

This is a repository copy of *Policies Towards Hospital and GP Competition in Five European Countries*.

White Rose Research Online URL for this paper:
<https://eprints.whiterose.ac.uk/109226/>

Version: Accepted Version

Article:

Chalkley, Martin John orcid.org/0000-0002-1091-8259, Siciliani, Luigi orcid.org/0000-0003-1739-7289 and Gravelle, Hugh Stanley Emrys orcid.org/0000-0002-7753-4233 (2016) Policies Towards Hospital and GP Competition in Five European Countries. Health Policy. ISSN 0168-8510

<https://doi.org/10.1016/j.healthpol.2016.11.011>

Reuse

This article is distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs (CC BY-NC-ND) licence. This licence only allows you to download this work and share it with others as long as you credit the authors, but you can't change the article in any way or use it commercially. More information and the full terms of the licence here: <https://creativecommons.org/licenses/>

Takedown

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.

Policies Towards Hospital and GP Competition in Five European Countries

Luigi Siciliani Martin Chalkley Hugh Gravelle

7 November 2016

Abstract

This study provides an overview of policies affecting competition amongst hospitals and GPs in five European countries: France, Germany, Netherlands, Norway and Portugal. Drawing on the policies and empirical evidence described in five case studies, we find both similarities and differences in the approaches adopted. Constraints on patients' choices of provider have been relaxed but countries differ in the amount and type of information that is provided in the public domain. Hospitals are increasingly paid via fixed prices per patient to encourage them to compete on quality but prices are set in different ways across countries. They can be collectively negotiated, determined by the political process, negotiated between insurers and providers or centrally determined by provider costs. Competition amongst GPs varies across countries and is limited in some cases by shortages of providers or restrictions on entry. There are varied and innovative examples of selective contracting for patients with chronic conditions aimed at reducing fragmentation of care. Competition authorities do generally have jurisdiction over mergers of private hospitals but assessing the potential impact of mergers on quality remains a key challenge. Overall, this study highlights a rich diversity of approaches towards competition policy in healthcare.

Keywords: Competition; patient choice; hospitals; GPs; quality.

1. Introduction

Governments have introduced elements of competition in the health sector across several European countries. Competition is a multifaceted *process* whereby producers strive to attract customers from their rivals by providing a more appealing combination of price and quality. In conventional markets this process may lead to greater efficiency to keep prices down, and consumers will benefit via lower prices, products that better suit their needs and a greater variety of products. Patients may also place an intrinsic value on having a choice of provider (Dixon et al 2010).

Healthcare markets differ in that “consumers” (patients) are usually insulated from costs by third-party payers operating through public or private insurance and healthcare providers may compete for the business of an insurer, rather than for patients. Depending on the objectives of the insurer and the contracts they are offered, providers may not be concerned with attracting more patients. Not only the target of competition but also its mechanisms are different in health care. If prices are set by the insurer then providers can only compete on quality. But patients may find it difficult to judge the quality of healthcare. Hence, the question “what do we expect or want of competition?” is not so easily answered in healthcare settings, and the analogy with other sectors may fail. Within the healthcare sector, institutional details matter and differ across services and countries.

The diversity of institutional details and concepts of competition motivate this study. We illustrate how policies affecting competition have been implemented and promoted in five countries: France, Germany, the Netherlands, Norway and Portugal. We restrict attention to primary (GP) and secondary (hospital) services, since arrangements for other services, especially pharmaceuticals, raise novel but separate issues.

Generally policy toward competition in healthcare markets appears to be based on acceptance of the argument that competition is *potentially* beneficial in driving down costs and improving quality. That argument receives some, though not complete, endorsement from economic models of healthcare delivery. In particular, most models suggest that when providers face regulated prices greater competition will drive up quality (Gaynor 2006; Brekke et al 2014). There is a general move towards introducing policies intended to

increase competition but just as there is a diversity of what exactly competition is across different settings, there is also a variety of policy responses.

The next sections outline and discuss the results from the case studies, reflecting the diversity of country settings and healthcare systems, the healthcare services to which policies have been applied, the types of policies and existing evidence. We are careful not to use the term *competition policy* because this is often synonymous with controls over mergers based on antitrust law. Instead we refer more broadly to policies which enhance competition, for example relaxing constraints on patient choice of provider or encouraging providers to compete on quality by ensuring that their revenue increases if they attract more patients.

2. Materials and methods

We draw on detailed case studies in five countries (France, Germany, Netherlands, Norway and Portugal) chosen to reflect differences in financing arrangements (social insurance versus tax-based systems), provider ownership, regulatory frameworks, gatekeeping by GPs, and patients' ability to choose a provider. The case studies were written by independent academics following a common template and constitute the remainder of this Special Issue of *Health Policy*.

The template asked authors to: focus on primary and secondary care; identify the dimensions over which providers compete; define relevant markets; investigate the interplay between competition and patient choice; explain the role of antitrust authorities; review, synthesise and analyse evidence, including academic and grey literature; describe and analyse the role of private providers and public-private partnerships; assess intended and unintended consequences; and explore how competition interacts with initiatives aimed at improving coordination between primary and secondary care. The case studies were presented at a conference in April 2016 and each discussed by an invited policymaker from the relevant country.

