# Counties Manukau District Health Board progress 2001 – 2006

## What have we achieved?

**Summary**

There has been a significant improvement in health in the CMDHB population over the last 5 years, including reductions in mortality rates, reducing rates of severe illnesses requiring hospitalisation, reductions in meningococcal disease, and increases in the amount of elective surgery in the public system. Investment in health services has seen improved access to services in primary care, an expansion in services at the interface between primary care and secondary care, with other sectors such as housing, and in the chronic care area. Increased provision of secondary care services locally has improved access for Counties Manukau people. Financially the DHB has managed to break even while managing this growth. At the same time a significant building programme has attempted to keep pace with the population growth and demand for services. It is not generally possible to make a direct causal connection between improving health and changes in healthcare provision, there being so many inter-related factors determining health status. However the consistency of the trends, and their alignment with the health service investments made are highly suggestive for CMDHB.

Symbols used:

Progressing well 

Some progress 

Little or no progress 

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9 August 2006

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## Contents

**Aim**

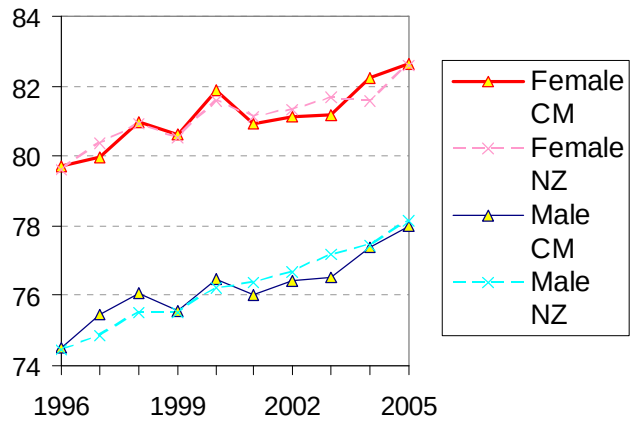
The New Zealand Public Health and Disability Act 2000 established District Health Boards to manage publicly funded health service provision in New Zealand from 2001, a significant system change from the prior Regional Health Authority and Health Funding authority systems. This report aims to show the changes in health for residents of Counties Manukau District Health Board (CMDHB) over the past 5 years since the advent of DHBs, the changes in health services provision, and the financial investment incurred.

## 1. Improving health

The health of the residents of CMDHB has steadily improved over the past 5 years.

### a) Life expectancy

Life expectancy is a prime summary indicator of population health, reflecting mortality across all ages from all causes. Life expectancy at birth is an estimate of the average number of years a newborn could expect to live if the experienced the current age-specific mortality rates over the course of their life. Ethnic-specific life expectancy is shown in the disparities section below (page 21).



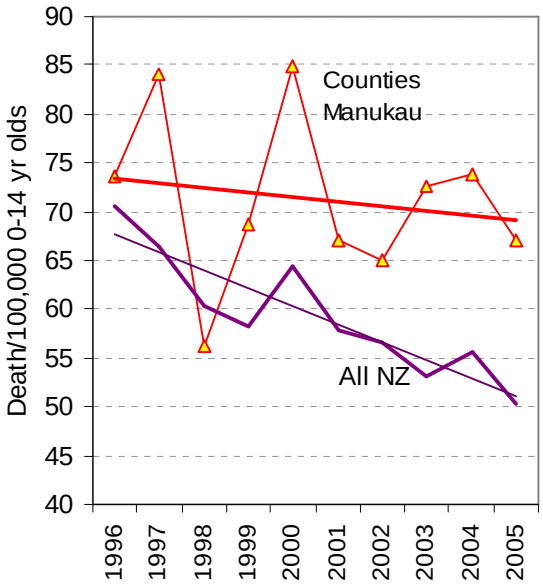

- Overall life expectancy has increased by 1.4 years in CMDHB from 2000 – 2005 (note that 2003-2005 rates are provisional)
- Life expectancy for males rose 1.5 years, females 1.3 years, but males still lag females by 4.6 years
- CMDHB showed similar changes to the all New Zealand rate from 1996-2005
- Despite its deprivation and ethnic group mix the CMDHB population has a life expectancy the same as all New Zealand
- Around half the rise in life expectancy over the past decade in industrialised nations is thought to be due to health services provision.
- *Source: NZHIS mortality data, CMDHB analysis*

### b) Child mortality <15

b

Childhood deaths are an important overall indicator of child health. They are fortunately relatively rare – 70-80 a year in CMDHB, of which 40-50 a year are outside the neonatal period (0-28 days).

- Deaths to children in CMDHB have dropped slightly from 74 to 69 per 100,000 0-14 year olds from 1996 to 2005, but have a lower decrease than the rest of New Zealand. Mortality rates for CMDHB in 2005 were a third higher than the NZ rate
- Premature birth is the single largest cause of death in the under 1s. sudden infant death syndrome (SIDS) or cot death, despite significant reductions in rates remains the most common cause of death in under 1 year olds outside the neonatal period
- Injuries and poisoning are the most common cause of death in 0-14 year olds past the neonatal period, with motor vehicle accidents making up 42% of these. Next most common is accidental suffocation, followed by drowning. Non-accidental injury causing death remains rare, despite recent publicity.

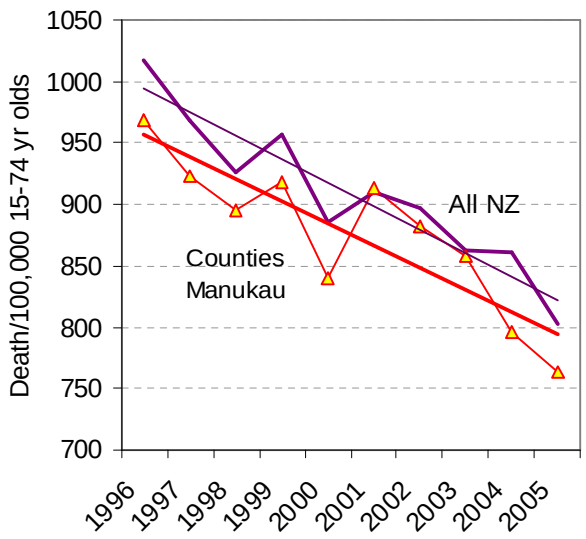



- *Source: NZHIS mortality data, CMDHB analysis*

### c) Premature mortality age 15-74

b

Premature mortality is the flipside of life expectancy, and an important indicator of ill-health. Mortality causes vary by age, with injury the main cause in the 15-44 group and for the 45-74 year olds the impacts of smoking, diabetes and cardiovascular disease come to the fore




- Premature mortality has fallen dramatically in CMDHB over the past 10 years, averaging 2.2% per year
- This parallels the drop in all NZ mortality
- The CMDHB rate in 2005 is similar to the Auckland rate, significantly higher than Waitemata, but significantly lower than the rest of NZ rate
- Reductions have been steeper in Maori (5% pa) and Pacific (4.2%) for CMDHB, significantly reducing the relative and absolute mortality gaps, although still leaving 80% and 50% excess mortality respectively in 2005
- *Source: NZHIS mortality data, CMDHB analysis*

### d) Acute hospitalisation rates in children

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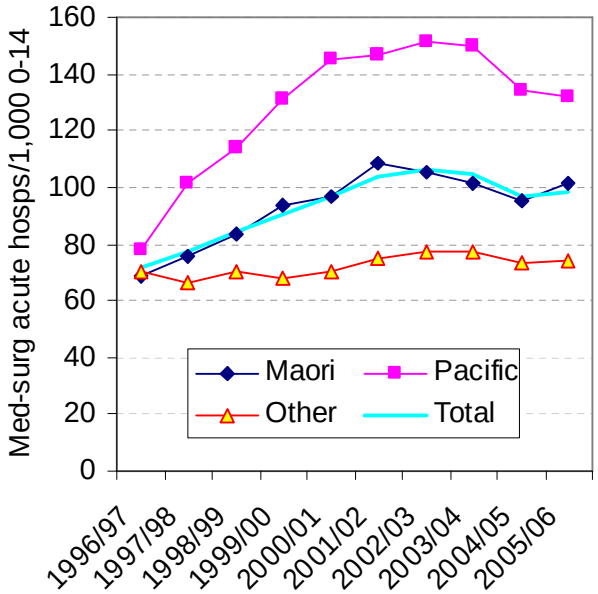
Mortality is a relatively rare event in childhood, severe illness requiring hospitalisation is the next major category of event to be measured. Whilst there may be some supply-side variation in hospitalisation thresholds across the country, in general child admission rates will be less variable than adult.

- Child hospitalisations (age 0-14 excluding neonates) rose sharply throughout the 1990s. The Kids First Hospital opened in 2000, seeing another rise into the next year before rates stabilised, then fell in 2004
- Pacific child hospitalisation rates are extremely high; they have dropped the past 2 years but still have a long way to go
- Around 10% of the fall in child hospitalisations in CMDHB has been due to reductions in meningococcal disease (see next graph).
- Overall CMDHB child hospitalisation rates remain higher than the rest of NZ.
- *Source: NMDS, 05/06 estimated from Jul05-May06 data, analysis by CMDHB*




### e) Meningococcal hospitalisation rate

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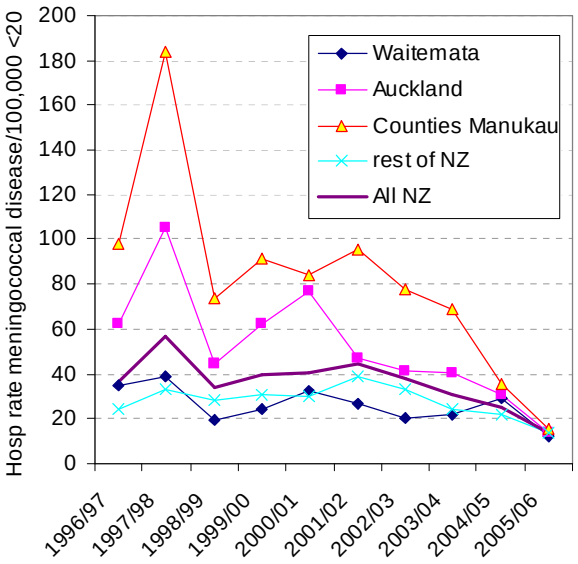
Meningococcal disease has had a major adverse impact of the health of the children of Counties Manukau. Almost all cases are hospitalised.




