

Helen Lester, Tatum Matharu, Mohammed A Mohammed, David Lester and Rachel Foskett-Tharby

## Implementation of pay for performance in primary care:

a qualitative study 8 years after introduction

### Abstract

#### Background

Pay for performance is now a widely adopted quality improvement initiative in health care. One of the largest schemes in primary care internationally is the English Quality and Outcomes Framework (QOF).

#### Aim

To obtain a longer term perspective on the implementation of the QOF.

#### Design and setting

Qualitative study with 47 health professionals in 23 practices across England.

#### Method

Semi-structured interviews.

#### Results

Pay for performance is accepted as a routine part of primary care in England, with previous more individualistic and less structured ways of working seen as poor practice. The size of the QOF and the evidence-based nature of the indicators are regarded as key to its success. However, pay for performance may have had a negative impact on some aspects of medical professionalism, such as clinical autonomy, and led a significant minority of GPs to prioritise their own pay rather than patients' best interests. A small minority of GPs tried to increase their clinical autonomy with further unintended consequences.

#### Conclusion

Pay for performance indicators are now welcomed by primary healthcare teams and GPs across generations. Almost all interviewees wanted to see a greater emphasis on involving front line practice teams in developing indicators. However, almost all GPs and practice managers described a sense of decreased clinical autonomy and loss of professionalism. Calibrating the appropriate level of clinical autonomy is critical if pay for performance schemes are to have maximal impact on patient care.

#### Keywords

health services research; primary health care; pay for performance; professionalism.

### INTRODUCTION

Pay for performance is increasingly used internationally as a quality improvement tool. There are many examples of schemes in primary and secondary care in the US, Europe, Australasia, China, and low- and middle-income countries.<sup>1</sup> The Quality and Outcomes Framework (QOF) for primary care in England is the most extensive example of a major system-wide reform involving pay for performance. It was introduced in 2004 on a voluntary basis, and taken up by almost all of the profession.<sup>2</sup> Evidence of the impact of pay for performance on primary care is still relatively limited,<sup>3-5</sup> with, for example, conflicting findings about whether pay for performance is a cost-effective use of resources.<sup>6</sup>

At the time of this study, QOF consisted of 142 indicators including 87 clinical indicators (66% of the points). If all available points were achieved, pay for performance would account for 20% of the take-home pay of a profit sharing GP in England (about 70% of the GP workforce versus 30% who are salaried), compared to approximately 7% associated with other international pay for performance schemes.<sup>7</sup>

By 2012, approximately half the GPs in England had spent half their working lives practising within a pay for performance system, while the other half had greater experience of the pre-QOF era. The overarching aim of this study was to obtain a long-term perspective on QOF from

GPs and primary healthcare teams before memories of working in a pre-pay-for-performance era became less reliable. The specific objectives were to determine the extent to which previous concerns about pay for performance (such as autonomy, workload and surveillance) had persisted and to identify any new concerns as well as possible improvements to the QOF.

### METHOD

All general practices in primary care trusts (PCTs) purposively sampled from areas with different population densities, were invited by letter in Autumn 2011 to participate in piloting potential new QOF indicators. A smaller sample of practices was subsequently randomly selected from those that agreed to participate, to be nationally representative of practices across England in terms of practice size, QOF score, and deprivation.<sup>8</sup> Semi-structured interviews lasting about an hour were undertaken with practice staff between 23 March and 30 April 2012 by two experienced qualitative researchers (one a non-clinical and the other a clinical health services researcher). The health professionals interviewed were those most involved in the day-to-day implementation of QOF. The topic guide consisted of three questions:

- their views on if, how and why they would redesign pay for performance in the

**H Lester**, MD, FRCGP, professor of primary care; **T Matharu**, BA, MA, PhD, research associate; **MA Mohammed**, PhD, research fellow; **R Foskett-Tharby**, RGN, BSc, MSc, research fellow, School of Health and Population Sciences, University of Birmingham, Birmingham. **D Lester**, 4th year Medical Student, Imperial College, London.