Despite considerable international policy interest in the role of competition in health care (OECD 2012), the published empirical evidence is mixed and based mainly on the US and UK (OHE 2012, Gaynor and Town 2011). US studies are also often difficult to translate to publicly-funded systems. There is very limited evidence in published literature from other countries. This study fills a gap in knowledge, and overcomes language and other barriers that impede knowledge transfer about experience in other countries. A brief overview of salient features of healthcare systems and policies is provided in Table 1.

[Table 1]

3. Results: review of policies and related empirical evidence

Wider choice of hospital is increasingly common

Some countries have relaxed constraints on patient choice of healthcare provider. In **Norway** from 2001 patients were given the right to choose their hospital rather than being referred to the closest hospital. Information on waiting time for selected procedures is provided and since 2012 hospital quality indicators have been published. In 2015 patient choice was reinforced by removing constraints on hospital volumes and allowing private providers to treat publicly-funded patients. Patients are now allowed to choose hospitals in other regions, with the home region paying the DRG-price to the receiving region, resulting in increased mobility across regions (Ringard et al 2006). Patient choice of hospital is responsive to waiting times and greater choice may have contributed to the marked reduction in waiting times (Ringard and Hagen 2011).

Patients have traditionally had free choice of hospital in **France**. Recent policies have facilitated hospital choice by providing public information on process measures of quality and hospital activity (Chone 2016). The website <http://www.scopesante.fr/> has over 450 indicators including generic process measures, such as hospital-acquired conditions and catering services, and condition specific measures (eg acute myocardial infarction, haemodialysis). Activity indicators include number of stays, length of stay and the C-section rate. Health outcomes are not included due to concerns over risk adjustment and potential

strategic response by hospitals, such as underreporting of negative outcomes. In 2015 the site had 340,000 visitors.

In the **Netherlands** the government has introduced mandatory publication of hospital waiting times, standardized mortality ratios and other outcomes (Shut and Varkevisser 2016). Evidence suggests that angioplasty patients are more likely to choose hospitals with a good (overall and cardiology) reputation and low readmissions after treatment for heart failure (Varkevisser et al 2012). Patient choice of hospital for hip replacement is affected by information in the public domain on reputation and waiting times, as well as travel time (Beukers et al 2014).

In **Germany** hospitals are required to publish quality reports. However, these are lengthy documents not easily accessible to patients and provide limited information (Kifmann 2016). There is no official platform which allows patients to compare hospitals, though some sickness funds provide guidance online. Some hospitals voluntarily publish quality data and one study found that these attract more patients if quality is above average (Wübker et al 2010). There is also evidence that coronary bypass patients are willing to travel further to hospitals with better reputation (Pilny and Menniken 2014).

In **Portugal** patients are restricted to the hospital in whose geographically-defined catchment area they reside. For certain elective procedures patients can choose a different hospital if they wait longer than a pre-determined maximum. There is limited information on hospital performance. The Health Regulatory Authority provides a three-star classification of hospitals based on voluntary assessment of public and private hospitals (Barros 2016).

Hospital competition takes different forms

In **France** private hospitals account for 1,030 out of 2,660 hospitals and 60% of treatments. Patients have low out-of-pocket payments covering 3% of hospital expenditure. Before 2005 revenues of public hospitals were determined administratively on a historical basis. A DRG system covering both public and private hospitals was phased in between 2005 and 2008. Although public and private hospitals compete for the same patients, DRG prices are

typically higher for public hospitals. Private clinics have argued that higher prices for public hospitals breaches European state aid law (Chone 2016).

Public hospitals seem to have responded to competition when the DRG payment was introduced. Prior to its introduction, admissions grew less rapidly in public hospitals than in private hospitals (Chone et al 2013). The introduction of DRG payment in 2005-2008 reversed this trend. Public hospitals exposed to competition from private hospitals reduced length of stay by 4.4% (0.24 days), while no effect was found for public hospitals without private competitors. Public hospitals expanded their catchment areas by 2 minutes, about 9% of patients' median travel time (22 minutes), and hospitals responded to an increase in competitors' quality by increasing their quality (Chone and Wilner 2015).

Although hospital prices are fixed by the DRG system, self-employed physicians and specialists working in private practice can charge extra fees for patient consultations in excess of an administrated price. Top-up fees have doubled between 1990 and 2010. There is some evidence suggesting that these doctors compete on price (Chone et al 2014).

The introduction of DRG payment has not been without critics who have suggested that competition will reduce coordination and synergies amongst providers leading to missed opportunities to improve quality and reduce costs. A new regulation was introduced in 2016 (*Groupement Hospitalier de Territoire*) to foster cooperation and integration of public hospitals. Each hospital has to belong to a group associated with a teaching hospital, and can share activity, equipment and medical teams with a joint information system (Chone 2016).

