

# Levers for change – Appendix

## Brief review of literature on methods for supporting change in general practice and primary care

Kushal Barai

June 2015

## Background

The Nuffield Trust and its partners hosted a seminar called ‘Levers for change in general practice and primary care’. The seminar brought together expert speakers and other stakeholders to discuss the evidence for interventions – ‘levers’ – to facilitate high-quality care in general practice. The debate and discussions that took place are summarised in an event briefing.

This paper supplements the event briefing by providing a brief overview of published research and expert opinion regarding the effectiveness of different methods for driving change and improvement in general practice. Like the briefing, it focuses mainly on evidence for change and improvement in general practice. However, it is also relevant to other primary care services and the wider health and care system.

## Contents

<a href="#">Introduction .....</a>	<a href="#">5</a>
<a href="#">Financial incentives and GP payment systems .....</a>	<a href="#">6</a>
<a href="#">Capitated payments for services.....</a>	<a href="#">8</a>
<a href="#">Regulation.....</a>	<a href="#">12</a>
<a href="#">Clinical leadership and professionally led change and improvement .....</a>	<a href="#">13</a>
<a href="#">Organisational development support .....</a>	<a href="#">15</a>
<a href="#">Conclusion.....</a>	<a href="#">17</a>
<a href="#">References .....</a>	<a href="#">19</a>

## Introduction

Numerous initiatives are in place in the NHS to improve general practice and primary care. These initiatives have various purposes:

- to improve the quality of care *within* GP practices
- to develop new relationships and working arrangements *between* practices in order to enhance scale and sustainability
- to *extend the scope* of general practice and build links with the wider health and care system.

There is no universally agreed definition of quality in health care. However, recurrent themes of patient safety, positive user experience, improved clinical outcomes and functional status, professional development and cost effectiveness are useful concepts for understanding high-quality care (Batalden and Davidoff, 2007; Raleigh and Foot, 2010). An increasing number of sources claim that shifting the emphasis to prevention and proactive intervention in primary care while integrating disparate NHS and social services will reduce the need for costly secondary care (Ham and others, 2012). Torbay and Southern Devon Health and Care NHS Trust (formed in 2005) and the now abolished North East Lincolnshire Care Trust Plus are two recent examples of this occurring (Robertson, 2011).

To improve quality and steer away from a health care system that is reactionary in nature, there has been an increasing trend towards large-scale GP practices serving populations of 30,000–100,000 patients. Governance arrangements vary, but include:

- groups of practices participating in a joint venture (so-called networks and federations)
- mergers into ‘super-partnerships’
- parent companies holding multiple short-term contracts for GP practices (held together by a formal governance arrangement such as a limited liability partnership or a company limited by shares).

This review of selected literature and policy analysis gives an overview of evidence on the effectiveness of five main approaches to facilitating change and improvement in general practice:

1. financial micro-incentives
2. capitated contracts
3. regulation
4. clinical leadership and professionally led change and improvement
5. organisational development support.

## Levels of evidence

NHS funding has arguably never been so heavily scrutinised. Government officials, the media and a better informed public expect changes in policy or spending on health care to be backed by unbiased evidence, demonstrating improvement in patient care, value for money or, ideally, both. There is a large amount of literature on change and quality improvement, but it is important to be mindful of the variations in evidence quality. For example, an uncontrolled observational evaluation, despite its usefulness in certain situations, cannot claim to be on a par with controlled comparator studies. Neither can

a policy framed on the evidence of partial ‘commentary’ compare with policy based on the interpretations of methodically strong trials.

This briefing focuses on UK-based studies. However, where possible, relevant international examples and evidence are considered.

## Financial incentives and GP payment systems

Pay for performance (P4P) schemes are a common tool for policy-makers worldwide. They are used to help embed health care improvement initiatives (Starfield and Mangin, 2010). Drawing on behavioural economics and reward psychology, schemes are designed to encourage and sustain desirable clinical behaviour in clinicians (Woolhandler and others, 2012). However, while financial rewards may be effective at incentivising simple tasks with consistent inputs and processes, their efficacy is less clear for complex, changeable tasks (Goodwin and others, 2011a; Kamenica, 2012). There is also a potential for the tool causing harm by ‘tainting’ altruistic drive if financial rewards are seen to demean an interesting or noble task, watering down a sense of professional achievement (Himmelstein and others, 2014).

Robust assessment of P4P schemes, both from the UK and abroad, is limited (Town and others, 2005; Rosenthal and Frank, 2006). In a Cochrane review, Flodgren and others (2011a) concluded that suboptimal study methodologies in P4P schemes limit analysis and conclusions to “speculative associative relationships”. The review extrapolated data from studies across various countries’ health care systems, finding that although financial incentive schemes may be effective at improving health care outcomes (referral and hospital admission practices are specifically mentioned), sustainability is unproven.

A summary of evidence on P4P in the NHS presented by Matt Sutton (Professor of Economics at University of Manchester, UK) during the workshop concluded that different payment systems have had differing impacts. Sutton argued that the general practice Quality and Outcome Framework (QOF) achieved sustained higher quality of incentivised measures and lower emergency admissions, whereas the £1 billion Commissioning for Quality and Innovation (CQUIN)<sup>1</sup> initiative has not delivered measureable improvements in quality or outcomes (McDonald and others, 2013). The ‘best practice tariff’<sup>2</sup> has had a variable impact: the hip fracture tariff drove faster treatment and better outcomes, while the stroke tariff had no effect on quality or

---

<sup>1</sup> The CQUIN framework aligns a proportion of secondary-sector income with predominantly *locally* agreed improvement targets. These targets were introduced in 2010/11 and are agreed between local commissioners and their providers in line with local health service requirements. As well as locally agreed targets, there is a set of national CQUIN targets. In 2014/15 there were four national CQUIN targets: the Friends and Family Test, improvement against the NHS Safety Thermometer, improving dementia care and improving mental health diagnosis. The CQUIN framework is effectively a penalty payment scheme, as it withholds a proportion of funding unless targets are met.

<sup>2</sup> Best practice tariffs incentivise high-quality care through *nationally* set targets. These have been incrementally incorporated into payments since 2010/11 too. The majority are procedure focused (for example, cataract operations, primary hip and knee replacements, and endoscopy procedures). Best practice tariffs aim to reduce variation in hospital care by financially rewarding the adoption of best practice standards.

outcomes. In contrast, a differential pricing system that favoured day case surgery (with a 28 per cent increase in price) led to a 20 per cent increase in day case operations.

