Erratum for

Cromwell DA, Griffiths DA 2002, 'Waiting time information services: how well do different statistics forecast a patient's wait?', Australian Health Review, vol 25, no 6, pp 32-42.

The appendix of this article contained some mistakes that affected the "rule of thumb" guidelines for the minimum distance between two averages on page 39. The formula for the minimum distance, based on the confidence interval of the difference between two sample means, included an unwarranted factor of two, and should have read:

$$D = Z_{1-a/2}\sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}$$

where Z is the reliability co-efficient for a confidence level of 100(1-a/2) percent.

For the MA1(CS) series, the removal of the unnecessary factor, and substituting the correct Z value for a = 0.05, resulted in the estimated minimum distance being 37.31 days (= 1.96 x 13.46 x square root of 2). This was rounded up to 40 days for the guideline.

For the MA3(TH) series, the removal of the factor, combined with the simplifying assumption that the standard error for the difference between the two means was 10% of the mid-point of the two average waiting times, suggested that the minimum distance between the two averages should be 27.7% (=1.96 x 0.10 x square root of 2) of the midpoint. However, the simplifying assumption ignores two components of variation, namely, the constant of 3.4, and the component due to substituting the midpoint for the two actual averages. Including terms for these components means that the calculated minimum distance varies between 32% and 39% of the midpoint for realistic average waiting time values. Consequently, a more approximate rule for the minimum distance between the two averages would be to define it as one third of their midpoint.

These corrections mean that the "rule of thumb" guidelines given on page 39 for the MA3(TH) and MA1(CS) functions should read as follows:

- services estimating expected waiting times based on throughput data should advise users that, unless average waiting times differ by at least one third of the midpoint between the two averages, they should not choose one unit over another based on waiting time information alone;
- services estimating expected waiting times based on census data should advise users that the average waiting times should differ by at least 40 days (regardless of the size of the averages) before they should choose one unit over another.