In the **Netherlands** hospital competition has been a feature since 2000 when DRG payment replaced fixed budgets. Each patient is categorised into a Diagnosis Treatment Combination (DTC). Prices are fixed by the Dutch Healthcare Authority for DTCs in the so-called A-segment, which covers more complex care. Prices are negotiated with health insurers for the remaining DTCs in the B-segment, e.g. hip replacement and cataract surgery. The B-segment was expanded from 10% to 70% between 2005 and 2012 (Schut and Varkevisser 2016).

Insurers can engage in selective contracting with hospitals and form limited provider networks in an attempt to obtain more favourable prices and quality. To channel enrollees to contracted providers insurers can use out-of-network cost-sharing: patients are not fully reimbursed if they choose a hospital outside the insurer's network. Since 2009 insurers can waive the annual deductible if patients choose the preferred provider (Schut and Varkevisser 2016). Varicose vein patients did respond to such financial incentives but cataract patients did not (Van der Geest and Varkevisser 2015). Overall, selective contracting remains uncommon. This may be because patients question whether insurers with restrictive networks are committed to provide good quality care. Moreover, there are constraints on the extent to which insurers can limit the reimbursement of non-contracted care (Schut and Varkevisser 2016).

There is limited evidence from the Netherlands on the effects of hospital competition on prices and quality. One study suggests that hospital price-cost margins were lower in areas where insurers had larger (or hospitals had smaller) market shares (Halbersma et al 2011). A study of cataract surgery suggests that negotiated prices did not depend on provider concentration and were not associated with quality (Heijink et al 2013).

The DRG system has raised concerns over total hospital expenditure. In 2011 the government introduced a *macro budget instrument* to guarantee that annual hospital expenditure does not exceed the available budget. If it does, the government can require hospitals to repay excess revenues in proportion to their market shares. This has not been used because of national agreements whereby stakeholders (insurers, government and providers) committed to an annual expenditure growth of 1% for 2014-2017. This percentage is used as a reference point when negotiating block budgets with individual providers, which may weaken incentives for competition (Schut and Varkevisser 2016).

In **Germany** patients have historically had free choice. Hospitals are paid by DRGs and compete for patients. DRG tariffs vary by state and are determined by state-level collective negotiations between sickness funds and hospitals. Payers and providers are organized in corporatist bodies, such as the National Association of Sickness Funds and the German Hospital Federation, with mandatory membership and special legal status. Quantities and services are negotiated between sickness funds and hospitals at the *hospital* level (Kifmann

2016). Hospitals are mostly restricted to providing care for inpatients and *surgery* for ambulatory patients.

Outpatient *care* is provided by specialists in private practices and payment is negotiated separately with sickness funds through collective negotiations (Kifmann 2016). Specialists are represented by 17 regional associations who receive morbidity-adjusted capitations from the sickness funds and which they then distributed to their members. Physicians face target budgets with sharp reductions of payment if they are exceeded (Busse and Blümel 2014). The boundaries between inpatient and outpatient care have been relaxed since 2004 and hospitals can provide ambulatory care for patients with rare diseases and specialised services. *Medical Treatment Centres* run by hospitals or groups of self-employed physicians have been introduced to foster cooperation across disciplines in providing outpatient treatment. In 2014 there were 2,073 medical treatment centres of which 38% were run by hospitals. Centres enable hospitals to prepare patients for inpatient stay, provide follow-up treatment, and channel inpatients.

Sickness funds can sign *selective contracts* with providers, in particular ambulatory care providers. Contracts can complement or substitute services agreed in collective negotiations. Selective contracting is intended to stimulate quality, achieve better coordination and cooperation in patients' care and to be evidence-based (Kifmann 2016). One example is *Disease Management Programs* for chronic diseases (asthma, breast cancer, COPD, diabetes, ischaemic heart disease) which some sickness funds introduced in 2002. Participation for patients is voluntary. In 2012 there were more than 10,000 programs covering 7.16 million patients. Ambulatory care providers are reimbursed by a combination of fee-for-service, capitation and pay-for-performance. The mode of payment is negotiated and contracts are confidential. Evaluations for diabetes type-II reported positive effects on patient outcomes and survival (Fuchs et al 2014). An evaluation for COPD found improvements in mortality, morbidity and process quality but higher costs (Achelrod et al 2016).

Another form of selective contracting is *Integrated Care Contracts*. These aim at overcoming inter-sectoral barriers through case management and coordinated patient pathways. Contracts cover a population for a given condition, such as stroke or hip replacement. They

can integrate providers *horizontally* (eg within ambulatory care) or *vertically* across sectors (eg inpatient and ambulatory care). During 2004-2008 1% of funding for ambulatory physicians was earmarked for these contracts. In 2008-2011 there were about 6,400 contracts and coverage increased from 1.66 to 1.92 million patients. Sickness funds negotiate with single or networks of providers, including rehabilitative care providers. Payment can be fee-for-service or capitation. Patient participation is voluntary. Patients are committed to contracted providers but not penalised by sickness funds if they seek alternative providers. Unlike Disease Management Programs, Integrated Care contracts can substitute for services included in collective agreements with subsequent transfer correction from sickness funds to regional physician associations. Little is known about the effectiveness of these contracts (Kifmann 2016).

