

Public hospital use

Introduction

Public hospitals are run and owned by District Health Boards, which are responsible for ensuring the delivery of health and disability services in their district. Public hospitals provide a variety of services such as medical, surgical, maternity, diagnostic and emergency services. The range of services offered by an individual hospital is affected both by the size of the local population and the services offered by other hospitals in the region.

Hospital services are provided on an emergency department, inpatient, day case and outpatient basis, depending on the type of care a patient needs:

- emergency department patients attend for assessment and treatment and may be discharged or become inpatients
- inpatients are admitted to hospital and stay a minimum of one night in hospital
- day case patients are admitted to hospital and discharged later the same day
- outpatients attend clinics, where they receive specialist services without being admitted to hospital.

It is important to note that hospital discharge data from the New Zealand Health Information Service (NZHIS) are a better source of information on public hospital use than the New Zealand Health Survey because they are not dependent on respondents' recall of events. However, there is variation among DHBs in the level of reporting emergency department events to the NZHIS. Therefore, the New Zealand Health Survey, in spite of depending on recall of events, is likely to provide more accurate information on the use of emergency departments in New Zealand. As a result, there is a focus in this section on the use of emergency departments.

What were the survey questions?

In the 2006/07 New Zealand Health Survey, adults participants and the parents of child participants were asked whether they/their child had used a service at, or been admitted to, a public hospital in the previous 12 months. If they had used a public hospital service, they were asked the type of service(s): emergency department, outpatient, day treatment or inpatient.

Maternity admissions (that is, 'born in the hospital in previous 12 months') were specifically excluded from these analyses for children. Adults were not asked about maternity admissions; therefore these are included in the data.

Emergency department use in the previous 12 months

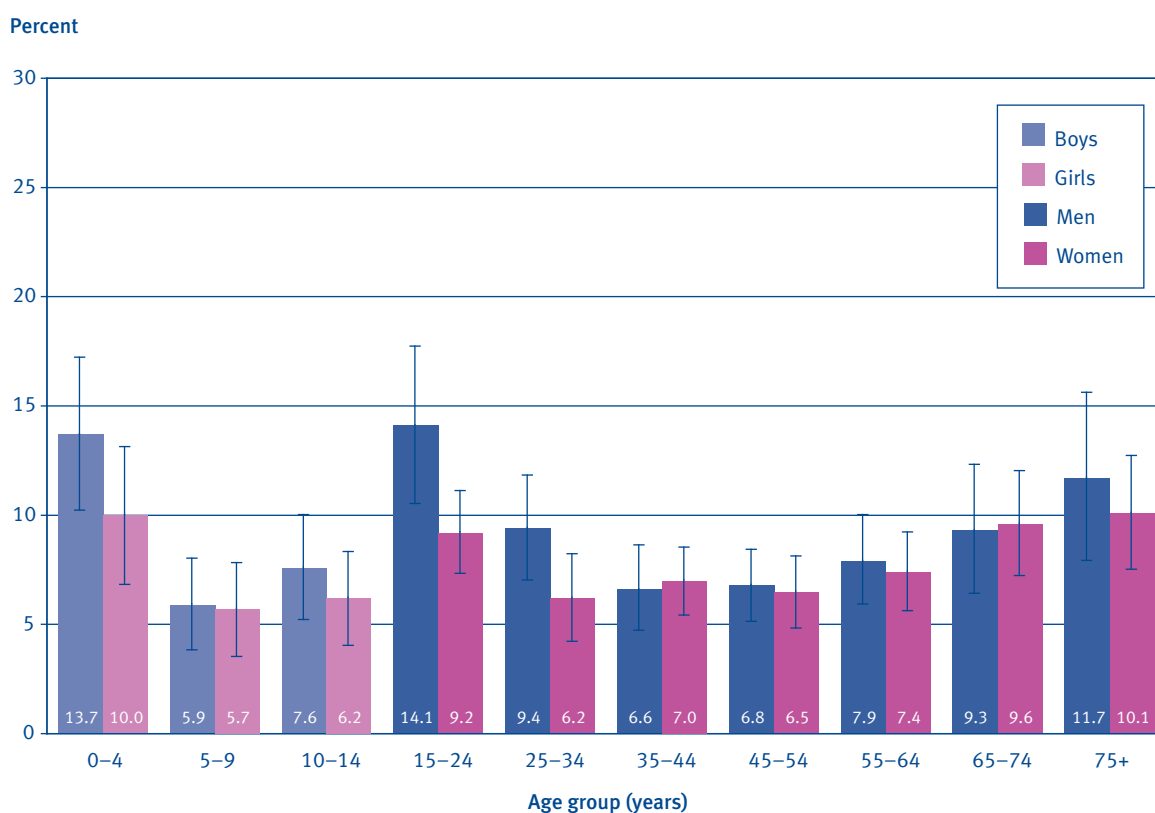
Emergency departments seek to provide care and treatment for those with serious injuries or illness and are usually open 24 hours a day, seven days a week. They are publicly funded, although some hospitals may charge for GP-level care at an emergency department.

One in twelve children (8.2%, 7.0–9.3) and 1 in 12 adults (8.4%, 7.7–9.0) had used an emergency department at a public hospital in the previous 12 months. There were no significant differences in emergency department use by gender for children or adults, adjusted for age.

Emergency department use in the previous 12 months, by age group

Boys aged 0–4 years, were significantly more likely than older boys to have used an emergency department in the previous 12 months. Men aged 15–24 years were significantly more likely than men aged 35–64 years to have used an emergency department in the previous 12 months. There were no significant differences by age for women for emergency service use (Figure 6.46).

Figure 6.46: Emergency department use in the previous 12 months for adults and children and adults, by age group and gender (unadjusted prevalence)

