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Longitudinal evaluation of a countywide alternative to the Quality and Outcomes Framework in UK General Practice aimed at improving Person Centred Coordinated Care

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ABSTRACT

Objectives To evaluate a county-wide deincentivisation of the Quality and Outcomes Framework (QOF) payment scheme for UK General Practice (GP).

Setting In 2014, National Health Service England signalled a move towards devolution of QOF to Clinical Commissioning Groups. Fifty-five GPs in Somerset established the Somerset Practice Quality Scheme (SPQS)—a deincentivisation of QOF—with the goal of redirecting resources towards Person Centred Coordinated Care (P3C), especially for those with long-term conditions (LTCs). We evaluated the impact on processes and outcomes of care from April 2016 to March 2017.

Participants and design The evaluation used data from 55 SPQS practices and 17 regional control practices for three survey instruments. We collected patient experiences ('P3C-EQ'; 2363 returns from patients with 1+LTC; 36% response rate), staff experiences ('P3C-practitioner'; 127 professionals) and organisational data ('P3C-OCT'; 36 of 55 practices at two time points, 65% response rate; 17 control practices). Hospital Episode Statistics emergency admission data were analysed for 2014–2017 for ambulatory-sensitive conditions across Somerset using interrupted time series.

Results Patient and practitioner experiences were similar in SPQS versus control practices. However, discretion from QOF incentives resulted in time savings in the majority of practices, and SPQS practice data showed a significant increase in P3C oriented organisational processes, with a moderate effect size (Wilcoxon signed rank test; p=0.01; r=0.42). Analysis of transformation plans and organisational data suggested stronger federation-level agreements and informal networks, increased multidisciplinary working, reallocation of resources for other healthcare professionals and changes to the structure and timings of GP appointments. No disbenefits were detected in admission data.

Conclusion The SPQS scheme leveraged time savings and reduced administrative burden via discretionary removal of QOF incentives, enabling practices to engage actively in a number of schemes aimed at improving care for people with LTCs. We found no differences in the experiences of patients or healthcare professionals between SPQS and control practices.

Strengths and limitations of this study

- ► This study evaluated changes to service delivery, conducted using two survey tools—offering a perspective on the experiences of both patients and healthcare professionals.
- ► These were supplemented with a longitudinal analysis of organisational change (to measure alterations to service deliver) and a time series of emergency admissions for ambulatory-sensitive conditions (to detect disbenefits arising from the scheme).
- ► Due to time and resource pressures on general practice in the UK, we struggled to recruit controls from within the same county (Somerset) or matched controls from the region. As an alternative, we obtained non-matched controls from the region.
- ► No detectable improvements were established in experiences of healthcare professionals or patients—this could be because the intervention had no effect on these outcomes, the instruments were not sensitive enough or changes to patient/practitioner experiences were somewhat distal to the intervention.

BACKGROUND

The Quality and Outcomes Framework (QOF) for UK General Practice (GP) is one of the largest health-related pay-for-performance (P4P) schemes in the world.[1] Following implementation in 2004, the scheme initially had a positive impact on quality of care, primarily achieved via establishment of consistent procedural baselines in the clinical management of incentivised (mostly chronic) diseases.[1–5] It reduced between-practice inequalities in care delivery,[1–3] while

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also leading to improved disease registers, widespread recording of clinical activities and adoption of electronic medical record systems,[1] leading to growth in GP data and related research.[6 7]

Since the introduction of QOF, demographic shifts of an aging population have continued to drive a shifting clinical landscape,[8] with the number of people with three or more long-term conditions (mLTCs) thought to have risen by one million over the last decade.[9] The subsequent rising demand for the management of long-term conditions (LTCs) and mLTCs—requiring tailored and coordinated support[10 11]—has led to QOF (with its emphasis on processes for single disease guidelines) being viewed as increasingly anachronistic.[6 12–16] After introduction of QOF, there was a significant reduction in the continuity of care[2 17] and the person-centeredness of GP consultations,[13 14 18 19] with a subsequent decline in patients' satisfaction.[20] It has been argued that QOF does not incentivise appropriate clinical care for people with multimorbidity,[6 12–16] who require individualised support, greater continuity of care and a holistic, biopsychosocial approach that is responsive and empowering.[10 11] An oft-quoted criticism is that QOF reduces consultations to a 'box-ticking' exercise.[21]

