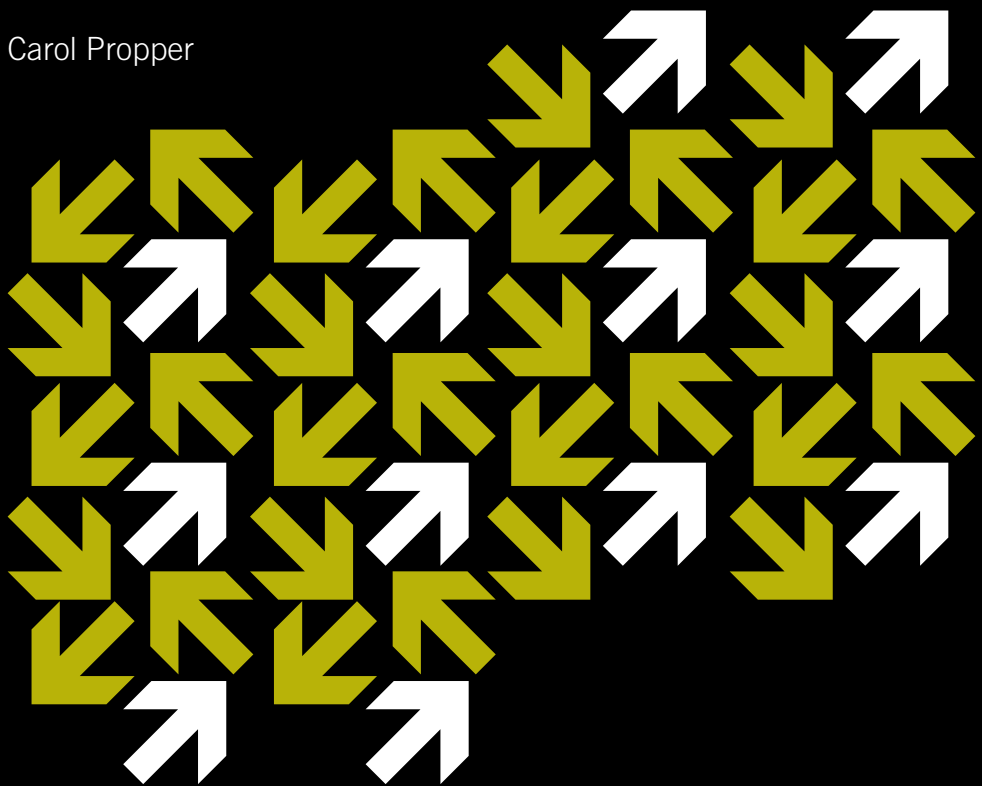


The operation of choice and competition in healthcare

A review of the evidence

Carol Propper



2020 Public Services Trust
at the RSA

E · S · R · C
ECONOMIC
& SOCIAL
RESEARCH
COUNCIL

The operation of choice and competition in healthcare

A review of the evidence

Carol Propper

2020 Public Services Trust
at the RSA



About the 2020 Public Services Trust

The 2020 Public Services Trust is a registered charity (no. 1124095), based at the RSA. It is not aligned with any political party and operates with independence and impartiality. The Trust exists to stimulate deeper understanding of the challenges facing public services in the medium term. Through research, inquiry and discourse, it aims to develop rigorous and practical solutions, capable of sustaining support across all political parties.

In December 2008, the Trust launched a major new **Commission on 2020 Public Services**, chaired by Sir Andrew Foster, to recommend the characteristics of a new public services settlement appropriate for the future needs and aspirations of citizens, and the best practical arrangements for its implementation.

For more information on the Trust and its Commission, please visit www.2020pst.org.

The views expressed in this report are those of the author and do not represent the opinion of the Trust or the Commission.

Published by the 2020 Public Services Trust, July 2010.

2020 Public Services Trust at the RSA
8 John Adam Street
London WC2N 6EZ

© 2020 Public Services Trust, 2010

ISBN 978-1-907815-09-6

About the ESRC



The Economic and Social Research Council is the UK's leading research and training agency addressing economic and social concerns. We aim to provide high-quality research on issues of importance to business, the public sector and Government. The issues considered include economic competitiveness, the effectiveness of public services and policy, and our quality of life. The views expressed in this report are those of the author and do not represent the opinion of the Economic and Social Research Council. The ESRC is an independent organisation, established by Royal Charter in 1965, and funded mainly by Government. Economic and Social Research Council Polaris House North Star Avenue Swindon SN2 1UJ

Telephone: 01793 413000
www.esrcsocietytoday.ac.uk

About the Author

Carol Propper is Professor of Economics at Imperial College and Professor of the Economics of Public Policy at the University of Bristol. She is also a founding member of CMPO, Bristol University and Research Associate at the CEPR. She was a Council Member and Chair of the Research Grant Board of the Economic and Social Research Council (ESRC) between 2005 and 2009.

She is a leading researcher of the UK health care market. Her research interests include the use of market and financial incentives to enhance quality, productivity and innovation in health care and the long term impact of children's health on later life outcomes. Recent research projects include examination of the effect of

competition on quality in the NHS post 'Choose and Book' and 'PbR', the use of performance measures to improve outcomes in health care, the impact of the public-private pay gap on productivity of the NHS and the effect of competition on management quality in the NHS. In 1993-4 she was Senior Economic Advisor to the Chief Executive of the NHS on the regulation of the internal market. She is on the editorial boards of the Journal of Health Economics, Health Economics, and the Journal of Economic Policy and Analysis.

She publishes regularly in international economics journals. Her research has appeared in the Economic Journal, Journal of Health Economics, the Journal of Political Economy, the Journal of Population Economics the Journal of Public Economics and Labour Economics.

In 2010 she was awarded a CBE for her services to social science.

Acknowledgements

I would like to thank the ESRC for financial support provided through its Centre funding of CMPO and Simon Burgess and Deborah Wilson for many discussions on this topic.

Introduction to this series

The Commission on 2020 Public Services is a major inquiry into how public services should respond to the significant societal challenges of the next decade. The Commission is developing a practical but compelling vision of the priorities for public action to address the emergent challenges facing society in 2020. The Commission has three aims:

- 1** To broaden the terms of the debate about the future of public services in the UK.
- 2** To articulate a positive and long-term vision for public services.
- 3** To build a coalition for change.