- Around 125 discharges per year for meningococcal disease occurred for CMDHB residents aged under 20 years during the epidemic (more than 2 per week, 1 in every 1000 children per year)
- This has fallen to 22 hospitalisations for 2005/06, a six-fold decrease - a clear signal of the halting of the epidemic
- Very impressive vaccination rates of around 93% of eligible under 18 years (and lower rates of the less-at-risk 18-19 year olds) has protected the majority of the vulnerable young people in CMDHB
- Counties Manukau children were affected more than any other DHB during the epidemic – by the close of 2005/06 hospitalisation rates were similar to the rest of New Zealand
- *Source: NMDS, 05/06 estimated from Jul05-May06 data, analysis by CMDHB*

### f) Hospitalisation rates adults

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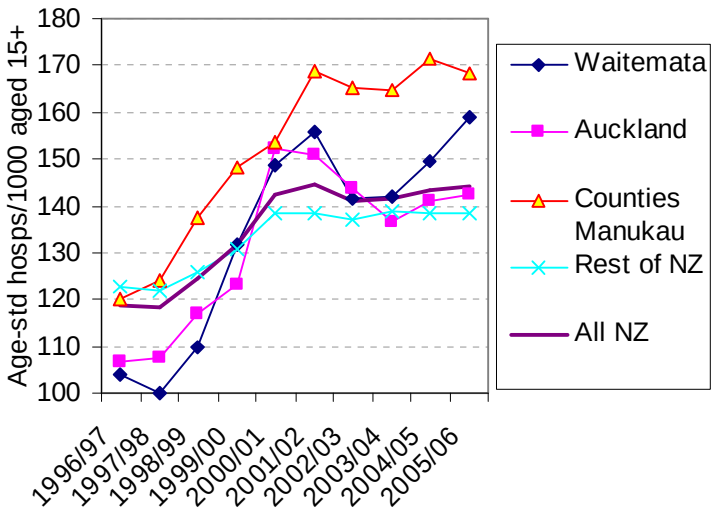
Severe illness requiring hospitalisation is an important health event. As an indicator of health however it is not as clear-cut as mortality as there can be "supply-side" variation in hospitalisation thresholds across the country and over time.

- Hospitalisation rates for adults (age 15+) rose dramatically across New Zealand in the late 90s
- CMDHB mirrored that trend, but rose faster, ending around 17% higher than the rest of the country
- From 2001 on CMDHB has maintained much the same rate of hospitalisation
- From 2001 on CMDHB has a similar excess rate compared with NZ (around 17%)
- *Source: NMDS, 05/06 estimated from Jul05-May06 data, analysis by CMDHB, age-standardised to the 2001 NZ population*




### g) Potentially avoidable hospitalisation rates adults

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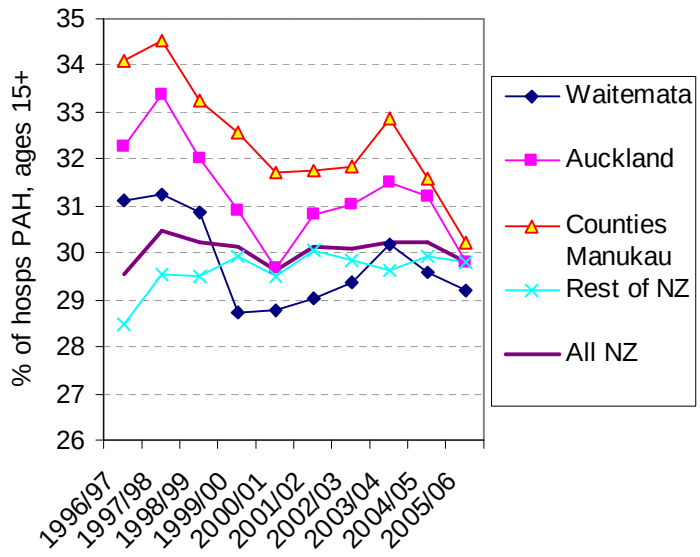
Potentially avoidable hospitalisations (PAH) refer to patients being admitted with conditions that one might have expected to be preventable, either through public health interventions (eg stopping smoking) or good primary care (eg adequate preventive treatment for asthma).




- Around 30% of all public hospital hospitalisations might be considered potentially avoidable
- The NZ rate of PAH has climbed at the same rate as all hospitalisations, leaving the proportion around 30% over the past 10 years
- The CMDHB rate has dropped from 34% in 1996/97 to close to the NZ average by 2005/06
- The overall CMDHB PAH rate of 51 per 1000 population is still 18% higher than the all NZ rate of 43.
- *Source: NMDS, 05/06 estimated from Jul05-May06 data, analysis by CMDHB*

### h) Teenage delivery rates

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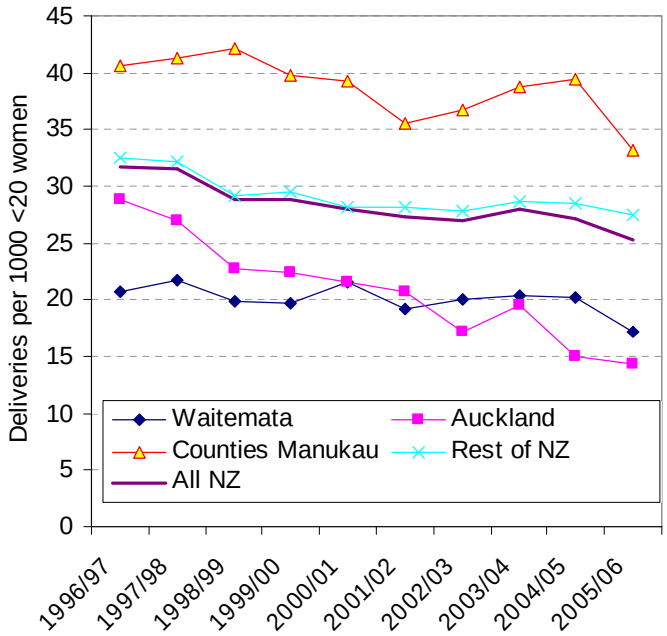
Health implications of early parenthood include health risks to the mother and baby. Teen parenthood is closely tied to social and economic indicators of well-being, especially income deprivation. Teenage delivery rates are a good proxy for overall teenage pregnancy rates.



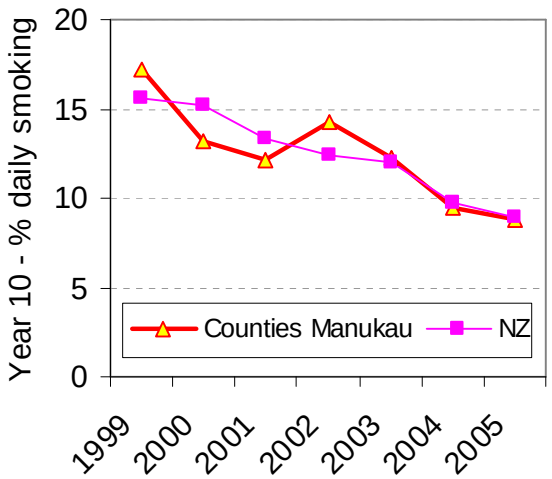

- There are around 550 deliveries in public hospitals to CMDHB women under the age of 20 (200 aged 17 or less)
- This is a rate of 33 per 1000 15-19 year olds, 30% higher than the NZ rate, and double that for the rest of Auckland
- The teenage delivery rate has been falling around 2% per year – a similar rate of fall to that of NZ as a whole
- The CMDHB Maori rate of 80 per 1000 15-19 year olds is nearly twice that of the Pacific rate (45) which is in turn three times the European/Other rate (15)
- The Teen Parent Unit established at Tangaroa College in 2005 has health working closely with the education sector to assist a population at high risk. Increased investment in the sexual and reproductive health area will be needed to improve the rate of fall of this health indicator.
- *Source: NMDS, 05/06 estimated from Jul05-May06 data, analysis by CMDHB*

### i) Teenage smoking rates

b

The majority of smokers get addicted in their teenage years. ASH carries out an annual survey on year 15 students (age 14-15) to monitor teenage smoking rates. Results are available annually by DHB by calendar year.

- 8.8% of CMDHB Year 10 students stated they smoked daily in 2005, down from 17% in 1999
- The CMDHB rate is just under the 9% national rate
- The rate of fall in CMDHB has been similar to the NZ fall
- Girls still smoke more than boys, 10.7% v 7.2% in 2005
- *Source: ASH – annual surveys. 2005 results: www.scoop.co.nz/stories/GE0605/S00110.htm, previous results: Tobacco Facts 2005 (www.moh.govt.nz Sept 2005)*

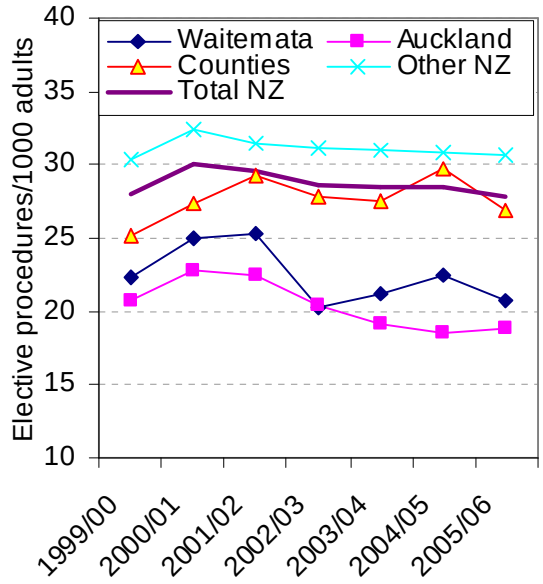


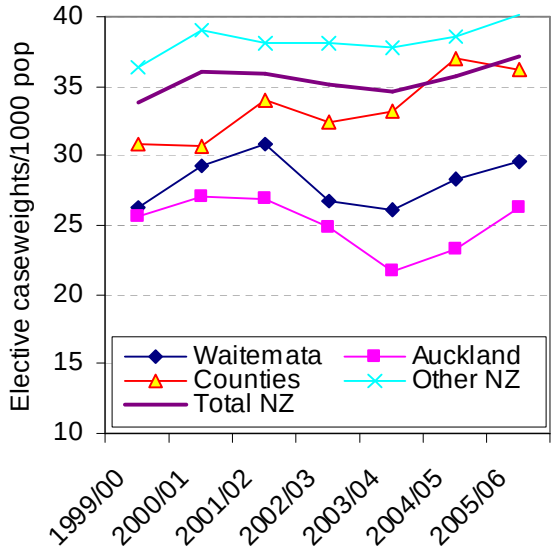
## 2. Improving access to healthcare

A component of the improved population health noted in the indicators above will relate to improvements in access to health care. Extensive investment in primary care, mental health and elective surgery over the past 5 years has shown results. The following measures serve as indicators of access to health care.