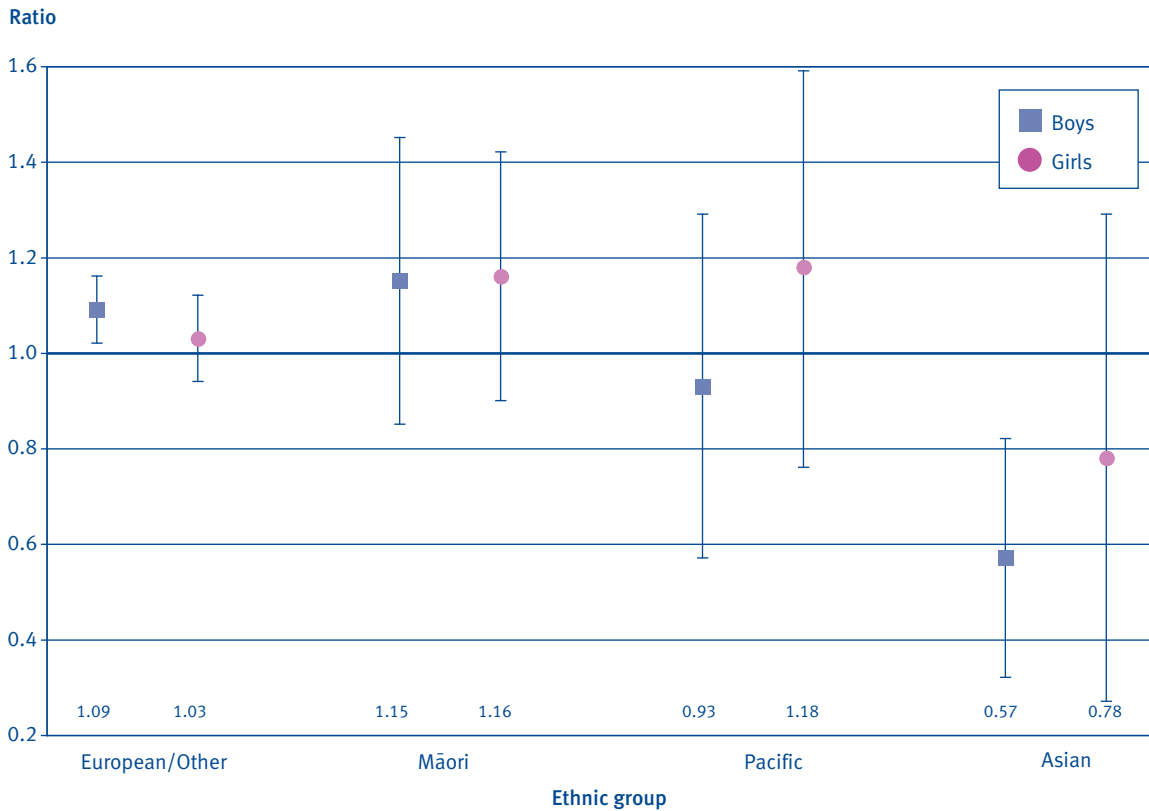


Source: 2006/07 New Zealand Health Survey

Emergency department use in the previous 12 months, by ethnic group

European/Other boys were significantly more likely than boys in the total population to have used an emergency department in the previous 12 months, while Asian boys were significantly less likely (Figure 6.47).

Figure 6.47: Children who used an emergency department in the previous 12 months, by ethnic group and gender (age standardised rate ratio)

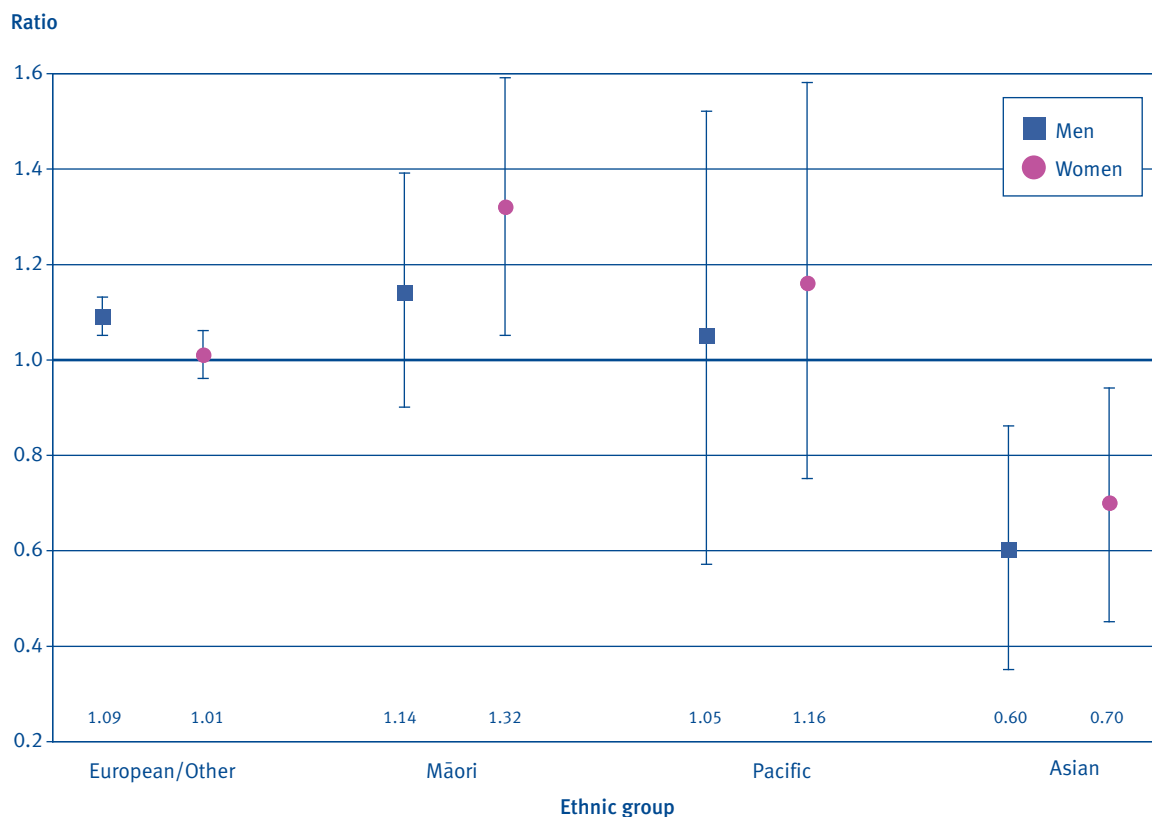


Source: 2006/07 New Zealand Health Survey

Notes: Age standardised to the WHO world population. Reference group, with a rate ratio of 1.0 (indicated by the bold line), is the total male or female population aged from birth to 14 years. Total response standard output for ethnic groups has been used.

European/Other men and Māori women were significantly more likely to have used an emergency department in the previous 12 months than men and women in the total population. Asian men and women were significantly less likely to have used an emergency department in the previous 12 months than men and women in the total adult population (Figure 6.48).