In **Norway** hospitals have been paid by DRG since 1997 as part of a mixed payment system in which the price initially covered 30% of treatment costs. This share increased to 40% in 1998, has since fluctuated between 40% and 60%, and is currently 50%. Hospitals also receive a block grant based on population demographics of their health region. DRG pricing initially covered only inpatient care by public hospitals and was later extended to outpatient care and private providers. Direct competition for patients was only possible after the 2001 patient choice reform.

In 2002 the ownership of public hospitals was transferred from the county to the higher-state level and hospitals were given more autonomy and independence. Although hospitals are state-owned, decision-making is decentralized to hospitals which are more likely to respond to competition. However, the 2002 ownership reform involved mergers of public hospitals, which could have weakened competition.

The evidence on the effects of competition is limited. The introduction of DRG pricing in 1997 led to gains in technical efficiency and increases in volume (Biørn et al 2003). The 2001 patient choice reform and the 2002 hospital-status reform both further stimulated activity. Volume of activity was higher than planned after 2002, leading to higher deficits (Tjerbo and Hagen 2009). Average waiting time for elective care was 250 days in 1998-2000, but dropped markedly after the 2001-2002 and stabilised at 70 days from 2005. It is unclear how much of this reduction can be attributed to competition (Ringard and Hagen 2011).

In **Portugal** public hospitals are funded by global budgets calculated on predicted patient volumes and pre-determined DRG prices so that hospital revenue does not vary with the number treated. Public hospitals have regional catchment areas with access defined by citizens' residence. Choice for highly-specialised care may be mediated by specialists. Since 2012 patients waiting longer than a predetermined time within a public hospital can choose another accredited public or private hospital. Critically, it is the original hospital that pays for treatment, thus creating strong incentives to keep within the maximum. There is evidence suggesting that the policy contributed to reductions in waiting times across a range of treatments (Barros 2013). Legislation in 2016 introduces elements of choice for elective procedures (Barros 2016).

GP choice and competition policies can be controversial

Some countries have also expanded the scope for patient choice and competition amongst GPs. In **Norway** from 2001 individuals can freely choose their GP and change GP up to twice a year. GPs can fix their list size between 500 to 2500 patients and refuse additional patients once their set size is reached. The GP choice reform was accompanied by a change in payment so that GPs are paid by capitation plus fee-for-service for consultations and other services. Capitation accounts for 30% of GPs income with the remaining 70% for fee-for-service payment. Patients face a copayment. The reform increased GP consultations, patient satisfaction and reduced waiting time for consultations from 8.3 to 7.2 days (Brekke and Straume 2016). GPs operating in more competitive markets (proxied by available patient list slots) have higher rates of referral to secondary care (Iversen and Ma 2011).

Attempts to remove restrictions on GP competition have been contentious in the **Netherlands**. Before 1998 GPs negotiated collectively on contractual conditions, divided the market through sharing agreements, and regulated entry. When the Dutch Competition Act was introduced in 1998, GPs came under scrutiny of the competition authority. The national GP association applied for an exemption from cartel prohibition, which was declined in 2001. There was a strike of GPs in 2005. In 2011 the competition authority imposed a fine of 7.7 million Euro. The association formally objected, though in 2012 it conceded that regional GP associations would not engage in collective negotiations about price, volume and service levels. In 2015 a court annulled the fine because the competition authority had failed to

provide sufficient evidence that the association had harmed quality by restricting competition (Schut and Varkevisser 2016).

Although health insurers can selectively contract with GPs, they have little incentives to do so since prices are highly regulated. Patients register with a single GP practice and selective contracting would end such longstanding relationships (Schut and Varkevisser 2016).

There is scope however for selective contracting in relation to *bundled payments* for patients with chronic conditions. In 2010 bundled payments were introduced nationwide for diabetes (type-II), COPD and vascular risks to support primary care coordination and prevent specialist visits and hospitalization. Prices are negotiated between a *care group* and health insurers. Care groups are legal entities acting as contractors and employ or subcontract providers to offer coordinated outpatient care. There are about 100 groups, with a median of 50 GPs each, covering 80% of GPs (van Dijk et al 2014). A study showed improvements in organization and coordination of care, better protocol adherence for diabetes, but increased administrative costs and large price variations not explained by quality (De Bakker 2012). A related study suggests that mortality rates also fell (Struijs 2015).

The number of groups per region varies between 1 and 13, with an average of 5 per region. The median market share is 16% and reaches 40% for a quarter of groups (Van Dijk et al 2014). Care groups compete for GPs since patients do not actively choose a group. One study found that one additional group reduced contract prices for diabetes by 1.5% (5 Euro, Van Dijk et al 2014). Regional insurer market concentration had no effect on price. There are large price variations, possibly due to lack of experience in negotiating contracts and uncertainty about care covered by the bundle (Schut and Varkevisser 2016). Additional payments are being considered for patients with depression and for frail elderly.

