

The relationship between consultation length, process and outcomes in general practice: a systematic review

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SUMMARY

The aim of the study was to examine differences in consultation process and health outcomes between primary care physicians who consult at different rates. A systematic review of observational studies was carried out, restricted to English language journal papers reporting original research or systematic reviews. Qualitative analysis with narrative overview of methodology and key results was undertaken, using MEDLINE (1966 to 1999), EMBASE (1981 to 1999), and the NHS National Research Register. Secondary references from this search were also considered for inclusion. Main outcome measures were objectively measured process or healthcare outcomes.

Thirteen papers, describing ten studies, were identified. There were consistent differences in several elements of process and outcome between general practitioners (GPs) who consult at different rates. Although average consultation length may be a marker of other doctor attributes, the evidence suggests that patients seeking help from a doctor who spends more time with them are more likely to have a consultation that includes important elements of care.

Keywords: *systematic review; consultations.*

Introduction

THE brevity of the general practice consultation is a longstanding concern of doctors,¹ politicians,² service users,³ and researchers.⁴ In the United Kingdom (UK) and the United States of America (USA) there is some evidence of a slight increase in average consultation length during the past decade,^{5,6} but this may not match increasing expectations and demands; for example, for health promotion and chronic disease management.⁷ A non-systematic review published in 1991 found some differences between doctors who consulted more slowly, but results from intervention studies where doctors consulted under different time conditions were less consistent.⁸ In the UK, appointment length has recently been suggested as a performance indicator for general practice.⁹ Therefore, it is timely to conduct a systematic review to explore associations between doctors' average consultation length and consultation process and outcome.

Method

Search strategy

MEDLINE (1966 to November 1999), and EMBASE (1981 to November 1999), and the NHS National Research Register were searched in the spring of 2000. The following search terms were used in MEDLINE, with equivalent strategies in the other databases using Medical Subject Headings (MeSH) or Textword (TW): 'appointments and schedules' (MeSH) or 'consultation' (TW) or 'consultations' (TW) or 'appointment' (TW) or 'appointments' (TW), and ('time factors' [MeSH] or 'time' [TW] or 'length' [TW] or 'duration' [TW]), and ('family practice' [MeSH] or 'physicians, family' [MeSH] or 'primary health care' [MeSH EXP]).

Selection process

Selection was limited to English language journal articles reporting original research or systematic reviews. All studies comparing primary care physicians' average length of consultation to any objectively measured process or outcome were included. Primary care physicians were defined as doctors of first contact, whether or not their practice was confined to certain patient groups, such as primary care paediatricians in the US. Studies that examined associations between individual consultation length and type of problem or patient were not included. Studies examining interventions to increase consultation length will be presented in a separate review. Titles were reviewed for inclusion by one of the authors. Electronic records and abstracts (where available) of those passing this filter were reviewed for relevance

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Submitted: 12 November 2001; Editor's response: 16 January 2002; final acceptance: 17 June 2002.

©British Journal of General Practice, 2002, 52, 1012-1020.

HOW THIS FITS IN*What do we know?*

GPs and patients express dissatisfaction with consultation length in general practice. Appointment length has been proposed as a quality marker in the UK. No previous systematic review has examined associations between average consultation length, processes, and health outcomes.

What does this paper add?

Doctors who consult more slowly prescribe less and engage in more health promotion. They also achieve higher levels of enablement and some elements of satisfaction. There is no clear relationship between average consultation length and referral or investigation rates. Work is needed to see if these differences can be replicated in intervention studies.



using the above criteria. Full papers were obtained for those studies selected and if no electronic abstract was available. Additional papers were identified from reference lists and contact with authors who had published in the previous five years. These were subjected to the same appraisal.

Data extraction and analysis

Quality assessment and extraction of data about the studies' aims, design, and results were done independently by both reviewers, using agreed criteria. Disagreements were resolved by discussion between reviewers. No quality scoring or thresholds were applied, as no accepted system exists for observational studies. Differences in the setting, design, and methods of studies were expected to preclude quantitative synthesis, and it was therefore planned to present results qualitatively.

Results

Of 1069 titles from MEDLINE, and 418 from EMBASE, 178 abstracts were selected and reviewed. The NHS National Research Register did not contribute any additional material.

Twenty-six full papers were considered for inclusion. A further 16 papers were considered for eligibility from the reference lists of the first selection, and one through contact with authors. Of these 42 papers, 13 met the eligibility criteria.¹⁰⁻²² Nine were from the original search, and four from secondary references. These papers represented ten studies.

