

## Comparison of rates of certification of death by DrB and her partners

Using the file of death certificates completed by DrB and her partners between 1991 and 2001, rates of certification by DrB and by her partners may be compared. Her partners provided cover for DrB during her absences (on leave). A comparison of death certification rates by her partners, relating to patients on Daedalus (+?) ward during those periods of absence, with those by DrB on the same ward when she was present would be of particular interest. Nonetheless, some difficulties of interpretation might remain since mortality during her absences could in part reflect effects of DrB's practice when present, possibly leading to attenuation of observable differences. Unfortunately, insufficient information is available to allow this comparison to be made directly, and the analysis reported below is differs from the straightforward comparison in 2 respects:

- a) Since individual wards cannot be consistently identified from the place of death details on the certificates, the analysis relates to deaths from all wards at GWMH certified by DRB or her partners. These include deaths of patients in the Sultan ('GP') ward as well as Daedalus ward, which may again lead to attenuation of observed differences if there are no differences of practice in respect of patients on Sultan ward.
- b) Since explicit records of DrB's patterns of absence are no longer available, an indirect method of inferring (some of) these periods of absence has been used, as described below, but the validity of this method cannot be verified directly.

Absence of DrB is inferred from prolonged periods between consecutive deaths certified by DrB. Such periods could of course occur by chance even when DrB is present. A variety of period lengths has been investigated. The principal results below are based on periods of at least 14 consecutive days, since use of shorter period lengths are more prone to error, such as uncertainty over the exact start and end dates.

Rates of certification by DrB except during those periods in which there was at least 14 days between successive certifications by her were compared with rates of certification by the 7 other partners in those same 14+ day periods. Incidence ratios (and 95% cis) were:

1998	1.67	(0.88-3.59)
1999	3.78	(1.91-8.52)
2000	1.25	(0.49-4.11)
1998-2000	2.24	(1.47-3.55)

In interpreting these ratios, it is helpful to consider the magnitude and direction of possible biases. End-estimate bias in the 14-day intervals is unlikely to exceed 15% (2 end days in 14 days); they could operate in either direction (ie increasing or decreasing the true estimate). If DrB is also absent for periods shorter than 14 days, this will lead to under estimation of DrB's rates. If the 14+ day periods are chance occurrences not corresponding to absence of DrB, her rates will be overestimated, by up to 30%. If, as noted earlier, DrB's practice while present impacted on her partners' certification rates during her absence the incidence ration might be reduced.

Taking these factors into account, it is difficult to draw secure conclusions from these analyses. However, further investigation of the markedly raised ratio in 1999 would seem to be justified.

DRJ 23 05 03