

Metcalfe D, Zogg CK, Judge A, et al. Pay for performance and hip fracture outcomes: an interrupted time series and difference-in-differences analysis in England and Scotland. *Bone Joint J* 2019;101-B:1015-1023.

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Authors' reply:

Sir,

We are grateful for the additional context provided by Farrow et al.

The principal aim of our study was to evaluate the Hip Fracture Best Practice Tariff (BPT) in England while using Scottish data to control for data trends that were expected to occur even in the absence of a BPT.¹ We found an immediate and sustained decrease in hip fracture mortality after the BPT was implemented in England, which was not seen in Scotland. We propose that the most likely explanation for this finding is the widespread adoption of quality standards driven by the BPT.

Farrow et al describe a number of initiatives that may have improved hip fracture outcomes in Scotland since 2014. We fully accept that there are likely to be ways to improve hip fracture outcomes beyond financial incentives for high quality care. Our data suggest continuing improvements in mortality in both countries, and it is certainly possible that those in Scotland are being driven by changes such as the Scottish Standards of Care for Hip Fracture Patients² and re-introduction of the Scottish Hip Fracture Audit. Some of our projected mortality curves could overestimate the effect of introducing a BPT in Scotland if further improvements have been achieved since the end of our data collection period.

There are reasons to be cautious about pay-for-performance initiatives (such as worsening care by withdrawing investment from underperforming hospitals) and any such policy should be accompanied by plans for robust evaluation. However, our data make it difficult to escape the conclusion that the BPT exerted an overall positive effect on hip fracture outcomes in England.

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1. **Metcalfe D, Zogg CK, Judge A, et al.** Pay for performance and hip fracture outcomes: an interrupted time series and difference-in-differences analysis in England and Scotland. *Bone Joint J* 2019;101-B:1015-1023.

2. **No authors listed.** Scottish Standard of Care for Hip Fracture Patients. NHS Scotland. Quality Improvement Hub.

<http://www.qihub.scot.nhs.uk/media/581060/scottish%20standards%20of%20care%20for%20hip%20fracture%20patients%20%20-%20consultation%20version%20-%20may%202014.pdf> (date last accessed 2 October 2019).