

Is the quality of care in general medical practice improving? Results of a longitudinal observational study

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SUMMARY

Background: The demand for increased accountability within health care has led to a myriad of government initiatives in the United Kingdom, with the aim of improving care, setting minimum standards, and addressing poor performance.

Aim: To assess the quality of care in English general practice in the year 2001 compared with 1998, in terms of access, interpersonal care, and clinical care (chronic disease management, elderly care, and mental health care).

Design of study: Observational study in a purposive sample of general practices in England.

Setting: Twenty-three general practices in England — eight in North Thames, seven in the North West, and eight in the South West.

Results: Outcome measures were: quality of chronic disease management (angina, adult asthma and type 2 diabetes from practice questionnaires and medical record review), elderly care and mental health care (from practice questionnaires), access to care, continuity of care and interpersonal care (from practice and patient questionnaires) and costs (mean change in practice budget between 1998 and 2001). There were significant improvements in quality of care in terms of organisational access to services ($P = 0.016$), practice organisation of chronic disease management ($P = 0.039$), and the quality of angina care ($P = 0.003$). There were no significant changes in quality scores for mental health care, elderly care, access and interpersonal care. The mean practice budget rose by 3.4% between 1998 and 2001 (adjusted for inflation).

Conclusion: These findings provide evidence of improvements in some aspects of the quality of care, achieved at modest cost. This was achieved during a time when the National Health Service was undergoing a series of reforms. However, primary care in England is characterised by variation in care, with significant improvements still possible.

Keywords: quality of care; general medical services; primary health care.

Introduction

HEALTH professionals, managers and patients are all demanding increased accountability within health care.¹ This has led to a myriad of government initiatives in the United Kingdom to improve quality of care, including fundholding,² Personal Medical Services (PMS),³ and a national systems-based strategy of quality improvement that includes setting standards, improving care through clinical governance, and monitoring care.⁴ These initiatives aim to improve care, set minimum standards, and address poor performance. Systems for assessing and improving quality of care are now prominent in the UK.⁵ They are also increasingly prevalent throughout Europe;^{6,7} for example, in France,⁸ Italy,⁹ and Belgium,¹⁰ as well as in Australia,¹¹ New Zealand,¹² Japan,¹³ and the United States.¹⁴ The unwritten message from these developments is that the standard of medical care is not good enough.

The research upon which this paper is based was part of a longitudinal national evaluation of first wave (1998–2001) PMS pilot sites in England.¹⁵ The PMS initiative allows individual general practices, groups of practices and/or local Trusts to negotiate site-specific arrangements for service provision.^{2,16} In order to place the performance of the PMS practices in context, we also studied a matched comparison group of 23 general practices providing care under the standard General Medical Services (GMS) contract.

This paper presents findings from the longitudinal quality assessment in these 23 GMS practices. PMS promised new flexibility, but it is difficult to know how generalisable the PMS experience is to usual primary care in the UK. In contrast, the experiences of GMS practices during the same period reflect ongoing national developments in general practice and may portray a more accurate picture of the quality of primary care in England.

Method

It has been previously suggested that quality of care can be defined as a combination of access and clinical and interpersonal effectiveness,¹⁷ and this study was organised according to that framework. Permission to undertake the study was sought and approved from the North West Multi-Centre Research Ethics Committee.

Sample

Quality of care was measured in 23 GMS practices, drawn from a stratified random sample of 60 practices in England, which had formed part of a detailed observational quality assessment in 1998.^{18–20} These 23 practices were selected purposively (from the 60) to match 23 of the 87 first-wave PMS pilots, which were being assessed in a national evaluation of PMS sites.¹⁵

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HOW THIS FITS IN*What do we know?*

Quality of care varies in English general practice. The morale of general practitioners and health professionals has diminished. Most studies look at quality of care from a single perspective, or examine a single condition, and usually at only one time-point.

