

# Diabetes

## Key points

In 1997 the mortality rate from diabetes was 11 per 100 000 population. An additional 5 percent reduction in mortality rate is required per year between 1998 and 2002 to achieve the 2002 target of eight per 100 000 or less.

The mortality rates were higher for males (13 per 100 000) than for females (nine per 100 000).

The Māori mortality rate was almost eight times greater than the rate for European and Others (53 versus seven per 100 000) in 1997. To achieve the Māori target of 38 per 100 000 population by 2002, an annual reduction of 6 percent is required during the period 1998–2002.

In 1998 there were 3399 hospitalisations where diabetes was the primary diagnosis, an age-standardised rate of 76 per 100 000 population.

The age-standardised Māori hospitalisation rate was 213 per 100 000 compared to 62 per 100 000 for European and Others.

Strategies to prevent adverse outcomes in those with diabetes depend upon the delivery of quality, timely and appropriate diabetes care including patient education and the promotion of patient empowerment, physical activity, appropriate nutrition and a smokefree lifestyle.

### Targets

To reduce the age-standardised diabetes mortality rate to eight per 100 000 population or less by 2002.

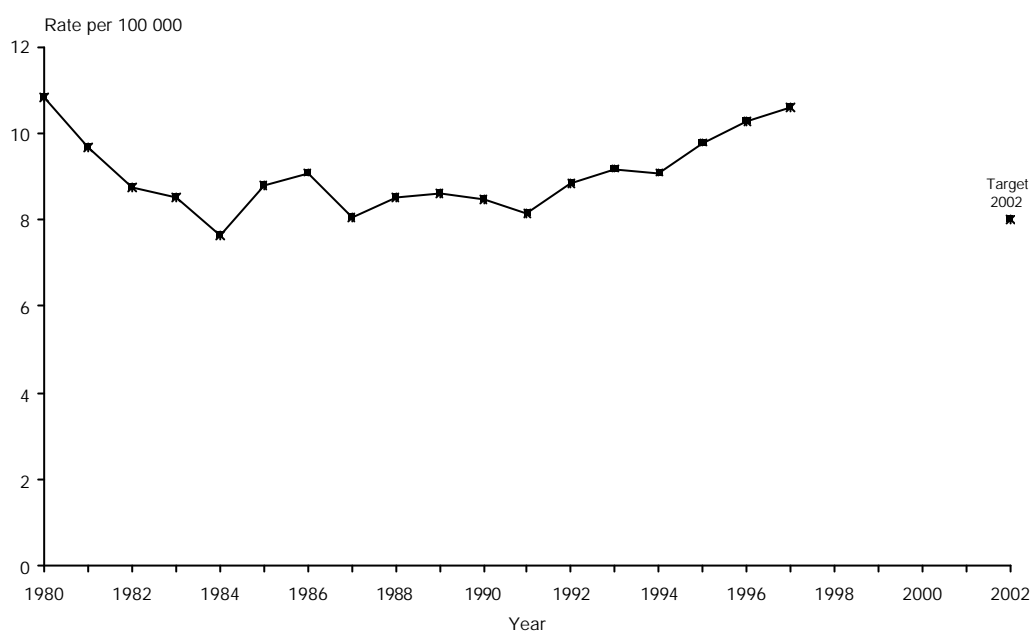
To reduce the age-standardised diabetes mortality rate among Māori to 39 per 100 000 or less by 2002.

## Progress towards the targets

### Mortality

In 1997 631 people died from diabetes, giving an age-standardised mortality rate of 11 per 100 000 population – the highest rate since 1980. Figure 1 shows the age-standardised mortality rates for the period 1980–98. Diabetes mortality rates have fluctuated over the period, but during the past six years (1992–97) they have been steadily increasing (from nine to 11 per 100 000). This increase may be the result of improvement in mortality coding, but it may also represent an actual increase in the number of people dying from diabetes. An annual reduction of 5 percent is required to achieve the target set for 2002.

**Figure 1:** Diabetes (primary cause) mortality rate, 1980–97



Source: New Zealand Health Information Service

Note: Data for 1997 are provisional, and rates are age-standardised to Segi's world population.