### **Quality and Outcomes Framework: a P4P system in UK primary care**

The Quality and Outcomes Framework (QOF), introduced in 2004, is a voluntary P4P scheme considered the most comprehensive of its kind in primary health care (Siriwardena, 2010). The QOF aims to achieve consistent delivery of evidence-based care for chronic diseases, aligning performance thresholds with financial rewards. Prior to the QOF, quality improvement relied on GPs' professional values and pride (Grant and others, 2009). Despite the extent of change brought about by the QOF, opinions over whether objectives have been realised is mixed (National Audit Office, 2008; Gillam and others, 2012).

Harrison and others (2014) reported reductions in avoidable hospital admissions for QOF-incentivised conditions. However, the QOF was launched at the same time as several other quality improvement initiatives, such as four-hour accident and emergency waiting time targets, so, as in other studies, it is difficult to prove a causal relationship. Furthermore, inequalities in clinical outcome measures appeared to narrow in the first two years of the QOF, implying that the management of chronic conditions improved in poorer areas. The supposed worst performing GP practices became the fastest improvers (Campbell and others, 2009; Doran and Roland, 2010; Sutton and others, 2010). However, it is best to maintain some scepticism about the extent of this proposed accomplishment, as Alshamsan and others (2012) found no change in existing disparities with diabetes management outcomes for ethnic minority groups.

Electronic record-keeping has markedly improved because clinical IT systems were extensively adopted after the QOF was introduced (Siriwardena, 2010). This accelerated after the point at which the Quality Management and Analysis System required surgeries to adopt systems that can automatically transfer QOF data to their own IT system (Gillam and others, 2012). Selected evaluations demonstrate better data entry and coding for incentivised conditions, with 'spill-over' benefits also reported in non-incentivised conditions (Sutton and others, 2010). However, these gains plateaued in later years, raising questions about whether there is a finite window of impact for P4P structures (Kontopantelis and others, 2013).

Another impact of the QOF might have been to encourage followership rather than stimulate innovation. As followers, GPs have been rewarded for 'toeing the line' in relation to QOF-incentivised interventions. Conversely, experimental, innovative service provision is not incentivised (Doran and Roland, 2010). This has led some people to question whether the QOF and similar P4P schemes are truly quality improvement mechanisms. Others go further, arguing that approaches that measure processes of care on a large scale may stifle a culture of small-scale, continual quality improvement initiatives and local, front-line ownership (Dawda and others, 2010).

McDonald and others (2007) argued that there is no evidence to support the presumption that the QOF demoralised GPs, while Lester and others (2013) concluded that GPs generally welcomed incentivised, evidence-based performance measures. Concerns about a 'tick box' culture developing and about diverting GPs from a personalised approach to patient management were mostly unfounded too, barring

specific instances where poor selection of measurement indicators led to such practice (Mitchell and others, 2011; Sutton and others, 2010). Doran and others (2008) found little indication that ‘gaming’ – exception reporting to exclude patients with clinical measures that will fail to meet thresholds from affecting averages and attaining QOF points – was prevalent. Overall levels of exception reporting were less than 6 per cent in 2005–6, accounting for approximately 1.5 per cent of the total annual cost of the QOF programme. An important factor underlying these low rates is that activities associated with treatments and proxy outcomes (for example, measuring HbA1c levels and blood pressure levels) did increase the likelihood of exception reporting six-fold compared with more straightforward recording activities such as smoking status (Doran and others, 2008).

In summary, there are several concerns with the QOF including:

- risk of curtailing innovative activity
- criticisms over the glut of process measures in the framework that may hold little value for patients (Doran and Roland, 2010)
- focus on single disease pathways that risks duplicating care for patients with multiple morbidities.

Commentators also draw attention, anecdotally, to the lack of indicators incentivising primary prevention (Ham and others, 2012).

Notwithstanding the clinical and organisation improvements described above, some have questioned whether a financial outlay of approximately £1 billion annually represents value for money (Gillam, 2010; Starfield and Mangin, 2010). Achieving maximum QOF points can increase GP practice incomes by 25–30 per cent, although comparative health gains may have been modest (Campbell and others, 2009). There are stakeholders who believe general practice is too weighted towards a P4P structure and that this disparity needs recalibrating (NHS Alliance, 2014).

## Capitated payments for services

Capitated payment systems offer a payment per person for a defined set of interventions, rather than a payment per service provided. In this sense they are a counterbalance to the P4P model. They exist in varying contractual and organisational forms across health care systems internationally. At one extreme are comprehensive integrated health systems, in which all care costs from primary and preventive services to specialist care are provided in return for a global, annual payment per enrolled individual. This may be risk adjusted to take account of individual comorbidities. At the other end are contracts to deliver a single, defined pathway of care or range of services in return for an annual payment for each patient.

There are two defining features of capitated contracts: providers carry financial risk, and contracts are inherently less interventional than P4P schemes. The onus lies with the contract holder to improve efficiency while delivering improved health care. Overspending against the capitated budget may have to be met by the provider, while savings could represent extra financial gains. Payers and providers agree on broad outcome measures and how ongoing performance information is fed back, but centrally driven micro-management to the degree seen in the UK’s QOF scheme is absent.

Appropriate day-to-day functioning relies on the inherent motivation of providers to reduce total spending while upholding expected professional behaviours (Himmelstein and others, 2014). The combination of flexibility and responsibility theoretically empowers providers to push for improvements in their services without bureaucratic restrictions.

### Capitation in UK general practice

Capitated funding is well established in NHS general practice. Until 2004, a capitated fee per patient was paid to all GPs for the provision of legislated general medical services (Hughes, 1993). This changed in 2004 when core funding contracts were transferred from individual GPs to GP practices in an attempt to remove the disincentive of employing salaried doctors. Capitation still forms the bulk of the funding stream, with QOF and enhanced services contracts making up the remainder. There are three types of capitation contracts:

- general medical services
- personal medical services
- alternative provider medical services.

A 'global sum' allocation is shared among all of UK's general medical services practices. There is an adjustment for age, sex, morbidity of patient lists, and contextual factors such as rurality and patient list turnover (Peckham and Gousia, 2014). Some 30 to 40 per cent of general practices have a locally negotiated personal medical services contract, but with little difference in the proportion of funding made up by capitation. The alternative provider medical services contract is negotiated for primary care services delivered by private companies, which, although on the rise, form a relatively small component of total primary care activity (see Marshall and others (2014) for a more detailed account of general practice funding).

