

## 15 HEALTH OF OLDER PEOPLE

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### KEY FINDINGS

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#### Māori

- The age profile of the Maori population is quite different to the profile of Other ethnic groups. For this reason, when accessing services, Maori are sometimes considered for age related care at 55, rather than 65.
- Among Māori aged 65+, the age proportion of mortality and hospitalisations due to circulatory system, cancer, diabetes and chronic obstructive pulmonary diseases (COPD) demonstrate that Māori die at a younger age than of Other ethnic groups.
- The age standardised rate of hospitalisation for diabetes among 65+ years old Waikato Māori increased considerably from 1699 in 2005 to 2900 per 100,000 population in 2006 and the Waikato rate was significantly higher than the national rate of 1753.9 per 100,000 in 2006. A similar trend was noticed across the age specific rates among 65-69 and 70-74 year olds.
- Considerable increase was noticed in the age specific rate of hospitalisation for stroke among Māori 65-69 year olds from 490.2 in 2005 to 1111.1 in 2006. The age specific rate among 65-69 year old Other ethnic group increased slightly to 442.3 per 100,000 in 2006.

The underlying causes behind the significant increases in the age standardised and age specific rates among Māori for ischemic heart disease, diabetes and strokes need further detailed investigation/studies in order to establish the root causes of the problem and to design appropriate services.

#### Other Ethnic Group

- Around 97% of mortality to colon cancer occurred among Other ethnic groups, and the trend increased steadily among females from 38% in 1998 to 72% in 2004, however decreased among males at 62% in 1998 to 28% in 2004.
- The age standardised rate of mortality to non-insulin dependent diabetes increased among Other ethnic group aged 65+ reached the highest since 1989 to 220.8 per 100,000 population in 2003 and 2004 years.
- Among Other ethnic group, the hospitalisation for skin cancer and colon cancer increased in 2006.
- The age specific rate of hospitalisation for Angina among Other ethnic group aged 65-69 also increased to 1170.9 per 100,000 and the Waikato rate was higher than the national rate of 975.8 per 100,000 in 2006.

## Health of Older People

### **Pacific People**

- Age proportion of mortality to circulatory system illnesses among Pacific People was the highest among 75-79 year olds at 50%, followed by 65-69 year olds at 33% for 2004.
- The Age standardised rate of mortality to circulatory system illnesses among Waikato Pacific People aged 65+ increased to 3768.1 per 100,000 in 2003 and 2004 years, although Waikato age standardised rate was significantly lower than the national rate.

### **Asians**

- Age proportion of mortality to circulatory system illnesses among Asians was comparable to Māori, as around 33% of Asians died between the ages of 65-75 years.
- Age proportion of hospitalisation for circulatory illness was the highest among Asians aged 65-69 and 70-74 (at 41% and 22% respectively for 2006).
- Hospitalisation for colon cancer was the highest among 70-74 year olds at 35% followed by 75-79 year olds at 21% in 2006.

### **Overall Findings**

- Waikato age standardised rate of avoidable hospitalisation for diabetes was significantly higher than the national rate for the seven years analysed (2000 to 2006).
- Analysis of residential care 2003 to 2007 showed that the average age of subsidised residential care population remained relatively static, with minor variations, since 2003. When analysed by care type the data showed an increase in people living in all care types except dementia care and especially in psycho-geriatric specialised hospital care.
- A steady increase was observed in the number of people receiving various home based care services and the number of hours of services delivered.
- The likely demand for both residential and home based services over the coming years will be affected more by the increasing population in the 80+ age group which is forecast to increase at 4-5% per annum, than by the 65+ group increase at 2% per annum.

The findings listed above are from the detailed analysis of the mortality, morbidity and payment data. Given the data limitations (Refer to Data Sources and Limitations, chapter of the HNA 2008) it is not feasible to recommend service delivery improvements as further detailed studies have to be undertaken to address the key findings to clearly understand the root cause of the health problems.

The main purpose of this analysis is to develop a conceptual view of the health status of people aged 65+ in the Waikato. The recommendations listed below encapsulate the key findings and it is imperative that the implementation processes ensure further investigation/clinical audit of the key findings in order to develop innovative service delivery options that best meet the needs of the older communities.

## **RECOMMENDATIONS FOR STRATEGIC CONSIDERATION**

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The implementation and ongoing management of the recommendations outlined below will need to be coordinated at the DHB, regional and national level depending on the next level detailed assessment of the recommendations:

**Research/clinical Audit:** Undertaking a clinical audit to clearly understand the disparate trends in mortality and hospitalisation across Māori, Pacific People and Asians when compared with Others. The main aim of the audit is to design an appropriate service delivery framework tailored to the specific needs of the community. The outcome from the audit may trigger possible changes for consideration, such as lowering the age breakdown of older people for Māori.

**Collective and Consistent Strategic approach:** Currently, there are a number of strategic plans for the health of older people with varying objectives and outcomes across the health care sectors. An integrated approach that brings together the fragmented strategies and objectives is essential to ensure well understood future direction for developing a focused strategic plan of action.

**Reduce Inequality:** Equity of access to health care for older people irrespective of the patient's domicile including rural, income, culture, language, religion and that achieves equitable outcomes.

**Integrated Care Management Framework:** Focus on evidence based chronic care management that delivers positive outcomes through effective integration of services across the continuum of care, i.e primary, secondary and tertiary levels.

**After Hours Medical Care:** The after hours medical care for elderly people in the Waikato is currently under review with the view to minimise avoidable hospitalisation rates.

**“Raise the Bar” in Service Delivery:** With the projected increase in the population of older people in the Waikato region (78% increase by 2026 year), future service delivery frameworks must ensure innovative service delivery options, utilizing currently available and newly developed technology advancements, ensuring the “the way we deliver care” reflects the “precise needs of the patients”.

**Integrated Information Infrastructure:** Focus on integrating and synchronizing information that are fragmented across the health sector organizations and work towards an integrated and easily accessible electronic health information sharing environment.

**Shared Strategic Goals and Targets:** Developing shared/common strategic goals and targets for the health sector organizations that facilitate collaboration, co-ordination and delivery of care using the full spectrum of

## Health of Older People

health professionals across the continuum of care. This will enforce the health sector organizations to jointly develop strategic projects/programmes and set up project governance groups for monitoring the progress of the projects and the timely achievement of strategic targets.

### 15.1 Introduction

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Maintaining good health enables older people to remain independent and enjoy good quality of life. The health challenges faced by older men are distinctly different compared with older women. Older women live longer and experience different chronic illnesses and functional limitations than older men. Understanding these differences helps to structure health services to meet the needs of the older people.

According to Statistics New Zealand estimated national population projections 2006 (base) - 2061<sup>92</sup>:

- The age structure of the New Zealand population will continue to undergo gradual but significant changes resulting in more older people and further ageing of the population.
- Under all projection scenarios, the number of New Zealanders aged 65 years and over is projected to exceed one million by the late 2020s, compared with half a million in 2006.
- People aged 65 years and over are projected to out number those aged under 15 years in the mid 2020s.

### 15.2 Regional Demography: Waikato at 2006 Census

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At the time of 2006 census, there were 45,260 older people (3,100 Māori, 40,480 Other and 400 Pacific People) aged 65+ years residing in the Waikato.