This series of essays represents a working partnership between the 2020 Commission and the Economic and Social Research Council (ESRC). As part of our commitment to rigorous, evidence-based research, we jointly commissioned a series of experts to examine the key issues in public services. Two broad themes emerged: one considering future relationships between citizens, state and society; the other exploring the future delivery of public services.

Generous support from the ESRC has allowed the Commission to dig deep into a complex set of issues, and ensure its inquiry represents the best contemporary thinking on public services and society, with a strong evidence base.

Each paper can be read separately, and will also be available as a collected volume in the future. We believe that the research and analysis emerging from this partnership is a rich and significant contribution both to the ongoing national debate on public services and to the Commission's vision for the future. We hope that you enjoy the series, and we invite you to share your own reflections and analysis at www.2020pst.org.

Foreword

Extending choice and competition in healthcare has been an explicit goal of successive governments in the UK. Provider competition can drive up productivity; patient choice can improve responsiveness to patients' needs. The potential of extending both is a system that provides better health outcomes at lower cost. As Professor Propper notes, a simple argument underpins this logic: 'Competitive pressure helps make private firms more efficient', whilst 'giving purchasers or service users the ability to choose applies competitive pressure to health care providers' (who will) 'raise their game to attract business'.

Yet in a complex and path-dependent system, the extension of competition and choice is neither linear nor inevitable. Nor are its impacts uniform or consistent. In the following paper, Professor Propper subjects the existing evidence to new scrutiny, and asks: do the economic arguments stack up? Does the evidence match the theory? And, given this evidence, what is the likely and desirable direction of travel in future?

Her analysis is particularly welcome within the current context for reform, in which productivity, efficiency and outcomes are the new watchwords. The coalition government has already set out its nascent blueprint for the NHS, and is placing great emphasis on the mechanisms of choice and competition as a means to re-shape a system around new citizen demands and growing financial constraints. This paper should thus make for essential reading for policymakers.

In its recent report on health, the Commission on 2020 Public Services argued for an approach to reform that connects up 'ends' (its purposes or goals) with 'means' (the mechanisms we use to get to there). And we would argue that this is the context within which Professor Propper's paper should be understood. Choice and competition can be intrinsically valuable 'means', but only if they help us to achieve the 'ends' they are designed for - in this case better health outcomes, especially where they have been poorest.

By understanding how the operation of choice and competition work currently, comparatively, and in conjunction with targets and rankings-based accountability

mechanisms,¹ we can make better judgements about the extent to which they might help us achieve these goals in future. This should be welcome within a context in which, perhaps now more than ever, the future of public services is there to be re-shaped.

Henry Kippin

2020 Public Services Trust, July 2010

1 See a recent paper in the ESRC/2020 series from Deborah Wilson (2010) 'Targets, Choice and Voice: Accountability in Public Services' London, 2020 Public Services Trust.

1

Introduction

During the past two decades, policy makers have promoted choice and competition in healthcare as a means of increasing productivity and responsiveness to consumers. In the USA, managed care has led to the introduction of price competition between health care providers. In Western Europe, England, Denmark, Sweden, Norway and Holland amongst others, are all seeking to increase competition and patient choice.

Those promoting competition and choice often appeal to a simple economic argument. Competitive pressure helps make private firms more efficient. They cut costs and improve their goods and services in order to attract consumers, and this continual drive for improvement is good for the economy. Firms that are unable or unwilling to become more efficient will be priced out of the market while new, more efficient, firms will enter the market. It seems easy to transfer this logic to the provision of public services. Giving purchasers or service users the ability to choose applies competitive pressure to health care providers and, analogously with private markets, they will raise their game to attract business.

The aims of this paper are first to subject this assumption to the scrutiny provided by the theoretical and empirical economic evidence on competition between providers and on patient choice in health care markets. Does either economic theory or the empirical evidence suggest that greater competition will improve health outcomes? What is the experience of increasing choice into previously low choice systems? Will all patients gain, or are some likely to lose? Second, based on this, I offer a personal view as to the desirability of the use of greater choice and competition mechanisms in the UK healthcare market.

Before proceeding, it is worth noting that competition between healthcare suppliers and patient choice are not necessarily the same policy, even if the two may be bundled together in political rhetoric. Competition between healthcare

suppliers can operate with relatively little choice being exercised by consumers - for example, in systems where patients have little choice of insurer or of a 'gatekeeper' for healthcare services but in which insurers and gatekeepers 'shop around' for healthcare on behalf of their insurer populations or patients. Even where consumers have more choice of supplier, the nature of healthcare means they typically rely heavily on professional advice in seeking use of care and may use the same provider of care for care over a period of time (for example, for those with chronic healthcare conditions). This gives the individual provider monopoly with respect to the consumer. So choice may more realistically (and usefully) be promoted by offering patients choice of an insurer or gatekeeper rather than choice for every episode of healthcare and competition promoted between suppliers of healthcare for business from the gatekeeper/insurer.

In this paper I do not examine in any depth issues around patient choice of insurer, instead focusing on the effect of competition between suppliers of healthcare, as this has been the form of reforms to date in the UK. However, in the conclusion I discuss briefly competition for insurer as it has been promoted as a possible means of increasing efficiency in a number of European countries as well as being part of the healthcare system in the USA.

The rest of the paper is structured as follows. Section 2 discusses the impact of competition between suppliers in health care markets. The provision of information on provider performance is a prerequisite for choice driven competition between providers and so Section 3 examines the role of information in increasing competition. Section 4 examines the effects of attempts to increase direct choice by patient of their care provider. Section 5 offers some concluding comments.

2

Competition between hospitals

I begin by examining the theoretical and empirical economic evidence on the effect of greater competition between providers in health care markets. Note that most of the evidence focuses on a narrow set of outcomes, primarily the effect of competition on prices and quality of health care, sometimes with a focus on winners and losers, that almost all studies provide evidence only on positive questions, such as ‘does competition increase quality?’ and that most of the evidence comes from the United States or, in Europe, the UK.

