Healthcare competition saves lives

Under what circumstances does the introduction of choice and competition into public healthcare provision lead to improved outcomes? *Carol Propper* describes the key findings of CMPO research on competition and quality in the English National Health Service.

Governments faced with rising costs and growing demand are constantly searching for methods of delivering higher productivity in healthcare, or put more simply, ways of getting higher quality without increasing expenditure. One currently favoured mechanism is to encourage competition between the suppliers of care. But will this work?

The appeal is simple – competition works in the rest of the economy, therefore it should work in healthcare. Unfortunately for politicians, the simple appeal does not necessarily translate across sectors of the economy. There is, in fact, no strong theoretical support for competition in healthcare leading to better outcomes: the predictions of economic theory on this issue are quite ambiguous (Gaynor, 2006).

But under certain conditions, theoretical models do support a relationship between competition and quality. This is when prices are fixed by government and hospitals compete in terms of quality and not price.

Testing this theory is difficult because the observed competitiveness of a healthcare market may be driven by quality. For example, the presence of a high quality hospital may mean that competitors stay out of its market. Alternatively, hospitals in urban areas may face more competition but they may also use cutting edge technology and hence deal with more difficult cases and have worse quality outcomes. In both of these situations, it will appear that greater competition is associated with lower quality, but competition is not the driving factor.

Dealing with this is not easy without some kind of experiment. Luckily for those interested in the impact of policy in the UK, experiments may exist because governments change the direction of social and health policy relatively often. In particular, the English NHS is subject to frequent policy change as politicians use healthcare as part of their drive to win supporters. These changes can be exploited as a kind of 'natural experiment'.

The last Labour administration introduced competition between healthcare providers as part of its drive to increase productivity in healthcare. In 2006 the government mandated that all patients must be offered the choice of five, and by 2008 any, hospital in the NHS for their treatment. In addition, the prices that hospitals could charge were fixed by the Department of Health.

Competition among English hospitals saves patients' lives and decreases their overall length of stay, all without increasing overall expenditure

This policy change provided a natural experiment that researchers can exploit to understand the effects of competition on quality. Hospitals compete in geographical markets because patients prefer to be treated, *inter alia*, closer to home. Hospitals thus vary in the extent to which they face competitive forces simply because of geography. Some hospitals will be heavily exposed to the policy because they are located in or near urban areas, others will be less exposed because they are in rural areas.

Exploiting this fact allowed a team of CMPO researchers to explore outcomes before and after the introduction of competition across different markets. We looked at all admissions to hospitals in the NHS – around 13 million admissions – pre- and post-policy, which led to a number of findings.

First, the policy seems to have led to differences in patient flows between hospitals, even only two years after the reforms. The left-hand panel of the figure overleaf shows how exposed hospitals were to potential competition in their local markets just before the time of the policy introduction. The right-hand panel shows the change in exposure after the policy.

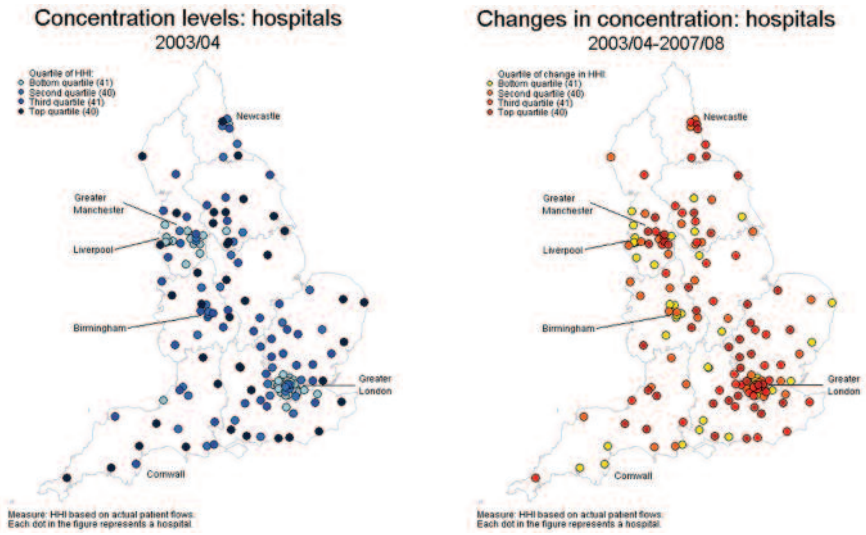
In the left-hand panel, hospitals are represented by dots and the colour of the dots represents the extent of potential competition. The lightest shade of blue shows those hospitals most exposed to potential competition and black indicates hospitals least exposed to potential competition. Not surprisingly, those hospitals located in major conurbations – London, Birmingham, Manchester, Newcastle – are most exposed to competition, while those in rural areas are least exposed.