Table 253: Census 2006 - Waikato Population by age breakdown and ethnicity

Age Breakdown	Māori	Other	Pacific People	Total
65-69	1,390	12,530	180	14,100
70-74	890	9,730	120	10,740
75-79	560	8,580	70	9,210
80-84	290	5,870	30	6,190
85-89	80	3,350	10	3,440
90-94	30	1,240	-	1,270
95+	-	310	-	310
<b>65+ Total</b>	<b>3,240</b>	<b>41,610</b>	<b>410</b>	<b>45,260</b>
Age Ages	75,080	270,050	8,330	353,460
<b>% 65+</b>	<b>4.3%</b>	<b>15.4%</b>	<b>4.9%</b>	<b>12.8%</b>

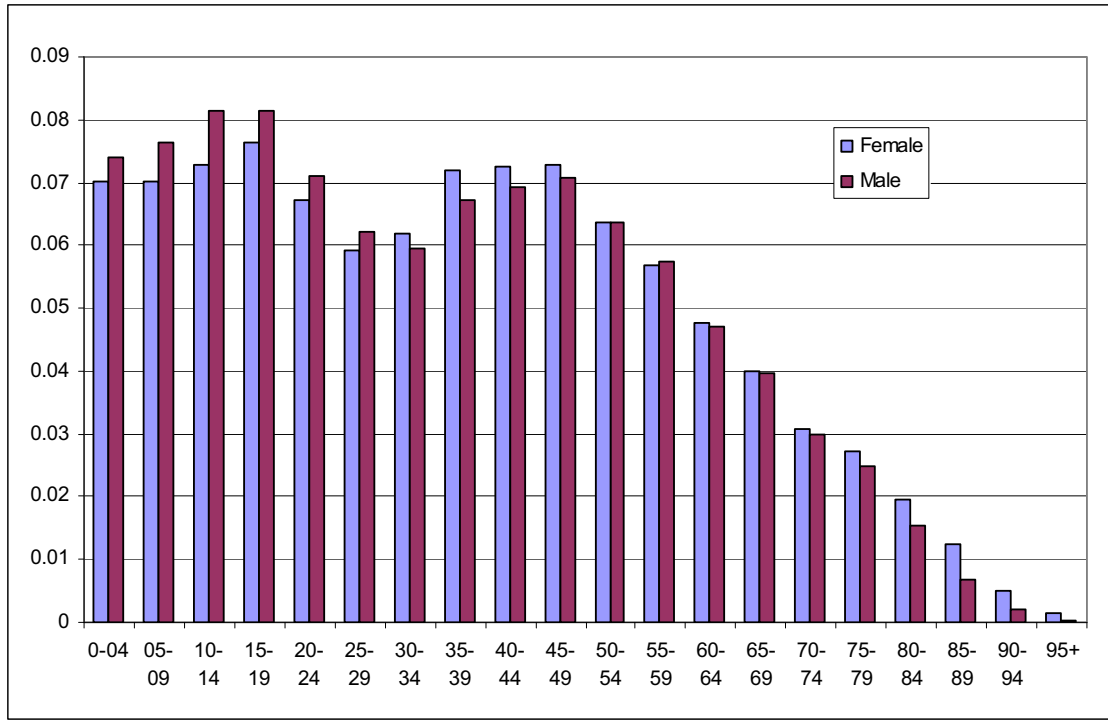
<sup>92</sup> Information available from: [www.stat.govt.nz](http://www.stat.govt.nz)

## Health of Older People

Of the total Waikato Māori population, 4.3% was 65 years old or older, 4.9% of Waikato Pacific People were in this age group, but among Other it was around 15.4%. 12.8% of the Waikato District Health Board population was 65 or older.

### Waikato DHB Population Age Group Proportion 2007

Graph 103: Waikato DHB population by age group and gender proportion - 2007



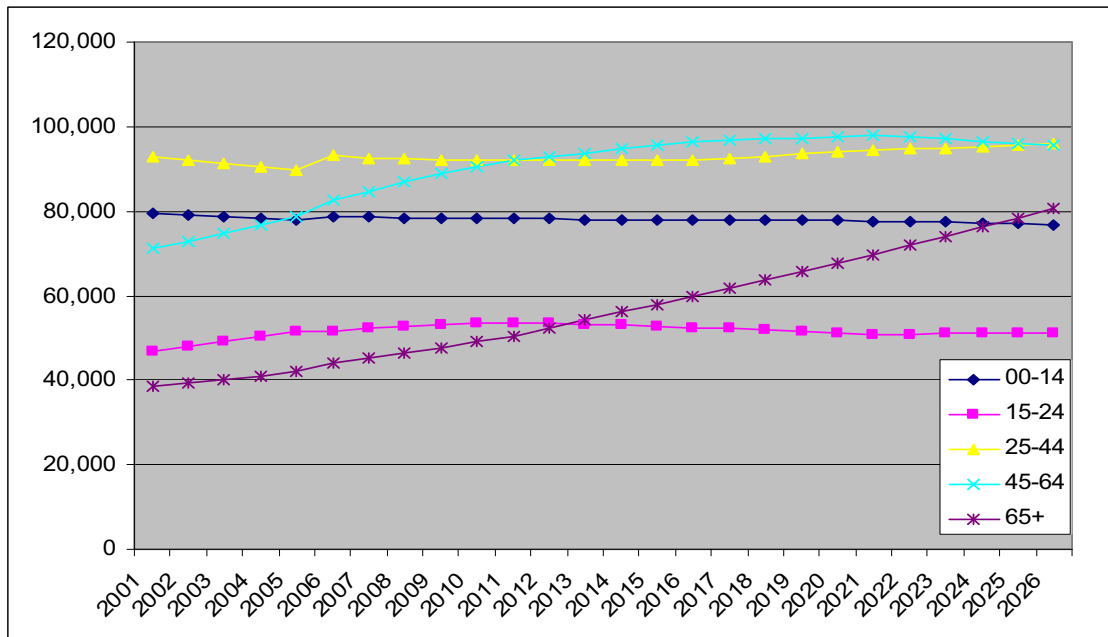
Some of the key points from the demographics chapter to consider with particular regard to the older population are:

- The 65+ age group is set for large growth over the next 20 years with the population in this age group increasing by more than 78% from the current level of 45,260 to 80,600 by the year 2026.
- The 85+ age group sees even more significant growth, more than doubling by 2026 (118% growth). This reflects the fact that we are on average living longer.
- The 65+ age group is currently the smallest life age group, but by 2013 there will be more 65+ people than 15-24 year olds and by 2025 there will be more 65+ than 0-14 year olds.

The impact of projected reduction in youth population and the increase in 65+ age groups shown in Graph 104 Population projections by age group, Waikato DHB could increase the burden the current on health services, consequently impacting on the design and delivery of future health services to meet the increasing demands across the 65+ age groups.

## Health of Older People

Graph 104 Population projections by age group, Waikato DHB



The average person aged 65 or over currently costs New Zealand's public health system five times as much as the average person under 65. The significant increase (83%) in population of 65+ age groups appears to imply that population ageing will put substantial pressure on government health care expenditures<sup>93</sup>. However, according to the 2005 policy paper "Population Ageing and government health expenditure", population aging is not the main cause of rising government health expenditure in New Zealand, where "non-demographic" factors - such as higher wages for health workers, rising administrative costs, new treatments, and better coverage of the population - outweigh demographic expenditure drivers.

### 15.3 Mortality - Older People

In the Waikato, there were 12,168 deaths among the 65+ age groups from 1998 to 2004. Of the total national deaths in 65+ age groups, around 12.2% of deaths were from Waikato.

