1 Introduction

Over the past few decades, economics has gained prominence in many areas of public policy. Though once it focused predominantly on issues such as employment, inflation, and taxation, the reach of economics now extends to a wide range of areas, such as social security, education, and the environment. Healthcare is no exception to this trend. Governmental bodies the world over now seek economic expertise and advice on the regulation, financing, and provision of healthcare.

Economics is perhaps best described as a way of seeing the world rather than a particular methodology for improving healthcare; so it is important that those who work in the healthcare system understand how economists view the world and seek to shape it. As a discipline, health economics covers a wide scope of topics, as set out in the textbook by Morris et al.[1]

In this Element, we will primarily focus on two important issues: economic perspectives on *stimulating* improvement and the role of economic evaluation in *evaluating* healthcare improvement activities. Our overall aim is to provide readers with an intuitive understanding of the value of economic thinking in healthcare improvement and to facilitate critical thinking in this area. We offer a particular, though not exclusive, focus on the English National Health Service (NHS).

2 The Economic Approach to Healthcare Improvement

We start with a brief introduction to the economic approach to improving healthcare. All governments play a key role in shaping their country's healthcare system through some combination of regulation, financing, and provision of healthcare. In the UK, the four constituent governments determine a large share of the amount of money that is available for spending on healthcare. Invariably, the amount available falls short of demand.[2] The difference between demand and the amount of care that can be delivered within limited resources means that trade-offs are inevitable, and difficult choices have to be made.

One common challenge arises because of what are called 'opportunity costs'. Every time we use resources for one purpose, we give up the opportunity to use them for something else that may also be beneficial. Examples of areas where opportunity costs are sometimes considered too high include very expensive cancer drugs[3] and cosmetic surgery.[4] All of these things may have intrinsic value, but the health benefits they generate may be smaller than the health benefits that would have to be sacrificed elsewhere to fund them. Policymakers may therefore decide that the limited funds available would be better spent in other ways.

2.1 Seeking Value for Money

UK governments face frequent calls to increase the amount of money they spend on healthcare. But to heed these calls, governments have to find the money from somewhere, whether by cutting expenses on other government-funded services (e.g. welfare, policing, etc.) or raising taxes. An alternative is to encourage the healthcare system to make better use of the resources it already has, so that same overall budget could deliver better value. It might be possible, for example, to reduce the resources needed to provide services by cutting wasteful spending[5] or through innovations, service improvements, or new technologies. Such efforts might, for instance, include switching from branded to generic drugs,[6] reusing medical devices,[7] or changing the skill mix of the healthcare workers who deliver the service.[8] These kinds of changes might be able to yield savings that could be reinvested in the healthcare system.

But can healthcare services be both motivated to and, in fact, improve care to make it better or cheaper? In most sectors of the economy, the pressure to improve lies in a well-functioning market; so competition is the main driver. If a well-functioning market does not exist, economists often propose system-level policies that seek to emulate the effect of competitive pressures. These often take the form of changes in funding or regulation of services. This is the key and distinctive economic approach to healthcare improvement.

2.2 Competition as a Spur to Improvement

Now, we first consider what a well-functioning market would look like before turning to a discussion of market imperfections. We then review some factors that explain why well-functioning markets are unlikely to arise in healthcare.

Economists see competition as driving organisations to improve and innovate – potentially yielding benefits to consumers and service users in the form of lower prices, higher quality, or a combination of both. *Perfect* competition arises when consumers are fully aware of the quality of the goods or services they are buying, that the goods or services provided by different organisations are pretty much identical (or readily comparable), and that organisations cannot charge a higher price than the going market rate.

In these circumstances, organisations have to work hard to attract customers. That means keeping up with their competitors. For example, if an organisation introduces a technological improvement that allows it to reduce prices or improve quality, it has a chance to attract new customers and sell more products. But other organisations may quickly adopt the new technology and follow suit in order to retain their own market share – so the benefits are quickly passed on to all consumers in the form of price reductions or quality improvements.

Any organisation that fails to react risks losing customers or going out of business altogether. In this cut-throat context, organisations either 'innovate or die'.[9]

The opposite extreme to perfect competition is a world dominated by monopolists, which are the sole and exclusive providers of particular goods or services. For example, monopolists have been or still are responsible for the provision of water, electricity, railways, or postal services in most countries. Facing no competition, monopolists have little incentive to innovate or make improvements. If customers think they are being charged too much or are unhappy with the quality of a product or service, they cannot shop around for a better option since nothing else is on offer. Customers then face a stark choice: take it or leave it. This can make monopolists complacent. Their only incentive is to make the minimum improvements needed to discourage potential competitors from entering the market.

