More time for complex consultations in a high-deprivation practice is associated with increased patient enablement

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ABSTRACT

Background
Evidence of the beneficial effects of longer consultations in general practice is limited.

Aim
To evaluate the effect of increasing consultation length on patient enablement in general practice in an area of extreme socioeconomic deprivation.

Design of study
Longitudinal study using a 'before and after' design.

Setting
Keppoch Medical Centre in Glasgow, which serves the most deprived practice area in Scotland.

Method
Participants were 300 adult patients at baseline, before the introduction of longer consultations, and 324 at follow-up, more than 1 year after the introduction of longer consultations. The intervention studied was more time in complex consultations. Patient satisfaction, perceptions of the GPs' empathy, GP stress, and patient enablement were collected by face-to-face interview. Additional qualitative data were obtained by individual interviews with the GPs, relating to their perceptions of the impact of the longer consultations.

Results
Response rates of 70% were obtained. Overall, 53% of consultations were complex. GP stress was higher in complex consultations. Patient satisfaction and perception of the GPs' empathy were consistently high. Average consultation length in complex consultations was increased by 2.5 minutes by the intervention. GP stress in consultations was decreased after the introduction of longer consultations, and patient enablement was increased. GPs' views endorsed these findings, with more anticipatory and coordinated care being possible in the longer consultations.

Conclusion
More resource to provide more time in complex consultations in an area of extreme deprivation is associated with an increase in patient enablement.

Keywords
holistic health; physician–patient relations; socioeconomic factors.

INTRODUCTION

Inequality in health and in the provision and quality of healthcare services is a key policy issue in Scotland.[1] Inequalities in health and health care are both closely linked to socioeconomic deprivation,[1] which in Scotland is concentrated in the west, especially Glasgow.[2] In such areas of high deprivation, the concentration of health and social problems results in levels of need and demand that place substantial and continuous pressures on GPs and primary healthcare teams.[2–4]

GPs working in high-deprivation settings report limiting influences of time and stress.[5] Consultation length in the UK is shorter than in many other European countries,[6] and tends to be even shorter in deprived areas compared with more affluent ones.[5,7] Although numerous studies have shown an association between consultation length and markers of consultation quality,[8,9] a recent systematic review concluded that there was insufficient evidence from controlled trials to infer that longer consultations improve outcomes or patient satisfaction.[10,11] However, another recent systematic review showed that consultations for psychosocial problems in general practice tend to be longer, and there was some evidence that increased consultation length improves the accuracy of diagnosis of psychological problems.[12] Psychosocial problems

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are much more common in general practice consultations in deprived areas than in affluent areas,[7] and patients in such areas report lack of time as a major constraint on consultation quality.[13]

This study evaluated an intervention implemented as part of a personal medical services (PMS) pilot that aimed to increase consultation length for patients with complex needs in a practice in an area of extreme deprivation in Scotland. The challenges of definition and implementation and the measured effects on GP stress and patient enablement are reported.

How this fits in

Patient enablement is associated with longer consultations in observational, cross-sectional studies in general practice. More resource to provide more time in complex consultations in general practice in an area of extreme deprivation results in higher patient enablement.

METHOD

Setting and population

The study was set in a single practice (Keppoch Medical Practice) in Possilpark, an urban area of extreme socioeconomic deprivation in Glasgow. The practice serves a population of approximately 3500 registered patients. Using the Scottish Indices of Multiple Deprivation (SIMD) 2003,[14] the population-weighted mean deprivation score for the practice is 73.2, which is the highest in Scotland (mean SIMD for all Scottish practices is 23.5; minimum 2.8).

The practice is a training and teaching practice and has four GP partners (one full-time male, one part-time male, two part-time females; 3.69 whole-time equivalents). In April 2002 the practice, in contract with NHS Greater Glasgow Primary Care Trust, obtained funding from the Scottish Executive to pilot the PMS scheme over a 3-year period.

