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Influences of socioeconomic deprivation on GPs' decisions to refer patients to cardiology:

a qualitative study

Abstract

Background

Variation in GP referral practice may be a factor contributing to the lower uptake of cardiology specialist services for people living in socioeconomic deprivation. Cardiology referrals were chosen for this study due to higher rates of premature death and emergency admissions resulting from coronary heart disease for patients living in more deprived areas.

Aim

To find out how socioeconomic deprivation influences GP referral practice.

Design and setting

A qualitative study of GPs working in affluent and deprived areas of one large city in the UK.

Method

The authors used purposive and snowball sampling to recruit 17 GP participants to interviews and a focus group. Participants were asked to reflect on their own experience of making referrals. The authors used a framework approach to the analysis, with differences in themes for GPs working in least and most deprived areas being highlighted.

Results

The authors identified four main themes by which socioeconomic deprivation influenced GP referral practice: identifying problems; making decisions about referral; navigating the healthcare system; and external pressures. Using a published framework of consultation complexity, the authors then examined the data in relation to a fifth theme of complexity. Referrals from areas of high socioeconomic deprivation involved greater complexity in the majority of the domains of this framework.

Conclusion

Socioeconomic deprivation influences GP referral decisions and navigation of the healthcare system in multiple ways. Referral practice for GPs working in deprived areas is more complex than for their peers working in more affluent areas.

Keywords

cardiology; coronary disease; family practice; general practice; health literacy; primary health care; referral and consultation; socioeconomic factors.

INTRODUCTION

Referral from generalists to hospital specialists is a core feature of primary care-led health services. In the UK, GPs act as gatekeepers.^{1,2} Referral occurs for a range of reasons, including the need to establish a diagnosis, to access investigations, and to request specialist guidance on patient management plans. Referrals attract attention not just because of their importance as opportunities to improve outcomes for patients, but also due to their impact upon specialist resources as demand continues to rise.³ Many factors influence the referral decision-making process, including clinical presentation, patients' concerns and preferences, service availability, and professional judgement.

Referral rates vary between GPs and practices; variation remains largely unexplained despite extensive research and reviews.^{4,5} Variation has been reported for many conditions including cancer.⁶ One factor found to influence referral rates is deprivation.⁷ However, how deprivation specifically influences the GP's referral decision-making process itself has not previously been examined qualitatively. In-depth qualitative research has been proposed as a way to understand the complexity of the referral decision-making process^{8,9} and to explore referral inequalities for life-threatening conditions and those without clear guidelines.¹⁰ Hence, this study aimed to examine the different

influences upon GPs making referral decisions when working with affluent and deprived communities.

Referral decisions are made by GPs in relatively brief consultations, often with a patient who presents with undifferentiated symptoms. Deprived communities have a higher prevalence of complex multimorbidity with the added burden of more psychosocial challenge.^{11,12} This study was designed to explore the impact of deprivation on GP referral decision making by comparing GPs' perceptions of working in affluent and deprived areas.

GP referrals to cardiology provide a particular opportunity to examine the influence of deprivation on referrals for several reasons. First, outcomes from coronary heart disease (CHD) are worse for patients in deprived areas, with higher mortality rates¹³ and more emergency admissions.^{14,15} CHD significantly contributes to the gap in life expectancy between least and most deprived communities.¹⁶ Second, inequalities have been demonstrated regarding both access to and utilisation of treatments in specialist cardiac services.¹⁷⁻¹⁹ Third, patients living in deprived areas have been shown to respond to chest pain differently from those living in affluent areas.²⁰ It has been found that patients from deprived areas do not present to their GPs for several reasons including the 'normalisation' of chest pain as a symptom due to high exposure to heart

E Walton, MB, PhD, NIHR clinical lecturer and GP, Academic Unit of Primary Medical Care, University of Sheffield, and Whitehouse Surgery, Sheffield. **A Ahmed**, BMedSci(Hons), MB, foundation doctor; **C Burton**, MD, FRCGP, professor of primary medical care; **N Mathers**, MD, PhD, emeritus professor of primary care, University of Sheffield, Sheffield.

Address for correspondence

Elizabeth Walton, Academic Unit of Primary Medical Care, Samuel Fox House, University of

Sheffield, Northern General Hospital, Herries Road, Sheffield S5 7AU, UK.