### a) Elective surgery utilisation rates

Increases in the provision of care for acute cases can make it difficult to provide non-urgent care. Elective surgery rates provide a good measure of the pressure on surgical service provision. While elective surgery is not a major component of population health, it has a disproportionate effect on public perception of how well the public health system is functioning.

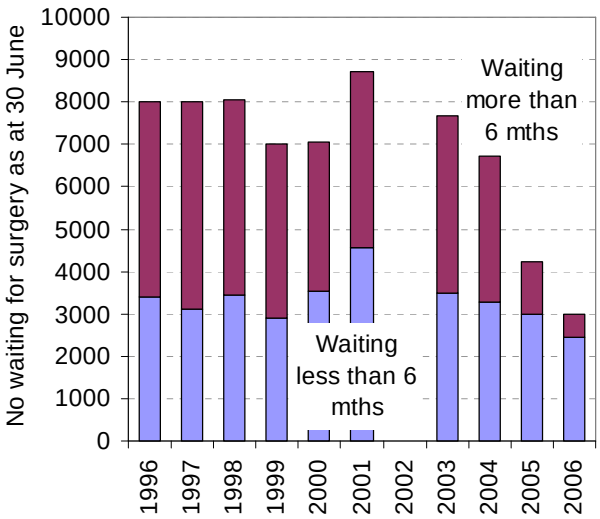



- Child elective surgery rates in CMDHB (and indeed the Auckland region) have been similar to the all NZ rates from the late 1980s to date (data not shown)
- By contrast adult elective rates in the Auckland region have lagged markedly throughout the 1980s and 1990s. Elective surgery rates have improved however for CMDHB over the past 5 years, nearing the NZ average for the first time in 2001/02
- Even more striking is the movement of case-weighted discharges. The first graph simply counts procedures – so a simple tonsillectomy counts the same as a complex total hip joint replacement. There has been a 12% increase in complexity over the past 4 years. This increase is likely to be related to the new access scoring system, and to the increased investment in major procedures like hip and knee joint replacement increasing average complexity
- Case-weighted adult elective discharges for CMDHB topped the New Zealand rate in 2004/05, the first time since records began. There is now a marked difference in elective surgical provision across the Auckland region, with central Auckland residents having the lowest access to public hospital elective procedures
- Rates by ethnicity are shown in the health disparities section (page 22)
- *Source – NMDS, 05/06 estimated from Jul05-May06 data, caseweights translated into WIES 11, analysis by CMDHB, rates age-standardised to NZ 2001 population*

### b) Numbers waiting for elective surgery

The number of people waiting for elective surgery has long been an indicator used in the health sector. It has a number of problems, including that the time spent waiting is arguably more important, and it is more driven by the rate at which surgeons assess someone as being suitable for surgery as the amount of surgery being performed. With the move to booking lists rather than waiting lists, and better defined surgical access criteria it is becoming a more useful indicator - for numbers waiting longer than 6 months anyway.

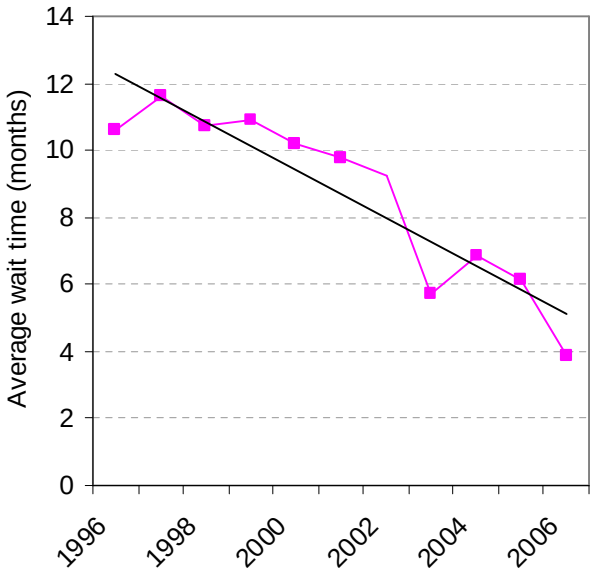



- People waiting for a surgical procedure have dropped from the 8000 level in the 1990s to around 3000 as at 30 June 2006
- More importantly the number waiting for longer than 6 months has dropped from around 60% of surgery performed to 18% (from 4,600 to 500 people)
- Accompanying this reduction in those waiting has been an increase in those operated on (see graph above)
- *Source – CMDHB, all treated at CMDHB facilities – ie includes non-residents, excluded CMDHB residents treated at eg ADHB facilities. Note that 2002 year is missing due to the system changeover to new booking system. Data collection systems are quite different before and after this year, so please interpret cautiously.*

### c) Average wait for surgery

The number waiting for surgery is a by-product in part of the sheer size of a surgical service. The time someone spends waiting for surgery once booked is a better performance measure.

- The average wait time was relatively stable at around 10 months in the 1990s, but dropped precipitously to under 4 months by 2006
- While increased surgery will have played a part, the main change has been the move to booking lists, and the aim to have no more than a 6 month booking list
- It is expected that the wait time will stabilise at around 3-4 months, the half-way point for the booking list

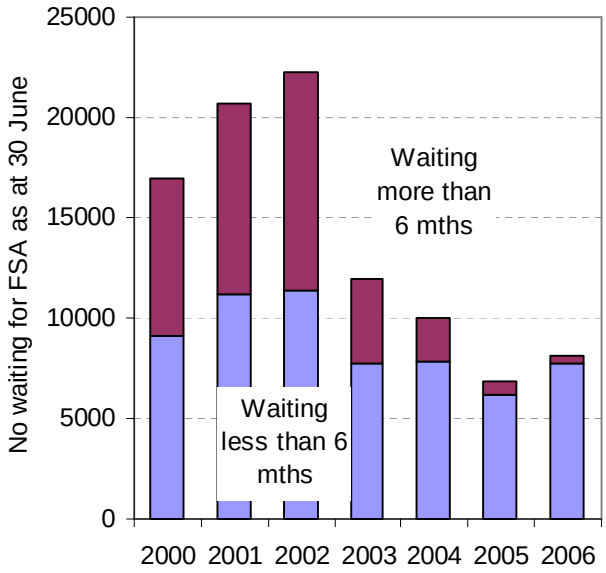



- *Source – CMDHB. Included all treated at CMDHB facilities – ie includes non-residents, excludes CMDHB residents treated at eg ADHB facilities. Note that 2002 year is interpolated due to the system changeover to new booking system.*

### d) Numbers waiting for FSA

b

As important as the wait for a procedure once seen is the time it takes to see a specialist after referral by a general practitioner. Total numbers are a reflection of the size of the system, but patients should not be waiting more than 6 months for a first specialist assessment (FSA)




- There has been a dramatic fall in the number of people waiting more than 6 months to see a specialist, from as high as 11,000 in 2002 to 400 who were waiting more than six months as at 30 June 2006
- There has been an increase in FSAs available (see page 15) through reducing follow-ups and the reduction in Auckland and Waitemata orthopaedic volumes to CMDHB
- The system change has mainly been accomplished through a better referral system targeting those who would most benefit from specialist assessment

### e) Mental health services access

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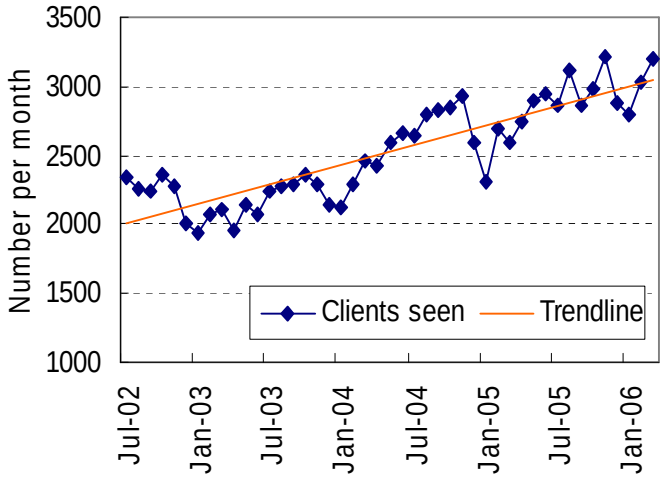
The Mental Health Commission estimates that in any one year 3% of the population has a mental illness severe enough to benefit from secondary mental health services. This has become a measure of access for the mental health strategy.

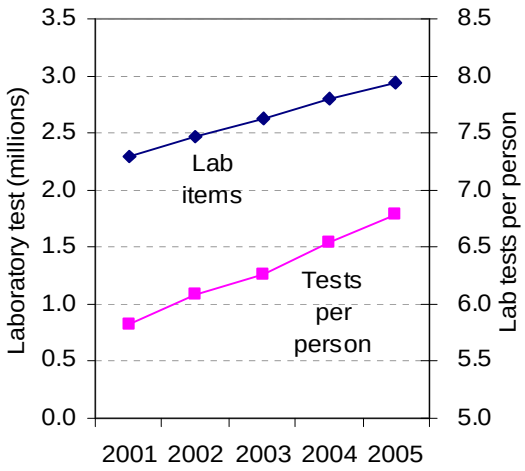



- In 2005 for CMDHB 8,424 residents accessed secondary mental health services, 1.9% of the population. While an improvement from around 1.6% in 2002 it is still less than the New Zealand rate of 2.2% in 2005
- Access rates have been steadily improving in CMDHB – the graph shows visit numbers by month for unique individuals (in that month) rising from around 2000 per month in 2002/03 to over 3000 in 2006
- CMDHB had a relatively higher use of non-inpatient services than the rest of NZ. For example in 2005 in CMDHB 7.1% of mental health clients had at least one inpatient episode in 2005, compared with 8.0% nationally
- *Source: MHINC data, CMDHB analysis*

### f) Laboratory test access – total tests

b

Access to primary care has improved through the primary care strategy with its investments in reducing co-payments for people to visit general practitioners (GPs). Unfortunately there is not a clear system-wide measure of this due the significantly changing structures over this time. Instead we show two proxies for primary care access whose measures have been relatively consistent over this time – laboratory tests and prescriptions. The number of GPs is also a useful marker – see page 25.