In response to such criticisms, both the National Health Service (NHS) Chief Executive and the General Practitioners Committee Chairman previously backed the removal of QOF.[21] In 2014, NHS England signalled a move towards devolution of QOF to Clinical Commissioning Groups (CCGs), allowing organisations the freedom to develop alternatives. Potential advantages included the targeting of local health needs and greater clinical engagement for quality improvement.[22] In response, the Somerset Practice Quality Scheme (SPQS) was established as a deincentivisation of QOF. It arose because GPs, the CCG and the Local Medical Committee felt that QOF was not incentivising the highest value clinical behaviour. The goal was to allow clinicians the freedom to innovate, enable consultations to be more person-centred and increase involvement with a number of concurrent schemes aimed at improving Person Centred Coordinated Care (P3C).[23] The details of the scheme were included in the SPQS contract[24] and local Sustainability and Transformation Plan (STP—plans for reforming healthcare mandated by the Five-Year Forward View[25]) of the GPs[26] (see online supplementary file 1 for a summary of Somerset STPs; box 1 for brief details of the various schemes and references for details). The contract removed incentives from QOF, although Calculating Quality Reporting System (CQRS) remained active in order to collect prevalence data for payment calculations. The SPQS contract stated that the reduced QOF overhead would be exploited to better meet the needs of patients with LTCs by developing new models of care. Implementation was specified in the locality STPs, which included a patchwork of initiatives, most notably the 'Test and Learn pilots', which encompassed three distinct schemes (box 1), all of which had a shared vision of targeting complex patients with care plans, multidisciplinary team input and single point of contact.[27 28] Other schemes included a Village Agents service[29] and Health Connections Mendip (HCM)[30]—see box 1. Fifty-five Somerset practices opted for SPQS, with 18 Somerset practices (initially 20) retaining the existing QOF contract (the SPQS practices increased to 57 in 2015/16; but two mergers reduced it back to 55).

Box 1 Initiative for implementation of SPQS.

Test and Learn: Comprises three similar initiatives (South Somerset Symphony Vanguard, Taunton and Mendip—see below), which share a common goal of targeting complex, multimorbid patients with a suite of approaches including single personalised care plans, multidisciplinary team input and single point of access to provide Person Centred Coordinated Care.

- **Test and Learn—South Somerset Symphony Vanguard:** A symphony 'hub' system located at Yeovil District Hospital, where complex patients receive extra support from health coaches (HCs)/Key Workers at the Symphony hub service, although they remain under management of general practice (GP).[27 28]
- **Test and Learn—Taunton:** Operates under a 'virtual hub' model, with complex/frail patients managed by a multidisciplinary team moving between practices, with shared care plans and Well-being Advisors.
- **Test and Learn—Frome Mendip, including 'Health Connections Mendip':** With loose eligibility criteria and a number of referral routes, Community Practice Nurse and Health Connectors (based at Frome) liaise regularly in multidisciplinary team input meetings. There is a hub telephone line for single point of access. The model advocates using existing assets in the community. The Health Connections team lead social prescribing work with a service directory to signpost patients to appropriate resources.[30]

Enhanced Primary Care (EPC): EPC is a subcomponent of the Symphony Vanguard scheme that incorporates HCs into primary care, focusing on less complex patients, allowing GPs to focus primarily on medical problems.

Village Agents Service: Supports isolated, excluded and vulnerable (including elderly and multimorbid) people by offering a signposting and referral service. The service links with GPs.[29]

Living Better: A working partnership between the GP, AGE UK Somerset, Social Care, Somerset Partnership, West Somerset District Council and Somerset Clinical Commissioning Group. The project supports people with one or more long-term conditions to better self-manage, helping them build connections to the community and reducing dependency on health and social care.

The initial phase of the scheme was previously evaluated with a retrospective approach.[31] This revealed early stages of organisational change, including stronger federation-level agreements and informal networks, increased multidisciplinary team working, reallocation of resources towards healthcare assistants, nurses and others, and changes to structure and timings of appointments with GPs. From April 2016 to March 2017, we conducted a longitudinal evaluation of the second full year of the SPQS programme (see online supplementary file 2 for a timeline of the SPQS scheme and associated evaluations). This was commissioned with the aims of establishing the nature and extent of P3C that has been implemented

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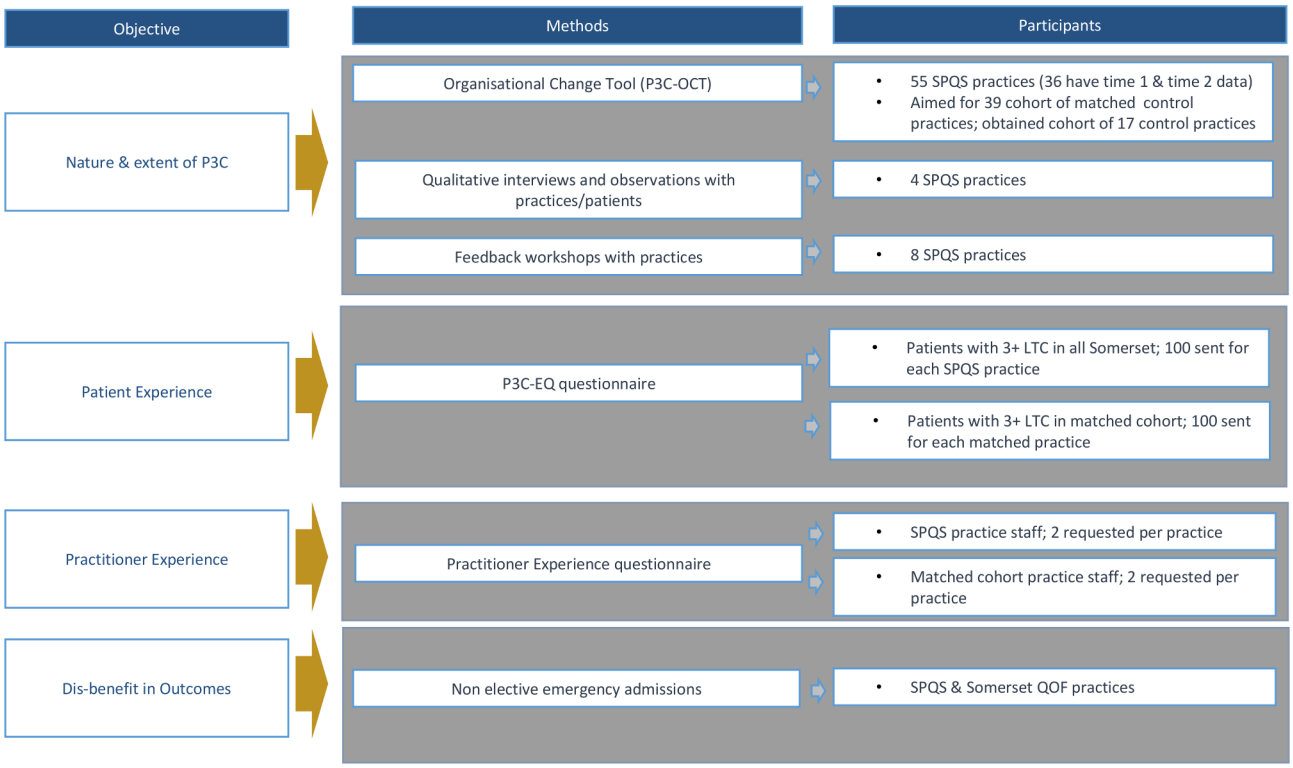

