

Primary care

Sickness certification system in the United Kingdom: qualitative study of views of general practitioners in Scotland

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Abstract

Objectives To explore how general practitioners operate the sickness certification system, their views on the system, and suggestions for change.

Design Qualitative focus group study consisting of 11 focus groups with 67 participants.

Setting General practitioners in practices in Glasgow, Tayside, and Highland regions, Scotland.

Sample Purposive sample of general practitioners, with further theoretical sampling of key informant general practitioners to examine emerging themes.

Results General practitioners believed that the sickness certification system failed to address complex, chronic, or doubtful cases. They seemed to develop various operational strategies for its implementation. There appeared to be important deliberate misuse of the system by general practitioners, possibly related to conflicts about roles and incongruities in the system. The doctor-patient relationship was perceived to conflict with the current role of general practitioners in sickness certification. When making decisions about certification, the general practitioners considered a wide variety of factors. They experienced contradictory demands from other system stakeholders and felt blamed for failing to make impossible reconciliations. They clearly identified the difficulties of operating the system when there was no continuity of patient care. Many wished either to relinquish their gatekeeper role or to continue only with major changes.

Conclusions Policy makers need to recognise and accommodate the range and complexity of factors that influence the behaviour of general practitioners operating as gatekeepers to the sickness certification system, before making changes. Such changes are otherwise unlikely to result in improvement. Models other than the primary care gatekeeper model should be considered.

Introduction

In the United Kingdom, the provision of sickness certificates is part of general practitioners' contractual service. The Department of Work and Pensions, a branch of the Department of Social Security, issues guidance to medical practitioners.¹ Statistics for 2002 show that of 4.9 million people of working age claiming key benefits, 3.0 million were claiming sickness benefits compared with 0.88 million claiming unemployment benefit.² Only a proportion may be regarded truly as unfit for work because of medical reasons.³ General practitioners have potentially conflicting roles as patient advocate and gatekeeper for the Department of Work and Pensions.⁴ Objective clinical

findings are present in only a few instances of sickness certification.^{5,6} Sick leave seems to be negotiated between doctor and patient, but general practitioners may feel coerced into writing certificates.^{4,7} Operation of the system seems to be inconsistent, with variation both between and among doctors.⁸ Both doctors and patients are dissatisfied with the current arrangement.⁹ A report from the Department of Work and Pensions described how certification was used by general practitioners but did not examine the more sensitive areas of the general practitioner's perspective in depth.¹⁰

Other developed countries also experience problems with sickness absence and certification procedures.¹¹ We aimed to qualitatively explore how general practitioners operate the sickness certification system, their views on the system, and suggestions for change.

Methods

Our study population consisted of general practitioners working in Glasgow, Tayside, and Highland regions in Scotland to ensure that perspectives were obtained from a variety of settings: inner city, suburban, small town, rural, and remote. Recruitment strategies and the topic guide were informed by two preliminary focus group sessions.^{12,13} Eleven one hour sessions with a total of 67 participants were conducted in primary care settings (group size between four and eight participants).

Initially we used purposive sampling to include general practitioners with a range of characteristics, including age, sex, type and size of practice, and medical interests to ensure a wide range of experience and views.¹⁴⁻¹⁶ The first eight focus groups consisted of principals, with a few assistants and general practitioners in training. Participants were recruited by letter or by face to face or telephone contact by the general practitioner researchers. Theoretical sampling was used in three final groups to investigate emergent themes.¹⁴⁻¹⁶ A group of registrars and a group of locum general practitioners were recruited specifically to explore themes raised by the earlier general practitioner principal groups. The last group of principal general practitioners was designed to clarify issues arising from analysis. Participants in the preliminary groups indicated that they were more likely to disclose sensitive data when they were facilitated by practising general practitioners, so all focus groups were led by two general practitioner researchers. In all but the registrar group, one facilitator was personally known to many of the participants. Many of the participants knew each other, as they worked in the same location.