The impact of competition on health care markets: what economic theory predicts

Health care markets are usually thought to differ from textbook competitive markets in a number of important ways. These include: the fact that the product is differentiated (due, for example, to hospital’s different geographical location or different styles of healthcare), that information is imperfect and that government regulation is extensive as a response to these departures from the textbook competitive market. In addition, many firms, even in a system like that of the USA, are not-for-profit (Dranove and Satterthwaite, 2000). In these types of complex markets, economic theory fails to provide strong guidance as to whether competition is optimal. In particular, where there is product differentiation, competition can provide too little quality or variety, too much, or just the right amount. The intuition is as follows. Competition may ‘underprovide’ variety since competitive firms cannot capture the consumer surplus from additional variety. A monopolist may provide more variety as it is the only seller in the market and can capture the consumer surplus. Alternatively, competition may produce too much variety since in a competitive market part of the profit from new variety will come from ‘stealing

demand' from other firms. A firm deciding to offer a new variety will not take account of this external effect so there will be excessive product variation (Gaynor and Vogt, 2000).

Analyses that take account of the multi-product nature of hospital production and the imprecision of measures of both quality and price have shown that the impact of competition between hospitals on price and quality is ambiguous (Dranove and Satterthwaite, 2000). The impact of competition will depend on the responsiveness of the buyer of health care to both quality and price. This will depend on how precisely price and quality can be observed. If price and/or quality cannot be measured and reported well, this will make the buyer less responsive to changes in price or quality. If quality is observed accurately but price is observed poorly, then demand becomes less responsive to price, allowing providers to raise their prices, but also giving the provider an incentive to increase and possibly 'overproduce' quality. If price is observed accurately but quality is observed poorly, then the levels of quality supplied will be too low. Finally, if quality has several attributes, one of which is easier to observe than another (for example, clinical quality and patient amenity), then competition may lead to overproduction of the one that is easily observed and underproduction of the one that is less easy to observe.

The level of prices will also impact on the outcome of supplier competition. In a market in which buyers of health care are covered by generous health insurance (as in the United States before the 1980s), buyers will not be sensitive to price, but will be responsive to differences in quality. So price may be high, but quality will also be high. In markets where buyers have 'harder' budget constraints, price may be more important and hospitals will compete on prices, leaving quality to fall below efficient levels. Where a single price is fixed for all providers for a treatment (as in prospective payment systems), there will be no price competition and so all competition will be in terms of quality. Competition may lead to excessive levels of quality and excessive product differentiation (Gaynor, 2004), but if government reimbursement for a treatment is too low, competition may lead to the quality of this treatment being too low.

As individuals differ in the severity of their illnesses, any regime that sets a single price for all patients of a certain type – for example, a single price for the treatment of a certain condition – will set up incentives to treat the less costly patients and to avoid treating or 'undertreat' the more costly patients. Such regimes include the diagnosis-related group (DRG) system used in the United States by the

government and any kind of prospective payment system, in which reimbursement is set in advance of treatment. These incentives exist regardless of whether there is competition or not, but competition may sharpen them, resulting in differential treatment of patients. So, for example, patients who are more expensive to treat may get worse quality care or remain untreated (known as ‘skimping’ and ‘dumping’) while hospitals compete for lower cost patients by offering them better quality (‘creaming’) (Ellis, 1998). Differential treatment might also arise in markets where patients are covered by insurers who differ in the generosity with which they reimburse hospitals.

The US evidence on competition and health outcomes

Almost all the evidence comes from the US market, and much of this comes from one – albeit very large – market, California.² The results of these studies shows impact of competition depends on the ‘rules of the game’: the institutional features of the health care market. Three regimes can be identified in the US health care market (Dranove and Satterthwaite, 2000). In the first, which operated in the 1960s and 1970s, consumers were covered by generous insurance and hospitals were reimbursed retrospectively for their full costs. In the second, which began in the early 1980s, payers increasingly used prospective payment schemes (PPS), which reimburse hospitals according to the average cost for a procedure or treatment group. The third regime began in the 1980s, took hold in the 1990s, and is known as managed care. Under these arrangements, payers limit the choice of healthcare suppliers that their insured population may use, in return for lower insurance costs. Managed care organisations have an incentive to be concerned about price and have also been very active in seeking information on quality.

Most studies suggest that the switch to both prospective payment and managed care increased price competition and lowered costs (or lowered the growth in costs) (e.g. Zwanziger and Melnick, 1988; Feldman *et al.*, 1990; Robinson, 1991; Melnick *et al.*, 1992; Gaskin and Hadley, 1997; Keeler *et al.* 1999; Baker and Phibbs, 2002; Heidenreich *et al.*, 2002; Bundorf *et al.*, 2004). There is also evidence that hospitals in competitive markets decreased the amount of uncompensated care they provided in response to the introduction of increased price competition

² Some of the early evidence is difficult to interpret because of the methods of analysis used. In early studies, hospital markets were not well defined and there was no recognition of the fact that the measure of competition might be affected by the outcomes that were being studied. Later studies tend to have paid more attention to these issues, and are more reliable indicators of outcomes.

(Gruber, 1992; Dranove and Satterthwaite, 2000; Gaynor and Vogt, 2000). Dranove *et al.* (2008) suggest that the managed care backlash of the mid 1990s weakened managed care organisations' (MCOs) ability to play competitive hospitals off against one another to secure price discounts, making demand less sensitive to price.

In terms of the effect on quality, it is the generally accepted view (though the empirical support is quite weak) that the first regime resulted in a 'medical arms race' (Robinson and Luft, 1985).³ Within the managed care regime, an emerging consensus is that competition where prices are fixed leads to an improvement in both costs and quality provided the fixed prices are high enough, whilst the results in systems where both price and quality competition occur are less positive.

Kessler and McClellan (2000) examined the treatment of elderly patients admitted to hospital with a heart attack. All these patients, because of their age, were covered by government insurance (Medicare), which payed generously for AMI treatment under the prospective payment system (PPS). This influential paper showed that higher competition was associated with high quality - lower AMI death rates - and lower cost increases. Similar findings are reported by Rogowski *et al.* (2007), who look at deaths across a broader range of medical conditions and Sari (2002) who measure quality of health care by number of in-hospital complications. Kessler and Geppert (2005) find that competition leads to more appropriate care for elderly Medicare patients admitted to hospital following a heart attack. They examined the extent to which competition has an impact on patients who are sicker compared with those who are healthier and found in more competitive markets there was greater variation in medical care. Furthermore, this variation was on average beneficial. Healthy patients in more competitive markets received less intensive treatment than those in more concentrated markets, without any significant difference in health outcomes. Sicker patients in more competitive markets received more intensive treatment and had better health outcomes than similar patients in more concentrated markets. The effect of competition is that there is more appropriate treatment.