#### Address for correspondence

Rachel Foskett-Tharby, Primary Care Clinical Sciences Building, School of Health and

Population Sciences, University of Birmingham, Edgbaston Campus, Birmingham, B15 2TT.

**E-mail:** r.fosketttharby@bham.ac.uk

**Submitted:** 5 November 2012; **Editor's response:** 31 December 2012; **final acceptance:** 4 February 2013.

©British Journal of General Practice

This is the full-length article (published online 28 May 2013) of an abridged version published in print. Cite this article as: **Br J Gen Pract 2013; DOI: 10.3399/bjgp13X668203**

## How this fits in

Pay for performance schemes are now part of many international health-related quality improvement initiatives. This interview-based study suggests that primary healthcare teams now welcome pay for performance as a routine part of primary care. Pay for performance may have led to subtle changes in medical professionalism, with a minority of family doctors now prioritising their own pay rather than patients' best interests. Calibrating clinical autonomy is critical if pay for performance schemes are to have maximal impact on patient care.

context of English primary care;

- how much income they would assign to pay for performance and why; and
- whether, on balance, pay for performance was a positive or negative feature of primary care.

Follow up questions were encouraged. The topic guide was piloted with two practices prior to the study start.

All interviews were audiotaped, professionally transcribed verbatim and checked for accuracy. Copies of the transcripts were available to interviewees, although none requested to see them. Each transcript was read and coded separately by the authors. Any coding disagreements were discussed until consensus was reached. Data collection and analysis were concurrent and iterative and continued until the study team felt theoretical saturation had been achieved.

## Data analysis

Analysis combined top-down, thematic coding guided by *a priori* knowledge of relevant theories and bottom-up, inductive coding that allowed themes to emerge from the data.<sup>9,10</sup> (See Appendix 1.) A range of approaches were used to validate data quality and credibility, including looking for disconfirming evidence.<sup>11</sup> The findings presented here are based on a synthesis of all interviews with healthcare staff.

## RESULTS

In Spring 2011, 991 practices were approached in 14 PCTs, and of the 57 (5.6%) who responded positively, 30 were recruited to be nationally representative and 23 of these then agreed to participate in the study (Table 1). (Practices are recruited to pilot QOF indicators on a 6-monthly basis as part of an agreed national indicator piloting protocol).<sup>12</sup> Forty-seven individuals were interviewed: 26 GPs (both profit sharing and salaried), 13 practice managers, six practice nurses and two practice administrative staff (Table 2). Twenty-seven (57%) of interviewees were female. The median and range of year of GP qualification were 1998 and 1970–2012. Half of the GPs had spent at least half of their general practice working lives within a pay for performance system (Table 3).

This article reports three key themes and nine nested subthemes.

### Theme 1: Routinisation of pay for performance into primary care work

*Sense of pride in practising evidence-based medicine.* Almost every interviewee was positive about the impact of introducing pay for performance into primary care. While some of this positive reaction was linked to comparisons with the state of primary care in other countries, most reflected comparisons with previous working practices and in particular, drew attention to the evidence-based nature of the indicators. There was a retrospective sense of disbelief from GPs of all ages that individualistic non-uniform care between practices had been allowed to persist for so long. Since 2004, QOF-related workload, which focused particularly on patients with long-term conditions, was described by interviewees as becoming more structured and proactively planned and managed on an annual basis, supported by increased computerisation. Patients followed a predetermined pathway with evidence-based indicators marking progress at regular intervals and clinics often planned around prevalence of illness in a practice (Box 1).

**Table 1. National representativeness of practices<sup>a</sup>**

Characteristic	English population	Study cohort
Number of practices	7819	30
<b>SOA Index of Multiple Deprivation 2010</b>		
Mean (SD)	26.2 (17.1)	26.1 (16.1)
10th–50th–90th percentile	7.2, 22.1, 51.8	8.1, 20.3, 52.7
<b>Practice list size 2010–2011</b>		
Mean (SD)	6882 (4172)	6346 (3226)
10th–50th–90th percentile	2350, 6077, 12 369	2706, 5384, 11 468
<b>Overall QOF achievement 2010–2011</b>		
Mean (SD)	89.2% (4.0%)	90.7% (2.3%)
10th–50th–90th percentile (%)	85.1, 89.8, 93.0	87.9, 90.6, 94.1

<sup>a</sup>Practices were sampled from the following 14 primary care trusts: Bath and North East Somerset, Birmingham East and North, Bristol, Bury, Devon, Enfield, Haringey, Kirklees, North Somerset, Nottinghamshire county teaching PCT, Oldham, Somerset, South East Essex, and Stockport. SD = standard deviation. SOA = super output area.