<sup>93</sup> Population ageing and government health expenditure, New Zealand Policy Perspectives Paper 05/01, Published: March 2005, Authors: John Bryant, Audrey Sonerson, Martin Tobias, Jit Cheung and Mhairi McHugh

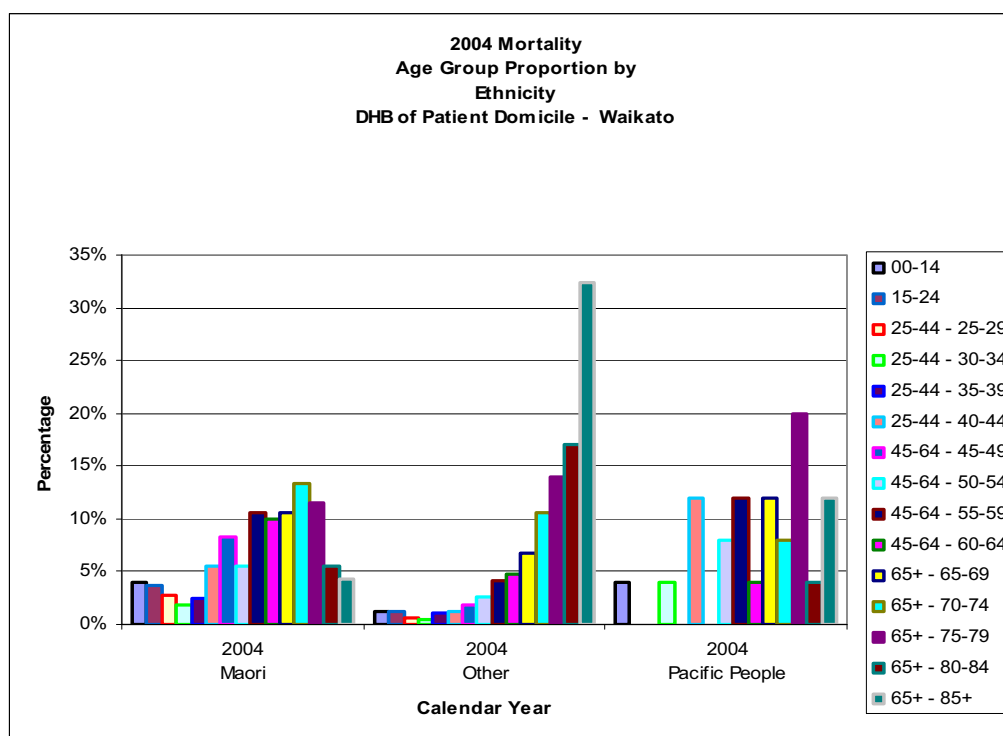
## Health of Older People

Table 254: Mortality - Older People Aged 65+ by Ethnicity - Waikato

Year	Maori	Asian	Other	Pacific People	Total
1998	138	10	1,481	16	1,645
1999	141	10	1,650	11	1,812
2000	157	12	1,487	14	1,670
2001	132	8	1,641	16	1,797
2002	148	9	1,590	13	1,760
2003	125	9	1,578	11	1,723
2004	146	12	1,589	14	1,761
<b>Grand Total</b>	<b>987</b>	<b>70</b>	<b>11,016</b>	<b>95</b>	<b>12,168</b>

In 2004, nearly 50% of deaths in Other ethnic groups was of people aged 80 or older, while less than 10% of Maori deaths were in these older age bands.

Graph 105 Proportion of mortality by ethnic group in 5 year age bands, Waikato DHB population 2004



### 15.3.1 Leading Causes of Mortality

The leading causes of deaths were: circulatory system (46%), malignant cancers (26%) and respiratory systems (11%) illnesses.

## Health of Older People

**Table 255: Leading causes of mortality among 65+ age groups - All Ethnic Groups - Waikato**

Leading Causes of Mortality	1998	1999	2000	2001	2002	2003	2004	Total
Circulatory system	768	876	759	820	812	815	780	5,630
Cancer - Malignant	427	446	437	468	449	419	490	3,136
Respiratory system	174	221	169	210	175	158	179	1,286
Endocrine, metabolic & immunity	67	58	80	59	57	78	57	456
Mental disorders	56	46	34	45	50	69	51	351
Digestive system	43	56	47	45	51	44	51	337
Remaining Causes	110	109	144	150	166	140	153	972
<b>Grand Total</b>	<b>1,645</b>	<b>1,812</b>	<b>1,670</b>	<b>1,797</b>	<b>1,760</b>	<b>1,723</b>	<b>1,761</b>	<b>12,168</b>

Among Asians, the third leading cause of mortality was endocrine, metabolic and immunity, however this minor change could be due to low volume data and the major leading causes were consistent across the remaining ethnic groups.

The leading causes of mortality in the Waikato were consistent with the national and Midland regional levels.

### 15.3.2 Ethnic Comparison of Mortality

Of the total deaths to circulatory system, two leading illnesses were: chronic ischemic heart disease and acute myocardial infarction, across all ethnic groups.

Mortality to leading cancer sites across all ethnic groups were: neoplasm of bronchus and lung, prostate and colon cancers.

Further data analysis of mortality across the above three leading causes revealed that death among Waikato Māori occurred between 65 to 74 years of age when compared with Other ethnic group at 80+. Similar trend was observed among Asians, however low volume data preclude in depth analysis of Asian ethnic groups.

The prevalence of deaths was consistently high in NZDeprivation quintile 3 to 5, across all ethnic groups.

## 15.4 Hospitalisation of Older People

From 2000 to 2006, there were 150,006 (74,005 female, 76,001 male and 1 undefined) hospitalisations of people in the 65+ age group. This was 28% of the total hospitalisation across all age groups.

### 15.4.1 Leading Causes of Hospitalisation

The leading causes of hospitalisations among 65+ year olds were:

## Health of Older People

**Table 256: Leading causes of hospitalisation among 65+ age groups - Waikato All Ethnic Groups**

Leading Causes of Hospitalisation - 2000 to 2006	2000	2001	2002	2003	2004	2005	2006	Total
Factors influencing health	2,452	3,037	2,887	3,327	4,301	4,331	4,798	25,133
Circulatory system	3,518	3,659	3,449	3,289	3,278	3,361	3,356	23,910
Cancer - Malignant	2,150	2,196	2,253	2,323	2,388	2,304	2,344	15,958
Ill-defined conditions	1,493	1,751	1,809	2,122	2,277	2,211	2,357	14,020
Digestive system	1,750	1,880	1,868	1,802	1,838	1,833	1,999	12,970
Respiratory system	1,283	1,401	1,416	1,551	1,537	1,442	1,607	10,237
Injury & poisoning	1,241	1,346	1,367	1,505	1,465	1,640	1,653	10,217
Remaining Causes of Hospitalisation								37,562
<b>Grand Total</b>	<b>18,553</b>	<b>20,396</b>	<b>20,269</b>	<b>21,141</b>	<b>22,843</b>	<b>22,751</b>	<b>24,054</b>	<b>150,007</b>

“Factors Influencing Health” predominantly records hospitalisation for further treatment following one or more primary causes of hospitalisations, eg. Rehabilitation following injury or Follow-up diagnostic procedures after treatment for cancer. Hence, this leading cause will be excluded from further analyses.