Figure 1 Our P3C mixed methods evaluation framework for SPQS2. LTC, long-term condition; P3C, Person Centred Coordinated Care; QOF, Quality and Outcomes Framework; SPQS, Somerset Practice Quality Scheme.

since discretion from QOF, explore staff and patient experiences of care delivery and examine non-elective hospital admissions before and after inception of the scheme.

METHODS

We conducted a mixed-methods evaluation of SPQS which included a suite of quantitative and qualitative tools. Analysis of quantitative data is described in this paper. In-depth qualitative findings will be published in a subsequent paper (including semistructured interviews with practitioners, observations of consultations and facilitation workshops with practices). A schematic overview of the full SPQS evaluation framework is provided in figure 1. The quantitative evaluation included completion of survey tools targeting patient experiences (P3C-EQ), staff experiences (P3C-practitioner) and organisational perspectives (P3C-OCT tool), alongside time series of Hospital Episode Statistics (HES) for ambulatory-sensitive conditions across Somerset. We chose not to use national measures of GP (ie, GP Patient Survey and Friends and Family Test): they have a broad sample and do not target the patient group (ie, patients with LTCs) that are the focus of SPQS. Furthermore, they do not target the construct of interest (ie, P3C).

Samples

The 55 participating Somerset practices (mean list size=7695; median=6515.5; smallest=1834; largest=29 078) completed our evaluation tools (see below). While these 55 practices were incentivised to take part in our evaluation (ie, by being part of SPQS), the non-SPQS Somerset practices had no incentive to act as controls and did not participate in this study. Therefore, for control practices, we initially identified a cohort of non-Somerset control practices matched for staffing data, list size, population density, indices of multiple deprivation, QOF scores and disease prevalence. However, the incentives available for this evaluation (£200 per practice) were only sufficient to recruit six practices by this method. We therefore supplemented this group with 11 unmatched practices from across the Southwest, making a total of 17 control practices (mean list size=6714; median=4878; smallest=2678; largest=4878). The control group therefore represents a self-selected sample of practices that are likely to represent engaged, active practices (ie, with the resources to engage with research). In contrast, completion of our evaluation was mandatory for all SPQS practices.

Patient and public involvement

Patients were involved via the peninsula CLAHRC patient involvement group (PenPig), who set priorities for research objectives. Patients, public and healthcare professionals were also involved in codesign workshops to develop the measurement framework and individual questionnaires (see papers for details[23 32–37]). Patients also reviewed drafts of ethics approval applications and all patient-facing communication. The work was copresented with patients at the South West Society for Academic Primary Care Regional Meeting 2018.

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Survey tools

The P3C-Patient Experience Questionnaire (P3C-EQ) is a brief, 11-item patient-completed measure of patient experiences of P3C delivery, which we have previously validated.[32 38 39] The tool can be used to generate an aggregate score of patient experience,[32] with a range of score from 0 to 30, where a higher score indicates better experiences of care.[39] It can also be subscored to previously described subdomains of P3C.[23 32 34–37]

The P3C-Practitioner Experience Survey is a 29-item instrument that measures individual and managerial experience of delivering P3C. Via a workshop with healthcare professionals, we selected the previously validated P3C-Practitioner questionnaire (also known as the Person-Centred Healthcare for Older Adults Survey[40]) as the most suitable instrument to examine practitioners' perspectives of P3C (see online supplementary file 3). A minimum of two practitioners from each practice were requested to respond. The instrument generates an aggregate score with a range of 29–145, where a higher score indicates better experiences of care.