Reasons for exclusion

The following papers were excluded. Five did not include primary care physicians.²³⁻²⁷ Sixteen included process and outcome in individual consultations, but did not include a comparison between doctors with different average consultation lengths.²⁸⁻⁴³ Eight papers examined associations between various doctor and practice characteristics and average consultation length, but did not include any objectively measured process or outcome measure.⁴⁴⁻⁵⁰ Finally, one paper reworked data already included.⁵¹

Design of included studies

Table 1 lists the studies included, their aims, and methodology. Studies included were of two designs. In the first group of studies there were comparisons of processes and/or outcomes in doctors whose average consultation length differed. These ranged from a small study by Hughes, which compared two practices in a single health centre,¹⁷ to large surveys that classified doctors according to average consultation length (Howie/Lothian).¹⁴ The inclusion criteria also admitted a study by Bensing, which compared male and female doctors, as they were found to have different consultation lengths.¹³ The second type of study investigated average consultation length as one of several predictors of a specific process or outcomes. Processes examined included prescribing volume by Hertzema,²¹ adherence to audit criteria by Hulka,²² and achievement of 'performance indicators' using routine data, by Heaney.¹¹ One study examined average consultation length as a predictor of enablement (Howie/enablement).^{15,16,18} Most studies examined process and outcome in samples of individual consultations, but four (Heaney, Camasso, Hertzema, and Hulka) included longer-term process measures.^{11,18,21,22}

Quality of included studies

Methodological considerations included: selection of doctors; method of assessing consultation length; the extent to which confounding factors were identified and controlled for; and validity of outcome measures.

With regard to the selection of doctors, some studies aimed to recruit a representative sample of doctors (Table 1). In Howie's Lothian study,¹⁶ 17% of those approached were recruited, and it was found that women and single-handed doctors were under-represented, with those between 35 and 45 years of age over-represented. Hulka²² recruited 14% of the doctors approached and found that participants were more likely to be younger and better qualified, with fewer working single-handedly. In Howie's enablement study,¹⁹ 38% of practices approached agreed to participate. These were reported as representative demographically, but larger practices were more likely to participate.

Methods of assessing consultation length are shown in Table 1. Most common was the 'gold standard' of objective timing of individual consultations. Some studies relied on dividing the duration of a consulting session (or hours worked) by the number of patients seen. Clearly, this approach will produce consistently longer consultation lengths than timing individual consultations, as it does not exclude the time between one patient leaving and the next entering, and may produce misleading comparisons between doctors if the time they spend between patients differs. One study used booking interval as a proxy for consultation length. This method is likely to underestimate true consultation length, as well as differences between doctors, as many of them, especially those who consult more slowly, fail to keep to their appointment schedule.⁵²

With regard to confounding factors, it is well established that patient factors such as age, sex, and type of problem all influence consultation length.²⁸ However, confounding due to case mix was only examined in one study,¹⁵ which found

Table 1. Aims and methodology of included studies.