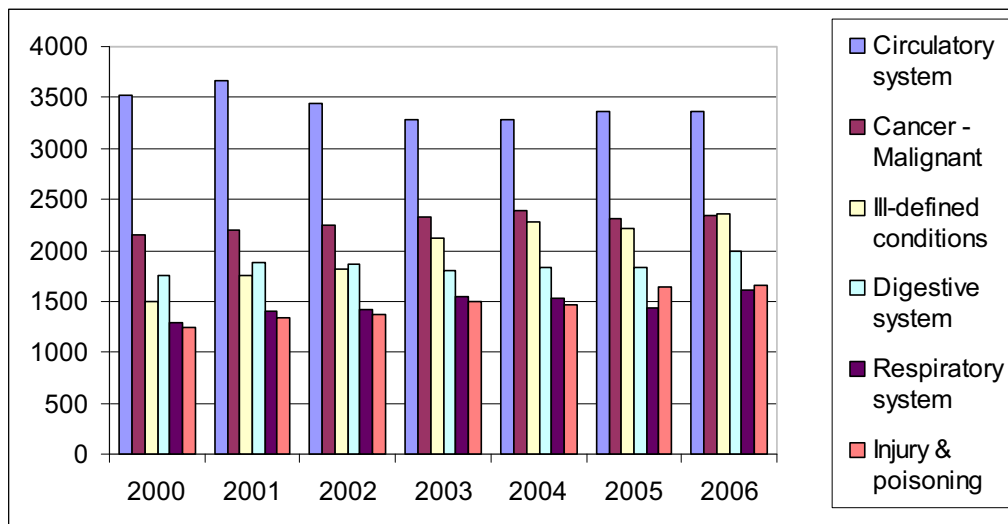
Hospitalisation related to ill-defined conditions predominately includes:

- R07 - Pain in throat and chest
- R10 - Abdominal and pelvic pain
- R55 - Syncope and collapse

The increase in hospitalisation due to these conditions could be minimised through establishing after hours medical care in the community.

The trend in hospitalisation remained reasonably stable from 2000 to 2006.

**Graph 106: Trends in leading causes of hospitalisation among 65+ age groups - Waikato All Ethnic Groups**



### 15.4.2 Circulatory System Hospitalisation - Māori

Of the total hospitalisations of 1741 for circulatory system illness among 65+ year olds, 23% related to heart failure, 12% for acute myocardial infarction, and 11% each for angina and atrial fibrillation and flutter.

## Health of Older People

The prevalence of hospitalisations for these leading causes of circulatory system related illness was consistently high in quintiles 4 and 5 at 26% and 48% respectively for 2006.

The age proportions of hospitalisation showed that Māori were likely to be hospitalised at a younger age, 33% aged 65-69 and 29% aged 70-74 in 2006.

### **15.4.3 Circulatory System Hospitalisation - Other Ethnic Group (Excl. Asians)**

In the Other ethnic group, there were 16,113 hospitalisations for circulatory system related illnesses among 65+ year olds from 2000 to 2006, 17% were for angina pectoris, 16% for acute myocardial infarction and 14% for heart failure.

Like Māori, the prevalence of hospitalisation for the leading causes of circulatory system related illness remained consistently higher across quintiles 3 to 5.

The age proportions of hospitalisation for circulatory illness showed an increasing proportion of hospitalisation among 75 to 85+ year olds.

### **15.4.4 Circulatory System Hospitalisation - Asians**

Among Asians aged 65+ year old, there were 214 hospitalisations for circulatory system related illnesses from 2000 to 2006. 21% was related to angina pectoris, 16% related to heart failure and 14% for myocardial infarction.

Like Māori and Other ethnic groups, the prevalence of hospitalisation for circulatory system illness remained consistently higher across quintiles 3 to 5.

The age proportion of hospitalisations for circulatory illness was the highest among Asians aged 65-69 and 70-74 (at 41% and 22% respectively for 2006) followed by 75-84 year olds at 15% each for 2006. Small volumes exaggerate the fluctuations.

### **15.4.5 Circulatory System Hospitalisation - Pacific People**

Among Pacific people, there were 145 hospitalisations of 65+ year olds with 19% of hospitalisations related to heart failure, 14% to acute myocardial infarction and 11% related to cerebral infarction from 2000 to 2006.

Around 85% of the hospitalisations for the leading causes were in the highest NZ Deprivation quintile 5, followed by 11% in quintile 2 for 2006.

The risk of hospitalisations for these causes was the highest among 70-74 year olds at 47% followed by 65-69 year olds at 32% in 2006.

### 15.4.6 Malignant Neoplasm - Hospitalisation - All Ethnic Groups

From 2000 to 2006, in total, there were 15,958 hospitalisations for cancer related illnesses among the 65+ age groups. Of this, around 28% was related to neoplasm of the skin which predominantly affects the Other ethnic group rather than the Māori, Asians and Pacific People.

**Table 257: Hospitalisation for malignant cancers among 65+ age groups - Waikato All Ethnic Groups**

Leading Causes of Hospitalisation - Cancer - 2000 to 2006	2000	2001	2002	2003	2004	2005	2006	Total
C44 - Other malignant neoplasms of skin	595	511	633	765	698	624	639	4465
C90 - Multiple myeloma and malignant plasma cell neoplasms	163	155	176	147	177	171	115	1104
C18 - Malignant neoplasm of colon	101	140	99	167	178	150	173	1008
C34 - Malignant neoplasm of bronchus and lung	154	162	144	129	155	122	142	1008
<i>Remaining Causes</i>								8373
<b>Grand Total</b>	<b>2150</b>	<b>2196</b>	<b>2253</b>	<b>2323</b>	<b>2388</b>	<b>2304</b>	<b>2344</b>	<b>15958</b>

### 15.4.7 Other Malignant Neoplasm of Skin

Around 99% of the hospitalisations for malignant neoplasm of skin were among Other ethnic group with no occurrences among Pacific People.

**Table 258: Hospitalisation for skin cancer among 65+ age groups by ethnicity - Waikato**

Year	Maori	Asian	Other	Total
2000	1		594	595
2001	1		510	511
2002	4	1	628	633
2003	1	1	763	765
2004	6		692	698
2005	2		622	624
2006	4		635	639
<b>Grand Total</b>	<b>19</b>	<b>2</b>	<b>4444</b>	<b>4465</b>

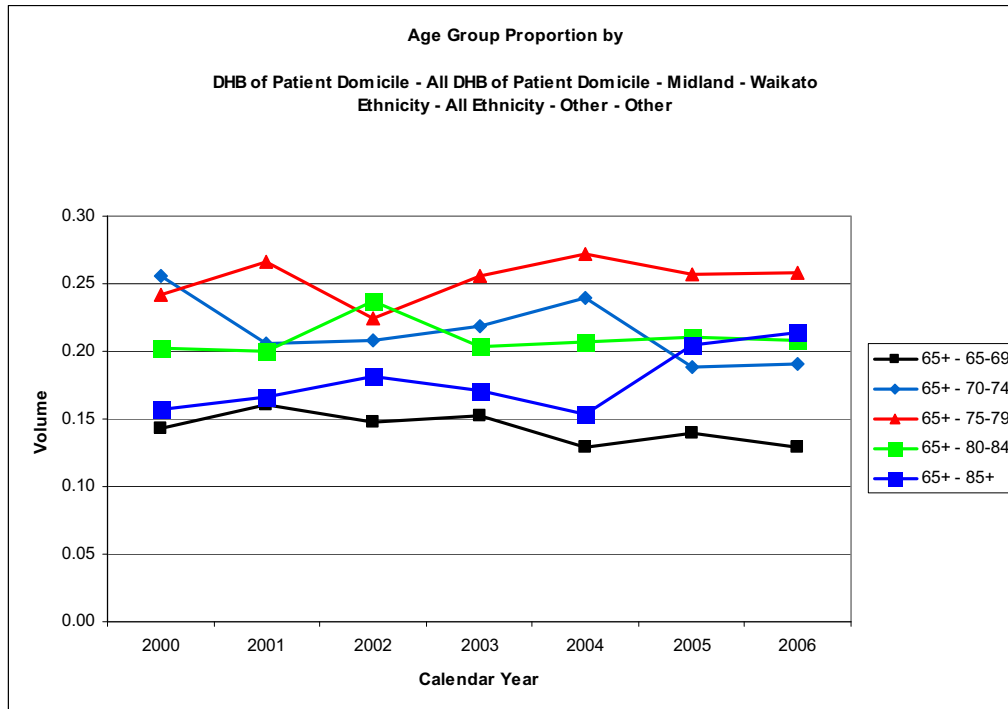
The gender proportion of hospitalisation for skin cancer among 65+ year olds remained reasonably stable at 37% of females and 63% males for 2006.