Participants

A minimum of 100 adult patients per GP at baseline (before the introduction of the extended consultations), and at follow up (more than 1 year after their introduction), were recruited to try to ensure a reliable score for the measures of process and outcome used.[15]

Intervention

Through the PMS scheme, the practice embarked on a number of service developments aimed at improving the accessibility and flexibility of services, including longer consultations for patients with complex needs, chronic disease management, and health promotion. These changes were made possible by funding to appoint an additional part-time salaried GP (five sessions per week). The current study focused on evaluation of the impact of the longer consultations. The process of defining complexity in actual consultations and the mechanism of introducing extended consultation time for such patients was not predefined by the researchers, but was evolved by the clinicians in a pragmatic way, based on trial and error. As such, it was an important part of the evaluation, and the findings are presented in the first part of the results section.

Outcomes

Both qualitative and quantitative approaches were used to assess outcomes. Qualitative interviews were conducted with the GPs after the intervention. Quantitative measures were used to assess patients' views on consultation quality before (baseline) and after (follow up) the introduction of extended consultations. The key outcome measure was the patient enablement instrument (PEI).[16] As one of the GPs (male, part-time) left the practice after the baseline period and was replaced during the intervention period (by another male, part-time GP), these two doctors were not included in the final analysis. Therefore, results are presented for the three GP partners who took part in the entire evaluation. Details of the procedures and methods used are explained below.

Data collection

Data were collected on patients' views on consultation quality by face-to-face interview before (between March and July 2003), and more than 1 year after (between November 2004 and April 2005), the systematic introduction of longer consultations. Exclusion criteria were: patients younger than 16 years; new patient medicals; being seen as an emergency (fitted in); attending a special clinic (for example, baby clinic); or unable to give informed consent. Patients were informed of the study by the reception staff and given an information leaflet. At the end of the consultation, the GP completed the first section of the questionnaire (patient age and sex; complexity of the consultation; and the time the consultation started and ended). In addition, GPs were asked to rate the extent to which they felt 'stressed', 'rushed', and 'tired' at the end of the consultation. This was loosely based on a validated method,[17] but measured on a 10-point scale (0 = not at all, to 10 = very much so) rather than the original 7-point scale, in the hope this would give a wider range of responses and increase the possibility of detecting differences.

Thereafter, the GP gave the patient the questionnaire back and invited them to meet the researcher, who provided further information and obtained informed consent. The researcher assisted the patient with completing the questionnaire. This contained the PEI,[15] and the Consultation and Relational Empathy (CARE) measure.[15,18] Patients estimated the length of the consultation, their satisfaction with the consultation

length, their overall satisfaction with the consultation, and how well they felt they knew the GP.[19] Finally, patients were asked to rate their general health over the preceding 12 months.[20] The PEI contains six items rated on a scale from same or less (scored as 0) to much better (scored as 2) per item.[16] Therefore, the minimum possible overall PEI score is 0 and the maximum possible score is 12. The individual item scores were multiplied by 6 to give a direct comparison with overall scores. The CARE measure[18] consists of 10 items rated on a scale from 1 to 5 (poor to excellent), with a minimum possible score of 10 and a maximum of 50. Satisfaction with consultation length was rated on a scale from 1 (very poor), to 6 (excellent).[19] How well they knew the doctor was rated on a scale from 1 (not at all), to 5 (very well).[19] General health over the last 12 months was rated on a 5-point scale (1 = very good, 5 = very bad).[20]

These tools are usually self-completed by patients, but previous attempts to use self-completed questionnaires in the practice had resulted in very low response rates of 10–15% (F McKinlay, personal communication, 2007). Using a researcher to administer the questionnaire was found to have little impact on the scores obtained in a parallel study in another practice where self-completion was compared with face-to-face interviews using the same tools and the same researcher. Data were collected on 455 patients attending four GPs using both methods (201 face-to face interviews and 204 self-completed questionnaires). No significant differences were found between the two approaches for any variable measured (SW Mercer, unpublished research, 2007).