Peckham and Gousia (2014) carried out a comprehensive review of different GP payment structures, including capitation. Interestingly, no papers from the UK were included. Despite this, the review indicated that capitation models increase preventative care (Canada) and reduce total costs for all services (USA), but may increase referral rates to hospitals and specialists (Norway) and shorten consultation times (USA). Studies were mostly cross-sectional surveys and regression analyses.

Taking another example from UK health care, personal dental services pilots were introduced in the mid-1990s to find new ways to tackle rising costs of fee-for-service contracts, inequalities to access, and variation in oral health. One payment model piloted was a capitated service, bringing together a multi-practice group of general dentists. An evaluation funded by the Department of Health found: access improved, with extended opening hours and a reduction in complaints due to access; there was better use of a multidisciplinary team; there was an increase in patients registered; and numbers of non-restorative treatments increased, suggesting a shift from interventional to preventative activity (Goodwin and others, 2003).

### **Using capitated contracts to drive collaboration**

In some situations, financial risk can be used to encourage cooperation between collaborating providers, with capitation contracts incentivising providers to cut across organisational and professional boundaries.

Two types of contract are emerging in the NHS. In prime contracting, a contract is awarded to one lead, or prime, contractor, which can subcontract specific areas within services or care pathways to other providers while remaining responsible to the commissioners for the delivery of the entire service. In alliance contracting, commissioners may hold multiple contracts with different providers, but all participating organisations are linked through an alliance board or leadership team, all participate in significant decisions and share in risks and gains. Alliance contracts are typically commissioner-led, and commissioners are members of the alliance and share in the risks.

Alliance contracts have been used successfully in the construction industry and for large-scale, national infrastructure projects (see, for example, [Welsh Water](#) (Annett, 2011)). Their success depends on creating shared goals across participating organisations and an alignment of values and drivers. This approach to contracting could stimulate high-performing providers to disseminate their knowledge and experience, and to support weaker providers. It is thought that the subsequent exchange of ideas and shared accountability improves care standards for the population. Evidence of shared financial risk and collaboration is also emerging in primary care. A time series analysis of an asthma care improvement scheme incentivised a threshold for a group of independent organisations, treating it as a single entity, and reported a positive change in the way practices interacted with one another, with an acceleration in shared learning (Mandel and Kotagal, 2007). Addicott and Ham (2014) evaluated contracts in the NHS that used varying degrees of shared financial risk in locally commissioned contracts. Based on their observations they asserted that engagement between providers and commissioners had increased.

### **Underestimating funding needs and managing risk and accountability**

A concern with using capitation contracts is that funding needs may be underestimated. Budget allocation should reflect recent actual and projected spending levels, adjusting for risk and inflation. Patient-level data analysis is critical for enabling accurate projections, but the required data is often not available. Also, providers can become overly focused on financial savings for self-interested reasons, to the detriment of high-quality care. Difficulties are also likely to arise in deciding who has overarching accountability for patient safety in multi-provider contracts, making highly complex governance frameworks necessary. This complexity could result in a lack of clarity, leading to problems with interpretation and general unworkability. Adding in the conflict of interest concerns over GPs performing dual roles as providers and commissioners only serves to heighten this level of confusion (Addicott and Ham, 2014; Holder and others, 2015).

### **Capitated contracts in the US healthcare system**

Capitated contracts were a feature of US-managed care in the 1990s but fell out of favour in the early 2000s. Zuvekas and Cohen (2004) argued that smaller organisations

in particular were unlikely to subscribe to the greater financial risk and administration burden that capitated contracts require in comparison with fee-for-service arrangements. More sophisticated forms of capitated contract, blended structures, have since emerged, where incentives are designed to balance the achievement of quality and efficiency.

This approach is exemplified by the Alternative Quality Contract developed by Blue Cross Blue Shield (Massachusetts, United States) and combining global payments with performance incentives. This scheme has slowed growth in health care spending with overall savings of 3.3 per cent, while driving quality improvements in areas such as chronic and preventative care (Song and others, 2012). A relatively long-term five-year contract offers stability for providers to realise these improvements. By the fourth year of operation, savings were greater than the cost of financial incentives, some of which could be returned to providers as part of the shared savings incentive (Song and others, 2014).

### **Accountable care organisations**

More recently, the use of capitated funding has been extended to support the formation of accountable care organisations (ACOs). Over 600 of these groups have now formed with varying organisational structures (Petersen and others, 2014). ACOs are networks of providers with a united governance framework that assume accountability for total cost and quality of care (Burns and Pauly, 2012). Health provision improvements are achieved through a strong emphasis on coordinated primary and community care, case managing high-risk users and promoting self-management (Moore, 2014). There are financial incentives underpinning a hospital readmissions reduction programme and encouraging 'value-based commissioning' (Jha, 2015). Some are set up to encourage cost savings by surplus sharing arrangements. Others stipulate dual-deficit and surplus accountability, and undertaking the additional financial risk usually reflects entitlement to a larger proportion of any savings. A significant proportion of ACOs have arisen from independent practice associations. These loosely affiliated, independent physician groups garner particular interest because of parallels drawn to multispecialty community providers envisioned for England (Dixon, 2014; Muhlestein and others, 2014; NHS England, 2014). Shortell and others (2014) highlight that ACOs will vastly broaden levels of understanding of capitation funding and shared risk.

Preliminary data from 114 ACOs in the Medicare Shared Savings Program (MSSP) showed that 54 were keeping costs below budget, with 29 of them below the 2 per cent threshold, entitling them to a share in the savings (Petersen and Muhlestein, 2014). MSSP-allied ACOs are relevant because most are networks of individual practices or group practices (Centers for Medicare and Medicaid Services, 2014). In another study, primary care physicians were shown to be better informed about specialist care provided to their ACO programme patients, and patient experience was higher in a comorbid subgroup when matched to controls, supporting the notion that shared financial risk can reverse the impact of fragmented care (McWilliams and others, 2014). One caveat to bear in mind is that ACOs do not necessarily provide all care. Patients are free to seek care outside their ACO, even for services the organisation offers. This invariably confounds any performance and outcomes measurement.

Of 32 pioneering ACOs mandated under the Affordable Care Act, all are meeting quality metric thresholds, and 25 have reduced admission rates to hospitals. More than half have generated cost savings, with a combined total of \$147 million. At time of writing, 23 pioneer ACOs remain – seven have made the shift to an MSSP ACO, while two left the experimental initiative completely (Petersen and Muhlestein, 2014; Shortell and others, 2014). The MSSP is theoretically a less risky financial model as it effectively does not penalise overspends, and this may partially explain the transition.

