This is an author produced version of The BMJ report on mortality cuts in hospitals put into special measures in 2013 is misleading.

White Rose Research Online URL for this paper: http://eprints.whiterose.ac.uk/85381/

**Article:**

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The report in the BMJ of the Dr Foster analysis of the mortality decline in hospitals put under special measures is somewhat misleading\(^1\). The widely quoted figures are of a decline of 9.5% in mortality rates in the 11 trusts put in special measures (‘Keogh’ hospitals) compared with 3.3% nationally\(^2\). In fact the ‘national’ figure is derived from 11 randomly chosen trusts selected with replacement 1000 times. Presumably this is what is meant by ‘thousands of randomised samples from other English trusts’ mentioned in the BMJ report. The analysis is further complicated by the fact that a ‘broken stick’ model was fitted but the break point was not chosen as the point when the trusts were placed in special measures but rather where the model chose the break point (p10 of Dr Foster’s report) which is not clear in the BMJ report.

There has been a steady reduction in HSMR nationally over the last 10 years and Dr Foster are comparing rate of decline for the last year of this period for Keogh and other hospitals. In my view the relevant graph to summarise the effect of special measures is that on page 8 of the Dr Foster report\(^2\). Approximately, the figure shows drops in HSMR over the last two years of 20% for the Keogh hospitals and 19% for the national hospitals with the former going from 10% above the latter to 7% above.

Although Dr Foster do mention changes in coding after special measures, it would be good practice to give the observed and expected values by quarter separately, as well as the ratio, to show that the increased decline in HSMR in the Keogh hospitals was not in fact due to an increase in the expected deaths rather than a reduction in the observed deaths.

Competing interests: I led the development of the SHMI, a potential competitor to the HSMR

Reference

1. Iacobucci G. Hospitals put into special measures in 2013 have cut their mortality
BMJ 2015;350:h744