Additional information is on bmj.com

Facilitators used a brief topic guide to ensure important areas were covered, although participants were encouraged to talk freely about their experiences. Personal and practice information was gathered by questionnaire (box 1 and bmj.com). The discussion was recorded and transcribed in full.

Analysis

The constant comparative method was used, guided by framework analysis.¹⁵ Atlas Ti software was used for coding, text searching, and merging of the researchers' analysis. A coding frame was independently developed by each researcher reading three transcripts, and the final version of 51 codes was agreed through discussion (see bmj.com). Underlying themes emerged iteratively as the groups progressed. These were developed by individual researchers, examined at regular research team meetings, and the constant comparative method used to form a consensus and inform the sampling strategy for subsequent groups. Each theme was systematically examined for views, how frequently or strongly a view was expressed, and any alternative views. This was achieved by constructing a matrix for each of the eight main themes with pertinent data from the focus groups (see bmj.com). This allowed comparison across groups for each theme. All data were examined in this manner. The final three groups were used to explore these emergent themes. Six sets of probes relating to key themes were developed and presented on slides in the second half of these groups (see bmj.com). Participants were asked to reflect on the probes in the context of their own experience. Of 11 transcripts, nine were double coded: SH standardised the codes for each transcript, constructed the matrices, and checked audiotapes to obtain an overview and to ensure correct interpretation of the context. Validation of matrix construction and coding was performed by the other four authors comparing the recordings of two groups with the codes assigned for one of the main themes. Between authors both coding and data summary for matrix construction were similar.

Results and interpretation

Eight main themes emerged (box 2). Continuity of care was considered as a sub theme of general practitioners' strategies for implementing the system, although it overlapped with several themes, particularly the doctor-patient relationship. Interaction

with colleagues was a subtheme of who was in control of the situation.

Strategies for implementing the system, and continuity of care

General practitioners developed either fixed or flexible certification strategies, based on acquiescence, negotiation, and challenging requests (box 3). Fixed strategies, such as always acquiescing, seemed to be pragmatic ways to minimise the stress of deciding how to behave on a case by case basis. These approaches seemed to be related to workload and location. Generally, in more rural practices, continuity of care was reported more often, and general practitioners were more likely to approach certification flexibly. The flexible case by case approach was viewed as patient centred and could be stressful. It included strategies for challenging patients or extensive negotiating strategies both of which required time, continuity of care, and knowledge of the community.

The doctor-patient relationship and certification

Most participants believed that their responsibility to the patient outweighed that to the Department of Work and Pensions and Department of Social Security. Almost all described strong con-

Box 2: Eight main emergent themes related to sickness certification

- General practitioners' strategies for implementing the system
- Continuity of care
- Doctor-patient relationship and certification
- Use and misuse of the system by general practitioners
- How general practitioners make judgments about certification
- Who is in control of the situation?
- Interaction with colleagues
- What is the scope for change?

Box 3: Strategies for implementing system, and continuity of care

Group 1 (Tayside, urban)

GP3: I've no discrimination at all, if a patient comes in and says "I need to be off for two weeks ... with a cold," I'll give him a Med 3 no questions asked.

Group 3 (Highland, mixed)

GP4: She said "Do you think that I should just take a week off sick; because, what else will I do?" And we just talked through it ... And eventually she decided, oh yes, it is a good idea to stay working.

GP2: So another doctor may have easily just given her that line within the first two minutes.

Group 8 (Highland, urban)

GP6: I don't think there is anything wrong with saying to people "You seem to me to be fit" ... because if you feel you are being bullied, maybe you need to stand your ground.

Group 6 (Highland, rural and remote)

GP6: She is going around all the doctors trying to get somebody to agree with her that she needs to be off sick.

Locum group (Highland)

GP6: Practices differ ... If you've got a very busy surgery and run 5 minute appointments, you've got much more compromises in what you do. If you've got a very slow 15 minute appointment system you can spend a lot of time, sorting things out.