The P3C-Organisational Change Tool (P3C-OCT) is an evidenced-based measure of progress towards delivering P3C from an organisational perspective.[33] It was developed to support and measure P3C in line with Year of Care[34] and RCGP Principles of Collaborative Care and Support Planning,[41] thus providing a way to monitor changes in line with policy directives which improve P3C. The tool was designed to measure all core P3C routines, which have been identified through research,[42 43] patients' accounts, policy documents[34] and our own work.[23 33] The design of the P3C-OCT is based on a shared consensus of the components of P3C (eg,[35 36 44]), which broadly correspond to six domains: Information and Communication, Care Planning, Goals and Outcomes, Transitions, Organisational Process Activities and Decision Making. These domains have been mapped to real-world actions that support the delivery of P3C (eg, multidisciplinary team meetings, care planning, provisions for information). This allows the tool to translate concepts that are often abstract and may be drawn from academic literature and policy documents, into actionable, tangible processes which a practice can implement. The result is a unique 29-question instrument with over 500 different possible responses, which provides a detailed and practical interrogation of P3C delivery. An equally weighted scoring system allows results of the P3C-OCT to be aggregated into a single composite score, or alternatively by subdomains of P3C—generating a score of 0–20, with higher scores indicating more P3C-related activity.

The P3C-OCT provides a detailed profile of care delivery and organisation through 29 core questions. All questions ask about objective activities (eg, processes in place to deliver P3C) and subjective responses (eg, how well these are working). Scores are given out of a theoretical maximum of 20 points. The P3C-OCT was also prepended by a series of SPQS-related questions about administrative and consultation time savings from discretion from QOF. Each SPQS practice was requested to complete the P3C-OCT at two time points (from February to August 2016 and December 2016 to March 2017). In contrast, control practices only completed the P3C-OCT once (at time 2).

Data collection

All participating practices supported data collection of the three survey tools. With the P3C-EQ, from each practice, 100 patients with one or more LTCs, randomly sampled from the practice list (using a customised EMIS script), were invited to complete a postal questionnaire at a single time point. Patients received an information pack, consent sheet, demographic questionnaire and P3C-EQ. All returned questionnaires were entered into a Microsoft Access database prior to statistical analyses. For the P3C-Practitioner, we obtained an opportunity sample via both written and email communication with all participating practices. For the P3C-OCT, all participating practices were offered an electronic or paper version, and we requested that the tool was completed by a combination of General Practitioner and Practice Manager (PM), thus ensuring representation of front-facing and backend operations of GP surgeries. Completion of the tool was mandatory as part of the SPQS evaluation.

Analysis

SPQS and control practices were compared on the P3C-Patient Experience Survey and the P3C-Practioner Experience Survey (at time 2; 6–12 months after initiation of second year/phase 2 of SPQS), with significance tested using the non-parametric unmatched Mann–Whitney–Wilcoxon (MWW) test taking into account within-practice clustering by calculating Somers' D statistic (non-parametric tests were used, as the scoring is a summation of Likert responses, ie, data were ordinal). For the P3C-Organisational Change Tool, we compared time 1 (immediately after implementation of second year/phase 2 of SPQS) and time 2 (6–12 months later), with significance evaluated by Wilcoxon signed-rank test.

Time series of emergency admissions to hospital

A multigroup interrupted time-series analysis (ITS) was conducted to identify whether deincentivisation of QOF and the introduction of SPQS were associated with changes in emergency admissions to acute hospitals with a primary diagnoses for four long-term, ambulatory care sensitive conditions (ACSCs). HES were obtained for patients from all 55 GP practices enrolled in the SPQS scheme (actually 56 practices in 2015/15) and 18 Somerset QOF practices (ie, Somerset practices not enrolled in SPQS; initially 20). Data were obtained for a 70-month period from April 2011 to May 2018. This time period is divided into 38 months preintervention (April 2011 to May 2014) and 48 months postintervention (June 2014 to May 2018; SPQS contract went live in June 2014, month 39). Data include monthly admission counts for four ACSCs: Acute Myocardial Infarction (AMI), Chronic

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Table 1 Demographic profile of responses to P3C-EQ as percentages

Participant demographics as a percentage										
Age (years)			Education			Gender			Multimorbidity	
	QOF	SPQS		QOF	SPQS		QOF	SPQS	No. LTCs	QOF	SPQS
<=24	0.3	0.4	None	1.0	1.3	Male	44.0	43.4	1	19.6	20.1
25–34	2.5	1.3	Primary	3.1	2.1	Female	53.8	53.9	2	19.6	23.8
35–44	2.5	2.6	Secondary	33.7	34.6	Non-response	2.2	2.7	3	20.6	17.8
45–54	8.8	5.3	College/vocational	26.4	28.1				4	11.3	13.7
55–64	18.3	13.3	Undergraduate	11.5	10.8				5	9.3	7.5
65–74	25.7	29.2	Postgraduate	8.2	7.8				6	4.7	5.1
75–84	29.3	32.7	Non-response	16.2	15.3				7	2.8	2.8
>=85	12.1	14.1							>=8	4.2	2.8
Non-response	0.5	1.0							Non-response	7.9	6.4

LTC, long-term conditions; P3C-EQ, Person Centred Coordinated Care-Patient Experience Questionnaire; QOF, Quality and Outcomes Framework; SPQS, Somerset Practice Quality Scheme.