Figure 6.48: Adults who used an emergency department in the previous 12 months, by ethnic group and gender (age standardised rate ratio)



Source: 2006/07 New Zealand Health Survey

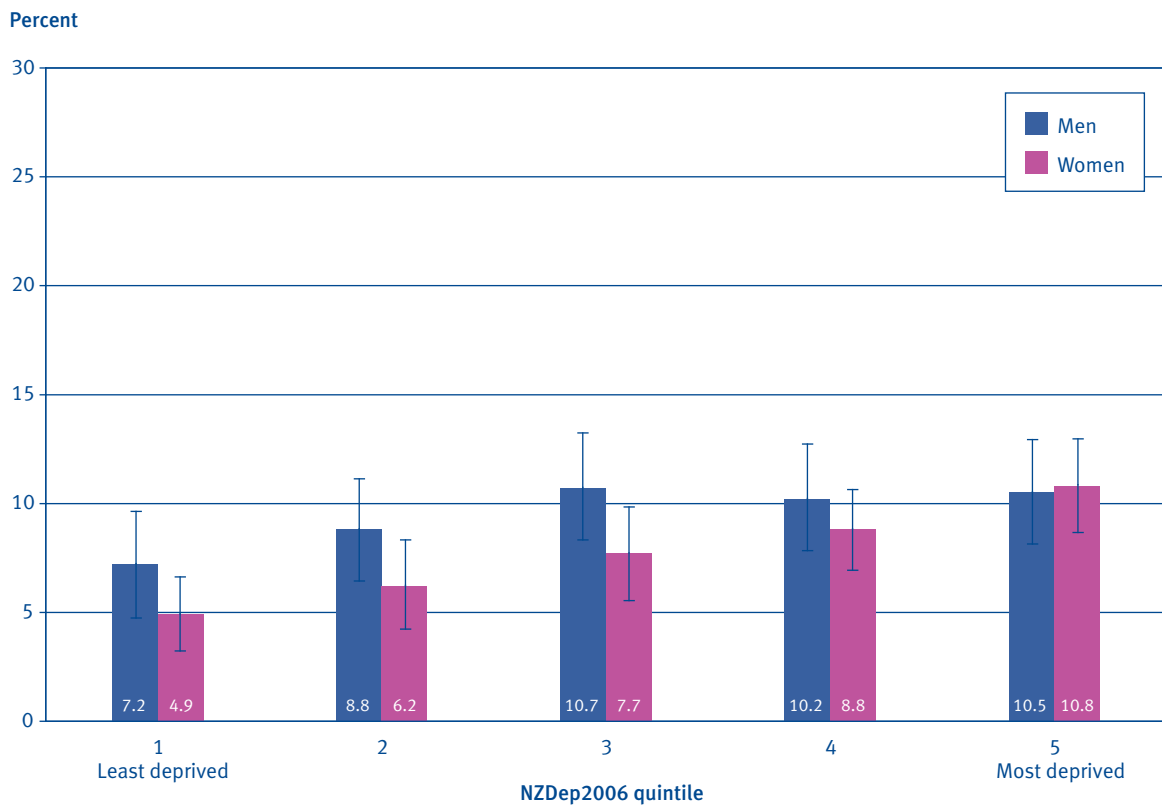
Notes: Age standardised to the WHO world population. Reference group, with a rate ratio of 1.0 (indicated by the bold line), is the total male or female population aged 15 years and over. Total response standard output for ethnic groups has been used.

Emergency department use in the previous 12 months, by neighbourhood deprivation

There were no statistically significant differences for children who used an emergency department at a public hospital in the previous 12 months by neighbourhood deprivation.

Women in NZDep2006 quintile 5 (most deprived) were significantly more likely than those in quintile 1 (least deprived) to have used an emergency department in the previous 12 months (Figure 6.49).

Figure 6.49: Emergency department use in the previous 12 months by adults, by NZDep2006 quintile and gender (age standardised prevalence)



Source: 2006/07 New Zealand Health Survey

Emergency department use in the previous 12 months, by DHB area

The proportion of children using an emergency department in the previous 12 months was significantly lower in the Counties Manukau and Canterbury DHB areas than the national rate. The Nelson Marlborough / West Coast / South Canterbury / Otago / Southland DHB areas had significantly higher rates than nationally (Table 6.13).

The proportion of adults using an emergency department in the previous 12 months was significantly lower in the Auckland, Counties Manukau and Canterbury DHB areas than the national rate. The Wairarapa / Hutt Valley / Capital and Coast and Nelson Marlborough / West Coast / South Canterbury / Otago / Southland DHB areas had significantly higher rates than nationally (Table 6.13).

Table 6.13: Emergency department use in the previous 12 months, children and adults, by DHB area (unadjusted)

DHB area	Prevalence in children (95% CI)	Number of children	Prevalence in adults (95% CI)	Number of adults
Northland / Tairāwhiti / Hawke's Bay / Lakes / Whanganui	7.0 (4.8–9.2)	8100	9.5 (7.9–11.0)	35600
Waitemata	7.5 (5.0–10.0)	7800	6.9 (5.0–8.7)	26000
Auckland	7.6 (4.7–10.5)	5600	4.9 (3.2–6.6) –	15700
Counties Manukau	4.7 (2.5–6.9) –	5200	4.1 (3.0–5.3) –	13400
Waikato	7.0 (4.8–9.1)	5300	8.9 (6.8–11.0)	23100
Bay of Plenty / Taranaki / MidCentral	10.3 (8.0–12.6)	10100	9.9 (8.3–11.4)	34700
Wairarapa / Hutt Valley / Capital and Coast	10.8 (7.3–14.4)	9700	11.1 (8.6–13.7) +	38600
Canterbury	3.8 (1.7–7.3) –	3500	6.5 (4.6–8.4) –	24100
Nelson Marlborough / West Coast / South Canterbury / Otago / Southland	15.2 (9.3–21.1) +	14300	13.0 (10.5–15.4) +	50900
New Zealand total	8.2 (7.0–9.3)	69600	8.4 (7.7–9.0)	261800

