP referred ASH so more consistent and effective use of these services can occur throughout CMDHB.

Figure 63 GP referrals to EC and POAC of all PHO enrolled patients, 2008



Source: CMDHB Decision Support

This analysis at practice level also allows for a targeted approach to improve POAC use for high needs groups. Currently there are strategies being developed to increase the number of Maaori referred to a level more appropriate to their health need. The POAC team is focusing on PHOs and practice teams with high ASH rates for their Maaori patients to assist in reducing these EC presentations by providing responsive care in the community as an alternative. The plan is to:

- send letters to GPs with high ASH rates for Maaori patients, encouraging use of POAC and offering support in utilising this service appropriately
- follow up by visiting practices with high Maaori ASH rates to provide support to staff and provide education on POAC and address any issues acting as barriers
- provide cellulitis kits to practices and patient information brochures on POAC services.

In addition to increasing the utilisation of POAC by Maaori, a suggestion was made in both the evaluation and interviews to develop a social marketing campaign to increase the public's awareness of POAC as well as investigating why people self-refer to EC. Currently it is not known why some people in CMDHB, particularly Pacific peoples, chose to self-refer rather than attend primary care services. Without this knowledge it is particularly hard to plan services such as POAC to reduce self-referrals. Finally the evaluation suggested that there is a need for greater regional alignment of POAC services, including the type of services provided, consistency in clinical pathways across the DHBs along with the key performance indicators (KPIs) and reporting requirements.[37]

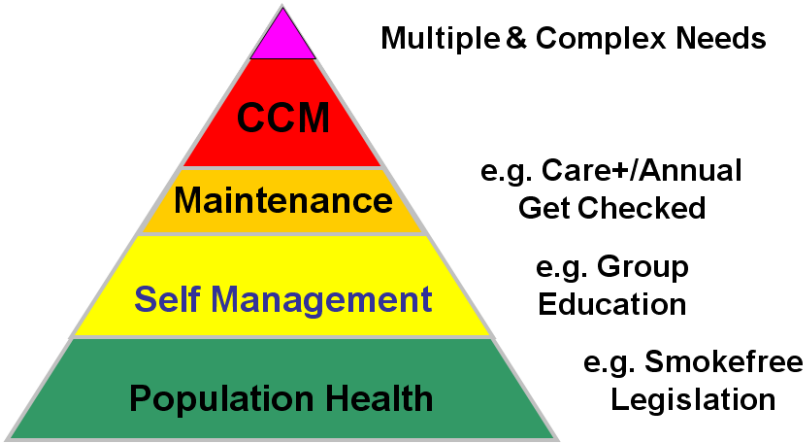
[37] The current "Better, Sooner, More Convenient" EOI business case is reviewing taking a more integrated regional approach to services such as POAC to ensure consistency across the metro Auckland district.

7.3. Long-Term Conditions Management – Chronic Care Management, Care Plus and Get Checked programmes in CMDHB

7.3.1. Introduction

The Chronic Care Management (CCM) programme was introduced to the local population as a pilot in 2001 for diabetes, CVD, COPD and CHF. This type of structured CCM programme has been shown to improve care and patient's health [84, 85]. Figure 64 illustrates the pyramid of managing chronic and long term conditions in CMDHB.

Figure 64 The Pyramid of Long-term condition management in CMDHB



The whole of population approach includes work such as legislation for smoke free environments and the CMDHB Let's Beat Diabetes programme.[38] This is followed by self-management of conditions. This is important for patients, families and whaanau as they live with their conditions 24/7 and often have to make decisions about management without consulting a health professional. Self-management is also important to ensure that the health system stays sustainable.

Maintenance is the next tier up and provides a lower level of care for long-term conditions which is provided by the Care Plus and the Get Checked programmes. Finally at the top of the pyramid is the more complex structured care that is provided by the CCM programme. Of the CCM modules, CHF and COPD are the most labour intensive in the provision of care [84].

Get Checked and Care Plus work alongside the CMDHB CCM modules and create a degree of complexity in the funding of long-term conditions management as PHOs vary in how they use these three forms of funding. In addition whilst Get Checked and CCM have strict reporting requirements, Care Plus does not require this.

[38] Let's Beat Diabetes (LBD) was a district-wide programme for Counties Manukau, aimed at long-term, sustainable change to prevent or delay the onset of type 2 diabetes, slow disease progression, and increase the quality of life for people with the disease. The programme had a broad set of community and health sector partnerships, working within a 20-year plan. LBD had a system-wide approach, working across ten areas of activity, including community-based programmes, social marketing, working with the food industry, supporting primary care, and improving service integration for advanced disease and was also linked with the nationwide Healthy Eating Healthy Action (HEHA) programme. It is now being reshaped to broaden the focus to include other important areas such as cardiovascular disease and smoking. The current working name for the programme is "Creating Better Futures – Supporting healthier communities in Counties Manukau".

7.3.2. Long-Term Conditions Programmes – CCM, Care Plus and Get Checked

Table 23 outlines the entry criteria for the CCM modules, Care Plus and Get Checked programmes.

Table 23 Long-term condition programmes in CMDHB

Get Checked	Care Plus
Entry Criteria • Every diabetic in New Zealand is eligible for a free annual check up to ensure diabetes is well managed. Data is collected nationally. Data checked includes: • HbA1c • Cholesterol – total, HDL, LDL, Ratio, Triglycerides • eye check • foot check • BP • Kidney check for microalbumnuria, • BMI	**Entry Criteria:** • Would gain benefit from more intensive clinical management over next 6 months and • Have 2+ chronic health conditions, each causing : ➢ Significant disability and ➢ Significant cost to health system and ➢ Agreed and objective diagnostic criteria and ➢ Continuity of care and primary care team approach important role in management Or • Have terminal disease Or • Two acute medical or mental health admissions in last 12 months (excluding surgical) Or • Has had 6 primary care visits in past 6 months Or • Are on active review for elective services

CCM Modules				
Diabetes	**CHF**	**COPD**	**CVD**	**Depression**
Entry Criteria: • HbA1c>9% or • BP >150/90 or • Total Cholesterol>6 or • Smoker or • Diabetes +1 of: ➢ High risk foot ➢ Nephropathy ➢ Vision threatening retinopathy ➢ CVD event ➢ Previous admission with CHF	**Entry Criteria:** • Systolic or Diastolic dysfunction on ECHO Plus one of : • Hospital admission for CHF within last 2 yrs Or • Evidence of failure (congestion & x-ray signs) and will need echo in one year	**Entry Criteria:** • Diagnosis of COPD AND • Spirometry with FEV1<80% of predicted post bronchodilator And • Spirometry with FEV1/Vc ratio<70% of predicted post bronchodilator And • FAMA criteria[39]	**Entry Criteria:** • Previous CVD event and one of: • BP>150/90 • Current smoker • Fasting TC>6 or LDL>2.5 Or • FAMA criteria Or • Recent admission in last 6 months To exit after one year on programme to annual review only	**Entry Criteria:** Adults • Aged between 18-64 • Depressed > 2 weeks • PHQ 9 score ≥ 15 • Excluded if bipolar, psychotic or cognitively impaired

[39] A FAMA criterion refers to the Frequent Adult Medical Admission (FAMA) programme that used to run in CMDHB. Patients were able to be enrolled on this programme which provided more intensive care if they had had 2+ admissions to medical wards, totaling more than five days, within the previous 12 months. The goal was to reduce acute demand by managing these patients more effectively in the community. This programme has now been replaced by the Very High Intensive User programme (VHIU) pilot which provides case management of frequent hospital attendees.

7.3.2.1. An outline of CCM – "making the right thing the easiest thing to do"

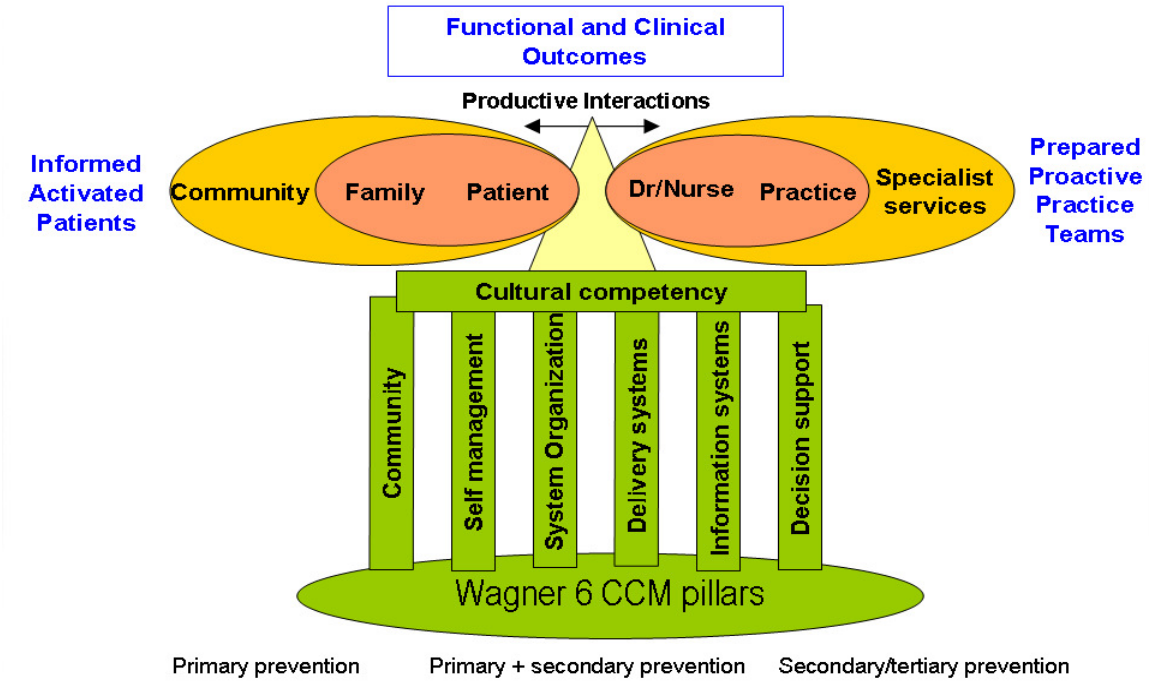
The CCM programme aims to:

Reduce preventable morbidity and mortality in people with chronic disease, and their use of resources in the health system, through improved clinical management of selected chronic disease patients in a primary care setting. Care is proactive and based on best evidence in order to get the best clinical outcomes for patients.

CMDHB's CCM programme is based on the Wagner chronic care model and has 6 central pillars: community; self-management; system organisation; delivery systems; information systems and decision support with cultural competency as an overarching requirement [84, 86].

The programme is holistic in nature and utilises a coordinated approach to ensure informed active patients and prepared proactive practice teams that work with whaanau, community and secondary care services.

Figure 65 The CMDHB CCM Programme Model, based on Wagner [86]



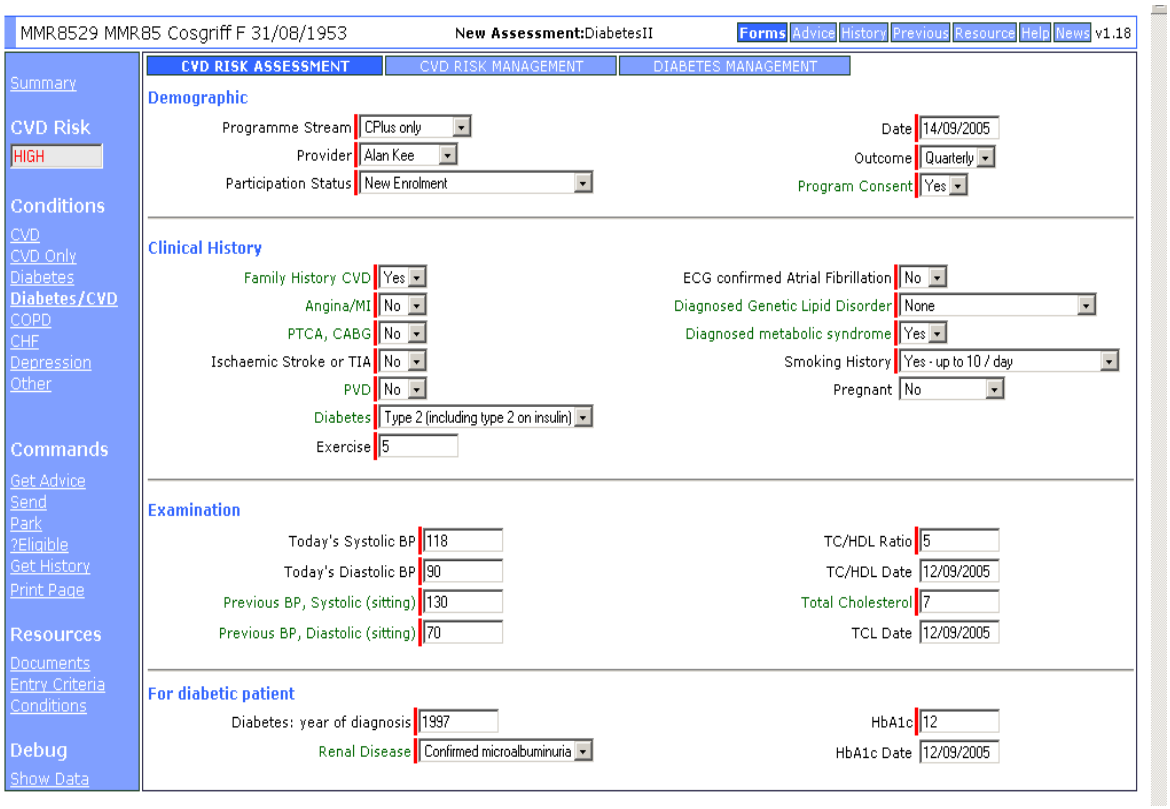
Wellness plans are completed for each patient enrolled on CCM. This is a tool to encourage patients and practice teams to work together as partners as well as to aid patients to self-manage their condition. Wellness plans include goal setting with each patient, a record of health checks, and an action plan which may include lifestyle interventions as well as appropriate medication. This is a key part of the CCM programme.

The CCM delivery system provides four free primary care visits to enrolees per annum along with six hours of dedicated primary care nursing time. CCM aims to utilise a coordinated multidisciplinary team that involves the primary care team, pharmacists, allied health and is well integrated with secondary care. Care involves documenting visits, performing risk assessments, and tailoring patient management to optimise risk-reduction by attempting to attain evidence-based clinical targets. This has been enabled through software changes to the PMS as well as continuing education on CCM modules for practice and PHO staff.

The information systems in primary care have been altered in order to provide electronic decision support. CCM templates are provided in practice PMS software. These provide a series of tick-boxes and drop-boxes that act as reminders to enter data. Once data is entered, either by the provider or

automatically, the templates can automatically calculate BMI, Framington risk and generate recalls and provide appropriate patient resources.

Figure 66 An example of a CCM template used in General Practice Patient Management Systems



Source: CMDHB Primary Health Care Team

Completed templates are then sent to a central server and guideline-based decision support is generated in real time and returned to the provider of care. For example if there is evidence of early renal disease in a diabetic, a response will be generated that suggests appropriate follow up investigations, medication changes and monitoring requirements. This use of structured electronic decision support has been shown to reduce prescribing errors, reduce serious medication errors, enhance delivery of preventive care and improve adherence to guidelines [87].

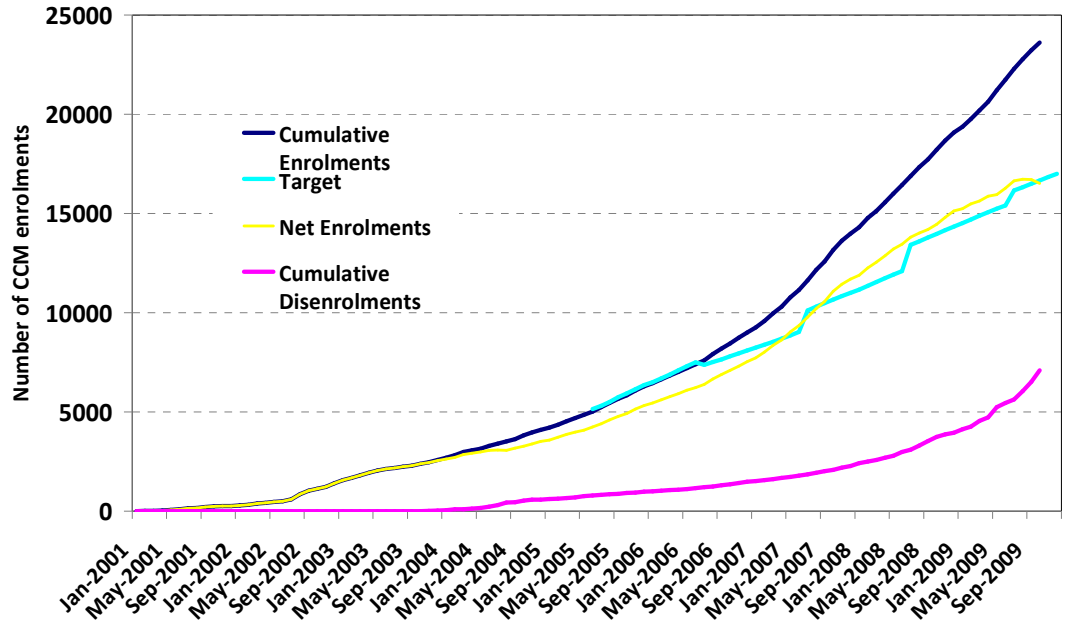
7.3.2.2. Enrolments into CCM

Since the 2001 pilot with two participating practices focusing on diabetes, enrolments have grown rapidly (see Figure 67). There has also been a growth in the number of practices 'signing up' to the CCM programme. All PHOs in the CMDHB are involved in one or more of the CCM modules, with 93 practices out of a possible 109 participating.

The increase in practices participating was hypothesised in a 2007 evaluation to be reaching its capacity given the issues with PHC workforce numbers in CMDHB [88]. In addition a CCM volume cap came into effected on the 1 July 2009 in response to financial constraints in the DHB, which limits further growth.

At the end of 2009 net enrolments for CCM were meeting the targeted volumes with 16,686 active patients in the five programmes. Maaori made up 20% of enrolments, Pacific 27% and non-Maaori/non-Pacific the remaining 53%.

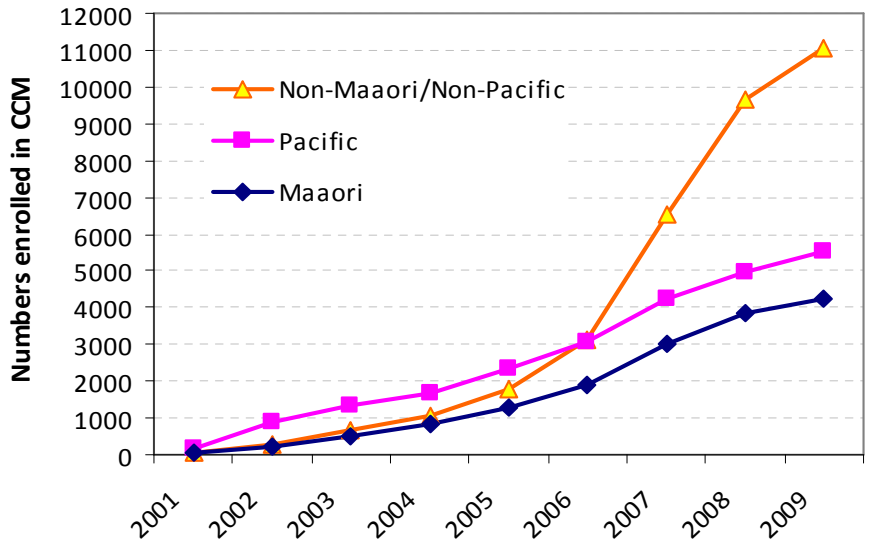
Figure 67 Enrolments in CMDHB CCM 2001 to 2009



Source: CMDHB Primary Health Care Team

Table 24 summarises the population demography of each of the CCM modules' enrolments and Figure 68 provides an ethnic break down of enrolments since 2001[40]

Figure 68 Enrolments in the CCM programme by ethnicity, 2001 to 2009



Source: CMDHB Primary Health Care Team

[40] Not all figures add to 100% due to rounding

Table 24 CCM Programme enrolments in total and by ethnicity as at 31 December 2009

CCM Programme	Number enrolled
Cardiovascular	Total: 1,123 Maaori: 23% Pacific: 11% Non-Maaori/non-Pacific: 66%
Congestive Heart Failure	Total: 545 Maaori: 33% Pacific: 31% Non-Maaori/non-Pacific: 37%
Diabetes	Total: 9,752 Maaori: 21% Pacific: 43% Non-Maaori/non-Pacific: 37%
Chronic Obstructive Pulmonary Disease	Total: 950 Maaori: 25% Pacific: 23% Non-Maaori/non-Pacific: 52%
Depression	Total: 4,167 Maaori: 15% Pacific: 6% Non-Maaori/non-Pacific: 79%
Total CCM Programmes	Total: 16,686 Maaori: 20% Pacific: 27% Non-Maaori/non-Pacific: 53%

Source: CMDHB Primary Health Care Team

7.3.2.3. How well are these modules working

- **High need enrolees**

CCM was introduced to ensure that there was appropriate funding to provide the care required for the burden of chronic disease and long-term conditions in Counties Manukau [84]. With the introduction of a funding cap in 2009, it raises the question if CCM should be targeting the higher needs groups more effectively in order to improve health outcomes and reduce health inequalities present in the district.