*What does this paper add?*

This research adds a multi-faceted analysis of 23 primary care practices, with patient and practice surveys and clinical reviews conducted in England in 1998 and 2001, which allowed assessment of longitudinal changes in quality of care. There is some evidence of improvements over time that were mainly owing to improvements in less well performing practices and a reduction in the overall variation in quality of care.

Matching, which was 100% successful, was based on three criteria. These criteria were: the practice's training status; the number of full-time equivalent general practitioners (GPs) and the practice's deprivation status, derived using National Health Service (NHS) deprivation bands and calculating the weighted sum of patients in each band (with Census-based deprivation payments as weights) divided by total list size.¹⁵ The characteristics of the GMS sample are shown in Table 1, which also shows how the sample corresponded to all GMS practices in England in 1998.

Data collection

Six measures were used to gauge quality of GMS care. All data were collected at or near 31 March 1998, and again at or near 31 March 2001, except for the General Practice Assessment Survey, which was administered in spring 1999 and spring 2001.

Practice organisation survey

A questionnaire was sent to the practice manager of each practice, asking for details relating to the organisational set-up of the practice in terms of the numbers and range of staff, clinics, appointments, and services available. The questionnaire also focused specifically upon the chronic disease management services provided for angina, asthma, diabetes and hypertension (registers, protocols, clinics) and access to services (appointment availability, telephone advice, translator availability). These items had been previously judged by GPs and health authority managers to be valid measures of quality of care.²¹

Table 1. Characteristics of the study sample compared to practices in England (1998).

Practice characteristic	Study sample (%)	England (%)
Full-time equivalent of <2 GPs	12/23 (52.17)	4539/9090 (49.9)
Training practices (approved trainers)	7/23 (30.43)	2131/9090 (23.4)
Receiving any deprivation payments	15/23 (65.17)	5390/9090 (59.29)

Clinical care audit and surveys

Chronic disease management. In addition to the organisational dimension of chronic disease management in the practice organisation questionnaire, the quality of clinical care for angina, asthma, and type 2 diabetes was assessed from medical records using validated review criteria as part of a clinical audit.^{19,22} These detailed data were collected by trained abstractors working onsite. Patient records were drawn at random in 1998 for approximately 20 patients per condition in each of five practices (that had been matched to PMS practices with objectives focused on chronic disease management). Data were collected for the same patients in 2001; where the patient was no longer registered another patient was selected at random.

Elderly care. The practice manager of each practice was sent an Elderly Care Questionnaire. This was based on a literature review of optimal practice; in terms of service provision for older patients with respect to teamwork, assessment, treatment quality (measured in terms of relevant protocols and access to services), and arrangements for intermediate care.¹⁵ The topics covered by the questionnaire are described in Box 1 and the full list of items is shown in Table 2.

Mental health care. The practice manager of each practice was sent a Mental Health Questionnaire, also based on a literature-based review of optimal practice, in this case covering teamwork, services, protocols, and patient focus.¹⁵ The topics covered by the questionnaire are described in Box 2 and the full list of items is shown in Table 3.

Patient Evaluation Survey. A random sample of 200 adult patients from each practice list was sent a copy of the General Practice Assessment Survey. This is a 57-item questionnaire (available at: www.gpas.co.uk), which asks patients to evaluate their primary care with respect to access, continuity of care, receptionists, doctor's knowledge of the patient, interpersonal care, patient's trust in the doctor, and nursing care.^{23,24}

Cost questionnaire. Questionnaires were sent to the relevant health authority for each of the practices, asking for financial information with respect to financial year 1997/1998 and for the three subsequent years. The information requested included overall practice income and budgets for prescribing, staff, computing, and development.