Whether hospitals increase quality when operating in competitive markets also appears to depend also on the precise mix of payers that the hospitals have. There is evidence that HMOs have preferences for higher quality hospital care (Schulman *et al.*, 1997; Chernew *et al.*, 1998; Escarce *et al.*, 1999; Gaskin *et al.*, 2002; Young

3 As buyers were not sensitive to price, hospitals competed on quality, both to attract buyers and to attract physicians to practice at their hospitals. This had the impact of raising both price and quality in areas with more hospitals (Joskow, 1980).

et al., 2002; Rainwater and Romano, 2003). This leads to both price reductions and quality improvements in competitive environments where HMO penetration is high (e.g. Mukamel *et al.* 2001, Sari, 2002 and Rogowski *et al.*, 2007). However, not all the evidence supports this view; Kessler and McClellan (2000) find no association between the two and Shortell and Hughes (1988) and Shen (2003) both find higher HMO penetration to be negatively associated with hospital quality of care.

Where reimbursement rates are set by Medicare (or another government insurer) that sets relatively low rates, hospitals may respond to competition for patients by reducing quality. Gowrisankaran and Town (2003) examine the treatment of both Medicare and HMO patients and find that competition reduced death rates for HMO patients but increased those of Medicare patients. There is also research showing that falls in reimbursement rates are associated with poorer quality. A change in payment methods in New Jersey reduced subsidies for hospital care for the uninsured and changed hospital payment to price competition from a rate-setting system based on hospital cost. This led to an increase in AMI mortality and a relative decrease in the use of cardiac procedures (Volpp *et al.*, 2003).⁴

A related issue is whether price-based competition changes the type of services provided. Mukamel *et al.* (2000) examine whether hospitals in more price-competitive environments will shift resources from activities related to clinical service, which are not easily observed and evaluated by patients, into hotel services, which are easily observed. They study the change to selective contracting in California in the early 1980s and find some evidence to support resource shifting. In not-for-profit hospitals, resource use declined more in clinical services than in hotel services.

Evidence on competition and health outcome from outside the United States

The evidence on competition between hospitals outside the United States is extremely limited, mainly because such competition has been extremely rare. In addition, some of this evidence is less about competition per se than about the effect of changes to the payment mechanisms that have accompanied policies to increase competition.

⁴ The more competitive market conditions of the 1990s also led to harsher financial conditions. Bazzoli *et al.* (2008), who look at the impact of financial performance on quality, find some limited evidence that hospital financial condition (measured as cash flow as a proportion of total revenue) is negatively associated with the number of in-hospital complications, medical errors and deaths.

The primary non-US evidence on competition comes from the UK internal market in hospital care that operated between 1991 and 1997. This internal market encouraged competition between NHS hospitals for contracts for hospital care from two sets of buyers (geographically-based district health authorities and the smaller GP fundholders). Prices could be negotiated between hospitals and the buyers and price lists (not including any discounts) were supposed to be publicly available. Information on quality was very limited.

The first thing to note is that the general consensus is that incentives in this market were weakened by political desires to limit competition, so we might not expect strong responses (Le Grand, 1999). In terms of evidence, there is some evidence suggests that greater competition was associated with lower costs (Söderlund *et al.*, 1997) (Propper *et al.*, 1998; Propper, 1996). On the other hand, quality – at least as measured by deaths of patients admitted to hospitals with heart attacks – fell during the internal market (Propper *et al.*, 2004, 2008). This combination of falls in price and quality fits with the predictions of economic theory: where demanders are sensitive to price and quality information is weak, both prices and quality are likely to fall as competition increases.⁵

The most recent reforms to promote hospital competition in the English healthcare system have had fixed price reimbursement (known as ‘Payment by Results’, PBR) coupled with the right of patients to go where they wish for hospital treatment, implemented through a computerised system which provides access to some information on hospital performance (Patient Choice and the Patient Choice website) (Gaynor *et al.* 2010). Economic theory suggests that with fixed prices, hospital competition should improve quality. The (limited) emerging evidence suggests that this indeed is the case. Cooper *et al.* (2010) and Gaynor *et al.* (2010) both find that the reforms led to fewer deaths for heart attack patients in hospitals facing more competition. In addition, Gaynor *et al.* (2010) find similarly positive effects for deaths following all types of admission and that patients admitted to more hospitals facing more competition had shorter lengths of stay. In addition, Gaynor *et al.* found that this increase in quality was not associated with a rise in total hospital expenditure, suggesting that the reforms increased patient benefit at no increase in cost.

5 There is also evidence to suggest that the two types of purchasers were differentially able to reap the benefits from provider competition. Compared to district health authorities, GP fundholders were able to secure shorter waiting times for their patients, were more able to move contracts and generally appeared to be more responsive to patients’ wishes and more willing to exploit competition between hospitals for their business (Le Grand, 1999; Croxson *et al.*, 2001; Propper *et al.*, 2002; Dusheiko *et al.*, 2004). Case study evidence suggests that fundholders did not engage in patient dumping, even though they had the incentive to do so (Matsaganis and Glennerster, 1994).

A handful of UK studies have considered the effect of competition on waiting times. Dawson *et al.* (2007) analyse the impact of a London based initiative to increase patient choice and found this led to shorter average waiting times in the London region and a convergence in waiting times amongst London hospitals. Siciliani and Martin (2007) look at hospital density and waiting times and find a modest negative relationship between the two; hospitals in more competitive markets have shorter waiting times. Propper *et al.* (2008) found that hospitals in competitive areas reduced their waiting times (whilst also reducing quality of care), again providing support for the theoretical argument that services for which buyers have high elasticity of demand will improve relative to those with lower elasticity.