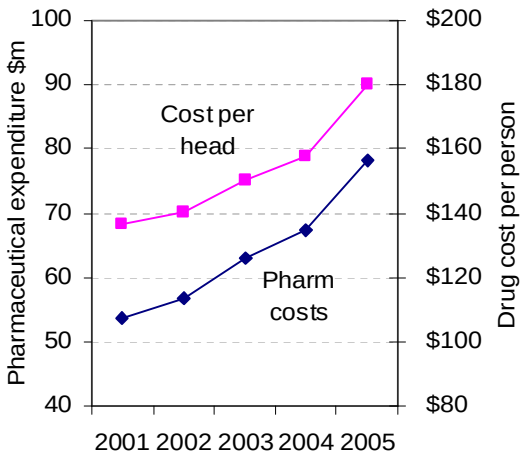



- Laboratory tests ordered in primary care for CMDHB residents have increased by 29% over the past 5 years, 2.3m to 2.9m tests
- The value of tests has grown 22% in the same period from $21.8 m to $26.5m (excl GST)
- In 2001 there were 5.8 tests per person in CMDHB. This has risen 17% to 6.8 tests per person in 2005
- CMDHB residents have a slightly higher rate of laboratory testing than the national average, but less than might be expected given the relatively deprived population being served
- *Source: NZHIS Lab Data Warehouse, via NDSA Regional Decision Support. CMDHB residents identified through NHI, community-ordered tests*

### g) Pharmaceutical access

b

As noted under laboratory tests above access to pharmaceuticals through prescriptions from primary care is a useful proxy measure of access to primary care. Due to the changes in stat prescribing it is more useful here to concentrate on the costs of what has been dispensed – script numbers can be misleading.




- Prescriptions filled at CMDHB pharmacies have increased in value by 45% over the past 5 years, from $54m to $78m
- The number of script items grew 21% in the same period, but this is distorted by the changes to prescribing amounts
- In 2001 CMDHB spent $137 per person on pharmacy-dispensed pharmaceuticals. This has risen 32% to $180 per person in 2005
- CMDHB is now approaching the national average per head prescribing, an increase from the 1990s, but still behind what might be expected for the DHB's relatively deprived population. Around 9% of all CMDHB expenditure is on community pharmaceuticals.
- *Source: NZHIS Pharm Data Warehouse, via NDSA Regional Decision Support. CMDHB located pharmacies. $ excl GST*

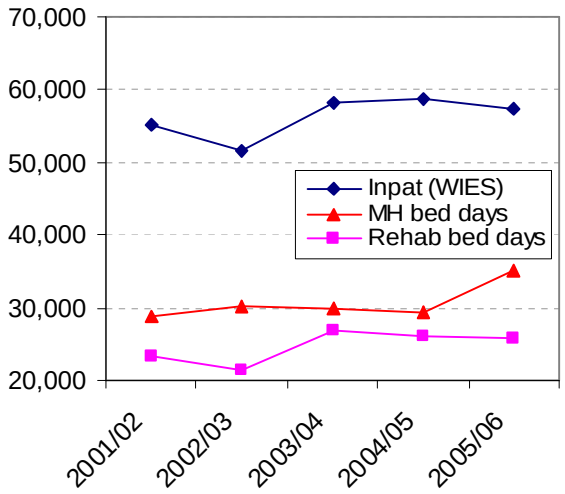
## 3. Improving healthcare

### a) Maintaining service loads

The acute demand management initiatives like CCM (see page 18) and POAC (page 19), along with the primary care improvements discussed above have assisted in reducing acute demand from 8-10% per annum to around the demographic growth rate. This still places an increasing load on the provider arm.

#### i) Inpatient care, provider arm

Overall DHB resident hospitalisation rates were shown above (page 8). Looking at the CMDHB provider arm only there has been a maintenance or increase in inpatient workloads

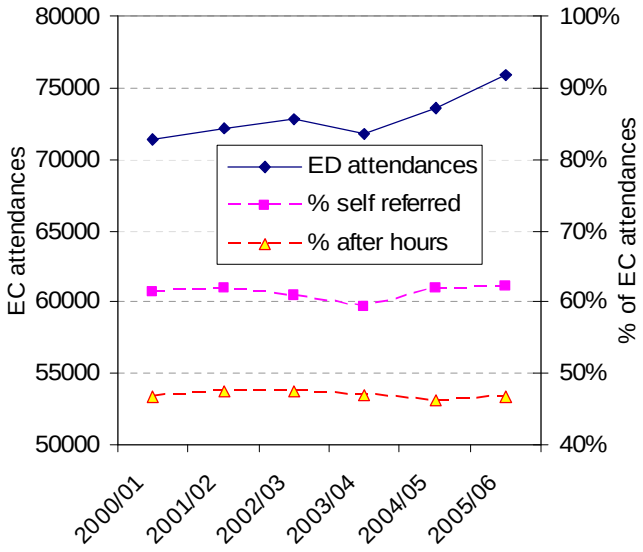



- Acute inpatient care for children has fallen off (see page 7), while adults have risen at about the rate expected by demographic growth
- Elective surgery provision peaked in 2004/05, with provision unable to be maintained in 2005/06 (see page 10), mainly due to workforce constraints
- Mental health services have invested strongly in community-based care, improving access to care see page 12) and reducing the need for inpatient care.
- The primary aim in the rehabilitation area is to keep residents in their homes as much as possible – inpatients bed day have been relatively constant
- *Source: CMDHB Decision Support*

#### ii) Emergency department attendances

The new Emergency Care (EC) facility at Middlemore Hospital opened in November 2000.

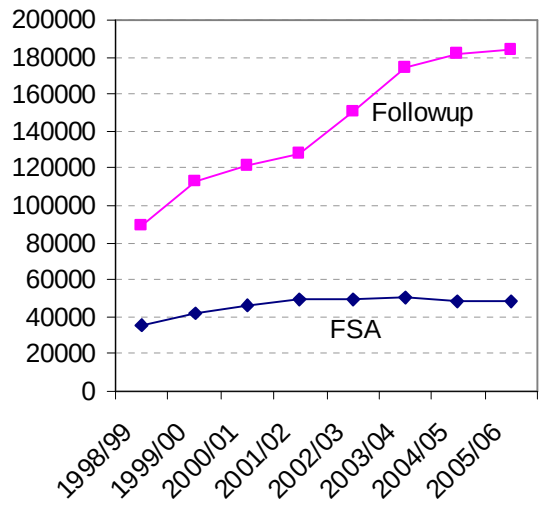
- After an initial increase in attendances volumes have risen to just over 75,000 attendances a year
- The growth from 2001-2006 of 1.0% is less than the 2-3% per annum that might have been expected through population growth and aging
- The proportion of self-referrals to EC has increased from 58% to 62% compared to those referred by general practitioners
- The proportion attending after normal hours (6pm-8am) has remained around 47%
- POAC (page 19) and the changes in primary care noted above including the reductions in co-payments for primary care are thought to have contributed to the stabilising of EC growth rates




- *Source: CMDHB Decision Support*

### iii) Outpatient attendances

Outpatient attendance volumes at CMDHB facilities are shown in the accompanying graph. Whilst the largest costs are represented by inpatient care, far more people interact wit the hospital specialised care through the outpatient setting.

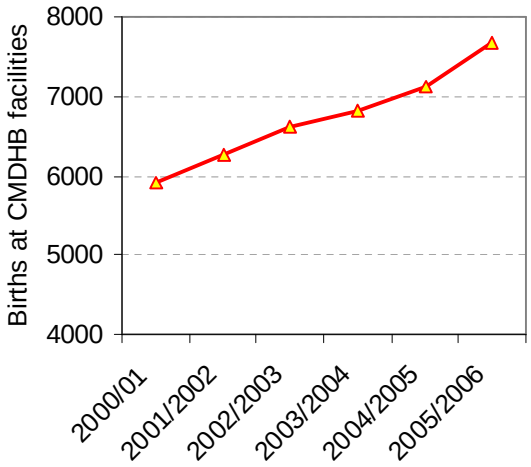



- The amount of on-going care and support secondary care offers primary care has increased markedly over the past 5 years
- First Specialist Assessments (FSA) have increased 37% over the past 7 years from 35,000 to 48,000 a year
- Follow-up visits have more than doubled, with over 180,000 patient visits a year in 2005/06
- Service changes in orthopaedics has seen less inflow from Auckland and Waitemata residents to CMDHB facilities for 04/05 and 05/06, slowing overall growth somewhat, but allowing an increase in CMDHB residents getting first assessments over the past 2 years
- *Source: CMDHB Decision Support*

### iv) Births

Women living in CMDHB have been having more births over the past 5 years, and more have been choosing to deliver at CMDHB facilities.

