Research

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Quality improvements of safety-netting guidelines for cancer in UK primary care:

insights from a qualitative interview study of GPs

Abstract

Safety netting is a diagnostic strategy that involves monitoring patients with symptoms possibly indicative of serious illness, such as cancer, until they are resolved. Optimising safety-netting practice in primary care has been proposed to improve quality of care and clinical outcomes. Introducing guidelines is a potential means to achieve this.

To seek the insight of frontline GPs regarding proposed safety-netting guidelines for suspected cancer in UK primary care.

Design and setting

A qualitative interview study with 25 GPs practising in Oxfordshire, UK.

Transcripts from semi-structured interviews were analysed thematically by a multidisciplinary research team using a mind- mapping approach.

Results

GPs were supportive of initiatives to optimise safety netting. Guidelines on establishing who has responsibility for follow-up, keeping patient details up to date, and ensuring test result review is conducted by someone with knowledge of cancer guidelines were already being followed. Sharing diagnostic uncertainty and ensuring an up-to-date understanding of guidelines were only partially implemented. Neither informing patients of all (including negative) test results nor ensuring recurrent unexplained symptoms are always flagged and referred were considered feasible. The lack of detail, for example, the expected duration of symptoms, caused some concern. Overall, doubts were expressed about the feasibility of the guidelines given the time, recruitment, and resource challenges faced in UK primary care.

GPs expressed general support for safety netting, yet were unconvinced that key elements of the guidelines were feasible, especially in the context of pressures on general practice staffing and time.

Keywords

diagnosis; general practice; neoplasms; patient safety; qualitative research.

INTRODUCTION

General practice has been described as the art of managing uncertainty, with GPs adept at coping with expected and unexpected turns of events. 1 Safety netting is an attempt to handle the 'what ifs' arising from patientreported symptoms that could, potentially, indicate a serious illness, thus helping to ensure timely and appropriate followup.^{2,3} Safety-netting behaviours are variably defined but involve monitoring symptoms until they are resolved or a diagnosis is reached.^{4,5} They extend to administrative activities such as test result communication and referral follow-up.6 Optimising such practices has been proposed as a means to improve quality of care and clinical outcomes.7 Robust safety netting is particularly relevant in childhood illness^{8,9} and cancer,10 in which prompt diagnosis is key but the presenting symptoms are rarely indicative of serious illness.

Variation in safety netting has been observed^{4,5,11} and some practices have been linked to suboptimal outcomes. For example, a review of safety incidents involving sick children identified inadequate communication of safety-netting advice to caregivers, that is, what to do if their child's condition fails to improve or deteriorates, as a priority for improvement.¹² Meanwhile, during cancer diagnosis, comparisons from an international survey found that fewer GPs in the UK retained responsibility for ensuring the follow-up of patients who failed to re-attend.13

Introducing guidelines could help standardise safety-netting activities in primary care. For example, the National Institute for Health and Care Excellence (NICE) guidelines for suspected cancer recommend that GPs offer patients follow-up within an agreed time frame, retain responsibility for investigation, and review patients with negative results.14 A broader set of recommendations to support such behaviours (Box 1) were developed from a Delphi process involving UK primary care cancer experts and GPs, and has subsequently been promoted by Cancer Research UK.3,7,10 However, it is unknown whether they would be feasible to action in everyday practice. The aim of this study, therefore, was to seek the insight of frontline GPs regarding the implementation of proposed safety-netting guidelines in UK primary care.

METHOD

Participants

GPs practising in Oxfordshire were eligible to take part. The Oxfordshire Clinical Commissioning Group (CCG) and Thames Valley Clinical Research Network (CRN) newsletters were used to advertise the study. Interested GPs contacted the study team and were sent an invitation letter, study information sheet, and reply slip. These documents were also sent directly

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How this fits in

Little is known about the acceptability and feasibility of proposed safety-netting guidelines for suspected cancer in primary care. The GPs interviewed in this study felt the guidelines were a good description of safety-netting best practice and shared concerns that implementation would be hampered by the lack of specific detail of some statements combined with the time pressures faced by GPs. The uptake of any safety-netting guidelines is likely to be dependent on how they could be embedded within current primary care practice without adding to GP workload.

to professional and personal GP contacts of the study team. A purposive sampling strategy was used to ensure variation in age, time since qualification, and location (rural versus urban). Recruitment continued until data saturation was judged to be achieved, that is, new interviews were no longer adding perspectives to the analysis. All study participants gave their informed consent before data collection.

Data collection

In-depth, semi-structured interviews were conducted by a highly experienced qualitative researcher with a social sciences background. Interviews were carried out face-to-face to facilitate rapport and the collection of insightful data. Interviewees were asked about their views and experiences of safety netting⁵ and then presented with the safety-netting recommendations in Box $1^{7,10}$ and asked to comment.