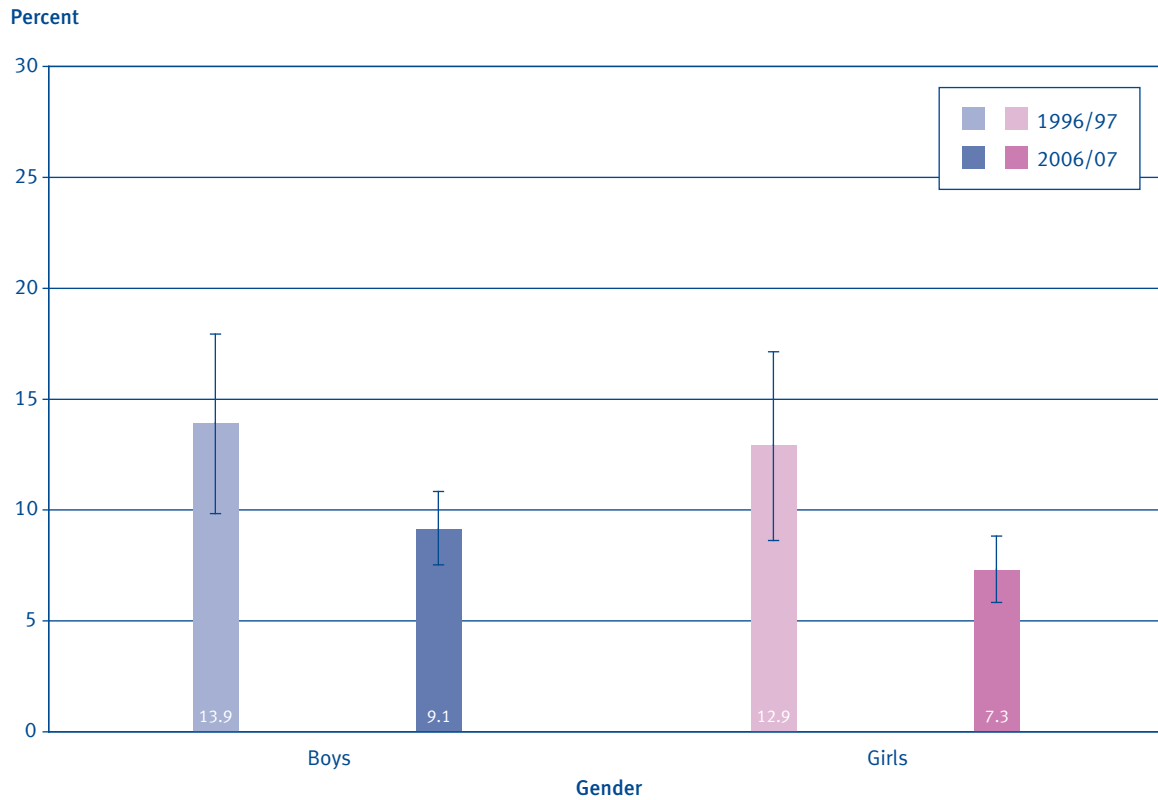
Source: 2006/07 New Zealand Health Survey

Notes: Estimates indicated with a + are significantly higher than the national rate, and estimates indicated with a – are significantly lower than the national rate. Data are based on direct survey estimates and could be confounded by different population characteristics in each DHB. Due to small sample size, some DHB areas have been combined. Survey population is the estimated resident population living in permanent private dwellings at 31 June 2007.

Time trends in use of emergency departments

For boys and girls there was a significant decline (p -values < 0.05) in the use of emergency departments between 1996/97 and 2006/07, adjusted for age (Figure 6.50).

Figure 6.50: Use of emergency departments in previous 12 months for children, by gender, 1996/97, 2006/07 (age standardised prevalence)

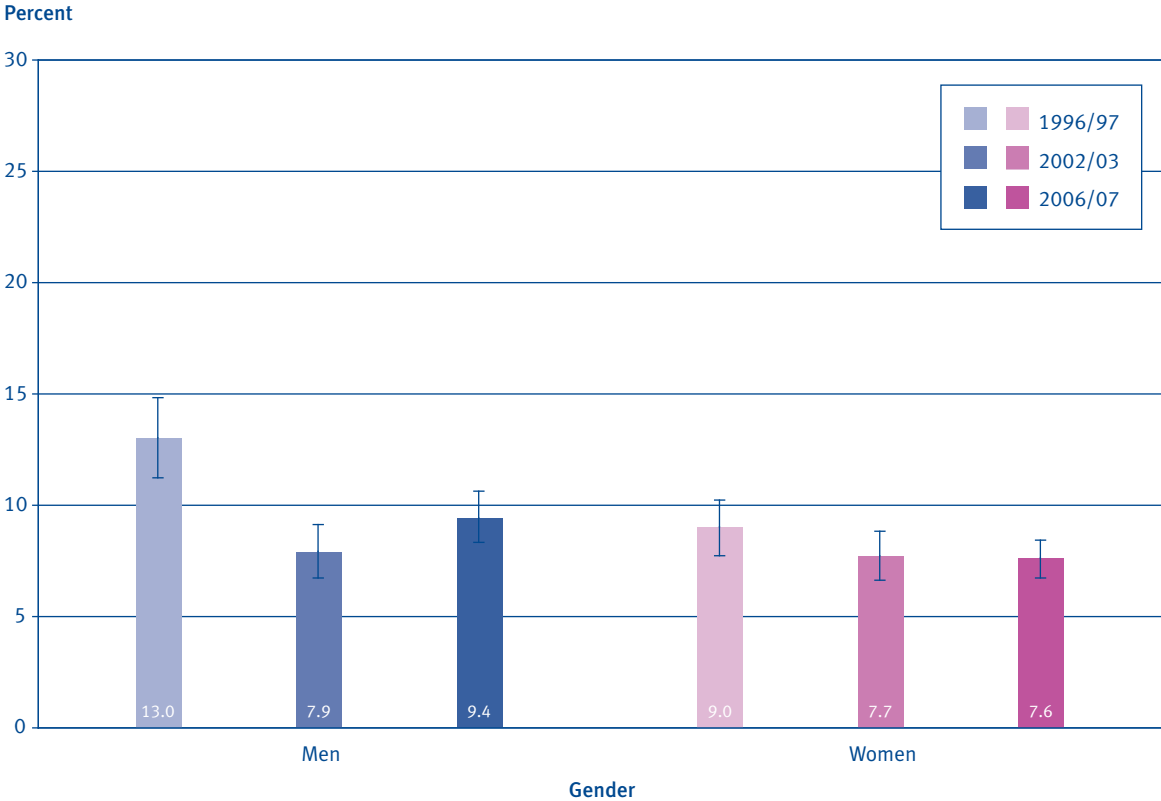


Source: 1996/97 and 2006/07 New Zealand Health Surveys

Note: Data from previous years have been reanalysed to allow for comparability. Data not available for 2003/03.

Adjusting for age, there was a decline in the use of emergency departments for men between 1996/97 and 2002/03, with the proportion remaining steady since 2002/03 (Figure 6.51). For women, there was no significant change in the use of emergency departments between 1996/97 and 2006/07. The same trend was also seen for Māori men and women (Figure 6.52).