Pioneer organisations typically evolved from large managed care organisations, some of whom had an established tradition of vertically integrated care. Transferability to the NHS may be limited at present, as vertically integrated organisations remain an embryonic concept, although they will serve as useful markers for primary and acute care systems in the near future (NHS England, 2014).

With long-term analyses still awaited, there is some uncertainty over the sustainable benefits to care provision and cost containment (Burns and Pauly, 2012), and questions remain about how to design incentive arrangements. Established ACOs aspire to a model comprising risk-adjusted partial capitation payments with quality-based bonuses (McClellan and others, 2010). Experts elsewhere recommend combined capitation and P4P remuneration structures to capture benefits from both approaches while mitigating their respective weaknesses (Roland and Campbell, 2014).

## Regulation

Health care regulation includes a collection of activities that set, monitor and enforce minimum standards in care (Goodwin and others, 2011b) and that are overseen by a designated statutory body. Regulation can be targeted at individuals (for example, licencing and revalidating clinicians) or organisations. This briefing focuses on the latter.

A recent Cochrane review was unable to draw conclusions from the impact of external inspections on patient outcomes and professional behaviour due to a lack of high-quality evaluations. Only two studies were deemed methodologically worthy (Flodgren and others, 2011b). One, a randomised controlled trial based in South Africa found no association between accreditation practice and hospital quality indicators. In England, an evaluation of the Care Quality Commission's hospital inspection regime identified problems with the cost, timing, consistency and reliability of assessment. The authors noted a positive response in inspected institutions to the introduction of ratings for each clinical service, but raised questions about the consistency and reliability of rating scores (Walshe and others, 2014). A further evaluation of the overall health and care inspection programme, which includes general practice inspection, is ongoing at the time of writing.

In the United States, the Joint Commission is recognised as one of the largest and longest-established external accreditation models (Schyve, 2000). They involve a combination of structured peer inspections and performance data feedback. In some instances, providers are expected to demonstrate evidence of acting on the recommendations given. Accreditation is generally seen as a desirable activity: benefits include better public confidence in the relevant organisations, recognition of service improvement outside conventional performance data capture and trustworthy appraisals for the government and purchasers (Valori and others, 2013).

Observational analysis of US-based health care organisations reported improved patient outcomes such as reduced mortality rates in trauma centres and better compliance with evidence-based management (Schmaltz and others, 2011). The authors highlighted a correlation between accredited status and high-performing hospitals.

In another example, a voluntary review service set up by the American College of Obstetricians and Gynaecologists reported largely positive feedback from participating organisations, although requests for follow-up were infrequent (Stumpf, 2007). The investigator emphasised that a non-coercive format with use of peer review were key to dressing the procedure as a corrective, evaluative one, rather than a punitive one.

There are several drawbacks with accreditation programmes (Sutherland and Leatherman, 2006):

- they demand time and resources (and, notably, an opportunity cost in terms of lost clinical time if these programmes are peer led)
- there is a dearth of validated evaluation tools
- there is a similar lack of peer or credible evaluators.

Overall, accreditation and other regulation processes, as some authors have pointed out, are more representative of quality assurance activity than quality improvement. They serve to enforce an expected minimal standard in care (Roland and others, 2001).

### **Clinical leadership and professionally led change and improvement**

Clinical leaders are defined as those who retain their clinical duties in some capacity, but at the same time hold responsibilities for “strategic direction, [...] resource management and collaborative learning” (Edmonstone, 2009).

Workshop participants commented on the need to support GPs in leadership roles, providing the resources, support and protected time to be better placed to influence key decisions. In scaled-up general practice organisations there will be a growing requirement for primary care clinicians to ‘step up’ to more formal administrative posts, becoming equally accountable for clinical and financial outcomes.

Clinicians bring front-line knowledge about their organisation and credibility among their peers (Goodwin and others, 2011b). A critical factor for sustainable change is ensuring front-line professionals ‘own’ the improvement agenda (James and Savitz, 2011). Implementing new ways of learning, working and improving care requires skills in understanding, motivating and leading teams, as well as in planning, tracking and evaluating organisational strategies. However, one survey of GPs attending NHS Institute for Innovation and Improvement training in 2010 reported that 96 per cent described ‘how to engage and lead their colleagues in new ways of working’ as one of their chief unmet learning needs (Dawda and others, 2010).

Health care organisations in the United States such as Kaiser Permanente and Geisinger have established in-house physician executive leadership programmes. These individuals ordinarily go on to occupy board-level-equivalent positions within the organisation, and the advent of such programmes are correlated with improved organisation performance (Mountford and Webb, 2009). Conversely, the failure of some independent practice

associations (networks of independent physician practices in the US) has been attributed to the lack of strong physician leadership (Casalino, 2011). The motivational and goal-setting role of clinical leaders is an important driver for improvement.

### **Public outcomes reporting and benchmarking**

Clinicians have altruistic tendencies and value their reputation in society. Using this can motivate enduring changes in behaviour (Addicott and Ham, 2014). Benchmarking is sometimes seen as an extension of public reporting – a tool which also aids rapid peer comparison. For example, after introducing a performance dashboard to compare selected measures of diabetic care across networks of practices in Tower Hamlets, there was a significant improvement in clinical markers of diabetes after 12 months (Fountaine and others, 2012).

Further afield, Schmaltz and others (2011) reported improvements in an observed group of hospitals obliged to report performance data publicly. In another study, Petersen and others (2013) suggested that discontinuation of online feedback reporting among doctors after a trial ended contributed to a fall in performance. Casalino and others (2003) outlined improvements seen in chronic care management through public ratings, but the same study found individual financial rewards were ineffective. Kiefe and others (2001) proposed a synergistic effect between public performance reporting and confidential peer feedback from colleagues in their randomised controlled trial of a quality improvement programme based in Alabama. They concluded that additional professional feedback resulted in improvements among primary care physicians beyond what would have been expected from a public performance reporting initiative alone.

Despite the above, evaluations are few in number and their design limits our ability to draw causal relationships between public reporting and improved outcomes (Marshall and others, 2003). Invariably, there are examples where public reporting has not demonstrated improvement in care either (Jha and others, 2009).