Obstructive Pulmonary Disease (COPD), Diabetes and Stroke. We selected these ACSCs as a proxy for preventable admissions and an indicator of any deteriorating quality of care associated with SPQS. Due to the difference in number of practices between SPQS and QOF practices, admissions were divided by the number of practices, thus providing an average of emergency admissions (expressed as admissions per month per practice). Analysis was performed using the *itsa* command[45] on STATA (StataCorp Ltd). This uses regression-based model with Newey-West standard errors. Preintervention and postintervention slopes/intercepts of the sample (SPQS practices) were compared with controls (QOF practices). Lag period was set to 1 month.

RESULTS

Person Centred Coordinated Care-Patient Experience Questionnaire

There were 1752 responses received from 49 (89%) of the 55 practices enrolled in SPQS and 611 responses from patients enrolled in the 17 control (QOF) practices (36% response rate and similar to other studies[46]). The responses of the two groups were compared in table 1.

The mean global aggregated scores for the P3C-EQ for SPQS (23.39, n 1752) and QOF controls (23.68, n 611) were not significantly different (MWW U test; p=0.346) and indicate generally positive experiences of care across both samples.

P3C-Practitioner results

Full results of the P3C-Practioner are provided in online supplementary file 3. We received 98 responses from 55 SPQS practices and 29 responses from 18 control practices from a mix of healthcare professionals—62 GPs (49%); 35 nurses (27%); 12 well-being advisors; 7 LTC nurse; 11 others. The mean global aggregated scores for the P3C-EQ for SPQS (23.39, n 1752) and QOF controls (23.68, n 611) were not significantly different (MWW test; p=0.405). Return rates are not applicable, as this was a convenience sample where we requested response from at least two different professionals at each practice.

P3C-OCT results

To evaluate changes to P3C during the SPQS scheme, we undertook an analysis of the organisation and delivery of care using the P3C-OCT. Of 55 practices enrolled in the scheme, 36 practices provided admissible data (ie, complete and timely) at the two evaluation time-points (time 1: 2/2016–8/2016 and time 2 was 12/2016-5/2017; 65% response rate). This revealed an increase (0.9; p=0.034) in aggregate scores on the P3C-OCT between T1 (5.8) to T2 (6.7). This therefore represents a measurable increase in activity towards P3C delivery and organisation (see table 2), with a moderate effect size (r=0.42). To determine the specific areas of P3C that improved during the evaluation, this was examined by domains of P3C.[34–36] When broken into subdomains of P3C,

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Table 2 Mean changes in P3C-OCT scores between time 1 and time 2 for 36 paired practices

	Time 1	Time 2	Change T1→ T2 (p value; effect size)
Total OCT Score	**5.8**	**6.7**	**0.9 (p=0.01; r=0.42)***
Information and Communication	7.4	8.1	0.7 (p=0.25; r=0.19)
Care Planning	6.6	7.2	0.6 (p=0.14; r=0.25)
Goals and Outcomes	6.1	7.8	**1.7 (p<0.001; r=0.61)***
Transitions	4.9	5.2	0.3 (p=0.43; r=013)
Organisational Process Activities	4.3	5.2	0.9 (p=0.03; r=0.36)
Decision Making	3.8	4.4	0.6 (p=0.07; r=0.3)

The top row provides the total OCT score (out of a maximum of 20), followed by domains of P3C. The OCT score for each domain is given for time 1, time 2 and the difference between time 1 and 2. The statistical significance of these differences is indicated by p value from Wilcoxon signed-rank test. Statistically significant results (at the level p<0.008; corresponding to a Bonferroni adjustment for six tests at the p<0.05 significance level) are indicated in bold font and with * next to the p value. Effect sizes were calculated as test statistic z by the square root of the number of pairs.
OCT, Organisational Change Tool; P3C, Person Centred Coordinated Care.

significant improvements were delivered in areas related to 'Goals and Outcomes' (eg, goal setting with patients; 1.7 increase, p=0.00; large effect size r=0.61).

Further to the longitudinal analysis, SPQS practices were also compared with a cohort of 17 non-SPQS practices from the South West (all control practices returned data at time 2). Aggregate results for the P3C-OCT revealed that control practices had an aggregate score of 6.2 on the P3C-OCT, with no significant difference between SPQS and control practices either before (a score of 5.8 vs 6.2; p=0.64) or after (6.7 vs 6.2; p=0.41) the intervention.

Discretion from QOF and time savings

When asking SPQS practices to complete the P3C-OCT, we also included a number of additional questions related to the SPQS scheme. We asked SPQS practices a subjective appraisal of time savings (both in GP consultations and administration) from enrolment in the scheme. These are shown in figure 2. More than half (55%) of the practices (28 of 51 practices that completed these questions) agreed that time had been freed up within the 10 min standard consultation time.