Unsurprisingly, monopolists may put more effort into protecting their monopoly power than into seeking technological improvements. Monopoly power can be used to earn large profits: facing no competition, they can charge what they like and keep prices high. This is bad for consumers, who have to pay higher prices for lower quality goods and services than they would if there was more than one supplier that they could go to. Competition (or antitrust) law is designed to prevent the creation of monopolies and limit the abuse of monopoly power.

Healthcare can feature different types of competitive environments. Table 1 shows three English examples, which will be considered in more detail in Section 3. Some organisations – such as an isolated hospital serving a rural community – might be regarded as local monopolists. Other parts of the health and social care system may have more competitive characteristics since they feature a great many organisations, such as care homes or general practice, providing similar types of service. Yet, even though we might expect competitive pressure to be greater in these settings, it might not ensure high-quality, affordable healthcare. This is because two important and distinctive features reduce the competitive imperatives that healthcare organisations face: first, it is often difficult to assess quality, and, second, people are often protected from bearing the full cost of services.

2.2.1 Quality Is Hard to Assess

Another distinctive feature of healthcare is that the quality of healthcare services is often very difficult to assess before, during, and after treatment. This means that a key requirement for perfect competition is not met because people are rarely well-placed to act as well-informed consumers in relation to healthcare.

Table 1 A comparison of selected health and care sectors in England

Sector	Example product or service	Number of competitors	Price awareness	Quality awareness	Example of approach to reduce cost or price	Example of approach to improve quality
Care homes	Residential care for dementia patients	Many	High: most individuals pay full price	Difficult to assess for residents and their families	Competition	CQC inspections[10]
GP practices	Range of primary care services	Some in local area	Zero: consumers pay nothing at point of use	Reasonably high, especially for regular attenders	GP contract negotiated between government and BMA[11]	Quality and Outcomes Framework[12]
Hospitals	Range of elective, emergency, A&E, and outpatient services	Local monopoly	Zero: consumers pay nothing at point of use	Medium: publicly reported data	National tariff payment system for hospital services[13]	CQC inspections; public reporting

CQC = Care Quality Commission. A&E = accident and emergency. BMA = British Medical Association.

Sometimes people have difficulty assessing their need for care,[14] notably when health problems are undetected (e.g. an undiagnosed cancer). Even if people are aware that they have a problem, they may lack the expertise to know what to do or how to do it. This is why they are so reliant on medical experts such as general practitioners (GPs) to provide them with diagnostic information and advice about treatment options. Economists describe this as a 'principal–agent' relationship.[15,16] Reliance on experts is not unique to healthcare: people commonly rely on mechanics or plumbers to service their vehicles or heating systems and to diagnose any faults that need to be rectified. But the extent to which people seek expert advice is often more pronounced in healthcare than in other areas of economic activity. Occasionally, this can lead to abuse. For example, Dr Ian Paterson inflicted medically unjustified procedures on women who had found a lump in their breast but were not in a position to determine what care was needed.[17] But even when doctors act in the best interests of their patients, people can find it difficult to judge whether the healthcare services they received were of the highest possible quality.

One of the key reasons that make it hard to judge the quality of services is that there is an unclear relationship between the treatment received and the outcome for an individual patient. If someone recovers, was this the result of treatment or would they have recovered anyway? Why do some people enjoy higher post-treatment health status than others? And why do some people suffer poorer post-treatment health status – or even death? These challenges in determining whether a treatment *worked* and the influences on the outcome make it very difficult to assess the quality and value of healthcare – even for members of the medical profession themselves.

Overall, because patients or would-be patients do not always share the characteristics of well-informed customers, competition in the usual sense is not straightforward for healthcare.

2.2.2 Financial Protection at Point of Use

A further distinctive feature of the healthcare sector, at least in many high-income and middle-income countries, is that people are often protected against the full cost of healthcare services. This means that they may pay little, if any, attention to prices when making decisions about what services to use or who to buy from. This in turn means healthcare organisations face little direct pressure from service users to reduce their costs.

The extent to which people enjoy financial protection from healthcare expenses varies from country to country and across services. Many countries fund their healthcare systems either from taxation or via some form of health

insurance. In tax-based systems, most services are free at the point of use, although there might be co-payments for some services, such as pharmaceutical prescriptions (England, Norway, and Spain) or GP visits (Australia, New Zealand, Norway, and Sweden).[18] In countries with insurance-based systems, such as Germany, France, and the USA, people usually have to make a contribution towards the cost of the services they receive, perhaps in the form of insurance premiums, co-payments, or deductibles; they rarely have to pay the full amount.