Others have highlighted the challenges of creating benchmarks that can be applied across organisations. All have a uniqueness dictated by context and the population they serve. Another concern when comparing organisations at differing levels of performance is the theoretical potential for regression in higher-performing practices compared with an arithmetic mean (Dawda and others, 2010).

### **Peer review and learning**

On the peer-to-peer comparison theme, there is empirical data suggesting that improved health outcomes can result from peer review and learning. Sharing knowledge, experience and mutual understanding with clinicians in similar positions can fast-track practical learning and cultivate relationships (Grol, 1994).

Historically, general practice in the UK has pioneered peer learning and support. Balint groups<sup>3</sup> and equivalents are embedded into GP training and schemes such as the Royal

---

<sup>3</sup> Psychoanalyst Michael Balint pioneered psychological training seminars for GPs in London in the late 1950s. Rather than lectures, doctor education was delivered through case presentation and small group discussions, focusing on the relationship between doctor and patient. Today, these groups are made up of GPs, one of whom is a 'leader' who facilitates the group. A case is brought to the forum by a

College of General Practitioners' [First5](#) represent formalised structures of peer review practice (Taylor and others, 2011).

In terms of more structured evaluation, the European Working Party on Quality in Family Practice surveyed peer-review activity across Europe. Qualitative analysis suggested 'peer led' peer groups were considered most effective (Beyer and others, 2003). This aligns with established behavioural science theories claiming that individuals will alter behaviour if they respect the individuals adopting and leading change (Fountaine and others, 2012).

A controlled study of 43 participants in a peer review group of GPs based in the Netherlands demonstrated improved history-taking, communication with patients, follow-up decisions and drug prescribing (Beyer and others, 2003).

Within the hospital sector, voluntary peer review of intensive care units was described as a meaningful exercise for quality improvement by participating intensivists; shared understanding of the functioning of intensive care units among the peer assessors lessened barriers for those being assessed (Kumpf and others, 2014). Elsewhere, a primary care transformation programme led by a large US health insurer found that introducing a learning collaborative (in the form of monthly meetings) contributed to reduced unscheduled hospital admissions and cost of care (Fountaine and others, 2012).

More evaluation is needed to understand what associations might exist between public reporting, peer review and incentivising professional reputation. Empirical observations imply a correlation but do not go far enough to be able to quantify their usefulness or steer implementation in improvement initiatives.

## Organisational development support

### Audit

Auditing (the process of measuring performance of professionals or the organisations they work for) against evidence-based standards has become a customary part of general practice, largely as a result of the groundwork laid by medical audit advisory groups. They were first set up in 1989 with the aim of coordinating and monitoring medical audits in general practice. Their oversight has established a self-propagating culture of auditing within primary care.

A Cochrane collaboration that was not limited to studies in primary care concluded that auditing and feedback activity had led to 'small but important' improvements in professional practice (Ivers and others, 2012). The same authors more recently questioned the justification for allocating resources to studies testing the audit effectiveness, such is their confidence that sufficient evidence already exists after compiling a cumulative meta-analysis (Ivers and others, 2014).

---

volunteer GP who presents his/her case without interruption. Following brief clarifying questions by the rest of the group the volunteer is asked to remain silent while the group discusses the case for 20–30 minutes. Groups meet regularly and, in the interests of continuity, frequent changes to group compositions occur. Observed benefits of this peer learning format include: a safe place to discuss interpersonal issues with sympathetic listeners, encouraging the 'volunteer' to appreciate differing perspectives in a non-threatening arena, and enabling Balint group members to reach a deeper level of understanding of patients' feelings.

## Continuous improvement methodology

Avoidable patient harm was thrust into the spotlight during the 1990s, driven by the seminal work of the US Institute of Medicine report 'To Err Is Human' (Kohn and others, 2000). This led to endeavours to adopt improvement science methodologies in health care (DelliFraine and others, 2010). Clinical leaders strove to learn about methods that gave other high-risk groups and manufacturing industries their enviable quality and safety records (Hudson and others, 2012).

Continuous improvement methodology is the process of identifying suboptimal activity, followed by planning, implementing and evaluating systems to rectify these issues in a reliable and efficient manner (Dawda and others, 2010). A suite of frameworks supports this iterative procedure – for example, 'Lean' and 'Six Sigma'. Importance is placed on exchange of learning throughout. Unpicking internalised cultures and behaviour as well as identifying undesirable processes is critical to more sustainable change and a habitual improvement ethos.

There are frequent examples of continuous improvement methodology tools being used in health care settings, although accompanying assessment often lacks robust methodology and analysis (DelliFraine and others, 2010). More examples of use are found in the hospital setting than in primary care; surgical specialities are technical and process intensive, similar to other pioneering industries such as car manufacturing and aerospace. Reducing variation in production is high-stakes work, with similar goals to those of reducing variation in operative and post-operative care processes (Nicolay and others, 2012).

In a comprehensive review of studies of Six Sigma and Lean usage in health care services overall, DelliFraine and others (2010) concluded that evidence was too sparse and weak to measure impact on clinical outcomes, processes of care or financial performance of organisations.

Of the occasions where continuous improvement methodology has been used in general practice (Cox and others, 1999; Scottish Government, 2010), results have been promising. An overview of the Health Foundation's 'Engaging with Quality in Primary Care' programme noted modest success from its nine projects (Health Foundation, 2012). Clinical teams in these nine projects were given training and support from the Health Foundation. Over three years, this focused on diverse specific health issues including back pain, reducing health inequalities and tackling domestic violence. Three teams reported small improvements in patient outcomes and seven reported improvements in patient care.

However, ambivalence towards continuous improvement methodology within the GP community was exemplified in a recent survey. Dawda and others (2010) asked delegates at a patient safety improvement course to complete a survey. From the 135 general practice staff attendees, 98 per cent responded, of which 87 per cent were GPs. Many voiced the opinion that there was further room for improving the culture of continuous quality improvement in general practice. Some 5 per cent of GPs had heard of the 'plan, do, study, act' model but almost none used it in their practices. Similarly, a few were aware of the other improvement models like Lean and Six Sigma but none had used them. This information is particularly telling given that delegates actively

chose to attend the course, which suggests that these doctors fell into the 'engaged' bracket (Dawda and others, 2010). A lack of time, poor knowledge about the correct use of such models and cultural barriers within practices were common reasons cited.