With regard to administrative time savings, more than three quarters of SPQS practices (40/51; 78%) reported administrative (non-consultation time for practitioners) time savings since initiation of the scheme, with just over one third of these practices (14/51; 27%) reporting gains of more than 2 hours per week. For administrators and non-clinical staff, SPQS was reported to free up time for more than 86% (44/51) of practices with only 13% (7/51) reporting a negligible effect. Free text response boxes confirmed the plans of the STPs (see introduction and online supplementary file 1), stating that efficiency had been leveraged for increased collaborative and federation-level working, including engagement with a number of schemes in Somerset designed to improve P3C, for example, 'Better use of Symphony', 'Engagement with EPC', 'Rural Practice Network', 'Health coaches', 'Huddles', 'P3C relevant training', 'Replaced by other work such as Symphony/health coaching'. 'This hasn't shown a reduction in workload but rather a change in workload.' In this manner, the time savings leveraged from QOF were not hypothesised to lead to an improvement of experiences for practitioners, but instead a shift in workload.

Retention of QOF elements

When asking SPQS practices to complete the P3C-OCT, we also included a number questions specific to the implementation of SPQS. When asked 'Are you still using components of the QOF?', nearly all practices enrolled in SPQS continued to use at least some aspects of QOF (only 1 out of 51 respondents to this question stated 'none'; 86% of practices used 'Some', 'Most' or 'All'). We further investigated the continued utilisation of QOF via a free-text response in the P3C-OCT questionnaire. This revealed that QOF was still (according to one practice) used by 'applying individually', not 'point scoring'. A common aspect that was dropped was exception reporting, with time also being saved by avoiding 'target chasing'. Elements of QOF were also contractually retained such as the CQRS. This remained active under the SPQS contract to allow data on prevalence and key indicators to be collected from practices via GP Extraction System (GPES), where prevalence figures are used in the SPQS payments calculation.

QOF also continued to be used for the monitoring of LTCs and recall of patients with LTCs for routine check-ups. Around a half of SPQS practices (n=25) still use QOF for recall of at least some (or all) conditions (eg, checking for recall requirements for patients with LTCs and the management of specific chronic diseases). Free text responses suggested that while recall was an essential function, the implementation under QOF was overly burdensome and not tailored for multiple morbidities. Some practices countered this by running in-house developed searches with a priority to 'concentrate on an integrated LTC system'. This suggests that there is scope for collaboration to design an overhauled, integrated recall system that is specifically designed for efficient management of multiple LTCs (as previously proposed[47 48]).

Time series of hospital episode statistics

Results of the ITS are shown in figure 3. No significant increases were detected in the slope postintervention (ie, after the initiation of the SPQS contract in June 2014) in emergency admissions for patients with a primary diagnosis of four ACSCs in SPQS practices. Full results of

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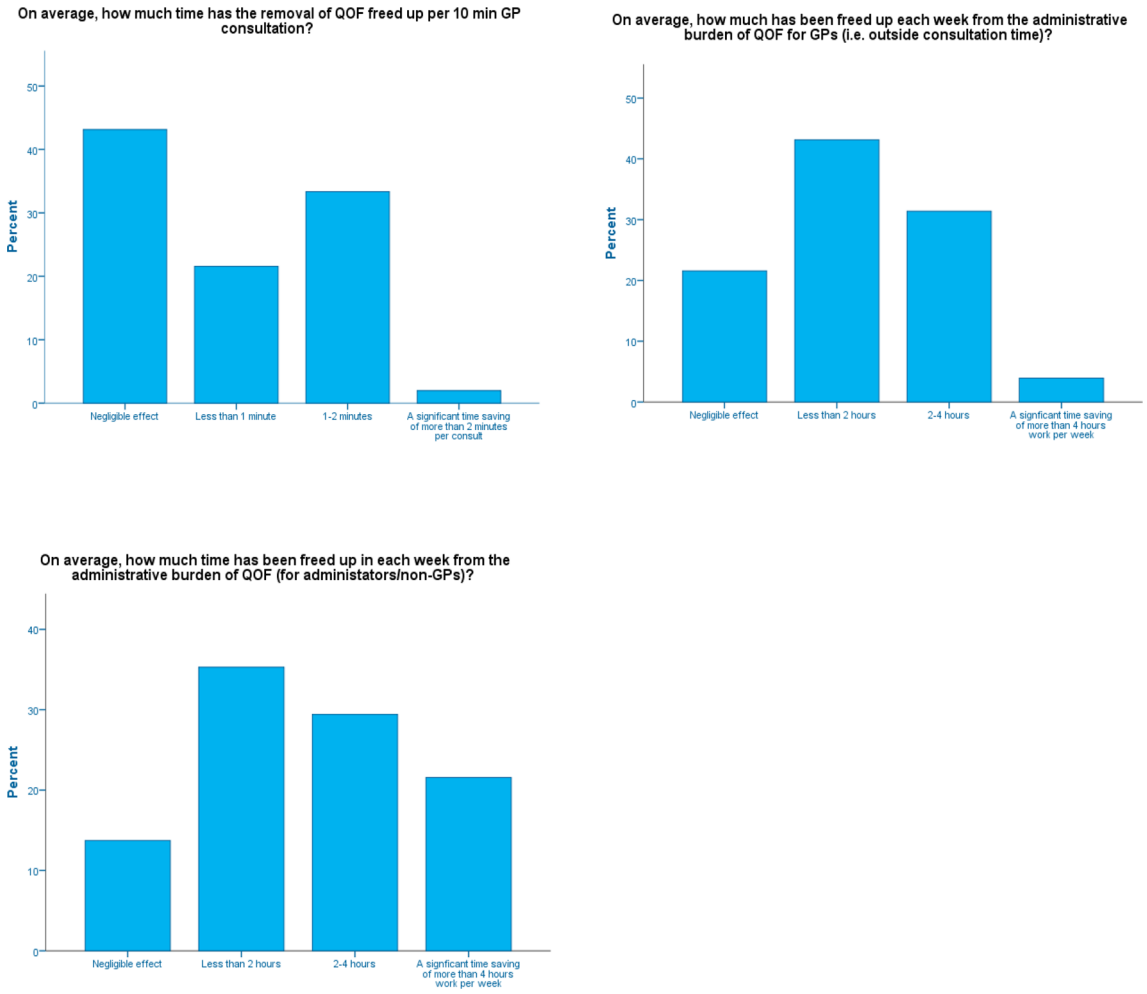