Data analysis

The quality measures assessed organisational structures (organisational access, organisation of chronic disease management, mental health, and elderly care), processes (angina, asthma and diabetes care, mental health, and elderly care) and outcomes (patient assessments of access and interpersonal

- Practice leadership on elderly care
- Access to a range of health professionals
- Meetings with hospital, community, voluntary and local authority staff
- At-risk register
- Annual health checks for patients aged over 75 years
- Written assessment protocols; place of assessment
- Screening for a range of ten problems
- Clinic availability
- Protocols/guidelines
- Access to intermediate care services
- Follow-up post-hospital discharge
- Access to social services
- Patient preferences

Box 1. Areas included in the Elderly Care Questionnaire.

- Practice leadership on mental health
- Access to a range of health professionals; choice
- Practice nurse responsibilities
- Meetings with hospital, community, voluntary, and local authority staff
- Clinic availability
- Registers
- Protocols/guidelines
- Information for patients
- Consultation with patients
- Patient evaluations
- Ethnic minority services
- Privacy

Box 2. Areas included in the Mental Health Questionnaire.

Table 2. Elderly Care Questionnaire item composition and scoring protocol

<i>Team (maximum possible score = 15)</i>		
Q1	Someone on the PHCT takes the lead on care of older patients	'Yes' scores 2; if explicit multi-professional approach, scores 4
Q2	Practice has access to (any from a list of seven) relevant professionals: community practice nurse, psychologist, counsellor, psychiatrist, welfare rights office, social worker, other	Each 'onsite' access scores 1
Q3	Regular meetings are held about elderly care between: (a) GPs and other members of PHCT, (b) PHCT and secondary care staff, (c) PHCT and social services, (d) PHCT and voluntary agencies	Each 'yes' scores 1
<i>Multidimensional assessment (maximum possible score = 17)</i>		
Q4	Practice maintains an at-risk register of elderly patients	'Yes' scores 1
Q5a	Practice offers annual health checks to patients aged over 75 years	'Offered opportunistically' scores 1; 'offered to all' scores 2
Q5b	Practice uses a written assessment protocol	'Yes' scores 2
Q6	Place of assessment	'Surgery' or 'either' scores 1; 'home' scores 2
Q7	PHCT recommends screening for (a range of ten problems): breast cancer, colon cancer, dementia, depression, gait/balance, hearing impairment, osteoporosis, polypharmacy, prostate cancer, visual impairment	No or 'if indicated' scores 0; each 'yes, routinely' scores 1
<i>Clinical protocols/services (maximum possible score = 13)</i>		
Q9	Practice offers access to (a range of eight relevant) clinics and services, that are used by older patients: bereavement, counselling, financial planning, health promotion, incontinence, memory, physiotherapy, social work assessment	Each 'yes, by referral' scores 1; each 'on site' scores 2
Q10	Practice has protocols or guidelines for management of (a list of 18) health issues associated with ageing: bereavement, carer stress, dementia, depression, elder abuse, hospital discharge, malnutrition, osteoarthritis, pain, Parkinson's disease, polypharmacy, pressure sores, referral to social services, stroke, suicide, terminal illness, urinary incontinence	Each 'yes' scores 2
<i>Intermediate care (maximum possible score = 13)</i>		
Q11-15	Practice has access to (a range of five) intermediate care services: access to short-term beds, admitting rights to community hospital, rapid response programme, hospital at home, respite care	Each 'yes' scores 1
Q16	PHCT makes contact with older patient newly discharged from hospital	'Within 1 week' scores 1; 'within 48 hours' scores 2
Q17	Practice knows who becomes responsible for an older patient's primary care after moving to a residential care setting	'Yes' scores 1
Q18	Practice has good access to social services for older patients	'Fair' scores 1; 'good' 2; 'excellent' 3
Q19	Practice records patient's preference re: resuscitation in case of emergency	'Yes' scores 1
Q20	Practice records contact details for patient's preferred family or friend to act as carer	'Yes' scores 1
<i>Maximum overall score = 97</i>		

PHCT = Primary Health Care Team.

care). Costs may be seen as either a process measure (resources supporting delivery of care) or as an organisational outcome. All analyses looked at changes in quality of care over time. For each measure, individual items were examined and simple summary scores were created. These scores facilitate comparisons over time and provide an accessible overview of

quality performance; they are emphasised in our presentation of results.