**Table 2. Demographic characteristics of interviewees**

Practice ID	Interviewee ID	Sex	GP year of qualification
ID1	GP1	Male	1983
	PM1	Female	
ID2	GP2	Male	1997
ID3	GP3	Male	1990
	GP4	Male	1996
	PN1	Female	
ID4	GP5	Male	1991
ID5	PN2	Female	
ID6	GP6	Male	1996
	PM2	Female	
ID7	GP7	Male	1987
	OAS1	Female	
	PM3	Male	
ID8	GP8	Female	1972
ID9	GP9	Male	1981
ID10	GP10	Male	1974
ID11	GP11	Female	1988
	PM4	Female	
ID12	GP12	Male	1970
	PM5	Female	
ID13	GP13	Male	1982
	OAS2	Female	
	GP14	Male	
	PM6	Female	
ID14	PM7	Female	
ID15	GP15	Male	1996
	PN3	Female	
	PN4	Female	
	PM8	Female	
ID16	GP16	Male	1990
	PM9	Female	
ID17	PM10	Female	
ID18	GP17	Male	1974
	GP18	Male	1972
ID19	GP19	Male	1985
	PM11	Female	
ID20	GP20	Female	1994
ID21	GP21	Male	1983
	PM12	Female	
ID22	PN5	Female	
	PN6	Female	
	GP22	Female	1981
	GP23	Female	1997
	GP24	Female	1999
	GP25	Male	2003
	GP26	Female	1997
ID23	PM13	Female	

GP = general practitioner. PM = practice manager. PN = practice nurse. OAS = other administrative staff.

attached to QOF was appropriate. Concern was voiced that if a smaller percentage (less than 10%) was attached to achievement, it would be insufficient to motivate practice teams to work as hard.

*Rhythm of the QOF year.* The relatively rapid way in which pay for performance had become a routine part of primary care was also helped by the structure it gave to the practice year. GPs, practice managers, and nurses talked about the need to put more time aside to work on pay for performance indicator issues in the second half of each financial year, creating a QOF-related seasonal rhythm to workload from April to March.

*Inconsistent changes and communication.* However a frequently reported problem was the need for greater consistency over the timing and extent of changes to the individual indicators and the overall QOF. During the past 8 years, there have been two major changes to the QOF (2006 and 2012) and smaller changes in most, but not all, other years. This inconsistency was seen by interviewees as working against routinisation, creating a sense of uncertainty that almost all felt could be improved through better communication between policymakers and front line practitioners, and an agreed timetable for changes. Biennial changes were most frequently favoured (Box 2).

## Theme 2: Impact of pay for performance on medical professionalism

Most of the internationally agreed attributes of medical professionalism (Appendix 1) were not perceived or described as being threatened by the introduction of pay for performance. For example, the application of expertise in the service of others was clearly recognised and reinforced through the use of evidence-based indicators. Accountability to others in the profession was also recognised by a majority when they noted that a small percentage of fellow health professionals (never themselves) may 'game' the system. However there were two specific aspects of medical professionalism where GPs in particular noted a change which they felt was attributable to the introduction of pay for performance indicators.