Currently the CVD CCM module is more extensively used by non-Maaori/non-Pacific despite the higher prevalence of CVD disease in Counties Manukau Maaori and Pacific peoples. Similarly the steep increase in overall enrolments from 2006 onwards came from a high level of enrolment of

non-Maaori/non-Pacific onto the depression module. Whilst consumer and stakeholder feedback has been overwhelmingly positive for this programme it was calculated in an evaluation in 2008 that only 20% of eligible Pacific peoples and 29% of eligible Maaori were utilising the programme [89]. This discrepancy is an issue given the prevalence of mental health issues for both Maaori and Pacific peoples and for those living in deprivation [90, 91]. Recommendations have been made to increase participation of these ethnic groups in the programme by rolling it out to all PHOs and making the programme more culturally appropriate for Pacific and Maaori patients [89].

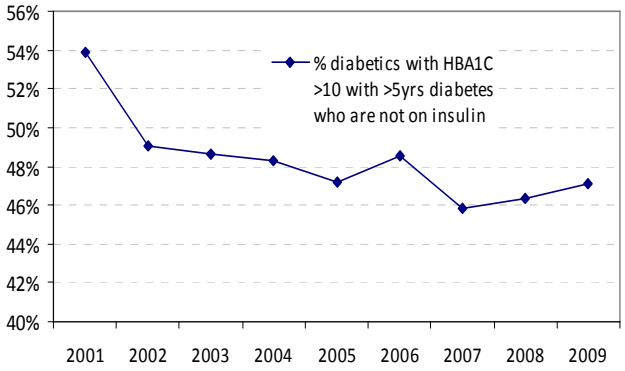
On a more positive note, Maaori and particularly Pacific peoples are more actively engaged in the Diabetes CCM module. Enrolments in this module mirror the burden of this disease in the community more realistically with 43% of current enrolees Pacific peoples and 20% Maaori.[41]

- **The impact of CCM on key performance indicators**

Table 25 demonstrates the changes that have been achieved for selected clinical and medical key performance indicators (KPIs) since the different CCM modules were rolled out.[42] In most of the KPIs presented here there have been improvements over time. For example the number of CHF class 2 and 3 enrolees on beta blockers (which are known to improve survival and clinical symptoms) have increased by 90% between 2003 and 2009.

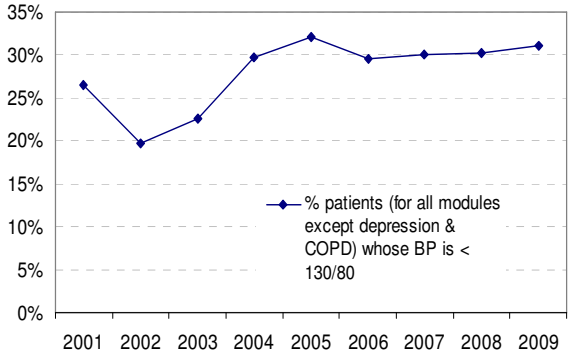
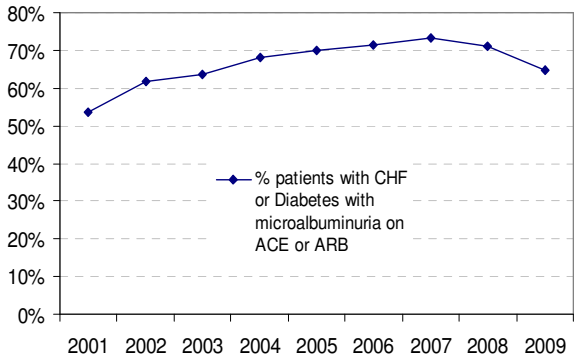
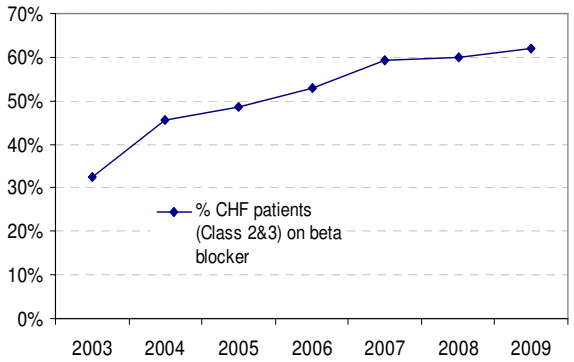
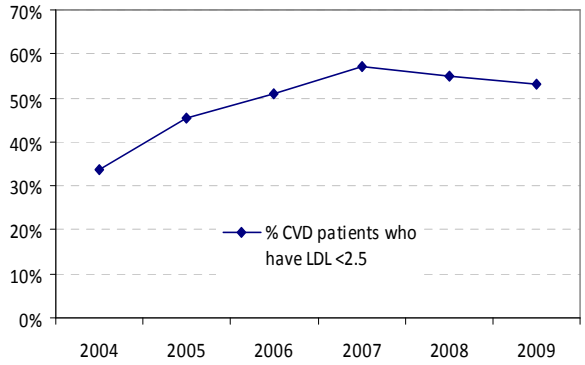
However it is important to note that there were smaller numbers in the earlier years of the CCM modules and this will impact on the following results for the CCM total and ethnic specific enrolled population. The initial years have been excluded if there were very small numbers.

Table 25 Changes in CCM Programme KPIs over time

CCM KPI	Graph	Results at 31 December 2009
% Diabetics with HbA1c>10 with 5yrs + diabetes and not on insulin		Fall from 54% in 2001 to 47% in 2009 – decrease of 12%

[41] South Asians also bear a large burden from CVD and diabetes but due to the time frame being examined and data availability, enrolments are not analysed to this level of ethnicity. Additional detail on the status of Asian health can be found in the CMDHB publication - G Gala, *Health Needs Assessment for Asian People in Counties Manukau*, 2008

[42] These KPIs are taken from a complete CCM dataset as the data that makes up each indicator is required to be entered into the CCM template before claiming can occur by the PHO.

% Patients (for all modules except depression and COPD) with BP ≤ 130/80		Increase from 26% to 31% between 2001 to 2009, overall increase of 17%
% Patients with CHF or Diabetes with microalbuminuria on ACE or ARB		Increase from 54% in 2001 to 65% in 2009, an overall increase of 20%
% CHF patients (Class 2&3) on Beta Blocker		Increase from 33% in 2003 to 62% in 2009, an overall increase of 90%
% CVD patients who have LDL <2.5		Increase from 34% in 2004 to 53%, an overall increase of 57%

Source: PHO CCM dataset with analysis by CMDHB PHC team

The KPIs were also analysed by ethnicity. For the "% of diabetics with HbA1c>10 with 5yrs of diabetes and not on insulin" there was not a significant decrease for Maaori or Pacific peoples. 35% of Maaori and 57% of Pacific diabetics were not on insulin in 2001, and this did not change substantially for either group in 2009. Paakehaa rates worsened, going from 25% in 2001 to 34% in 2009.

There was a 28% and 22% improvement for Maaori and Pacific peoples respectively enrolled on CCM and achieving a BP<130/80. Paakehaa showed no improvement. Unfortunately not even a third of the total population enrolled were achieving this in 2009. The percentage of patients with CHF or diabetes with microalbumnuria on an ACE or ARB increased for Maaori and Pacific peoples, by 5% to 60% and by 35% to 70% respectively. Paakehaa feared less well with the percentage falling from 74% to 61%.

There was improvement in the proportion of Maaori and Pacific peoples on the CVD module having a LDL<2.5. This increased from 33% to 49% for Maaori and 29% to 49% for Pacific people. Paakehaa had the largest gains, increasing from 34% to 55%. There was also a large increase in the proportion of Maaori and Paakehaa on beta blockers with heart failure over the time period. However there were very small numbers enrolled initially and this module remains the least utilised with only 545 enrolled.

Overall as illustrated by the graphs above, much of the gain in clinical parameters occurred early in the life of the CCM programme, with performance tending to level out in more recent years. Maaori and Pacific peoples enrolled in the modules show similar or better improvements to Paakehaa for the KPIs discussed but on the whole the performance is not where it should be. More work is needed to achieve improved clinical outcomes for the population. Individual targets are not currently set for these KPIs either at a PHO or practice level. Part of improving clinical outcomes will be to introduce targets as part of the process along with ensuring the most appropriate KPIs are being used.

7.3.3. CCM Diabetes and Get Checked Annual review

7.3.3.1. Introduction

The CCM Diabetes module and Get Checked national diabetes programme are described in more detail as an example of the performance and the issues associated with the running of a long-term conditions programme. The reason for using CCM Diabetes and Get Checked as an example is that these programmes have been in existence since 2000/2001 and have good data collection for the time period of interest. In addition the Get Checked KPIs match with national health targets. For those patients enrolled in the CCM Diabetes module, their first check in the new financial year is treated as their annual Get Checked visit and data from this is sent to the Ministry of Health.

7.3.3.2. CCM Diabetes Engagement

As at the 31 December 2009, 9,752 patients were enrolled on the CCM Diabetes module. Pacific peoples and Maaori made up 43% and 20% respectively of the enrolees.

Using this data and the estimated prevalence of diabetes in the Counties Manukau population for 2008, it can be extrapolated that nearly 50% of Maaori and Pacific peoples with diabetes are enrolled in this CCM module.[43] The 50% of people with diabetes not enrolled may not meet the

[43] Using 2009 CMDHB CCM data: 20% Maaori and 43% Pacific were enrolled on the Diabetes CCM programme out of total 9,752. Total estimated diabetic population in CMDHB: Maaori 1,996 enrolled, 4,211 total Maaori diabetics in CMDHB equals 47% enrolled; Pacific peoples 4,145 enrolled out of 8,945 total Pacific diabetics in CMDHB equals 46% enrolled.

entry criterion which does require a degree of poor control and/or complications as shown in Table 23. However given the morbidity from diabetes in Counties Manukau Maaori and Pacific peoples it is likely that many not enrolled in the programme would be eligible and likely to benefit from inclusion.

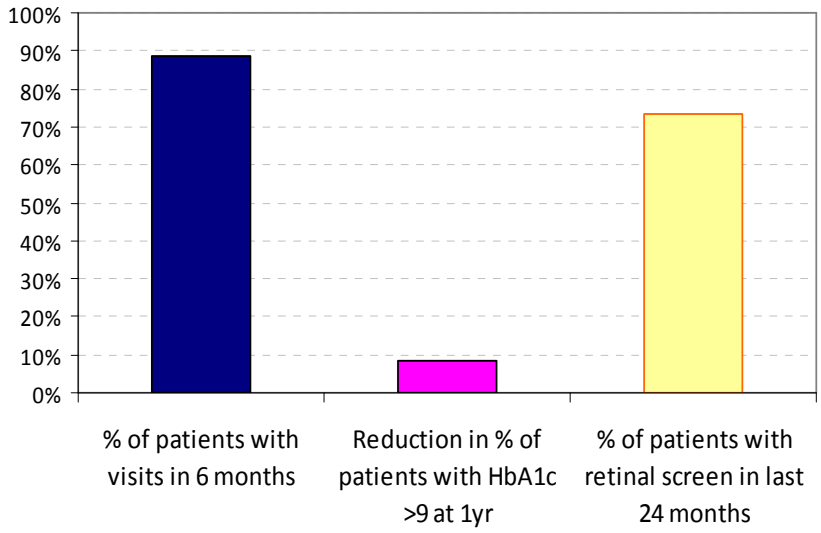
7.3.3.3. CCM Diabetes KPI achievement

The CCM diabetes programme has three KPIs based on engagement, clinical and medical intervention status. The results of these at the end of 2009 are illustrated in Figure 69.

While it is challenging to assess the health outcomes from the programme, the clinical and medical intervention indicators provide useful surrogate measures.

- The Clinical KPI is to achieve a reduction in the percentage of patients with a Haemoglobin A1c (HbA1c) over 9 at one year by 10% or more. HbA1c is a measure of a person's long-term blood glucose levels. The goal is to have well controlled diabetes which is considered to be an HbA1c under 8.
- The medical intervention KPI aims to achieve 90% or more of enrolees undergoing retinal screening in the past 24 months in order to screen for and treat diabetic retinopathy.
- The target for engagement is that more than 85% of enrolees are seen at least once in 6 months.

Figure 69 KPIs for CCM diabetes module - actual performance for the year ending 31 December 2009



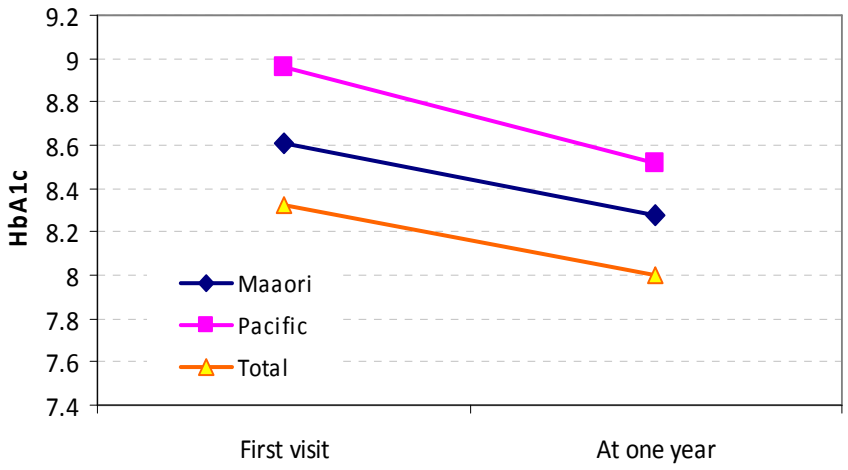
Source: CCM data analysed by CMDHB

At the end of 2009 CCM Diabetes enrolees were meeting the KPI for engagement with 89% having had a visit in the last 6 months. KPI targets for HbA1c reduction and retinal screening were not achieved. Only 8% of those enrolled with an HbA1c over 9 had had a reduction in this measure and no more than 73% had an up-to-date retinal screen.

However overall there was a modest but significant fall in HbA1c shown at one year as at the 31 December 2009 (see Figure 70). After one year on the programme, HbA1c fell by 3.8% for Maaori (HbA1c down by 0.33) and 4.9% for Pacific peoples (HbA1c down by .44). There was a 3.8% reduction for the entire enrolled population. Evaluation data of the CCM diabetes module in 2007 showed that (at least for those who stay enrolled) this drop continues past one year with HbA1c falling by a total of 0.6 after five years on the programme [88]. This is in line with two systematic

reviews that reported a mean or median drop in HbA1c of 0.5 over about 12 to 18 months with a disease management programme compared to usual care [92, 93]..[44]

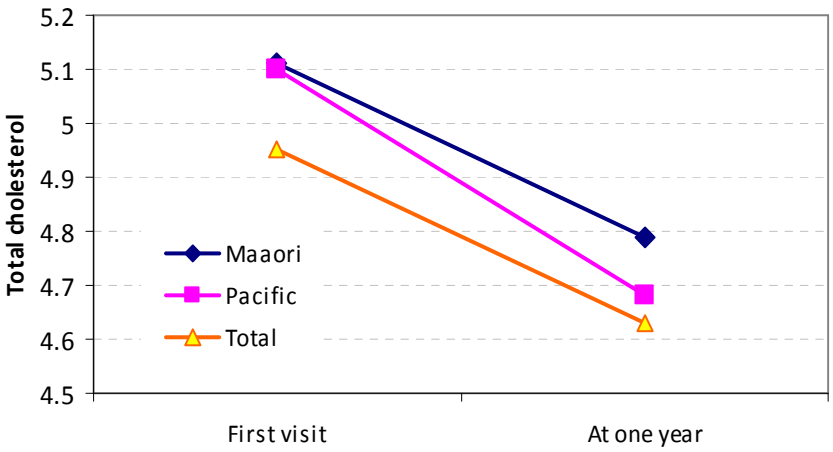
Figure 70 Change in HbA1c by ethnicity at entry to CCM Diabetes programme and at one year, as at 31 December 2009



Source: CMDHB Primary Health Care Team

Total cholesterol is also measured as part of the CCM Diabetes module given its importance to controlling macrovascular complications. Figure 71 demonstrates that Maaori and Pacific peoples on entering the programme have higher total cholesterol than enrolees overall. However Pacific peoples total cholesterol fell by 8.2% after one year in the module (approximately 0.43 mmol/L), which is a larger decline than that of the total enrolled population (which experienced a 6.5% fall).

Figure 71 Total cholesterol by ethnicity at entry to CCM Diabetes programme and at one year, as at 31 December 2009



Source: CMDHB Primary Health Care Team

[44] The UK Prospective Study in 1998 reported that a 1% reduction in HbA1c resulted in a 17% reduction in all cause mortality, an18% reduction in MI, 15% reduction in Stroke, 35% reduction in micro vascular end points and an 18% reduction in cataract extraction.

In the 2007 evaluation, as with the HbA1c, the mean total cholesterol fell by 1.2mmol/L over a five period from 5.5mmol/L to 4.2mmol/L which was a statistically significant reduction of 24% [88]. Similar results were seen for different PHOs and ethnicities.

7.3.3.4. Get Checked

All New Zealanders with diabetes are entitled to a free diabetes check-up annually with their primary care provider. As well as ensuring that appropriate care is being received and checking for complications, the free annual check-up collects nationwide information about the numbers of people with diabetes and the state of their health to help plan policy for the provision of appropriate services.

The following are checked at each annual visit:

- BMI
- Blood pressure (goal ≤ 135/75)
- HbA1c (goal ≤ 7%)
- Cholesterol
    - Total (goal ≤ 5.2 mmol/L)
    - HDL (goal ≤ 1.1 mmol/L)
    - LDL (goal ≤ 2.5 mmol/L)
    - Triglycerides (goal ≤ 2.0 mmol/L)
- Foot exam including pedal pulses and sensation
- Presence of microalbumunuria (goal ratio ≤ 3.0)
- Ensuring retinal screening is up to date (goal at least every 2 years)

7.3.3.5. Trends in Get Checked Results for CMDHB[45]

The percentage of diabetes patients in CMDHB that are identified and receive an annual check based on the estimated prevalence for the area is an important KPI. Figure 72 shows the percentage of diabetes patients receiving an annual Get Checked exam over the estimated prevalence of diabetes in the area. For four years there was a steady growth in detection, averaging a 25% increase annually before an apparent fall off after 2007/2008.

During the peak 140% of Pacific peoples estimated to have diabetes were being checked annually along with 71% of Maaori and 94% of non-Maaori/non-Pacific. Obviously there were data inaccuracies which needed resolving.

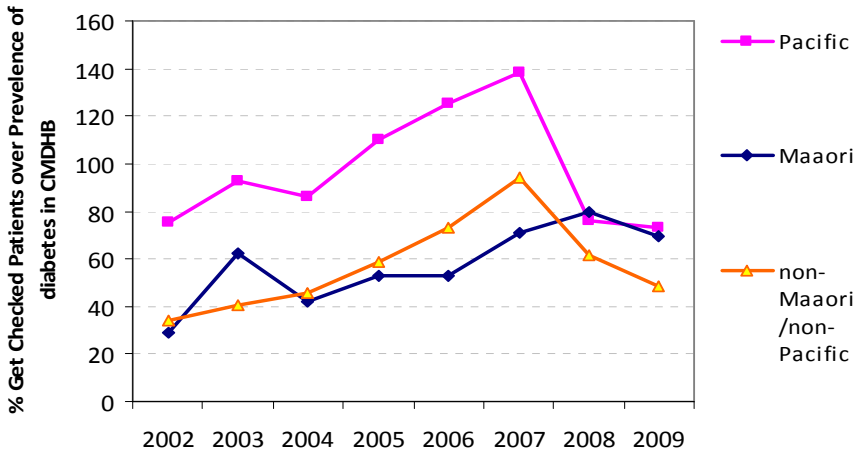
The apparent decrease in detection after 2007/2008 was multifactorial.

- Firstly there were changes to the funding rules with Get Checked reports having to contain NHIs. These were checked with CCM data to ensure no double counting was occuring.
- Secondly and most importantly new estimates of prevalence were introduced by the Ministry of Health. Previously prevalence rates were based on 1996 estimates which were grossly inaccurate for the district given the rapid population growth in CMDHB and the high percentage of Pacific peoples and Maaori. The Ministry updated the prevalence of diabetes through out

[45] 2001 results for Get Checked are excluded due to small numbers

New Zealand, introducing the new values for the 2008 and 2009 years and there was a significant 75% increase in the diabetes prevalence in CMDHB (G Jackson, internal CMDHB work 2009). Consequently there was an apparent overall drop of the estimated diabetes detection. This corrected for the overstating of detection for Pacific people and the understating of diabetes for Maaori and non-Maaori/non-Pacific.

Figure 72 The percentage of Get Checked diabetes patients identified annually by ethnicity based on the MOH prevalence model for CMDHB, 2002 to 2009[46]

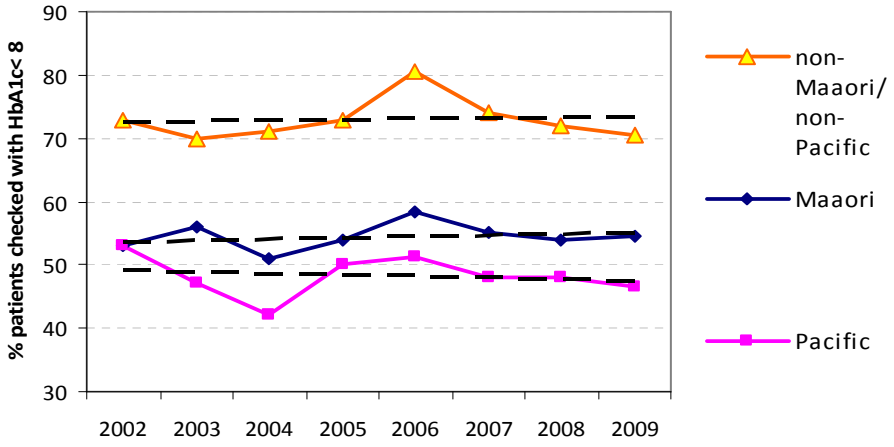


Source: MOH reporting, see text

The percentage of Get Checked diabetes patients with an HbA1c under 8 is also a national target. The aim is get 60% of CMDHB residents with diabetes on the Get Checked programme achieving this target. Currently 59% of those enrolled have an HbA1c under 8 which is an overall improvement of 17% when compared to 2002. Hence CMDHB is nearly meeting the overall target for the district.

