

Institution: Birkbeck, University of London
Unit of Assessment: Economics and Econometrics
Title of case study: Making the right decisions for patients: competition, choice and inequality in publicly-funded healthcare
Period when the underpinning research was undertaken: 2000-2018
Period when the claimed impact occurred: August 2013 to present
Is this case study continued from a case study submitted in 2014? N
<p>1. Summary of the impact (indicative maximum 100 words)</p> <p>Beckert's research into patient choice has significantly impacted the practice of the assessment of mergers of NHS-funded healthcare services, changing the way that authorities like the Competition Commission (CC) and the Competition and Markets Authority (CMA) assess competition between health care providers and on their understanding of how health care markets work. This has had a direct effect on every decision about hospital trust mergers taken in England over the impact period, ensuring the best outcome for local patient populations. More broadly, Beckert has helped to change the prevailing policy assumption that patient choice is a good from which all groups could benefit. This has helped to change policies towards encouraging collaboration between providers (rather than competition through patient choice) to improve performance of the NHS.</p>
<p>2. Underpinning research (indicative maximum 500 words)</p> <p>The research underpinning this case study encompasses a series of academic and policy papers, which have informed antitrust decisions and broader policy discussions. The research was carried out independently and in collaboration with other academics (Kelly, at the Institute for Fiscal Studies; now at the Health Foundation, a major UK health charity and policy think tank), practitioners (Christensen and Collyer, both at the Co-operation and Competition Panel – now NHS Improvement - at the time) and policy commentators (Dixon, Chief Executive of the Health Foundation).</p> <p>Successive UK governments have promoted choice as a means for service users to voice and realize their preferences, and to introduce and enhance competition in markets for public and private goods and services. An important example of this is found in publicly-funded healthcare. Beckert's research demonstrates that choice for users in this area is not straightforward. Patients may lack the necessary information to make informed decisions or suffer from 'choice overload'. Often this is counteracted by third-party navigators – GPs – who may select specific choice alternatives in order to guide the patients' selection. Where GP and patient incentives are not perfectly aligned, this may lead to suboptimal outcomes and defeat the consumer welfare objective of competition policy. The fact that GP access is to some extent dependent on socioeconomic status introduces a further complicating factor and the risk of social inequity: a particular concern in publicly funded health care systems that aim at providing equal access for equal need.</p> <p>Beckert's work on this topic is a strand of his established research interest in the economics of competition; publications [1] (on the relationship between price and number of firms in local markets, with reference to merger decisions) and [4] (which is a methodological paper providing a framework for jointly implementing Durbin-Wu-Hausman exogeneity and Sargan-Hansen overidentification tests, as a single artificial regression, providing important tools for evaluating the specification of econometric models) were instrumental in bringing his work to the attention of those working on choice in the NHS, facilitating the collaborative relationships that have informed the other publications listed.</p>

Paper [2]'s co-authors, Christensen and Collyer, were working at the time of publication for the Cooperation and Competition Panel (CCP). The paper uses historic data to analyse patients' choice of hospital for hip replacement procedures and to offer a new model for simulating mergers between hospitals with regulated prices. Importantly, the model considers quality as a key factor in patient choice.

Paper [3] offers a micro-econometric analysis of patient choice for elective procedures from a choice set preselected by a GP. Recognising the conflicting demands of the GP's dual role within the NHS (they must consider both patient welfare and local health budgets), Beckert proposes a two-stage choice model that encompasses both patient and GP level optimization. He shows that econometric estimators that do not take account of strategic pre-selection of choice sets may be biased and inconsistent. This is important for competition analysis that traditionally modelled patient and GP as a single entity.

Understanding such discrepancies is important for competition analysis because merger simulations (incl. small, but significant increase-in-price (SSNIP) and decrease-in-quality (SSNDQ) counterfactuals) need to accurately account for the way in which economic agents respond to actual and hypothetical changes in incentives and market structure. And it is important for policy makers because they need to accurately gauge how policies – such as on the one hand giving patients wider choice, and on the other endowing GPs with broader financial responsibilities – interact.

Paper [6] explores the implications of increased choice in healthcare provision (including the use of for-profit providers within the NHS) in terms of their effect on social equality. It shows that, in terms of the value of access, entry of for-profit providers benefitted the richest patients at least twice as much as the poorest, and white patients at least six times as much as ethnic minority patients. About half of these differences can be explained by healthcare geography and patient health, while primary care referral practice plays a lesser, though non-negligible role. It also shows that, with capitated reimbursement, different compositions of patient risks between for-profit surgical centres and existing public hospitals put public hospitals at a competitive disadvantage.

Paper [5] comments on a CMA discussion paper purporting to estimate the effect of local competition on hospital quality (“Hospital Mergers Increase Death and Harm”, typically on average by 41%, according to the authors). Beckert's arguments, referring to [2], show that the CMA's methodology substantially overestimates the true effect.