- Births at CMDHB facilities have risen from 5,900 in 2000/01 to 7,685 in 2005/06, a 30% increase
- Around 400 of this increase in births are those that would previously have occurred at ADHB (around 1000 CMDHB residents still delivered at ADHB in 2005/06)
- Around 900 are due to population/fertility increases
- The proportion of babies delivered by caesarean section has risen from 14% to 17% over this time at CMDHB, but remains well below the national rate of 26%

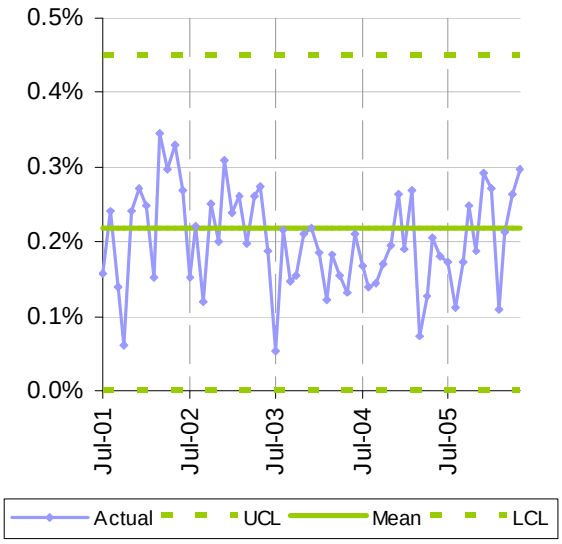



- Premature delivery (<37 weeks) occurred in 6.6% of births, little changed in past 5 years
- The median age of the mother has been gradually rising over this period, from 27 to 28 years of age, but is younger than the national median of 30 years
- *Source: NMDS, CMDHB analysis (adjusted for 05/06 undercount at MMH)*

### b) Maintaining service quality

Growing services combined with budget constraints make it important to ensure that service quality is not compromised. CMDHB collects over 50 clinical indicators on quality and safety monthly. The three summary indicators used are included here, as well as a patient satisfaction measure.

#### i) Blood infection rates




b

Hospital-acquired blood stream infections are a measure of hospital clinical quality. Whilst one might not expect much decrease in rates one would certainly not want to see an increase (UCL and LCL in the graph refer to upper control limits and lower control limits – data points within these limits indicate a process "in control").

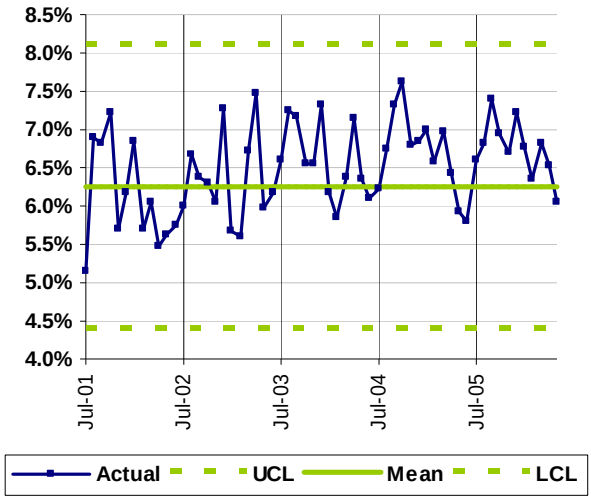
- blood stream infection rates have remained stable in CMDHB facilities over the past 5 years
- This is despite increasing workloads
- In 2005/06 on average 0.2% of discharged patients suffered a hospital-acquired blood stream infections
- These rates compare well with other hospitals in Australasia

- *Source: CMDHB Clinical Indicators*

#### ii) Unplanned readmission rates

Unplanned readmissions may indicate a lack of completeness of care, lack of follow-up or over-hasty discharge from hospital. A decrease in rates is not specifically expected, but one would certainly not want to see an increase

b

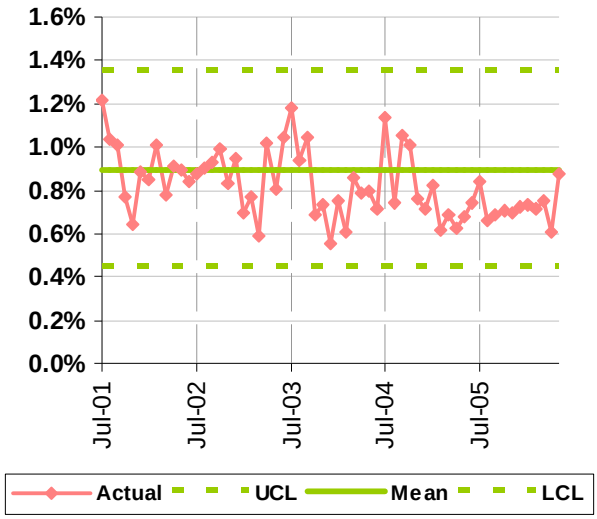



- Unplanned readmissions within 30 days of discharge have remained stable in CMDHB facilities over the past 5 years
- This is despite increasing workloads and shortening average lengths of stay
- In 2005/06 around 6.5% of discharged patients were readmitted within 30 days
- These rates are similar to other tertiary-level hospitals in Australasia
- *Source: CMDHB Clinical Indicators*

### iii) In-hospital mortality

b

Deaths in hospital have long been used as a measure of quality of hospital care. While difficult to compare across hospitals due to variations in the severity of cases presenting and the local palliative care system it can provide a useful overall measure.



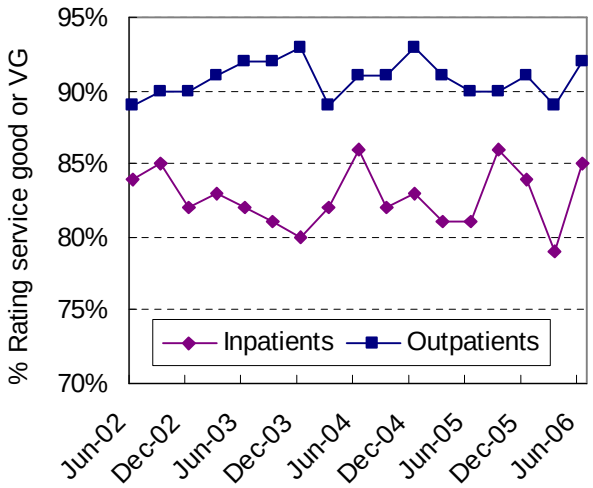

- In-hospital mortality has remained stable or fallen in CMDHB facilities over the past 5 years
- A statistically significant drop in mortality is shown with a 'run' of 19 points below the median line from Nov 04 onward
- This will reflect improvements in hospital quality, but a relatively light influenza load over the 2005 winter may have contributed – the 2006 winter will be a test of that
- This lowering in mortality comes despite increasing workloads in the hospital and an aging population
- In 2005/06 only 0.7% of patients died in hospital, a historic low for CMDHB
- *Source: CMDHB Clinical Indicators*

### iv) Patient satisfaction with CMDHB services

b

A proportion of inpatients and outpatients are sampled within 2 weeks of their visit. Among other things they are asked about their overall satisfaction with the service.

- Satisfaction with CMDHB outpatient services was around 91% for 2005/06 (that is 91% said the service was 'good' or 'very good')
- Inpatient satisfaction is slightly lower at 84% for 2005/06
- Both have been maintained well over the past 5 years, but do remain slightly below the average for New Zealand
- *Source: CMDHB Clinical Indicators*



### c) Extending and improving services

CMDHB has had an active policy of service improvement from its instigation. It inherited significant workplans in childhood immunisation via the Kidslink programme, integrated care – continued in the CCM and POAC programmes described below, and regional work on equity of access to secondary and tertiary services.

#### i) Childhood immunisation rates

b

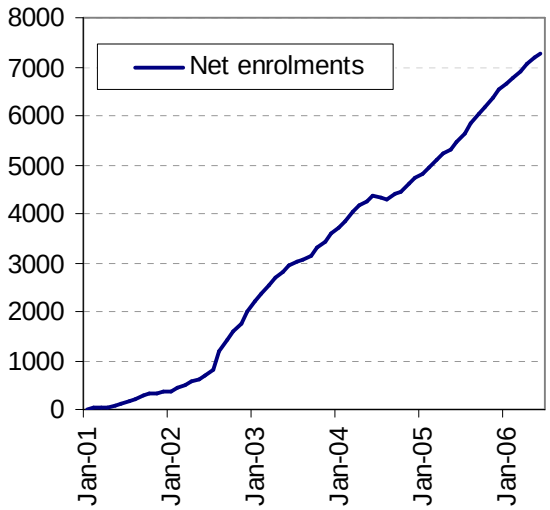
CMDHB has historically had a low child immunisation rate. A serum survey carried out in 1996 by North Health showed only 64% of all 2 year olds fully immunised. A major investment in immunisation coordination and IT was made through the Kidslink programme to address this.

- By 2004 the fully immunised 2 year old rate had risen past 80%
- A feature of the CMDHB immunisation figures is the continued improvement over time as follow-up and outreach get to the "hard-to-reach" children. By age three the first cohorts in the Kidslink programme were reaching 90% full immunisation coverage
- In 2004 the Kidslink programme was rolled into the National Immunisation Register (NIR). Since that time CMDHB has been unable to get reports on local immunisation rates (hence no graph has been shown), but the system of defined providers, alerts, the high profile meningococcal vaccine campaign, and community outreach is thought to have led to further improvement in immunisation rates
- The National Childhood Immunisation Coverage Survey undertaken in 2005 by the Ministry of Health has yet to report its findings
- The meningococcal vaccine campaign saw 90% of 1-4 year olds and 94% of school-age children vaccinated over an 18 month period starting in July 2004 (see also page 7).

#### ii) Chronic care management enrolments

b

Programmed chronic care management (CCM) has been shown to improve care and patient's health. The current health system structure has evolved to deal well with acute problems and emergencies, but long-term management of ongoing problems is less well handled. Chronic diseases are the largest health burden on CMDHB's population, and are a major cause of avoidable hospital admission and primary care workload.

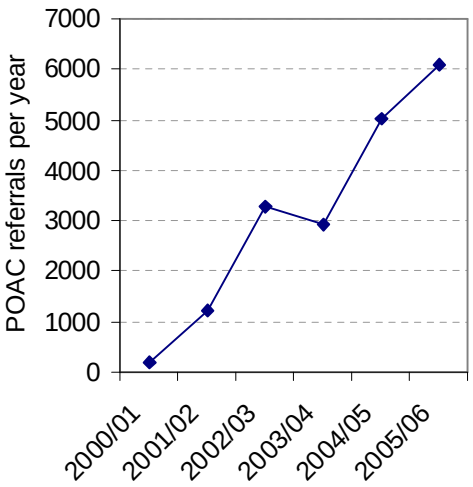



- CMDHB has invested heavily in supported CCM programmes for diabetes, chronic obstructive respiratory disease (CORD), Congestive heart failure (CHF), cardiovascular disease and recently launched depression
- The CCM programme started in 2001; by June 2006 the programme had 7281 enrolees (a net figure, only counting those that remain on the programme)
- More than 75% of GP practices in CMDHB are participating in at least one CCM programme.
- *Source: CMDHB*

### iii) Acute demand management

b

The Primary Options for Acute Care (POAC) programme is designed to give primary care the resources need to care for acutely ill patients in the community rather than involving hospital care. The DHB makes available a specific budget that can be accessed to pay for this care.