However, applying a trendline demonstrates that this improvement is much less marked overall and there has not been substantial change for any ethnicity. This is illustrated in Figure 73.

Figure 73 The percentage of Get Checked patients with an HbA1c under 8 by ethnicity with linear trendlines, 2002-2009

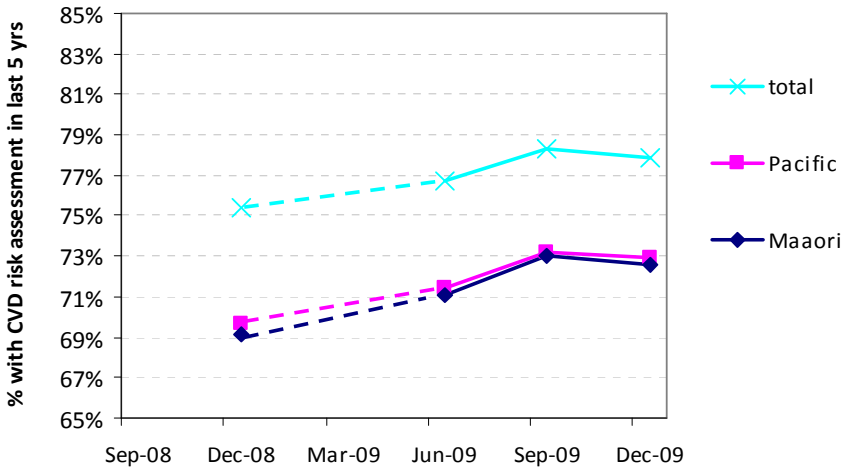


Source: CMDHB, reanalysis of MOH provided data

[46] Data from 2006 onwards is presented by financial year due to the unavailability of calendar year breakdown of results.

In 2008 cardiovascular risk assessment was added to the Get Checked programme as well as being introduced as a national target. Data has not been consistently available for each quarter but Figure 74 shows that Maaori and Pacific peoples have nearly identical rates of assessment (73% receiving a CVD risk assessment) at the end of 2009.

Figure 74 The percentage of Get Checked patients having had a cardiovascular risk assessment in the last five years by ethnicity, from 2008-2009



Source: CMDHB via MOH

The targets for these high needs groups sit lower than the total target of 76% for the DHB with a target of 72% for Maaori and 73% for Pacific. This raises the appropriateness of setting targets based on previous performance rather than true "need" in the population group, particularly when the DHB has an aim to achieve health equity[47].

7.3.4. Discussion from interviews and evaluations

This section is informed by qualitative evidence. Semi-structured interviews were undertaken with key stakeholders along with review of CMDHB specific and national literature on CCM and Care Plus [46, 94-96].

During the interviews undertaken for this report there were consistent themes that emerged about the CCM and Care Plus programme, the majority which were mirrored in a formal evaluation that was undertaken in 2007 and the CMDHB PHC workforce plan [53, 88].

Whilst the 2007 evaluation stated that there was near universal acceptance of the CCM philosophy at PHO and practice level, the theme that most commonly emerged during interviews was that there needs to be buy-in to the programme to be able to utilise CCM most effectively [88]. The majority of practices are still GP owned and therefore GPs play a key role in how engaged the practice becomes in CCM.

The practice nurse tends to be most involved in the programme given the 6 hours of nurse-led time funded per patient. CTA funding has been allocated to fund practice nurses to attend a postgraduate paper in long-term conditions management. However their ability to put learning's into practice is determined, in a large part, by the support they receive from their employer.

[47] Discussions are currently taking place about targeting enrolments to high needs groups as well as what are appropriate KPI targets for high need groups

> The aim was to provide long-term condition (LTC) postgraduate training in order for nurses to implement the CCM programme themselves at GP practices. Approximately 36 practice nurses have been through LTC postgraduate training. However a significant barrier is private owners of the practice not seeing the value of this and hence the CCM programme is not nurse led. Nevertheless some GP practices are innovative and allow this to occur as value is seen in having practice nurses in this role.
>
> DHB nurse leader

> A lot of money has been put into CCM with a large amount supposed to be for additional nursing time but there doesn't seem to be the increase of nurses employed or nurse utilisation. The model of the GP employing nurses creates barriers and the PHO taking over that role removes that and allows better utilisation of nursing staff who then have the ability to influence the GPs more. It also takes care of ensuring nurses are up to date with CME and other training. Often no money is allocated by GPs for nurse CME.
>
> Nurse leader, small PHO

The draft CMDHB Primary Care workforce development plan 2010-2015 is also heavily influenced by this issue. It also comments on practices nurses that have training in long-term condition management not being able to implement their skills due to GPs being concerned about the medico-legal aspects of having practice nurses solely managing CCM patients.

Similarly it was reported that some practice nurses doing the training may not have the confidence or the desire to take on this responsibility and similar themes came across in the interviews. A robust process is suggested to ensure that this valuable nurse resource is appropriately utilised with nurse-led CCM becoming more common place.

However this will require support of both nurses and GPs: support to help the nurses put the new learning into practice; and support to help the GP to build trust in the changing roles for GPs and nurses for chronic care patients. Quality systems should be in place to enable this with clear guidelines, training requirements and competency standards. Team work is also important and was frequently mentioned as key to running an effective CCM programme.

> CCM works best when the practice works as team. Best performers occur in practices that have team meetings that include reception, practice managers, nurses and doctors and assign responsibilities. When a practice nurse takes ownership of the CCM programme and organises it - it works well.
>
> Nurse leader, Medium sized PHO

Developing multidisciplinary teams and working effectively in appropriate roles is important given the short supply of both GPs and practice nurses and the growing burden of long-term conditions in Counties Manukau. It was frequently reported in interviews and in national literature that nurses are often inappropriately used, doing jobs such as reception and administration. This work could be given to other staff such as a health care assistant, allowing the nurse to be better utilised.

> Few practices are allowing nurses their 6 hour nurse time that the CCM programme funds. Nurses aren't dedicated to this role in most parts but used inappropriately to do clerking jobs such as recalls. This is slowly changing though. With nurse shortages it will become more apparent to change the nursing role and work in a team fashion with more appropriate roles. There is a need for a whole team approach with the receptionist to practice manager involved.
>
> DHB nurse leader

Another theme that emerged was that many see the programme as restrictive and time consuming with regards to the complexity of funding, enrolment and IT requirements. Qualitative data from the 2007 evaluation suggests that a number of practices are losing motivation because of difficulties with prioritising time, funding nurses to spend time on this programme, having IT issues, and not receiving payments in a timely manner [88].

It was suggested by a number of interviewees that funding could be altered to enable better uptake of the programme and more appropriate use of staff. For example: providing up front funding to enable employment of a nurse specifically for the programme; and allowing the six hour funding of nurse time to be split to allow better use of the nursing resource with administration to be completed by a more appropriate member of staff.

In addition some of the interviewees felt that the approach currently used in the CCM programme is limiting by creating silos of care instead of integration of programmes. This is acknowledged by the DHB as something that needs to be re-evaluated.

> Along with quality improvement there is a need to improve CCM and figure out how to weave together programmes in order to adopt a more holistic approach. So not only is clinical time given but also a whaanau ora approach with family and communities engaged to support patients to self-manage their conditions.
>
> DHB programme manager

The complexity of the CCM programme data requirements is in complete contrast to Care Plus which is regarded by those interviewed as a fairly straight forward process to use by comparison. There are however significant issues with Care Plus because there are no measurements of success. Some practices do not even need to see patients regularly to receive funding. At the very least the CCM programme provides KPIs as a yard stick so attempts can be made to improve performance.

In addition the presence of two funding streams (three for diabetes management) can lead to practices being less likely to choose the "harder option". This along with the continuing presence of the HUHC and CSC may mean that the long-term condition programmes are not utilised as effectively as they could be to improve patient health outcomes.

> The CCM programme has made no difference in outcomes despite the concept being good. CCM is a complex process with complicated and time consuming administration if practices aim to do this properly. Care Plus is a different scheme with GPs paid quarterly whether or not the patient is seen or not. One can put a patient on a variety of schemes. For example, diabetes patients can be put on Get Checked, CCM or Care Plus. This creates perverse incentives.
>
> CEO, small PHO

> The CCM programme was good initially as it ran with lifestyle and clinical arms with clinical champions. This enabled good integration between primary and secondary care. All of the team needs to be trained in programme to ensure quality. However with Care Plus introduced in 2004, this all went out the window. Care Plus is a weak version of CCM and some practices used this instead and quickly filled up all the Care Plus places. This left doctors with diabetes patients that could be enrolled onto CCM but why would they bother as it created too much work for the funding, plus HUHC and CSC are still in place to ensure cheaper visits.
>
> DHB Primary Health Care nurse

There was an acknowledgement by those interviewed that CCM has not been achieving the outcomes it set out to accomplish. Originally the intention was that a major component of CCM was patient self-management in order to empower patients to have an active role in their health improvement. Wellness plans and goal setting were an important part of this. Whilst the 2007 evaluation showed that 81-91% of patients across the 4 modules reviewed had a wellness plan, qualitative data showed that the plans are generally not valued or utilised well [88].

Another missing but key part to CCM is the continuous quality improvement process [96]. It was felt by many interviewed that quality improvement was often poorly done in primary care and the results suggest that the funding provided by CCM is not achieving the added value in regards to improved health outcomes.

> However we are still concerned that the CCM programme is paying for process rather than outcomes. In addition the DHB provides good information down to a practice level on KPIs. They identify patients that have dropped off for example. But the DHB is unsure how that information is used to drive quality at a practice level and improve outcomes. There is supposed to be a degree of clinical leadership at PHO level that drives quality improvement. However this varies between different PHOs.
>
> DHB Programme Manager

The value of the DHB maintaining its current stance in paying primary care to provide CCM when it is already part of primary care's core business and therefore covered by capitation can be questioned. However it can also be argued that capitation in CMDHB is not adjusted to need appropriately to cover for the burden of chronic disease in the community. Therefore providing this additional funding stream has been the right thing to do.

The newly introduced cap on CCM volumes due to financial constraints also highlights whether the programme should be primarily targeted to high need groups. Currently Maaori and Pacific peoples are less engaged in CCM than non-Maaori/non-Pacific for all modules aside from the diabetes. Maaori and Pacific people in Counties Manukau bear the brunt of the chronic disease burden and tend to live in more deprived socioeconomic circumstances than non-Maaori/non-Pacific. Given the DHB's focus on equity and the current economical environment, there is a good argument for targeting CCM in this manner. In addition the provision of more appropriate health targets based on need rather than previous performance is an area that needs further discussion if one wants to maximise the opportunities to reduce health inequalities in the district.

Overall it appears that the current structure and funding of CCM has not been enough to achieve the degree of improvement in patient health outcomes. Initiatives to introduce continuous quality improvement, further focus on self-management and targeting to high health need are areas that need discussing in order to get the best health outcomes for the Counties Manukau population.

7.4. Summary

POAC

- Primary Options for Acute Care was established in Counties Manukau in 2001 with the purpose of allowing GPs to access funds to allow investigations, levels of care and treatment not generally available or affordable to the patient in primary care thus reducing acute demand.
- Referrals to POAC have grown markedly from700 in the 2001 pilot to 5,200 in 2009. The most common reasons for use of POAC are treatment of cellulitis, suspected pneumonia, suspected DVT and dehydration.
- The percentage of patients avoiding an EC attendance has remained consistent since POAC was introduced, sitting in the late 80's
- CMDHB is working on linking primary care data at a practice level with hospital data to maximise the efficacy and efficiency of the POAC programme. Approximately 15-18% of POAC referrals have been for Maaori patients over this time, with Pacific peoples sitting slightly higher at 22-25%. This is proportional to the CMDHB population demography but does not necessarily reflect the proportion expected to meet the increased level of health need in these two groups.

Long-term conditions management

- There has been a rapid increase in enrolments onto CCM over time with 85% of practices participating in at least one programme.
- Some gains have been made in the proxy measures of outcome particularly for diabetes patients. Overall much of the gain in clinical parameters occurred early in the life of the CCM programme, with performance tending to level out in more recent years
- Many of the modules do not have the numbers of high needs patients enrolled as would be expected given their burden of disease. This is particularly concerning for the CVD module given the morbidity and mortality impacts of this disease on Maaori and Pacific adults in the community.
- This uptake of the CCM programme by relatively healthier populations can exacerbate health inequalities. Therefore further effort needs to be made to engage more effectively with these higher need populations to ensure an appropriate degree of participation. This is particularly important now that caps on CCM volumes have occurred due to financial constraints.
- Similarly there needs to be quality improvement mechanisms built into the programme in order to maximise CCM's impact on the health of the population.
- Work needs to continue to ensure provider buy-in to the programme, particularly due to the administration and IT requirements that the CCM entails.
- Finally greater collaboration between the GP employer and practice nurse is required in order to utilise the valuable resource nurses bring to structured CCM. The use of a multidisciplinary team is important for CCM to be a success and is going to be essential as workforce shortages and the burden of chronic diseases grow in the district.

Chapter 8. Models of Care

8.1. Introduction

> There needs to be a focus on developing highly performing teams. There needs to be clear goals for the practice and defined roles for each team member for achieving these goals. There also needs to be a communication strategy for achieving performance with barriers and enablers identified through this strategy.
>
> Currently there is a stressed health care system. Models of care need to change to cope with demands. The majority of problems are behaviour based versus acute care and this requires time. We need more nurse led clinics to help with this versus GP care which traditionally been focused on acute care.
>
> Clinician medium PHO

There has been much discussion nationally and internationally about the need to respond to the growing burden of chronic diseases and long-term conditions, as well as an aging population, by changing the model of care in PHC [3, 53, 84, 96-100]. Heavy work loads with patients with both simple and complex issues, reduced numbers of GPs entering the speciality, the increasing complexity of funding and administration requirements and the current governments wish to devolve some secondary care services into the community makes a change to the model of care necessary.

A shift is needed away from attending to acute illness towards a model that delivers comprehensive chronic care management as well as preventive care. This was a key objective of the Strategy.

A model of care has been usefully defined as "a multifaceted concept, which broadly defines the way health services are delivered. It can therefore be applied to health services delivered in a unit, division or the whole district[101]."

There are a number of elements that are important to consider in a model of care. These include:

- values and principles on which the model was developed
- structure and roles within the model of care, including the staff and skill mix, accountability and quality improvement systems
- care delivery process – where, when and by whom is care delivered
- referral patterns – the processes by which people move in and out of the services
- patient outcomes – across various quality domains such as equity, evidence based and patient reported outcomes
- fixed and variable costs [101].

Table 26 outlines the changes that the Strategy envisaged in order for the New Zealand primary care system to realign its model of care. These relate fairly closely to the criteria listed above.

The following section will examine CMDHB's progress in areas that relate to changing the model of care in order to create an effective and sustainable primary care system. The areas covered will include workforce development, the use of multidisciplinary teams and driving continuous quality improvement in primary care.

Table 26 The vision of the Strategy moving from an old to new model of care [1]

Old	New
Focuses on individuals	Looks at health of populations as well
Provider focused	Community and people-focused
Emphasis on treatment	Education and prevention are important too
Doctors are principal providers	Teamwork – nursing and community outreach are crucial
Fee-for-service	Needs-based funding for population care
Service delivery is monocultural	Attention is paid to cultural competence
Providers tend to work alone	Connected to other health and non-health agencies

Source: King 2001, MOH

8.2. Workforce Development

The potential primary health care workforce is vast. GPs, practices nurses, community health workers and allied health professionals all form an important role. Roles new to primary care such as nurse practitioners and health care assistants are also being introduced into practices yet are not widely used. The following will review these key roles and the numbers working where available for primary care in Counties Manukau.

8.2.1. General Practitioners

GP numbers in CMDHB have been previously described in chapter 3 of this report. To recap, Counties Manukau was approximately 50 FTE GPs short of the recommended minimum 1 FTE GP per 1,400 of the population in 2001 which equates to having 1 FTE GP for every 1,600 people in Counties Manukau. This has not changed dramatically if looking at the latest figures available in 2008. This compares poorly to the national average of 1 FTE GP for every 1300 people. This is compounded by an unequal distribution of GPs in the district leaving some rural and poorer urban areas such as Franklin and Mangere underserved.

Counties Manukau may also be affected by the national trend that is occurring where some GPs are cutting back their clinical hours. Based on RNZCGP data the decrease in GP capacity nationally is about 12.5%[102]. This is hypothesised in the College's workforce surveys to be due to feminisation of the workforce and GPs wanting a better work-life balance [103].

In addition GPs are an ageing workforce and a significant proportion will be looking to retire in the upcoming decade [104]. New graduates entering the GP programme will not be able to match this loss despite recent increases in training places.[48] Making the profession attractive to new graduates is also a challenge with surveys undertaken of medical students and house officers showing a preference for hospital based specialities [105, 106].

In addition new graduates finishing their GP training have shown an inclination for salaried positions versus ownership of a business which has been the traditional model of general practice [107]. Since 2005, the percentage of self-employed GPs nationally has fallen from 56% to 39% [37, 103]. This appears to be occurring more frequently in high need and rural areas [108].

[48] The lifting of the ten year working moratorium in urban Australia for New Zealand GPs may well impact further on workforce shortages.

Getting new medical graduates to choose general practice as a speciality, reorienting the role of the GP to meet the challenges of increasing chronic disease in the community and continuing to shift the focus to prevention and population health need to priorities. Another key area is the development of GPs working in a "team together" rather than "together alone".

The national GP training programme is currently undergoing a restructure and looks to address some of these issues.

8.2.2. Practice nursing

"The move towards greater population focus and emphasis on a wider range of services will increase the need for well-trained PHC nurses.[1] "

Primary care nursing plays an important role in reducing health inequalities, achieving population health gains and promoting and preventing disease. The role is particularly important in the provision of chronic disease management. Nurses enhance the quality of care especially when working within a structured care environment such as the CCM programme. Recent research suggests that practice nurses can obtain better outcomes, better patient satisfaction with patients understanding more about their condition when working in a structured care environment compared to GPs or nurses working in a unstructured environment [109].

The Expert Advisory Group on Primary Health Care Nursing recommends that a national approach is adopted that addresses the "capabilities, responsibilities and areas of professional practice" for primary care nurses, as well as "setting educational and career frameworks and exploring suitable employment arrangements [110]."

Despite this recommendation a number of barriers exist that have prevented utilising practice nurses to their fullest ability. These barriers are issues nationally and internationally rather than specific to Counties Manukau; however these same issues were frequently noted in the qualitative interviews undertaken for this report and are incorporated in the following quote [111].

"Practice nursing in 2008 looks like this: an ageing workforce without primary health care qualifications; no standardised career pathway; unacceptable variations in the quality of practice; and a capitation funding system that does not reflect the intent of the Strategy for nurses while continuing to fund PHOs and general practitioners. Painting a new picture for practice nurses in a capitated environment now demands a new perspective [112]"

8.2.2.1. Nursing numbers

The first recording of the number of nurses working in primary care for the time period of interest comes from data obtained from the Nursing Council of New Zealand (NCNZ) broken down into different nursing categories. The total headcount from this source between 2000 and 2003 is shown in Table 27. Data is unavailable for 2004 and 2005. However from 2006 CMDHB collected practice nursing numbers directly from the PHOs. This was a mandatory requirement from the Ministry of Health under the Strategy. Up-to-date data was unavailable for total nursing staff in 2008 for Procare and TaPasefika so the previous year numbers were included.

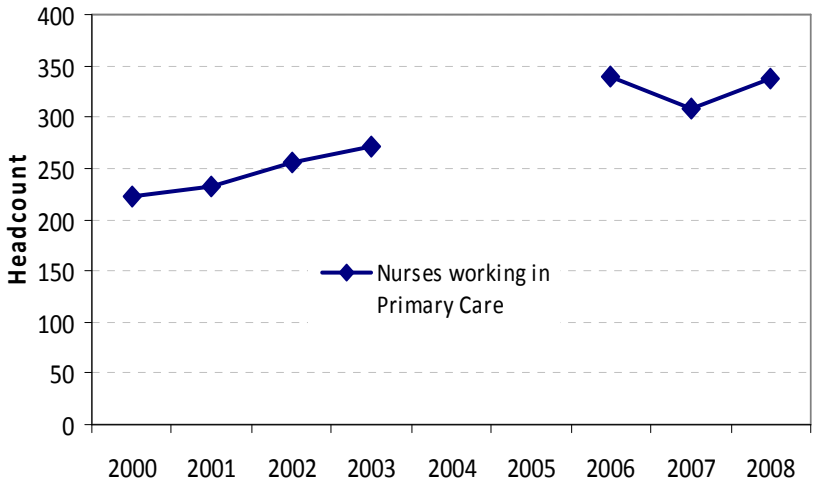
Looking at this data graphically (Figure 75) it appears that there has been a growth in nursing numbers since the implementation of the Strategy. However this data only represents a head count and therefore does not demonstrate the actual FTE practice nurses available to the district. Information on the total number of hours worked in a usual week along with the overall total head count is a data collection requirement but is not consistently supplied. This is a particular issue as more than 50% of the nurses surveyed by the Ministry of Health in 2001 worked part-time[113]. Hours worked varied with 30% of practice nurses working more than 40 hours a week which is more than 1 FTE. A quarter worked 20-39 hours, with the remaining working under 20 hours a week[113].