Author	Hulka 1979 ²²	Hughes 1983 ¹⁷	Hartzema 1983 ²¹	Hull 1984 ²⁰	Howie 1989, ¹⁶ 1991, ¹⁵ 1992 ¹⁴ (Lothian)
Aim	To examine correlates of adherence to audit criteria	To compare slower and faster doctors	To examine correlates of prescribing volume	To examine the influence of time availability on patient satisfaction	To explore the relationship between use of time and quality of care
Location	USA	Wales	USA	UK	Scotland
Duration	5 months	8 weeks	11 months	Not stated	1 year (RTI, 6 months)
Number of practices	Not stated	2	One health maintenance organisation	25	Not stated
Number of doctors	31	6	80	25	85
Number of consultations	869 patients (for general examination, and with hypertension, diabetes or dysuria)	1652	Not stated	1112	21 707 (1787 for RTI)
Mean consultation lengths in minutes	9.3 to 37.5	8 versus 5	Average 17.6, range = 13.3 to 26.1	>8 versus <8	<7, 7 to 8.99, 9 (RTI ≤6, 6.1 to 8.99, ≥9)
Method of assessing consultation length	Reported patients per hour	Consultations as timed by observer	Reported patients seen per hour	Individual consultation lengths reported by doctor	Consultations timed by doctor
Design of study	Medical record review	Doctor encounter forms	Retrospective prescribing data	Patient questionnaire	Encounter forms, patient questionnaire
Analysis	Correlation between patients seen per hour and adherence to audit criteria	Comparison of results from slower and faster practice	Patients per hour as predictor of prescribing in regression model	Comparison of satisfaction scores for faster and slower doctors	Comparison of slow, intermediate, and fast doctors
Percentage of eligible doctors participating	14	Not applicable	100	Hand picked sample	17
Author	Bensing 1993 ¹³	Andersson 1994 ¹²	Camasso 1994 ¹⁸	Baker 1996 ¹⁰	Howie 1999, ¹⁹ Heaney ¹¹ (enablement)
Aim	To compare consultation content of male and female doctors	To examine correlates of a 'good consultation'	To examine the association between average consultation length and content	To determine principal practice correlates of patient satisfaction	To determine principal correlates of patient enablement and its relationship to achievement of performance indicators
Location	The Netherlands	Sweden	USA	UK	UK
Duration	12 months	Not stated	7 months	Not applicable	2 months
Number of practices	21	3	15	39	53 (49 in Heaney)
Number of doctors	50 (27 male, 23 female)	6	64	126	221 (not stated in Heaney)
Number of consultations	47 254	581	4695 (1424 patients)	7273	25 994 (not stated in Heaney)
Mean consultation length in minutes	Male = 25.7% > 10 Female = 32.7% > 10	>30 versus 11 to 30 versus ≤10	Average = 16.7	Range of appointment lengths = 6 to 15	Average = 8.0, range = 3.8 to 14.4
Method of assessing consultation length	Consultations timed by doctor	Consultations timed by doctor	Time/number of patients	Reported appointment length	Consultations timed by doctor
Design of study	Encounter forms	Doctor and patient questionnaires	Medical record review	Patient questionnaire	Encounter form, patient questionnaire
Analysis	Comparison of male and female doctors	Percentage of 'good consultations' according to consultation length	Linear and piecewise regression	Multiple regression	Multiple regression
Percentage of eligible doctors participating	Not stated	Hand picked sample	100	Not stated	38

RTI = respiratory tract illness.

that patients seen by faster and slower doctors were similar, as assessed by the Nottingham Health Profile (NHP).

All objectively measured process measures reported in the studies were included. Those that were explicitly linked to 'quality' were achievement of audit criteria²² and achievement of performance indicators.¹¹ Opportunistic health promotion/screening can also be considered a key element of the general practice consultation.⁵³ There is consistent evidence that such opportunities are frequently missed,⁵⁴ and so increased health promotion can also be considered an element of quality.

Other process measures were: prescribing, investigation and referral rates, and reconsultation/follow-up rates. Although there is a view that some prescribing in general practice is unnecessary, crude rates (i.e. percentage of consultations in which a prescription is issued) are difficult to link to quality without evidence of appropriateness. Similarly, investigation, referral, and reconsultation rates may conceal differences that really matter, i.e. the appropriateness of these actions. It is notable that none of the studies included a health economic analysis to determine whether the additional costs of longer consultations were offset by lower rates of resource use in other activities.

Only two studies included validated outcome measures. Baker¹⁰ used the consultation satisfaction questionnaire (CSQ),⁵⁵ and Howie the patient enablement instrument (PEI). The latter has been tested less widely than the CSQ, but has been shown to have construct validity and test-retest reliability.⁵¹

Effect of average consultation length on process and outcome measures

Three papers from the Lothian study assessed recognition and management of patient problems. Faster doctors, i.e. those with an average consultation length of less than seven minutes, were less likely than slower doctors, with an average consultation length of nine minutes or more, to recognise and deal with long-term problems ($P < 0.05$) and psychosocial problems, even when controlled for individual consultation length.¹⁵ In a subset of consultations for respiratory illness, psychosocial problems were more likely to be recognised (the figure for fast doctors was 28%, for intermediate doctors 31%, and for slow doctors 33%), and if recognised dealt with (11%, 10%, 20%, respectively, $P < 0.01$).¹⁶ The third paper did not directly compare faster and slower doctors, but classified them as high, intermediate, or low scorers on patient centredness, which was found to correlate with average consultation lengths of 8.4, 7.6, and 7.5 minutes, respectively. Recognition of psychosocial problems according to patient centredness occurred in 48%, 46%, and 39% of consultations, respectively, and was dealt with in 80%, 73%, and 71% of consultations, respectively, if recognised.¹⁴