The more that people have to pay for services themselves, the more likely they are to shop around for the lowest price or best-value services. By contrast, when people have to pay nothing at all for a service, individual consumers might have very little, if any, knowledge of its price or cost and so may exercise very little cost control over healthcare providers. This gives rise to a problem: potentially, providers could charge what they like and pass the costs on to taxpayers under a tax-based system or on to insurers under an insurance-based system. But the money has to come from somewhere, either in the form of higher tax or insurance contributions or by cutting healthcare expenditure elsewhere in the system. Thus, there is a trade-off: the downside of financial protection for individuals is that healthcare providers are under less pressure to reduce their costs.

3 Stimulating Healthcare Improvement

Three important ideas guide the types of activities that economists have proposed to stimulate and encourage healthcare improvement. First, economists think about improvements in healthcare as having the potential to yield two forms of benefit: higher quality and/or lower cost. Quality can be defined as anything that people value from a service, such as better health-related quality of life (HRQoL), satisfaction with how the service is delivered, higher safety, or provision of care according to the best clinical practice. Lower costs can mean cost savings, which can be reinvested to pay for more or better healthcare. Second, economists are interested in the environment in which organisations operate because it influences both the incentives for organisations to make improvements and the likelihood that cost reductions are reinvested. Third, as we noted earlier, economists also recognise that healthcare systems are distinctive and different from other parts of the economy, most notably because people may not always be able to assess the quality of care accurately and are insulated (perhaps completely) from having to pay for care.

When organisations face little competitive pressure, when quality is hard to assess, and when service users pay limited attention to costs or prices,

economists say that 'market failure' can occur. The risk is that innovations and improvements then emerge and spread more slowly than they would in more competitive environments. In order to speed up improvement and ensure an appropriate balance between efforts to reduce costs and improve quality, economists may advocate fostering greater competition or using other approaches to put pressure on healthcare organisations to make improvements. In this section, we look at how this plays out in three examples of healthcare and social care sectors in the UK, starting with a sector that has many service providers (care homes – Section 3.1) and then considering sectors with progressively fewer organisations (primary care – Section 3.2, and hospitals – Section 3.3). For each, we assess the strength of competitive forces and the form of interventions that have been developed to foster cost control and stimulate improvement.

3.1 Care Homes

As populations become progressively older, the care home sector is assuming greater responsibility for providing round-the-clock care for older people who can no longer live independently. Residential care homes cater for people who need help with their personal care, such as washing and dressing. Nursing homes support people who have health conditions that require support from qualified nursing staff. The majority (80%) of the 11,000 care homes in the UK are run by private, for-profit organisations, while the remaining fifth are run by voluntary or charitable organisations or by local authorities on a not-for-profit basis.[19] Around 4,000 (36%) are standalone care homes; the rest are run as part of groups. The largest six chains own more than 100 care homes each and together account for 11% of the total number of homes.

Simply by virtue of the large number of care homes, the sector has the potential to be quite competitive. But users of care homes (or their family members) are also very price-conscious. Moving to a care home is a major and expensive decision. In England, nursing home care for someone with dementia costs over £800 a week, usually payable for the rest of that individual's life.[20] Financial support varies across the constituent countries of the UK. England is the least generous, in 2023 providing up to £92.40 a week (as an Attendance Allowance) towards the costs, but no other financial support until the individual's assets fall below £23,250.[21]

Because of the large number of care homes and people's sensitivity to price, there is considerable price competition in the English care home sector.[22] The result is that care homes typically earn just enough to cover costs, with many care homes struggling to break even.[23] There is evidence that care homes may seek to compromise on quality in an attempt to keep costs low;[22] yet, they may

be exposed to limited challenge from 'customers' themselves because many service users, such as those with dementia, may not be able to assess or influence the quality of care. This makes service users vulnerable to poor quality care and worse, with more than 67,500 allegations of abuse in care homes in 2018.[24]

Given that individuals are in such a vulnerable position, the care home sector is highly regulated. In England, care homes need to be registered by the Care Quality Commission, which conducts regular inspections to ensure that ' . . . the service is safe, effective, caring, responsive and well-led'.[10] If inadequacies are found, the frequency of inspections increases and care homes are required to make improvements as specified in the Care Quality Commission's inspection report. Care homes are also required to provide a summary of and a link to the most recent inspection report on their website.

In summary, the care home sector features many providers competing for custom by keeping costs and prices low. But because users struggle to assess quality and have limited power to influence it, providers may respond to price competition by cutting their costs in ways that have implications for their ability to deliver safe, respectful care. Economists would support initiatives to improve quality measurement and reporting so that service users can make more informed decisions. But it may also be necessary for regulators to set and enforce quality standards to protect vulnerable service users.

3.2 Primary Care

Like the care home sector, the primary care sector is characterised by a large number of relatively small providers. In England, for instance, there are about 7,000 GP practices, each serving an average of 9,000 patients.[25] But unlike the care home sector, patients do not pay directly for the services they receive. This means they are not typically price-conscious, as they do not need to worry about the cost of services when deciding whether and where to seek primary care. As a result, GPs face no direct pressure from patients to keep their costs down; that pressure has to come from elsewhere.