However this data is nearly a decade old and therefore its accuracy for the current primary care environment is questionable. This makes planning for workforce development difficult.

Table 27 The headcount of practice nurses working in primary care in CMDHB, 2000-2008

Year	Active registered nurses and midwives working in PHC (from NCNZ)	Active nurses with midwifery qualifications working in PHC (from NCNZ)	Enrolled nurses working in PHC (from NCNZ)	Nurses working in Primary Health Organisations (from PHO reporting to DHB)
2000	221	22	2	
2001	228	18	4	
2002	254	22	2	
2003	269	21	4	
2006				340
2007				309
2008				337

Figure 75 Nurses working in primary care in CMDHB from 2000 to 2008



Source: NCNZ 2000-2003, PHO reporting to DHB 2006-2008

8.2.2.2. Shortages of primary care nurses in CMDHB

Based on the 2005 Community, NGO and Primary Care Workforce Census Counties Manukau has an ageing primary care nursing workforce with nearly half (44%) aged 50 and above [114]. This is compounded by Counties Manukau having fewer primary care and community nurses than the national average. In addition the retirement rate predictions combined with population growth in the district means that 36 new FTE primary care nurses per year is the minimum requirement from 2011 to 2016 to maintain the current low nurse to population ratio [114]. These estimates are conservative and a greater number will be required to deal with the growing burden of chronic disease.

Prior to the introduction of capitation, the traditional ratio of practice nurses to GP was 1 to 1 [115]. A model of care that incorporates multidisciplinary team work would be aiming for more practice nurses than GPs in order to meet the mix of acute, semi-acute, chronic conditions and disease prevention.

However calculations from PHO data show that the average ratio of practice nurses to GP is not much over one. Some practices are employing more nurses and have higher ratios as a result. Unfortunately the hiring of new practice nurses is compounded by the lack of nurse availability as well as the MECA conditions introduced for secondary care nurses which create further barriers to increasing primary care nursing numbers. [49] In addition there is large variation in salaries paid to practice nurses along with different expectations of the role they will play. Some of the new nursing graduates are receiving MECA pay and conditions which have helped recruitment.

'Return to nursing' programmes have been introduced by the Nursing Council to help rectify shortages. However this requires 8 weeks of non-paid study and with costs of around $4500 to complete [115]. CMDHB does find placements for nurses wishing to work in primary care so training is specific to the speciality. However it has been suggested that placing a primary care scope restriction on practising certificates may increase the numbers entering practice nursing though further training and additional skill sets are necessary for this scope[115].

Another initiative has been achieved through facilitation between CMDHB and the Manukau Institute of Technology (MIT) to allow new nursing graduates to directly enter general practice rather than spend an internship in the hospital system. CMDHB is also promoting new graduates to take up a career in primary care by offering positions in its Nurse Graduate Programme based in general practice. CMDHB has a budget of $120,000 allocated annually to fully fund or partly fund the salaries of new graduates in practice nursing roles.

8.2.2.3. Extreme shortages of Maaori and Pacific primary care nurses

There are extremely low numbers of Maaori and Pacific primary care nurses in Counties Manukau. Nearly three quarters of those surveyed in 2001 identified as Paakehaa with only 4.3% and 4.7% reporting their ethnicity as Maaori or Pacific respectively [53, 113]. These percentages are nowhere near being representative of the Counties Manukau population and given the burden of chronic disease in Maaori and Pacific peoples, it would be appropriate for even higher numbers of Maaori and Pacific nurses to be trained.

National PHC Nursing innovation funds have been provided to CMDHB which have allowed for the development of a Maaori and a Pacific nurse role to lead nursing developments in primary care and take a proactive approach to the nursing needs of the entire sector for Maaori and Pacific Health. There are a number of initiatives occurring in the district in an attempt to increase practice nurse numbers. One such initiative is Pu Ora Matatini developed by TKOH PHO.

Pu Ora Matatini – Maaori Nursing Workforce Initiative

The Pu ora Matatini is a programme established by TKOH that aims to 'grow their own' workforce. The goal is to train 100 Maaori nurses by 2014. Through the support of MIT, the Ministry of Social Development and the DHB, Maaori women are offered places in the programme that provides bridging secondary education by completing a Foundations course to secure entry into the Bachelor of Health Sciences. Approximately 75% of women entering the programme are on the DPB and have dependent children, without the appropriate education to undergo tertiary training. The women go through the foundation course at MIT as a separate cohort. The PHO provides a whaanau ora approach to the programme providing ongoing mentoring, extra tutoring, cultural support and a computer lab. Some of the women in the first cohort are expected to graduate this year.

[49] The MECA agreement for hospital nurses gives better pay conditions and protected and paid for professional development time and was not extended to primary care nurses.

Another initiative is the Pacific 'Return to Nursing' programme which was set up as a collective by CMDHB, the Nursing Council and MIT. This programme enables Pacific registered nurses to obtain a New Zealand Practising Certificate. However the International English Language Testing (IELTs) used to pass the course is not necessarily appropriate to the health speciality and has created barriers for many potential nurses. Collaboration is required in order to enable the test to be more relevant to the health sector.

8.2.2.4. Professional development Issues for practice nursing

The National PHC funding for Innovation has allowed for the development of a CMDHB PHC Nurse Leader to help plan and implement innovations initiatives in the district and provide working relationships with the local training sites - MIT and the University of Auckland. In addition the nurse leader is involved in the development of curriculum for post-graduate PHC nurses as well as assisting nurses with the career pathway to nurse specialist and nurse practitioner status.

Practice nurses in CMDHB now have access to the Middlemore Hospital Centre for Clinical Education (CTEC) for completing CPR and obtaining IV access, plastering and wound care credentials. However some interviewees suggested that many practices are unaware of this. Practice nurses also have access to CTA funding to complete the University of Auckland's Long-term Conditions postgraduate paper with the objective being that nurses then implement a nurse-led CCM programme in their practice. Thirty-six Counties Manukau practice nurses have been through this to date. CTA funding provides for cover for the nurse although it is reported that finding such cover is difficult. In addition some nurses are employed under the MECA contract which guarantees protected paid time for professional development along with pay parity with hospital nurses.

However it has been suggested in the national literature and interviews for this report that the value of practice nurses in general practice is not always appreciated and this has resulted in the increased funding in primary care not being used to recruit more practice nurses or pay for or encourage professional development [116]. The unbundling of ring-fenced practice nurse funding with the Strategy[50] has been suggested in a recent practice nurse workforce development project and by several of the interviewees to have disadvantaged the development of the profession [115].

In the workforce surveys undertaken in 2001 and 2005 clinical career pathways were felt to be unavailable to over half the nurses[113, 114]. Similarly management and/or leadership roles were felt to be unavailable to many nurses. Employer resistance was quoted as being a barrier yet this was often due to the inability to get cover and partially explains why a lot of practice nurses are only able to attend CME after hours. Time required and the costs of undertaking postgraduate study are also significant reasons for not undertaking further study.

Often practice nurses are used in 'house-keeping' roles that could be done by a health care assistant or receptionist such as performing recalls and stocking shelves. Having a trained nurse in long-term conditions is not seen as an asset and creates a barrier to qualified nurses implementing their training in practice.

However the role of a practice nurse is evolving with the changing model of care. There is the need for practice nurses to take on more speciality roles such as CCM as part of their professional scope or even nurse practitioner roles. It must also be acknowledged that some practice nurses are reluctant to undertake this additional training and change their traditional role, creating a further barrier to creating nurse-led CCM clinics and ensuring the upskilling required to effectively work in a new model of care.

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[50] Prior to the implementation of the PHCS there was a separate Practice Nurses Subsidy paid to general practices for the employment of Practice Nurses. Under the Strategy this was 'bundled' up into the overall capitation payment to the practice.

8.2.3. Nurse practitioners in primary care

The nurse practitioner was a new scope of practice launched by the Ministry of Health and the Nursing Council of New Zealand in May 2001 [117]. Nurse practitioners are nurses who have undertaken approved additional education in order to work within a specific area of practice using advanced nursing knowledge and skills. This allows them to practice more independently and in collaboration with other health care professionals and is considered a part of overcoming the GP workforce shortages.

Nurse practitioner's scope of practice includes the diagnosis, assessment, treatment and management of patients health needs. In a general practice context, nurse practitioners focus on population health looking at prevention for the enrolled population [117].

Currently there are not many existing jobs for nurse practitioners in primary care. In 2006 there were 2 nurse practitioners employed in primary care out of a total of 7 in CMDHB. This creates a barrier to practice nurses considering upskilling as there is not the opportunity to easily work in this area.

8.2.4. Health care assistants in primary care

Health care assistants (HCAs) have been widely used in secondary care in CMDHB for a number of years but are not widely utilised in the primary care environment. Minimal research has been undertaken into their role in this setting. As such there is no formal framework defining the role and competencies for HCAs working in primary care.

However the use of HCAs may be appropriate provided a formal competency framework is developed, in order to meet the current and future changes within the primary care model. As practice nurses are required to expand their scope and provide care for the growing burden of chronic conditions and an ageing population, HCAs can be utilised to perform the less skilled set of tasks such as recalls and measurements. This can help with cost containment whilst maintaining quality which is an important issue now and going forward into the future. Overseas studies have found that HCAs tend to help reduce patient waiting times and improve access to appointments [118].

Currently one PHO in the district makes significant use of HCAs to complete and record on the PMS the standard observations as well as to provide basic health education before the patients are seen by the nurse then by the GP. The majority of their HCAs are overseas nurses who have had difficulties with the IELT exam. The PHO provides training to the HCAs prior to them commencing work as well as ongoing supervision.

A number of challenges to using HCA more widely exist. In the first place the HCA role needs defining, as do the competencies required. Whilst HCAs may free up GPs and practice nurses to perform more complex tasks, they still require a degree of supervision to ensure quality and patient safety which could be an issue due to nursing shortages [115, 118].

> Health care assistants may be good to use. But there is a need for clearly defined roles for everyone so one knows what is expected and they do not step beyond their capabilities. This would allow for better utilisation of skills.
>
> Nurse leader, ethnic PHO

8.2.5. Community health workers in primary care

The growth of community health workers (CHW) in primary care is the biggest change that has occurred in the Counties Manukau primary care workforce in the last ten years. CHWs are now

counted alongside GP and practice nursing numbers. In 2007 there were 25 FTE CHWs working in the district. SIA funding has been used, particularly in the past, to fully or partially fund these positions. However CHWs are now seen as a key and permanent part of the primary care team and this raises the question of whether they should be funded via SIA.

CHWs provide a link from primary care to the patient in their own environment. This allows an understanding of the social determinants of each person and identifies key intersectoral agencies that could or should be involved in their care.

CHWs can play a role in assisting patients and whaanau to help navigate the system from health providers to intersectoral agencies such as WINZ and Housing New Zealand. They can also play a role in improving the health literacy of patients, which is known to be poor nationally [119] which has positive flow on effects for the individual, family and whaanau and their community. In the future CHWs are expected to play an increasing role in helping people to self-manage their health conditions.

> CHWs allow an insight into the home and to understand the reality of the patients' situations. They provide a link to dealing with the social determinants of health. They can organise transport, Salvation Army food parcels, coordinate their discharge from hospital and explain about medical issues as many don't understand their doctors. 80% of our CHWs have English as a second language which helps facilitate this relationship.
>
> CEO, medium PHO

> A CHW is attached to each practice in our PHO. They are trained up at the colposcopy clinic to know what happens in order to be able to explain this to the women enrolled in the practices needing this service. Our PHO had a 40% DNA rate at colposcopy clinic but this is now down to 12% after six months. We are not talking about big numbers but it is important to achieve as these women already have changes to their cervix and are therefore higher risk of cancer.
>
> CEO, ethnic PHO

Training for CHWs in CMDHB has been developed by MIT who now offer a Level 4 Certificate in Community Health Work. One PHO has "home-grown" their own CHW workforce by training up people who speak another language common in the practices' population. They were trained by the PHO's lead clinician and quality advisor and the PHO nurse leader along with some social work input. These CHW currently sit in the PHO's general practices and have a degree of autonomy. However there are plans to reorganise this in order to improve their efficacy.

Similarly a CMDHB project is underway to develop the scope of practice for primary care CHWs.

8.2.6. Allied health professionals in primary care

Allied health professionals provide services and engage in activities which include prevention, assessment, evaluation, diagnosis, treatment, rehabilitation, advocacy, promotion of health and wellbeing, education and research. This broad speciality group includes pharmacists, physiotherapists, occupational therapists, social workers, optometrists, psychotherapists, audiologists, psychologists, dental practitioners, dieticians and podiatrists. There are also a number of others that are not included in this list.[51]

[51] A full list of allied professionals can be found at http://alliedhealth.org.nz/

One of the key objectives of the Strategy was to create a multidisciplinary team in primary care which would include allied health professionals. However the primary care multidisciplinary team has become the GP, practice nurse and administration with CHWs included occasionally rather than the intended broad range of professionals.

One of the reasons for this is the lack of direct funding allocated to allied health professionals under the Strategy. Instead funding has focused on traditional primary care with capitation going to GP and practice nursing consultations. This was highlighted by several stakeholders interviewed as well as in national literature as being a significant barrier to moving to the required new model of care.

> Despite it not being its intention the Strategy only funded GPs rather than wider team such as physiotherapy and pharmacy. The Strategy failed completely to integrate services. Look at diabetes for an example. This condition needs multiple providers to help improve health outcomes such as podiatry and dietician. Yet they are not funded.
>
> CEO, small PHO

Despite this lack of dedicated funding some PHOs employ or contract various allied health professionals, particularly podiatrists, dieticians and pharmacists.

- One of the smaller PHOs employs a podiatrist to perform free diabetic foots checks on enrolled patients as well as providing access to retinal screening locally in order to improve the health outcomes for their patients with diabetes.
- Another PHO has a pharmacist on staff that does medication reviews in enrolled patients' homes when referred by their GP. They will also visit rest home patients. This view into the individual's home circumstances can help increase compliance as well as ensuring appropriate medications are prescribed. This is important given the growing burden of chronic disease in the district.
- The CCM depression module also enables GPs in the district to refer patients requiring cognitive behavioural therapy to psychologists for free or a reduced cost. This has led to good working relationships forming between psychologists and general practices in the area.
- Dieticians are employed or contracted in a number of PHOs. There is a need for an increased number of dieticians working in the primary care environment given the increasing rate of obesity in CMDHB. Reducing weight and managing the chronic health conditions that can result from obesity such as diabetes and renal failure need careful monitoring and management. Dieticians play an important role in self-management of these conditions along with improving health literacy

Only a small number of allied health professionals are employed in primary care nationally, with the bulk sitting inside the DHBs. The actual number of allied health professionals working in a primary care setting in CMDHB is unknown as the numbers employed or contracted to PHOs or individual practices are not required to be reported.

To move forward in the development of multidisciplinary teams intended by the Strategy there needs to be a way that allied health professionals are funded or able to generate their own funding in primary care. Additionally the allied health profession numbers should be part of the recording of the primary care workforce in CMDHB.

8.2.7. "Growing our own" primary care work force

CMDHB and several PHOs have chosen to be proactive in developing the PHC workforce in the district by 'growing their own'. TKOH has developed a mentoring and training programme as a bridge to nursing for Maaori women and THO has trained up their own local CHWs and HCAs.

The Centre for Health Services Innovation is a response by the CMDHB to provide educational and learning infrastructure to grow, develop and support the districts current and future workforce and to build skills and knowledge to enhance service delivery. In addition to workforce development, the Centre will provide a focus for research, evaluation, innovation and quality improvement activities at Counties Manukau and also represents a significant contribution to improving the educational and socioeconomic outcomes for the district

The intention is to achieve this by partnering with tertiary education providers to establish a learning and training facility at CMDHB, which will be linked to community-based learning activities. A strategic objective of the proposal is to grow a sustainable future workforce from Counties Manukau communities, with a particular emphasis on significantly increasing the proportion of Maaori, Pacific and Asian people who work in healthcare in Counties Manukau. It is necessary that training of community based health professionals is seen as important as hospital based specialities.

8.3. Multidisciplinary teams and teamwork

Multidisciplinary teamwork can be defined as the collaboration between different professional groups to achieve a common purpose. It was proposed by the Strategy and the CMDHB PHC plan as part of the solution to the challenges and demands facing primary care. Team work in a health setting has been researched extensively and advantages of such an approach relate to improvements in clinical quality, system productivity, patient satisfaction and employee morale [120, 121]. However research in primary care settings has not always found this to be the case [122].

Engaging GPs in teamwork and the development of nurse-led clinics is often challenging as there often is insufficient collaboration between doctors and other health professionals in the “team”. GPs have grown from working in solo practices to group practices yet in many ways are still “working alone together” with other team members [123].

A strong comprehensive integrated PHC model underpins a nationally effective health care system both in terms of population based health outcomes and cost. Working in a multidisciplinary team requires the transfer of tasks via delegation or reallocation of tasks to other members of the team. It is vital that an appropriately skilled individual is chosen along with effectively utilising a team approach in order to provide these maximum health benefits to the population as well as ensuring patient safety.

Therefore working as a “team together” requires GPs to redefine their role. Whilst positives of teamwork are highlighted by GPs and include the division of labour, being relieved of some responsibility and being able to concentrate more on medical tasks, these are often counterbalanced by negatives such as teamwork being more time-consuming than doing it oneself, concerns over the doctor having final medico-legal responsibility and potentially losing the continuity of care that is seen as a defining aspect of being a GP. Learning to work in a team is also not formally taught in medical school and therefore actual training will likely be required to get buy-in to the process as well as to achieve this skill.

It is not surprising then that the substitution of practice nurses for certain GP tasks will not always reduce costs or reduce GP workload given the current progress on teamwork. Careful management and development of teamwork is required to ensure that primary care can achieve the most efficient and efficacious system for the district. There has been some slow incremental change in this area with regards to improving teamwork, with the introduction of some nurse-led CCM clinics and the employment of CHWs and HCAs and utilising the reception, clinical staff and practice managers in effectively running the practice. Moving from GMS claiming to capitation has helped achieve this as doctors are no longer required to see every patient for funding purposes.

> Our PHO is team driven - the receptionists and nurses are highly involved in getting the team to work. It runs from reception to clinical assistants to nurse to doctors to operations managers. It is not doctor-centric now GMS claiming has gone.
>
> CEO medium PHO

> There have been small incremental changes over the years with changes in GP and practice nurses mindsets. Practice nurses are doing more professional development and doing portfolios. This is good for quality improvement. However there needs to be a growing of trust between practice nurses and GPs to increase actual effective team work. And there needs to be clear ring marking of responsibilities. Old school attitudes in general practice does persist in this area. For both GPs and practice nurses not wanting to train.
>
> Nurse Educator, medium PHO

However the change to the funding of primary care is not seen as being completely successful in developing the multidisciplinary team envisioned by the Strategy. Current funding is doctor-centric and the inclusion of practice nurse funding into the general capitation pool is seen as a disadvantage for developing the practice nurse role. In addition ACC funding still requires a GP consultation regardless of the injury in order for the practice to receive funding.

The development of a multidisciplinary team in primary care is also limited by the majority of general practices in Counties Manukau being privately owned small to medium practices. Many do not have the financial capacity to employ a broad range of multidisciplinary staff such as specialist nurses, additional nurses, allied health professionals, practice managers and receptionists.

8.4. Continuous Quality Improvement

One of the key objectives of the Strategy and also one of the goals of the RNZCGP in the last few years has been to drive quality improvement in primary care in order for it to have the greatest impact on health outcomes whilst maintaining a sustainable service. IT capabilities have improved and there is the ability to utilise primary care data to assess performance and develop strategies for more effective and efficacious care. This is particularly important in this environment as financial constraints and workforce shortages will continue to exist as the population grows, ages and the burden of chronic disease rises.

> There is work required on how to grow the performance culture in primary care. Some PHOs have not only a PHO-DHB gap in communications but also a gap between practices and PHOs. There's a need to promote a bottom-up approach in order to focus on and improve service delivery and performance outcomes.
>
> Clinician, medium PHO

The following section focuses on patient-reported experiences as a measure of quality, the PHO Performance Programme (PPP), the Cornerstone and Te Wana Accreditation process along with current initiatives that are occurring in primary care in the district to drive quality improvement.

8.4.1. Patient-reported Outcomes

'The patient should be the judge of patient centred care[124] '

Patient reported outcomes include health-related quality of life, self-reported health status, symptoms, feelings and satisfaction with treatment [125].

Tools have been developed to measure these outcomes. For example the Patient Enablement Instrument by Howie et al [126] measures how confident and how in control people feel about their health after a consultation and the Diabetes Empowerment Scale [127] is used to assess whether patients are able to problem solve about issues related to their illness, and have the confidence to seek care when they need to. Tools like these examples are important to develop and utilise given the movement towards increased self-management of long-term conditions.