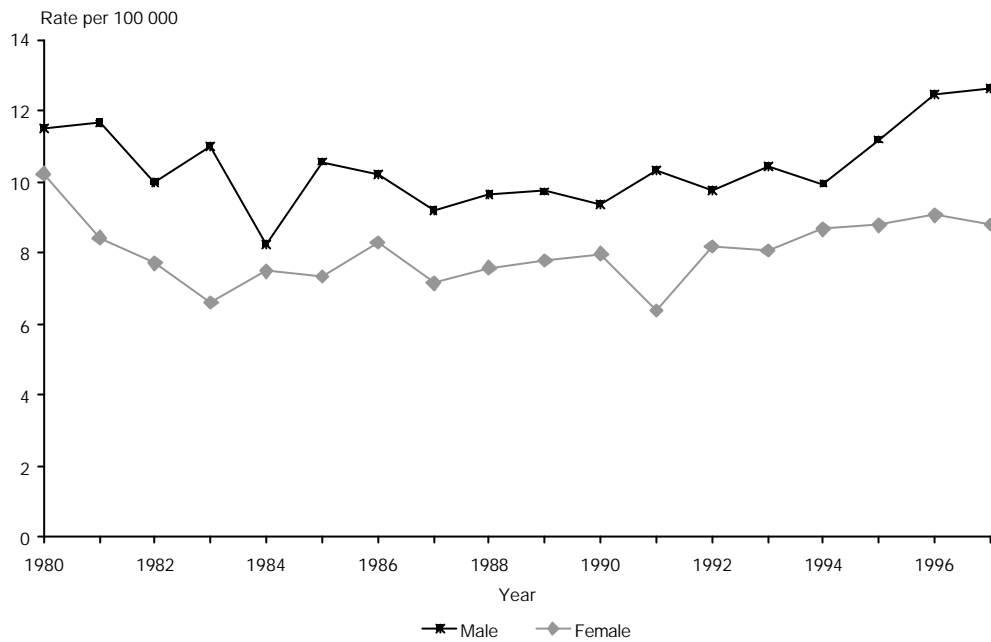
Some supporting evidence for the possibility that the higher mortality rate reflects an actual increase in diabetes mortality comes from comparison of the 1992–93 and 1996–97 national health surveys. The increased rate of diagnosed diabetes in the most recent survey suggests that there may have been a significant increase in the number of New Zealanders with diabetes (Ministry of Health 1999). However some of the apparent increase in prevalence between the two surveys may be due to increased awareness and diagnosis of the disease rather than an actual increase in prevalence.

Given the current rate of mortality due to diabetes, an additional 5 percent reduction per year during the period 1998–2002 is required to meet the target set for 2002.

The mortality rate was slightly higher in males than females in 1997, as was the case in past years (13 versus nine per 100 000). It appears that the male mortality rate from diabetes has been increasing steadily since 1994 (10 per 100 000 in 1994 versus 13 per 100 000 in 1997). The average rate for the past three years (1995–97) was 12 per 100 000 males.

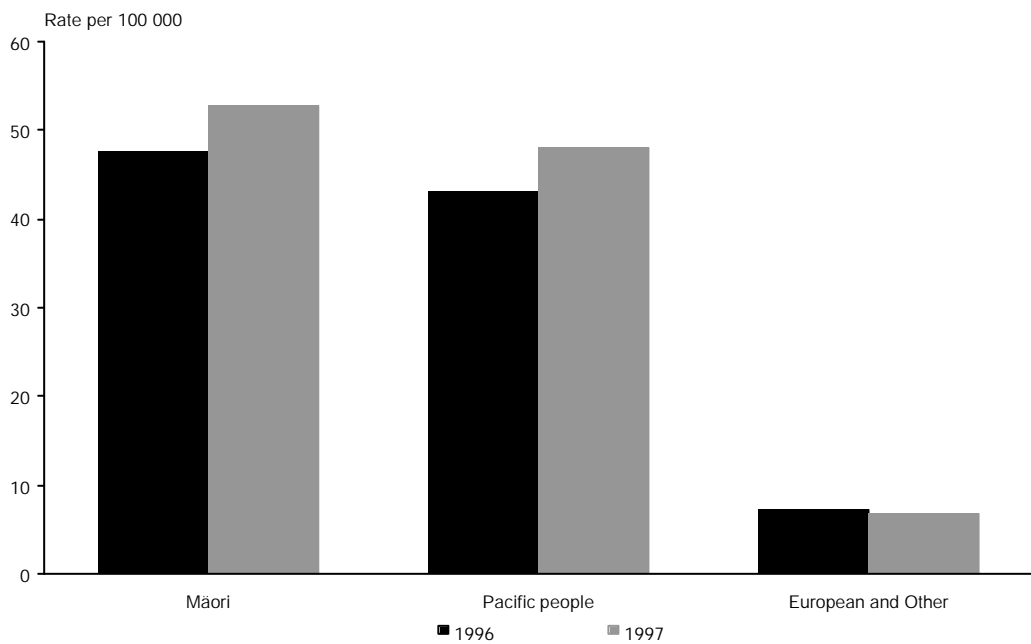
The mortality rate for females has been increasing slowly but steadily, creating not only a widening gap in mortality rates between males and females compared to the past several years (see Figure 2) but also moving away from the target.