In the right-hand panel, those hospitals with the biggest increase in potential competition are shown in dark red, those with the least in yellow. It is clear that not all the hospitals that faced the greatest increase in competition are in the urban areas. There is a clear set of hospitals located *around* urban areas that have experienced increases in potential competition, particularly in the South East outside London but also round Merseyside, Bristol and Newcastle. This suggests that the policy might have an effect on a larger set of hospitals than just the set located in highly urban areas.

Second, the research finds that hospitals rated as better by the health quality regulator before the policy reform attracted more patients after the reform and drew their patients from further away and from more locations post-reform. This suggests that patient choice is having some effect on the selection of hospitals by patients and that

Competition under fixed prices has beneficial results while competition where hospitals bargain over price and quality does not

Patterns of market concentration: pre-policy and changes post-policy



Merging failing hospitals may stifle competition and thereby fail to improve outcomes for patients

more patients are choosing – with the help of their GPs – to go to better hospitals.

Third, the research finds that hospitals located in areas where patients have had more choice since the NHS reforms have had higher clinical quality – as measured by lower death rates following admissions – and shorter lengths of stay than hospitals located in less competitive areas.

What's more, the hospitals in competitive markets did this without increasing total operating costs or shedding staff. These findings suggest that the policy of choice and competition in healthcare can have benefits – quality in English hospitals in areas in which more competition is possible has risen without a commensurate increase in costs (Gaynor et al, 2010).

One reason that the policy may be having this impact is the fact that prices are externally fixed. Research for the UK showed that when competition was introduced in the early 1990s in an NHS regime that allowed hospitals to negotiate prices as well as quality, there was a *fall* in clinical quality in more competitive areas. This is confirmed by research in the US healthcare market: where prices are set as part of the bargaining process between hospitals and buyers of healthcare, competition tends to be associated with poorer quality.

These results are supported by economic intuition. Where quality is hard to observe, buyers' responsiveness to quality differences will be low. Buyers will care more about price, which is easier to observe. In response, suppliers will tend to compete on price, leading to lower costs but also lower quality (Propper et al, 2008).

These results also suggest that the details of policy matter – or put more generally, that the rules by which competition takes place matter for outcomes. Competition under fixed prices appears to have beneficial results while competition where hospitals bargain over price and quality does not.

This, in turn, has policy implications for governments that are keen on market forces in healthcare. If competition is to work, price regulation has to be retained. A free-for-all in prices would mean a return to the 'internal market' of the 1990s, a regime in which hospitals competed vigorously on waiting times and ignored aspects of quality that are more difficult to measure.

In addition, the tendency of the UK government to merge failing hospitals needs to be looked at carefully. Mergers are popular with finance ministries in NHS-type systems because they remove what is often seen as 'excess capacity'. But while there may be gains from removing poor managers when a hospital fails, removing capacity by merger (rather than simply replacing the management team) will limit the extent of competition and may stifle the impetus given by competitive forces to improve outcomes for patients.

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Further reading

Martin Gaynor (2006) 'Competition and Quality in Healthcare Markets', *Foundations and Trends in Microeconomics* 2(6): 441-508.

Martin Gaynor, Rodrigo Moreno-Serra and Carol Propper (2010) 'Death by Market Power: Reform, Competition and Patient Outcomes in the National Health Service', National Bureau of Economic Research Working Paper No. 16164.

Carol Propper, Simon Burgess and Denise Gossage (2008) 'Competition and Quality: Evidence from the NHS Internal Market 1991-9', *Economic Journal* 118(525): 138-70.