However apart from patient satisfaction, patient-reported outcomes are infrequently reported in primary or secondary health care in New Zealand, leaving only clinical and process KPIs to measure effectiveness of the health system. The important perspectives of patients and their family and whaanau are often overlooked.

If primary care aims to improve patient experiences by the process of developing new models of care, then those perspectives of the patient need to be heard and developed into appropriate tools to drive quality improvement. For Counties Manukau's multicultural population, understanding patient's cultural perspectives and experiences of the health system may well provide a vital input into developing processes to improve the delivery of primary care in the community and reducing acute demand.

8.4.2. PHO Performance Programme (PPP)

The PHO Performance Management Programme (PPP) has been designed to drive quality improvement in primary care. It aims to improve the health of enrolled populations and reduce inequalities in health outcomes. The programme has been running nationally since 2005 and all CMDHB funded PHOs at the time were enrolled onto the scheme by July 2006.

Quality improvement is expected to occur through the establishment of strong clinical governance at both the DHB and PHO level along with providing incentives within the PHO environment and at practice level by the introduction of payments for progress in performance against a range of national key performance indicators. In order to participate in the programme and be eligible for the incentive payments, PHOs were expected to meet a number of prerequisites demonstrating how they intend to implement the programme, including the development and implementation of clinical governance structures[128].

Individual DHBs are responsible for the oversight of PHOs' participation in the PPP and to ensure prerequisites are met and agree to each PHO's performance plan. They can then assess each PHO's progress against this plan. The DHB can also supply additional funding to the programme though this has not occurred in CMDHB.

The nationally consistent indicators were initially divided into three groups:

- Clinical indicators
- Process indicators
- Financial Indicators

The clinical indicators focus on national priority areas to support best practice, population health initiatives and overcoming barriers to access for the high needs population. To increase equity of access, treatment and health outcomes, some targets for the clinical indicators are measured for the PHOs high needs population. The payments are also weighted toward progress for the high needs populations in order to place focus on reducing health inequalities. The process indicators included achieving a target for valid NHIs on patient registers and utilisation of services by high need enrolees. The financial indicators examined community laboratory and pharmaceutical expenditure and compared actual against benchmarked expenditure. The target was to ensure expenditure was ≤100% of benchmark. This is to ensure that these resources are used appropriately and also that they reflect the population's health need.

The process indicators were dropped from the programme in July 2008 and additional clinical indicators were included along with the exclusion of others. Now the bulk of payments occur for achieving clinical indicator targets with 20% of funding put towards achievement of financial indicators. Current indicators are listed in Table 28.

Each indicator has a national target and each PHO has an individually set target which is derived from their baseline data. These targets are reviewed every six months. Once targets have been set for each indicator, PHOs monitor progress against targets for the indicators and work with their general practices as part of quality improvement.

Table 28 PPP current performance indicators

Indicator		Weighting	National Target
Clinical			
Breast cancer screening coverage	High needs	6%	70%
Cervical cancer screening coverage	Total population	3%	75%
	High needs	6%	
Cardiovascular disease risk detection	Total population	8%	80%
	High needs	12%	
Diabetes detection	Total population	3%	90% detected and coded in PMS
	High needs	6%	
Diabetes follow up	Total population	3%	80%
	High needs	6%	
65+ Flu vaccination coverage	Total population	3%	75%
	High needs	6%	
Age appropriate vaccinations in 2 year olds	Total population	3%	85%
	High needs	6%	
Financial			
GP referred Laboratory expenditure	Total population	10%	Actual laboratory test expenditure for a DHB region matches its expected expenditure
GP referred Pharmaceutical expenditure	Total population	10%	Actual pharmaceutical expenditure for a DHB region matches its expected expenditure

Source: DHBNZ

Payment occurs when PHOs reach or make some progress towards their own target, which is not necessarily the same as the national target. PHOs decide how these payments are to be used as part of their performance plan with the DHB and in CMDHB the incentive payment is normally passed onto the practices achieving their targets. The actual financial incentive from the PPP is small in relation to total PHO incomes.

GPs receive ongoing feedback on their individual progress against the performance indicators from PHO reports and also individualised reports on their pharmaceutical and laboratory utilisation which compares them to their peers. GPs enter an agreement to supply data to the programme when their PHO enrols in the PPP. However individual GPs and practices can 'disengage' from the programme by simply not altering their performance on the indicators.

8.4.2.1. Feedback from key stakeholders

Whilst there is a clear consensus from the stakeholders interviewed, national policy and the RNZCGP in support of quality improvement in primary care, there is a general view that the PPP is not providing this due to a number of issues.

> PPP data doesn't tell the full story. I'm totally disillusioned by process. Not one indicator says you should look at this with scepticism as there are issues with the data. For example it is likely that immunisation rates have not changed much. Instead they have gone up as we are collecting more data. In addition the denominator used for some indicators such as diabetes is a major issue as in Counties Manukau there are very different populations than national. That's how you get 120% of Pacific diabetics having an annual check!
>
> CEO, small PHO

For a number of clinical indicators there are data issues which make the results meaningless to many providers.

- The entering of results into the system to be counted is dependent upon practice staff understanding their PMS system and having the IT capability to do this accurately. Having appropriate training in using the PMS system and introducing a quality improvement process such as regular auditing of data will help prevent the problem of meaningless data. It will remove the problem of "rubbish in, rubbish out".
- Similarly the numerators and denominators used are not necessarily accurate for all of the localities of Counties Manukau. The text box above provided a classic example where the prevalence of diabetes calculated by the Ministry of Health has not been accurate for the Counties Manukau population leading to nonsensical results.

Combining these issues can lead to limited buy-in to the programme. This limits the impact of the PPP on improving quality in primary care and may have the unintended consequence of diverting scarce resources from other key areas and other quality improvement innovations.

However the introduction of the new cardiovascular screening indicator has been better received by those interviewed. In addition some PHOs employ staff to encourage buy-in and help drive quality improvement via the PPP at practice level.

> The cardiovascular targets that have just been added will be helpful to improve performance but the other indicators have had minimal uptake by practices. Practices that do best tend to encourage team work and distribute any money received from meeting target to the team. We try to drive quality in the programme by employing a staff member to help GPs read their reports and help them in meeting targets.
>
> CEO, medium PHO

It was also questioned whether the PPP is measuring the most appropriate indicators. The majority of the original clinical indicators describe processes of care which frequently are not for the most part close to the end of the causal pathway from process to outcome. For example the cervical smear indicator is very early in the chain of events that improve health outcomes. However just as with the CCM programme, some interviewed viewed the PPP as introducing a yardstick for

measuring progress which is an important first step in introducing quality improvement in primary care. Previously this has been difficult to drive in general practice.

> In 2006 the PPP was introduced into our PHO and this allows benchmarking of our own progress. I guess you could debate if KPIs are clinically adequate or not but at least it's measured on data supplied locally by providers. It is an attempt to leverage better quality. Improving quality in general practice is difficult.
>
> CEO, small ethnic PHO

8.4.2.2. The Cardiovascular Risk Assessment Indicator

The Cardiovascular Risk Assessment indicator has been an important new addition to the PPP and is described here as an example of an indicator that has greater acceptability from GPs.

A Cardiovascular Risk Assessment (CVRA) is a tool for identifying individuals at high risk of a cardiovascular event and therefore enabling health professionals to provide appropriate management and support. Cardiovascular disease (CVD) is the leading cause of mortality and morbidity in Counties Manukau particularly for Maaori and Pacific peoples, impacting on their average life expectancy and quality of life. Primary prevention and early treatment can increase both life expectancy and quality of life for these at-risk populations.

Data collection

Data is collected from the PHOs. The target is set at 80% and has been in effect since July 2008. CVD risk assessment guidelines targets the following high risk population subgroups:

- males of Maaori, Pacific or Indian sub-continent ethnicity aged 35 to 74 years
- females of Maaori, Pacific or Indian sub-continent ethnicity aged 45 to 74 years
- males of any other ethnicity aged 45 to 74 years
- females of any other ethnicity aged 55 to 74 years.

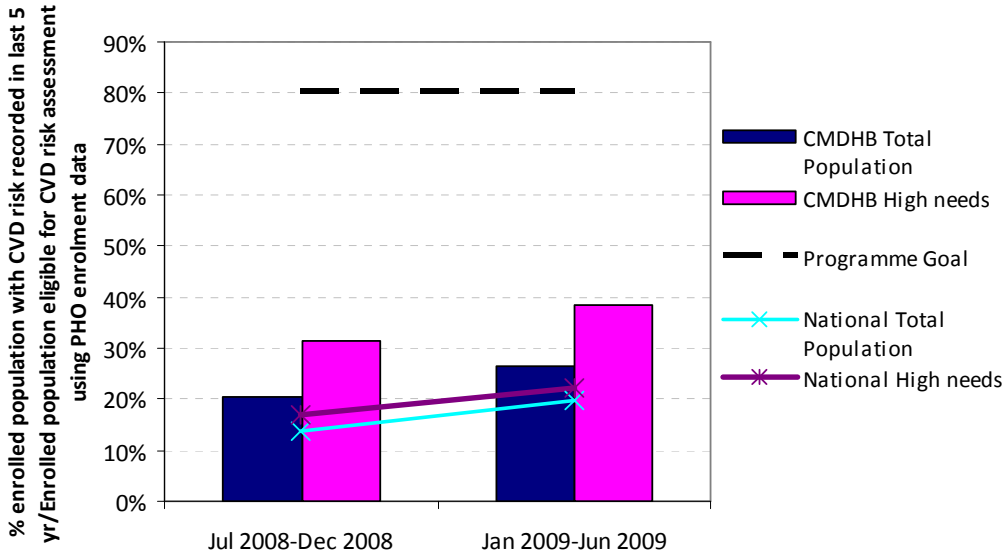
The denominator is formed from the number of these particular groups enrolled in the PHO/practice. The numerator is the number of patients eligible that have a CVD risk assessment recorded in the last 5 years.

There are a number of templates that can be used in practices but normally data from the patient's record is entered or self-populated into the template to calculate an overall risk. The result then shows up in the patient's record. Blood pressure, cholesterol and BMI are some of the key results entered into the template. However the template can combine data taken at different times over the last five years which may not be the most accurate way of utilising this tool.

Results

Counties Manukau PHOs are performing better than the national total and high needs populations though there is a long way to progress before the national target is achieved (see Figure 76). The increase in identifying high needs individuals for an assessment is particularly encouraging and a good first step in improving health outcomes for Maaori and Pacific people and starting to close the gap.

Figure 76 PPP Cardiovascular Risk Assessment clinical indicator for CMDHB versus national



Source: CMDHB data from DHBNZ

8.4.3. The Cornerstone Accreditation Process

Accreditation is defined as "a self-assessment and external peer review process used by health care organisations to accurately assess their level of performance in relation to established standards and to implement ways to continuously improve the health care system [129]."

The RNZCGP developed the Cornerstone Accreditation programme and implemented it in 2004 in order to grow the continuous quality improvement culture in general practice. The Cornerstone Accreditation process is a framework for practices to ensure that quality of care is being provided to patients. The practices participating are compared against a range of indicators and criteria that identify the minimum legal and safety standards required by the College. A number of other areas are highlighted as key for development in order to improve the practice's organisational systems and clinical care.

The practices are assessed by peers who undertake an external assessment, coming into the practice and ensure standards are being met appropriately. Their report then is verified. The Health and Disability Auditing New Zealand provides this oversight for Cornerstone and provide an analysis of reports and recommend practices to the College for final accreditation.

Some of the key areas that require competency, and therefore training in, include:

- Code of Health and Disability Services Consumers' Rights 1996 – all practice team within last three years
- Health Information Privacy Code 1994 – all practice team within last three years
- Cultural Competence – all practice team within last three years
- Treaty of Waitangi – all practice team
- Recognition and appropriate response to urgent medical conditions – reception staff
- CPR training – all practice team, ACLS levels 1 to 7, current certification required
- Disinfection and sterilisation policies to urgent medical conditions – appropriate team members in the last year

- Vaccinator training – designated team members, current certification required
- Screening and recall programme – appropriate team members, eg PMS training, smear taking courses
- Formal management training – practice manager
- Continuing professional education – professional team members

In addition feedback from patients is required along with medical record review. Further information on this can be found at the RNZCGP website.

Cornerstone has been received fairly positively by most general practices. In the CMDHB area 42 out of a 109 practices have completed the first accreditation process.

8.4.4. Te Wana Accreditation

Another accreditation process is Te Wana, a Health Care Aotearoa quality programme based on an Australian Community and Health Accreditation and Standards Programme [130]. Currently two general practices in the district have accreditation with Te Wana.

Te Wana is a set of standards and a process to measure an organisation's performance against. These standards were developed in consultation with the community. The standards are outcomes based and are reviewed every three years enabling new participants in Te Wana to contribute to their modification and enhancement.

The Te Wana accreditation process enables the identification of gaps in organisational performance, sets in place a plan to reduce the gaps, ensures implement of the plan with re-assessment before moving forward. The assessment is not done by an outside agency. Rather, Te Wana involves self assessment, coupled with peer review.

Te Wana has a set of core requirements that must be achieved. These values include:

- Te Tiriti o Waitangi: Maori perspective and tauiwi perspective
- Consumer and Community Participation
- Consumer Rights
- Management and Leadership
- Planning, Quality Improvement and Evaluation
- Training and Development
- Work and its environment

Some practices undertake accreditation with Te Wana but also complete Cornerstone as the latter has a stronger clinical component.

8.4.5. Improving quality in CCM in CMDHB

The CCM programme in CMDHB did not include a continuous quality improvement component from the beginning. A clinical network programme pilot funded by DHBNZ has been approved for 18 months working in the localities of Otara, Mangere and Papatoetoe. Practices within the collaborative will initially be supported to examine their CCM performance data. The clinical network will look at measures of clinical outcomes, resource utilisation including hospitalisation, and organisation process measures. They will also examine particular patients that have high and complex needs. The outcome of the process will be the development of a population plan for the localities in which the practices sit.

The plan will include areas to target (such as smoking cessation) and the strategies to achieve the changes required. The plan will include the skill set required and the resources and identify any gaps that need to be addressed. All key stakeholders will then work with this plan over three months focusing on the identified target areas.

After 3 months the clinical network will reconvene and look at the changes that have occurred in the indicators and reasons why (or why not). From this process the group again sets targets, reviews the population plan, and works on affecting the desired change. This process will continue to cycle for 18 months in total.

8.4.6. Obtaining a population view of CMDHB

The Health Intelligence Unit at CMDHB is working on the development of a strategic plan in order to obtain a population view of the district. The key issue is having the ability to look at all of the interfaces Counties Manukau residents have with their health providers. This includes primary, secondary and community health providers.

Having this population view will enable the following to take place:

- Longitudinal study across primary and secondary care
- To understand the underlying behaviours and subsequent health issues of the population
- To be able to use the results of data mining and analyses to influence future health strategy
- To understand what is being delivered in the district, who is delivering it and how it is being delivered
- Creating locality profiles for the local health networks
- Measuring outputs and outcomes

Currently CMDHB holds a number of datasets which can be analysed and provide important information for planning. However the majority of primary care datasets aside from the PHO registers are unavailable for analysis at this time. For example GP consultation datasets are not available for analysis.

Being able to develop a strategic framework to access this data through consultation with key stakeholders will enable the "joining up" of important data. For example the identification of high smoking rates in a particular locality would enable tailoring of smoking cessation strategies to this community in order to improve long term health outcomes.

8.5. Summary

- There has been much discussion nationally and internationally about the need to respond to the growing burden of chronic disease, as well as an aging population, by changing the model of care in PHC. Heavy work loads with patients with both simple and complex issues, reduced numbers of GPs entering the speciality, the increasing complexity of funding and administration requirements and the current governments wish to devolve some secondary care services into the community makes a change to the model of care necessary.
- The potential PHC workforce is vast. GPs, practices nurses, community health workers and allied health professionals form an important role. Roles new to primary care such as nurse practitioners and health care assistants are also being introduced into practices yet are not widely used. Formal competency frameworks will be required to the appropriate roles for this workforce, in order to ensure quality of care and patient safety.
- It was difficult to determine how many FTE GPs, practice nurses, CHWs, allied health professionals and HCAs are working in primary care in the district as there was not a consistent and complete dataset. This makes it extremely difficult to develop work force plans effectively if there is not an accurate and timely collection of this data in the district.
- CMDHB and several PHOs have chosen to be proactive in developing the PHC workforce in the district by 'growing their own'. The Centre for Health Services Innovation is a response by the CMDHB to provide educational and learning infrastructure to grow, develop and support the districts current and future workforce. It is important that there is a focus on growing the community workforce
- The growth of Community Health Workers (CHW) in primary care is the biggest change that has occurred in the Counties Manukau primary care workforce in the last ten years. CHWs provide a link from primary care to the patient in their own environment. This allows an understanding of the social determinants of each person and identifies key intersectoral agencies that could or should be involved in their care.
- Counties Manukau was approximately 50 FTE GPs short of the recommended 1 FTE GP per 1400 of the population in 2001 which equates to having 1 FTE GP for every 1600 people. This has not changed dramatically in 2009 and an ageing workforce and a trend in decreasing clinical hours on a background of population growth will impact on the FTE availability of GPs in the district going forwards.
- There is also a shortage of practice nurses in the district, particularly nurses of Maaori and Pacific ethnicity. Practice nursing is important, particularly in the provision of chronic disease management. However practice nurses often struggle to put their learning's from postgraduate training into practice as their employer fails to see its full value. It is now necessary to redefine the appropriate role of the practice nurse in the current environment to ensure maximum use of this resource.
- A multidisciplinary team approach is proposed as being the most efficacious and cost effective way to deal with the provision of PHC to a population that is growing in number and in complexity of health needs.
- A multidisciplinary team requires the transfer of tasks via delegation or reallocation of tasks to other members of the team. It is vital that an appropriately skilled individual is chosen along with effectively utilising a team approach in order to provide these maximum health benefits to the population as well as ensuring patient safety. Therefore there is a need to define and redefine the roles of the GP, practice nurse, CHW, HCA, nurse practitioner and allied health workforce in the provision of care going forward.

- One of the key objectives of the Strategy was to drive quality improvement in primary care in order to have the greatest impact on health outcomes whilst maintaining a sustainable service. IT capabilities have improved and there is the ability to utilise primary care data to assess performance and develop strategies for more effective and efficacious care. This is particularly important in this environment as financial constraints and workforce shortages will continue to exist as the population grows, ages and the burden of chronic disease rises.
- There are still substantial gains to be made in this area with improved data collection and increased sharing of primary care data to help inform appropriate interventions for the population. Quality improvement in both the CCM programme and PPP are necessary to ensure the current resources are being utilised appropriately in order to maximise positive health outcomes for the community.

Chapter 9. A Snapshot of CMDHB Population Health Status 2009[52]

This section provides a snapshot of Counties Manukau at the end of the time period of interest, 2009, in order to look at changes in demography and health status since 2001.

9.1. Demography

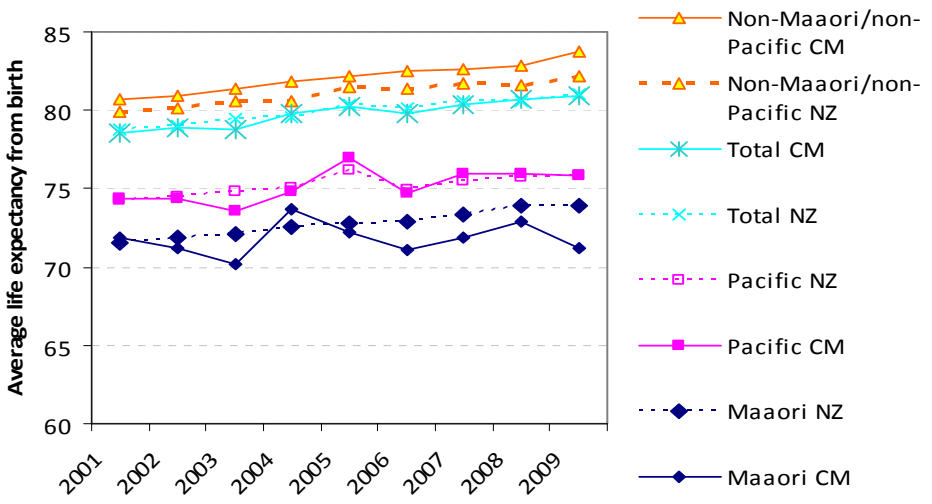
The estimated Counties Manukau population for 2009 was 481,660, 11% of the total New Zealand population. The Counties Manukau population is growing at 2-3% per year, which equates to an additional 8-12,000 residents each year. The population is also very young with 25% of the population aged 14 years and under. The birth rate is higher in Counties Manukau than nationally and is hypothesised to be due to younger people migrating into an area with more affordable housing. However the population is also ageing and the number of over 65 year olds in the district (particularly Maaori and Pacific peoples) is expected to double from 2001 numbers by 2021.

Counties Manukau has high numbers of Maaori and Pacific peoples making up 17% and 22% of the population respectively. Nearly 34% of the Counties Manukau population are living in areas that are very deprived. A high concentration of Maaori (57%) and Pacific peoples (73%) live in NZDep 9 and 10 areas. Maaori are more likely to live Manukau/Manurewa (27% of the Manurewa population), Otara (18%), Takanini/Papakura (28%) and Mangere/Papatoetoe (16%). Pacific peoples are more likely to live in Mangere and Manurewa (39% of the population of those suburbs), 22% in Otara (64% of the Otara population) and 9% in Papatoetoe (25% of its population).