*Tension between GP self-interest and patients' best interests.* A small number of process measures (such as measuring blood pressure) were removed from QOF 7 years after introduction, when almost all

*Size of the scheme.* The size and therefore importance to practice profits was also a critical part of ensuring the routinisation of pay for performance into every day practice. Almost all interviewees felt that the income

**Table 3. GP year of qualification**

Year of qualification	Total
1970–1979	6
1980–1989	7
1990–1999	11
≥2000	2
Total	26

practices were achieving and sustaining maximal scores on these indicators.<sup>13</sup> These process measures were replaced by new indicators in new clinical areas of patient care. Three-quarters of the GPs felt this was appropriate even though the previous measurement work still had to be completed to achieve intermediate outcome indicators such as blood pressure control. However one-quarter of GPs described it as ‘disheartening’ to have indicators removed and wanted to continue to be paid a small amount of money to reflect the ongoing workload ‘something for maintaining quality you know’. So although a financial penalty, through the removal of process measures, and work load penalty, through the increased work needed to achieve new indicators in new clinical areas, appeared acceptable to a majority of GPs, a sizeable minority felt it was unfair.

*Reduction in clinical autonomy.* Almost all GPs and practice managers described a sense of decreased clinical autonomy and loss of professionalism. They also described a sense of micromanagement from above and frequently cited the late communication about changes to the wider QOF and year-on-year variability in the occurrence and timing of changes to indicators as politically motivated micromanagement that reduced their clinical autonomy and sense of professionalism (Box 3).

*Regaining clinical autonomy.* A ‘tick box’

approach to medicine encouraged by pay for performance indicators was also seen by a small minority of GPs and practice nurses as a further reduction in clinical autonomy. The ‘black and white’ nature of indicators was seen as an inevitable consequence of their evidence-based nature, but also as something that caused a tension with the essentially ‘grey’ ambiguous nature of work in primary care. The clinician interviewees described wanting to regain some control over their clinical work through modifying indicators to meet the needs of individual patients. These strategies included in the context of existing QOF, variable practice in using depression assessment schedules (Box 3). However, this created differences in how reviews and structured tools were implemented between clinicians and therefore the care received by patients in different practices.

### **Theme 3: Evolution of pay for performance in a primary care setting**

*Inclusion of challenging indicators.* Many recognised that pay for performance indicators were traditionally best applied to ‘simple’ tasks such as achieving blood pressure targets, however, there was also a clear sense that in future, pay for performance could include indicators that challenged the practice team from an educational and organisational point of view. Many of the GPs cited the five new rheumatoid arthritis indicators they had just piloted for 6 months as an example of such

## **Box 1. Routinisation of pay for performance into primary care work. Sense of pride in practising evidence based medicine**

*It's raised standards, narrowed health inequalities, and introduced evidence-based medicine and err the rest of the world look up on err us and our implementation of QOF with a degree of envy. I mean I went to the US 2-years-ago, and what I couldn't get over was they — how sick with envy they were that we had QOF, you know. It's evidence-based medicine, standardised care.* GP19 ID19

*In my experience in the past, when I worked as a hospital doctor, you could see the difference of standards from analysing the letters coming from practices — at least now it has created some uniformity.* GP12 ID12

*It is because in the olden days when there wasn't any QOF, there were no templates, nothing to follow and the GP did what the GP thought was genuine practice. With the QOF protocol, they know they have to do this and this minimal. With the points system they will do it, they have to do it, so the quality of care has increased. Before QOF, some of the things weren't tested.* PM7 ID14

*I've got a few friends whose dads are GPs, who are now taking over their practice, and they tell me how terrible their dad runs their practice ... When I look back at some of the diabetic care ... And I think it does make sure that those GPs work to a certain standard.* GP26 ID22

## **Box 2. Routinisation of pay for performance into primary care work. Rhythm of the QOF year. Inconsistent changes and communication**

*But we're not actively looking for them until July, which puts all the focus on the second half of the year.* PM8 ID15

*QOF should change every second year, every second year you introduce say new domains, you know, alter all the old ones, but fiddling about with, altering, doing minor adjustments every year, to a multiple of indicators is actually quite confusing ... We had the 1 year when there was a bit of a holiday because there was some politics going on.* GP1 ID1

### Box 3. Impact of pay for performance on medical professionalism

*'They're trying to control our income, and we're trying to get as much money out of them as we can.'* GP9 ID9

*'I still think that if you're maintaining the quality then there might be something that might say they can have a certain amount of points brought in that is for maintaining quality of you know.'* GP8 ID8