Data collected: response rates, validity, and reliability

Complete datasets (containing both GP and patient data) were obtained for 624 patients attending the three GP principals employed in the practice during both the baseline and follow-up periods. The response rates during both periods were similar: 300 out of a total of 413 eligible patients (73%) agreed to the interview at baseline compared with 324 of 463 (70%) at follow-up.

Factor analysis and reliability analysis were used on the data to examine the internal construct validity and reliability of the different instruments used in the study. The 10 CARE measure items and the six PEI items formed two distinct factors (eigen-values above 1). Factor loading for the CARE measure items ranged from 0.747 to 0.833 with inter-item correlations between 0.524 and 0.734 and Cronbach's α of 0.938 (which was reduced if any item was deleted). Factor loading for the PEI items ranged from 0.563 to 0.736 with inter-item correlations between 0.239 and 0.492 and Cronbach's α of 0.769 (reduced if any item was deleted). Cross-factor loadings (CARE item loadings on PEI factor and vice versa) were low, ranging from 0.035 to 0.204). Thus the CARE measure and the PEI are clearly measuring two different and separate constructs. A third distinct factor emerged for the three GP stress items (factor loadings 0.616 to 0.907), and therefore the scores for the three aspects of stress were combined and are presented as an 'overall stress' score. Overall satisfaction and patients' satisfaction with consultation length did not form a clear factor, but both cross-loaded with the CARE measure items factor (loadings of 0.540 and 0.532 respectively). 'Knowing the doctor' (relational continuity) and consultation length did not cross-load highly with any of the factors, and formed two separate single-item factors with loadings of 0.860 and 0.806 respectively. Collectively, the factor analysis explained 61.25% of the variance.

The data analyses presented in the results were based on parametric or non-parametric tests, depending on the distribution of the variables. PEI scores and CARE measure scores were calculated as average item scores (multiplied by 6 and 10 respectively to give total scores), thus excluding 'not applicable' responses. Missing data were replaced with the mean value for the group in question (that is, before, after, complex, non-complex).

Qualitative interviews

Individual interviews were carried out with the three GP principals who were in post before the introduction of the PMS pilot and still in post during the follow-up data-collection period. The interviews were carried out during March and April 2006. A semi-structured interview schedule was used with the aim of exploring views and experiences in relation to complex consultation, extended consultation times, and perceived benefits or disadvantages of the pilot.

RESULTS

Defining complex consultations

In such a highly deprived area, patients commonly present with multiple physical, psychological, and social problems. Initially, the GPs considered defining a consultation as complex if it involved three or more problems. However, single problems can also involve complexity (Supplementary Box 1). Therefore, the system adopted was that any patient regarded by the GP as having complex needs at the time of consultation would be regarded as complex, irrespective of whether that involved one or multiple needs.

Identifying a system to target longer consultations

Initially, the GPs asked patients with complex needs identified in a routine (10-minute) appointment to return for a booked longer consultation, but patients frequently failed to return. Patient self-selection was

then tried; patients were given the choice of booking an extended consultation when they phoned to book an appointment. However, this was also unsuccessful as many patients did not understand the likely complexity of their consultation, and patients who needed extra time once they consulted often did not request it (Supplementary Box 1). The third approach tried (and the one adopted), was to leave an empty 10-minute appointment after every fifth routine appointment. Therefore, when a consultation was found to be complex, the GP could allow that patient up to 20 minutes by 'dragging in' an extra 10-minute slot. This was the method in place before the follow-up period of the patient questionnaire (Supplementary Box 1).

Consultation characteristics

A higher proportion of the consultations were rated as complex during the follow-up period than during baseline: 189 (58%) versus 142 (47%), respectively. The characteristics of complex and non-complex consultations in the baseline and follow-up groups are shown in Table 1. More female than male patients had complex consultations, but there were no differences between the baseline and follow-up groups. Patients' self-rated general health status over the previous 12 months was poorer in the complex consultations compared with non-complex consultations (higher score indicating poorer health), but there were no significant differences between the baseline and follow-up groups. Patient satisfaction was consistently high for both complex and non-complex consultations during both data-collection periods, as were patients' ratings of GP empathy (CARE measure). Patients in complex consultations had higher scores for 'knowing the doctor' than those in the non-complex consultations, but the intervention had no effect in complex consultations, although a significant increase in the non-complex group was observed. Consultation length was significantly increased in complex consultations by the intervention, with the average consultation length in the follow-up group being approximately 2.5 minutes longer than in the baseline group. Patient satisfaction with consultation length was higher in complex consultations in the follow-up group compared with baseline. The distribution of consultation lengths (categorised into six time groups) at baseline and follow-up is shown for complex consultations (Figure 1). As can be seen, higher percentages of patients with complex needs received longer consultations in the follow-up group in all time categories beyond 12 minutes.