9.2. Health Status

Figure 77 shows the average life expectancy from birth from 2001 to 2009 nationally and in Counties Manukau.

Figure 77 Average life expectancy from birth for Counties Manukau residents versus New Zealand, 2001 to 2009



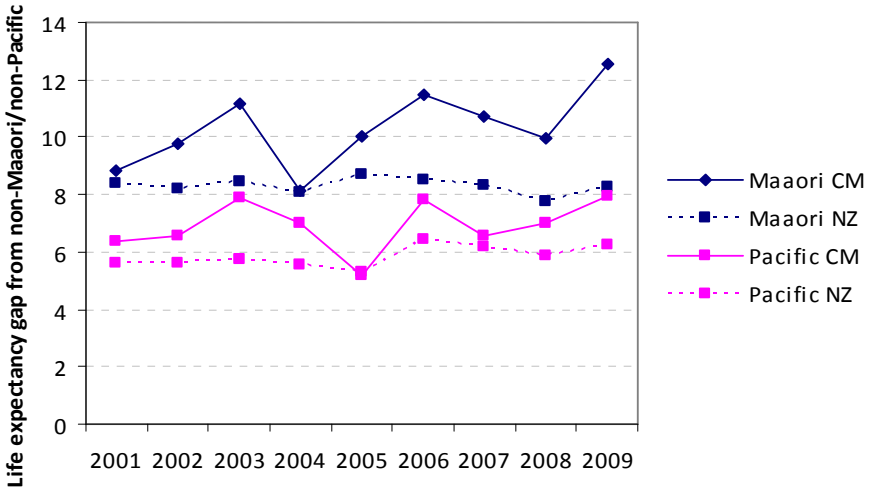
Source: CMDHB analysis from the NZHIS mortality collection

[52] Data from this section is sourced from internal CMDHB data sources unless otherwise stated

For a child being born in CMDHB in 2009, their average life expectancy based on this data would be 82.8 years if female, 79 years if male. Life expectancy in Counties Manukau is increasing on par with national rates. However when data is disaggregated by ethnicity the overall picture is not good. Counties Manukau non-Maaori/non-Pacific life expectancy continues to grow and is higher than the national average. New Zealand Maaori and Pacific peoples are doing less well than non-Maaori/non-Pacific and have started to flatten off since 2007. Pacific people in Counties Manukau have a similar life expectancy to their national counterparts. Unfortunately Counties Manukau Maaori are doing worse than national Maaori, running approximately 1.7 years behind. Differences between the groups are statistically significant.

Figure 78 presents a gap analysis, using trend data for each ethnicity, and subtracting non-Maaori/non-Pacific average life expectancy from Maaori and Pacific peoples. This gives a life expectancy gap of 12.6 years for Counties Manukau Maaori in 2009 and a gap of 7.9 years for Pacific peoples. Since 2001 there has been an increase in this gap for these ethnicities with a 42% increase for Maaori and a 24% increase for Pacific people in Counties Manukau.

Figure 78 Gap analysis in average life expectancy from birth for Maaori and Pacific compared to non-Maaori/non-Pacific, 2001 to 2009



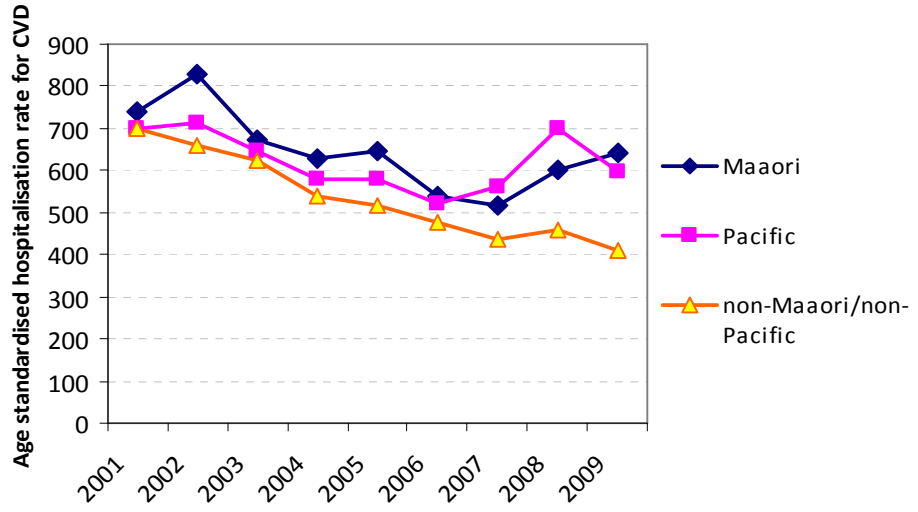
Source: CMDHB analysis from the NZHIS mortality collection

Further to this increase in inequalities in average life expectancy, in the last two years it would seem that Maaori and Pacific peoples' hospitalisation rates for cardiovascular disease have been increasing, whereas the non-Maaori/non-Pacific group have been falling (see Figure 79).

CVD is a largely preventable disease and is able to be continued to be prevented through a recession if one looks at the non-Maaori/non-Pacific rates. This is a concern as it may not be a fluctuation in the data but the first glimpse of the impact of obesity, diabetes and less smoking cessation for Maaori and Pacific peoples.

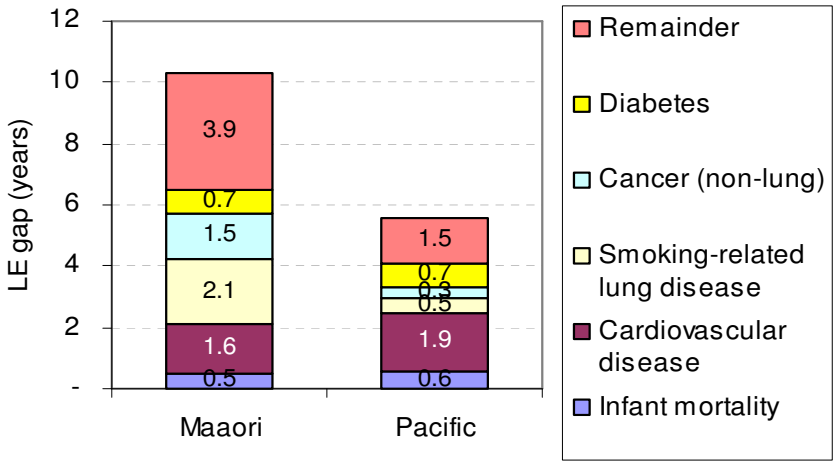
This is given support when the main causes of mortality that give rise to this gap in life expectancy were analysed for CMDHB for the 2005 year. Looking at Figure 80, the upstream causes of this gap are smoking, obesity, nutrition and physical activity and these drive the cardiovascular disease and diabetes gaps. Smoking-related lung disease is significant for both Maaori and Pacific peoples and contributes to infant mortality through increased SUDI (cot death).

Figure 79 Age standardised hospitalisation rate for cardiovascular disease by ethnicity, 2001 to 2009



Source: CMDHB analysis from the NZHIS

Figure 80 Life expectancy – five main causes of ethnic gaps

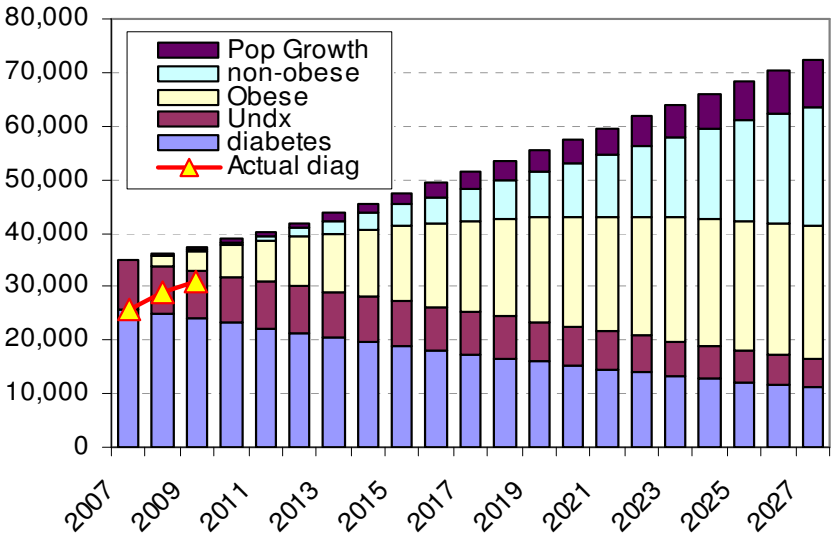


Source: CMDHB

Recent analysis of Counties Manukau diabetes rate shows that the prevalence is increasing faster than previous modelling. Figure 81 shows the actual prevalence of diabetes in 2007 to 2009 (see the line with yellow triangles) overlaid on the modelled predicted growth to 2027. Whilst the model predicts a doubling of diabetes by 2027 the actual increase in diabetes is higher than what is modelled. The growth from 2007 to 2009 was 24%, higher than the 13% predicted by the model. CMDHB has added another 6,000 new diabetics to the population from 2007-2009. South Asian and Pacific peoples make up 44% of all people with diabetes despite making up only 30% of the population.

In addition this report has shown some disturbing signs in the last 2 years with overall increases in ASH rates and less urgent EC attendance especially with Pacific peoples (see chapter 4). Whilst the "Swine flu" epidemic partially impacted on these rates in 2009 it is worrying that these may continue to trend up. Pacific peoples' rates, particularly for children, tend to be a barometer for what is to come.

Figure 81 Diabetes model CMDHB predicted prevalence, 2007 to 2027, with actuals for 2007-2009



Source: G Jackson, K Wang, 2009 CMDHB

Learning's

It is helpful at this point to recap the key objectives that underpinned the national policy change in PHC. The objectives centred on:

- Identifying and reducing health inequalities
- Offering access to comprehensive services to improve, maintain and restore people's health with an increased emphasis on health promotion and disease prevention
- Co-ordinating care across service areas and considering the wider determinants of health and establishing links with other health and non-health agencies
- Developing the PHC workforce
- Continuously improving quality using good information.

This learning's section will review what has worked well in the district with regards to working towards the achievement of these objectives. It will then look at key issues and questions that need answering in order for primary care to continue to progress forward in achieving these objectives.

What's going well?

- A commitment by PHOs/providers to do better, and work smarter within financial constraints, to improve health outcomes is strongly present in the district. PHC providers are key people to identify health inequalities in the community and advocate for strategies to improve the health of the CMDHB population.
- The community has a high level of enrolment, with approximately 95% enrolled in PHOs in and outside CMDHB. Enrolment gives access to lower copayments and other PHO initiatives such as SIA and health promotion funded projects.
- While the number of general practitioners has not increased substantially, there has been good retention of GP numbers, something that was not assured prior to the income increases made possible by the Strategy.
- Despite the presence of data issues, there are steadily increasing screening and immunisation rates for Maaori and Pacific peoples with some closing of the gap between the rates of screening for these populations and for the non-Maaori/non-Pacific people.
- There has started to be an incremental shift to a population based approach in general practice with a focus on prevention. Systematised care for diabetes, cardiovascular risk assessment and other disease processes are now common place, at least in some practices. There is good evidence in improvements in quality of care and reductions in ethnic inequalities in the provision of care – for example blood pressure lowering medication prescription rates for Maaori and Pacific compared to non-Maaori/non-Pacific.
- Health promotion and SIA funding have allowed for innovation in the district. For example:
    - Procare's development and piloting of a health-promoting practices framework for general practice provides practical ways to grow the prevention, health promotion and population care culture in primary care.
    - East Tamaki Healthcare's partnership with a grass roots community development organisation, Otara Health Inc, (OHI) as the THO PHO has enabled the provision of health-promoting programmes to be offered to THO's enrolled population as well as growing the capacity of OHI to offer further programmes to their community.

- A solution for after-hours care has been reached that is low cost and potentially sustainable into the future.
- VLCA practices provide very low cost access to primary care. At least half of the enrolled population in the district has access to these very low cost fees regardless of CSC status.
- High needs utilisation appears to have increased since 2001 looking at PPP data from 2005 and proxy outcome measures such as community pharmaceutical expenditure., at least until 2007.
    - This is hypothesised to be partially due to lower copayments and this is supported when looking at results from the New Zealand Health Survey (NZHS) during this time. The NZHS demonstrates a drop in unmet need for a GP nationally from 12% of adults in 2002/03 nationally to 6.8% in 2006/07 with significantly higher drops in CMDHB. Cost was previously cited as the predominant reason for this unmet need.
- Widening of the scope of practice in primary care in CMDHB has occurred through changes by practices and PHOs, and through specific initiatives like SIA, CCM and POAC. POAC gives access to investigations in the community for those who could not previously afford it and allows primary care to offer a wider range of services. CCM provides an additional four free visits for those with complex chronic conditions. The depression module in particular is seen as innovative and well-received.
- There has been the continued development of a new workforce in primary care– the Community Health Worker (CHW). The CHW can be a key member of the primary care team for a community like Counties Manukau.
    - They provide the link to the individuals' social determinants that impact greatly on health and highlight to the provider what additional health and intersectoral services are required.
- There has been an uptake of the Cornerstone Accreditation Process by primary care in the district.
- The quality of primary care data sets has improved over the timeframe with a high proportion of NHI and ethnicity recording. Cornerstone and the PPP have partially helped with this and this improvement allows for matching of primary care data to national and hospital datasets.
- There is an acknowledgement that quality of care needs to be continually improved and this will require robust datasets and a population view of those enrolled. Knowing your own community means being able to tailor strategies effectively. For example matching ASH rates to PHOs and practices can help develop appropriate and specific interventions to reduce these rates.

Questions and Issues raised by the report:

Quality Issues

- To achieve progress in quality going forward it is necessary to ensure better collection of data in primary care. This will enable strategies to be developed based on local evidence rather than 'guesstimates'.
    - A limitation of this report was not including a further analysis to level 2 ethnicity and including Asian and South Asian results given their growing population and health needs in this district. It is recommended that further work includes this degree of analysis.
    - In many cases in this report, it proved necessary to utilise proxy measures of outcome as actual data from primary care was unavailable. This makes it difficult to conclude definitively that certain areas have improved with the implementation of the Strategy.

- In the future it would be of benefit to be able to share more primary care datasets and complete datasets in order to fully evaluate the effects of policy.

- There are a number of indications that the CCM programme needs reviewing to improve the quality of care. There are a number of questions that need to be asked:
  - Has the CCM programme been engaging the right populations? At present only the diabetes module has the proportion of Pacific people enrolled that would represent their burden of the disease in the community.
  - Should there be a tailoring of certain CCM modules to high need populations for key conditions given the cap on enrolment volumes due to financial constraints? For example ensuring that funded CCM places are prioritised to Maaori, Pacific peoples and South Asian populations for the CVD and Diabetes modules given their degree of disease burden
  - Is the current CCM programme actually making any impression on health outcomes– either good or bad? Are the changes in the current KPIs just random progressions back to the mean after the first year? The challenge remains to get KPIs as proximal to the health outcome as possible and then drive continuous improvement on these.
  - How can CMDHB, PHOs and individual practices do better in engaging their CCM population and is the current programme structure the most effective for this district?
  - How can the confusing interplay of three discrete long-term conditions programmes (CCM, Care Plus, Get Checked) be best managed?
- The PPP provides a set of KPIs to help improve the quality of performance in primary care with a particular focus on the high needs population. However like the CCM programme, there has been criticism of the PPP with many of the KPIs cited as being meaningless to providers. This raises the following points:
  - What can be done to increase buy-in to the programme in order to achieve better health outcomes for the Counties Manukau population?
  - Do there need be different KPIs that are meaningful to providers and the community? Who should decide what these KPIs are?
  - Are there issues with the way the data is collected that make results meaningless to many providers and can this be corrected? Certainly collecting the data at a NHI-based transaction level would assist in improving the quality of collection locally.
- Patient experience measures are an important aspect of quality of care and are part of CMDHB's Triple Aim and GP and nursing teaching. However there is limited practical use of this type of outcome measure in primary care. The GAIHN proposal under the "BSMC" EOI business case aims to include these outcome measures as part of the quality improvement process. For Counties Manukau's multicultural mix, understanding patient's cultural perspectives and experiences of the health system may well provide a key input in processes to improve the delivery of primary care in the community and reducing acute demand.

Health Inequalities in the district

- Life expectancy increases have started to stall in the last 2 years for Maaori and Pacific peoples living in CMDHB, with rates lower than those nationally for Maaori.
- Along with this worrying trend comes another concerning observation; overall rates for less urgent EC attendance and ASH conditions have started to increase since 2007 especially for Pacific peoples. Self-referral rates to EC have markedly increased yet most get discharged home signifying that they most likely could have been managed in primary care. The National

Evaluation of the Strategy also demonstrates a fall off in consultations particularly for Pacific people in 2006/07, having only 73% of the number of consults 'others' have.

- This increase in acute demand comes after a period of improvement from 2001 to 2006, though the gap between the high need ethnic groups and non-high needs did not close substantially due to improvements in non-Maaori/non-Pacific rates. This report would hypothesis that this stabilisation is partially due to the impact of lower copayments in the district as funding was rolled out, but the impact of this is declining as fees are progressively increasing in Interim and Access-funded practices and the international and national recession impacts on the district.
- This has a significant effect on the health system that is already struggling to maintain its current service not to mention the impact on health equity. By not attending primary care people miss out on preventive care and the potential benefits of continuity and coordination of care, as well as acute care. For example, this limits the provision of information on prevention such as smoking cessation and preventing obesity, two key messages that could slow the growth of diabetes and CVD in the district.
- While the life expectancy and EC usage results may be unrelated to changes in primary care provision, being temporally associated with the recession, they do form a worrying pattern. Key questions and issues that need to be considered include:
    - Are the increases in EC and ASH attendances related to the cost of accessing primary care? Unfortunately data was not available for this report on the actual copayment being charged. However there is a perturbing progressive increase in scheduled copayments for Interim and Access-funded practices. A quarter of the CMDHB population enrolled in Interim-funded practices are classified as high needs.
    - The Strategy's policy objective is that there is no requirement to provide CSC or HUHC discounts now that the funding roll-out is complete. However there is a degree of "swings and roundabouts" utilised in practices with some choosing to maintain discounting for card holders which is demonstrated in the latest National Evaluation of the Strategy. Unfortunately the degree of discounting in CMDHB is not known. This discounting is likely to be more sustainable in Interim-funded practices than the higher need Access-funded practices
        - There needs to be a better ongoing review of copayments 'charged' to the districts population utilising similar methodology to the National Evaluation of the Strategy. This will enable a clearer view on copayment changes and the impact (if any) on utilisation.
    - Or are the increases in EC attendance and ASH rates related to other areas of primary care that are not fulfilling their needs? Geographical, cultural and functional barriers have been discussed and this is an area that needs to be explored as potential reasons for this increase.
        - Without this knowledge it is very challenging to ensure that effective strategies are developed, which the CMDHB and PHOs can ill afford to do in this fiscal environment and with the degree of health need in the population.

Developing the PHC workforce and model of care

- There are many indications that a rethink of the delivery of primary care in the district is in order to meet the demands from the growing and ageing population, the increased burden of complex chronic disease and the shift to providing preventive care along with acute episodic care. A locality based approach with greater integration between services is desired by the majority with

the current "BSMC" business case potentially shifting the district closer towards the provision of this.

- CMDHB faces shortages in its primary care workforce. The development of the PHC workforce was a key objective of the Strategy and CMDHB's PHC plan and needs to focus on "growing our own". The Centre for Health Services Innovation provides an opportunity to develop the PHC workforce in the district and it is important that there is a focus on the community workforce rather than a predominance of hospital based workforce training.

  However this degree of planning is hampered by the lack of workforce information in the district. It was difficult to determine how many FTE GPs, practice nurses, CHWs, allied health professionals and HCAs are working in PHC in the district. This makes it extremely difficult to develop work force plans effectively if there is not an accurate and timely collection of this data in the district.

  - It is recommended that this data is recorded regularly and consistently by the DHB for every PHO.
  - It would also be beneficial to obtain more information on the PHC workforce working outside PHOs in the district.

- A multidisciplinary team approach is proposed as being the most efficacious and cost effective way to deal with the complexity of PHC provision to a population that is growing in number and in complexity of health needs.
  - How does the district ensure that there is buy-in to this shift?
  - What training will be required to achieve this and to ensure quality service and patient safety?
  - How will roles need to be defined and redefined for the PHC team going forward?
    - The continued extension of the CHW is important and formal training links with MIT have helped progress this.
    - The HCA role needs to be developed into how it will integrate into the primary care model in the district.
    - The nursing role needs to continue to be developed and funded to enable the best use of this resource by primary care.
    - The shortage of GPs in the district will be compounded in the future by population growth, the retirement of the ageing GP workforce and the trend to reduced clinical hours. The RNZCGP is currently reviewing the national GP training programme in order to make the speciality more attractive and ensure that it meets the requirements of the model of care into the future.
  - What funding implications are there for this new model?

- This leads to the challenge of continuing to have ring-fenced funding when there is a shift to a more integrated approach to care. Whilst this may not be ideal in all instances, there are indications that it is appropriate to ring-fence certain funding pools at this time.
  - There is an argument for continuing to ring-fence health promotion and SIA funding given the trending up of Pacific peoples and Maaori ASH rates and existing health inequalities in the district. This would assure that there continues to be population based preventive strategies funded for the district, in particular focused on these high needs groups.