Dawda and others (2010) support setting up groups akin to medical audit advisory groups, tasked with championing continual quality improvement and supporting UK primary care to apply it to day-to-day work. To this end, practice facilitation of primary care organisations in North America is an interesting comparator. Practice facilitation is training, support and mentorship given to primary care organisations by a individual or group of individuals, trained in organisational development, project management and quality improvement methods (Knox and others, 2011). The aim is to help organisations engage with improvement activity, and in turn to achieve incremental transformative goals. Practice facilitation is thought to differ from traditional consultancy services because relationships between facilitators and organisations are both 'closer' and 'longer term'. Recent evidence supports the positive rhetoric: one meta-analysis found that primary care organisations were 2.76 times more likely to adopt evidence-based guidelines through practice facilitation (Baskerville and others, 2012).

## Conclusion

This short overview of literature demonstrates the complexity and variability of initiatives to change and improve health services and the methodological challenges of evaluating their impact. Much published research is methodologically weak and supports only limited conclusions. Just as conventional randomised controlled trials are vital for proving or disproving the efficacy of novel clinical interventions, there is a pressing need for better analysis of general practice policy using validated research methodology. Nevertheless, the literature suggests that a multi-faceted approach is needed using a combination of the levers explored here.

The QOF is an example of a large-scale P4P programme that resulted in early improvements that plateaued in later years, suggesting a ceiling of effect. The scheme rewards followership rather than innovation and is criticised for being restrictive and focused on a single disease, fragmenting care. Such findings are stimulating policy-makers to reshape reimbursement structures in primary care and to reduce the proportion of GP income that is directly linked to the QOF.

Capitation contracts are attracting attention as an alternative approach through which financial incentives can be linked to whole-system outcomes. They can be adjusted to take account of local health needs and have a smaller performance management burden. Empirical evidence indicates that capitation contracts sharing financial risk between providers can lead to greater collaboration between often fragmented health and care services. Such contracts could potentially be used to draw emerging larger-scale primary care organisations into integrated services with other local providers.

Professional incentives and peer review and learning can also be powerful drivers for sustainable, positive change. Observational studies indicate that public and peer performance reporting can facilitate quality improvements in care. Based on qualitative work with peer review groups in general practice, peer review is another route to enable sustained improvements. Scaled organisations and federated GP surgeries are in a favourable position to exploit intrinsic motivations.

## References

- Addicott R and Ham C (2014) *Commissioning and funding general practice. Making the case for family care networks*. The King's Fund.
- Alshamsan R, Lee JT, Majeed A, Netuveli G and Millett C (2012) Effect of a UK pay-for-performance program on ethnic disparities in diabetes outcomes: interrupted time series analysis. *Ann Fam Med* 10, 228–34.
- Annett N (2011) Nigel Annett: Unleashing dynamism at Welsh Water. In: Annett N (ed.). Nuffield Trust, <http://www.nuffieldtrust.org.uk/talks/videos/nigel-annett-unleashing-dynamism-welsh-water> [accessed 12 March 2015].
- Baskerville NB, Liddy C and Hogg W (2012) Systematic review and meta-analysis of practice facilitation within primary care settings. *Ann Fam Med* 10, 63-74.
- Batalden PB and Davidoff F (2007) What is 'quality improvement' and how can it transform healthcare? *Qual Saf Health Care* 16, 2-3.
- Beyer M, Gerlach FM, Flies U and Grola R (2003) The development of quality circles/peer review groups as a method of quality improvement in Europe. Results of a survey in 26 European countries. *Family Practice*, 443-451.
- Burns LR and Pauly MV (2012) Accountable care organizations may have difficulty avoiding the failures of integrated delivery networks of the 1990s. *Health Aff (Millwood)* 31, 2407-2416.
- Campbell SM, Reeves D, Kontopantelis E, Sibbald B and Roland M (2009) Effects of pay for performance on the quality of primary care in England. *N Engl J Med* 361, 368-378.
- Casalino L, Gillies RR, Shortell SM, Schmittiel JA, Bodenheimer T, Robinson JC, Rundall T, Oswald N, Schauffler H, Wang MC (2003) External incentives, information technology, and organized processes to improve health care quality for patients with chronic diseases. *JAMA* 289, 434-441.
- Casalino LP (2011) *GP commissioning in the NHS in England: Ten suggestions from the United States*. The Nuffield Trust.
- Centers For Medicare And Medicaid Services (2014) Fast Facts – All Medicare Shared Savings Program ACOs.
- Cox S, Wilcock P and Young J (1999) Improving the repeat prescribing process in a busy general practice. A study using continuous quality improvement methodology. *Qual Health Care* 8, 119–125.
- Dawda P, Jenkins R and Varnam R (2010) *Quality improvement in general practice*. The King's Fund.
- Dellifraigne JL, Langabeer JRN and Nembhard IM (2010) Assessing the evidence of Six Sigma and Lean in the health care industry. *Qual Manag Health Care* 19, 211-225.
- Dixon A (2014) What can we learn from the US experience of accountable care organisations? Available from: <https://annadixon.blog.gov.uk/2014/04/15/accountable-care-organisations/> [Accessed 23 December 2014].
- Doran T, Fullwood C, Reeves D, Gravelle H and Roland M (2008) Exclusion of patients from pay-for-performance targets by English physicians. *N Engl J Med* 359, 274-284.
- Doran T and Roland M (2010) Lessons from major initiatives to improve primary care in the United Kingdom. *Health Aff (Millwood)* 29, 1023-9.
- Edmonstone J (2009) Clinical leadership: the elephant in the room. *Int J Health Plann Manage* 24, 290–305.
- Flodgren G, Eccles MP, Shepperd S, Scott A, Parmelli E and Beyer FR (2011a) An overview of reviews evaluating the effectiveness of financial incentives in changing healthcare professional behaviours and patient outcomes. *Cochrane Database Syst Rev* 7, CD009255.
- Flodgren G, Pomey MP, Taber SA and Eccles MP (2011b) Effectiveness of external inspection of compliance with standards in improving healthcare organisation behaviour, healthcare professional behaviour or patient outcomes. *Cochrane Database Syst Rev* 11, CD008992.
- Fountainaine T, Richardson B and Wilson F (2012) *How to improve clinical behavior in primary care*. Health International. McKinsey and Company.
- Gillam S (2010) Should the Quality and Outcomes Framework be abolished? Yes. *BMJ* 340, c2710.
- Gillam SJ, Siriwardena AN and Steel N (2012) Pay-for-performance in the United Kingdom: impact of the quality and outcomes framework: a systematic review. *Ann Fam Med* 10, 461-8.
- Goodwin N, Dixon A, Poole T and Raleigh V (2011a) Chapter 4: Developing an environment for quality improvement. In: Goodwin and others (ed). *Improving the quality of care in general practice*. The King's Fund.
- Goodwin N, Dixon A, Poole T and Raleigh V (2011b) *Improving the quality of care in general practice*. The King's Fund.
- Goodwin N, Morris AJ, Hill KB, Mcleod HS, Burke FJ and Hall AC (2003) National evaluation of personal dental services (PDS) pilots: main findings and policy implications. *Br Dent J* 195, 640-3.
- Grant S, Huby G, Watkins F, Checkland K, McDonald R, Davies H and Guthrie B (2009) The impact of pay-for-performance on professional boundaries in UK general practice: an ethnographic study. *Social Health Illn* 31, 229-45.
- Grol R (1994) Quality improvement by peer review in primary care: a practical guide. *Qual Health Care* 3, 147-152.
- Ham C, Dixon A and Brooke B (2012) *Transforming the delivery of health and social care*. The King's Fund.
- Harrison M, Dusheiko M, Sutton M, Gravelle H, Doran T and Roland M (2014) Effect of a national primary care pay for performance scheme on emergency hospital admissions for ambulatory care sensitive conditions: controlled longitudinal study. *BMJ* 349, g6423.
- Health Foundation (2012) *Evidence in brief: Involving primary care clinicians in quality improvement*. The Health Foundation.
- Himmelstein DU, Ariely D and Woolhandler S (2014) Pay-for-performance: toxic to quality? Insights from behavioral economics. *Int J Health Serv* 44, 203-214.
- Holder H, Robertson R, Ross S, Bennett L, Gosling J and Curry N (2015) *Risk or reward? The changing role of CCGs in general practice*. The Nuffield Trust.