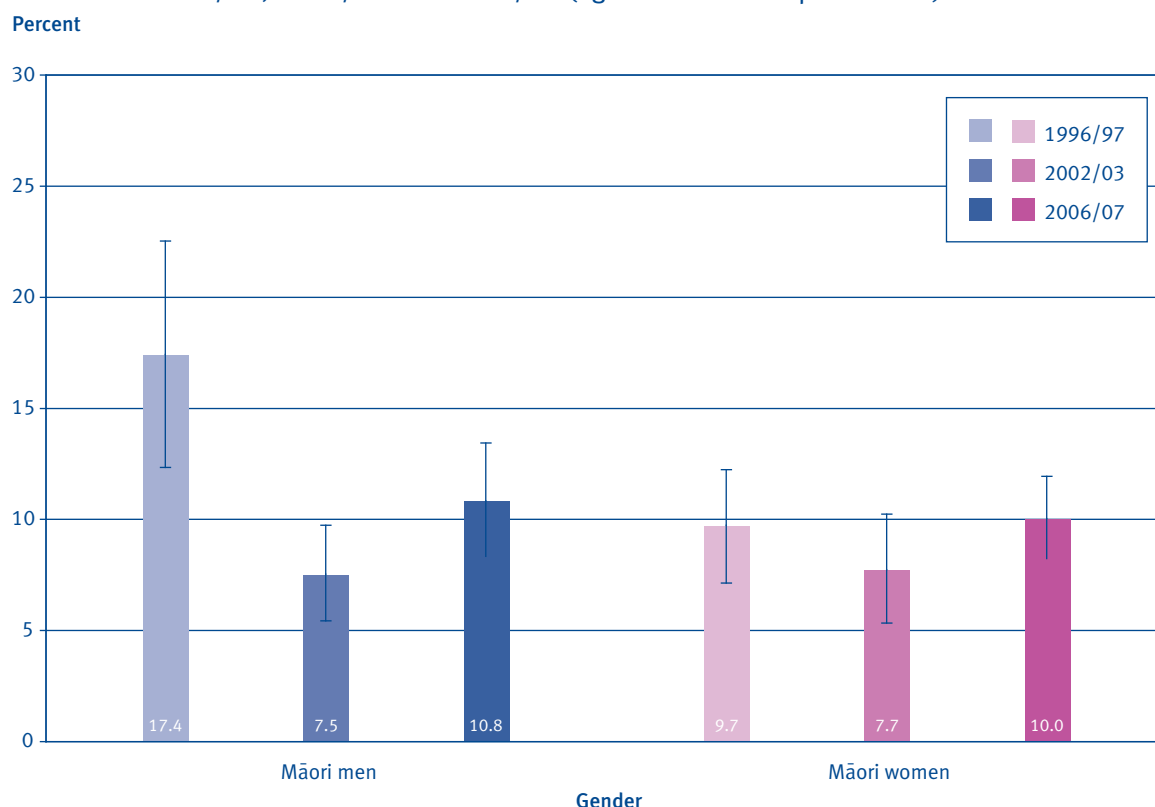
Figure 6.51: Use of emergency departments in the previous 12 months for adults, by gender, 1996/97, 2002/03 and 2006/07 (age standardised prevalence)



Source: 1996/97, 2002/03 and 2006/07 New Zealand Health Surveys

Note: Data from previous years have been reanalysed to allow for comparability.

Figure 6.52: Use of emergency departments in previous 12 months for Māori adults, by gender, 1996/97, 2002/03 and 2006/07 (age standardised prevalence)



Source: 1996/97, 2002/03 and 2006/07 New Zealand Health Surveys

Note: Data from previous years have been reanalysed to allow for comparability.

Public hospital use (excluding emergency departments) in previous 12 months

One in five children (18.2%, 16.8–19.7) and adults (18.3%, 17.4–19.2) used a service other than an emergency department at a public hospital in the previous 12 months. After adjusting for age, women (20.2%, 19.0–21.3) were significantly more likely than men (14.5%, 13.3–15.8) to have used a service other than an emergency department at a public hospital in the previous 12 months. There was no significant difference in public hospital use for boys and girls, adjusted for age.

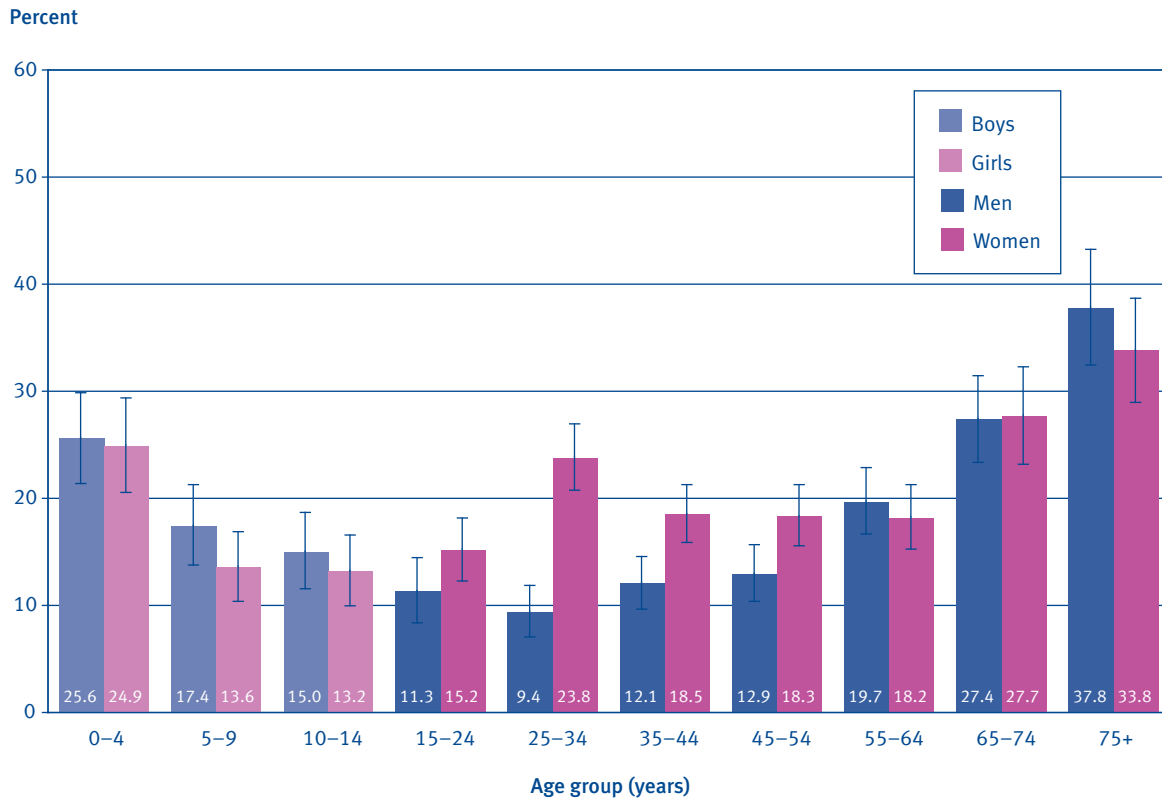
One in fourteen children (7.3%, 6.4–8.3) in the total population had been treated as an outpatient at a public hospital in the previous 12 months, 4.2% (3.5–4.9) were admitted as an inpatient and 2.9% (2.2–3.6) were admitted for day treatment. Māori boys (SRR 1.40, 1.02–1.77) were significantly more likely than boys in the total population to be admitted as an inpatient.