Figure 2 Consultation time savings (top left), administrative GP time savings (top right) and non-GP administrative time savings (bottom left). Per cent responses for 51 practices enrolled in Somerset Practice Quality Scheme. GP, General Practice; QOF, Quality and Outcomes Framework.

significance tests are provided in online supplementary file 4. The removal of QOF has had no significant effect on emergency admissions for these four ACSCs at the time of intervention or in the 2 years following. However, for the non-SPQS Somerset practices, a significant slope change (increase) in admissions for AMI and diabetes was observed, and a significant slope change (decrease) for admissions for stroke was observed. These changes in admissions are therefore unrelated to the SPQS contract (see discussion below).

DISCUSSION

We observed a variety of responses to deincentivisation of QOF in Somerset. Some QOF-related components remained mandatory (prevalence reporting). Some 'desirable' features of the QOF system were still used (eg, prompts during consultation), others were adapted (eg, patient recall) and some burdensome components dropped altogether (eg, exception reporting).

Practices reported that these alterations had led to time and resource savings in both GP consultations and administration. These time savings were used to increase involvement in implementation projects such as Symphony Test and Learn, Village Agents, Health Connections and the South Somerset Vanguard. These were planned as part of the SPQS contract and associated ongoing healthcare reforms. These local implementation projects are actively targeting service redesign for complex patient needs, using P3C across practice contexts. These projects have involved stronger federation-level agreements and informal networks, increased multidisciplinary team working, reallocation of resources for healthcare assistants (including Health and Well-being Advisors and Health Coaches), nurses and others, single points of access for the patient, shared electronic record systems, increased use of care planning and changes to structure and timings of GP appointments. The results of our longitudinal P3C-OCT survey confirm significant improvements in P3C, suggesting that SPQS has been successful in its stated aims as a system lever for service redesign aimed at the delivery of greater person-centred and coordinated primary care.

While there is emerging evidence that P3C approaches can improve outcomes (particularly for complexity/

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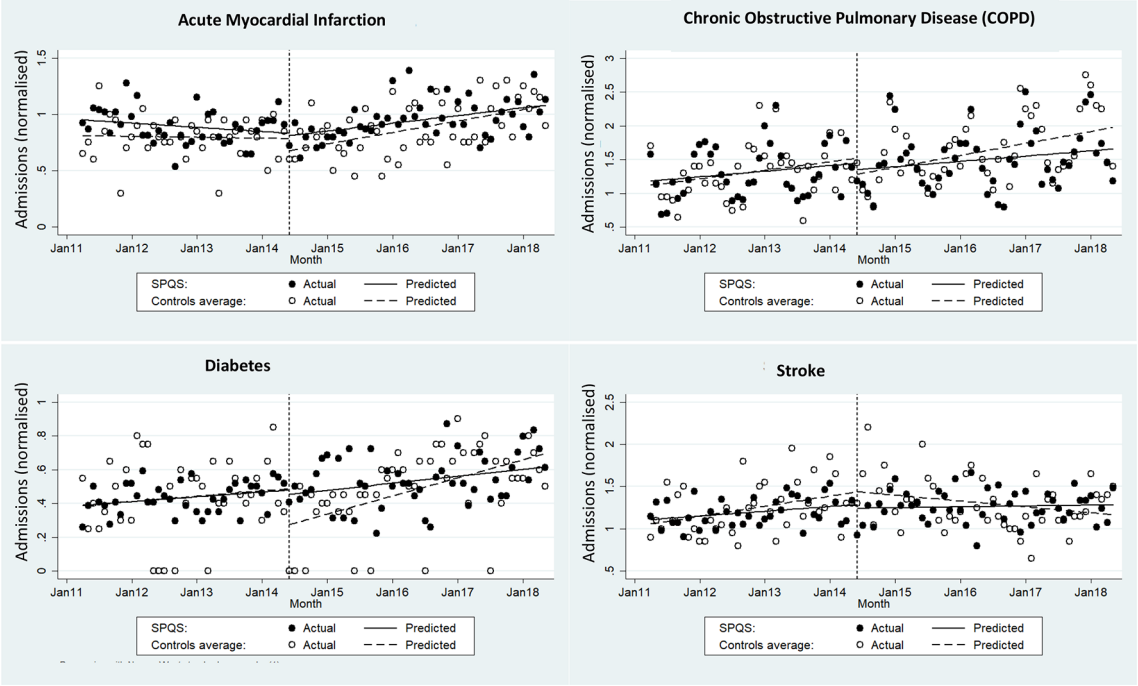