3. References to the research (indicative maximum of six references)

[1] Beckert, W. and N. Mazzarotto (2010): “Price-Concentration Analysis in Merger Cases with Differentiated Products”, *Economics*, **Vol.3**, 2010-16

[2] Beckert, W., Christensen, M. and K. Collyer (2012): “Choice and Competition in NHS-Funded Acute Services in England”, *The Economic Journal*, Vol.122, Issue 560, 400-417.

The paper was discussed in the Financial Times on 03 May 2011, in The Telegraph on 14 May 2012.

[3] Beckert, W. (2018): “Choice in the Presence of Experts: The Role of General Practitioners in Patients' Hospital Choice”, *The Journal of Health Economics*, **60**, 98 - 117.

[4] Beckert, W. (2019): “A Note on Specification Testing in Some Structural Regression Models”, *The Oxford Bulletin in Economics and Statistics* **82(3)**, 686-695.

[5] Dixon, J., Beckert, W., Alderwick, H., Thorlby, R. and N. Black (2019): “‘Hospital Mergers Increase Death and Harm?’ Not so fast...”, *Health Foundation working paper*, response to the Competition and Markets Authority working paper by R. Whitehouse and P. Schiraldi (2019)

[6] Beckert, W. and E. Kelly (2019): “Divided by Choice? For-Profit Providers, Patient Choice and Mechanisms of Hospital Sorting in the English National Health Service”, *Institute for Fiscal Studies working paper WP17/15*

Grants - peer-reviewed and competitively awarded:

October 2015 – September 2017: ESRC grant, “Empirical Analysis of Vertical Contracting”: ca. £300,000 (joint with Howard Smith, Oxford University)

4. Details of the impact (indicative maximum 750 words)

Between 1991 and the start of the impact period, UK government policy focused increasingly on introducing elements of patient choice into healthcare provision, under the assumption that increased competition between providers would motivate improvements and result in better patient care. In 2012, the Health and Social Care Act 2012 took this much further, seeking to make competition the organising principle of the NHS.

As discussed in the underpinning research, Beckert's work on patient choice challenges uncomplicated understandings of competition as a mechanism towards improvements in care, showing that competition can reinforce existing inequalities and that choices may be driven by concerns other than patient care. His membership of a series of academic panels and steering groups for stakeholders such as the Competition and Markets Authority, NHS Improvement, the Nuffield Trust and the Institute for Fiscal Studies has allowed him to share his findings with decision-makers in the sector and to influence the actions not only of these groups, but of top policymakers at NHS England and the Department of Health. The effect can be seen in the long-term plan published by the NHS in January 2019, which makes explicit the intention to move the service away from its current emphasis on competition to favour collaborative ways of working instead.

Impact on hospital mergers

As attested by Kate Collyer, who was Director of Economics at the Competition Commission between 2012 and 2014, and subsequently (until 2018) the Deputy Chief Economic Adviser at the Competition and Markets Authority, Beckert's research as expressed in paper [2] heavily influenced the methodology used by the Competition and Markets Authority to investigate hospital mergers during the impact period, as well as the CMA's guidance on NHS mergers more generally [A].

Beckert has had an ongoing role as an academic panel member for the Competition Commission (2007-14) and Competition and Markets Authority (2016-present), as well as position on the economics reference group of the Co-operation and Competition Panel (now known as NHS improvement), since 2013. His 2012 paper on hospital choice [2], which was co-authored with Collyer, reflected on the methodology used by NHS Improvement and the Competition and Markets Authority to assess demand-side aspects of hospital mergers in England. The empirical approach to simulating the effect of mergers between hospitals that was laid out in that paper was then used by the CC and CMA in the competitive assessment of a series of hospital mergers in England, starting with the Royal Bournemouth and Christchurch Hospitals/Poole Hospital NHS Foundation Trust merger inquiry, which ran from January to October 2013.

The CMA has been involved in three hospital merger investigations, all of which fall within the census period: the Bournemouth and Christchurch/Poole merger inquiry that concluded in (October) 2013 (the merger was denied), the Ashford and St Peter's Hospitals (ASP)/Royal Surrey County Hospital inquiry in 2015 (approved), and Central Manchester University Hospitals/University Hospital of South Manchester inquiry in 2017 (approved). Beckert's methodology was used as the basis for decision-making in each instance. As well as these three full merger inquiries, Beckert's work also supported decision-making in the further five cases of proposed mergers which were approved without a full investigation being completed: Heatherwood and Wexham Park Hospitals/Frimley Park Hospital (June 2014); Chelsea and Westminster Hospital/West Middlesex University Hospital (January 2015); University Hospitals Birmingham/Heart of England (September 2017); Derby Teaching Hospitals/Burton Hospitals (April 2019); and Aintree University Hospital /Royal Liverpool and Broadgreen University Hospitals (August 2019). In every case, the CMA used Beckert's research to assess the likely impact of the merger on care for the patients served by these hospitals, with the appendices in each case (which lay out the details of the decision-making) referring explicitly for their methodology to the Bournemouth/Poole decision of 2013 [C].