*'It's not taking their blood pressure that's important, it's managing the levels isn't it? So that makes sense to get the points for that rather than just taking the blood pressure. There's no point taking it if you're not going to act on it.'* GP11 ID11

*'It's brought a structure, but the structure is too rigid. There should be flexibility.'* GP8 ID8

*'I think I would definitely make it less black and white. I mean, the ranges are a good idea in terms of, you know, like the HbA1c where you hit a range. But sometimes medicine isn't like that. Maybe you, you know, maybe more QOF indicators should be slightly more grey.'* GP15 ID15

*'The more templates that get introduced, it takes away the clinician's freedom and that sort of rapport that you can build with a patient is much more difficult when you have to go through set [depression score] questions.'* GP14 ID13

'challenging' indicators. These included indicators measuring cardiovascular risk and fracture risk and an annual review that focused on medical and social aspects of health and care (Box 4).

**Greater professional involvement.** Above all, however, almost all interviewees wished to see a greater emphasis on involving front line practice teams in developing indicators. This was seen as a further mechanism to regain clinical autonomy and included a particular focus on more regular and open communication around the rationale for inclusion and, once again, the timing of changes (Box 4).

#### DISCUSSION

##### Summary

Pay for performance remains a contentious topic of international interest. This study suggests that pay for performance is now an accepted and welcomed routine part of primary care in England, with previous more individualistic and less structured ways of working viewed by almost all primary healthcare teams as poor practice. The percentage of practice income attached to QOF and the evidence-based nature of the indicators were seen as key to its success. However, pay for performance does appear to have had a negative impact on some aspects of medical professionalism, with a

perception that it was, in part, responsible for a significant minority of GPs prioritising their own pay rather than patients' best interests and reduced clinical autonomy through increased micromanagement of the clinical workload. A small minority of GPs reclaimed elements of their autonomy through modifying indicators to meet the needs of individual patients. Greater clinical autonomy could also be achieved through more active involvement of the profession throughout the indicator development process and more consistent and signposted communication about changes to the QOF.

##### Strengths and limitations

This study reflects a particular and important time point when about half the practising GPs in England had spent at least half of their working lives within a pay for performance system. The sample size is relatively small at times reports minority views of fewer than 10 interviewees. However data saturation was achieved and data collection and analysis were grounded in well established theoretical frameworks and concepts that are likely to be relevant in other settings, which increase the transferability of the findings.<sup>14</sup>

Data were collected by an experienced group of health service researchers who have also been involved in the development

### Box 4. Evolution of pay for performance in a primary care setting

*'... you know I can see that this [the RA indicators in the pilot] is quite a change of behaviour I think that probably would be useful. I think the cardiovascular risk assessments and the actions that are generated by that are quite deeply embedded now whereas I think osteoporosis was, well certainly with me, FRAX is not embedded, so that would generate a bit of motivation.'* GP2 ID2

*'It was interesting, because we found a few more patients that we were missing out — we didn't realise we had that much rheumatoid arthritis so the missing ones were brought to our attention.'* PM7 ID14

*'I think that's tremendously important that GPs feel they have some form of participation in generating indicators. I think it completely changes your relationship from feeling it's some sort of diktat handed down from on high to thinking we're all involved in saying what's gonna be the best way of driving change.'* GP2 ID2

and implementation of pay for performance. Twenty-three practices were randomly selected as part of the sampling process and three were openly negative about QOF, but as volunteers to develop indicators, practices were perhaps more interested in the concept and mechanics of pay for performance than practices who did not participate. No differences were found in the views of GPs based on length of time in practice.

### Comparisons with existing literature

This study shares a number of commonalities and differences with previously published work. Primary care teams remain positive about pay for performance (a commonly noted finding since 2004), however the reasons behind this positive attitude appear to have changed. Initially GPs emphasised how pay for performance posed no real change to their routine practice.<sup>15–18</sup> However in this study, almost all reflected on the significant improvements QOF had enabled in terms of creating more structured, standardised, and evidence-based care in their practice.