GPs reported significantly lower levels of stress in the follow-up group compared to the baseline group in both complex and non-complex consultations. Patient enablement (PEI) scores were significantly higher in the follow-up study than at baseline, reflecting significant increases in both complex and non-complex consultations. Analysis of the six individual items of the PEI showed that some items increased more than others in the follow-up group compared with baseline (Table 2).

GPs' views on the benefits of longer consultations

Anticipatory care. GPs reported that the extended consultations were advantageous in terms of providing opportunistic health screening, promotion and/or treatment, allowing them to see patients who might otherwise have been missed (Supplementary Box 1).

> *'... a patient who comes in with one problem and then you say "by the way, you've never actually come in for your review of your heart disease, so how about I just check your blood pressure and your weight and go through some of the other things and how is your angina" all in the same consultation, because they won't come in and have that done at other times.'* (GP 2)

Table 1. Characteristics of complex and non-complex consultations in the baseline and follow-up groups.

	Complex consultations			Non-complex consultations		
	Baseline	Follow-up	*P*-value	Baseline	Follow up	*P*-value
Patient age, years, mean (SD)	50.12 (15.91)	47.28 (16.05)	0.111	47.25(16.48)	45.54(16.96)	0.386
Patient sex, *n* female (%)	96 (67.6)	126 (66.7)	0.857	87 (55.1)	74 (54.8)	0.966
General health, mean SD	3.33 (1.06)	3.36 (1.05)	0.806	2.95 (1.08)	2.76 (1.05)	0.123
Patient satisfaction, *n* satisfied (%)	138 (97.2)	182 (96.3)	0.656	156 (98.5)	133 (98.5)	0.874
GP empathy, mean (SD)	43.66 (6.79)	43.24 (6.43)	0.566	42.60 (6.28)	42.58 (6.87)	0.980
Knows doctor, mean (SD)	4.22 (1.22)	4.28 (1.28)	0.370	3.57 (1.52)	3.98 (1.37)	0.021
Consultation length, mins, mean (SD)	12.20 (4.43)	14.39 (4.00)	<0.001	9.47 (4.96)	9.26 (2.88)	0.279
Satisfaction with time, mean (SD)	4.49 (1.19)	4.74 (0.98)	0.044	4.53 (0.87)	4.64 (1.06)	0.350
GP stress, mean (SD)	2.28 (1.19)	2.06 (1.11)	0.035	2.09 (1.22)	1.78 (1.04)	0.038
Patient enablement, mean (SD)	4.17 (2.83)	4.92 (3.19)	0.037	3.89 (2.471)	5.39 (3.32)	<0.001

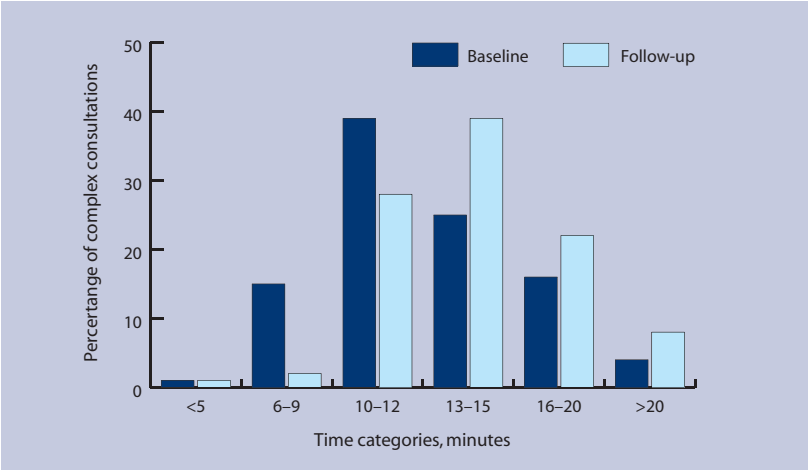

Figure 1. Distribution of consultation length in complex consultations at baseline and follow up.