Email: e.walton@sheffield.ac.uk

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How this fits in

Inequalities exist regarding uptake of elective specialist cardiac services for patients living in socioeconomically deprived areas. There are health inequalities for patients living in these areas as they have higher rates of premature mortality from coronary heart disease and higher rates of emergency admissions than patients living in affluent areas. The authors conducted a qualitative study of GPs' perceptions of their referrals to cardiac services to examine the influence of socioeconomic deprivation on referral decisions and practice. Referral decisions and navigation of the healthcare system were found to be more complex for GPs working with deprived communities.

disease in the family, confusion of chest pain with other conditions, and anxiety about potentially being chastised for high-risk behaviours by their GPs.²⁰ Communication between patients and their doctors has also been shown to be more challenging in deprived areas, even when English is a first language for both.²¹ In order to examine the influences of socioeconomic deprivation on referrals, the authors conducted a qualitative study of GPs' perceptions about their referrals to cardiology services.

METHOD

The authors conducted 12 qualitative interviews and a focus group with five GPs working in the most affluent and deprived areas of one large city in the UK; Sheffield has a diverse population that includes geographically distinct communities of very high and low socioeconomic status.

All practices refer to the same cardiac care provider within the city, which meant that guidelines and other provider-based factors that might affect referral patterns were the same for all participants. Interviews were carried out between July and November 2010, and a focus group took place on 23 February 2012.

Sampling and recruitment

Purposive sampling was used to recruit GP participants from practices working in different areas of the city to interview and later to the focus group.

Practices were categorised for sampling, based on quintiles of their Index of Multiple Deprivation (IMD) scores²² as most deprived, above average deprivation, average deprivation, below average deprivation, and

least deprived. Sampling was undertaken in two stages, and all GP practices in the most and least deprived groups were invited to participate in the study. Snowball sampling from early participants and a regional clinical research network was used for both the interviews and the focus group.

Data collection

Data were collected using individual face-to-face interviews following a semi-structured format. A topic guide was derived from current literature and discussion within the research team. In order to ground accounts of referral in actual practice, interviewees were encouraged to reflect on individual cases.

All interviews took place at participants' clinical workplaces except for one, which took place at the participant's home. The focus group was informed by a topic guide derived from thematic analysis of the interviews and conducted at the university medical school. All the interviews and the focus group were undertaken by a GP researcher and were audiorecorded and transcribed.

Field notes were taken during and after the interviews and focus group. Iterative data analysis was used simultaneously with data collection, and emerging themes were incorporated into the interviews. Data saturation was present when no new themes had emerged in two consecutive interviews.²³ No personal information from the patient record was shared with the researcher.

Analysis

The analysis combined themes provided a priori, from discussion and literature, and that which emerged during the analysis using a framework approach.²⁴

One GP researcher conducted all the interviews and the focus group, and also listened to all recordings in addition to reading the transcripts. Initial coding was carried out by one researcher and then discussed in regular meetings with senior and peer researchers, who also independently carried out coding on a selection of transcripts. A research log was kept throughout the project.

The framework continually updated as the analysis progressed. Data were managed using NVivo software (version 9). The authors regarded data from the interviews and focus group as comparable, and so reported quotations by deprivation group but not by data collection type. Following the original analysis, the results were considered in relation to a recently developed framework of consultation complexity.

RESULTS

Seventeen GPs participated in total, with 12 being interviewed and five contributing to a focus group. GPs ranged in their experience from newly qualified to 26 years since graduation. There were eight female and nine male GPs. Participants worked in practices across the sociodemographic spectrum: six worked in the most deprived quintile of practices, six worked in the least deprived, that is, most affluent quintile; and five participants worked in the remaining three quintiles.

The study aimed initially to only recruit from the least and most deprived quintiles but due to difficulties recruiting the authors accepted these five participants. It was found that their contributions were also important to the analysis as, despite their practice IMD scores being less extreme, they had experience within their practices of patients from varied socioeconomic backgrounds.

The authors identified four main themes by which socioeconomic deprivation may have influenced referrals:

- identifying problems;
- making decisions about referrals;
- navigating the healthcare system; and
- external pressures.

These four themes, and the differences between them for GPs working in deprived and affluent areas, are summarised in Table 1. Finally, the results were considered in relation to a recently developed framework of consultation complexity²⁵ and this has been summarised in Table 2.

Identifying problems

Unsurprisingly, GPs in both high- and low-deprivation areas described several similar 'classical' clinical triggers for referral, including symptoms, signs, investigation results, and medication queries.