Analysis

Interviews were recorded and transcribed verbatim, and anonymised transcriptions produced. These were thematically coded using the constant-comparison approach, 15 a process facilitated by NVivo (version 10) software. Broad codes were used to identify data about the safety-netting recommendations and then subcodes for each recommendation were applied. A mind-mapping approach called 'one sheet of paper' (OSOP)16 was used to analyse data under each subcode. This process was conducted independently by, first, the researcher responsible for collecting and coding data, and, second, a clinical researcher and practising GP along with the researcher who originally developed the guidelines. A fourth researcher with a qualitative background triangulated these analyses and wrote them up, noting areas of discordance for further discussion among the multidisciplinary study team. This approach enabled a range of perspectives to be included.

RESULTS

Table 1 describes the characteristics of the 25 GPs who were interviewed between November 2016 and June 2017. Most were recruited via the CRN (n = 10, 40%); n = 7(28%) through the CCG and n = 8 (32%) were directly invited by the study team. Interviews typically lasted about 60 minutes.

Overall, the guidelines were felt to be a good description of safety-netting best practice. However, interviewees raised concerns about the lack of specific detail regarding their implementation and the resources required:

'These are things that every GP would love to implement, no question, they make really good sense. You know, whether we could truthfully say that we're going to manage it at the current time with 10-minute appointments and other things squeezed in ... I'm not confident about that.' (GP 17)

The subsequent findings have been structured using the three main headings of the recommendations ('with the patient', 'clinician actions' and 'improved systems') that

Box 1. Safety-netting recommendations developed by Bankhead and colleagues^{7,10}

With the patient

- Explain the expected time course of symptoms
- Describe any specific warning symptoms or signs of serious disease or cancer
- · Give specific information about when and how best to re-consult, including specifying who is responsible for making the appointment
- · If the working diagnosis is uncertain, explain the uncertainty to the patient together with the reasons for tests, investigations, watchful waiting, or a trial of management
- · Ensure patients understand safety-netting advice, with written instructions if needed, and clearly document the advice in the medical record

Clinician actions

- Keep up to date with urgent referral guidelines for suspected cancer
- If symptoms do not resolve, or persist intermittently, further investigations should be conducted even if previous tests were negative and referral considered, such as 'three strikes and you are in'
- Perform an annual audit of new cancer diagnoses and conduct significant event analysis of delayed and emergency cancer diagnosis
- · Participate in cancer awareness campaigns and screening

Improved systems

Consider developing systems to ensure:

- up-to-date contact details for all patients.
- results are viewed and acted on by someone with knowledge of cancer guidelines
- patients receive test results even if they do not attend for follow-up
- consultations for unexplained recurrent symptoms are highlighted

Table 1. Participant characteristics, N = 25

Sex	
Female	9 (36)
Male	16 [64]
Ethnicity	
White British	21 (84)
Age, years	
34–38	7 (28)
39–43	2 (8)
44–48	5 (20)
49–53	6 (24)
54–59	5 (20)
Time since qualification, years	
0–9	9 (36)
10–19	7 (28)
20–29	9 (36)
Type of employment	
Part time (<8 clinical sessions/week)	16 (64)
Full time	7 (28)
Locum	2 (8)
Location	
Urban (in Oxford city)	13 (52)
Rural (outside Oxford city)	12 (48)

reflect areas of interest in the safety- netting literature. Quotes from the interviews have been used to illustrate findings. (In a relatively small, potentially identifiable sample, contextual detail has been added where relevant rather than demographic participant information.)

With the patient

Explaining the expected time course of symptoms was considered relatively straightforward when they had an obvious cause with a well-understood 'life cycle'. However, it was felt to be problematic for patients with unclear and non-specific symptoms. With intermittent or chronic conditions, interviewees described how the duration of symptoms can vary or be difficult to assess:

'It takes quite a lot of time and experience to become familiar with what is expected and what isn't, and there's quite a lot of stuff out there where there just isn't an expected time course. '[GP 12]

The recommendation to describe specific warning symptoms or signs of serious disease was regarded as important and necessary. Careful, rather than avoidant, communication, of these 'red flags', was thought best to avoid unnecessary distress or anxiety.

When advising about re-consultation, GPs said it was the patient's responsibility to make follow-up appointments, citing their workload and patient autonomy as their reasons. In terms of continuity of care, when discussing follow-up, one GP acknowledged:

You've got to accept a pragmatic approach, which is, you know, "Ideally back with me, but if I'm booked up for 3 weeks, you know, you might have to see a colleague. "'(GP 17)

They agreed that they should explain the uncertainty of the working diagnosis to patients but suggested that their ability to do so was limited both by the length of consultations and by some patients preferring 'black and white answers'.