GP stress. All three GPs welcomed the opportunity to provide care for patients without having the levels of stress and frustration that they had experienced before the introduction of extended consultations (Supplementary Box 1).

> *'... I know I'm never that stressed because I know I've got my catch-up slots um, so I can do what I feel is better medicine because I don't just listen to the patients and their worries, I can also approach and discuss with them how to improve their health and I still know I'm not running too late.'* (GP 2)

DISCUSSION

Summary of main findings

This study evaluated the effect of an intervention aimed at increasing consultation length for patients with complex needs in general practice, in an area of extreme socioeconomic deprivation in Glasgow. More than half of all consultations were regarded as complex by the GPs: 47% at baseline, rising to 58% after the introduction of extended consultations. Defining whether a consultation is complex was a subjective decision made by the GP within the consultation. However, the long-term general health scores of complex and non-complex patients, at both baseline and follow-up, suggest that the GPs' targeting of complex consultations were indeed reaching the patients with the poorest health.

The introduction of longer consultations was not straightforward. The GPs tried several methods before simply keeping 'free slots' within routine surgeries so that additional time could be 'moved' as required. Because need was much greater than anticipated (every second consultation being defined as complex), the intention to provide an extra 10 minutes to complex patients was not possible and consequently average consultation length was around 15 minutes for the extended consultations. Although average consultation length in complex consultations was only increased by around 2.5 minutes, this reflected a change in the distribution of consultation lengths.

Despite this relatively small increase in consultation length, GP stress in consultations was significantly decreased after the introduction of longer consultations, and patient enablement was significantly increased in both complex and non-complex consultations, suggesting that the effect of more time in complex consultations is not a simple linear relationship.

An additional important finding in the present study was that high response rates to validated patient-reported measures can be achieved with the input of a researcher with dedicated, funded time to carry out face-to-face interviews. Using this approach, which did not seem to influence the way patients scored the consultation, response rates of approximately 70% were obtained. Therefore, 'coal-face' research in high-deprivation areas is clearly possible, but may require more investment in research time and higher costs than in less-deprived areas.

Strengths and limitations of the study

The Keppoch Medical Practice was unusual before the introduction of PMS, being an active participant in a number of voluntary activities, unlike the majority of practices with patients living in similar circumstances.[2] Clearly, an evaluation in such a practice using a simple before-and-after approach has a number of limitations. However, the study was an important opportunity for an evaluation of extended consultation length in one of the most deprived areas in the UK. Deprivation is a

Table 2. Patient enablement: individual item scores in complex and non-complex consultations before and after the intervention.

	Complex consultations			Non-complex consultations		
	Baseline	Follow-up	*P*-value	Baseline	Follow up	*P*-value
Able to cope with life, mean (SD)	4.93 (4.51)	4.99 (4.73)	0.990	4.27 (4.21)	4.60 (4.66)	0.974
Able to cope with illness, mean (SD)	5.14 (4.50)	5.93 (4.79)	0.250	4.63 (4.33)	6.52 (4.58)	<0.001
Able to understand illness, mean (SD)	3.56 (4.27)	5.00 (4.77)	0.010	3.87 (4.32)	5.62 (4.79)	0.004
Able to keep healthy, mean (SD)	3.11 (4.10)	4.24 (4.55)	0.031	2.65 (3.69)	4.97 (4.52)	<0.001
Confident about health, mean (SD)	3.83 (4.22)	4.81 (4.46)	0.066	4.14 (4.37)	5.26 (4.80)	0.067
Able to help self, mean (SD)	4.43 (4.31)	4.57 (4.65)	0.997	3.72 (4.35)	5.38 (4.63)	0.004