Box 1: Personal and practice characteristics of general practitioners (n=67)

Designation

Principals (n = 47); assistants (n = 2); training fellow (n = 1); registrars (n = 10); locums (n = 7)

Practice list size*

< 1000 (n = 5); 1000-4000 (n = 9); > 4000-7000(n = 24); > 7000-10 000 (n = 13); > 10 000 (n = 9)

Practice location*

Remote (n = 6); rural (n = 13); rural and urban (n = 5); urban (n = 30); suburban (n = 4); urban and suburban (n = 2)

Number of years as a general practitioner

< 1 (n = 8); 1-5 (n = 16); > 5-10 (n = 12); > 10-20 (n = 23); > 20-30 (n = 6); > 30 (n = 2)

Age

26-30 (n = 6); > 30-35 (n = 11); > 35-40 (n = 19); > 40-45 (n = 11); > 45-50 (n = 12); > 50-55 (n = 4); > 55-60 (n = 4)

Values in brackets are numbers of general practitioners. *n = 60, as locums had no regular practice site.

licts of interest (box 4). They often described feeling they were endangering the doctor-patient relationship when challenging or confronting patients. Some denied any duty to society or the Department of Work and Pensions, believing their only duty is to the patient. Some were upset when they described scenarios in which the patient had fallen out with them as a result of a decision on certification. A few commented that doctors find not being liked difficult. It was pointed out that general practitioners see communication as one of their core or defining roles. If that breaks down, they experience a failure in a core function, regardless of the cause. Patient centred communication and decision making is widely accepted as good practice. To most participants the sickness certification system, in which external judgment is a central component, was the antithesis of this approach.

Use and misuse of system by general practitioners

Knowledge of the system was poor and lack of interest stated (box 5). The participants frequently used vague diagnoses such as “debility” on certificates, without clarification. This was ostensibly to preserve patient confidentiality, but participants commented with satisfaction that the resulting statistics from certificates must be meaningless. A few wondered if writing accurate sick notes made a difference to occupational health legislation or local employers’ occupational health practice. Participants described problems in deciding what to write. There seemed to be a code or “language of sick lines” developed by general practitioners, which fulfilled three purposes: to preserve patient confidentiality, to communicate with other agencies, and to deliberately misuse or sabotage the system by the use of vague diagnoses. Participants described writing “malaise,” “debility,” and “TALOIA” (there’s a lot of it about), producing meaningless statistics. The strategy of acquiescence to every patient can also be seen as a form of sabotage, rendering the gatekeeping role useless. Participants related their misuse of certification to frustration with its irreconcilable requirements. (Although participants were interested in the concept of training on certification, they did not wish to learn about a system that they perceived to be flawed.)

How general practitioners make judgments about certification

Participants normally took a compassionate approach towards certification (box 6). Many factors were taken into consideration.

Box 4: The doctor-patient relationship and certification

Group 2 (Highland, mixed)

GP8: How can we act as policeman, friend, social worker and all the rest of it? We can’t.

GP6: I very rarely refuse to supply a certificate ... I’m not going to allow a small issue like that to interfere with my relationship.

Group 4 (Glasgow, urban)

GP1: Once a patient didn’t come to me for ten years because of me refusing her a sick line.

Group 7 (Tayside, rural)

GP3: I consider my relationship with a patient possibly more important than being that governmental officer that says you shall get no sick pay because you’re fit for work.

Registrar group (Glasgow, urban)

GP4: Established GPs don’t tend to fight.

GP6: I think the older partners or our trainers feel that they have a great rapport with the patients and they don’t think it is their job to be involved with certificates. And so they aren’t really willing to rock the boat.

Although many judgments were straightforward, some difficult or dubious requests for certification posed problems. Judgments about issues where there were no objective clinical findings were often difficult and inevitably subjective. Many participants made a value judgment that patients’ lives would be better if they were able to work. They described conflict between their advocate role as a doctor and their role as judge. The role of the general practitioner in certification can be interpreted as the oxymoronic “judgmental advocate.” Most of the participants did not see making judgments on behalf of the Department of Work and Pensions or employers as a core role.

Who is in control of the situation?

