

Falls

Key points

Falls among older people are a major public health problem. In 1997 208 people aged 65 years and over (69 males and 139 females) died due to falls.

Age-standardised mortality rates for falls were 33 and 36 per 100 000 population for males and females respectively. These rates have decreased by almost two-thirds since 1980 when the corresponding rates for males and females were 105 and 111 per 100 000 respectively.

In 1997 the falls-related mortality rate for males aged 75 years and over was eight times greater than the rate for those aged 65–74 years. Correspondingly, mortality rates for females aged 75 and over were almost 15 times greater than for those aged 65–74.

Hospitalisations for falls have increased both in terms of absolute numbers and rates. In 1988 4593 people aged 65 years and over were hospitalised for falls (1063 males and 3530 females) which increased to 6663 hospitalisations in 1998 (1754 males and 4909 females).

The age-standardised hospitalisation rates for males increased from 696 in 1988 to 850 per 100 000 males in 1998. The female rates increased from 1367 per 100 000 in 1988 to 1441 per 100 000 in 1998.

Because of a change in the methods of data extraction for the calculation of falls-related hospitalisation rates, the existing targets appear to be based on overestimated baseline rates. Hence the hospitalisation targets need to be revised accordingly.

Targets

To reduce the falls-related mortality rate in people aged 65 or more years to 10 per 100 000 by 2010.

To reduce the falls hospitalisation rate in males aged 65 or more years to 1200 per 100 000 by 2010.*

To reduce the falls hospitalisation rate in females aged 65 or more years to 2000 per 100 000 by 2010.*

* Need to revise these targets as they were set based on overestimated falls hospitalisation rates. The discrepancy occurred because of difference in codes used to extract falls-related hospitalisation data.

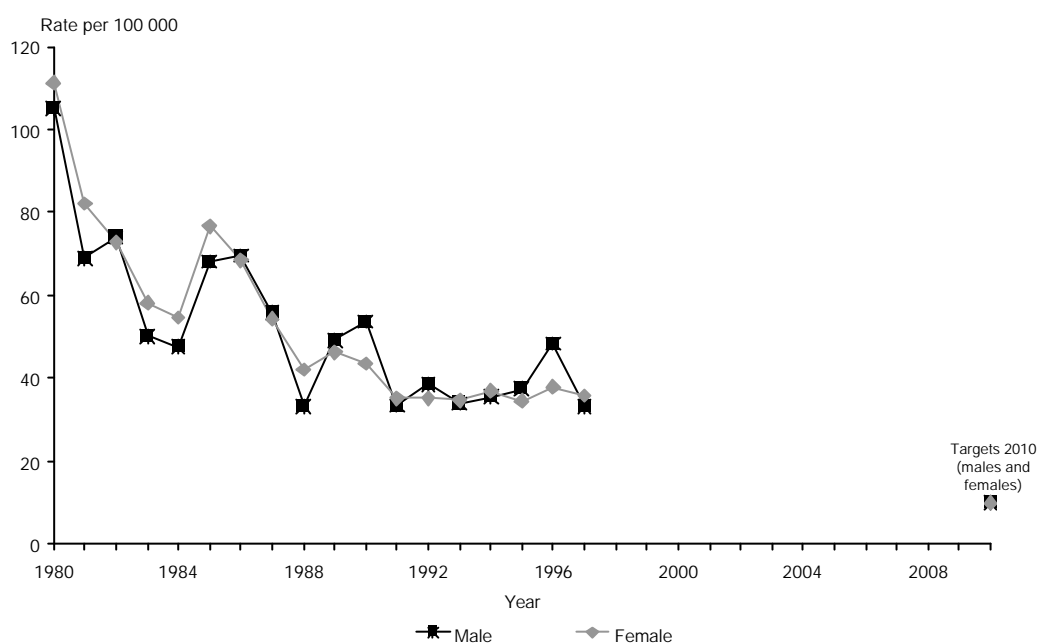
Progress towards the targets

Mortality

Falls among older people (65 years and over) are a major public health problem in New Zealand. It has been estimated that about a third of people aged 65 years and older living in the community will fall in any one year (Tinetti et al 1988; Downton and Andrews 1991).

In 1997 208 people aged 65 years and over died due to falls. The age-standardised mortality rates were 33 for males and 36 for females. These rates have declined by two-thirds (68 percent) since 1980 when the fall-related mortality rates were 105 for males and 111 for females (Figure 1). However the decline is not consistent throughout the period. The mortality rates fluctuated for males while the rates for females have remained consistent, at least since the early 1990s.