Hospitalisation for skin cancer was the highest among quintiles 4 and 5 at 35% and 32% in 2006.

Hospitalisation was the highest among 75-79 year olds at 26% followed by 80-84 and 85+ at 21% each in 2006.

## Health of Older People

**Graph 107: Age group proportion of hospitalisation for skin cancer broken down across 65 to 85+ age groups - Waikato Other**



### 15.4.8 Multiple myeloma and Malignant Plasma Cell Neoplasm

Among 65+ year olds, there were 1104 hospitalisations for multiple myeloma and malignant plasma cell neoplasm related illnesses. Around 95% of the hospitalisations were among the Other ethnic group followed by Māori at 5% from 2000 to 2006. The trend in the Other ethnic group was stable until 2006 when it decreased suddenly. There was no recorded incidence of hospitalisation among Asians and none in Pacific People after 2001 year onwards. The upward trend among Māori stabilised in 2005 and 2006.

**Table 259: Hospitalisation for plasma cell neoplasm by ethnicity - Waikato**

Year	Maori	Other	Pacific People	Total
2000	5	153	5	163
2001		155		155
2002	4	172		176
2003	3	144		147
2004	11	166		177
2005	14	157		171
2006	14	101		115
<b>Grand Total</b>	<b>51</b>	<b>1048</b>	<b>5</b>	<b>1104</b>

## Health of Older People

As the number of hospitalisations was too low for Māori and Pacific People, detailed analysis will be presented for Other ethnic group only.

The gender proportion of hospitalisation for malignant plasma cell neoplasm varied with neither gender consistently higher than the other, but in 2006 the fluctuation was larger than in previous years, males increased to 68% and females decreased to 32%.

The prevalence of hospitalisation was stable in quintile 3, but increased in quintile 2 to 30% in 2006.

Among 65-69 year olds the rate of hospitalisation remained stable in 2005 and 2006 with minor variations noticed across the remaining 70 to 85+ age groups.

### 15.4.9 Malignant Neoplasm of Colon

The total number of hospitalisation for colon cancer among 65+ age groups was 1008 from 2000 to 2006. Around 93% of hospitalisations were among Other ethnic group, 5% among Māori and 2% among Pacific People.

Table 260: Hospitalisation for colon cancer among 65+ age groups by ethnicity - Waikato

Year	Maori	Asian	Other	Pacific People	Total
2000	2		99		101
2001			138	2	140
2002	1	1	96	1	99
2003	8	1	157	1	167
2004	11		163	4	178
2005	9	1	129	11	150
2006	11		158	4	173
<b>Grand Total</b>	<b>42</b>	<b>3</b>	<b>940</b>	<b>23</b>	<b>1008</b>

#### Colon Cancer - Māori

The gender proportion of hospitalisation was higher among males at 73% followed by females at 27% in 2006. The highest NZ Deprivation quintiles 3 to 5 had the most hospitalisations. Around 64% of hospitalisations were among 65-69 age groups followed by 27% among 75-79 year olds for 2006.

#### Colon Cancer - Other Ethnic Group

As there were only 3 Asian hospitalisations between 2003 and 2005, Asians will be included in the Other ethnic group colon cancer analysis.

In total there were 943 hospitalisations among 65+ Other ethnic group from 2000 to 2006.

## Health of Older People

The proportion of hospitalisation fluctuated with neither gender consistently higher than the other.

Once again, the prevalence of hospitalisation for colon cancer was the highest among quintiles 3 to 5.

The hospitalisation trend among 65-69 year olds increased to 24% in 2006. A similar increase was noticed (23%) among 80-84 year olds and 85+ years at 18% in 2006.

### 15.4.10 Neoplasm of Bronchus and Lung

There were 1008 hospitalisations related to neoplasm of bronchus and lung among 65+ age groups from 2000 to 2006. Around 86% of the hospitalisations were among Other ethnic group followed by Māori at 13%.

Table 261: Hospitalisation for neoplasm of bronchus and lung by ethnicity - Waikato

Year	Maori	Asian	Other	Pacific People	Total
2000	16	1	136	1	154
2001	21		138	3	162
2002	21		120	3	144
2003	10	1	118		129
2004	21	2	132		155
2005	9	2	111		122
2006	28	3	111		142
<b>Grand Total</b>	<b>126</b>	<b>9</b>	<b>866</b>	<b>7</b>	<b>1008</b>

### Bronchus and Lung - Māori

The gender proportion of hospitalisation for bronchus and lung cancer among 65+ year olds fluctuated from 2000 to 2006 with neither gender consistently higher than the other.

The hospitalisation prevalence was the highest among quintile 5 at 64% and quintile 4 at 32% for 2006 year.

Hospitalisation remained consistently high among 65-74 year olds, but decreased across 75 to 85 age groups.

## Health of Older People

**Table 262: Age group proportion of hospitalisation for bronchus and lung cancer broken down across 65 to 85+ age groups - Waikato Māori**

Year	Age Breakdown			
	65-69	70-74	75-79	80-84
2000	63%		19%	19%
2001	33%	33%	33%	
2002	62%	24%	14%	
2003	60%	20%	20%	
2004	52%	48%		
2005	22%	33%	33%	11%
2006	61%	25%	11%	4%

### Bronchus and Lung - Other ethnic groups (Incl. Asians)

There were 875 (340 female and 535 male) hospitalisations among the 65+ age groups from 2000 to 2006.

The gender proportion remained reasonably stable at more male hospitalisations the female (59% and 41% respectively in 2006).

Most hospitalisation was among quintiles 3 to 5, with a slight reduction noticed in quintile 3.

The proportion of hospitalisations was the highest among 70-74 year olds at 35% followed by 75-79 at 21% in 2006.

As there were only 7 hospitalisations of Pacific People from 2000 to 2006, no further analysis will be undertaken.

### 15.4.11 Hospitalisation - Respiratory Illnesses - All Ethnic Groups

In total there were 10,237 hospitalisations among 65+ age groups for respiratory system related illnesses from 2000 to 2006. Around 43% of the hospitalisation was for Chronic Obstructive Pulmonary Disease (COPD) and 23% for pneumonia.

**Table 263: Leading causes of hospitalisation for Respiratory illnesses among 65+ age groups - Waikato All Ethnic Groups**

Leading Causes of Hospitalisation - Respiratory System	2000	2001	2002	2003	2004	2005	2006	Total
J44 - Other chronic obstructive pulmonary disease	542	578	639	697	697	577	651	4381
J18 - Pneumonia, organism unspecified	321	359	325	349	344	345	366	2409
<i>Remaining Causes</i>								3447
<b>Grand Total</b>	<b>1283</b>	<b>1401</b>	<b>1416</b>	<b>1551</b>	<b>1537</b>	<b>1442</b>	<b>1607</b>	<b>10237</b>

## Health of Older People

81% of the hospitalisations for COPD were among Other ethnic group followed by Māori at 18% and 1% each for Pacific People and Asians.

