

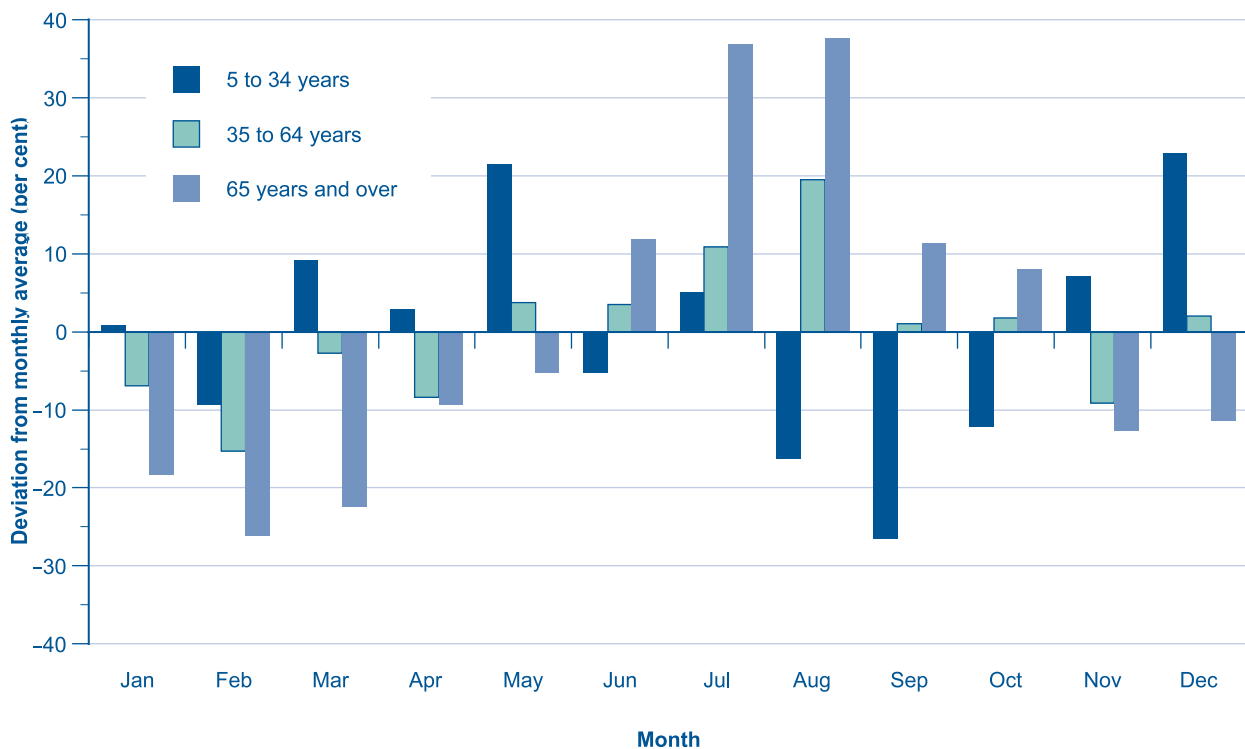
## Seasonal variation in mortality risk

Previous studies have shown that seasonal variation in risk of death due to asthma varies between age groups (Marks & Burney 1997; Weiss 1990). These studies from the USA and England & Wales have shown higher rates during winter months in the older age groups. Data for Australia (Figure 4.12) reflected a similar pattern in people aged 65 years and over. This seasonal pattern presumably reflects the impact of the winter rise in influenza and pneumonia. A similar winter predominance is observed for all-cause mortality in this age group (AIHW: De Looper 2002).

Overall, there was no winter predominance in the pattern of asthma mortality among those aged 5 to 34 years and 35 to 64 years. There was no clear seasonal trend in these age groups. This is in contrast to the USA (Weiss 1990) and England & Wales (Marks & Burney 1997) where asthma mortality in 5 to 34 year olds peaked in late summer.

In Australia, all-cause deaths are more common in spring in younger people (AIHW: De Looper 2002), although the degree of seasonal predominance in this age group is less than in older age groups.

**Figure 4.12**  
Average monthly deviation from average number of deaths due to asthma, by broad age group, Australia, 1979–2003



Note: Asthma classified according to ICD-9 code 493, 1979 to 1996 and ICD-10 codes J45 and J46, 1997 to 2003. For each month, the deviation from that year's monthly average number of deaths for the relevant age group was calculated. The mean monthly deviation was then calculated over the observed 24 years.

Source: AIHW National Mortality Database.

## Summary

We have shown that Australian mortality rates due to asthma have been steadily falling for more than a decade and that this has continued an overall decline that occurred throughout the 20th century. However, the risk remains high compared with other nations.

Mortality rates for asthma increased markedly with age and, generally speaking, people living in remote areas and those living in socioeconomically disadvantaged areas had higher mortality rates. These trends mirror similar trends observed for all-cause mortality; however, a greater proportion of deaths due to asthma were among people aged 5 to 64 years than of deaths due to all causes. Among people aged 65 years and over, mortality was more commonly attributed to asthma in females than in males. How far this represents diagnostic or labelling preferences, as opposed to real differences in risk, is not known. There was an increased risk of death due to asthma during winter in older people but there was no such pattern among children and young adults.