Participants described several stakeholders in the sickness certification system that may have differing agendas or be in direct conflict. These included employers, patients, relatives, the acute sector, the Department of Social Security, the Department of Work and Pensions appeals system, the Benefits Agency Medical Service, overseeing authorities (for example, the aviation authority), and society. Participants described feeling ill used by the demands and expectations placed on them by these groups—for example, when another agency makes the decision about work and general practitioners are merely “used as scribes”; or where general practitioners perceive that the Department of Work and Pensions are using them “as speed bumps” to try and discourage patients from taking sick leave (box 7). Some participants felt pressurised into writing lies and other illegal behaviours such as providing certificates without seeing the patient. They perceived

Box 5: Use and misuse of sickness certification system

Group 6 (Highland, rural and remote)

GP3: We are the gatekeepers of it [the system], and we don’t really understand what happens. There’s lots of bumff I’ve had to read over the years, but I never read it.

Group 2 (Highland, mixed)

GP7: I’ve just given up worrying about whether I’m acting as the gatekeeper to the DSS system or benefits agency system ... Patient wants a line, that’s fine, here you are.

Facilitator: So that’s for any length of time, so it’s patient-led?

GP7: Yes ... I think often what we write down is rubbish ... there must be an epidemic of “malaise.” If they produce government figures to say these are the illnesses that keep people off work, then I can’t see that they’re any use at all.

Group 6 (Highland, rural and remote)

GP4: Have you ever written something really crap on a Med 3?

GP3: Yeah, I write “neurasthenia” and I scribble it so even I can’t read it, and they have never ever asked for clarification, so they are obviously quite happy for you just to scrawl something totally illegible.

Group 5 (Glasgow, urban and suburban)

GP2: And I will lie on their (the patient’s) behalf.

GP3: Put “nervous debility” for drug dependency.

Group 7 (Tayside, rural)

GP3: There were about 15 cases in three weeks of the condition TALOIA on certificates and nobody ever questioned them. TALOIA means “there’s a lot of it about.” Well there was ... and they all had it.

Locum group (Highland)

GP1: I’ve stopped filling it in and never had a problem.

Facilitator: You say you don’t write anything? You leave it [diagnosis section] blank?

GP1: I’ve been doing this for about 4 months now and I’ve not had any returned yet.

a loss of personal and professional control and felt caught between (often warring) factions. Where overt benefit fraud occurred, general practitioners had no satisfactory mechanism for dealing with it. Two participants described patients taking legal action against them or their partners for refusing to condone applications for or appeals on behalf of sickness certification benefits.

General practitioners were reluctant gatekeepers, who knew they could easily be circumvented by patients. Patients were especially able to do this in group practices where they had access to more than one gatekeeper.

Interaction with colleagues

Participants felt undermined and undervalued by hospital colleagues and other health and social service agencies (see box 7). They were critical of hospital doctors and others who

Box 6: How general practitioners make judgments about certification

Group 8 (Highland, urban)

GP4: And if you can't find any clinical evidence that they have actually got a problem then I really find that terribly difficult. I mean they've probably pushed me into saying "OK well if you rest for a week hopefully it will get better." But if they come back again ...

Group 1 (Tayside, urban)

GP3: I don't feel on the one hand you can say to somebody, "well you know you're genuinely ill I agree you should be off work" and say to somebody else "well you're telling me you're ill and on balance, yes OK I'll sign you off" and then say to somebody else "well I don't believe you." How can you actually differentiate?

Group 10 (Tayside, urban and rural)

GP7: Often the earlier you get them back (to work) the better for the patient, but I don't care as far as the company goes.

Box 7: Control of situation and interaction with colleagues

Group 1 (Tayside, urban)

GP2: I think the patients tell me what to do. They [the Department of Work and Pensions] are using us as speed bumps ... and it's rubbish! All the good malingerers do is ask for a line and they'll get it. I can't believe I've got any real malingerers back to work.

Group 3 (Highland, mixed)

GP3: You're putting your professional reputation on the line over something ... over which you have no control.