In **Germany** 46% of doctors working in private practices in 2012 were GPs and 54% were specialists. Patients can generally access specialists without seeing a GP. However, from 2007 sickness funds need to sign *Gatekeeping Contracts*, a form of selective contracting, with a partner representing more than 50% of GPs in an area, often the German Association of Family Physicians, or as an addition to contracts with the regional physician association. The aim is to improve coordination of care and reduce costs. There are 91 contracts involving 16,500 GPs covering 4 million patients. Contracts use a mix of capitation (60 Euro

per patient) and fee-for-service. Initial evaluations suggest fewer avoidable hospitalisations and dangerous drug combinations, higher patient satisfaction, but more specialist visits, higher pharmaceutical expenditure and ambiguous effects on costs (Kifmann 2016).

In **France** there are no restrictions on patient choice of GP. 66% of GPs are self-employed and paid by fee-for-service. Most GPs are required to charge regulated fees but some are permitted to charge above the regulated level. GP ability to overcharge has been constrained since 1990.

In **Portugal** patients are free to choose a GP if there is place on their list. Choice is however severely constrained by excess demand. Some residents do not have a GP since all local lists are full. Patients pay user fees regulated by the Government but can visit a private practice if they pay out-of-pocket.

Most hospital mergers are cleared by competition authorities

In **France** no merger case has concerned public hospitals. There have been 90 mergers between private hospitals since 1995, mostly small or medium-size hospitals. All were cleared by the competition authority without further investigation of possible effects on quality. Since prices are regulated, the competition authority computes local market shares to assess whether merging hospitals could reduce quality. In areas with limited private providers, the pressure from public hospitals has been considered sufficient to maintain competition. Market shares are defined by categories of services such as obstetrics, surgery, and long-term care. A more segmented grouping by Major Diagnosis Categories has been considered. Catchment areas are defined with a radius of 30 minutes' driving time, though it can be extended depending on the service (Chone 2016).

In the **Netherlands** up to 2015, 26 out of 27 hospital mergers have been cleared after an initial or substantial assessment. The general rules of the Competition Act apply to hospitals. In the first phase, the competition authority decides whether a license is needed if “a dominant position that appreciably restricts competition...” arises. After a detailed assessment “A license shall be refused if, as a result of the proposed concentration, effective competition [...] would be appreciably impeded ...”. The number of hospitals has

steadily declined to 81 in 2015 with hospitals having an average market share of 50%. Some have argued that hospital merger policy is too permissive (Loozen et al 2014). Although market shares can be computed, it has been argued that they are problematic since the patient flows on which market shares are based are not indicative of patients' willingness to travel if quality differences across hospitals are not transparent to patients. As a result, the competition authority has not specified the size of the geographical market for a merger to imply a reduction in competition. In the only prohibited merger the merging hospitals were strong competitors and insurers would have been left with insufficient alternatives when negotiating with providers (Varkevisser and Schut 2016; see also Schmid and Varkevisser 2016).

In **Germany** hospital mergers are subject to antitrust law and should be prohibited if the merged firm obtains more than 40% market share or if the merger leads to significant concentration (3 or less firms with 50% market share, or 5 or less firms with 66%). The competition authority defines the market according to comparable services (eg acute or rehabilitative care) based on patient flows and travel time. 182 mergers were approved between 2004-2014 and 7 were prohibited. The largest approved merger related to a takeover of 40 hospitals by private chains. The takeover initially involved 43 hospitals but the number was reduced after the authority raised concerns (Kifmann 2016).

In **Portugal** the competition authority has jurisdiction over private hospitals. Most decisions relate to acquisitions of small hospitals located in medium-sized cities by large groups. The Health Regulatory Agency produces an opinion which is not binding on the competition authority. Hospital mergers within the NHS are seen as administrative acts. Mergers of private hospitals in different regions do not affect market concentration and raise no concern (Barros 2016).

In **Norway** competition law does not apply to state-owned health enterprises. Private non-profit or for-profit hospitals are subject to competition litigation, but there have been very few cases.

Involvement of private providers is widespread

The involvement of private providers varies across countries. There is a mix of public and private providers in Germany, France and Portugal. In **Germany** in 2014 about 30% of hospitals were public, 35% private non-profit hospitals and 35% for-profit hospitals with many owned by chains. In **France** private hospitals provide 60% of surgery and co-exist with public hospitals. In **Norway** most hospitals are public. There are some private non-profit hospitals providing care for public patients and also some private for-profit hospitals with contracts for certain treatments. In **Portugal** private providers can provide services to both publicly-funded and privately-funded patients. Prices of publicly-funded treatments are negotiated between the NHS and private hospitals, the latter often organized in professional associations. Prices for privately-funded treatments are negotiated with health insurance companies. Private hospitals compete on price and quality of services to win contracts with insurance companies or with health subsystems.