Other evidence

The Nordic countries have NHS-type systems where care is provided by the public sector and finance is provided through taxation. In Norway, Denmark and Sweden some elements of patient choice driven competition has been introduced, primarily to decrease waiting times. In all three countries, it has been accompanied by a move towards output-related (Diagnosis Related Group (DRG)-type) payments. A review of Denmark and Sweden concluded that the incentives for hospitals to accept patients from outside their area have been weak and, perhaps unsurprisingly, only a small proportion of patients went out of area under these schemes (Williams and Rossiter, 2004). The evidence does not support a strong reduction in waiting times in Denmark. In Sweden there is some evidence that the move to output-related payments in the late 1980s and early 1990s initially increased productivity (Gerdtham *et al.*, 1999) and reduced waiting times, but at the expense of increased total costs (Kastberg and Siverbo, 2007). In the mid 1990s, adjustments were made to control costs, but this led to longer waiting times and the initial productivity increases ceased (Hakansson, 2000). There appears to be little assessment of the impact of output-related payments on provider competition or outcomes in Norway. Another country with an NHS system also attempted to increase competition. New Zealand, in 1993, pursued a 'big-bang' policy change whereby they pushed through a radical set of market orientated reforms designed to improve efficiency via increased competition between providers (Gauld, 2000). However, these reforms failed to bring about the improvements in performance that were hoped for and also had several adverse consequences.

3

The use of information in health care markets

The provision of information on provider performance is a prerequisite for choice driven competition between providers. However, the evidence – mainly from the United States – suggests that such information does not necessarily improve outcomes.

Marshall (2002) suggests very different use of information on provider performance by consumers, buyers and health care providers. Although consumers state they want more information, published data has only a small impact on consumer decision-making. Lack of interest in, and lack of use of, performance data appears to be due to difficulties in understanding the information, lack of trust in the data, problems with timely access to the information, and lack of choice. Purchasers use information on providers to a greater extent than patients. Information appears to be most used by healthcare providers, suggesting a strong potential ‘yardstick’ competition function for information.

Public reporting of performance may engender positive responses by providers, but it may also have unintended consequences. This stems from the fact that outcomes, particularly quality, are very difficult to measure in health care (Propper and Wilson, 2006). Information on performance gives providers the incentive to do well according to the criteria that are published: the problem is that they will do this by increasing efforts to improve the published criteria, which is not necessarily the same thing as improving actual outcomes. Possible responses include the improvement of performance and the exodus of poor performers but also, less positively, the selection of patients, differential treatment of patients and manipulating the data to appear to do better (Propper and Wilson, 2003). Examples of manipulation of the data from the UK include the re-categorisation of patients

during the 1990s to reduce published inpatient waiting lists. Smith (1995) provides an extensive list of some of the less positive responses of providers to the publication of information in health care.

Report cards have been introduced in the United States to provide information, at the level of individual surgeons in hospitals, on the quality of outcomes. Studies of the impact of the mandatory New York coronary artery bypass graft surgery report cards, which were introduced in the late 1980s, concluded that mortality decreased, and the severity of patients operated on increased. Possible explanations include: the exodus of low volume, high mortality surgeons, a marked improvement in the performance of non-low volume surgeons, and improvement in the performance of surgeons new to the system (Hannan *et al.*, 1994). Dranove *et al.* (2003) use the same data to examine the impact of report cards on appropriate matching of patients to hospitals, on the quality and incidence of intensive cardiac treatments and on the resource use and health outcomes that determine the net consequences of report cards on social welfare. They find that report cards led to substantial selection by providers of patients, increased sorting of patients to providers on the basis of severity of their illness, and significant declines in the use of intensive cardiac procedures for sicker patients. The introduction of report cards appears to have altered both the mix of patients (less ill patients were admitted where there were report cards) and the treatments given to admitted patients also changed. Both healthier and sicker patients received more treatment, but while this improved the outcomes for healthier patients, it worsened outcomes for sicker ones, because hospitals avoided performing intensive surgical therapies that were monitored for sicker patients and instead used less effective medical therapies. Overall, Dranove *et al.* (2003) conclude that these cards reduced patient welfare, though the longer-term effects might be more positive. For example, the increased patient sorting that report cards engender might lead to more accurate and effective treatment as hospitals become more specialised in the treatment of certain types of patients.

In summary, while consumers have access to more information, information in health care markets is often too complex for direct use by consumers. It is often in a form that is of limited use for buyers of health care. It is most widely used by providers themselves and they appear to respond quickly to the incentives given by the information. In these responses they will focus on improving measured outcomes; this may or may not improve actual outcomes and there is considerable evidence of 'gaming the system'.

4

Do patients respond to greater choice?

As noted above, direct patient choice may be limited in many health care systems, not just NHS-type ones. Even in private insurance systems, attempts to contain the growth of costs mean that patient choice is typically exercised at the point of choice of insurer, rather than in direct choice of hospital conditional on insurance. Patients who are allowed to choose hospitals will make these choices on the basis of the benefits and costs associated with each of the hospitals they may choose between. Factors that play a part in this calculation will include what illness they have, the severity of the illness, the quality of the hospitals, the costs of accessing and using them, and the amount of information they have, both about their medical health and the benefits of care provided at different hospitals. Individuals who differ along these dimensions are likely to differ in their willingness to exercise choice.

Evidence from the UK

This section examines how patients in the UK have reacted to being offered greater choice of provider of hospital care. As part of its market reforms, the UK government gave patients the ability to choose between four or more providers of hospital care (Department of Health, 2004). From April 2008, patients were given the ability to choose from any provider in England, as long as the provider met NHS standards and were paid using the NHS wide tariff (Department of Health, 2009a). Along with giving patients formal choice of where they could receive secondary care, the government also introduced a new information system that enabled paperless referrals and provided information on waiting times⁶, known as 'Choose

6 Primarily waiting times which were based on the last 20 appointments at each hospital.

and Book' (Department of Health, 2004). Information on quality at the provider level was available from a web site operational from 2007. The evidence comes from patient choice pilots prior to the roll out and emerging evidence on the operation of 'Choose and Book'.

The pilots offered patients who had been waiting over six months for certain treatments a choice of different provider. The evidence suggests high take up of choice under the scheme: 67 per cent in the London scheme, 50 per cent in the national coronary heart disease pilot and 75 per cent in the Manchester pilot. The high take-up rate is likely to be driven by the fact that in order to qualify patients had to have been waiting six months, patients were provided with high levels of information about the available choices open to them and they were given advice and financial assistance with transport and accommodation for companions (Williams and Rossiter, 2004). This high take-up contrasts with rather lower take-up for patient choice policies in other countries. The reasons may include the fact that the financial factors in the UK pilots either did not operate, or operated only weakly, in choice schemes in other NHS-type systems. In the English pilots, it does not appear that the patients who took up choice differed in terms of severity or the deprivation of the area in which they lived. This again may be peculiar to the nature of the pilots. Patients were relatively homogenous: all had been waiting for at least six months and travel costs and information costs were similar across all groups.