One in eleven adults (8.9%, 8.2–9.6) in the total population had been treated as an outpatient at a public hospital in the previous 12 months, 7.9% (7.3–8.4) were admitted as an inpatient and 3.6% (3.2–3.9) were admitted for day treatment. Māori adults (SRR 1.54, 1.35–1.73) were significantly more likely to be admitted as an inpatient than the total adult population. Adults in NZDep2006 quintile 5 (most deprived) (10.1%, 8.8–11.4) were significantly more likely than those in quintiles 1 (least deprived) (5.4%, 4.2–6.6), 2 or 3 to be admitted as an inpatient.

Public hospital use (excluding emergency departments) in the previous 12 months, by age group

Children aged 0–4 years and adults aged 65 years and over were significantly more likely than other age groups to use public hospital services other than an emergency department. Women aged 25–34 years and 35–44 years were significantly more likely than men of the same age to have used public hospital services other than an emergency department in the previous 12 months (Figure 6.53), which is likely to be due to use of maternity services.

Figure 6.53: Public hospital use (excluding ED) in the previous 12 months for children and adults, by age group and gender (unadjusted prevalence)

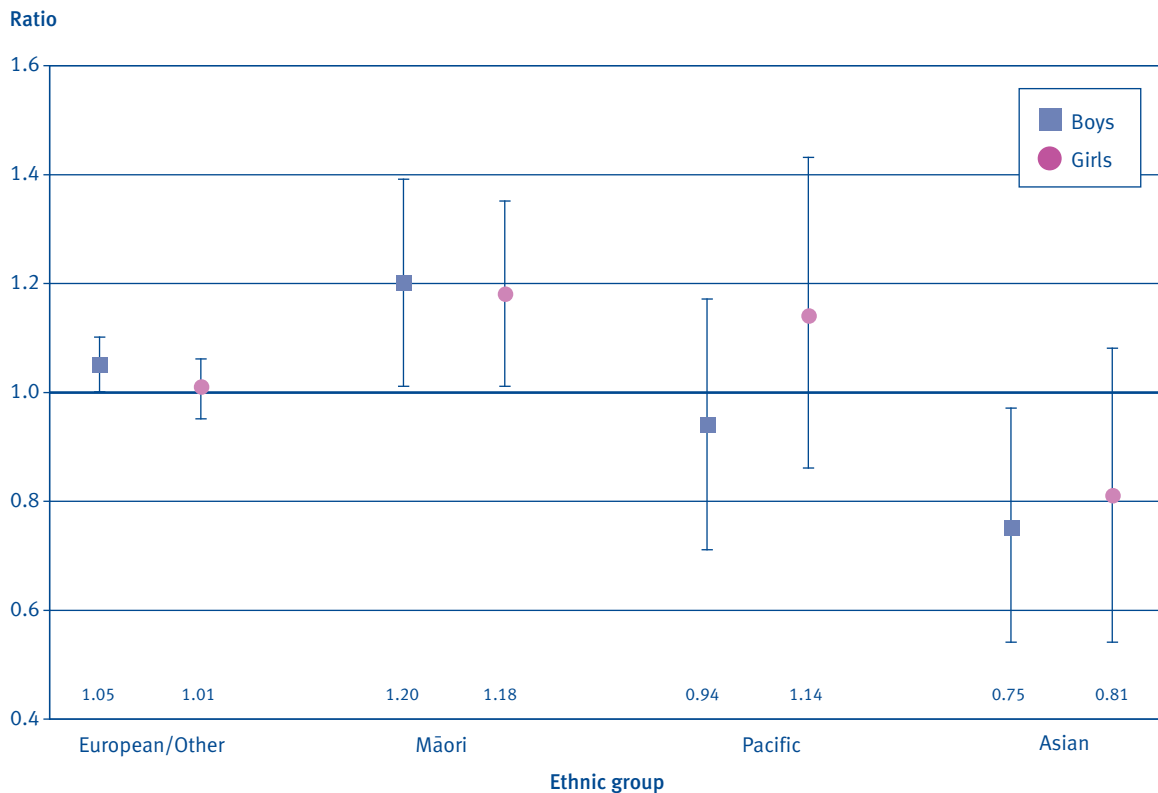


Source: 2006/07 New Zealand Health Survey

Public hospital use (excluding emergency departments) in the previous 12 months, by ethnic group

Māori boys and girls were significantly more likely than boys and girls in the total population to have used public hospital services other than an emergency department in the previous 12 months. Asian boys were significantly less likely than boys in the total population to have used public hospital services other than an emergency department in the previous 12 months (Figure 6.54).

Figure 6.54: Children who used a public hospital service (excluding ED) in the previous 12 months, by ethnic group and gender (age standardised rate ratio)