Although in **Portugal** hospital competition remains limited, competition *for the market* has been stimulated since 2011 through tendering processes. The Ministry of Health is developing electronic platforms for bidding for contracts. Examples include pharmaceuticals and hospital products (Barros 2016). There have been Public Private Partnerships (PPP) for the construction of new hospitals since 2000 – another form of competition *for the market*. Hospitals managed by private entities under PPP contracts are part of the NHS. A key element was the inclusion of clinical services in addition to infrastructure which potentially gives scope to innovate, reduce cost and improve quality. Each PPP involves one contract which relates to building, operating and maintaining the infrastructure and lasts 30 years, and one contract for clinical services management lasting 10 years with the possibility of renewal. The bidding process to select the private partner involved a first phase with sealed bids, and a second phase between the two best bidders. The first wave of PPPs covered ten planned new hospitals, of which four are now open. No major renegotiations took place in the first decade. Quality is controlled by indicators specified in the contract and fines have been applied by the public sector when these were not respected (Barros 2016).

4. Discussion and key policy lessons

Policies aimed at enhancing competition in the health sector may focus on demand (patients) or supply (hospitals and GPs) or both. For example, patient choice policies aim at removing restrictions on the set of providers available to patients and so encourage them to improve quality. Policies that influence hospitals' revenues, such as the introduction of DRG pricing, act more explicitly on supply but work in conjunction with patient choice since DRG pricing is only beneficial to hospitals if they can attract extra patients. The effects of policies are further mediated by market structure reflected in the distribution of the providers over geography (eg rural versus metropolitan areas) and over time as reflected by waves of provider consolidations, mergers and closures. Policies aimed at enhancing competition are therefore best seen as a portfolio of interdependent tools, aimed at patients, the providers and the markets through which they interact.

Patients' choice policies are increasingly popular with information on quality increasingly available in the public domain in France, Norway and the Netherlands. There is some evidence that demand responds to these published quality indicators in the Netherlands. In Norway patients are likely to bypass local hospitals following the introduction of patient choice. These findings are consistent with existing limited empirical literature, mostly from the US and the UK (Brekke et al 2014), which suggests that distance to hospital is the key determinant of choice. Whilst hospitals with higher quality are rewarded with more patients, the response to higher quality – the quality elasticity of demand – is quite small. Patients with higher socioeconomic status are more likely to exert choice.

There are design issues in relation to the quality indicators provided in the public domain. Countries differ in the amount and type of information they produce. For example in France only process measures of quality are provided.

Patients' choice policies are still at an early stage of development. There is scope to make indicators more accessible to patients and more relevant to the exercise of choice. Since patients' choices of hospital are generally made in consultation with their GP, even in systems without gatekeeping, policy design needs to take the GP role into account.

Hospital competition on quality for publicly-funded patients is present in all countries reviewed except Portugal where patients are generally restricted to their local hospital. The extent of competition and the institutional set-up differs significantly. Policymakers have a menu of policy options in relation to hospital competition, especially with regard to how prices are determined. For example, prices are fixed and centrally determined in France, subject to *negotiations* between insurers and hospitals in the Netherlands and *collectively* negotiated between insurers and professional associations in Germany.

DRG prices are normally set to reflect past average hospital costs. This is not the case in Norway where the price reflects only 40% to 60% of average cost and is determined by parliament each year through the political process. DRG prices below average costs might help in mitigating excessive incentives to increase volumes, a common concern with DRG systems, but also hinders quality competition since hospital profit margins from attracting additional patients are reduced or might be negative. In the Netherlands, concerns over expenditure have led to the introduction of a macro budget instrument which potentially penalises all hospital revenues if the target expenditure is exceeded. In practice, this has meant that health insurers have also introduced expenditure caps, which in turn also reduces hospitals' incentives to compete on quality. In Germany although prices are collectively negotiated, there are no restraints on hospital volume and hospitals in principle compete on quality.

There is generally little empirical evidence from the case studies whether hospital competition increases quality under fixed price regulation or when prices are negotiated (as in the Netherlands). The only exception is France for which there is evidence that public and private hospitals treating publicly-funded patients do compete for patients on non-price attributes. Although there seems to be general support for policies stimulating hospital quality competition, some concerns have also been raised. In France in particular it has been suggested that competition may hinder collaboration. There have been consequent attempts to combine competition and cooperation across hospitals with teaching hospitals leading and coordinating groups of public hospitals.

Choice and competition policies for GPs have mixed support across countries. Norway introduced GP choice in 2001 and combined it with an element of fee-for-service to align

patients and doctors incentives. There is evidence suggesting that the policy led to GPs being more responsive to patients. In contrast, attempts by the competition authority to remove restrictions on GP entry and competition in the Netherlands have been strongly resisted by GPs and have been controversial. The example highlights the importance of the political process when introducing such policies.

There are no formal restrictions on GP choice in the Portuguese, French and German system. In Portugal however choice is severely hindered by GP shortages with some patients not being able to register with a GP. GPs have a stronger gatekeeping role in Norway, the Netherlands and Portugal, and a weaker one in France. In Germany gatekeeping is still being developed. There is some evidence that patients registered with gatekeeping GPs experienced fewer hospital admissions but, somewhat surprisingly, visited specialists more frequently.

Some countries like Germany and the Netherlands have recently introduced innovative **selective contracting aimed at patients with chronic conditions**. The aim is to address the segmentation of care pathway. This is a form of competition *for the market*, as opposed to *in the market*. The arrangements differ across countries. In the Netherlands health insurers contracted with networks of GPs. In Germany sickness funds contract with ambulatory care providers. There are unresolved design questions. Horizontal competition can hinder vertical integration by increasing the segmentation of care pathways, but policymakers can introduce vertical competition between integrated care pathway providers.