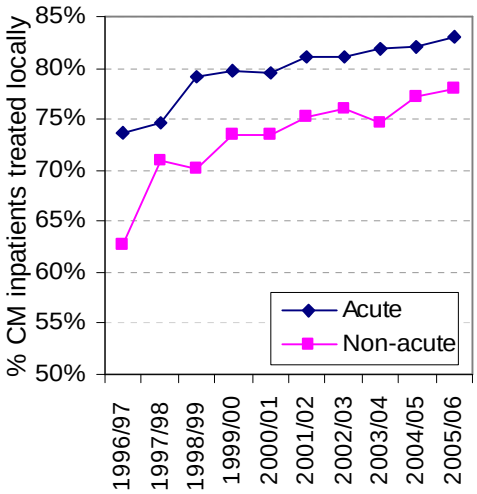



- The POAC programme started in 2001; by June 2006 the programme had had 18,765 patient referrals, 6,109 for the 2005/06 year
- The programme is regularly audited. On average 87% of referrals would have needed hospital attendance and probable admission without the referral
- The average cost of a referral is around $250
- Most (~95%) primary care practices in CMDHB have utilised the POAC programme
- *Source: CMDHB*

### iv) Improved local provision of secondary services

b

CMDHB has reviewed all health service provision for its residents, looking to provide local access to services wherever possible, either through repatriation of services -- providing them locally – or bringing the providers to local clinics.




- For all acute hospitalisations for CMDHB residents 83% were at CMDHB facilities in 2005/06. For elective and arranged it was 78%. There have been significant increases in both over the past 10 years
- Cardiology. Some inpatient and outpatient volumes transferred from Auckland DHB 01/02, and a further large tranche in 05/06. This latter includes coronary angiography and angioplasty volumes being performed in the new Cardiac Catheter Laboratory at Middlemore Hospital. Some specialised cardiology remains with ADHB, as does cardiothoracic surgery
- Neonatal inpatient care. The Middlemore NICU became Level 3 in 2001, and with the opening of the new neonatal unit in 2005/06 has ended a long period of planning to bring the care of babies more local. CMDHB has the largest number of births at its facilities of any DHB in NZ (see page 15)
- Gynaecology inpatient and outpatient care. All secondary gynaecology is based at CMDHB as from 2005/06
- Respiratory inpatients and outpatients. Following extensive regional review of services most respiratory inpatient and outpatient care was transferred to CMDHB for 2002/03. Specific specialised services (eg lung cancer, tuberculosis) remain with ADHB
- Dermatology outpatients. All secondary dermatology (ie most) provided by CMDHB as from 2005/06

- Home oxygen treatment. Part of a regional planning process, CMDHB patients began being provided for locally in 2005/06
- Sleep apnoea services. Local provision began in 2005/06
- Mammographic breast screening. CMDHB became the local provider in 2005/06, expanding its service to local women

Clinics and visiting specialists include:

- Oncology, 10 different clinics, including multi-disciplinary conferences, held at Botany and Manukau Superclinics™
- Neurology – 3 times a week visits to Middlemore (inpatients), clinics at Manukau and Botany Superclinics™
- Opthalmology, general and specific, including occuloplastic, laser, glaucoma, diabetes, paediatric and medical retina at Manukau Superclinic™
- Infertility at Manukau Superclinic™
- Antenatal high risk at Manukau Superclinic™
- Urology, 10 clinics at Manukau Superclinic™
- Medical Genetics at Manukau Superclinic™
- Paediatric general surgery at Manukau Superclinic™

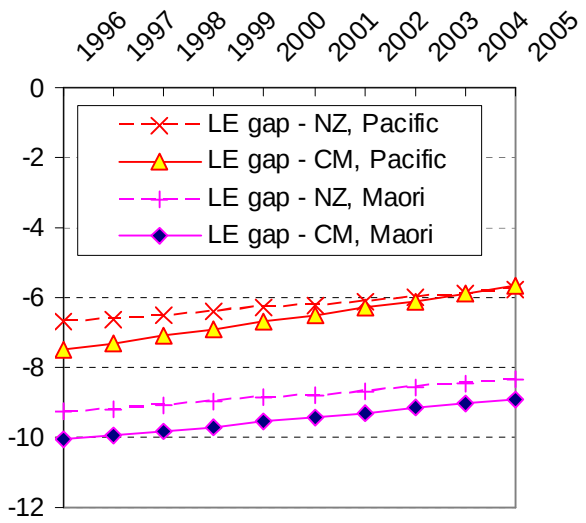
## 4. Reducing disparities

Improving the health of the Maori and Pacific populations and reducing health disparities are key goals for CMDHB, part of the overall vision statement and appearing throughout the strategic plan.

### a) Life expectancy

b

Life expectancy is a key health indicator, summarising total population mortality - see also section 1 (page 5). The graph here shows the gap in years between Maori and Pacific life expectancy compared to that of people of European or Other ethnicity.



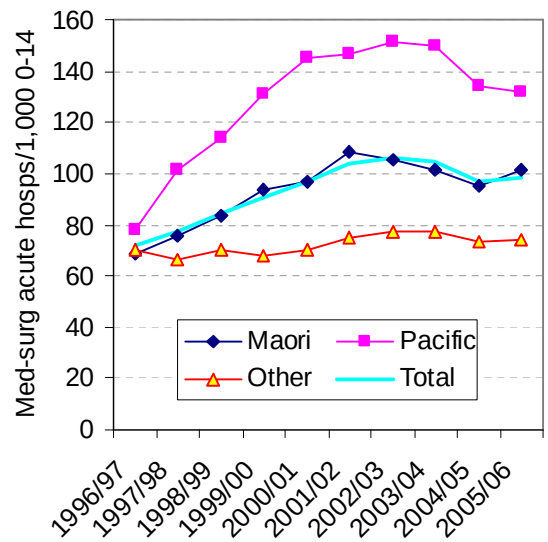

- Maori life expectancy (LE) in Counties Manukau in 2005 was 72 (provisional figures), 9 years less than the NZ European and Other rate
- Pacific life expectancy in CMDHB in 2005 was 76, a 6 year shortfall compared to the NZ European and Other rate
- Maori life expectancy has been steadily improving in CMDHB, gaining 2.2 years from 2000 to 2005, a faster rise than European and other, and slightly faster than all NZ Maori
- Pacific life expectancy has also been improving in CMDHB, gaining 2.6 years from 2000 to 2005, a faster rise than European and other, and faster than all NZ Pacific
- European and others living in CMDHB have a life expectancy 1 year higher than their counterparts in the rest of NZ (data not shown)

- *Source: NZHIS mortality data, CMDHB analysis*

### b) Child acute hospitalisation

b

For children (ages 0-14) acute hospitalisation is a marker of ill-health. Once basic access to service is established higher rates of hospitalisation are generally considered a negative health indicator. See page 7 for CMDHB rates compared with other DHBs and NZ.

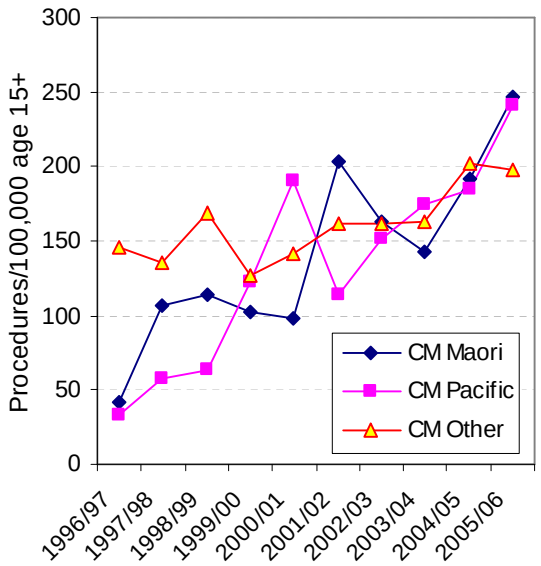



- Pacific child acute hospitalisation rates increased markedly in the late 1990s, and Maori rates also increased. European and Other rates were largely unchanged.
- By 2001/02 Pacific rates were twice that of Other, while Maori children were admitted 40% more
- Since then rates have decreased for both Pacific (20/1000 pop or 3.4%) and Maori (10/1000 or 2.5%), but they remain significantly above the European and Other rates
- The fall in meningococcal disease (see page 7) and improvements in housing (page 24) have contributed to the reductions
- *Source: NMDS, CMDHB analysis. Ages 0-14, excluding neonates, 05/06 estimated from Jul05-May06 data*

### c) Access to cardiology procedures

b

Access to cardiological interventional procedures in the public hospital system were shown to be poor for Maori, Pacific and relatively deprived people in the 1990s. Populations with twice or higher rates of cardiovascular disease were getting angioplasty and coronary artery bypass (CABG) interventions at a third the rate or less. This section shows the changes that have occurred in this area, the next looks at all elective surgery combined.



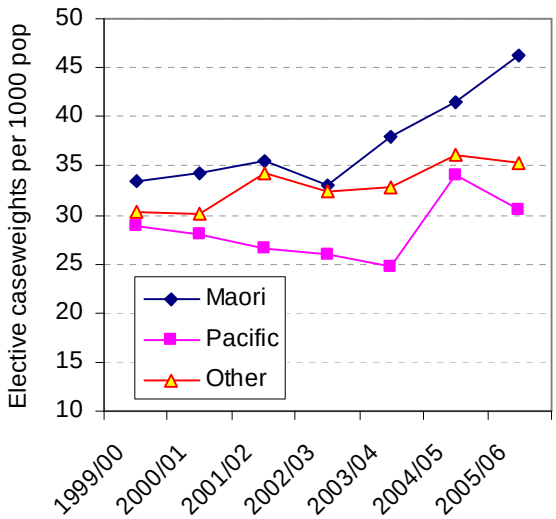

- Angioplasty and CABG procedure rates have risen dramatically across New Zealand over the past 10 years, with by far the largest rises in the Maori and Pacific populations
- CMDHB's rate has been slightly above the NZ rate over this time period
- Within CMDHB the Maori rate has risen 5-fold and the Pacific 6-fold – both at a faster rate of increase than their NZ counterparts, and both ending with higher rates than their NZ counterparts and higher rates than European and Others within CMDHB
- All surgery during this time was performed at Auckland DHB facilities; there has been dramatically improved referral pathways and assessment of cases based on need over this time period
- *Source: NMDS, CMDHB analysis. Age-standardised ages 15+, all CABG and angioplasty procedures, 05/06 estimated from Jul05-May06 data*

### d) Access to elective surgery

b

Despite increased rates of illness and death Maori, Pacific and more deprived populations have had a lower rate of access to elective surgery in the public system. Section 2a (page 10) gives more information on overall elective surgery rates.