The overriding importance of ensuring patients' best interests rather than those of GPs also appears to have changed since 2007–2008<sup>19–21</sup> suggesting that elements of pay for performance may now conflict with elements of medical professionalism. This study is the first to report empirical data to substantiate this theorised negative effect on medical professionalism.<sup>22,23</sup>

The most noticeable change, however, is that GPs are now far more concerned about reduced clinical autonomy, perceived external control and micromanagement than previously reported. Data collected between 2004–2006 found changes in internal roles and relationships including the introduction of internal practice-generated peer review and surveillance.<sup>15,16</sup> By 2007–2008, GPs and practice nurses began to view the increasing number of indicators as part of a performance monitoring and surveillance culture,<sup>19–21</sup> but this external scrutiny appeared to be accepted as a part of professional life and was not identified as a cause for concern.<sup>24</sup> It is possible that this more negative perception was influenced by the acceptance, in 2008, of a non-negotiated contract focused on extending opening hours in primary

care that left many English GPs feeling demoralised<sup>25</sup> and may have altered the context within which other schemes such as pay for performance were perceived. It will be interesting to see if the current threat of an imposed contract has a further negative effect on morale.

### Implications for research and practice

Harrison and Dowswell define clinical autonomy as 'the ability of individual doctors to determine their own clinical practices and to evaluate their own performance'.<sup>26</sup> The initial theoretical concern about pay for performance leading to greater control and surveillance within primary care<sup>27</sup> has been less evident in empirical data.<sup>28,29</sup> While McDonald *et al* described the notion of 'chasers' and 'chased' within practices when QOF was first introduced,<sup>16</sup> this was not seen as new by the practices themselves or indeed as particularly controlling of clinical autonomy since it was instigated 'in house'. However, GPs in this study talked extensively about micromanagement, from above (usually from the Department of Health), linked to notions of losing control of workload, for example, due to the unpredictable and variable announcement of changes to indicators and the wider QOF each year. A small minority of GPs and practice nurses in this study described regaining some clinical autonomy by seeking opportunities to modify indicators to meet the needs of individual patients. While greater individual discretion in implementation of indicators appears to be attractive to the profession in terms of increased clinical autonomy, such flexibility may not lead to improved patient outcomes<sup>30</sup> and is potentially dangerous within the context of pay for performance, since it directly contradicts evidence on the importance of validity and reliability in developing performance indicators.<sup>31</sup> Calibrating the appropriate level of clinical autonomy is critical if pay for performance schemes are to have maximal impact on patient care. Initiatives to increase professional autonomy may be best focused on greater professional involvement in indicator development and timely consistent communication about changes to both indicators and the wider QOF.

---

### Funding

Not applicable.

### Ethical approval

Ethical approval was provided by the North West Liverpool Central Committee 09/H1001/74. All interviewees gave informed consent.

### Provenance

Freely submitted; externally peer reviewed.

### Competing interests

Helen Lester was contracted to the National Institute for Health and Clinical Excellence to provide advice on piloting new indicators for the Quality and Outcomes Framework. However all authors were/are fully independent of NICE and the Department of Health. NICE had no role in study design, data collection, analysis interpretation or writing up of the article or decision to submit for publication. All authors had full access to all the data in the study.

### Acknowledgements

Helen Lester died on 2 March 2013. She will be greatly missed. We thank all the practices and GPs who gave up their time to be interviewed, and Ms Sarah Hinton, QOF pilot practice administrator.

### Discuss this article

Contribute and read comments about this article on the Discussion Forum: <http://www.rcgp.org.uk/bjgp-discuss>