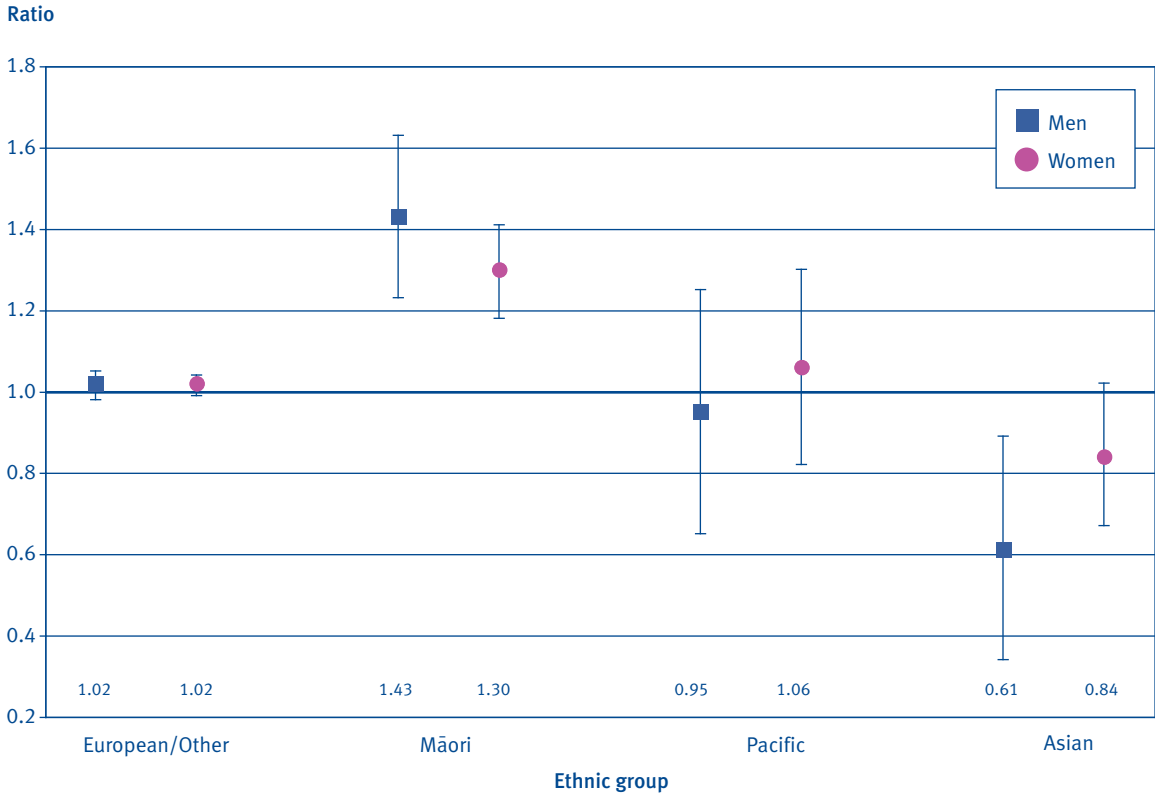


Source: 2006/07 New Zealand Health Survey

Notes: Age standardised to the WHO world population. Reference group, with a rate ratio of 1.0 (indicated by the bold line), is the total male or female population aged from birth to 14 years. Total response standard output for ethnic groups has been used.

Māori men and women were significantly more likely to have used public hospital services other than an emergency department in the previous 12 months than men and women in the total adult population, while Asian men (SRR 0.61, 0.34–0.89) were significantly less likely than all men (Figure 6.55).

Figure 6.55: Adults who used a public hospital service (excluding ED) in the previous 12 months, by ethnic group and gender (age standardised rate ratio)



Source: 2006/07 New Zealand Health Survey

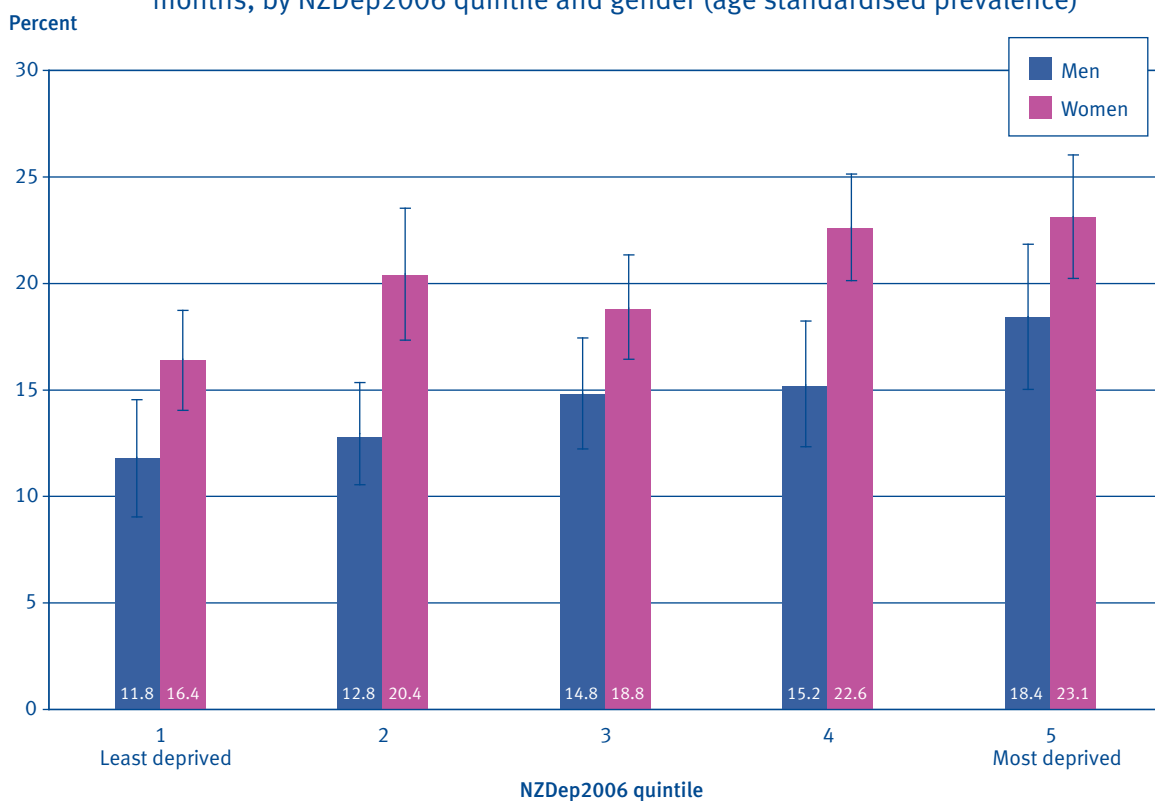
Notes: Age standardised to the WHO world population. Reference group, with a rate ratio of 1.0 (indicated by the bold line), is the total male or female population aged 15 years and over. Total response standard output for ethnic groups has been used.

Public hospital use (excluding emergency departments) in the previous 12 months, by neighbourhood deprivation

There were no statistically significant differences for children who used public hospital services other than an emergency department in the previous 12 months by neighbourhood deprivation.

Men and women in NZDep2006 quintile 5 (most deprived) were significantly more likely than those in quintile 1 (least deprived) to have used public hospital services other than an emergency department in the previous 12 months (Figure 6.56).