- For CMDHB rates of procedures for Maori have risen slightly, while Pacific and Other ethnic groups have remained steady (data not shown)
- By case-weighted discharges though the CMDHB Maori elective surgery workload has increased 18% over the past 5 years (see graph). A description of case-weights is on page 10. Maori intervention rates have increased in the rest of New Zealand too, but at half the rate of increase of CMDHB
- Pacific rates have risen to match the NZ average (30 cf 32/1000 pop in 2005/06), Other rates are still slightly below the NZ rates (35 cf 37/1000 population in 2005/06)
- The increases may relate to improved access to primary care, and also improved clarity in priority access scoring for elective surgery




- *Source: NMDS, 05/06 estimated from Jul05-May06 data, case-weights translated into WIES 11, rates age-standardised to NZ 2001 population, analysis by CMDHB*

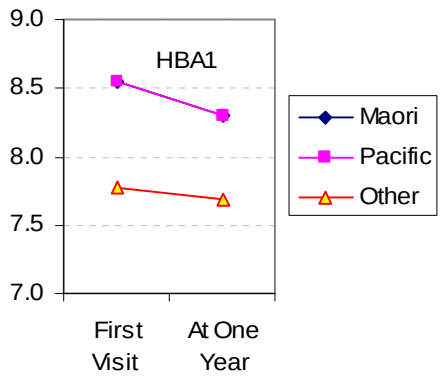
### e) Immunisation rates

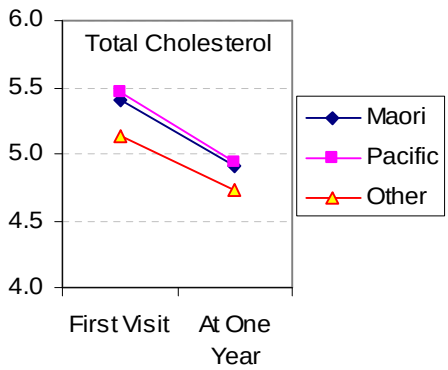
A serum survey carried out in 1996 by North Health showed that by the age of 2 years only 45% of Maori and 53% of Pacific children were fully immunised, compared with 72% of European and other. A major investment in immunisation coordination was made in CMDHB to address this (see page 18).

- By 2004 Maori 2 year olds in CMDHB were showing an fully completed immunisation rate of 80%, with Pacific 83%, and Other 89%. This is a dramatic improvement in coverage
- Around 95% had begun their immunisation schedule before the age of one year (ie had had at least their first 6 week vaccination, while 74% had had their 6 week vaccination within 3 months of their due date (71% Maori, 75% Pacific, 76% Other)
- Unfortunately reports are not available past 2004; it is anticipated that these rates will be being maintained in the National Immunisation System which took over from the CMDHB-developed KidsLink system
- *Source: CMDHB*

### f) Chronic Care Management physiological changes

Maori, Pacific and the more deprived populations within CMDHB have higher rates of chronic disease. The Chronic Care Management (CCM) programme (see page 18) is aiming to improve management of chronic disease in all populations. Sometimes new health programmes can exacerbate health disparities if uptake is faster in relatively healthier populations. The CCM programme is aiming to assist in reducing health disparities in people with chronic illness. While it is too soon to look at outcomes from the programme, indicators such as changes in disease are useful surrogate measures. The following graphs take all patients who have been in CCM for a year or more and compare their measures on entry with the measures after one year in the programme.

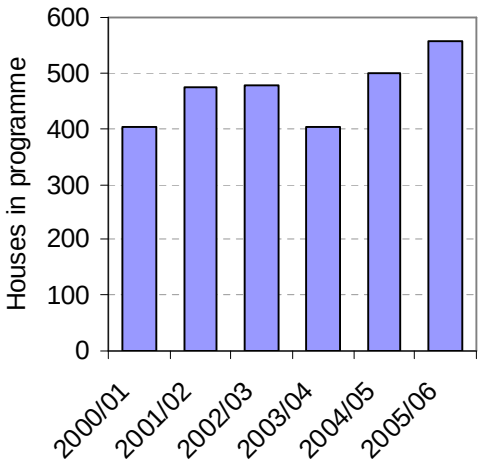



- Haemoglobin A1c (HbA1c) is a measure of a persons long-term blood glucose levels – long term here meaning weeks (cf hours/minutes for a blood glucose measure)
- For people with diabetes a modest but significant fall in HbA1c was shown at one year. For well-controlled diabetes the target is to get below 7, so there is still some way to go however
- Maori and Pacific show higher rates than Others on programme entry, indicating less well controlled disease, but do show a larger drop at one year (Note that the Maori and Pacific data points are remarkably similar – the lines overlay one another in the graphic)
- Preliminary data shows that (at least for those who stay enrolled) this drop continues past one year
- Total cholesterol figures show a similar picture. Maori and Pacific enrolees show a higher level on entry, but have a larger drop after one year in the programme
- Findings to date indicate some reductions in disparities for those enrolled in the programme
- *Source: CMDHB.*

### g) Healthy housing programme

Intersectoral work has been an important aspect of CMDHB's aim to improve the overall health of the population it serves. Housing New Zealand Corporation (HNZC) has been a major partner in this work, with the Healthy Housing Programme the single largest intersectoral project undertaken by CMDHB The programme assesses HNZC houses from both a health and housing viewpoint (joint assessments or JATs) with a building programme following up to correct heating, ventilation, kitchens, room numbers etc as needed. It serves the poorest populations in CMDHB.



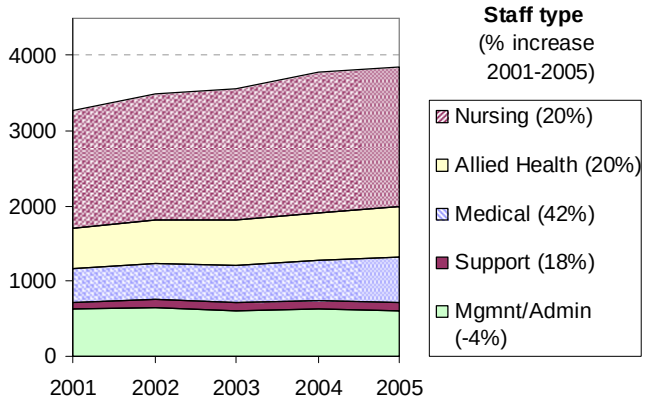

- By June 2006 2,816 houses had entered the programme in CMDHB, with significant investment by Housing NZ in building improvements
- This represents 3.5% of the entire housing stock of Manukau City, and around 10% of those in the most deprived areas of Manukau City
- A study examining hospitalisation rates of residents of the houses in the years before and after the intervention showed a 37% reduction in 'housing-related' hospitalisation. Housing-related hospitalisations are mainly infectious and respiratory diseases linked to poor housing conditions
- Health benefits would expect to improve in later years, as residents spend longer in their dryer warmer homes

- *Source: CMDHB and Housing NZ Corporation*

## 5. Workforce

Workforce is a key resource issue for District Health Boards. For CMDHB with a rapidly growing population and hence growing service load finding, training and retaining staff, particularly clinical staff, is a major operational priority

### a) Staff employed by CMDHB



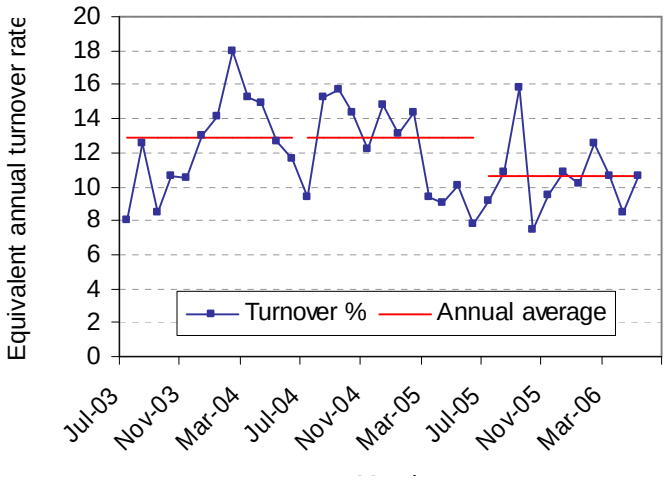

- CMDHB is the largest employer of health care workers in Counties Manukau (and indeed is one of the largest employers in the area overall), with 3,859 full-time equivalent (FTE) staff in 2005.
- Staff numbers increased from 3,261 FTE in 2001, an 18% increase
- Medical staff numbers are 610 FTE in 2005, up 42% since 2001
- Nursing staff make up half the workforce, up 20% since 2001
- Management and administration staff fell 4% over the same period, from 19% of the workforce in 2001 to 16% of the workforce in 2005
- *Source: CMDHB.*

### b) Staff turnover rate

b

A good employer is expected to have a low staff turnover rate – the proportion of staff resignations to total workforce (excluding temporary or short-term workers such as junior doctors (RMOs)

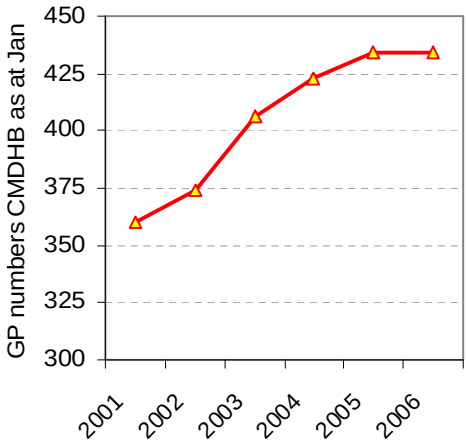
- CMDHBs staff turnover has dropped from over 13% per year in 2003 to just over 10% per year in 2006.
- The CMDHB rate for Oct-Dec 05 of 2.9% (11.6% annualised) was lower than the average for all DHBs of 3.3% (13.2%) (MoH: DHB Hospital Benchmark Information. Mar 2006.)
- *Source: CMDHB*




### c) Number of GPs

b

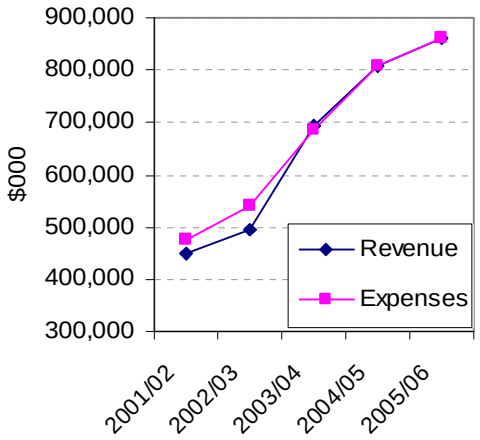
Workforce has been an important issue within primary care development, particularly with the attempts to develop primary care teams. Unfortunately there is no clear measure of the primary care workforce available. Here we use general practitioner numbers as a proxy – GPs are clearly a fundamental part of primary care.