**Figure 2:** Diabetes (primary cause) mortality rates, by sex, 1980–97



Source: New Zealand Health Information Service  
 Note: Data for 1997 are provisional, and rates are age-standardised to Segi's world population.

**Figure 3:** Diabetes (primary cause) mortality rates, by ethnicity, 1996–97



Source: New Zealand Health Information Service  
 Note: Data for 1997 are provisional, and rates are age-standardised to Segi's world population.

Figure 3 shows mortality rates for Māori, Pacific and European and Others for 1996 and 1997. In 1996 and 1997 the mortality rates due to diabetes were higher among Māori and Pacific peoples compared to European and Others. The Māori and Pacific mortality rates due to diabetes increased slightly in 1997 compared to 1996 while the rates for European and Others remained almost the same.

The higher incidence of diabetes among Māori and Pacific peoples has been said to be associated with both genetic (Morris et al 1989; Simmons et al 1995; Brown 1993) and modifiable risk factors. Modifiable risk factors include poor glucose, blood pressure and blood fat control; delayed diagnosis and treatment; smoking; and poor food care, physical inactivity and obesity (Helmrich et al 1991; Manson et al 1991; Marshall et al 1991; Colditz et al 1990; Scragg et al 1991).

In order to achieve the Māori target set for 2002, an annual reduction of 6percent in diabetes mortality rate is required during 1998–2002. Given the current rise in the Māori rate, the 2002 target may not be achieved.

### **Morbidity**

In 1998 there were 3399 hospitalisations where diabetes was the primary diagnosis, indicating an age-standardised hospitalisation rate of 76 per 100 000 population. After a significant decrease in 1995, the hospitalisation rate has been increasing steadily.

Hospitalisation rates among Māori and Pacific peoples were particularly high relative to European and Others in 1998. Māori hospitalisation rates for diabetes exceeded rates for European and Others by more than three times (213 and 62 per 100 000 respectively). The rates for Pacific people were also four times greater than for European and Others (245 versus 62 per 100 000).

The recent 1996–97 health survey gives a diabetes prevalence rate of 4percent among people aged 15 years or over in New Zealand. The prevalence rates varied for different ethnic groups: 3 percent for European and Others, and 8 percent each for Māori and Pacific people (Ministry of Health 1999).

Hospitalisation data based on primary diagnosis have been found to underestimate the true incidence (prevalence) of diabetes by 25 to 75 percent (Simmons 1996). However including all those primary and secondary diagnosed diabetics may still not provide a true estimate as diabetes will not always be diagnosed at the time of admission. It is estimated that diabetes accounts for approximately 5percent of surgical and 15 percent of medical inpatient admissions (Simmons 1996).

### **Indicator**

Age-standardised mortality rate for diabetes (ICD-9-CM code 250).

### **Data source**

The National Minimum Dataset mortality data for 1980–97 and hospitalisation data for 1988–98 provided by the New Zealand Health Information Service were used. Mortality data for 1997 and hospitalisation data for 1998 are provisional.

Some of the shortcomings of using mortality data alone are that the data underestimate the true diabetes mortality in New Zealand. Additionally the data do not capture the important non-fatal health outcomes associated with diabetes (for example, disability from heart disease, blindness, renal failure and limb amputations) (Tobias and Roberts 1999).

## References

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