Group 6 (Highland, rural and remote)

GP4: An independent medical examination found that she was unfit for work because of her backache; with no objective evidence. When I spoke to that consultant on the phone and said we have been struggling for ages to get her off the sick, he said "it's easier on these people just to let them off." He made an arbitrary decision.

Group 7 (Tayside, rural)

GP2: The employment office says "you go and see your doctor and get signed off, then you won't appear on our unemployment statistics."

Registrar group (Glasgow, urban)

GP1: He was much better ... and I refused to give him a line. Two days later he saw one of the other GPs and he got a line! And I said "why did you give him a line?" and he says, "You'll learn."

delegated certification to them. The only colleague consistently appreciated was the (defunct) regional medical officer, to whom general practitioners had previously turned for specialist advice and support. Doctors from the Benefits Agency Medical Service who replaced regional medical officers were not known personally to general practitioners and were rated as much less effective. General practitioner registrars felt undermined by principals and their trainers; they were struggling to make fair decisions, but perceived a lack of support (see box 7, registrar group). This contributed to the disillusionment associated with the development of the less challenging attitude towards sickness certification held by more experienced general practitioners (see box 4, registrar group). The difference between the idealised view of medical students and the more pragmatic view of experienced practitioners was described as being even more noticeable. Locums, however, reported fewer grievances, which reflected their more transient relationship with patients, and protection from the continuing doctor-patient relationship, workload, and organisational pressures of general practitioner principals.

What is the scope for change?

Almost all suggested changes were aimed towards fairness to patients and reduction of stress for general practitioners. About half the participants wished their certification role removed. Many thought an extension of self certification the best alternative. Frequently expressed was the need for a personally known authoritative individual to whom they could refer (such as a regional medical officer). Some participants considered that other healthcare workers could provide sick certificates to patients, but the participants in partnerships described numerous instances of patients "shopping around" for certificates (see box 3, group 6 and box 7, registrar group). Other suggestions included the streamlining of forms, better occupational health and rehabilitation, further training, sick line clinics, general practitioner time in a "regional medical officer hat," and copying other countries' systems.

Discussion

Variation exists in the practice of sickness certification both between and among doctors.⁸ Our participants confirmed that the system is largely patient led, and that they found judgments difficult where there were no objective signs.¹⁷⁻¹⁹ We used a collaborative, multicentre method for researching sensitive professional issues in general practice. Many of our findings supported those of the only other comparable study commissioned by the Department of Work and Pensions.¹⁰ Some of our data and conclusions are, however, significantly different. By using general practitioner interviewers we were able to gather more sensitive data and to canvas more extreme views and practices. We found that the focus group method encouraged confession in a peer led environment.²⁰ Individual interviews of data rich participants with unusual views or additional experience would have added to the study, but time and funding constraints did not allow this. Patients' views were not investigated; other studies have explored these.^{9 21 22}

Significant new findings

Straightforward sickness certification is not a problem. However, our participants reported that for the significant minority where difficult decisions exist, any or all of the stakeholders, including patients, employers, the Department of Work and Pensions, the Department of Social Security, other agencies, and the general practitioners themselves, may substantially misuse the system. Among the reasons why they misuse the system in their role as

What is already known on this topic

The cost of sickness absence to developed countries is high

Only a proportion of people certified as sick can truly be regarded as unfit for work due to medical reasons

General practitioners are unhappy with their current certification role

What this study adds

General practitioners develop individual ways of operating sickness certification; in practice most operate a “sick certificate on demand” system

All stakeholders, including general practitioners, may seriously misuse the system

Consideration of underlying issues is pivotal to proposed changes—for example, increasing sources of sick certificates will further undermine the gatekeeper role

general practitioners, participants cited patient confidentiality, stress, demands on time, avoiding conflict in the doctor-patient relationship, disillusionment with the system, and undermining of their decisions. The participants particularly resented the effect of their certification role on the doctor-patient relationship and also resented making judgments for other agencies. They had developed individual ways of using the system, largely unrelated to the guidelines of the Department of Work and Pensions. Many made patient advocacy a priority and issued sick certificates on demand. By doing this they undermined the intended gatekeeper role.

