

12 Sarcoidosis results (standard output graphs can be found in Appendix A12)

Summary

| Type of variation | Consistent across data sources? | Consistent within data sources? | Comments |
|--------------------------|----------------------------------|---------------------------------|--|
| Age | Partially: HES & GPRD | N/A | Highest rates ages 40-60 in GPRD, ages 30-65 in HES, ages 55-85 in mortality |
| Sex | Yes | N/A | Initially M>F, then F>M |
| Year on year | No | N/A | ↑ GPRD, ↑→ HES, ↓↑ mortality |
| Week of year | Yes: HES & mortality No: GPRD | N/A | ↓ weeks 26-40 HES & mortality. Small numbers in the GPRD made seasonal patterns hard to determine. |
| Regional | Yes | N/A | ↑ North Thames & East Anglia ↓ North of England & Wessex |
| Urban-rural | Yes: HES & mortality No: GPRD | N/A | ↑ rural in GPRD but ↑ conurbations in HES & mortality |
| Geographical correlation | N/A | N/A | Numbers of events too small to allow meaningful geographical correlations |

The following results are considered:

Variations by age and sex
 Seasonality
 Regional and urban rural distribution
 Comparisons across data sources

Variations by age and sex

Highest rates were seen in mid-life (ages 40-60 years) for GP consultations, in mid to later life (30-65 years) in emergency hospital admission rates (Figure 12.1) and in later life (55-85 years) for mortality (Figure 12.2). GP consultation rates were an order of magnitude higher than emergency hospital admission rates, while rates of emergency hospital admissions were 3-4 times higher than death rates.

A distinct male peak in ages 30-35 years, with a later female peak in ages 55-60 was seen in emergency hospital admissions (Figure 12.1). In GP patient consultations, the peaks were much closer, with a first male peak at ages 40-45 (with a second, similar size peak at ages 50-55) and a female peak at ages 45-50. In mortality (Figure 12.2), death rates were higher in males than females at ages 25-50 and higher in females at ages 50-80.

Figure 12.1 Emergency hospital admission rates for sarcoidosis by age and sex, 1991-1994

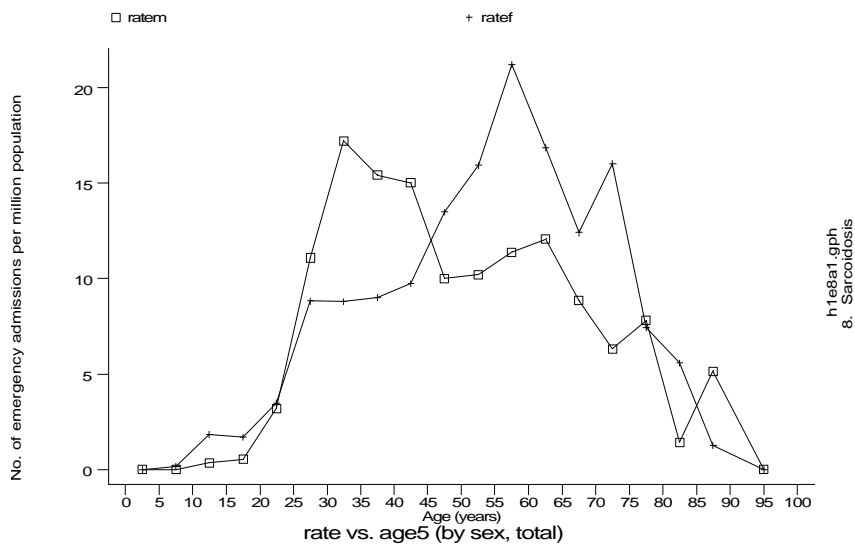
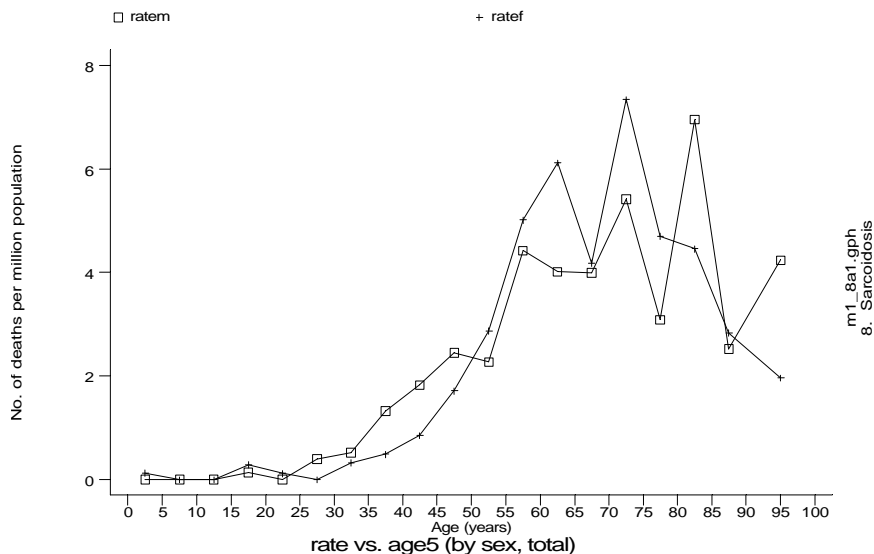