## REFERENCES

- Magrath P, Nichter M. Paying for performance and the social relations of health care provision: an anthropological perspective. *Soc Sci Med* 2012; **75**(10): 1778–1785.
- Roland M. Linking physicians' pay to quality of care — a major experiment in the United Kingdom. *N Engl J Med* 2004; **351**(14): 1448–1454.
- Scott A, Sivey P, Ait Ouakrim D, *et al*. The effect of financial incentives on the quality of health care provided by primary care doctors. *Cochrane Database Syst Rev* 2011; **(9)**: CD008451.
- Doran T, Fullwood C, Kontopantelis E, Reeves D. Effect of financial incentives on inequalities in the delivery of primary clinical care in England: analysis of clinical activity indicators for the quality and outcomes framework. *Lancet* 2008; **372**(9640): 728–736.
- Hammouche S, Holland R, Steel R. Does the quality of care for hypertension in primary care vary with postcode area deprivation? An observational study. *BMC Health Serv Res* 2011; **11**: 297.
- Walker S, Mason AR, Claxton K, *et al*. Value for money and the Quality and Outcomes Framework in primary care in the UK NHS. *Br J Gen Pract* 2010; DOI: 10.3399/bjgp10X501859.
- Grumbach K, Osmond D, Vranizan K, *et al*. Primary care physicians' experience of financial incentives in managed-care systems. *N Engl J Med* 1998; **339**(21): 1516–1521.
- Patton MQ. *Qualitative evaluation and research methods*. 2nd edn. Thousand Oaks, CA: Sage Publications, 1990.
- Mays N, Pope C. Quality in qualitative health research. In: *Qualitative research in health care*. 1st edn. London: BMJ Publication Group, 1999.
- Corbin J, Strauss A. Strategies for qualitative data analysis. In: *Basics of qualitative research. Techniques and procedures for developing grounded theory*. 3rd edn. Thousand Oaks, CA: Sage Publications, 2008.
- Silverman D. *Doing qualitative research: a practical handbook*. Thousand Oaks, CA: Sage, 2000.
- Campbell S, Kontopantelis E, Hannon K, *et al*. Framework and indicator testing protocol for developing and piloting quality indicators for the UK Quality and Outcomes Framework. *BMC Fam Pract* 2011; DOI:10.1186/1471-2296-12-85.
- Reeves D, Doran T, Valderas JM, *et al*. How to identify when a performance indicator has run its course. *BMJ* 2010; **340**: c1717.
- Green J. Generalisability and validity in qualitative research. *BMJ* 1999; **319**: 421.
- Maisey SP, Steel N, Marsh R, *et al*. Effects of payment for performance in primary care: qualitative interview study. *J Health Serv Res Policy* 2008; **13**(3): 133–139.
- McDonald R, Harrison S, Checkland K, *et al*. Impact of financial incentives on clinical autonomy and internal motivation in primary care: ethnographic study. *BMJ* 2007; **334**(7608): 1357–1359.
- Checkland K, Harrison S, McDonald R, *et al*. Biomedicine, holism and general medical practice: responses to the 2004 General Practitioner contract. *Social Health Illn* 2008; **30**(5): 788–803.
- Checkland K, Harrison S. The impact of the Quality and Outcomes Framework on practice organisation and service delivery: summary of evidence from two qualitative studies. *Qual Prim Care* 2010; **18**(2): 139–146.
- Campbell S, McDonald R, Lester HE. The experience of pay for performance in English family practice: a qualitative study. *Ann Fam Med* 2008; **6**(3): 228–234.
- Lester H, Campbell SM, McDonald R. The present state and future direction of primary care: a qualitative study of GPs' views. *Br J Gen Pract* 2009; **59**(569): 908–915.
- McDonald R, Campbell S, Lester H. Practice nurses and the effects of the new General Practitioner contract in the English National Health Service: the extension of a professional project? *Soc Sci Med* 2009; **68**(7): 1206–1212.
- Qaseem A, Snow V, Gosfield A, *et al*. Pay for performance through the lens of medical professionalism. *Ann Int Med* 2010; **152**(6): 366–369.
- Mannion R, Braithwaite J. Unintended consequences of performance measurement in healthcare: 20 salutary lessons from the English National Health Service. *Int Med J* 2012; **42**(5): 569–574.
- McDonald R, Cheraghi-Sohi S, Tickle M, *et al*. *The impact of incentives on the behaviour and performance of primary care professionals*. Report for the National Institute for Health Research Service Delivery and Organisation programme. SDO report (08/1618/158). London: HMSO, 2010.
- McDonald R, White J, Marmor T. Paying for performance in primary medical care: learning about and learning from 'success' and 'failure' in England and California. *J Health Polit Policy Law* 2009; **34**(5): 747–776.
- Harrison S, Dowswell G. Autonomy and bureaucratic accountability in primary care: what English general practitioners say. *Soc Health and Illness* 2002; **24**: 208–226.
- Jeffries D. Save our soul. *Br J Gen Pract* 2003; **53**(496): 888.
- Young G, White B, Burgess JF, *et al*. Conceptual issues in the design and implementation of pay for quality programs. *Am J Med Qual* 2005; **20**(3): 144–150.
- Deom M, Agoritsas T, Bovier P, Perneger T. What doctors think about the impact of managed care tools on quality of care, costs, autonomy, and relations with patients. *BMC Health Serv Res* 2010; **10**: 331.
- Connolly A, Iliffe S, Gaehl E, *et al*. Quality of care provided to people with dementia: utilisation and quality of the annual review in general practice. *Br J Gen Pract* 2012; DOI: 10.3399/bjgp12X625148.
- Glasziou P, Buchan H, Del Mar C, *et al*. Pay for performance. How to make it worth doing. *BMJ* 2012; **345**: e5047.
- Hendrickson M. Pay for performance and medical professionalism. *Q Manag Health Care* 2008; **17**(1): 9–18.
- Parsons T. The professions and social structure. *Soc Forces* 1939; **17**(4): 457–467.
- Goode WJ. Encroachment, charlatanry, and the emerging profession: psychology, sociology and medicine. *Am Soc Rev* 1960; **25**(6): 902–914.
- Freidson E. *Profession of medicine: a study of the sociology of applied knowledge*. New York: Harper and Row Publishers, 1970.
- Swick H. Toward a normative definition of medical professionalism. *Acad Med* 2000; **75**(6): 612–616.
- ABIM Foundation. American Board of Internal Medicine; ACP–ASIM Foundation. American College of Physicians–American Society of Internal Medicine; European Federation of Internal Medicine. Medical professionalism in the new millennium: a physician charter. *Ann Intern Med* 2002; **136**(3): 243–246.