Figure 1: Fall-related mortality rates, aged 65 years and over, by sex, 1980–97

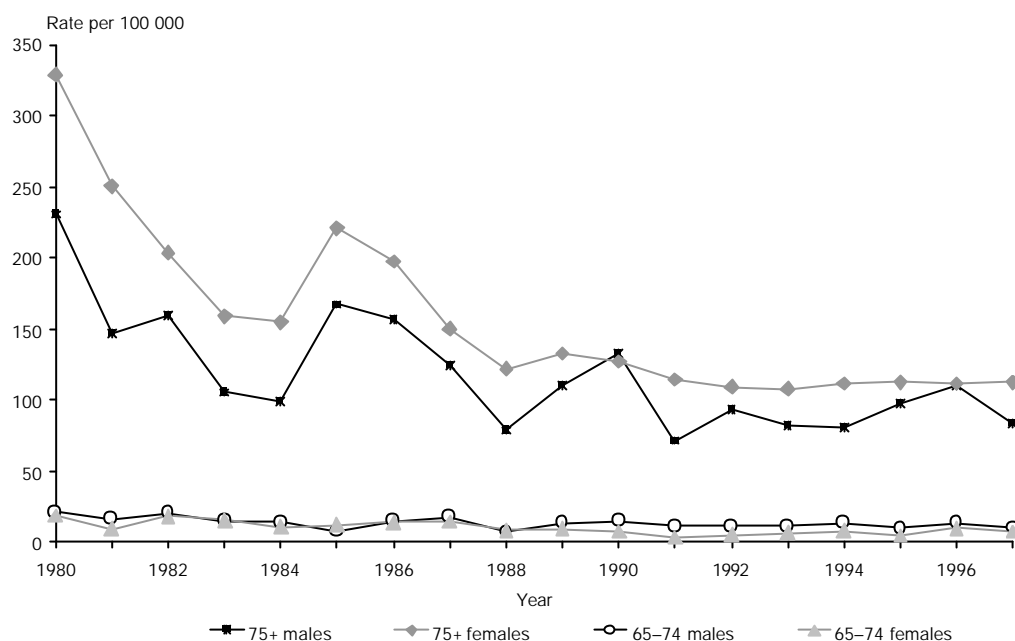


Source: New Zealand Health Information Service
 Note: Data for 1997 are provisional, and rates are age-standardised to Segi's world population.

The risk of fall-related mortality increases with age, as shown by the marked difference in death rates for those aged over 75 years and those aged 65–74 years (Figure 2). In 1997, among those aged 65–74 years, the fall-related mortality rates were 10 per 100 000 for males and eight per 100 000 for females, while among those over 75 years the rates were 84 per 100 000 for males and 112 per 100 000 for females. This indicates that the fall-related mortality risk among males aged 75 years and over is eight times greater than for those aged 65–74 years. The risk of fall-related mortality among females aged 75 and over is almost 15 times greater than the risk faced by females aged 65–74 years.

Although fall-related mortality among people aged 65 years and over has declined significantly since the early 1980s, it would require an additional annual reduction of 9 percent in falls mortality. It is highly unlikely that the target set for 2010 will be achieved without further improvements in prevention and treatment strategies.

Figure 2: Fall-related mortality rates, 65–74 years and 75 years and over, by sex, 1980–97



Source: New Zealand Health Information Service
 Note: Data for 1997 are provisional, and rates are age-specific.

Hospitalisation

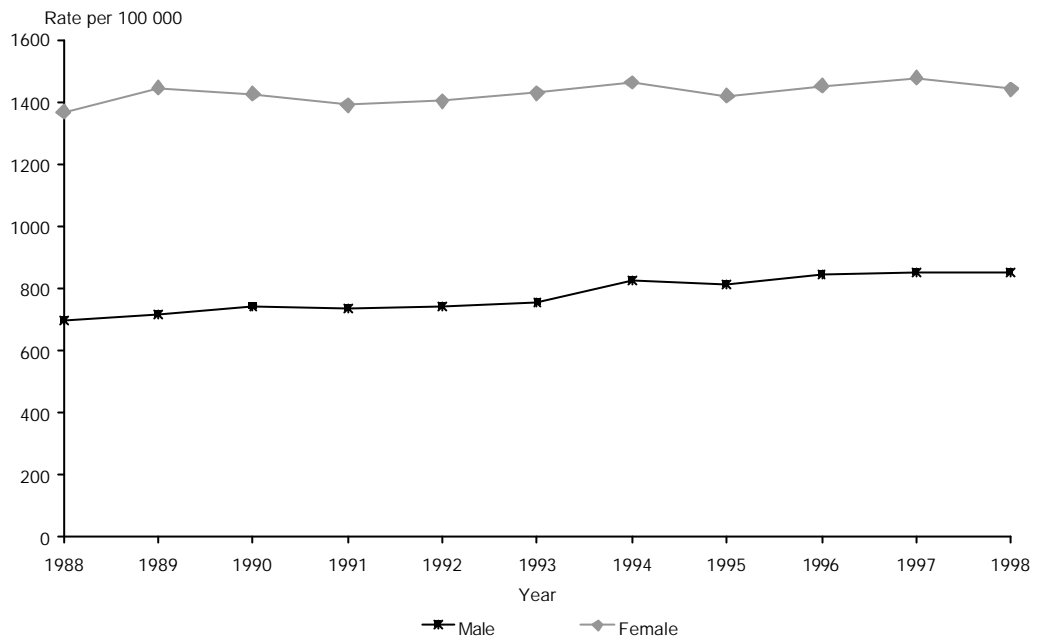
The absolute number of hospitalisations for falls has increased significantly. In 1988 there were 4593 hospital admissions for falls in people aged 65 years and over (1063 males and 3530 females). This increased to 6663 in 1998 (1754 males and 4909 females).