Figure 12.2 Crude mortality rates for sarcoidosis by age and sex for 1991-1995



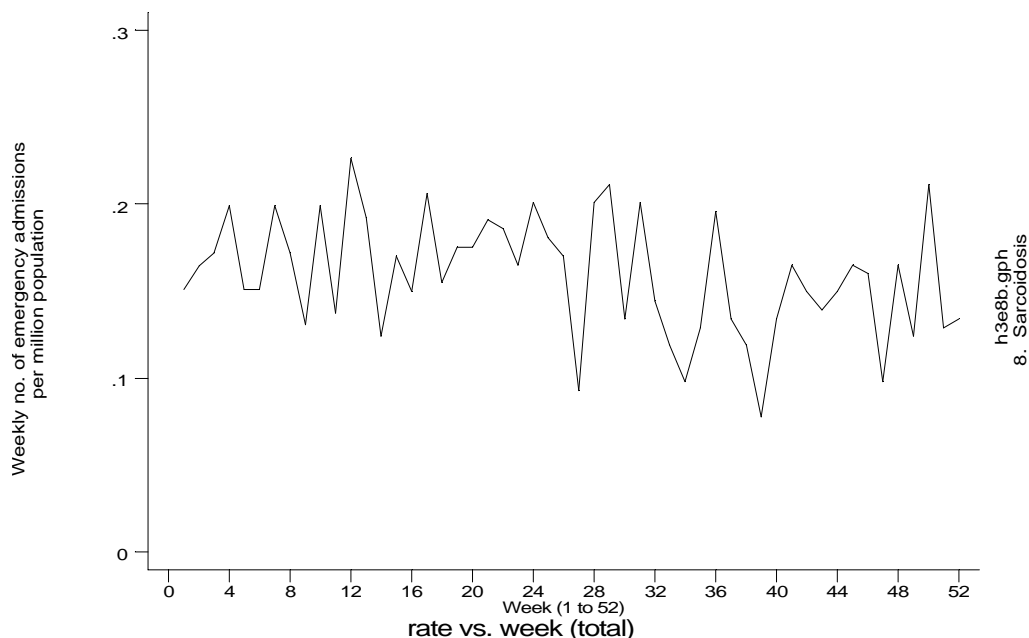
Year on year: GP consultation rates increased slightly over 1991-1995, emergency hospital admissions rose to 1993 then stabilised, while deaths decreased between 1991-1994 then rose again in 1995.

Cohort effect: It was difficult to investigate cohort effects because of the small numbers involved. Using five year age groups, there was an apparent cohort effect in GP consultations, with a peak in those born in 1935-39 and in 1950-55 and a trough in those born in 1945-49. However, no cohort effects were seen in hospital admissions or mortality. A possible explanation is that the same persons attended their GP each year, which would not be discernible with five year age-groups, but did not have an emergency admission to hospital each year.

Seasonality

Random variation due to small numbers, even when all years were combined, made seasonal patterns more difficult to interpret. Emergency hospital admissions (Figure 12.3) and deaths were lowest in summer (July – early October) with the lowest rates in week 40 (early October) in both data sources. GP patient consultations appeared to peak in the summer months of June and July, but this may have been artefactual due to small number fluctuations.