- Further to this the reintroduction of ring-fenced funding for practice nursing has been frequently mentioned as a way to utilise the nurse resource more effectively in primary care. A significant barrier to using practice nurses to lead CCM programmes, for example, has been the presence of the GP employer–employee relationship and the lack of ring-fenced nurse funding. The true value of practice nurses, especially with regards to providing high quality structured care, is not always seen and the removal of ring-fenced funding has not helped drive the multidisciplinary team and model of care that the Strategy envisioned. Further consideration of how to drive this multidisciplinary approach is also needed.

Conclusion

The WHO Commission on the Social Determinants of Health [131] states that:

Health-care systems are a vital determinant of health...Health systems should be based on the PHC model, combining locally organised action on the social determinants of health as well as a strengthened primary level of care and focussing at least as much on prevention and promotion as treatment.

There has been useful incremental change in primary care in CMDHB since 2001. The development of PHOs, reductions in copayments, the introduction of POAC, CCM and Care Plus along with ring-fenced funding for high needs populations and prevention has helped move the model of care from the provision of acute episodic care to more of a population based preventive approach. There has also been an increased recognition of the impact of social determinants on health and the need to provide appropriate intersectoral links.

It is critical that the gains made so far are not lost going forward, particularly if the district is to make significant progress in reducing health inequalities. Counties Manukau has one of the most socioeconomically deprived populations in the country and as such the key focus should be on health equity which is especially pertinent when reviewing the emerging trends of increasing acute demand and the levelling off in life expectancy gains for Maaori and Pacific peoples.

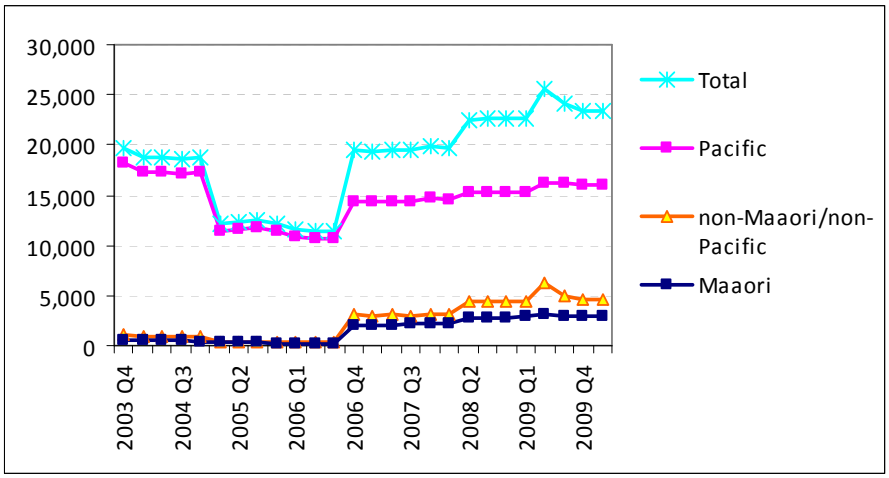
This report has attempted to provide an overview of PHC in CMDHB since the development and implementation of the Primary Health Care Strategy. It raises key questions and issues that would benefit from discussion in order to ensure that PHC continues to provide the maximum benefit to the Counties Manukau population.

Appendix 1: PHO formation timeline

July 2002

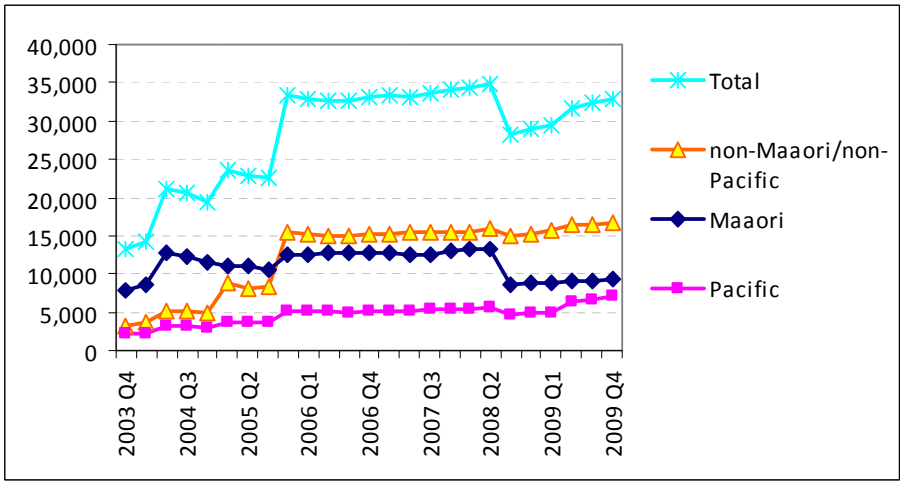
TaPasefika Health Trust

TaPasefika Health Trust originally started as a tripartite relationship between Health Star Pacific Trust, Bader Drive Healthcare (formerly Health Pacifica Doctors) and South Seas Healthcare and now includes Mangere Family Doctors and The Airport Doctors. It was the first PHO to be established in New Zealand. 87% of its enrolled population is considered high needs.



Te Kupenga O Hoturoa Charitable Trust (TKOH)

TKOH was established in July 2002 under the guidance of CMDHB, bringing together three Maaori providers: an iwi provider (Raukura), an urban Marae based provider and a Maaori midwifery service focused on mother and child. In 2008 Raukura left and became part of North Waikato PHO, reducing the enrolled population of TKOH by approximately 6000. In February 2010, the Peoples Healthcare Trust merged with TKOH, increasing their population by over 5000. 62% of the current enrolees are considered high needs.



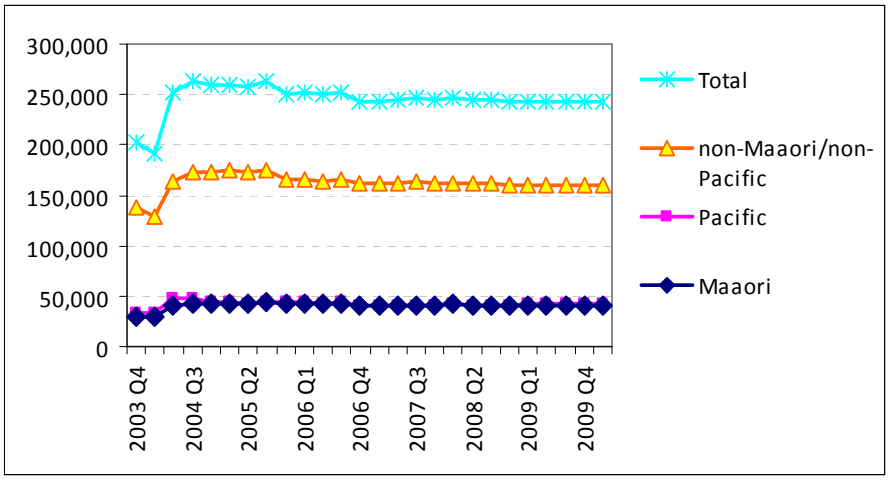
January 2003

ProCare Network Manukau

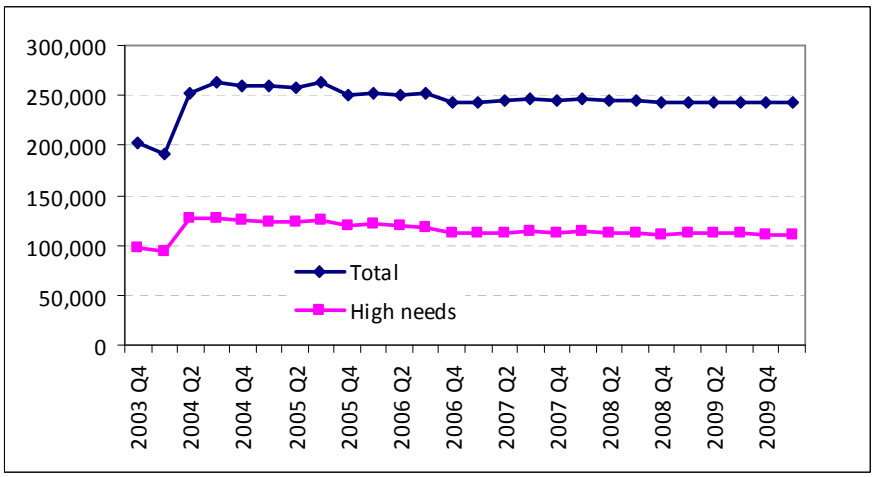
Procare PHO formed out of an IPA of the same name and is divided into three locality networks – North, Central and Manukau – the latter serving CMDHB. At the end of Q4 2009, 243,443 people were enrolled in Procare Network Manukau, making it the largest

PHO in the district. Procare practices were initially divided into interim or access funded based on the demographics of their enrolled population. Currently 176,003 are enrolled in what were called access funded practices with 34,116 Maaori, 40,806 Pacific peoples and 101,081 non-Maaori/non-Pacific. Of the latter group 24,824 are considered high needs based on their area of residence (defined as NZDep 9 and 10 decile areas). Overall the current proportion of high needs people enrolled in access funded practices is 56%.

The remaining 66,910 people are enrolled in Procare interim funded practices. Of this group 6,617 are Maaori, 1,245 Pacific peoples and 59,048 non-Maaori/non-Pacific. Of the latter group 3,239 are considered high needs (or 5.5%). In total 17% of those enrolled in interim practices are defined as high needs of which only a third hold a CSC. Less than 100 of the entire interim enrolled population hold a HUHC.

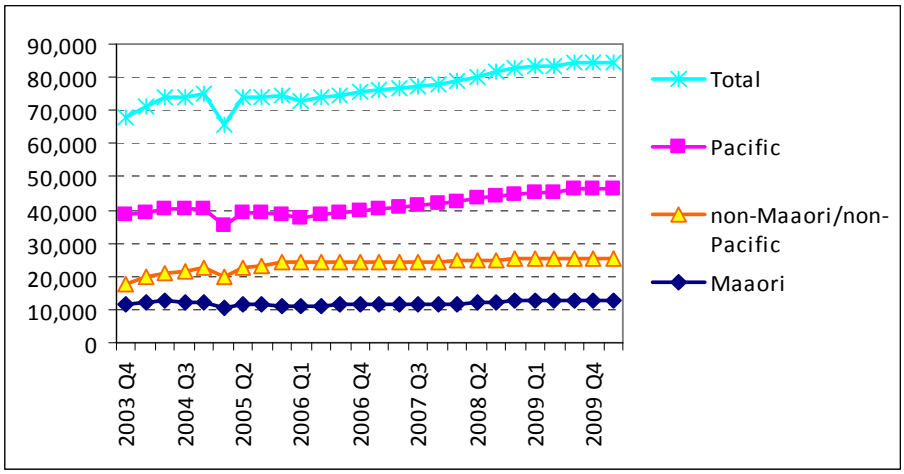


Overall 46% of the Procare Manukau network enrolled population are considered high needs. Of the 64 practices in CMDHB, 23 continue to be access funded with a further 29 choosing VLCA funding. The remaining 12 practices stay as interim practices.



Total Healthcare Otara (THO)

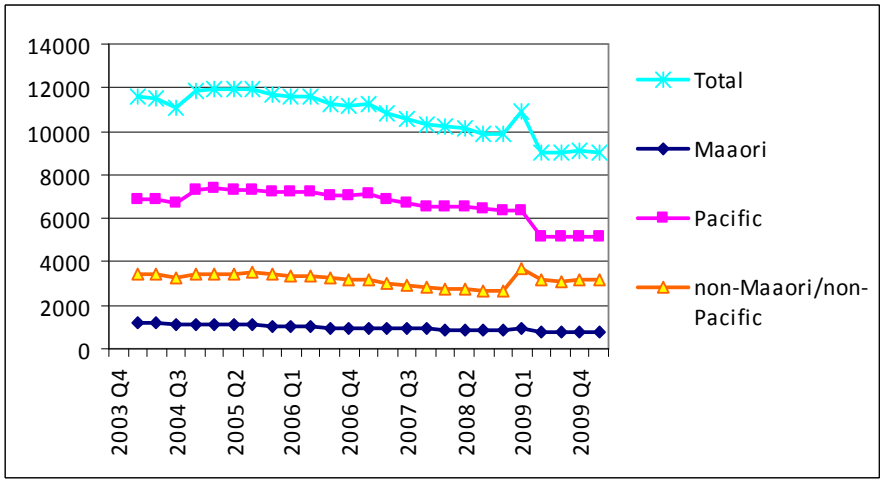
THO began in January 2003 with the coming together of East Tamaki Healthcare, a group of 10 general practices and Otara Health Inc, a community ?development rather then health promotion organisation. Over 75% of enrolees are considered high needs.



April 2003

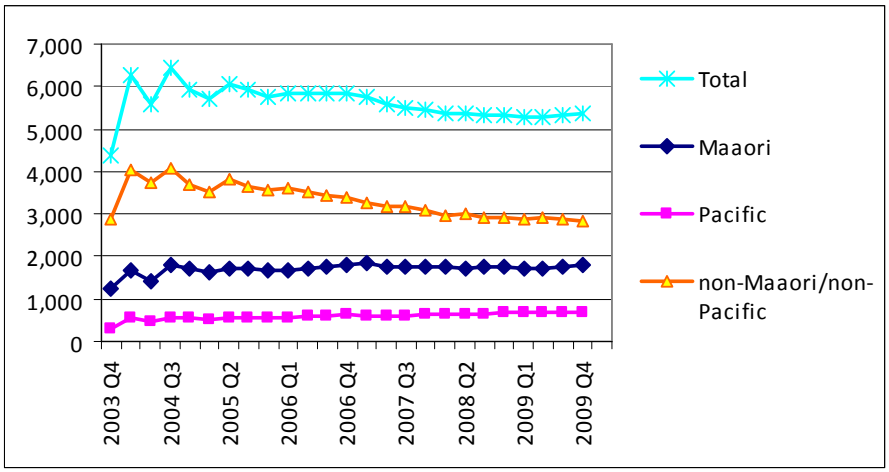
Mangere Community Health Trust

The MCHT was formed in 1992 and became a registered PHO in April 2003 providing health services to Mangere district. High needs patients make up 74% of those enrolled. Currently the PHO has 3 primary care providers with a PHO-owned PHC centre opening in April 2010.



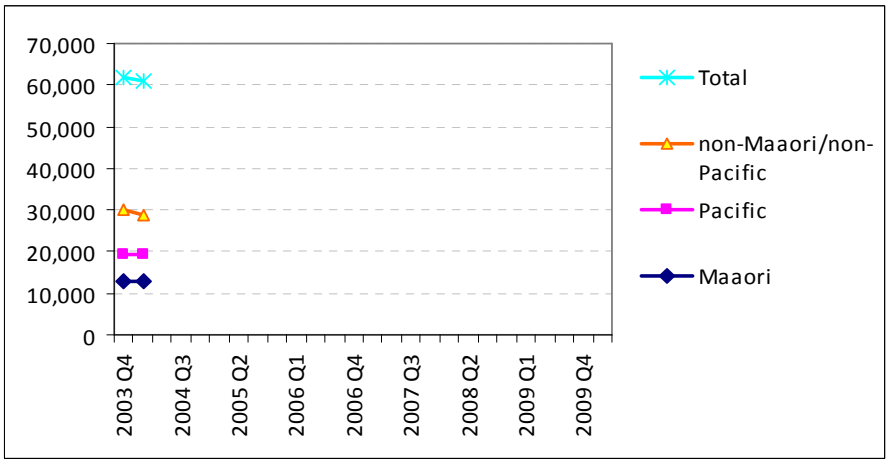
Peoples Healthcare Trust (merged with TKOH in 2010)

The Peoples Centre was formed over twenty years ago as a registered non profit organisation to provide affordable PHC services to high need populations. It became a PHO in April 2003 and has three centres. Two are in CMDHB area – Mangere and Manurewa – and one is in Central Auckland. Over 60% of enrolees are high needs. At the start of 2010 the Peoples Healthcare Trust merged with TKOH and its Q1 enrolments for 2010 are incorporated with TKOH.



Middlemore PHO

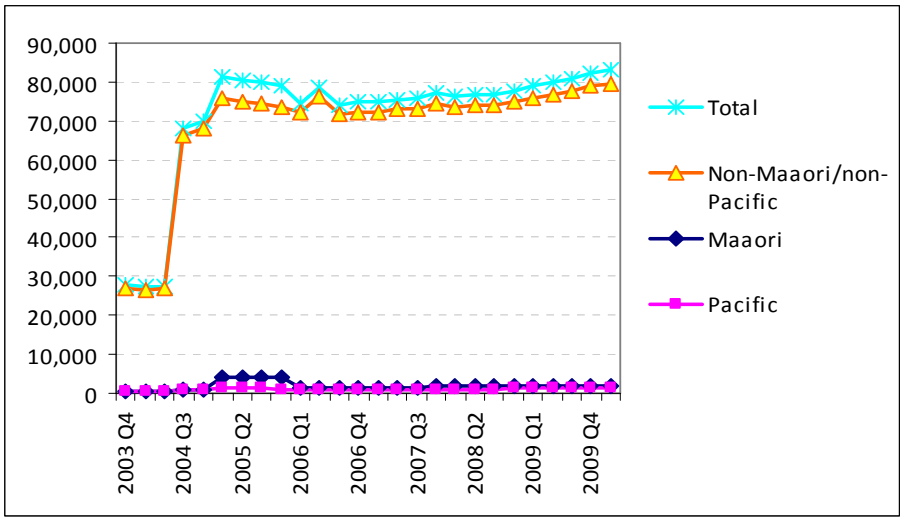
Middlemore PHO was also established in April 2003 with four equal shareholders - three GP- owned general practices, and a union health centre - with practices in Papatoetoe, Mangere (2) and Otara. It had an enrolled population of approximately 60,000 patients (53% Maori/Pacific). However it ceased trading on the 31 March 2004.



July 2003

East Health Trust

East Health Trust was established as a Primary Health Organisation (PHO) on 1st July 2003 having been an IPA. It provides PHC to the Howick, Pakuranga, Beachlands, Maraetai and Clevedon regions. It has a current enrolled population of approximately 84,000, of which 6% are high needs. In 2005 a high needs practice became part of the PHO with more than 3000 high needs enrolees bringing the proportion to 9%. However the practice left the PHO in 2006 and later closed.



July 2004 **Tamaki Healthcare Charitable Trust**

Tamaki Healthcare Charitable Trust was established in April 2003 and currently has 14 PHC providers of which only one sits in CMDHB. This practice, based in Otara, moved from Middlemore PHO when it collapsed in 2004. It currently has around 3200 enrolees and is funded by ADHB.

July 2008 **North Waikato PHO**

This PHO was initially established in October 2003 in the Waikato. In 2008, the Raukura group of practices from TKOH became the Tamaki branch of North Waikato PHO, taking 6000 patients to the organisation. Raukura (now known as the Tamaki branch) provide PHC to a relatively high needs population and have low cost access. Funding is provided by Waikato DHB.

Appendix 2: ASH definitions

Condition	Principal Diagnosis Codes	Age group	ASH Weight	Include Electives
Angina and chest pain	I20, R072-R074	A	0.5	No
Asthma	J45-J46	B	1	No
Bronchiectasis	J47	C	1	No
Cellulitis	H000, H010, J340, L01-L04, L08, L980	B	1	No
Cervical cancer	C53	A	1	No
Congestive heart failure	I50, J81	A	1	No
Constipation	K590	B	1	No
Dental conditions	K02, K04, K05	B	1	Yes
Dermatitis & eczema	L20-L30	B	1	No
Diabetes	E10-E14, E162	A	1	No
Epilepsy	G40-G41, O15, R560, R568	A	1	No
Gastroenteritis/dehydration	A02-A09, R11	B	1	No
GORD (Gastro-oesphageal reflux disease)	K21	B	1	No
Hypertensive disease	I10-I15, I674	A	1	No
Kidney/urinary infection	N10, N12, N136, N309, N390	F	1	No
Myocardial infarction	I21-I23;I241	A	0.5	No
Nutrition Deficiency and Anaemia	D50-D53, E40-E46, E50-E64, M833*	B	1	No
Other ischaemic heart disease	I240, I248,I249, I25	A	0.5	No
Peptic ulcer	K25-K28	A	1	No
Respiratory infections - Pneumonia	J13-J16, J18	B	1	No
Rheumatic fever/heart disease	I00-I02,I05-I09	B	1	No
Sexually transmitted Infections	A50-A59,A60, A63, A64, I980, M023, M031, M730, M731, N290, N341	A	1	No
Stroke	I61, I63-I66	A	0.5	No
Upper respiratory tract and ENT infections	J00-J04, J06, H65-H67	B	1	No
Vaccine-preventable disease - Meningitis, Whooping Cough, Hep B, Pneumococcal disease, Other	A33-A37, A403, A80, B16, B18	D	1	No
Vaccine-preventable disease - MMR	B05, B06,B26, M014, P350**	E	1	No

Age group Key:

Excludes neonates under 29 days

A > 15 years

B = all ages

C<15 years

D > 6 months to < 15 years

E >15 months to <15 years

F ≥ 5 years

Appendix 3: SIA programmes in CMDHB

	SIA Name	Brief Description of Project
Total Healthcare Otara	Getting Started Programme Administration Support	Administration support - Get Started Programme - Encourages physical activity to promote healthy lifestyles
Total Healthcare Otara	Emergency Ambulance and Taxi	Ambulance Memberships and Taxi Chits provided to those patients who require transport to and from appointments at Clinics, Hospitals, or the Super Clinic.
Total Healthcare Otara	Oral Health Alliance	Oral Health Checks and Health Education provided to children under 5 years of age and expectant mothers prior to delivery.
Total Healthcare Otara	After Hours Settlement	Funding support to cover additional costs for extended hours services provided by 3 practices - co-payments to remain at low cost levels.
Total Healthcare Otara	Pneumovax Project	At-risk patients to be immunised with Pneumovax vaccine to reduce avoidable hospitalisations.
Total Healthcare Otara	Sexual Health and Family Planning	GPs to provide medical consultations and education to women (25-44 years of age) in relation to sexual health and family planning. This service is a free to patients - no co-payment is charged.
Total Healthcare Otara	School Clinics	Primary Care services, Health Screening and Health Promotion offered weekly to students at Tangaroa and Hillary Colleges - Services provided by local GPs.
Total Healthcare Otara	Cervical Smears	Health Promotion and Education given to women to improve the uptake - Encourages women to have their smear tests taken. Training offered to Nurse Smear Takers. Smears carried out in GP practices and in special Smear Clinics. STI screening also provided at no/minimum additional cost to the patient.
Total Healthcare Otara	THO Smokefree Programme	Provides timely, consistent, and easily accessible advice to smokers & make timely referrals to smoking cessation. The project will target the THO enrolled popn > 14 years.
Total Healthcare Otara	ECGs 2006-07	Facilitates access to ECGs by reducing any financial barriers, particularly to the "high-need" enrolled patients in THO. ECGs will be made available to patients with acute chest pain or arrhythmia and also to patients enrolled in the various CCM programmes who have multiple risk factors for CD.
Total Healthcare Otara	Prescription Subsidy	Improves access to primary health services by reducing some of the financial barriers & hence enhances the value of prescribed medication regimes to enrolled 'high-need' patients. Increases patient's understanding of their medication and promotes greater independence and leading healthy lifestyles.