Very recent evidence from the Choose and Book scheme as it operated in four local health economies (Dixon *et al* 2010) suggests that patients being offered choice was relatively high (around 50% of patients recall being offered choice), that patients like the idea of choice but that choices are often made on dimensions that receive large amounts of public coverage, such as hospital 'superbugs' and cleanliness rates rather than on clinical measures of quality. In stated preference experiments conducted in the same study, patients who are older, female, have lower educational qualification or who look after children are less likely to indicate that they wish to take up choice (Dixon *et al* 2010).

In addition, the study provides interesting evidence that GPs sometimes underestimate the willingness of their patients to make choices and do not offer patients choices because they believe that the patient will not wish to make a choice. Around half (45 per cent) of the patients surveyed said that they knew

7 The web site currently includes information collected by the national hospital accreditation bodies including risk adjusted mortality rates, infection rates, hospital activity rates for particular procedures (Department of Health, 2009c).

before visiting their GP that they had the right to choose a hospital. Older patients and those looking after their family at home were more likely to know about choice, possibly because of their more regular contact with the health service, as were men and those holding a university degree. This went against GPs' perceptions that most patients were unaware of choice and that the young were more likely to be aware. In addition, there was some resistance, even among the study's sample of 'enthusiastic' GPs, to offering choice to every patient regardless of circumstances. GPs appeared to be more willing to let patients choose when the referral was fairly routine but were more directive when more specialist treatment is required.

Evidence from elsewhere in Europe

The very limited Nordic and French evidence from patient choice in these countries systems suggests patients who travel have different socio-economic status; the French evidence also suggests patients who travel have different medical conditions (Williams and Rossiter, 2004). Extending patient choice may also change the flow of patients to hospitals. It seems likely that more severely ill patients will want to go to more high-tech hospitals, leading to a change in the distribution of patients across hospitals. For example, US research indicates that, even among heart attack patients, the more severely ill travel further and to more specialist hospitals (Tay, 2003).

5

Remarks

In this section, we raise issues that arise from the evidence and then speculate on a suitable direction of travel for choice in the English healthcare context.

The evidence suggests:

- Institutional design matters: the effects of competition between providers depend on the features of the market. Important features include whether prices are set centrally or not, who makes the choice of provider, and the availability of information on quality and prices.
- Where buyers care about price, competition between hospitals has led to lower costs or lower cost growth. The best US evidence suggests that quality is higher where markets are more competitive and prices are fixed, though there are exceptions.
- It is important to distinguish between payer choice and patient choice, as they are not the same thing. In healthcare, the localness of the product often means that the number of hospital providers are limited, giving providers monopoly power. To redress this, purchaser power may be required. In this situation, payer choice may be more effective than patient choice. If payer choice is to operate well, this may mean restricting direct patient choice. Note that in resolution of this conflict, most healthcare systems are characterised by payer choice and limited direct patient choice of hospital supplier. However, payer competition does not mean that consumers have no choice: they can be offered choice of primary care provider and/or insurer (the Dutch system is an example of the latter).
- The provision of information is a prerequisite for informed choice and therefore needed to increase competition and to make health care markets work. But

such information is generally partial and so gives the providers opportunities to 'game the system'.

In terms of direction of travel:

- It seems clear that the very restricted choice models of NHS type systems of the past are not likely to survive. As examples, the Nordic countries, England and New Zealand, all NHS type systems, have all tried to increase provider choice. The extent to which it is possible has been limited to date by geography, particularly in the smaller of these countries, but there is clearly an appetite for greater choice.
- While supply side competition has its limitations, the emerging consensus from robust studies appears to be that competition between providers under fixed prices will result in lower cost (growth) and better outcomes.
- If it is accepted that payer-driven competition is broadly beneficial, then the logic is that it should be promoted. This is likely to require regulatory intervention. Competition is intended to increase pressure on hospitals, something that hospitals, just as other firms in a market, are likely to want to avoid. In the US, hospitals have tried to reduce this pressure by entering into preferential pricing agreements, negotiating access rights to selected buyers or by merging. Many not-for-profit providers have merged and where they have done so they often appeal to the fact that their principal motivation is to serve local communities and - in some cases – this argument has been accepted by the courts. However, the US experience suggests that the benefits of mergers between either for or not-for-profits may well be exaggerated and so regulatory policy will be needed to promote competition.
- In the English context at present, the current supply side reforms are still slightly too new to yield robust conclusions as to their impact. But perhaps the most obvious policy issue which has not been addressed to date is the lack of choice of primary care providers. Despite government rhetoric, choice of GPs remains limited. In spite of encouragement, private providers have not entered in large numbers as rivals to GPs, and restrictions on patient choice, which must be linked to home location, still remain. There seems no justification for such restrictions. Freeing up the market in primary care would reduce the monopoly power that GPs current have and may also allow a greater plurality

of purchasing arrangement to develop. For example, some GPs might want to enter vertically integrated systems with a limited number of hospital and other health care providers. Others might offer a wider range of hospital and healthcare choice. This would allow consumers to match with their preferred GP type, whilst allowing these GPs to use their market power, something that individual patient choice of hospital does not have.

- Encouragement of greater choice in GP would be one way of moving towards patient choice of insurer and so introducing both demand and supply side competition. Several Western European countries have sought to increase patient choice of insurer, though in most this remains more of a desire than a reality. It is also clear from the experience of the Netherlands, where this policy has been in place for longest, that equity concerns and the resultant measures to limit cream skimming can limit the gains from insurer competition.
- Greater choice of GPs, encouragement of entry and diversity of provision may all lead to diversity across consumers. This will need to be addressed in policies to promote choice. However, while the rhetoric of the NHS is equal treatment for all, the reality is that current and past arrangement have been characterised by choice for some and not for others. It is clear that these arrangements continue. Dixon *et al* (2010) for example show that some GPs, faced with mandatory 'Choose and book' arrangements simply make decisions for their patients and do not offer them a choice on the grounds they think they will not want to go anywhere but the local hospitals, or are not able to exercise choice. This is at odds with the high proportion of people who state that they wish to make a choice. Until individuals have the opportunity to have greater choice such assumptions cannot be put to the test. In addition, plurality allows better matching of consumer to healthcare supplier or to insurer. By allowing individuals to choose the supplier or insurer that matches their tastes, it may result in better outcomes at lower cost.⁸

⁸ This aspect of competition/choice has been less studied. Besley and Ghatak (2005) show that matching in the labour market may play an important role in the production of public services. They show that matching between motivated agent and firms with missions reduces the need for incentive pay.