However, GPs perceived particular problems due to patients with lower health literacy in more deprived areas, making the identification of problems possibly needing referral more complex:

There's a huge amount of pathology that we don't know about. There will be lots of silent events and [people's] health literacy is poor, they struggle with diabetes, education.' (GP5, above average deprivation [Practice IMD category])

It's difficult finding out what's going on sometimes.' (GP6, above average deprivation)

An added challenge only brought to light by GPs working in more deprived areas was

highlighted when they described consulting with patients whose first language was not English:

'It is quite challenging to have a consultation and it's ... with a lot of our patients, it's all very grey and they have very different ways of explaining things.' (GP5, above average deprivation)

Health literacy can be defined as *'the ability to gain access to, understand, and use information in ways which promote and maintain good health.'*²⁶ There was a perception among GPs that high levels of CHD were seen as inevitable by patients in more deprived areas, in part due to low health literacy:

'Working here, you're also aware that people just don't come, and normalise [symptoms] ... very high levels of deprivation are mirrored by high levels of morbidity and particularly, cardiovascular morbidity.' (GP2, most deprived)

It was not only patients who were perceived as showing this fatalism. One interviewee described how GPs can also fall into the trap of normalising symptoms where patients did not push for action:

'They're [patients] less confident and they're less willing to assert their rights ... we know that the people who are less articulate get less attention from their GPs, sadly.' (GP4, most deprived)

However, not all patients in areas of high deprivation were seen as so passive. For instance, patients who had migrated from countries without gatekeeping primary care systems were seen as posing different problems:

'[In contrast to the] indigenous, working-class deprived population in this area, who will not ask for anything, those people [patients recently moved to the UK] just ask because they think they've got access to it and they've not had access to investigations before.' (GP7, average deprivation)

It was striking that in the accounts from GPs working in areas of higher deprivation case histories were described with a greater emphasis on patients being admitted as emergencies rather than elective outpatient referrals:

'He said through an interpreter, I'm not surprised [about being referred to hospital]

Table 1. Summary of results framework: factors influencing GP referrals to cardiology in deprived and affluent areas

	Identifying problems	Making decisions about referrals	Navigation of the healthcare system	External pressures
All areas	History and examination Investigation results Medication issues	Need for reassurance: patient, family, or GP. Resources: time, investigations, and experience. GP personality and situation: stress and fatigue. Colleague referral behaviour and knowledge		GPs keen to improve the quality of referrals through educational relationships and communication between primary and secondary care
GPs working in most deprived areas	High rates of multimorbidity, mental health, and social problems for patients with lower health literacy make the identification of problems complex for GPs, especially for patients whose first language is not English	Decision making is more challenging when working in areas of higher deprivation due to complex patient presentation. Patients from more deprived areas can be fearful, reluctant, and deferential, leading to referral decision making in most deprived areas to be 'doctor led'.	GPs need to act as 'navigators' as well as 'gatekeepers' of care because of patients being challenged in navigating complex referrals systems. GPs aware of their patients needing emergency admissions	Reducing referrals can be especially challenging and frustrating when working in deprived areas as GPs are striving for the best health for their patients. Fearful of the advent of financial reasons not to make referrals but happy to embrace strategies to improve the quality of referrals
GPs working in least deprived areas	Patients are more likely to have higher health literacy, making identification of the presenting complaint more obvious for GPs	Patients from least deprived areas are more articulate with higher expectations of GPs leading to referral decision making in least deprived areas to be 'patient led'	Patients have candidacy and are able to negotiate the elective outpatient system independently and also make use of the private healthcare sector	Reducing referrals can be challenging in part due to medico-legal fears of the implications of referral decisions

my heart's been hurting me today and he'd had 4 hours of central crushing chest pain while he'd been at work and it was a routine appointment.' (GP5, above average deprivation)

In contrast, GPs in more affluent areas described identification of the presenting complaint as a more straightforward task:

He's quite educated (the patient) and probably ... a professional you know, so probably knows a bit more about the relevance of ischaemic heart disease and things like that ... so it was kind of a straightforward thing, really.' (GP9, least deprived)

Making decisions about referral

Anxiety and reassurance. In both deprived and affluent practices GPs described either their own anxiety, possibly raised by personal events or experiences, or that of their patients as an influence in their decision to refer:

'Patient anxiety, slightly doctor anxiety I suppose, a small chance of it being a problem but probably anxiety.' (GP6, above average deprivation)

Persuading fearful and reluctant patients to be referred. GPs in deprived-area practices reported that they often had to persuade reluctant and fearful patients of the merits of referral:

'Fear of what it might be, fear of you know, going to the hospital and ... they know that this may end up having things like coronary angiograms and possibly surgery.' (GP2, most deprived)

In the focus group, a GP from an affluent area commented on this as contrasting with his practice:

'Trying to think of the last time I was trying to persuade someone they really did need to go to hospital for an outpatient referral and you know that's not a conversation you have very often, so, that's quite different.' (GP13, least deprived)

Another aspect of reluctance was discussed in the focus group as arising from patients living in deprived areas having different priorities, as they may be struggling for the basics in life such as housing and food:

'Or priority is the other thing, you know, other things are more important [than going to be seen by a doctor for angina symptoms].' (GP14, most deprived)

Table 2. Summary of task and patient complexity in relation to referrals from general practice to cardiology

Type of complexity		Category/level of complexity, low, high, variable, mixed ^a	
Description	Components	Affluent area	Deprived area
Task complexity			
Task size	Multiple goals, multiple options, excess information	LOW: Usually explicit task, focused information	HIGH: Difficulty unpicking information and prioritising for health gain
Task novelty	Lack of experience	VARIABLE: GPs knowledge of the local systems and clinical experience will be variable	VARIABLE: GPs knowledge of the local systems and clinical experience will be variable
Task ambiguity	Unclear goals, confusing information	LOW: Patient expectation dictates GP action	HIGH: GPs seek to engage patient
Relationships	Conflicting goals, decision conflict	HIGH: Patient wish versus defensive versus resource use	HIGH: Imperative to treat versus patient fear/reluctance versus resource use
Action complexity	Lack of coordination, information flow	LOW: Clear lines of communication, option of private referral for some	HIGH: Events above patients' health literacy level
Variability	Changing information	LOW: Patients report concerns promptly	HIGH: Patients often accept deterioration rather than notify GPs/seek help
Temporal	Time pressure	HIGH: Present	HIGH: Present
Patient complexity			
Physical health	Multimorbidity, polypharmacy	LOW: Few other conditions, controlled	HIGH: Multiple comorbid conditions
Mental health	Anxiety, other illness, substance dependency	MIXED: Anxiety drives referral for some	MIXED: Anxiety drives referral for some
Demographics	Age, socioeconomic, ethnicity	MIXED: Older but independent	HIGH: Younger but sicker, challenge of continuing to be economically active
Social capital	Poverty, low social support, high treatment burden	LOW: High social capital, networks of support and advocacy	HIGH: Low social capital, variable support but little advocacy
Health and social experiences	Heavy use of resource, difficulty navigating systems	LOW: Adept at using and choosing systems as consumers	HIGH: Need assistance (sometimes ongoing) to navigate systems. Safety nets are less likely to work

^aCategories/levels of complexity taken from Islam et al.²⁵ High complexity = a task or patient presentation which is intricate and complicated. Variable complexity = a task which can vary in difficulty for different groups or the same group at different times. Mixed complexity = a 'mixture' of patients present with different characteristics of complexity. Low complexity = a task which is more explicit and simple.

In the quote below the GP describes an added layer of reluctance arising from local history and culture:

'Oh I think it goes way back, all kinds of things, I mean really, in some of the older people, just the thought that, like the Northern General [Hospital] used to be the Workhouse, and I know that's a very, very long time ago, but I think it's still there in the folk memory of people in Sheffield.' (GP7, average deprivation)

Pressure from patients to be referred. In contrast, GPs in the least deprived areas saw referral for specialist care as something that was expected:

'You know, if I'm hearing from them that they're going to want referral, I'm very likely to refer them, whatever it is.' (GP8, least deprived)

'When he came in the first time, his expectation would be to end up with a

referral ... I think our patients do have a lower threshold to actually ask for a referral.' (GP10, least deprived)

GPs from affluent areas described their patients as articulate, and at times felt unwilling or unable to impede their demands; this contrasted with GPs in the deprived areas, who described their patients as in need of enlightenment and support. It emerged that decision making in the high-deprivation practices was doctor led whereas in the low-deprivation practices it was essentially patient led. There was very little description of shared decision making:

'Usually it's us saying well, you know, we think you need to go and see a specialist, not the patients demanding it ... we don't really have many people we refer totally because the patient wants that, you know, we do it because we want to.' (GP3, most deprived)

A final interesting theme emerged from GPs in the affluent areas describing many

examples of patients who came wanting private (as opposed to NHS) referrals, which was very much in contrast with GPs working in more deprived areas:

'What percentage of our referrals are private? And it's none, really none of our patients, once in a blue moon, so obviously our NHS referral rate is higher because, you know, the percentage of private is negligible.' (GP3, most deprived)

Referral of older patients. Frailty associated with advancing years was found to inhibit referrals but the trend seemed more obvious in more deprived areas:

'The main body of people we wouldn't refer is really elderly frail people who don't want to be referred, who don't want intervention' (GP6, above average deprivation)

This was in contrast with a GP from a least deprived area, who when asked if patients are ever reluctant to attend hospital replied:

'No, that's rare, that's really rare here.' (GP8, least deprived)

Navigating the healthcare system after referral

GPs in deprived areas reported that even after negotiating referral with patients their work continued as patients frequently need ongoing guidance when navigating the outpatient system:

'... patients often actually bring us the letters to show us and particularly with choose and book things or when they've been asked to ring back to make an appointment, actually that's a barrier for lots of patients, that's hard.' (GP5, above average deprivation)

This meant that referral was accompanied, for the GP, by a sense of uncertainty. For instance, one GP from a deprived area wondered whether their patient would chase up an appointment for an angiogram:

'You just sort of wonder, you know, if it doesn't come through or whatever, will he chase it up and suspect not really.' (GP2, most deprived)

External pressures

Pressure of work. GPs from all areas described the pressures of work and time constraints, which sometimes led to referral as a strategy to reduce strain. This

could either represent the cognitive strain of uncertainty or relationship strain with a challenging patient:

'I think when people are under pressure some people, probably more people than not, tend to refer more when they're stressed, because they can't deal with uncertainty, as well as everything else they are dealing with.' (GP10, least deprived)

Pressure of defensive practice. GPs in the affluent areas saw themselves as practising in a setting where defensive medicine was a necessity on account of patients' familiarity with the culture and process of complaints:

'I don't practise as defensively as others, but it comes into it, unfortunately.' (GP11, least deprived)

Pressure within the NHS to contain referrals.

Practitioners in both deprived and affluent areas described similar drivers from NHS organisations to contain referrals. The way they were described, however, reflected the different settings. Thus for a GP from an affluent practice it was seen as a threat to medicolegal security:

'If I have actually put in an appropriate referral which then gets managed ... And if they end up having something wrong with them, they get sued, well that's fine. I think it's a minefield.' (GP10, least deprived)

Whereas GPs from more deprived practice areas displayed more anger towards referrals management and a threat to their clinical autonomy:

*'We're slightly suspicious that monitoring of referrals is a cost-driven exercise and we're almost you know, bristling up at that, aren't we, you know, if I want to refer somebody, I'll bloody refer somebody and I don't want some s***ing manager up at the [primary care organisation] telling me not to refer.'* (GP1, most deprived)

Complexity

Throughout the four themes described above a consistent thread of complexity was found. In order to explore this further the authors applied the data to a recently developed framework of task and patient complexity.²⁵ Although this was developed in the field of infectious disease, it was found to provide a useful framework for the data. Table 2 reflects a mapping of the data to this framework, which has seven components reflecting task complexity

and five components reflecting patient complexity. Although referrals from all areas had high complexity in some aspects, such as conflicting goals and time pressure, it was found that, in almost all components of both task and patient complexity, referrals from more deprived areas showed higher complexity than in affluent.

The value of complementing the analysis with this complexity framework is that it makes it possible to differentiate between difficulty of consultations (which may exist in an affluent setting, for example, where there is implicit medicolegal pressure) and complexity of consultations (where multiple problems and priorities coexist).

DISCUSSION

Summary

Referral decisions are different for GPs working in deprived communities when compared with those working in affluent communities. Differences arise from identifying problems for referral, making decisions about referral, navigating the healthcare system after referral, and regarding external pressures to manage referrals. Together these differences mean that referrals for GPs working in deprived areas are more complex.