- Full-time equivalent (FTE) numbers for GPs based in Counties Manukau area are not collected directly by the DHB. What is able to be measured is the overall number of people working in CMDHB, whether part-time or full-time
- The number of GPs in CMDHB has increased by 20% since January 2001
- Comparing with Medical Council data for FTE numbers for 2002 and 2003 should be deflated by about a third to arrive at FTEs
- Further work is being done in this area to more accurately quantify the primary care workforce
- *Source: CMDHB*

## 6. Financial impact

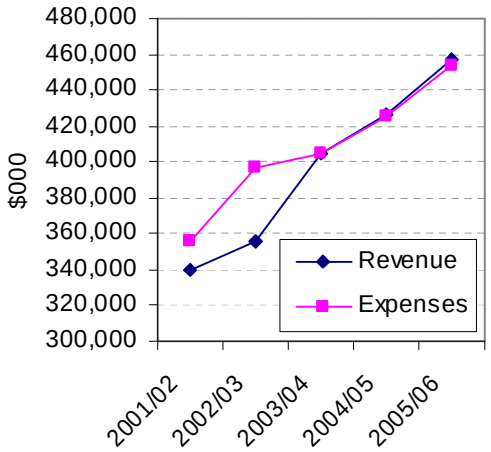
### a) Revenue v expenses – DHB



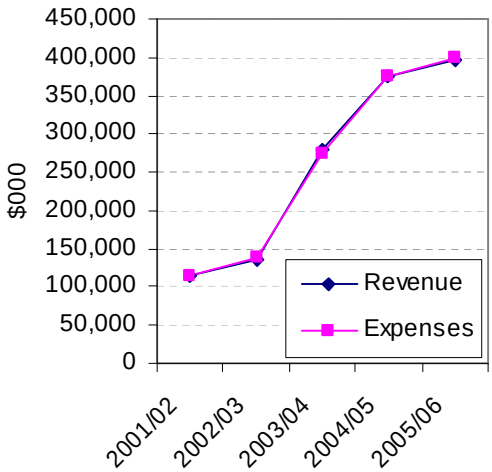

- CMDHB revenue has increased significantly over the past 5 years. This is due to a progressive increase in services transferred to DHBs (eg services for the elderly in 2003/04), funding increases by government and the movement to a fairer population based funding formula (PBFF) environment
- In 2002/03 CMDHB was running a deficit of nearly $50m. With a combination of cutting operational costs and improved revenue through the PBFF changes this was turned into a break-even position for 2003/04 and small surpluses subsequently.
- *Source: CMDHB*

### b) Revenue v expenses – provider

- While there has been increased investment in primary and preventive care at CMDHB the provider arm (all hospitals and related services) makes up around 60% of expenditure
- The revenue and costs of the provider have increased in line with increased demand (see p14)
- The single biggest driver of cost is personnel – staff costs made up 61% of the total expenditure of the provider arm in 2005/06
- The operational cost savings instituted in 2003/04 show with a sharply curtailed growth in expenditure. The CMDHB provider arm has developed a culture of cost containment and achieving efficiency gains
- The increase in revenue in 2003/04 was largely due to PBFF funding being passed on to the provider arm, reflecting particularly the increased use of acute inpatient care by the relatively deprived communities of Counties Manukau
- *Source: CMDHB*



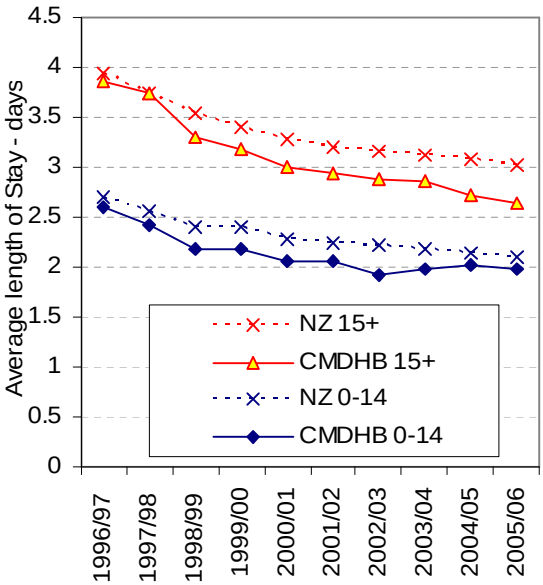

### c) Revenue v expenses – funder




- With the devolution of health of the elderly in 2003/04 Funder arm revenue and cost nearly doubled
- Additional primary care investment through the primary care strategy and its PHO funding has also increased revenue and cost significantly
- This strengthening of the primary care sector has seen improved access to primary care by CMDHB residents (see laboratory tests p13, pharmaceuticals dispensed p13, and GP numbers p25)
- *Source: CMDHB*

### d) Provider arm efficiency – average length of stay

There are many different indicators of efficiency within health services. A much-used one for inpatient care is the average length of time someone spends in hospital as part of an inpatient episode.

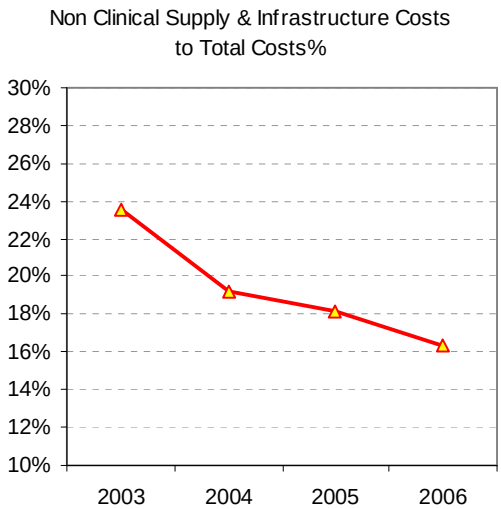



- The average length of stay (ALOS) for inpatients in CMDHB facilities has fallen 30% over the past 10 years
- Adult length of stay (age 15+) dropped from 3.9 days to 2.6 days, and child (including neonates) ALOS fell from 2.6 to 2 days
- Both the fall and absolute numbers are less than the NZ average. The rate of fall has been slowing as might be expected; it will be difficult to further postpone bed number expansion as the CMDHB population continues to grow.
- *Source: NMDS - medical, surgical, paediatric, maternity and neonatal inpatients included.*

### e) Provider arm efficiency - Non Clinical Supply & Infrastructure Costs

Hospitals look to maximise the clinical loading of their spend – in general terms the greater proportion of funds spent on clinical matters rather than on support, non-clinical supplies, and administration is thought beneficial.

- The CMDHB provider arm has seen a fall in the proportion of non-clinical supply and infrastructure costs to total provider arm costs from 23.6% to 16.3%, a more than 7 percentage point drop
- Improved procurement through the Health Alliance shared agency (with Waitemata DHB) and shared IT, HR and finance costs have helped drive this ratio down
- *Source: CMDHB*



### 7. Facilities modernisation

Up to 2001 Counties Manukau DHB had undergone a major capital upgrade programme to keep pace with the growing populations. The $160m spend to that point included on the Middlemore site the 82 bed Kidz First children's hospital, 150-bed acute medicine (AMC) ward block, new Emergency Care department, renal dialysis satellite centres, new entry way, new Laboratory premises, new Coronary Care and Cardiac Investigation units and upgrading some of the surgical wards in the Galbraith building; and on the Manukau site the 40-bed elective surgical hospital. Since then around $70m worth of projects have been completed or are under way and due to be completed by the end of 2006. No significant cost or time over-runs have occurred.

| Project | Completion Date | Approximate Cost |
|---|---|---|
| **03/04 Projects** | | |
| Radiology expansion, refurbishment, CT suite | August 06 | $16m |
| Engineering infrastructure upgrade | December 06 | $5m |
| **Current required upgrades** | | |
| Neonatal Intensive Care – 30 cot unit (space to go to 36 cots) | February 06 | $7.9m |
| National Burn Centre | June 06 | $6.9m |
| Cardiac Catheter Laboratory | September 2005 | $4.5m |
| AMC Level 3 fit-out (60 beds) and AMC new levels | June 2006 | $13.1m |
| Manukau - inpatient beds – additional ward (40 beds) | April 2005 | $3.2m |
| **Core Consolidation** | | |
| AMC Level 4 & 5 fit-out (120 beds) | December 06 | $9.1m |
| Cardiology | December 06 | $4.1m |

A further $41.3m capital was approved by the Ministry of Health in June 2006 to cover

1. Intensive Care Unit /HDU
2. New cardiology suite (CCU / CIU / SDU)
3. New Birthing Suite and Mother and Baby Assessment Unit
4. New antenatal and postnatal wards
5. Enabling for Master Plan: new circulation corridors, service tunnels & infrastructure
6. Women's Health building minor refurbishment
7. Mental health refurbishments