Organisational access and the organisation of chronic disease management were evaluated using summary scores (number of 'yes' responses divided by the total items), which were derived from these sections of the practice organisation

Table 3. Mental Health Questionnaire item composition and scoring protocol.

<i>PHCT (maximum possible score = 15)</i>		
Q1	Someone on the PHCT takes the lead on mental health care	'Yes' scores 2
Q2	Practice has access to (any from a list of) relevant professionals: counsellor, community practice nurse, psychiatrist, psychologist, social worker, welfare rights officer, other	Each 'on-site' access scores 1
Q3	Practice nurse: (a) has specific responsibilities for patients with mental health problems, (b) has received specific training or support for role	Each 'yes' scores 1
Q4	Regular meetings are held about mental health care between: (a) GPs and other members of PHCT, (b) PHCT and secondary care staff, (c) PHCT and local authority staff, (d) PHCT and voluntary agencies	Each 'yes' scores 1
<i>Services (maximum possible score = 11)</i>		
Q6	Any of a list of clinic/services are available (on-site, or by referral off-site): alcohol, bereavement, counselling, drug misuse, marriage guidance	Each 'yes' scores 1 (2 if available in both locations)
Q7	Appropriate room is available for counselling or visiting mental health staff	'Yes' scores 1
<i>Treatment quality (max possible score = 19)</i>		
Q10	Practice has a mental health register for patients with severe and enduring illness	'Yes' scores 1
Q11	Practice has protocols or guidelines for practice staff for management of (any from a list of) mental health problems: anti-psychotic medication, anxiety, bereavement, depression, postnatal depression, referrals, substance abuse, suicide and severe mental illness.	Each 'yes' scores 2
<i>Patient focus (maximum possible score = 6)</i>		
Q 9	There is written information/advice on mental health problems for patients (a) in English, and (b) in another language	Each 'yes' scores 1
Q8	It can be arranged for a patient to consult with a male or female mental health specialist or counsellor as preferred	'Yes' scores 1
Q13	In the past two years the practice has undertaken any consultation with patients about mental health services, e.g. meetings; patient evaluations of mental health services, e.g. satisfaction surveys	Each 'yes' scores 1
Q14	Practice has specialist services for ethnic minority groups	'Yes' scores 1
<i>Maximum overall score = 51</i>		

PHCT = Primary Health Care Team.

Table 4. Response to Practice Profile Questionnaire access dimension questions: proportion of practices responding positively in 1998 and 2001 (mean access scores).

Practice Profile Questionnaire items relating to access	1998 (n = 17)	2001 (n = 17)
Patients can get urgent appointment same day	94%	100%
Patients can get information over the telephone	82%	100%
There is someone to answer the phone 9.00 am–5.00 pm weekdays	88%	94%
Practice has access to translators	29%	53%
Overall percentage of positive responses/ number of items	73.5	86.8

questionnaire. The overall proportion scores in 1998 and 2001 were compared using paired sample *t*-tests. For access, item-specific responses are also reported.

To analyse clinical review data, practice scores were created for angina, asthma and diabetes, based on patient-level data. These scores represented the ratio of care actually provided to patients divided by care that should have been provided, according to the review criteria.^{18,19} Face-valid review criteria had been developed using a RAND Appropriateness Panel procedure²² and were subsequently field-tested in the UK for their inter-rater reliability, acceptability — as assessed by GPs and nurses in 60 general practices — and feasibility.¹⁹ Only criteria that had been found to be acceptable, feasible, reliable, and valid were used to create the final analyses. Scores ranged from 0 to 100, where 100 equalled optimum quality care. Paired sample *t*-tests were performed to assess differences in care between 2001 and 1998.