Total Healthcare Otara	Community Health Workers & CHWs Overheads	CHWs to deliver interventions around providing education, monitoring and support for a range of clinical conditions - Improves health outcomes. Services include smoking cessation programme, improving uptake and completion of immunisations, access to dental services for pre-schoolers, breast screening, nutrition and lifestyle advice.
Total Healthcare Otara	Self Management Education	Recruitment of SME Educators to assist in informing, educating and supporting people with diabetes and other chronic conditions who require extra assistance. SME Programme to deliver education, motivation and lifestyle modification behaviours in group sessions.
Total Healthcare Otara	Home Visits	Installation of a triage system to redirect phone calls to the Home Visiting Team - assists those patients that are unable to / have restricted access to healthcare services. Senior GPs will coordinate the high-risk patients within the centres that would benefit from the service.
Total Healthcare Otara	CCM Glen Innes	CCM services provided to GI enrolees who fall out of the CMDHB catchment area.
Total Healthcare Otara	CCM Case Management	Additional support for CCM via Case Management and Health Care Assistants – payment is subject to achievement of greater than DHB average attendance rates
Total Healthcare Otara	Discharge Care Project	Registered Nurse employed in a Discharge Care Coordinator Role - facilitates better health outcomes for recently discharged enrolees. Services are provided by medical staff to assist in preventing readmissions and improving management of recently discharged patients.
Te Kupenga o Hoturoa Charitable Trust	Well Women's Clinic	Services are nurse-led and provide: Cervical Screening, Breast Health Awareness, Sexual Health Screening & Treatment (incl HIV treatment), HP/Education on smoking cessation, sexual & reproductive health issues to women aged from 16 - 70. PHO to contract ADHB to provide this service.
Te Kupenga o Hoturoa Charitable Trust	Kaumatua / Cultural Advisor	Employed for 2 days a week - training and cultural support provided to PHO staff in developing relationships with Maori and non-Maori Providers who have Maori enrolees / whaanau. All PHO staff to complete training within 3 months of starting.
Te Kupenga o Hoturoa Charitable Trust	New Graduate Nurse	The Graduate Nurse is to work in Primary Care and participate in an induction program in order for her to become a competent Primary Health Care nurse. Intention to increase the number of Maori Nurses within the Primary Health Care sector. Nurse = 1 FTE
Te Kupenga o Hoturoa Charitable Trust	Community Health Worker (PHO)	CHW (1 FTE) to work as part of the integrated Primary Healthcare teams at Bakersfield and Onehunga Medical Centres (0.5 FTE in each). CHW to undergo relevant training.
Te Kupenga o Hoturoa Charitable Trust	Community Health Workers - 6 (Providers)	6 CHWs employed to work at Te Puea Clinic (0.5 FTE), Otahuhu (0.5 FTE), Papakura Marae (1 FTE), Turuki Health Care (1 FTE), Clendon (1 FTE), Trust (1.5 FTE) and Dr Wong's Practice (0.5 FTE) as part of the integrated Primary Healthcare teams.

Te Kupenga o Hoturoa Charitable Trust	Workforce Development - Pu Ora Matatini - PC Maori Nursing Initiative	TKOH and MoSD to identify young unemployed people, who are recent school leavers that demonstrate interest and commitment, for possible recruitment into the pre entry course and/or the nursing degree course - recruitment necessary to provide skilled nursing workforce. Target of 15 Graduate Nursing Students yearly.
Te Kupenga o Hoturoa Charitable Trust	Chronic Care Management Nurse (Clinical Nurse Specialist)	Clinical Nurse Specialist employed to increase the number of Providers involved in the PHO Performance Management Plan. Nurse will also assist with cervical and breast screening, childhood immunisation, flu immunisation and improved access to Palliative Care in the community.
Te Kupenga o Hoturoa Charitable Trust	Flu Vaccinations	Free flu vaccinations given to people aged 18-64.
Te Kupenga o Hoturoa Charitable Trust	Teen Parent Unit Nurse	TPU nurse to support and co-ordinate the Health, Social and Educational Needs of teens in the TPU. Works closely with the CHW and social worker attached to the Unit.
Te Kupenga o Hoturoa Charitable Trust	School Based Health Services	Fully serviced School Based Health Service on Southern Cross Campus. Target Population - young people between 12 and 18 years who attend the school. Service provided by School Nurses and Youth Health Workers between 8am and 4pm during the school terms. Students referred on to the GP at Turuki Health Care are not charged consultation fees.
Procare Network Manukau Limited	Community Health Coordinators	This service is designed to increase access to health and community services through a coordinated service. It also aims to reduce the DNA rate to identified output clinics.
Procare Network Manukau Limited	Choose To Be Free	This is a smoking cessation programme delivered by the General Practice team in the primary care setting.
Procare Network Manukau Limited	Diabetes Get Checked	This programme is designed to provide free annual diabetics reviews to all eligible patients (Type 1 and Type II). These checks are carried out by either a GP or Practice Nurse.
Procare Network Manukau Limited	Care Plus (Diabetes Incentive)	This is a nationwide initiative that provides a comprehensive package of PC health services at a reduced cost for those people identified as having higher health needs.
Procare Network Manukau Limited	CCM Incorporating Frequent Adult Medical Admission (FAMA) Programmes	This is a step up from Care Plus for patients at high clinical risk who require a more intensive level of care and interaction with greater access. The Programme includes Diabetes, CVD, COPD, and CHF Modules. It is only available to those practices using Med Tech and Next Generation.
Procare Network Manukau Limited	Mental Health - Engage	SIA Funding has been made available for additional/extended GP consults to High Needs patients who have disclosed or have been screened for psychological problems.

Procare Network Manukau Limited	Mental Health - Psychological Services (PPS)	SIA Funding for high needs patients who need to be referred on from the Engage programme. Access to high quality psychological treatments are provided where clinically required.
Procare Network Manukau Limited	U25 Programme	This programme provides free, accessible contraception, sexual health services, and education to youth who are at risk from unplanned pregnancies, and or STDs. There is also provision of free IUCD insertion and vasectomy procedures.
Procare Network Manukau Limited	ProExtra	ProExtra is a set 'menu' of difficult to access and proven effective services that is made available to high needs patients and accessed via their general practice. (e.g. ECGs, Home Visits, Insulin Initiation)
Procare Network Manukau Limited	Inform (Primary Options for Acute Care)	This programme provides general practice in the CMDHB area with alternative, community-based healthcare options that can be used for patients who would otherwise have to be admitted to hospital.
Procare Network Manukau Limited	Maori Services	Funding provided for the employment of a Manager - 0.5 FTE
Procare Network Manukau Limited	Pacific Services	Funding provided for the employment of a Manager - 0.5 FTE
Mangere Community Health Trust	Quantity/Quality and Clinical Governance	GPs measured as per the Quality Improvement Plan 2004-2006. This involves regular GP meetings and education for GPs in the data recording processes. Part-time Medical Practitioner employed to manage the clinical governance of the Trust and to support the GPs with 'change processes' (e.g. disease coding, template recording, immunisation recording). Laboratory & Pharmacy Expenditure reviews to be under-taken by this Practitioner and subsequently reported on to the Trust and GPs.
Mangere Community Health Trust	Pharmacy Facilitation	Pharmacist contracted to be the local 'pharmacy facilitator'. The facilitator assists the GPs in meeting their pharmacy performance management targets and offers pharmacy reviews, brief interventions to encourage compliance, and pharmacy-based patient interviews.
Mangere Community Health Trust	Workforce	GP from South Africa to be placed in a new practice to ease the GP shortage. Part-time Senior Nurse employed to provide relieving duties - involved in the CCM programme and is also establishing cervical smear clinics at practices. An additional practice nurse has been deployed within in GPs practice. The Trust is also in the process of appointing a CCM nurse as a full time position. Three CHWs are employed to carry out work associated with non-PHO contracts. Work undertaken by the CHWs to do specific PHO work is charged against the SIA funding. (Part-Time Nurse Manager & Part-Time Prac Nurse - positions vacant)
Mangere Community Health Trust	Community Nutrition Project	Project aimed at reducing diabetes in the enrolled population. Practice Nurses will be become involved in brief interventions - funding required for nurse time as well as community health worker assistance (0.5 FTE).

Mangere Community Health Trust	Vasectomies	Vasectomies offered to the partners of women awaiting tubal ligation as a number of women have had repeat terminations while awaiting tubal ligation. IUCDs will also be offered to these women. Proposal to purchase 75 procedures @ $300 each from a medical practitioner external to the Trust.
Mangere Community Health Trust	Women's Health	Qualified Nurse employed to run the Cervical Screening Programme. This programme will include the purchase of speculae for individual use.
Mangere Community Health Trust	Oral Health	All enrolled children (5400) at 15 months to be given education in tooth care by the practice nurse while they are presenting for their final 15 month vaccination. Child to be given a toothbrush and a tube of fluoride toothpaste during that visit. PHO to give a free toothpaste and toothbrush (as well as oral health advice according to age) to each enrolled child on the anniversary of each birthday.
Mangere Community Health Trust	Imaging	Plain Film - The film radiology unit situated at the Mangere Health Centre provides no 'after-hours' services. At times where the service does not make a profit in any month, SIA Funding is used to meet the difference between income and expenditure. Emergency Imaging - available for GPs on a pre-approval basis when the patient requires urgent access and when the hospital services are not readily available.
Mangere Community Health Trust	Retinal Screening Clinic	Failed Photograph' clinic to be run by an Ophthalmologist to reduce the long waiting time for services at the Superclinic. The clinic will see 20 patients a week for 45 weeks a year at $85/patient. MCHT to provide the facilities and equipment needed for this clinic.
TaPasefika Health Trust	Screening Nurse	Proposal to fund a part-time nurse to run the two structured nurse-led clinics per week. Screens offered at no cost to enrolled male and female patients over 30 years and involves placing them in appropriate care pathways depending on screening outcome. Nurse to screen for Diabetes Risk, Cervical Smears, Mammography, CVD Risk, A&D, Smoking Screening, Referral and Smoking Cessation Referral.
TaPasefika Health Trust	Well Women's Clinic	Service to be provided by female GPs in a structured clinic or within an opportunistic visit to the GP - extended visit of half to one hour for an in-depth doctor's assessment. Women over the age of 30 will receive a cervical smear, mammography referral and a comprehensive medical examination (focusing on breast and abdominal areas for cancers; weight management assessment; diabetes and CVD Risk Assessment etc). Promotes a healthy, longer lifestyle, especially for Pacific Women.
TaPasefika Health Trust	Well Men's Clinic	Service to be provided by male GPs in a structured clinic or within an opportunistic visit to the GP - extended visit of half to one hour for an in-depth male doctor's assessment. Men to be initially assessed by the Screening Nurse and referred to the clinic. Promotes a healthy, longer lifestyle, especially for Pacific Men.

TaPasefika Health Trust	STI, Sexual Health & Reproductive Services	Aim to improve access of sexually active youth and young adults up to the age of 30 who self-identify as being sexually active or participating in risk-taking behaviours related to SH, alcohol, drugs & tobacco. This service will either be provided opportunistically by a doctor or a trained smear-taking and STI nurse - 1 four hour clinic per week. Services provided - contraceptive advice and education; ongoing assessments, treatment and referral for chronic conditions; approved vasectomy services for up to 25 enrolled males per year to assist with family planning.
TaPasefika Health Trust	Access to Dietician and Self-Management Facilitation Services	Two half-day clinics per week. Dietician Services to run in conjunction with the diabetes/CVD CCM Programme. A Pacific Dietician is both relevant and essential for Maori and Pacific People, to assist in lifestyle modification, dietary information and identification of barriers, to changing lifestyle and diet. Enrolled High Risk Patients are targeted for referral to dietician services.
TaPasefika Health Trust	Access to Diagnostics, Procedures, and Other Primary Care Based Providers (Non POAC)	Proposal aimed at reducing barriers to access for Maori & Pacific and those from high deprivation areas by providing financial relief through full subsidy or private sector purchase and also by improving access through more appropriate location of services. Services to include (examples) - Dressings, Repeat Prescriptions, SH services (free STI checks), ECGS... Runs in conjunction with the Well Women's and Well Men's Clinic.
TaPasefika Health Trust	CCM Diabetes - Clinical CHW Subsidy	Part-time CHW (0.2 FTE - 4 hours per week) employed to serve hard to reach patients; provide culturally-appropriate services including home visiting; carry out assessments for bed bound patients; take bloods and; to assist with transport where required.
TaPasefika Health Trust	Data Administration	Funding required to carry out monitoring, reporting and evaluation of SIA Proposals - 5% Of SIA
TaPasefika Health Trust	Screening Nurse	Proposal to fund a full-time nurse to screen patients and place them in appropriate care pathways depending on screening outcome. Includes A & D Screening. Screens offered at no cost to enrolled high needs Maori and Pacific male and female patients 30+ years and involves placing them in appropriate care pathways depending on screening outcome. Nurse to screen for Diabetes Risk, Cervical Smears, Mammography, CVD Risk, A&D, Smoking Screening, Referral and Smoking Cessation Referral.
TaPasefika Health Trust	Well Women's Clinic	Service to be provided by female GPs in 2 scheduled clinics per week or within an opportunistic visit to the GP - extended visit of half to one hour for an in-depth doctor's assessment. Women over the age of 30 will receive a cervical smear, mammography referral and a comprehensive medical examination (focusing on breast and abdominal areas for cancers; weight management assessment; diabetes and CVD Risk Assessment etc).
TaPasefika Health Trust	Well Men's Clinic	Service to be provided by male GPs in a structured clinic once a month or within an opportunistic visit to the GP - extended visit of half to one hour for an in-depth male doctor's assessment. Men to be initially assessed by the Screening Nurse and referred to the clinic. Promotes a healthy, longer lifestyle, especially for Pacific Men.
TaPasefika Health Trust	Well Youth Service	School Based Clinic provided at Mangere College to improve youth access to primary care - run by a female doctor. One clinic per week - emphasis on tackling obesity, STI rates and teen

		pregnancies.
TaPasefika Health Trust	Access to Dietician and Self-Management Facilitation Services	Regular Clinics run by a Tongan Dietician. Dietician Services to run in conjunction with the diabetes/CVD CCM Programme. A Pacific Dietician is both relevant and essential for Pacific People, to assist in lifestyle modification, dietary information and identification of barriers, to changing lifestyle and diet. Includes referrals from school clinics.
TaPasefika Health Trust	Access to Non-POAC Diagnostics, Procedures, and Other PC Based Providers	Proposal aimed at reducing barriers to access for Pacific population and those from high deprivation areas by providing financial relief and improving access to PC through more appropriate location of services. Services to include (examples) - Dressings, Repeat Prescriptions, SH services (free STI checks), ECGS... Runs in conjunction with the Well Women's and Well Men's Clinic. Diagnostic Imaging and procedures subsided only when the patient is ineligible for POAC. Minor surgery deemed necessary performed when not available through the Public Health system.
TaPasefika Health Trust	Home Visiting and Palliative Care - GP	GP Home Visiting Services provided to chronically ill, terminally ill, and bed-bound patients. Service provided to enrolled patients who are cared for by family (in the way rest homes and nursing homes care for their patients). Pacific people under-utilise rest home care.
TaPasefika Health Trust	CCM Diabetes - Clinical CHW	Funding to provide a Pacific Model of Care to deal with the 98% high needs Pacific Population. CHWs for HPD (1.2 FTE) and SS (1.2 FTE) employed to serve hard to reach patients and to provide culturally-appropriate services including interpreters when the doctor does not speak the patient's language.
TaPasefika Health Trust	Access to Extended Consultation Acute Care (Non POAC)	Funding required to support extended consultations for acute care for opportunistic presentations for non-POAC cases only - up to an additional 18 hours per week of GP consultation time. TaPasefika providers are being overwhelmed by the level of acute demand with complex morbidity within the practices.
TaPasefika Health Trust	Data Administration - Provider Monitoring	Funding required to carry out monitoring, reporting and evaluation of SIA Proposals - 5% Of SIA

Appendix 4: Activities identified as a priority for the use of SIA funding in Counties Manukau

Aspect of access addressed	Priority: High	Priority: Lower
Cultural (Note 1)	Ethnic specific staff Cultural competency training Translation services	
Workforce (Note 1) **(a) Multidisciplinary team** **(b) Wider role of primary care team**	(a) utilisation of non-medical health professionals in primary care team e.g community health workers, social work/ advocacy services, pharmacist (b) self management programmes	(a) Clinical support services – podiatry, physiotherapist, dietician, oral health (b)(i) oral health (screening, health education) particularly for high need under 5s (ii) Intensive contacts (e.g. smoking cessation). (iii) Health education. (iv) Conjoint clinics with specialists **(Note 2).**
Financial **(a) Access to high cost services** **(b) Further reduce barriers to high priority services**	(b) high priority first contact services e.g. mental health, sexual health, youth specific primary care, cervical screening, breast screening.	(a) (i)Home visiting (ii) Primary care procedures (e.g. IUCD insertion, skin lesion removal) (iii) Investigations to aid primary care management (e.g. X-ray, ultrasound, ECG)
Functional/ Geographical	Outreach services for rural Maori communities (e.g. Port Waikato)	Outreach services which may require collaborative approaches between PHOs (e.g. marae/urban marae, church, school, community centre, mobile services for isolated areas) Transport **(Note 3)** Facilitating access to and uptake of programmes aimed to address long term conditions e.g. chronic care Information about services (SIA services, PHO services) - **Note 4**
Quality	Clinical audit and feedback related to reducing inequalities **(Note 5)**	

Further notes to matrix

1. Workforce Development Strategies need to be directly related to reducing inequalities by addressing a barrier to access. Priority should be given to employment/training of ethnic/bi-lingual health workers given this is widely seen as a highly effective strategy in improving service provision for underserved populations (Barwick, 2000), and cultural competency development for health practitioners, including nurses and doctors. Where ethnic specific staff are employed, proposals should include not just the funding of new staff positions but appropriate professional mentoring/supervision and training opportunities. Proposals need to be explicit about what the project is trying to achieve for the workforce/patients and how this relates to reducing inequalities,

with reporting linked to these objectives. Specific training to up-skill practitioners to participate in projects designed to improve access is also a priority (e.g. nurse training for cervical smear taking).

Broad workforce proposals (e.g. CME not targeted to specific skills related to implementing the project or cultural competence) are not acceptable for the use of SIA funds.

2. Providing support for specialist outreach where these clinics are run conjointly with PHC providers and involve upskilling of the primary care team to enhance their capacity to provide primary care access to the service in the future (e.g. CMDHB would fund the visiting specialist resource, and the PHO may utilise SIA funding to provide relevant support with a view to independent primary care provision of the service in the future)

3. The inequalities lens and prioritisation needs to be considered in any decision regarding **transport** to health services.

4. Providing information to help patients access services (as distinct from health promotion related information) – e.g. written info / telephone triage / help-lines. This may include information for patients, and also for providers to increase provider awareness of PHO projects available to improve patient care (and hence potentially reduce inequalities). However direct marketing of the PHO itself is not acceptable.

5. Quality improvement support. Where funded by SIA, this work needs to have a specific focus on quality improvement to reduce inequalities e.g. assisting providers to determine who of their Maori/Pacific/Quintile 5 enrolled patients are not being seen, barriers, systems changes that could enhance support for these patients etc, with reporting linked to these objectives. This could also be linked directly to the indicators for high needs populations in the national PHO Performance programme.

Access for high needs patients to After Hours Services

Future use of SIA funds to support provision of after-hours services will be subject to the results of the current work to develop the Counties Manukau After-Hours Plan. In the meantime, SIA proposals for the provision of after-hours services will be considered on their own merits, but should be focused on extended hours rather than overnight services. However, the PHOs' emphasis should remain on responsive services within usual hours of service provision to minimise the need for extended hours care.

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