Hospital mergers are increasingly subject to scrutiny by competition authorities. Even for countries where hospital DRG tariffs are fixed and hospitals cannot collude on price, there are concerns that quality may suffer following a merger. In France, Norway and Portugal, mergers between public hospitals are treated as administrative acts and internal reorganisations of public services, and not subject to authorisation from the competition authority. This is not the case for private hospitals, though the vast majority of proposed mergers have been approved on the ground that markets would still exhibit sufficient choice and competition from the remaining rivals. Occasionally, mergers have been stopped if there were significant concerns over potential reductions in quality. But both measuring quality and predicting the effects of mergers on it will remain the key challenge in assessing

mergers in the foreseeable future. The rationale for exempting public hospitals from the scrutiny of competition authorities is unclear. Hospital competition policies encourage hospitals to compete on quality, and it would seem a natural concern that quality may suffer as a result of a merger between private or public hospitals.

Countries differ in the **mix of public and private hospital provision** and the evidence on the effect of ownership on quality is mixed (Herrera et al 2014). In France, Germany and Portugal (and to a much lesser extent in Norway) public and private providers coexist and compete for the same patients. A contentious issue in France has been whether both types of provider should be paid with the same DRG tariff with private providers currently being paid less. It raises a general issue of what constitutes an appropriate pricing when different types of providers treat publicly-funded patients, given their different objectives, obligations (eg the provision of an emergency department in public hospitals), regulatory constraints (VAT, pension contributions, access to capital) and abilities to treat less complex cases. In Portugal private hospitals have been built under Public Private Partnerships to the benefit of publicly-funded patients. Private providers can be an integral part of publicly-funded health systems either for historical reasons, to augment public capacity at times of financial constraints, or to introduce some contestability in the market of public providers.

5. Conclusions

This study shows how policies aimed at stimulating competition are multifaceted. It illustrates how competition can have different implications depending on the service (primary or secondary), the dimension on which providers compete (quality and/or price), market structure, and the diversity of providers (eg for-profit versus non-profit).

Policies to promote competition are a relatively recent development in most countries and there is a dearth of empirical evidence on their intended and unintended effects. In particular, we know very little regarding their effects on quality. The problems in developing and accessing good information on quality are exemplified by the difficulty that competition authorities have in assessing the effect of a proposed merger on quality. Similarly, although

selective contracting is supposed to act on quality and price, most negotiations ultimately revolve around prices.

Finally, although policies which enhance competition can potentially play a useful role in driving up quality and driving down costs, ideally they should be assessed alongside other policy levers, such as pay-for-performance, quality rating and auditing mechanisms, though such assessment still requires good information on quality.

Acknowledgments

This research is supported by the Health Foundation, an independent charity committed to bringing about better health and health care for people in the UK. The views expressed in this paper and in the case studies are those of the authors and do not necessarily reflect the views of the funders. We thank Sally Al-Zaidy, Anita Charlesworth, Sara Martin and Emma Spencelayh for helpful comments and suggestions.

Table 1. Overview of key policies					
	<i>France</i>	<i>Germany</i>	<i>Netherlands</i>	<i>Norway</i>	<i>Portugal</i>
<i>Hospital patient choice:</i>	Extensive	Extensive	Extensive	Extensive from 2001	Restricted
<i>Hospital competition on quality and prices</i>	Yes No	Yes No	Yes Yes	Yes No	Limited No
<i>GP choice and quality competition</i>	Extensive	Extensive	Restricted	Extensive from 2001	Limited by shortage of GPs
<i>Hospital mergers</i>	Mostly approved	Mostly approved	Mostly Approved	Very few cases	Mostly Approved
<i>Involvement of private providers</i>	Extensive	Extensive	Extensive	Limited	Increasing