For mental health and elderly care, quality scores were created for each practice according to the items and scoring protocols shown in Tables 2 and 3, respectively. For elderly care, a summary score was obtained by calculating how many items were met in the areas of teamwork, assessment, treatment quality, and intermediate/crisis care, and dividing this overall number by the maximum possible score of 97.¹⁵ The same procedure was applied for mental health care in terms of teams and training, services, protocols and procedures, and patient focus, with a maximum possible score of 51.¹⁵ Thus scores were expressed as a percentage of the maximum possible score, i.e. along a 100-point scale where 100% represents the best quality of care. Summary scores were assessed using paired sample *t*-tests.

Linear statistical models (regression, analysis of variance, *t*-tests), adjusting for clustering of patients within practices using STATA software (version 6), were used to analyse the multi-item scales on the GPAS patient survey. Finally, cost data were summarised for each practice by financial year, adjusted for inflation, with the overall mean of changes across all practices then calculated.

Results

Access, continuity of care, and interpersonal care

There were improvements in the organisation of access, based on the questions in the practice organisation survey. The mean scores rose from 73.5 in 1998 to 86.8 in 2001 ($P = 0.016$). The minimum score increased from 0 to 50 and the standard deviation across the practices reduced from 25.7 to 15.6, suggesting a rising floor in the quality of access in this sample of GMS practices. Improvements were found in terms of telephone

Table 5. Practice-level mean (including lowest and highest mean) General Practice Assessment Survey scores for 1999 and 2001.

GPAS Scale	Overall mean (minimum–maximum)		Mean change over time (minimum–maximum)
	1999 (n = 1751)	2001 (n = 2769)	
Access	62.0 (47 to 79)	61.4 (45 to 78)	-0.6 (-7.8 to +3.8)
Receptionists	70.0 (52 to 85)	69.6 (54 to 87)	-0.4 (-10.7 to +7.6)
Continuity of care	67.6 (47 to 84)	68.8 (50 to 85)	+1.2 (-5.5 to +10.8)
Communication	73.0 (55 to 83)	74.4 (60 to 86)	+1.4 (-12.2 to +12.5)
Interpersonal care	70.4 (50 to 83)	71.2 (56 to 83)	+0.8 (-13.9 to +8.2)
Trust	76.8 (63 to 86)	77.8 (67 to 87)	+1.0 (-10.2 to +6.9)
Knowledge of patient	60.1 (43 to 76)	60.8 (50 to 72)	+0.7 (-14.2 to +10.2)
Nursing	76.2 (65 to 88)	76.0 (69 to 88)	-0.2 (-8.6 to +4.1)

contact, urgent appointments, and access to interpreters (Table 4).

For the GPAS patient survey, 1751 patients returned their questionnaires in 1999 (response rate = 40%), while in 2001, 2769 questionnaires were returned (response rate = 68%). The mean and range of scores by practice, for each multi-item scale of the General Practice Assessment Survey, are shown in Table 5. There were no significant changes in quality scores and wide variations between practices persisted.

Clinical care

Chronic disease management. There were improvements in the organisation of chronic disease management, based on the questions in the practice organisation questionnaire. The mean scores rose from 58.7 in 1998, to 92.4 in 2001 ($P = 0.039$). The minimum score increased from 0 to 72.7 and the standard deviation across the practices reduced from 32.9 to 9.2 (Table 6).

For the five practices where detailed record reviews were conducted, practices improved their care significantly between 1998 and 2001 for angina (1998 — 67.44, 2001 — 77.57; $P = 0.003$). There were non-significant changes for asthma (1998 — 62.25, 2001 — 69.37; $P = 0.06$) and diabetes (1998 — 78.82, 2001 — 81.37; $P = 0.06$). Table 7 shows the range of scores at both time periods.