Hospitalisation rates for falls have steadily increased since 1988. The rate for males has increased from 696 per 100 000 in 1988 to 850 per 100 000 in 1998, and for females from 1367 per 100 000 in 1988 to 1441 per 100 000 in 1998 (Figure 3). Because of change in codes of falls hospitalisation data extraction, the current rates are not evaluated against the target.

In 1998 197 Māori⁹ aged 55 years and over were admitted to hospital for falls (106 males and 91 females). The age-standardised rates for Māori males and females were 589 and 425 per 100 000 respectively. The Māori female rates were considerably lower than rates for European females during 1996–98. An analysis by sex and ethnicity reveals that the age-standardised hospitalisation rates for those aged 55 years and over were higher for European females than for Māori and Pacific females (Figure 4).

⁹ Note that hospitalisation rates for Māori are for the age group 55 years and over. This recognises that Māori face age-related disability at a younger age and also takes into account the definition of the term 'kāumatua' (Ministry of Health 1997).

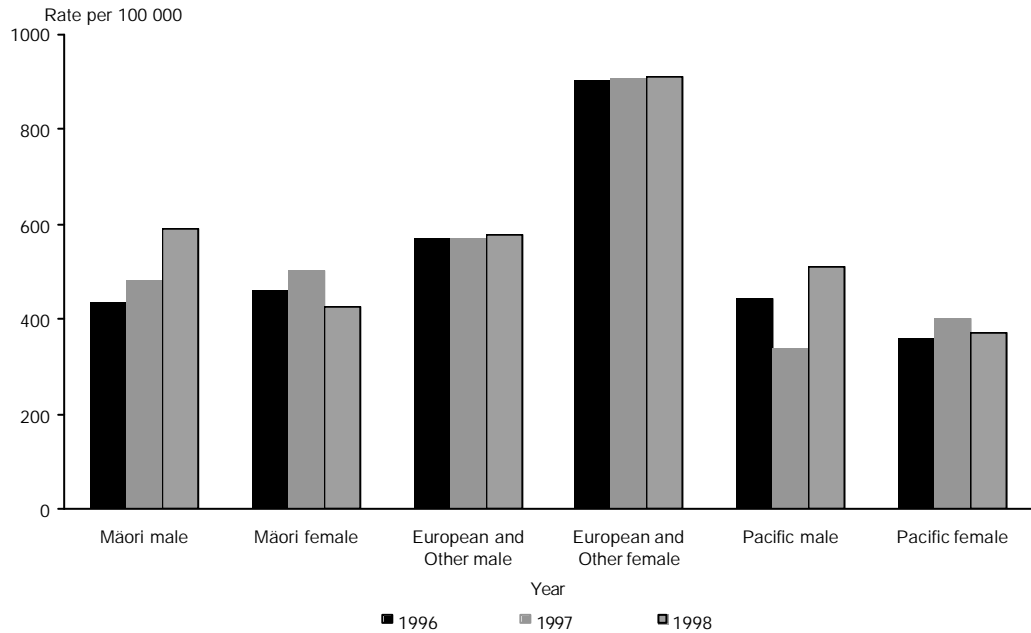
Figure 3: Hospitalisation rates for falls, 65 years and over, by sex, 1988–98



Source: New Zealand Health Information Service

Note: Data for 1998 are provisional and rates are age-standardised to Segi's world population. Because the targets were based on overestimated baseline rates of hospitalisation for falls, targets are not shown here.

Figure 4: Hospitalisation rates for falls, 55 years and over, by ethnicity and sex, 1996–98



Source: New Zealand Health Information Service.

Note: Data for 1998 are provisional, and rates are age-standardised to Segi's world population.

Indicators

Falls-related mortality rates (age-standardised to Segi's world population) for the population 65 years and over (ICD-9 codes E880–E888).

Falls hospitalisation rates (age-standardised) for the population 65 years and over (ICD-9 codes E880–E888).

Data source

Mortality and hospital discharge data are from the New Zealand Health Information Service National Minimum Dataset.

The quality of the data is dependent on the accuracy of the coding. This is probably adequate in the case of hospitalisation data as every effort is made to establish a cause for admission. It may be less adequate with mortality data, not only because of coding issues, but also because falls are often not listed on the death certificate and rely on a history from relatives.

The indicators do not take into account the impact falls have on families and other social supports necessary for maintaining functional status, independence and improved quality of life. Nor do the indicators monitor risk factors such as reduced strength, impaired balance and vision, use of psychotropic drugs or home safety. Admission to residential facilities (which is a major risk factor for falls) is also not monitored.

References

- Downton JH, Andrews K. 1991. Prevalence, characteristics and factors associated with falls among the elderly living at home. *Ageing [Milano]* 3: 219?28.
- Tinetti ME, Speechley M, Gitner SF. 1988. Risk factors for falls among elderly persons living in the community. *New England Journal of Medicine* 319: 1701?7.