Implications and implementation

Our findings may have several implications for policy makers planning both future research and strategies: extra training for its own sake is unlikely to be effective until underlying problems for gatekeepers are addressed. Should a gatekeeper system continue or alternatives be considered? Alternatives could include a self certification system with spot checks (akin to tax self assessment). If the gatekeeper system is continued, problems must be resolved—namely, pressurising of the gatekeeper by other agencies, the lack of accessible and authoritative support for the gatekeeper, and the ability of the consumer to “shop around,” weakening the gatekeeper role.

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- 1 A Guide for registered medical practitioners. London: Executive Agency, 2000. (No IB204 DSS.)
- 2 Department of Work and Pensions. *Client group analysis: quarterly bulletin on the population of working age on key benefits—May 2002*. London: DWP, 2002.
- 3 McEwan IM. Absenteeism and sickness absence. *Postgrad Med J* 1991;67:1067-71.
- 4 Mayhew HE, Nordlund DJ. Absenteeism certification: the physician's role. *J Fam Pract* 1988;26:651-5.
- 5 Larsen BA, Forde OH, Tellnes G. Legens kontrollfunktion ved sykmelding. *Tidsskr Nor Laegeforen* 1994;114:1442-4.
- 6 Feeny A, North F, Head J, Canner R, Marmot M. Socioeconomic and sex differentials in reason for sickness absence from the Whitehall II study. *Occup Environ Med* 1998;55:91-8.
- 7 Reiso H, Nygard JF, Brage S, Gulbrandsen P, Tellnes G. Work ability assessed by patients and their GPs in new episodes of sickness certification. *Fam Pract* 2000;17:139-44.
- 8 Tellnes G, Sandvik L, Moum T. Inter-doctor variation in sickness certification. *Scand J Prim Health Care* 1990;8:45-52.
- 9 McCormick J. *On the sick: incapacity and inclusion*. Edinburgh: Scottish Council Foundation, 2000.
- 10 Hiscock J, Ritchie J. *The role of GPs in sickness certification*. London: Department of Work and Pensions, 2001. (Research report No148.)
- 11 Luz J, Green MS. Sickness absenteeism from work—a critical review of the literature. *Public Health Rev* 1997;25:89-122.
- 12 Kitzinger J. Introducing focus groups. *BMJ* 1995;311:182-4.
- 13 Kitzinger J, Barbour RS. Introduction: the promise and challenge of focus groups. In: Barbour RS, Kitzinger J, eds. *Developing focus group research: politics, theory and practice*. London: Sage, 1999.
- 14 Patton MQ. *Qualitative evaluation and research methods*. London: Sage, 1990.
- 15 Kuzel AJ. Sampling in qualitative inquiry. In: Crabtree BF, Miller WL, eds. *Doing qualitative research*. Newbury Park: Sage, 1992:31-4.
- 16 Ritchie J, Spencer L. Qualitative data analysis for applied policy research. In: Bryman A, Burgess RG, eds. *Analyzing qualitative data*. London: Routledge, 1994:173-94.
- 17 Wolinsky FD, Wolinski SR. Expecting sick-role legitimation and getting it. *J Health Social Behav* 1981;22:229-42.
- 18 Chew-Graham C, May C. Chronic low back pain in general practice: the challenge of the consultation. *Fam Pract* 1999;16:46-9.
- 19 Haland Haldorsen EM, Brage S, Stomme Johannesen T, Tellnes G, Ursin H. Musculoskeletal pain: concepts of disease, illness, and sickness. Certification in health professionals in Norway. *Scand J Rheumatol* 1996;25:224-32.
- 20 Chew-Graham CA, May CR, Perry MS. Qualitative research and the problem of judgement: lessons from interviewing fellow professionals. *Fam Pract* 2002;19:285-9.
- 21 National Association of Citizens Advice Bureaux. *Evidence to the social security select committee: inquiry into medical services for the benefits agency*. CAB Evidence Report, 2000.
- 22 Burchardt T. *Enduring economic exclusion: disabled people, income and work*. York: York Publishing Services, 2000.

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