In a study of adherence to agreed criteria for specific conditions, Hulka *et al*²² found that criteria for history and examination were more likely to be met in doctors who consulted more slowly. The overall score for meeting audit criteria was higher in slower doctors. This reached statistical significance for hypertension and dysuria, but not for diabetes or for general examination. Camasso found that faster doctors

recorded sparser histories.¹⁸ Bensing found that female general practitioners (GPs) had longer consultations and were more likely to engage in 'active and passive counselling'.¹³

Prescribing was examined in five studies; four measured prescribing rate, and one assessed prescribing quality. Hughes found that slower doctors prescribed in a lower proportion of consultations (51.5%) than faster doctors (62.6%), $P < 0.001$.¹⁷ In the Lothian study, faster doctors had a prescribing rate of 60%, compared with 54% for slower doctors ($P < 0.001$).¹⁵ In respiratory consultations, antibiotic prescribing rates did not differ significantly. Hartzema found that the number of patients seen per hour was positively associated with prescribing volume, explaining about 14% of the variance.²¹ Bensing found that female GPs had longer consultations and prescribed less.¹³ In the UK, Heaney found that an index of prescribing quality, based on NHS data on the use of ten categories of drugs, was positively associated with longer consultation length. In summary, there is consistent evidence from several studies that the prescribing rate of slower doctors is lower and some evidence that it is of higher quality.

With regard to investigation, Camasso *et al* found that doctors with an average rate of seeing patients of between 2.7 and 3.8 patients per hour requested fewer blood counts than those whose consultations were longer or shorter.¹⁸ Bensing found that female GPs investigated more.¹³ Hulka found that adherence to criteria for laboratory tests was higher in faster doctors, and significantly so in cases of dysuria and general examination.²² Evidence that investigation rate is related to consultation length is therefore inconclusive.

Referral was examined in two studies. Hughes found that these did not differ between faster (8.4%) and slower doctors (8.8%).¹⁷ Camasso found higher referral rates in faster doctors.¹⁸

Health promotion was examined in four studies. Howie¹ found that slower doctors were more likely to offer preventative care than faster doctors, even when controlled for individual consultation length ($P < 0.001$).¹⁵ Camasso *et al* examined health promotion in detail in consultations for health checks, which lasted an average time of 16.7 minutes. They found that the health promotion interventions that were usually delegated to a nurse; for example, blood pressure and weight, were more likely to occur when consulting with a fast doctor. However, preventative procedures administered in the consultation were more likely to occur in consultations with slower doctors.¹⁸ Bensing found that female GPs had longer consultations and offered more lifestyle advice.¹³ However, Heaney found no association between average consultation length and the achievement of NHS target payments for immunisation and cervical cytology.¹¹ In summary, there is evidence that longer consultation length is associated with more preventative activity in the consultation.

Follow-up and consultation rates were examined in two studies. Hughes found that slower doctors arranged follow-ups in fewer consultations (28.5%) than faster doctors (34.3%), $P < 0.02$.¹⁷ Re-consultation rates within four weeks of the index consultation were also lower (7.2% versus 12.9%, $P < 0.001$). Camasso *et al* found that patients attending slower doctors had a lower frequency of consultation

Table 2. Process and outcome results in included studies.

Author	Hulkka 1979 ²²	Hughes 1983 ¹⁷	Hartzema 1983 ²¹	Hull 1984 ²⁰	Howie 1989, ¹⁶ 1991, ¹⁵ 1992 ¹⁴ (Lothian)
History/information	+ (better history scores for all conditions, $P < 0.05$ for all but dysuria) + (better examination scores for all conditions, $P < 0.05$ for diabetes)	- (rates of 51.5% versus 62.6% for slower and faster doctors, $P < 0.01$)	- (slower doctors prescribed less, $P < 0.01$, explaining 14% of variance)		- overall (≥ 9 minutes, rate 54%, < 7 min, 60% $P < 0.001$) RTI = 0, antibiotics, 50% versus 56%
Examination					
Prescribing rate					
Prescribing quality					
Health promotion	(+) (slower doctors had higher scores for general examination cases) (NS)				+ ($P < 0.05$, when controlled for individual consultation length) + ($P < 0.05$ when controlled for individual consultation length) RTI + (20% versus 10% versus 11% of recognised problems were managed [$P < 0.05$]) + ($P < 0.05$ when controlled for individual consultation length)
Recognition and management of psychosocial problems					0
Recognition and management of chronic problems	+ (slower doctors had higher scores for diabetes [$P < 0.05$] and hypertension [NS])	0 (8.8% versus 8.4%)			
Referral rate					
Investigation	- (lower investigation scores for slower doctors for diabetes, general examination and dysuria, $P < 0.05$ for last two)	- (28.5% versus 34.3% [$P < 0.02$]) - (in 4 weeks, 7.2% versus 12.9% [$P < 0.01$])			
Follow-up arranged					
Reconsultation/consultation rate					+ (80 doctors, 20 281 consultations). Doctors who were more patient-centred had longer consultations and higher stress scores and higher stress scores (no test of significance)
Doctor stress					Slower and faster doctors not compared, only individual consultations
Patient satisfaction/enabment/'good consultation'				+ communication ($P < 0.05$) (+) amount of time (0.1, $P < 0.5$)	
Author	Bensing 1993 ¹³	Andersson 1994 ¹²	Camasso 1994 ¹⁸	Baker 1996 ¹⁰	Howie 1999, ¹⁹ Heaney ¹¹ (enablement)
History/information	+/- (part-time female GPs gave more information, and full-time female GPs less than male GPs [$P < 0.01$])		+ (slower doctors recorded more items of history), $P < 0.05$		