Comparison with existing literature

Evidence shows that several aspects of general practice are more complex in deprived areas. It has been found that patients in deprived areas present with more long-term illness, more reasons to consult, and more psychosocial problems.²⁷ Potential cultural gaps between doctor and patient can lead to communication difficulties when discussing potential cardiac symptoms, even when English is a first language.²¹ Working with fearful, reluctant patients who normalise significant potentially treatable conditions including angina^{20,21,28} all make working in deprived areas more challenging and complex. The findings of this study that cardiology referrals are more complex for GPs working in deprived areas very much reflect this evidence, and may contribute to patients from deprived areas having significantly lower utilisation rates of interventional cardiac procedures^{7,17,18,29} and higher rates of premature death from CHD.¹³

One key finding from this work was that decision making in the most deprived practices was doctor led whereas in the low deprivation practices it was essentially patient led with the exception of some migrant patients unused to a gatekeeping primary care system. Referral decisions

being patient led is at odds with an analysis of consultation research generally, which highlights that even well-educated patients can struggle to share enough power during a consultation to make decisions.³⁰ Perhaps this could be due to the fact that one specific aspect of GP consultations (cardiology referrals) was looked at in affluent practices. Or, it could be argued that Sheffield's 'affluent' patients are more empowered in consultations than the literature suggests due to their concentration of wealth and high educational status. The most affluent area of Sheffield has been ranked highest outside of London for overall wealth (Sheffield City Council. Sheffield Key Facts. Leaflet, 2013; no longer available on the internet), and seventh out of the 628 UK constituencies for the number of residents holding a degree.³¹ In contrast, descriptions from GPs working in deprived areas were very much more in keeping with the evidence around low health literacy and the need for a 'more symmetrical balance of power',³² as the GPs described themselves working with patients to gain trust and encourage patients to access services. This concept has been neatly described by the Scottish 'GPs at the Deep End' network as some patients from deprived areas needing a 'worried doctor' to take the initiative on their behalf due to being 'the unworried unwell'.³³

Strengths and limitations

This study described the contrasting GP experience of referrals to cardiology between GPs working in affluent and deprived areas in one large city in the UK. Findings are likely to be relevant and transferable to other UK urban areas and beyond, as the challenge of more multimorbidity and psychosocial problems for poorer communities are ubiquitous; however, it could be argued that the GPs working with extremely educated and affluent patients in Sheffield make the contrast with deprived patients more obvious than in less segregated cities. Having a GP researcher undertake the fieldwork brought credibility to the project through prolonged and persistent observation. GPs as researchers have also been shown to provide broader, more personal, and richer accounts in qualitative data collection³⁴ in regards to exploring the clinical practice of peers. A reflexive approach throughout the project using a log reduced the bias that a GP researcher could bring. Dependability was gained through negative case analysis (for example, the consideration of migrant groups who had not experienced the gatekeeper role of a

GP previously) with a systematic approach after qualitative research training and regular peer/supervisor analysis meetings. Although the sample size was relatively small, data were collected until saturation, when no new themes had emerged after two concurrent interviews. Themes were also checked in the focus group, where the findings resonated with participants' practice.

Implications for research and practice

This study adds to research highlighting the extra complexity for GPs working in deprived areas through an exploration of cardiology referral decisions. GPs in deprived areas need the extra complexity of their role acknowledged through funding, which would lead to extra time and training to fulfil the GMC duties to *'give patients the information they want or need in a way they can understand'* and to *'never discriminate unfairly against patients'*.³⁵

Strategies on how to design services more equitably have been described³⁶ and there may be opportunities with Accountable Care Organisations to design services in ways to reduce health inequalities based on these models.

Inequalities persist regarding mortality rates from cardiac disease¹³ and accessibility and treatments for cardiac procedures.^{17,19,29} It is unknown what proportion of these inequalities are due to the social determinants of health and what part GPs can play to reduce them. However, longer consultation times for patients in deprived areas may be a cost-effective intervention to improve patient wellbeing and quality of life³⁷ and would also help GPs to make better sense of their patients' symptoms and complex psychosocial presentations. If GPs are to *'facilitate genuine participation in decision making'*³² for activities such as specialist referrals for patients with poorer health literacy, more time with patients is essential.

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Ethical approval

The study received ethical and NHS governance approvals (Sheffield Research Ethics Committee 09/H1308/112) and all participants provided informed consent.

Provenance

Freely submitted; externally peer reviewed.

Competing interests

The authors have declared no competing interests.

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