Patients might, of course, be sensitive to quality in their choices relating to primary care, but the evidence suggests that they take little account of quality when deciding which practice to register with.[26,27] And once registered, people tend to stay with the same practice, switching only if they move to a different neighbourhood.[28] Loyalty is particularly evident among patients with chronic conditions, who may build long-term personal relationships with their GPs.[29] Attempts have been made over the years both to make it easier for people to change practice and to encourage GPs to compete for those patients. This was the key aim of the general practice fundholding scheme advocated by Maynard,

a health economist, in the 1980s and implemented by the Conservative government in 1989.[30,31] The idea was that if it was easier for patients to change practice, GPs would improve the quality of primary care services to attract new patients. Although some evidence suggests that the scheme did improve quality, the benefits did not justify the costs.[32] Since then, efforts have been made to make it even easier for patients to switch GP practices, but it is clear that this, on its own, is not sufficient to drive improvement in primary care because very few people are actually prepared to change practices on a regular basis.[27]

Since patients do not pay for primary care and only rarely shop around to choose their practice, the standard competitive mechanisms to encourage cost control and improve quality in primary care are weak. Instead, more recent UK policy has relied on the system by which GPs are paid to achieve these two objectives. Traditionally, though not exclusively, GPs in the UK are paid via a mixture of capitation, fee-for-service, and specific payments reflecting local circumstances, such as rurality and staff costs.[11] These forms of payment allow the government to control costs, but they do not encourage improvement explicitly. To address this, the UK introduced a pay-for-performance scheme for GPs known as the Quality and Outcomes Framework (QOF; see Box 1).

The QOF awards extra payments to GPs who deliver high-quality care according to pre-specified definitions of quality. GPs who invest in quality are able to earn more money, allowing them to recoup the costs of investment and, possibly, generate a surplus. GPs who do not improve quality on the chosen measures are likely to lose out financially. Evidence suggests that the QOF has helped improve the quality of primary care services – but only for those things for which payments are made. Research has also identified the risk that GPs could become alienated by pay-for-performance schemes that are perceived to remove some of their clinical autonomy and encourage 'box ticking'.[38]

In summary, despite the large number of general practices in the UK, competitive pressure on GPs to reduce costs or improve quality is weak. This is because patients are not price-conscious, as they do not have to pay for care, and patients rarely switch their practice because of poor quality. So the government relies on payments to GPs as the predominant means to encourage them to improve quality as well as to control costs.

3.3 Hospital Market

In most countries, the majority of hospitals face little competition, sometimes by design. In England, for example, plans were implemented from the 1960s to create district general hospitals to serve the needs of their geographically

Box 1 The Quality and Outcomes Framework

Introduced in April 2004, the QOF seeks to improve population health by incentivising GPs to deliver lifestyle interventions such as smoking cessation and to meet specific quality targets in the management of common chronic conditions, such as heart disease, diabetes, and asthma.[12] Although voluntary, the QOF covers nearly all GP practices and so applies to the vast majority of the population. The total QOF expenditure in England in 2020–21 was approximately £700 million per year or 8% of average practice income, which makes it economically significant.[33]

Did the introduction of the QOF lead to improvements in primary care? Yes and no. Its introduction was associated with rapid improvements in targeted activities, but these improvements were typically modest in size and accompanied by some unintended negative impacts on non-incentivised activities.[34] Disparities in the provision of incentivised activities diminished under the QOF, as poorer-performing practices in more deprived areas improved at fastest rates.[35] This was likely due to increasing payments being awarded for increasing achievement, so that practices with lower baseline performance had a greater incentive to improve.

It is less clear whether the QOF led to improvements in population health. There is some evidence that emergency hospital admissions fell for some conditions with incentivised activities, such as coronary heart disease, but not others.[36] There are also indications that the QOF may have reduced mortality for incentivised conditions, although the findings are not statistically significant by usual standards.[37] Overall, this suggests that pay-for-performance can help induce some improvement effort in primary care, but this effort translates into better health only with careful design of the incentives.

defined catchment populations of around 100,000–150,000.[39] Subsequent consolidation means that, in 2023, there were around 135 acute hospitals located across England, such that most people have a local hospital reasonably nearby. As a consequence, the NHS hospital sector comprises a set of local monopoly hospitals, each serving a defined population.

Patients in the UK do not have to pay directly towards the cost of their hospital care; so they do not need to worry about the direct financial consequences of receiving treatment. The advantage of this arrangement is that access to hospital care is (in principle at least) equitable both in geographical and financial terms because access does not depend on where people live or how