References

- Baker, L. C. & Phibbs, C. S. (2002) Managed care, technology adoption, and health care: the adoption of neonatal intensive care. *Rand Journal of Economics*, 33, 524-548.
- Bazzoli, G. J., Chen, H. F., Zhao, M. & Lindrooth, R. C. (2008) Hospital financial condition and the quality of patient care. *Health Economics*, 17, 977-995.
- Besley, T and Ghatak, M (2005) Competition and Incentives with Motivated Agents *American Economic Review* 95, xx-yy.
- Bundorf, M. K., Schulman, K. A., Stafford, J. A., Gaskin, D., Jollis, J. G. & Escarce, J. J. (2004) Impact of managed care on the treatment, costs, and outcomes of fee-for-service medicare patients with acute myocardial infarction. *Health Services Research*, 39, 131-152.
- Cooper, Zack, Stephen Gibbons, Simon Jones, and Alistair McGuire. 2010. "Does Hospital Competition Save Lives? Evidence from the English NHS Patient Choice Reforms." LSE Health Working Paper 16/2010.
- Chernew, M., Scanlon, D. & Hayward, R. (1998) Insurance type and choice of hospital for coronary artery bypass graft surgery. *Health Services Research*, 33, 447-466.
- Croxson, B., Propper, C. & Perkins, A. (2001) Do doctors respond to financial incentives? UK family doctors and the GP fundholder scheme. *Journal of Public Economics*, 79, 375-398.
- Dawson, D., Gravelle, H., Jacobs, R., Martin, S. & Smith, P. C. (2007) The effects of expanding patient choice of provider on waiting times: Evidence from a policy experiment. *Health Economics*, 16, 113-128.
- Department of Health (2009a) Department of Health Payment by Results Webpage http://www.dh.gov.uk/en/Managingyourorganisation/Financeandplanning/NHSFinancialReforms/DH_077259. Accessed Jan 25 2010.
- Department of Health (2004) Choose and Book programme. http://www.dh.gov.uk/dr_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4088352.pdf. Accessed Jan 25 2010.
- Department of Health (2009c) NHS Choices Webpage <http://www.nhs.uk/choiceintheNHS/Toolsandresources/Pages/helpingyouchoose.aspx>
- Dixon A, Roberston, R, Appleby, J, Burge, P, Devlin, N, Magee, H (2010) Patient choice: How patients choose and how providers respond. London: The Kings Fund.
- Dranove, D., Kessler, D., Mclellan, M. & Satterthwaite, M. (2003) Is more information better? The effects of "Report cards" on health care providers. *Journal of Political Economy*, 111, 555-588.
- Dranove, D. & Lindrooth, R. (2003) Hospital consolidation and costs: another look at the evidence. *Journal of Health Economics*, 22, 983-997.
- Dranove, D. & Ludwick, R. (1999) Competition and pricing by nonprofit hospitals: a reassessment of Lynk's analysis. *Journal of Health Economics*, 18, 87-98.
- Dranove, D. & Satterthwaite, M. A. (2000) The Industrial Organization of Health Care Markets. In Culyer A J and Newhouse J. P. (Eds.) *Handbook of Health Economics*. Amsterdam, North Holland.
- Dusheiko, M., Gravelle, H. & Jacobs, R. (2004) The effect of practice budgets on patient waiting times: allowing for selection bias. *Health Economics*, 13, 941-958.
- Ellis, R. P. (1998) Creaming, skimming and dumping: provider competition on the intensive and extensive margins. *Journal of Health Economics*, 17, 537-555.
- Escarce, J., Van Horn, R. L., Pauly, M. V., Williams, S. V., Shea, J. A. & Chen, W. (1999) Health maintenance organizations and hospital quality for coronary artery bypass surgery. *Medical Care Research and Review*, 56, 340-362.
- Feldman, R., Chan, H. C., Kralewski, J., Dowd, B. & Shapiro, J. (1990) Effects of Hmos on the Creation of Competitive Markets for Hospital Services. *Journal of Health Economics*, 9, 207-222.