major characteristic of the Glasgow population in general, and the Keppoch Medical Practice population in particular, with significant implications in terms of poor health and high levels of health service use. Such practices are among the most challenged in the NHS, but least likely to be researched. Thus, this study is a small but valuable contribution to the research literature in this area; not only has it demonstrated positive outcomes following the introduction of longer consultations for complex cases, but, perhaps just as importantly, it has shown that research in this setting is feasible, opening the door to asking further important questions in the future.

Regarding the choice of tools, the main instruments used (the CARE measure, the PEI, knowing the doctor, satisfaction with time, and overall satisfaction) have all been widely used and validated in previous work.[15,16,18,19] However, the GP stress measure has not been validated, and although the factor analysis did show that the three items (stress, rushed, and tired) were measuring a single construct, rather low scores were observed. The scale ran from 0 to 10 (low to high stress), but 98.6% of responses recorded a score of 5 or less. Further work is required before the scale can be considered robust.

Comparison with existing literature

During both data-collection periods, patients in both complex and non-complex consultations reported high satisfaction in relation to the length of consultation, the overall consultation, and GP empathy. Relational continuity (knowing the doctor) was also high, and was higher in complex than non-complex consultations. This may be because patients with complex problems prefer to consult a known and trusted doctor.[13,21] On the other hand, doctors may be more likely to recognise complex needs in patients they know well.

Previous work in primary and secondary care has demonstrated the importance of a patient-centred, empathic approach in enablement at consultation.[22,23] In larger studies in general practice in the UK, associations between consultation length and enablement have also been demonstrated.[16] However, the present study is the first to show that providing an intervention of longer consultation time improves enablement scores. The study demonstrated that follow-up patient ratings of enablement were significantly higher for both complex and non-complex cases. This suggests that there has been a general effect of the intervention, benefiting both complex patients (who received longer consultations) and non-complex ones (who did not). It should be noted however, that the particularly high levels of continuity, empathy, and enablement in the current study, even at baseline, suggest that the GPs in this study are 'high enablers' in comparison with national benchmarks.[19] For such GPs, consultation length may thus be the 'rate-limiting' factor in enabling more patients more often. The beneficial effect of longer consultations may also be related to the reduction in GP stress, which was observed in both complex and non-complex consultations at follow up compared to baseline. There is no published research relating stress in the consultation to patient enablement, but previous work using a similar stress measure has shown that doctors who value 'patient-centredness' are less stressed in longer consultations than in shorter ones.[24] Similarly, Wilson *et al* found decreased stress and increased arousal in GPs with longer booking intervals.[25]

Implications for future research and clinical practice

An interesting finding regarding the improvement in enablement in the follow-up study at Keppoch was that improvement did not occur uniformly across all six items in the PEI. For complex patients, improvements were mainly seen in patients' reported ability to understand their illness and keep themselves healthier as a result of the consultation with the doctor. Further qualitative work is required to understand why this different pattern of enablement emerged, and what the implications are for self-management, lifestyle change, and future health status.

In a broader context, the PMS pilot has exerted a positive influence upon the stress and morale within the practice in general, but particularly on the GP principals. It is useful to revisit the comments made by one GP who makes a compelling case for the benefits of providing extra consultation time and resources for general practice in an area of high deprivation:

> *' ... the point where we started from was a situation of desperation as it were, but realising that we were working in a very, very hard and rather unsatisfactory manner because* [of] *the lack of time to deal with complex issues, and this had led to a situation where we were feeling we just couldn't continue ... I would say that it's been a real boon and I would love to broadcast it to other people to say "yes, that's it"!'*

Supplementary information

Additional information accompanies this article at http://www.rcgp.org.uk/bjgp-suppinfo

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Ethics committee

Ethical approval obtained from the Greater Glasgow Primary Care Trust Local Research Ethics Committee

Competing interests

The authors have stated that there are none

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Discuss this article

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