- Hudson DW, Holzmueller CG, Pronovost PJ, Gianci SJ, Pate ZT, Wahr J, Heitmiller ES, Thompson DA, Martinez EA, Marsteller JA, Gurses AP, Lubomski LH, Goeschel C A and Pham JC (2012) Toward improving patient safety through voluntary peer-to-peer assessment. *Am J Med Qual* 27, 201-209.
- Hughes D (1993) General practitioners and the new contract: promoting better health through financial incentives. *Health Policy* 25, 39-50.
- Ivers N, Jamtvedt G, Flottorp S, Young JM, Odgaard-Jensen J, French SD, O'Brien MA, Johansen M, Grimshaw, J and Oxman AD (2012) Audit and feedback: effects on professional practice and healthcare outcomes. *Cochrane Database Syst Rev* 6.
- Ivers NM, Grimshaw JM, Jamtvedt G, Flottorp S, O'Brien MA, French SD, Young J and Odgaard-Jensen J (2014) Growing literature, stagnant science? Systematic review, meta-regression and cumulative analysis of audit and feedback interventions in health care. *J Gen Intern Med* 29, 1534-1541.
- James BC and Savitz LA (2011) How Intermountain trimmed health care costs through robust quality improvement efforts. *Health Aff (Millwood)* 30, 1185-91.
- Jha AK (2015) 5 Years On: A Bird's Eye Look at Improvement Under ACA. The Nuffield Trust Health Summit 2015, 26 February 2015.
- Jha AK, Orav EJ and Epstein AM (2009) Public reporting of discharge planning and rates of readmissions. *N Engl J Med* 361, 2637-2645.
- Kamenica E (2012) Behavioral economics and psychology of incentives. *Annual Review of Economics* 4, 427-452.
- Kiefe CI, Allison JJ, Williams OD, Person SD, Weaver MT and Weissman NW (2001) Improving quality improvement using achievable benchmarks for physician feedback. *JAMA* 285, 2871-2879.
- Knox L, Taylor EF, Geonnoti K, Machta R, Kim J, Nysenbaum J and Parchman M (2011) *Developing and Running a Primary Care Practice Facilitation Program: A How-to Guide* (Prepared by Mathematica Policy Research under Contract No. HHS2902009000191 TO 5.). Rockville, MD.
- Kohn LT, Corrigan JM and Donaldson MS (2000) *To Err Is Human: Building a Safer Health System*. National Academies Press.
- Kontopantelis E, Reeves D, Valderas JM, Campbell S and Doran T (2013) Recorded quality of primary care for patients with diabetes in England before and after the introduction of a financial incentive scheme: a longitudinal observational study. *BMJ Qual Saf* 22, 53-64.
- Kumpf O, Bloos F, Bause H, Brinkmann A, Deja M, Marx G, Kaltwasser A, Dubb R, Muhl E, Greim CA, Weiler N, Chop I, Jonitz G, Schaefer H, Felsenstein M, Liebeskind U, Leffmann C, Jungbluth A, Waydhas C, Pronovost P, Spies, C and Braun JP (2014) Voluntary peer review as innovative tool for quality improvement in the intensive care unit - a retrospective descriptive cohort study in German intensive care units. *Ger Med Sci* 12.
- Lester H, Matharu T, Mohammed MA, Lester D and Foskett-Tharby R (2013) Implementation of pay for performance in primary care: a qualitative study 8 years after introduction. *Br J Gen Pract* 63, e408-15.
- Mandel KE and Kotagal UR (2007) Pay for performance alone cannot drive quality. *Arch Pediatr Adolesc Med* 161, 650-655.
- Marshall L, Charlesworth A and Hurst J (2014) *The NHS payment system: evolving policy and emerging evidence*. The Nuffield Trust.
- Marshall MN, Shekelle PG, Davies HTO and Smith PC (2003) Public reporting on quality in the United States and the United Kingdom. *Health Affairs* 22, 134-148.
- McClellan M, Mckethan AN, Lewis JL, Roski J and Fisher ES (2010) A national strategy to put accountable care into practice. *Health Affairs* 29, 989-990.
- McDonald R, Harrison S, Checkland K, Campbell SM and Roland M (2007) Impact of financial incentives on clinical autonomy and internal motivation in primary care: ethnographic study. *BMJ* 334, 1357.
- McDonald R, Sutton M, Kristensen SR, Zaidi S, Todd S, Konteh F, Hussein K and Brown S (2013) Evaluation of the Commissioning for Quality and Innovation Framework. University of Nottingham; University of Manchester.
- McWilliams JM, Landon BE, Chernen ME and Zaslavsky AM (2014) Changes in patients' experiences in Medicare accountable care organizations. *N Engl J Med* 371, 1715-1724.
- Mitchell C, Dwyer R, Hagan T and Mathers N (2011) Impact of the QOF and the NICE guideline in the diagnosis and management of depression: a qualitative study. *Br J Gen Pract* 61, e279-89.
- Moore A (2014) Show you can navigate integration. *Health Services J*, 28 November.
- Mountford J and Webb C (2009) *When Clinicians Lead*. McKinsey and Company.
- Muhlestein D, Gardner P, Merrill T, Petersen M and Tu T (2014) *A taxonomy of accountable care organizations: different approaches to achieve the triple aim*. Leavitt Partners.
- National Audit Office (2008) *NHS pay modernisation: new contracts for general practice services in England*. The Stationary Office: National Audit Office, London
- NHS Alliance (2014) *Think Big, Act Now: Creating a Community of Care*.
- NHS England (2014) *The Forward View Into Action: Planning for 2015/16*. NHS England.
- Nicolay CR, Purkayastha S, Greenhalgh A, Benn J, Chaturvedi S, Phillips N and Darzi A (2012) Systematic review of the application of quality improvement methodologies from the manufacturing industry to surgical healthcare. *Br J Surg* 99, 324-35.
- Peckham S and Gousia K (2014) GP payment schemes review. PRUComm.
- Petersen LA, Simpson K, Pietz K, Urech TH, Hysong SJ, Profit J, Conrad DA, Dudley RA and Woodard LD (2013) Effects of individual physician-level and practice-level financial incentives on hypertension care: a randomized trial. *JAMA* 310, 1042-50.