Figure 12.3 Hospital admission rates by week for sarcoidosis, 1991-1994



Regional and urban rural distribution

In all years combined, higher than average SERs were seen in East Anglia and North West Thames. North East Thames had higher SERs in mortality and hospital admissions and average GP consultations with wide confidence intervals. Lower than average SERs were seen in Northern, Yorkshire, Trent, Mersey, North Western and Wessex. Even using data from all years, numbers were small giving wide confidence intervals, particularly for mortality. SERs for 1994 only are shown in Table 12.1.

Table 12.1 Numbers of events and SERs in 1994 for sarcoidosis ranked (high-low) following order of emergency hospital admission SERs

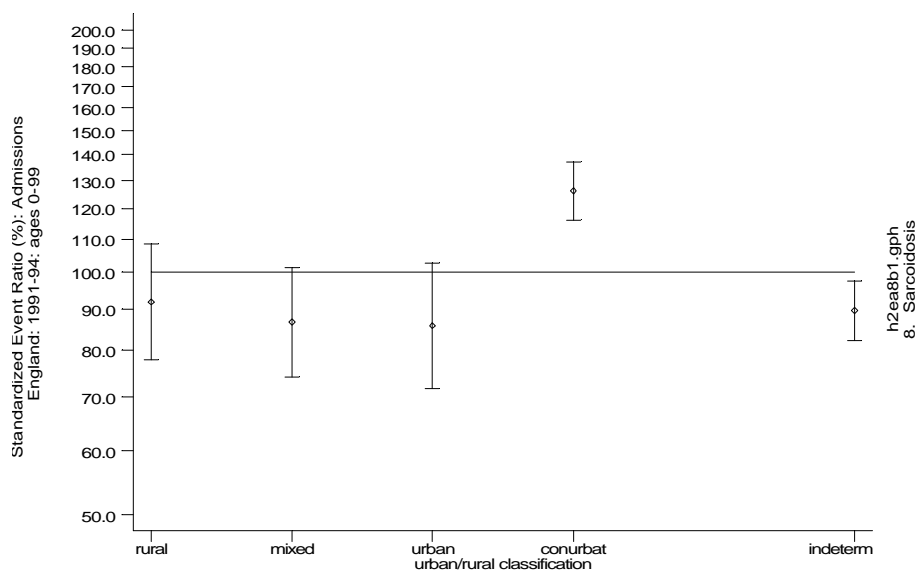
| Region | Mortality | | HES: Emergency admissions | | GPRD: patient consultations | |
|------------|-----------|-------|---------------------------|--------|-----------------------------|-------|
| | 4 | 71.8 | 54 | 162.4* | 4 | 106.0 |
| NE Thames | 4 | 71.8 | 54 | 162.4* | 4 | 106.0 |
| NW Thames | 2 | 46.3 | 41 | 153.9* | 22 | 153.4 |
| SW Thames | 7 | 149.4 | 30 | 111.3 | 17 | 117.9 |
| Wessex | 5 | 98.9 | 31 | 111.0 | 4 | 46.0 |
| SE Thames | 5 | 87.2 | 36 | 110.5 | 4 | 97.3 |
| Trent | 7 | 93.7 | 44 | 104.5 | 11 | 75.2 |
| W Midlands | 9 | 109.6 | 46 | 99.4 | 35 | 130.1 |
| S Western | 5 | 90.2 | 29 | 98.1 | 14 | 120.2 |
| Oxford | 2 | 53.1 | 20 | 87.4 | 2 | 36.5 |
| E Anglia | 7 | 169.4 | 20 | 86.3 | 18 | 131.9 |
| Yorkshire | 9 | 157.6 | 24 | 74.1 | 3 | 47.9 |
| Mersey | 4 | 106.3 | 14 | 66.4 | 11 | 104.2 |
| Northern | 3 | 65.2 | 16 | 61.9 | 10 | 80.8 |
| N Western | 6 | 93.4 | 22 | 60.6* | 4 | 32.9* |

* SER significantly different from 100 (p<0.05)

Time trends: A number of regions diverged from the national year on year trends but confidence intervals were wide.

Urban rural: No consistent pattern emerged. The highest SERs were seen in rural areas for GP consultations but in conurbations for emergency hospital admissions (Figure 12.4) and mortality.

Figure 12.4 Urban-rural pattern for age and sex standardised ratios emergency hospital admissions for sarcoidosis, 1991-1994



Comparisons across data sources

Numbers of events in all data sources were too small to allow meaningful geographical correlations.