Care of elderly patients. Completed questionnaires were received from 19 practices in 1998 (response rate = 83%) and 17 practices in 2001 (response rate = 74%). Table 6 shows the range of scores and that practices did not significantly improve their care between 1998 and 2001, although the variation across practices decreased from 61 points in 1998 to 53 points in 2001.

Mental health services. Completed questionnaires were received from 19 practices in 1998 (response rate = 83%) and 17 practices in 2001 (response rate = 74%). Table 6 shows that practices did not significantly improve their mental health care but the range of scores narrowed from 65 points in 1998 to 59 points in 2001.

Costs. Completed questionnaires were received for all three years from 19 practices (83%). There was a wide range in the experience of practices, with some losing income and others receiving additional income. After adjusting for inflation, annual average funding for the practices had increased by 3.4% (95% confidence interval = -13.85% to +27.55%).

Discussion

Summary of main findings

This study found significant improvements in the quality of primary health care in terms of organisational access to services, the organisation of chronic disease management, and the clinical quality of angina care. While no other quality measures demonstrated statistically significant improvement, higher minimum scores and smaller standard deviations were observed for most measures. This suggests a rising floor in the overall quality of GMS, at least in terms of structure and processes of care.

Limitations and strengths of the study

The study had a number of limitations, which mean that the findings reported in this paper must be treated as suggestive of trends in GMS care, rather than definitive. First, the sample size of 23 practices meant that the study only had the power to detect large changes in service/care provision; particularly in the clinical audit, which only included five practices for resource reasons. However, this suggests that the significant developments that were observed were important. Second, the sample was not selected to be representative of all GMS practices in England but chosen to match a set of first-wave PMS pilots.¹⁵ Compared with general practice across England, there was parity in practice size, some over-representation of practices receiving additional deprivation payments and a higher proportion of training practices. However, while some research has shown that training practices offer a wider range of services,^{25,26} other studies found no link between training status and higher quality of care,¹⁸ and indeed there is some evidence of lower patient assessments of care in training practices.²⁷

Third, as an observational study, the quality assessment must acknowledge a number of potential threats to validity. With the exception of the clinical review, the findings rely on self-report. In the case of the patient survey, a low response rate, especially in 1998, may be associated with non-response bias. The cost data were weakened by inconsistencies in health authorities' methods of allocating and monitoring budgets. Two of our measures — the elderly care and mental health questionnaires — were being used for the first time and do not have their validity established. While low scores usually indicate poor quality care, they could also be owing to weaknesses in the questionnaires or to implicit standards that are unrealistic in general practice. However, they may also reflect underdeveloped and unstandardised primary care infrastruc-

Table 6. Overall Practice Profile Questionnaire chronic disease management and access dimensions: overall Elderly Care Questionnaire and overall mean Mental Health Questionnaire, scores, over time.

	1998		2001		Significance level
	Mean	Range (standard deviation)	Mean	Range (standard deviation)	
Practice Organisation Questionnaire: chronic disease management	58.7	0–100 (32.9)	92.4	72.7–100 (9.5)	$P = 0.039$
Practice Organisation Questionnaire: access	73.5	0–100 (25.7)	86.7	50–100 (15.6)	$P = 0.016$
Overall score for Elderly Care Questionnaire	34.48	12–73 (16.28)	35.99	20–73 (14.48)	$P = 0.636$
Overall score for Mental Care Questionnaire	27.68	9–75 (17.55)	30.05	11–70 (18.05)	$P = 0.865$

Table 7. Differences in clinical scores for five practices: baseline and at year 3.