Table 2 continued on next page.

Table 2. Process and outcome results in included studies (continued).

Author	Hulka 1979 ²²	Hughes 1983 ¹⁷	Hartzema 1983 ²¹	Hull 1984 ²⁰	Howie 1989, ¹⁶ 1991, ¹⁵ 1992 ¹⁴ (Lothian)
Prescribing rate	- (significantly lower rate for full-time female GPs with male and female patients and part-time GPs with female patients [$P < 0.01$])				
Prescribing quality					+ correlation between external prescribing quality index and mean consultation length (Spearman's rank correlation = 0.36, $P < 0.01$)
Health promotion	+ (significantly more health education and lifestyle advice by female part-time GPs with male and female patients; only lifestyle advice to female patients more for full-time female GPs compared with males [$P < 0.01$])		+ (mean consultation length >20 minutes versus mean <20 minutes, alcohol/smoking 58% versus 37%, cervical smear, breast examination 66% versus 42%), $P < 0.05$ + (slower doctors did more immunisations) $P < 0.05$		0 (no correlation between external prevention index [cervical cytology and immunisation targets] and mean consultation length)
Recognition and management of psychosocial problems	+ (female GPs did more active and passive counselling but registered fewer reassurances than male GPs [$P < 0.01$])				
Recognition and management of chronic problems					
Referral rate	0 (no difference in referrals to medical specialist)				
Investigation	+ (female GPs investigated more [$P < 0.01$])				
Follow-up arranged					
Reconsultation/consultation rate					
Doctor stress					
Patient satisfaction/enablement/'good consultation'		0 (proportion of 'good consultations' same in each group)			+ Patient enablement (Spearman's rank correlation with consultation length = 0.38 to 0.93)
External quality index					0 (no correlation between external quality index and mean consultation length)

+/- = association with average consultation (longer compared with shorter); non-statistically significant associations in parentheses; 0 = no association; RTI = respiratory tract illness; NS = not significant.

than those attending faster doctors, the threshold being 3.8 patients per hour.¹⁸ Therefore, there is some evidence that longer consultations are negatively associated with consultation rate.

Patient satisfaction, enablement, and 'good consultations' were studied. Baker¹⁰ examined the relationship between average consultation length and consultation satisfaction. The consultation satisfaction score has four domains. Only one, 'perceived length of consultation', was associated with average consultation length in regression analysis ($P < 0.025$). Patient enablement was examined by Howie *et al*,¹⁹ who found a strong correlation between this and average consultation length. Low enablers had average consultation lengths of 7.3 minutes for patients who claimed to know the doctor well, and 7.2 minutes for those who did not, compared with high enablers, for whom these figures were 9.4 and 9.1 minutes, respectively. Andersson *et al*¹² dichotomised consultations into 'good' or not, according to a three-item post-consultation questionnaire answered by doctors and patients. They found no relationship between the proportion of good consultations and average consultation length, but there was a suggestion that doctors with a high proportion of good consultations showed a wider variation in consultation length.¹² In summary, average consultation length appears to be positively associated with some, but not all, elements of patient satisfaction, and with patient enablement.

With regard to the external quality index, Heaney compared average consultation length with an external quality index derived from NHS data.¹¹ This included the proportion of doctors eligible for the postgraduate education allowance and the proportion registered for child health surveillance, minor surgery, and maternity care. No association was found with average consultation length.