Figure 6.56: Adults who used public hospital services (excluding ED) in the previous 12 months, by NZDep2006 quintile and gender (age standardised prevalence)



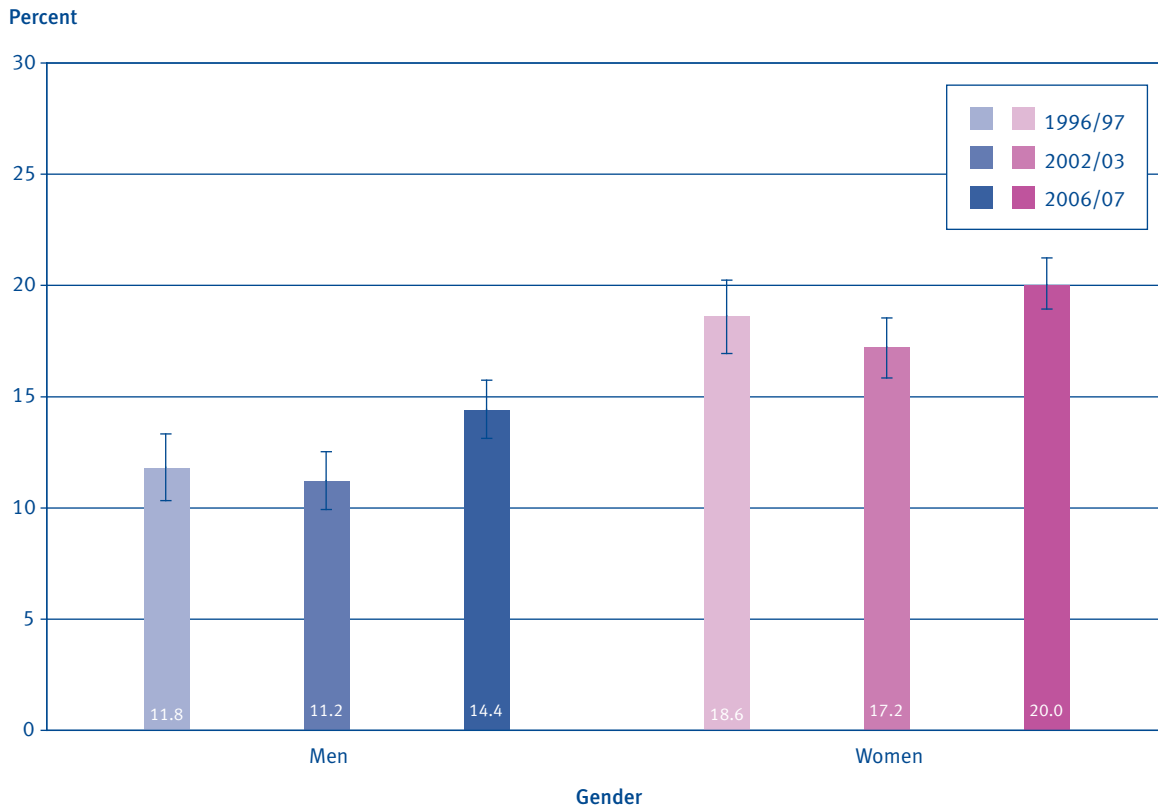
Source: 2006/07 New Zealand Health Survey

Time trends in use of public hospitals (excluding emergency department)

There were no significant differences in public hospital use from 1996/97 to 2006/07 for children, adjusted for age.

For both men and women, there was a significant increase in the use of public hospital services between 2002/03 and 2006/07, adjusted for age (Figure 6.57). This same pattern occurred for Māori men and women (Figure 6.58).

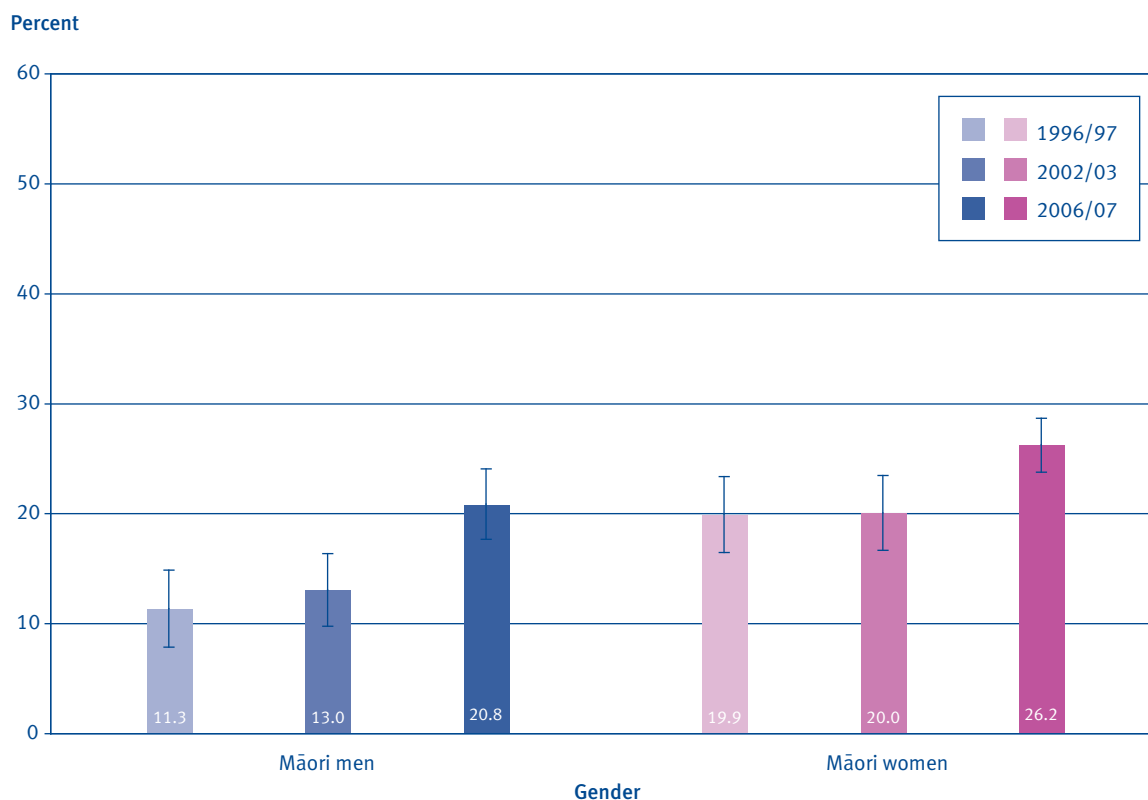
Figure 6.57: Use of public hospital in previous 12 months (excluding ED) for adults, by gender, 1996/97, 2002/03, 2006/07 (age standardised prevalence)



Source: 1996/97, 2002/03 and 2006/07 New Zealand Health Surveys

Note: Data from previous years have been reanalysed to allow for comparability.

Figure 6.58: Use of public hospital in previous 12 months (excluding ED) for Māori adults, by gender, 1996/97, 2002/03, 2006/07 (age standardised prevalence)



Source: 1996/97, 2002/03 and 2006/07 New Zealand Health Surveys

Note: Data from previous years have been reanalysed to allow for comparability.