- Petersen M, Gardner P, Tu T and Muhlestein D (2014) Growth and Dispersion of Accountable Care Organizations: June 2014 Update. Leavitt Partners.
- Petersen M and Muhlestein D (2014). ACO Results: What We Know So Far. *Health Affairs* blog [Online]. <http://healthaffairs.org/blog/2014/05/30/aco-results-what-we-know-so-far/> [accessed 2 January 2015].
- Raleigh VS and Foot C (2010) *Getting the Measure of Quality*. The King's Fund.
- Roland M and Campbell S (2014) Successes and failures of pay for performance in the United Kingdom. *N Engl J Med* 370, 1944-1949.
- Roland M, Campbell S and Wilkin D (2001) Clinical governance: a convincing strategy for quality improvement? *J Manag Med* 15, 188-201.
- Rosenthal MB and Frank RG (2006) What is the empirical basis for paying for quality in health care? *Med Care Res Rev* 63, 135-57.
- Schmaltz SP, Williams SC, Chassin MR, Loeb JM and Wachter RM (2011) Hospital performance trends on national quality measures and the association with Joint Commission accreditation. *J Hosp Med* 6, 454-461.
- Schryve PM (2000) The evolution of external quality evaluation: observations from the Joint Commission on Accreditation of Healthcare Organizations. *International Journal for Quality in Health Care* 12, 255-258.
- Scottish Government (2010) *The Scottish Primary Care Collaborative Summary*. The Scotland Government. Available: <http://www.gov.scot/Publications/2010/10/25094316/1> [accessed 19 February 2015].
- Shortell SM, Addicott R, Walsh N and Ham C (2014) *Accountable care organisations in the United States and England. Testing, evaluating and learning what works*. The King's Fund.
- Siriwardena AN (2010) Should the Quality and Outcomes Framework be abolished? No. *BMJ* 340, c2794.
- Song Z, Rose S, Safran DG, Landon BE, Day MP and Chernew ME (2014) Changes in health care spending and quality 4 years into global payment. *N Engl J Med* 371, 1704-1714.
- Song Z, Safran DG, Landon BE, Landrum MB, He Y, Mechanic RE, Day MP and Chernew ME (2012) The 'Alternative Quality Contract' in Massachusetts, based on global budgets, lowered medical spending and improved quality. *Health Aff (Millwood)* 31, 1885-1894.
- Starfield B and Mangin D (2010) An international perspective on the basis for payment for performance. *Qual Prim Care* 19, 399-404.
- Stumpf PG (2007) Voluntary review of quality of care peer review for patient safety. *Best Pract Res Clin Obstet Gynaecol* 21, 557-564.
- Sutherland K and Leatherman S (2006) Regulation and quality improvement. A review of the evidence. Executive Summary. The Health Foundation.
- Sutton M, Elder R, Guthrie B and Watt G (2010) Record rewards: the effects of targeted quality incentives on the recording of risk factors by primary care providers. *Health Econ* 19, 1-13.
- Taylor C, Parsons J, Sparrow N and Gerada C (2011) The First5 concept. *Br J Gen Pract*.
- Town R, Kane R, Johnson P and Butler M (2005) Economic incentives and physicians' delivery of preventive care: a systematic review. *Am J Prev Med* 28, 234-40.
- Valori R, Rogers C, Johnston D and Ingham J (2013) Developing a strategy for accreditation of clinical services. *Clin Med* 13, 538-542.
- Walshe K, Addicott R, Boyd A, Robertson R and Ross S (2014) *Evaluating the Care Quality Commission's acute hospital regulatory model: final report*. The King's Fund and University of Manchester.
- Woolhandler S, Ariely D and Himmelstein DU (2012) Why pay for performance may be incompatible with quality improvement. *BMJ*.
- Zuvekas S and Cohen JW (2004) Trends in provider capitation, 1996-2000. Agency for Healthcare Research and Quality Working Paper No. 04006.

For more information about Nuffield Trust,  
including details of our latest research and analysis,  
please visit [www.nuffieldtrust.org.uk](http://www.nuffieldtrust.org.uk)



Download further copies of this policy response  
from [www.nuffieldtrust.org.uk/publications](http://www.nuffieldtrust.org.uk/publications)



Subscribe to our newsletter:  
[www.nuffieldtrust.org.uk/newsletter](http://www.nuffieldtrust.org.uk/newsletter)



Follow us on Twitter: [Twitter.com/NuffieldTrust](https://twitter.com/NuffieldTrust)

---

---

Nuffield Trust is an authoritative  
and independent source of  
evidence-based research and  
policy analysis for improving  
health care in the UK

---

59 New Cavendish Street  
London W1G 7LP  
Telephone: 020 7631 8450  
Facsimile: 020 7631 8451  
Email: [info@nuffieldtrust.org.uk](mailto:info@nuffieldtrust.org.uk)

[www.nuffieldtrust.org.uk](http://www.nuffieldtrust.org.uk)

Published by the Nuffield Trust.  
© Nuffield Trust 2015. Not to be reproduced  
without permission.