- Gaskin, D. J., Escarce, J. J., Schulman, K. & Hadley, J. (2002) The determinants of HMOs' contracting with hospitals for bypass surgery. *Health Services Research*, 37, 963-984.
- Gaskin, D. J. & Hadley, J. (1997) The impact of HMO penetration on the rate of hospital cost inflation, 1985-1993. *Inquiry*, 34, 205-216.
- Gauld, R. D. C. (2000) Big bang and the policy prescription: Health care meets the market in New Zealand. *Journal of Health Politics Policy and Law*, 25, 815-844.
- Gaynor, M., Moreno-Serra, R and Propper, C (2010) Death by Market Power: Reform, Competition and Patient Outcomes in the National Health Service. Working paper, CMPO, University of Bristol.
- Gaynor, M. (2004) Competition and quality in health care markets: what do we know, what don't we know? Paper commissioned by the Federal Trade Commission, mimeo, Department of Public Policy, Carnegie Mellon University, Pittsburgh.
- Gaynor, M. & Vogt, W. B. (2004) Competition among hospitals. *Rand Journal of Economics*, 34, 764-785.
- Gaynor, M. S. & Vogt, W. B. (2000) Antitrust and Competition in Health Care Markets. IN Culyer A.J. & Newhouse, J. P. (Eds.) *Handbook of Health Economics*. Amsterdam, North Holland.
- Gerdtham, U. G., Lothgren, M., Tambour, M. & Rehnberg, C. (1999) Internal markets and health care efficiency: A multiple-output stochastic frontier analysis. *Health Economics*, 8, 151-164.
- Gowrisankaran, G. & Town, R. J. (2003) Competition, payers, and hospital quality. *Health Services Research*, 38, 1403-1421.
- Gruber, J. (1992) The Effect of Price Shopping in Medical Markets: Hospital Responses to PPOs in California. *NBER Working Paper 4190*, Cambridge, MA.
- Håkansson, S. (2000) Productivity changes after introduction of prospective hospital payments in Sweden. *Casemix Q.*, 2, 47-57.
- Hannan, E. L., Kilburn, H., Racz, M., Shields, E. & Chassin, M. R. (1994) Improving the Outcomes of Coronary-Artery Bypass-Surgery in New-York-State. *Jama-Journal of the American Medical Association*, 271, 761-766.
- Heidenreich, P. A., McClellan, M., Frances, C. & Baker, L. C. (2002) The relation between managed care market share and the treatment of elderly fee-for-service patients with myocardial infarction. *American Journal of Medicine*, 112, 176-182.
- Joskow, P. L. (1980) The Effects of Competition and Regulation on Hospital Bed Supply and the Reservation Quality of the Hospital. *Bell Journal of Economics*, 11, 421-447.
- Kastberg, G. & Siverbo, S. (2007) Activity-based financing of health care - experiences from Sweden. *International Journal of Health Planning and Management*, 22, 25-44.
- Keeler, E. B., Melnick, G. & Zwanziger, J. (1999) The changing effects of competition on non-profit and for-profit hospital pricing behavior. *Journal of Health Economics*, 18, 69-86.
- Kessler, D. P. & Geppert, J. J. (2005) The effects of competition on variation in the quality and cost of medical care. *Journal of Economics & Management Strategy*, 14, 575-589.
- Kessler, D. P. & McClellan, M. B. (2000) Is hospital competition socially wasteful? *Quarterly Journal of Economics*, 115, 577-615.
- Le Grand, J. (1999) Competition, cooperation, or control? Tales from the British National Health Service. *Health Affairs*, 18, 27-39.
- Marshall, M. (2002) The publication of performance data in the National Health Service. http://www.chi.nhs.uk/eng/ratings/academic_papers/index.shtml.
- Matsaganis, M. & Glennerster, H. (1994) The Threat of Cream Skimming in the Postreform NHS. *Journal of Health Economics*, 13, 31-60.
- Mukamel, D. B., Mushlin, A. I., Weimer, D., Zwanziger, J., Parker, T. & Indridason, I. (2000) Do quality report cards play a role in HMOs' contracting practices? Evidence from New York State. *Health Services Research*, 35, 319-332.
- Mukamel, D. B., Zwanziger, J. & Tomaszewski, K. J. (2001) HMO penetration, competition, and risk-adjusted hospital mortality. *Health Services Research*, 36, 1019-1035.

- Propper, C. (1996) Market structure and prices: The responses of hospitals in the UK National Health Service to competition. *Journal of Public Economics*, 61, 307-335.
- Propper, C., Burgess, S. & Gossage, D. (2008) Competition and quality: Evidence from the NHS internal market 1991-99. *Economic Journal*, 118, 138-170.
- Propper, C., Burgess, S. & Green, K. (2004) Does competition between hospitals improve the quality of care? - Hospital death rates and the NHS internal market. *Journal of Public Economics*, 88, 1247-1272.
- Propper, C., Croxson, B. & Shearer, A. (2002) Waiting times for hospital admissions: the impact of GP fundholding. *Journal of Health Economics*, 21, 227-252.
- Propper, C. & Wilson, D. (2003) The use and usefulness of performance measures in the public sector. *Oxford Review of Economic Policy*, 19, 250-267.
- Propper, C. & Wilson, D. (2006) The use of performance measures in health care systems. *The Elgar Companion to Health Economics*. Cheltenham: Edward Elgar.
- Propper, C., Wilson, D. & Soderlund, N. (1998) The effects of regulation and competition in the NHS internal market: the case of general practice fundholder prices. *Journal of Health Economics*, 17, 645-673.
- Rainwater, J. A. & Romano, P. S. (2003) What data do California HMOs use to select hospitals for contracting? *American Journal of Managed Care*, 9, 553-561.
- Robinson, J. C. (1991) HMO Market Penetration and Hospital Cost Inflation in California. *Jama-Journal of the American Medical Association*, 266, 2719-2723.
- Robinson, J. C. & Luft, H. S. (1985) The Impact of Hospital Market-Structure on Patient Volume, Average Length of Stay, and the Cost of Care. *Journal of Health Economics*, 4, 333-356.
- Rogowski, J., Jain, A. K. & Escarce, J. J. (2007) Hospital competition, managed care, and mortality after hospitalization for medical conditions in California. *Health Services Research*, 42, 682-705.
- Sari, N. (2002) Do competition and managed care improve quality? *Health Economics*, 11, 571-584.
- Schulman, K. A., Rubenstein, L. E., Seils, D. M., Harris, M., Hadley, J. & Escarce, J. J. (1997) Quality assessment in contracting for tertiary care services by HMOs: A case study of three markets. *Joint Commission Journal on Quality Improvement*, 23, 117-127.
- Shen, Y. C. (2003) The effect of financial pressure on the quality of care in hospitals. *Journal of Health Economics*, 22, 243-269.
- Shortell, S. M. & Hughes, E. F. X. (1988) The Effects of Regulation, Competition, and Ownership on Mortality-Rates among Hospital Inpatients. *New England Journal of Medicine*, 318, 1100-1107.
- Siciliani, L. & Martin, S. (2007) An empirical analysis of the impact of choice on waiting times. *Health Economics*, 16, 763-779.
- Smith, P. (1995) On the unintended consequences of publishing performance data in the public sector. *International Journal of Public Administration*, 18, 277-310.
- Soderlund, N., Csaba, I., Gray, A., Milne, R. & Raftery, J. (1997) Impact of the NHS reforms on English hospital productivity: an analysis of the first three years. *British Medical Journal*, 315, 1126-1129.
- Tay, Abigail (2003) *Rand Journal of Economics*
- Volpp, K. G. M., Williams, S. V., Waldfogel, J., Silber, J. H., Schwartz, J. S. & Pauly, M. V. (2003) Market reform in New Jersey and the effect on mortality from acute myocardial infarction. *Health Services Research*, 38, 515-533.
- Williams, J. & Rossiter, A. (2004) *Choice: the evidence*. London: Social Market Foundation.
- Young, G. J., Burgess, J. F. & Valley, D. (2002) Competition among hospitals for HMO business: Effect of price and nonprice attributes. *Health Services Research*, 37, 1267-1289.
- Zwanziger, J. & Melnick, G. A. (1988) The Effects of Hospital Competition and the Medicare PPS Program on Hospital Cost Behavior in California. *Journal of Health Economics*, 7, 301-320.