Figure 3 Results of interrupted time-series analysis. The four graphs show the ITS for the four ACSCs (from left to right, top to bottom, the graphs are: Acute Myocardial Infarction (AMI), Chronic Obstructive Pulmonary Disease (COPD), Diabetes and Stroke). Data starts at April 2011 and ends at January 2017. The SPQS contract was live from June 2014 (ie, intervention start time, indicated by vertical dashed line). Y-axis gives the number of admissions, normalised as admissions per month per practice. Black circles indicate the average number of emergency admissions in each month for SPQS practices; white circles are average admissions for QOF Somerset practices. The regression lines preintervention and postintervention are shown unbroken (for SPQS) and dashed (for QOF Somerset practices). All changes between preintervention and postintervention between SPQS and QOF practices are non-significant (see online supplementary file 4). ACSCs, ambulatory care sensitive conditions; ITS, interrupted time-series analysis; QOF, Quality and Outcomes Framework; SPQS, Somerset Practice Quality Scheme.

multimorbidity),[36 49] we could not establish that the changes introduced via SPQS are leading to better outcomes for patients. Patient experience is downstream of the organisational changes occurring in Somerset, and any detectable improvement in patient outcomes may be delayed. The results of the patient P3C-EQ experience established a similar experience of care in Somerset compared with the control QOF practices (who represent active, research engaged organisations, whereas completion of the survey was mandatory for SPQS practices; see Methods). Similarly, comparison of practitioner perspective of P3C to the control group revealed similar experiences in SPQS versus the control practices. These findings are broadly reflective of results from other initiatives, where—for example—patient-centred care for multimorbid patients recently revealed mixed effects on processes of care, but was not associated with measurable improvements in quality of life or other secondary outcomes, with the authors concluding that the initiative 'supported changes in organisation more than it supported changing the clinicians' attitudes on which patient-centredness depends.'[50]

In reference to disbenefits, we could find no evidence of increased admissions associated with SPQS. However, ITS did establish trend changes in admissions in non-SPQS Somerset practices (eg, those practices that retained the QOF contract). A significant increase was observed in admissions with a primary diagnosis of AMI and Diabetes, and a significant decrease observed for those with a primary diagnosis of Stroke. It is, however, unlikely that relatively minor changes to QOF in the years 2014/15 and 2015/16[51 52] have led to these observed trend changes in emergency admission.

While the time series did not establish any disbenefits in SPQS practices, earlier evaluation of SPQS established that deincentivisation of QOF leads to inconsistent recording of QOF data. Subsequently, analysis of QOF scores have little utility in assessing the quality of care in Somerset.[31] This paucity of data represents a major disbenefit of QOF deincentivisation: one of the primary benefits of QOF has been the widespread recording of clinical activities[1] and availability of GP data and research.[6 7] It is not currently clear how 'quality' could be assessed in the post-QOF landscape—a question that has major implications for research, evaluation, healthcare management.

Limitation of the study

The ability to draw firm conclusions from this study was limited by several factors. Due to time and resource pressures on GP in the UK, we struggled to recruit controls from within the same county (Somerset) or matched controls from the region. As an alternative, we obtained

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non-matched controls from the region. These represented a biased cohort of research-engaged practices. We could not detect improvements in experiences of healthcare professionals or patients—this could be because the intervention had no effect on these outcomes, the instruments were not sensitive enough, the controls were unsuitable or changes to patient/practitioner experiences were somewhat distal to the intervention. A further limitation of the study methods was that P3C-OCT was only administered to control practices at the second timepoint, meaning that we cannot determine if significant improvements of P3C-OCT score in SPQS practices might also have been present in controls.

Implications for the future

While previous calls for the removal of QOF in England[53] have not been reiterated, recent policy has moved towards a reformed, streamlined version of QOF.[54 55] With QOF continuing to evolve, lessons from SPQS have implications for UK policy. We have previously made a number of suggestions for the future landscape of QOF.[47 48] These include retaining limited components of QOF (eg, those elements that are desirable by GPs; 'QOF-Lite'), the development of novel systematic data capture (including GP contact data) or collaboration on an overhauled, integrated recall system that is specifically designed for efficient management of multiple LTCs.[47 48] GP, however, is under huge time and resource pressures.[56] Any proposed alternatives will have to fulfil the primary requirements of being a streamlined process for supporting coordination of care, especially for those with complex health needs. The recent national review of QOF concluded that QOF should be reformed to become more person-centred, create space for professionalism and optimally impact wider population health and system resource utilisation.[57]

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