## Appendix 1. Medical professionalism

Medical professionalism is difficult to define precisely but many commentators have suggested a number of common characteristics.

The basic concept can be traced back to the 18th century Scottish doctor John Gregory who laid out a framework for intellectual and moral excellence in medicine that had three main elements: that the discipline is scientific and intellectual and free from bias; that the primary consideration should be the protection and promotion of patient's health related interests; that doctors should keep all forms of self-interest secondary to their other role.<sup>32</sup>

In the mid 20th century, Talcott Parsons suggested that in addition to public service, medical professionals were predisposed to cooperating with each other and focused on self-regulation.<sup>33</sup> In 1960, Goode reinforced these ideas by suggesting that professionalism involved accountability for the application of expert knowledge to the service of others.<sup>34</sup>

Freidson's work in the 1970s on professions within a sociological framework used medicine as representative of all professions. Freidson argued that a profession is a specific type of occupation that performs work with special characteristics, holds something of a monopoly over its work and enjoys relative autonomy that derives from the nature of the work and from the relationship of the profession to institutions external to it such as the government.<sup>35</sup> However Freidson also noted that professional self-interest could conflict with ideas of self-regulation and devotion to the best interests of patients, challenging the prevailing wisdom that patients' interests must take precedence over doctors' financial self-interest.

In 2000, Swick added five further elements to the definition: high ethical and moral standards; exemplifying core humanistic values including honesty, and integrity, altruism, empathy, respect for others, and trustworthiness; a continuing commitment to excellence; a commitment to scholarship and reflection upon actions and decisions.<sup>36</sup>

Since 2002, The American Board of Internal Medicine has suggested that medical professionalism requires the doctor to serve the interests of the patient above his or her self-interest. Professionalism aspires to altruism, accountability, excellence, duty, service, honour, integrity, and respect for others. This definition includes the three key principles of the primacy of patient welfare, patient autonomy, and social justice.<sup>37</sup>