The above list covers all hospital merger inquiries ever undertaken by the CMA. Beckert's research has therefore impacted every hospital merger decision that the CMA has made.

The purpose of the CMA's intervention is to weigh up the potential benefits of a merger (which include greater financial efficiency, as resources are not duplicated across different settings, and a more efficient use of staff time as departments combine) against its potential costs (if competition with other providers motivates hospitals to focus on reducing waiting times, improving facilities, and extending service provision to attract patients, a merger removes the incentive to do this).

The outcome of this evaluation and therefore the benefits to patients in the local area are different in each case. But in every instance, by giving the Competition and Markets Authority the ability to make decisions that more accurately reflect the reality of a merger's impact on the patients served by the hospital trusts, Beckert has helped to ensure that a patient population of approximately 7,000,000 is best served by their local NHS provision and that public money is spent efficiently. The income involved in any merger must be above £70 million (GBP70,000,000) in order for the Competition and Markets Authority to become involved; so with eight mergers in question, these decisions have directly influenced how a minimum of £560 million (GBP560,000,000) of public money has been spent.

Beckert's ongoing work with the Competition and Markets Authority has continued to reflect his developing research. In 2017 and 2018, he was invited to lead a series of research meetings with the organisation to develop its in-house health care demand modelling, part of the organisation's ongoing commitment to strengthening its in-house research capabilities in anticipation of recurring health care merger and market analyses. His 2018 paper [3] further refined his approach by adding a structural model of GP pre-selection decisions, estimable on observational data and permitting counterfactual analysis. This was a critical innovation which contributed to the CMA's array of analytical tools because GP surveys suffer from extremely low response rates, as noted in the Final Reports of the Bournemouth and Christchurch merger investigation.

Impact on NHS policy

Beckert's work on how expanded competition in publicly funded healthcare can exacerbate existing inequalities of access [3, 7] has helped to shape and to stimulate an ongoing debate on the ways that any benefits of competition actually accrue to patients. His research demonstrates that competition primarily benefits those people who can make it work for them, either on their own initiative or by being given suitable advice. Wealthy patients do twice as well as poorer patients under the system and white patients six times as well as their black equivalents. Beckert's initial academic study into this phenomenon [2, 3] as well as his work on econometric methodology [4] was quickly seized upon by the Health Foundation, a major campaigning healthcare charity, whose chief executive suggested that Beckert translate his results into a policy paper [6] aimed at health policy practitioners.

As attested by that chief executive, Beckert's work has helped those working in the sector to better understand the complexities of patient choice: it is now recognised that many groups of patients do not actively choose their provider of care. As a result, policymakers are now less focused on patient choice as being such a strong force for improvement in care or outcomes for patients. Instead collaboration and integrated care are now favoured means to improve care [B]. The NHS Long-Term Plan, which was published in 2019 and which sets out spending plans for the five-year, £20.5 billion (GBP20,500,000,000) NHS budget settlement announced by the government in 2018, is exemplary. This plan focuses on 'collaboration, rather than competition, as an organising principle' [D]: a significant change to the way in which the NHS is run. The reach of Beckert's work therefore potentially affects all the population in England – circa 55 million people.

Impacts beyond the NHS

Beckert's research has also influenced the work of international bodies engaged with the question of choice and competition in healthcare markets. The OECD's working party on competition and regulation, part of the Directorate for Financial and Enterprise Affairs, cites Beckert [2] in a paper on 'Designing Publicly Funded Healthcare Markets' for the information he offers on the factors affecting patient choice [E]. This paper served as the background for a best-

practice roundtable on healthcare markets, details of which were disseminated across OECD member states.

Beckert's work with the Healthcare Foundation offers another route to international impact through the Healthcare Foundation's involvement with other international bodies such as the WHO European Observatory on health systems and the OECD [B]. The Healthcare Foundation's ongoing discussions with these bodies are informed by their work with Walter, influencing the policymakers who comprise their membership. It is therefore anticipated that Beckert's research will benefit those other countries whose healthcare systems have seen the rise of competition as an organising principle; particularly those countries of the former Eastern Bloc, whose healthcare systems have been privatised and subject to competition [B].

5. Sources to corroborate the impact

- A. Testimony from Kate Collyer, Chief Economist, Financial Conduct Authority (previously Deputy Chief Economist at the Competition and Markets Authority, and Director of Economics at the Co-operation and Competition Panel, Department of Health)
- B. Testimonial from Dr Jennifer Dixon, Chief Executive, Health Foundation
- C. Merger inquiry reports
- D. NHS Long-Term Plan:
<https://publications.parliament.uk/pa/cm201719/cmselect/cmhealth/2000/200006.htm>
- E. OECD Working Party No. 2 on Competition and Regulation (2018), 'Designing Publicly-Funded Healthcare Markets':
[http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WP2\(2018\)4&docLanguage=En](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WP2(2018)4&docLanguage=En).