6. References

- Achelrod D, Welte T, Schreyögg J, Stargardt T. 2016. Cost-effectiveness of the German Disease Management Programme for COPD. A large population-based cohort study. Unpublished manuscript, Hamburg Center for Health Economics.
- Barros P. 2016. Competition policy for healthcare provision in Portugal. [This issue].
- Barros P, Cristovao R, Gomes PA. 2013. Case study: Portugal. In: Siciliani L, Borowitz M, Moran V (eds), *Waiting Time Policies in the Health Sector. What works?*, OECD Book, Paris, France.
- Beukers PDC, Kemp RGM, Varkevisser M. 2014. Patient hospital choice for hip replacement: empirical evidence from the Netherlands. *European Journal of Health Economics*, 15:927–36.
- Biørn E, Hagen TP, Iversen T, Magnussen J. 2003. The Effect of Activity-Based Financing on Hospital Efficiency: A Panel Data Analysis of DEA Efficiency Scores 1992–2000. *Health Care Management Science*, 6:271–283.
- Brekke K, Gravelle H, Siciliani L, Straume OR. 2014. Patient Choice, Mobility and Competition Among Health Care Providers, Chapter 1:1-26, in Levaggi R, Montefiori M (eds) *Healthcare Provision and Patient Mobility, Developments in Health Economics and Public Policy*, 12.
- Brekke KR, Straume OR. 2016. Competition policy for healthcare provision in Norway. [This issue].
- Busse R, Blümel M. 2014. Germany: health system review. *Health Systems in Transition*, 16(2):1–296.
- Chone P. 2016. Competition policy for healthcare provision in France. [This issue].
- Chone P, Evain F, Wilner L, Yilmaz E. 2013. Introducing activity-based payment in the hospital industry: Evidence from French data. *Direction des Études et Synthèses Économiques, Working Paper G2013/11*.
- Chone P, Wilner L. 2015. Spatial non-price competition: A network approach, *CREST Working Paper*.
- Chone P, Coudin E, Pla A. 2014. Are physician fees responsive to competition? *CREST Working Paper*.
- De Bakker DH et al. 2012. Early results from adoption of bundled payment for diabetes care in the Netherlands show improvement in care coordination, *Health Affairs*, 31(2):426-433.
- Dixon A, Robinson R, Appleby J, Burge P, Devlin N, Magee H. 2010. *Patient Choice: How Patients Choose and How Providers Respond*. The Kings Fund, London.
- Fuchs S, Henschke C, Blümel M, Busse R. 2014. Disease management programs for type 2 diabetes in Germany. A systematic literature review evaluating effectiveness. *Deutsches Ärzteblatt International*, 111:453–63.
- Gaynor M. 2006. What do we know about competition and quality in health care markets? *NBER Working paper w12301*.

- Gaynor M, Town RT. 2011. Competition in Health Care Markets, in M Pauly, T McGuire, P Barros, Handbook of Health Economics. Elsevier, 2:499-637.
- Heijink R, Mosca I, Westert G. 2013. Effects of regulated competition on key outcomes of care: cataract surgeries in the Netherlands. *Health Policy*, 113:142-150.
- Herrera C, Rada G, Kuhn-Barrientos L, Barrios X. 2014. Does ownership matter? An overview of systematic reviews of the performance of private for-profit, private not-for-profit and public healthcare providers. *PLOS One*, December 1, <http://dx.doi.org/10.1371/journal.pone.0093456>
- Iversen T, Ma A. 2011. Market conditions and general practitioners' referrals. *International Journal of Health Care Finance and Economics*, 11:246-265.
- Kifmann M. 2016. Competition policy for healthcare provision in Germany. [This issue].
- Loozen E, Varkevisser M, Schut FT. 2014. Dutch Authority for Consumers and Markets fails to meet the standard of proof in recent hospital merger decisions, *European Competition Law Review*, 35:17-23.
- OECD. 2012. Competition in hospital services, OECD Policy Roundtables, Proceedings, Competition Committee.
- Office of Health Economics. 2012. Competition in the NHS, Report of the OHE Commission.
- Pilny A, Mennicken R. 2014. Does Hospital Reputation Influence the Choice of Hospital? *Ruhr Economic Papers* 516.
- Ringard A, Hagen TP. 2011. Are waiting times for hospital admissions affected by patients' choices and mobility? *BMC Health Services Research*, 11:170.
- Ringard A, Hagen TP, Rico A. 2006. Introducing patient choice of hospital in National Health Systems. A comparison of the UK and Norway. HORN Working Paper 2006:2.
- Ringard A, Saunes IS, Sagan A. 2016. The 2015 hospital treatment choice reform in Norway: Continuity or change? *Health Policy*, 120:350-355.
- Schmid A, Varkevisser M. 2016. Hospital merger control in Germany, the Netherlands and England: Experiences and Challenges, 120:16-25.
- Shut E, Varkevisser M. 2016. Competition policy for healthcare provision in the Netherlands. [This issue].
- Struijs J. 2015. How Bundled Health Care Payments Are Working in the Netherlands. *Harvard Business Review*.
- Tjerbo T, Hagen TP, 2009. Deficits, soft budget constraints and bailouts: budgeting after the Norwegian Hospital Reform. *Scandinavian Political Studies*, 32:337-358.
- Van der Geest SA, Varkevisser M. 2015. Using the deductible for patient channelling: did preferred providers gain market share? *European Journal of Health Economics*, 17(5):645-652.

Van Dijk CE et al. 2014. Market competition and price of disease management programmes: an observational study. *BMC Health Services Research*, 14: 510(1-7).

Varkevisser M, Van der Geest SA, Schut FT. 2012. Do patients choose hospitals with high quality ratings? Empirical evidence from the market for angioplasty in the Netherlands. *Journal of Health Economics*, 31:371–8.

Varkevisser M, Schut FT. 2012 The impact of geographic market definition on the stringency of hospital merger control in Germany and the Netherlands. *Health Economics, Policy and Law*, 7:363–81.

Wübker A, Sauerland D. 2010. Does better information about hospital quality affect patients' choice? Empirical findings from Germany. *Jahrbücher für Nationalökonomie und Statistik*, 230(4):467–490.