Table 264: Hospitalisation for respiratory illnesses among 65+ age groups by ethnicity - Waikato

Year	Maori	Asian	Other	Pacific People	Total
2000	78		462	2	542
2001	90	3	481	4	578
2002	116	7	513	3	639
2003	117	2	572	6	697
2004	144	7	541	5	697
2005	110	6	457	4	577
2006	130	3	509	9	651
<b>Grand Total</b>	<b>785</b>	<b>28</b>	<b>3535</b>	<b>33</b>	<b>4381</b>

### 15.4.12 COPD Hospitalisation - Māori

There were 785 (433 female and 352 male) hospitalisations for COPD among Māori aged 65+ from 2000 to 2006 with females showing higher prevalence than males for the last three years.

The gender proportion fluctuated over the seven year reporting periods with 57% female and 43% male in 2006.

Most hospitalisation for COPD was from quintile 5 at 61% in 2006.

30% of Māori hospitalised for COPD in 2006 were aged 65-69 and 34% aged 70-74. this was consistent with other years

### 15.4.13 COPD Hospitalisation - Other ethnic group

As there were only 27 hospitalisations of Asians for COPD from 2000 to 2006, separate Asian analysis is not possible. The Other ethnic group will include Asians.

There were 3563 (1608 female and 1955 male) hospitalisations for COPD among Other ethnic groups.

Over the seven year reporting period there were consistently more male hospitalisations than female at 48% female and 52% male in 2006.

The hospitalisation spread across the highest NZ Deprivation quintiles 3 to 5 at 23%, 29% and 38% respectively in 2006 year.

Unlike Māori, around 29% of the hospitalisations were among 75-79 year olds followed by 23% among 80-84 year olds for 2006.

#### 15.4.14 COPD Hospitalisation - Pacific People

Among the Pacific People aged 65+, there were 33 hospitalisations for COPD, spread from 2000 to 2006. Due to this low volume, no further analysis will be presented in this report.

### 15.5 Avoidable Hospitalisation

For explanation of avoidable hospitalisation, refer to Avoidable Hospitalisation chapter of HNA 2008.

Around 89% of the hospitalisations of people aged 65 or older were considered unavoidable with the remaining 11% considered avoidable hospitalisations. These are considered further in this section of the report as health promotion and illness prevention programmes may be focussed on these areas.

Table 265: Avoidable and Unavoidable hospitalisation among 65+ age groups - Waikato All Ethnic Groups

Year	Injury	Non-Injury	Total	Unavoidable Hospitalisations	Total
2000	37	2,169	2,206	16,347	18,553
2001	47	2,278	2,325	18,071	20,396
2002	34	2,280	2,314	17,955	20,269
2003	39	2,429	2,468	18,673	21,141
2004	48	2,512	2,560	20,283	22,843
2005	53	2,312	2,365	20,386	22,751
2006	36	2,459	2,495	21,559	24,054
<b>Grand Total</b>	<b>294</b>	<b>16,439</b>	<b>16,733</b>	<b>133,274</b>	<b>150,007</b>

Among 65+ age groups, of the total injury related avoidable hospitalisations from 2000 to 2006, 79% were road accident related, 10% to intentional self harm (attempted suicide) and 9% related to poisoning.

Table 266: Leading avoidable injury related hospitalisations among 65+ age groups - Waikato All Ethnic Groups

Year	Burns and scalds	Indeterminately caused injuries	Poisoning	Road traffic injury	Suicide	Total
2000			5	30	2	37
2001			4	34	9	47
2002			4	25	5	34
2003	3	3	4	28	1	39
2004	3		2	41	2	48
2005			3	47	3	53
2006			3	26	7	36
<b>Grand Total</b>	<b>6</b>	<b>3</b>	<b>25</b>	<b>231</b>	<b>29</b>	<b>294</b>

Of the total avoidable non-injury related hospitalisations, 59% were for only six leading causes:

## Health of Older People

**Table 267: Leading avoidable non-injury related hospitalisation among 65+ age groups - Waikato All Ethnic Groups**

Leading Avoidable Non-injury Hospitalisations	2000	2001	2002	2003	2004	2005	2006	Total
CORD	286	322	320	339	348	258	279	2152
Skin Cancers	260	209	259	316	298	236	242	1820
Angina	158	215	236	266	281	278	289	1723
Ischaemic heart disease	265	274	229	223	227	250	237	1705
Diabetes	104	147	212	190	194	191	226	1264
Stroke	213	150	147	129	137	163	147	1086
<i>Remaining Causes</i>								6689
<b>Grand Total</b>	<b>2169</b>	<b>2278</b>	<b>2280</b>	<b>2429</b>	<b>2512</b>	<b>2312</b>	<b>2459</b>	<b>16439</b>

The ethnic breakdown of avoidable non-injury hospitalisations for these leading causes showed that around 85% were among Other ethnic group, followed by Māori at 14% and 1% Pacific People.

As the data is not available for Asians, Other ethnic group includes Asians.

**Table 268: Leading avoidable non-injury hospitalisation among 65+ age groups by ethnicity - Waikato**

Leading Avoidable Non-Injury Hospitalisation	Maori	Other	Pacific People	Total
CORD	577	1547	28	2152
Skin Cancers	13	1807	0	1820
Angina	175	1537	11	1723
Ischaemic heart disease	161	1525	19	1705
Diabetes	356	887	21	1264
Stroke	113	955	18	1086
<b>Grand Total</b>	<b>1395</b>	<b>8258</b>	<b>97</b>	<b>9750</b>

For comparison, the ethnic breakdown of the Waikato 65+ population in 2006 was Māori – 7%, Other – 92% and Pacific People – 1%.

The following table presents an ethnic comparison of the age standardised and age specific rates for each of the above leading causes for avoidable hospitalisation.

## Health of Older People

Table 269: Ethnic comparison of age standardised and age specific rates for each leading causes of avoidable hospitalisation - Waikato 2006

		Age Standardised Rate and the Age Specific Rates - 2006, Per 100,000 Population					
		Age Standardised Rate		Age Specific Rate 65-69		Age specific Rate 70-74	
Leading Avoidable Hospitalisation	Ethnicity	Waikato	NZ	Waikato	NZ	Waikato	NZ
CORD	Maori	3,000	2,503.9	3,036.0	3,036.0	5,232.6	4,222.2
	Other	458.9	521.3	667.8	809.6	1,104.0	1246.4
	Pacific People	2,051.3	2,017.1				
Skin Cancer	Other	606.0	461.2	954.0	680.3	1,369.4	1,147.8
Angina	Maori	1,066.7	984.4	1,587.3	1252.3	1395.3	1569.4
	Other	638.9	545.7	1,170.9	975.8	1,242.0	1143.2
IHD	Maori	1,066.7	1261.7	1,269.8	1702.7	1,860.5	1,861.1
	Other	504.6	653.1	667.8	1,073.8	1,295.1	1486.3
Diabetes	Maori	2,900.0	1,753.9	4,365.1	2,378.4	3,720.9	2569.4
	Other	347.4	292.9	633.1	467.6	679.4	684.3
Stroke	Maori	600.0	550.8	1111.1	738.7	465.1	819.4
	Other	322.0	278.2	442.3	418.9	806.8	681.6

Summary of findings are:

### Māori

- The age specific rate of hospitalisation among 70-74 year olds for ischemic heart disease reached the highest at 1860.5 per 100,000 in 2006.
- The age standardised rate of hospitalisation for diabetes among 65+ increased significantly in 2006 to 2900 per 100,000 and the Waikato rate was higher than the national rate of 1753.9. Similar large increases were shown among 65-69 (4365.1 per 100,000) and 70-74 year olds (3720.9 per 100,000).
- The age specific rate of avoidable hospitalisation for stroke among 65-69 year olds increased significantly from 490.2 in 2005 to 1111.1 per 100,000 population in 2006. The substantial decrease in age specific rate among 70-74 may be as a result of the death occurring at 65-69 age group.
- Waikato Māori have over seven times more risk of hospitalisation for CORD and diabetes, and twice more risk of hospitalisation for angina, stroke and ischemic heart diseases than Waikato Other population

### Other

- Waikato age standardised rate of avoidable hospitalisation for skin cancer among Other ethnic group was 606 per 100,000 population in 2006, and the rate was higher than the national rate of 461.2 for 2006. The age specific rate among 65-69 year olds was 954 per 100,000 in 2006, and the Waikato rate was significantly higher than the national rate of 680.3 per 100,000 population.

### Pacific people and Asians

Low volume data for Pacific People and Asians preclude detailed analysis for informed decision.

## 15.6 Older People – Home Based and Residential Services

Data from the Client Claims and Payments System (CCPS) was extracted for HNA 2008 in order to assess disability support services for Older People.

Currently, most demographic information on disability support services is provided through the CCPS payment system. This system collects data supporting payments for DHB and Ministry of Health funded services, including residential care, home based care, carer support, respite care, transport and accommodation to attend treatment and is predominantly intended to hold eligibility and payment information. It has been adapted over the years to provide demographic information on those services paid for on a fee for service basis based on individual 'client' eligibility and at least partly by public funding. It does not hold information on services funded by private individuals or on those paid on a capacity basis.

It is difficult to extract data from this system to report on service delivery and utilisation. DHB users become familiar with their own areas of responsibility (age related services) but as the data in the system is unstructured, analysis and reporting of other services is problematic and open to the risk of misinterpretation.

Data is limited to services fully or partly funded by Waikato DHB. Because of this, the two services which are not at least partly funded for all older people who are assessed as needing this care, (rest home residential care and household management home support) are under reported in this data and in the national dataset.

### 15.6.1 Age related Residential care

Since 1 October 2003 to 2007, each year approximately 5-6% of the Waikato population aged 65+ spent some time living in an aged residential care facility, at least partly funded by Waikato DHB. (Note this includes dementia, hospital and psychogeriatric care funded at "top-up" level as the resident is personally contributing the maximum amount which equals the cost of rest home care)

Table 270 Long term age related residential care Waikato DHB - 3 months only

Year	Individual residents	Days	DHB Expenditure (000s)	Average Occupied Bed	\$ per pop 65+	Clients as % of 65+ population
2003*	1516	127,037	\$8,364			
2004	2037	511,444	\$34,208	1401.2	832.59	4.96%
2005	2383	570,780	\$39,573	1563.7	943.15	5.68%
2006	2531	625,443	\$45,101	1713.5	1053.03	5.91%

Health of Older People

Year	Individual residents	Days	DHB Expenditure (000s)	Average Occupied Bed	\$ per pop 65+	Clients as % of 65+ population
2007	2364	617,745	\$47,282	1692.4	1072.39	5.36%

An increase in 2005 and 2006 is as a direct result of a change in the threshold for eligibility for subsidised rest home care. Although it was expected that this increase would be sustained, rising house prices appeared to have decreased the numbers in **subsidised** rest home care in 2007.

The number of individuals shown in these tables is higher than the average occupied beds per day as some individuals are not resident for the full year.

When broken down into the separate services the number of individual residents increased, as a person may be resident in more than one service in the same year.

Table 271 Waikato DHB expenditure on long term residential care by care type

Service	Year	Individual residents	Days	DHB Expenditure	Average Age	\$ per pop 65+	Clients as % of 65+ population
DEMENTIA-AGE	2003	205	16,208	\$824,428	80.22		
DEMENTIA-AGE	2004	275	64,182	\$3,316,992	81.55	80.73	0.67%
DEMENTIA-AGE	2005	295	68,337	\$3,870,755	80.95	92.25	0.70%
DEMENTIA-AGE	2006	323	71,327	\$4,506,707	81.14	105.22	0.75%
DEMENTIA-AGE	2007	311	68,119	\$4,467,680	81.11	101.33	0.71%
HOSPITAL-AGE	2003	574	45,438	\$3,941,194	82.45		
HOSPITAL-AGE	2004	923	185,026	\$16,187,964	83.31	394.00	2.25%
HOSPITAL-AGE	2005	925	192,191	\$17,825,050	83.51	424.83	2.20%
HOSPITAL-AGE	2006	956	190,224	\$18,922,350	84.07	441.80	2.23%
HOSPITAL-AGE	2007	913	195,327	\$20,464,210	83.99	464.15	2.07%
PSYCGERI-AGE	2003	17	1,312	\$158,773	64.06		
PSYCGERI-AGE	2004	37	6,806	\$812,328	71.24	19.77	0.09%
PSYCGERI-AGE	2005	50	9,926	\$1,182,609	74.28	28.19	0.12%

## Health of Older People

Service	Year	Individual residents	Days	DHB Expenditure	Average Age	\$ per pop 65+	Clients as % of 65+ population
PSYCGERI-AGE	2006	78	15,886	\$1,961,175	76.85	45.79	0.18%
PSYCGERI-AGE	2007	75	16,863	\$2,205,010	77.03	50.01	0.17%
RESTHOME-AGE	2003	775	64,079	\$3,439,555	82.96		
RESTHOME-AGE	2004	1016	255,430	\$13,890,623	83.49	338.09	2.47%
RESTHOME-AGE	2005	1316	300,326	\$16,694,261	84.26	397.88	3.14%
RESTHOME-AGE	2006	1433	348,006	\$19,710,968	84.54	460.21	3.35%
RESTHOME-AGE	2007	1319	337,436	\$20,144,806	84.22	456.90	2.99%

The number and average age of people accessing rest home care shows an increase in 2005, reflecting the change in eligibility level. This change meant that private payers already in residential rest home care were recorded as accessing the service on 1 July 2005.

Table 272 Annual Number of people accessing subsidised residential care

Service Category	Year	People Accessing	Average Age
Any Residential Care	2004	658	82.57
Any Residential Care	2005	955	83.69
Any Residential Care	2006	779	83.08
Any Residential Care	2007	641	82.42

Most of the rise is clearly in rest home care, but the drop in numbers accessing services in 2007 was across all care types. Note that the table below includes people moving from one care type to another.

## Health of Older People

**Table 273 Annual number of people accessing each type of residential care**

Service Category	Year	People Accessing	Average Age
DEMENTIA-AGE	2004	88	82.83
DEMENTIA-AGE	2005	115	80.28
DEMENTIA-AGE	2006	118	81.21
DEMENTIA-AGE	2007	98	80.49
HOSPITAL-AGE	2004	425	83.28
HOSPITAL-AGE	2005	408	83.58
HOSPITAL-AGE	2006	400	84.30
HOSPITAL-AGE	2007	374	83.34
PSYCGERI-AGE	2004	23	78.13
PSYCGERI-AGE	2005	24	77.83
PSYCGERI-AGE	2006	47	78.83
PSYCGERI-AGE	2007	23	78.09
RESTHOME-AGE	2004	316	82.39
RESTHOME-AGE	2005	590	84.79
RESTHOME-AGE	2006	434	83.43
RESTHOME-AGE	2007	360	82.80

A snapshot of residential care taken on or near 1 October each year showed that the average age of the subsidised (includes “topup” subsidy) residential care population had not changed much since 2003.