Condition	Mean score at baseline–1998 (range/standard deviation) [Number of patients]	Mean score in Year 3–2001 (range/standard deviation) [Number of patients]	Change in scores between Year 3 and baseline	Significance level
Angina	67.44 (20–80/21.5) [$n = 100$]	77.57 (33–77/15.4) [$n = 95$]	+10.13	$P = 0.003$
Asthma	62.25 (0–100/29.9) [$n = 100$]	69.37 (0–100/27.7) [$n = 95$]	+7.12	$P = 0.06$
Type 2 diabetes	78.72 (10–100/20.0) [$n = 100$]	81.37 (10–100/18.7) [$n = 95$]	+2.65	$P = 0.06$

ture, especially for mental health, which is nascent in many localities.²⁸

The study's strengths are, first, that it explicitly recognises that quality of care is a complex and multi-dimensional phenomenon.^{17,29} To fully reflect this complexity, methods are now being advocated that focus upon multiple dimensions, such as access, interpersonal care, and clinical care.^{18,30,31} This study examined multiple aspects of quality from the perspectives of both practices and patients. Second, it makes clear the fact that quality improvement has numerous interpretations, from patient approval to changing norms of care to excellence in one area but not necessarily another. For example, the practice organisation survey is based on usual and acceptable practice, whereas the elderly care and mental health questionnaires are based on optimal — even idealised — practice. Lastly, this study has the important advantage of a longitudinal design.

Implications for policy and clinical practice

This research confirms variations in quality of care in England, as has been documented previously.^{18,32} Such variations have also been observed in, for example, Australia, New Zealand and the United States.^{32,33} However, because of its longitudinal design, this study also suggests that the quality of care assessed in this sample of GMS practices improved or was maintained between 1998 and 2001, a time when the NHS was subjected to a series of reforms. Such improvements are encouraging, particularly at a time when public confidence in the NHS and health professionals is reported to have diminished.^{34,35} and when there is some evidence of poor performance³⁶ and low morale among GPs,³⁷ as well as problems with recruitment and retention.³⁸

For example, the quality of angina care was significantly better in 2001 than 1998, and changes in the quality of asthma and diabetes care were close to significant. The quality gains for angina may reflect the combined impact of the high priority given to diagnosis and treatment of coronary heart disease by the majority of Primary Care Groups and Trusts in England,³⁹ and the introduction of the National Service Framework for coronary heart disease.⁴⁰ The asthma and diabetes scores

could have been, but were not, adversely affected by practice staff devoting attention towards improving care for patients with angina.

The literature on quality improvement in general practice shows that improvements have been ongoing in the NHS since its inception;⁴¹ for example, in terms of individual clinical areas⁴² or as assessed by audit.⁴³ Therefore, it is important to identify the factors between 1998 and 2001 that acted as catalysts for change distinct from these ongoing improvements. Two policy developments during the study period require consideration. First, research suggests that quality improvement comes from multi-level, systems-based strategies for change.^{44–46} The strategy of clinical governance introduced in 1997 constituted the first systems-level strategy for improving care and services in the NHS as a whole⁴⁷ and is unique in Europe to the UK.⁴⁸ This strategy has incorporated national standards and guidelines, quality improvement initiatives, and mechanisms to monitor existing care.³ Second, the focus on local-level quality improvement, particularly by Primary Care Trusts, represents a coherent attempt to improve the quality of primary care across all practices, often using corporate strategies, such as education and training, but also employing financial incentives.^{39,49,50} However, while these developments have influenced the local delivery of care there is, as yet, limited evidence of a positive effect on health outcomes.³⁹ Even assuming success, it will take time to achieve the cultural and behavioural changes that will underpin sustained improvements in care.^{51–53}

The improvements in care were accompanied by a modest annual increase in costs (adjusted for inflation) of 3.4%, a lower figure than the increase in hospital and community health services pay and price inflation, taken as the increase in the weighted average of the health service cost index and pay cost index, of 4% for 1998/1999, 4.5% for 1999/2000, and 4.2% for 2000/2001.

In conclusion, these results provide encouraging evidence of improvements in the quality of GMS in England but also demonstrate substantial variation in the quality of care provided by primary care practices, which suggests that many prac-

tices are falling short of providing an excellent quality of care.

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