Doctor stress was examined by Howie,¹⁴ who found that doctors with a high patient-centredness score had longer average consultations and were more stressed after a higher proportion of these (27%) than intermediate (19%) or low-scoring doctors (11%). Stress scores were particularly high among slow doctors with high booking rates. No studies examined whether there is a direct association between doctor stress and average appointment length.

Discussion

The main limitation of this review is that, owing to funding constraints, it excluded hand searching, 'grey literature', and foreign language journals. The inclusion of 'general practice' and 'general practitioner' as text words may also have increased the sensitivity of the search. However, these results do suggest that important differences exist in consultation process and outcome between GPs who consult quickly and those who consult more slowly. These differences were seen in studies using a variety of designs and methods. They were also consistent within countries with marked differences in healthcare systems and usual consultation length. Differences were found, not just in the content of individual consultations, but also in some longer-term markers, suggesting that fast doctors may not compensate for deficiencies in individual consultations by seeing patients more often.

The main methodological weakness of the studies presented was owing to reliance on volunteer doctors, even when attempts were made to recruit representative samples. Practices taking part in research tended to have lower list sizes per doctor,⁵⁶ and so there may be more time to spend with patients. Therefore, studies may have excluded doctors who are most time pressured, thereby underestimating the differences between fast and slow doctors. There were problems in identifying the specific effect of consultation length in studies in which the main aim was not to compare doctors with different average consultation lengths, but with attributes such as patient centredness or sex of doctor, which were themselves related to consultation length. Similarly, by compressing data on average consultation length to classify doctors as fast or slow, the full effects of a range of consultation lengths could not be determined.

A weakness of all but one study was owing to a failure to take into account the potential confounding effect of case mix. Even the study that took this into account assessed in a fairly crude way using the Nottingham Health Profile. A study that was not included in this review, because it did not provide process or outcome measures, showed that much of the variance in consultation length could be explained by doctor characteristics, such as sex, time since training, etc.²⁸ However, as Howie pointed out in a response to this paper, assessment of some elements of case mix is problematic, as longer consultations may, for example, themselves result in more psychological problems being identified.⁵⁷

The most consistent evidence was that doctors who had longer average consultation lengths prescribed less and were more likely to include lifestyle advice and preventive activities. They also adopted a style of practice that enabled more problems to be dealt with and more information to be exchanged, and this may explain the findings from two studies, that they have lower consultation rates. The only process measures for which there was no consistent relationship with average consultation length were investigation and referral rates.

Only four studies examined any outcome measure, and two of these were on a small scale using untested instruments. In the two larger studies, there were differences in enablement and in satisfaction with consultation duration, but not overall satisfaction, suggesting that average consultation length may be associated with some better short-term outcomes. This review illustrates the need to develop a valid generic outcome measure for general practice consultations. There is also a need to explore relationships between average consultation length and clinical outcomes, such as control of chronic disease, as reported in a study that was published too late to be included in this review.⁵⁸ This showed that a booking interval of ten minutes was the most powerful predictor of the quality of management of chronic disease.

The main difficulty in interpreting these studies is that it cannot be shown whether consultation length itself is the important variable, or whether it is simply a marker for other attributes of the doctor. The finding that female doctors have longer consultations is one example of this, as is Howie's finding that slower doctors were more 'enabling', even when consulting quickly. Although this question is important in

devising intervention studies to improve GPs' performance, it is less significant in deciding whether average consultation length should be a marker of quality. The evidence reviewed here suggests that a patient seeking help from a doctor who consults more slowly is more likely to have a consultation that includes important aspects of care. This appears to be the case across very different healthcare systems, which have differing average consultation lengths. In the UK context it supports the use of longer appointments as one marker of quality, although there is insufficient evidence to propose an ideal consultation length.

Although intervention studies were not reported in this paper, the search strategy used did not discover any long-term trials of longer consultations. Given the inherent limitations of observational studies, such trials are now needed. They will need to acknowledge the changing context of the general practice consultation,⁵⁹ include an economic analysis of costs and benefits, and weigh consultation length against potentially competing quality markers, such as accessibility and continuity.

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Acknowledgements

This work was funded by a grant from the Scientific Foundation Board of the Royal College of General Practitioners and supported by a steering group, whose membership comprised Richard Baker, George Freeman, John Howie, and Pali Hungin.