**Table 274 Snapshot of residential services in October 2003-2007**

Service Category	Review Date	Resident in Oct	Average Age	Clients as % of 65+ population
All Subsidised Residential Care	14/10/2003	1391	82.27	3.46%
All Subsidised Residential Care	1/10/2004	1401	82.42	3.41%
All Subsidised Residential Care	1/10/2005	1878	83.50	4.48%

## Health of Older People

Service Category	Review Date	Resident in Oct	Average Age	Clients as % of 65+ population
All Subsidised Residential Care	1/10/2006	1874	83.64	4.38%
All Subsidised Residential Care	1/10/2007	1757	83.39	3.99%

However the same information by care type showed that the age of people by all care types except dementia care and especially in psycho-geriatric specialised hospital care increased.

**Table 275 Snapshot of residential care services in October 2003-2007**

Service Category	Review Date	Resident in Oct	Average Age	Clients as % of 65+ population
DEMENTIA-AGE	14/10/2003	178	80.63	0.44%
DEMENTIA-AGE	1/10/2004	173	80.60	0.42%
DEMENTIA-AGE	1/10/2005	196	80.64	0.47%
DEMENTIA-AGE	1/10/2006	192	80.73	0.45%
DEMENTIA-AGE	1/10/2007	180	80.28	0.41%
HOSPITAL-AGE	14/10/2003	496	82.15	1.23%
HOSPITAL-AGE	1/10/2004	505	82.71	1.23%
HOSPITAL-AGE	1/10/2005	553	83.18	1.32%
HOSPITAL-AGE	1/10/2006	517	83.52	1.21%
HOSPITAL-AGE	1/10/2007	549	83.60	1.25%
PSYCGERI-AGE	14/10/2003	15	62.40	0.04%
PSYCGERI-AGE	1/10/2004	22	67.55	0.05%
PSYCGERI-AGE	1/10/2005	29	71.10	0.07%
PSYCGERI-AGE	1/10/2006	49	75.78	0.11%
PSYCGERI-AGE	1/10/2007	46	76.24	0.10%
RESTHOME-AGE	14/10/2003	700	83.20	1.74%
RESTHOME-AGE	1/10/2004	701	83.12	1.71%
RESTHOME-AGE	1/10/2005	974	84.19	2.32%
RESTHOME-AGE	1/10/2006	969	84.12	2.26%

## Health of Older People

Service Category	Review Date	Resident in Oct	Average Age	Clients as % of 65+ population
RESTHOME-AGE	1/10/2007	936	84.02	2.12%

### 15.6.2 Home Based Support Services

Again from 1 October 2003 to 2007, each year approximately 10-11% of the Waikato population aged 65+ received home based support services funded by Waikato DHB. Note that household management home support is only funded for Community Services Card holders.

Table 276 Annual Home based Support Services Expenditure - 2003 data is 3 months only

Year	Individual people	Hours	DHB Expenditure	\$ per pop 65+	Clients as % of 65+ population
2003	2864	74,422	\$1,145,978		
2004	4332	378,072	\$5,849,932	\$142.38	10.54%
2005	4488	403,242	\$6,520,885	\$155.41	10.70%
2006	4675	408,413	\$7,570,834	\$176.76	10.92%
2007	4626	407,892	\$9,012,652	\$204.41	10.49%

When broken down into the separate services the number of individuals increased, as a person may be receiving more than one service at the same time. The expenditure for home based support by care type are outlined below:

Table 277 Waikato DHB expenditure on home based support by care type

Service	Year	Individual people	Hours	DHB Expenditure	Average Age	\$ per pop 65+	Clients as % of 65+ population
Home Support Household Management	2003	2467	34,194	\$502,644	80.2	\$12.50	6.13%
Home Support Household Management	2004	3720	177,068	\$2,618,009	80.1	\$63.72	9.05%
Home Support Household Management	2005	3894	192,189	\$2,968,175	80.2	\$70.74	9.28%
Home Support Household Management	2006	4075	197,773	\$3,501,125	80.6	\$81.74	9.51%
Home Support	2007	4077	197,521	\$4,147,603	80.8	\$94.07	9.25%

## Health of Older People

Service	Year	Individual people	Hours	DHB Expenditure	Average Age	\$ per pop 65+	Clients as % of population 65+
Household Management							
Personal Care - Home Support	2003	991	39,526	\$632,408	81.7	\$15.73	2.46%
Personal Care - Home Support	2004	1603	195,072	\$3,138,736	81.9	\$76.39	3.90%
Personal Care - Home Support	2005	1521	203,887	\$3,433,873	82.2	\$81.84	3.63%
Personal Care - Home Support	2006	1601	201,151	\$3,892,110	82.0	\$90.87	3.74%
Personal Care - Home Support	2007	1592	201,790	\$4,670,847	82.3	\$105.94	3.61%
Rural Travel Allowance - Home Support	2003	22	703	\$10,927	79.7	\$0.27	0.05%
Rural Travel Allowance - Home Support	2004	87	5,932	\$93,187	81.1	\$2.27	0.21%
Rural Travel Allowance - Home Support	2005	95	7,167	\$118,837	80.6	\$2.83	0.23%
Rural Travel Allowance - Home Support	2006	138	9,489	\$177,599	80.4	\$4.15	0.32%
Rural Travel Allowance - Home Support	2007	136	8,581	\$194,202	81.0	\$4.40	0.31%

The number and average age of people receiving household management showed an increase in volume each year.

A snapshot of home based care taken on or near 1 October each year showed that the average age of the subsidised care population had not changed much since 2003 but there had been a steady increase in the number of people receiving each service and the number of hours delivered.

## Health of Older People

**Table 278 Snapshot of home based services in October 2003-2007**

<b>Service Description</b>	<b>Review Date</b>	<b>Clients</b>	<b>Average Age</b>	<b>Clients as % of 65+ population</b>
Household Management - Home Support	14/10/2003	1981	80.6	4.93%
Household Management - Home Support	1/10/2004	2582	80.0	6.28%
Household Management - Home Support	1/10/2005	2732	80.1	6.51%
Household Management - Home Support	1/10/2006	2791	80.4	6.52%
Household Management - Home Support	1/10/2007	2851	80.6	6.47%
Personal Care - Home Support	14/10/2003	765	82.3	1.90%
Personal Care - Home Support	1/10/2004	966	81.9	2.35%
Personal Care - Home Support	1/10/2005	942	81.7	2.25%
Personal Care - Home Support	1/10/2006	950	82.1	2.22%
Personal Care - Home Support	1/10/2007	1016	81.8	2.30%
Rural Travel Allowance - Home Support	14/10/2003	11	81.0	0.03%
Rural Travel Allowance - Home Support	1/10/2004	49	80.1	0.12%
Rural Travel Allowance - Home Support	1/10/2005	54	81.1	0.13%
Rural Travel Allowance - Home Support	1/10/2006	71	79.9	0.17%
Rural Travel Allowance - Home Support	1/10/2007	68	81.0	0.15%

## Health of Older People

The likely demand for both these services over the coming years will be affected more by the increasing population in the 80+ age group which is forecast at 4-5% per annum, than by the 65+ group increase forecast at 2% per annum.