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Lay Summary

**DOES A HOSPITAL'S QUALITY DEPEND ON THE QUALITY OF OTHER
HOSPITALS? A SPATIAL ECONOMETRICS APPROACH TO INVESTIGATING
HOSPITAL QUALITY COMPETITION**

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Is a hospital's quality affected by the quality of other hospitals?

The quality of health care is a key concern for patients and policymakers. Some argue that encouraging competition among hospitals will improve quality, as those that offer higher quality will attract more patients. Now that choice has become central in the NHS, patients (or doctors acting on their behalf) are likely to be more interested in the quality of hospital care. Many studies have investigated the relationship between quality and competition amongst hospitals, much of it exploring experience in the United States. The evidence from the US is mixed. Some studies find that more competition is associated with higher quality; others find that it is associated with lower quality and others find no effect. Recent work from England, suggests that competition between hospitals may increase quality.

The traditional way to test the effect of competition on hospital's quality is to examine the association between quality (often measured by a single quality indicator such as hospital mortality rates) and measures of the number of hospitals located in the neighbouring vicinity.

In this study we examine the association between the quality of a hospital and the quality of its neighbouring hospitals. Hospitals trying to attract patients may need to offer higher quality than that of their neighbouring hospitals. This is of interest because the greater the effect of a neighbouring hospitals' quality on a hospital's own quality, then the more impact will be gained from any policy that improves quality, as the effect will be multiplied.

We use data on English hospitals in 2009-10 and a set of 16 quality measures including mortality rates, rates of readmission to hospital, rates of revision for surgical procedures and indicators of patients' experience (e.g. cleanliness, trust in doctors and degree of patients' involvement).

Our first finding is that the 16 quality measures are not strongly associated with each other: a hospital which does well on one quality measure may do poorly on others. This suggests that it may be misleading to draw strong conclusions about the effect of hospital competition on quality based only on a single quality measure.

Our second finding is that if the quality of care in a hospital is high, this is associated with high quality care in neighbouring hospitals for seven out of the sixteen quality indicators. There is no association for the other nine quality indicators. We find this association for overall mortality rates, in-hospital stroke mortality, readmissions within 28 days of a knee replacement or following an admission for stroke, and three indicators of patients' experience. We find that a 10% increase in its neighbour's quality is associated with 1.7-2.9% higher quality in the hospital itself.

This suggests that a policy which improves the quality of one hospital will have a positive influence on quality in neighbouring hospitals.

Full report available at

http://www.york.ac.uk/media/che/documents/papers/researchpapers/CHERP82_Hospital_competition_quality_spatial_econometrics.pdf

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