There was considerable comment regarding the recommendation to ensure patients understood safety-netting advice and to clearly document this in the medical records:

'I know in the kind of model consultation you do check patients' understanding, but it is a very difficult thing to do ... when you've got real-time constraints, that's tough. (GP 24)

Achieving consistency of recording safetynetting advice and actions in the patient notes was seen as challenging and information technology tools were suggested to help:

You could very easily have a macro, effectively, and you could programme into it an interactive menu where you triggered it and there would be a series of safety-netting tasks ... and you could have a sequence of different questions that you could use as a tool to structure the conversation but also to record it ... it would be too time consuming to type it out every time. (GP 22)

Interviewees agreed that there was a limit to what patients could take in during consultations and providing written information could act as a reminder.

Clinician actions

Although some GPs said they updated their knowledge of referral guidelines for suspected cancer by attending courses, others said that it was not possible to keep truly up to date:

Well, how honestly can I put that in my brain? I mean it's just impossible.' (GP 13)

Regarding the recommendation proposing further investigations for persistent symptoms, the phrase 'three strikes and you are in caused some confusion. Some GPs interpreted it as an unambiguous instruction that every patient should be referred at the third consultation for the same or similar symptom:

'I think it's very hard to put a number on it because it so depends on the person. If you took a three strikes and you're in approach to some patients, they'd be perpetually having 2-week-wait referral investigations. But I think in principle it's a reasonable thing. '(GP 23)

Although some said they already followed a similar rule, others were concerned that referring patients with chronic unexplained symptoms or health anxiety could medicalise them unnecessarily and overwhelm the already stretched hospital system:

There are some people who just repeatedly consult, and repeatedly consult about similar issues but with a different flavour each time. And these are the people with medically unexplained symptoms and lots of functional stuff going on where, my goodness, if we referred them every third attendance, you know, we would clog up all of our patients. (GP 17)

The challenges of applying this rule with patients seeing multiple clinicians was highlighted, a problem compounded by queries of how best to code the process in the medical records:

'If somebody comes and sees three different people about their abdominal pain, it's much more difficult, to pick that up. '(GP 23)

Other practical issues included difficulties knowing which pathway to refer a patient to if their symptoms were non-specific.

Interviewees' narratives alerted the research team's attention to the possibility that onward referral may not mark the completion of safety-netting activities, for example, if no diagnosis is made following urgent referral. In such cases, patients returning from hospital investigations with no diagnosis may be falsely reassured, and represent a potential gap in safety netting overlooked by the proposed guidelines in their current form.

The next recommendation concerned annual audits of new cancer diagnoses and significant event analyses of delayed and emergency cancer diagnoses. Although the GPs interviewed rarely undertook formal audits, they employed strategies within their practice to review new cases such as discussions at team meetings or circulating details via email.

The relevance to primary care safety netting of the recommendation to participate in cancer awareness campaigns and screening was not obvious to study participants. Some suggested this was primarily a public health activity and a low priority for GPs.

Improved systems

Ensuring up-to-date patient contact details was seen as a task for administrative staff. Some GPs gave examples of systems by which contact details were checked, such as via their online appointment booking system.

Most interviewees reported that test results were reviewed and acted on by a GP and that, as GPs, they should be up to date with cancer guidelines.

The next recommendation concerned how patients would receive test results if they did not attend for follow-up. Although all GPs said they acted on abnormal results, some said there was no system for ensuring results were transmitted to patients who did not attend-

We do not have any systems for doing that, and they, the impact on workload of sending out information, you know, if you have to send things by post that's too expensive to do. Not everyone has emails ... it's a good idea but it's an incredibly big ask.' (GP 02)

Amid a strained primary care system with an increasing volume of test results to handle, in some practices patients were tasked with taking the responsibility of ensuring follow-up:

We make it clear that patients are under no illusion that it is their responsibility to follow up on the results. (GP 21)

However, identifying patients who had cancelled telephone consultations or appointments to discuss abnormal test results was raised as a key safety-netting concern.

Communicating normal results posed their own set of challenges. Limited time meant that GPs generally did not contact patients about normal test results, but it was usual to invite patients to phone the surgery for them:

'If I think to myself, no harm is going to come of this patient not finding out that they've got a normal result, then I'm quite happy to just file it. But if I'm, I'll look at their record if I don't know what's going on and think to myself, well [does] this normal result mean that they're now going to start a new treatment or have a colonoscopy or whatever it is, then that's different. (GP 19)

Some practices delegated normal result reporting to non-clinical staff. GPs acknowledged this to be a potentially risky strategy in safety netting with a 'normal' result being equated with 'no action needed' when it could signify that further investigations or a referral was indicated. When passing on negative test results, GPs also described using the opportunity for further safety netting, for example, by encouraging patients to re-consult if their symptoms persisted or recurred:

'I often find myself saying ... "It's reassuring that the results are normal but they don't tell us everything and so if things don't improve you should still come back."" (GP 23)

Some surgeries used an automated text messaging service linked to the electronic medical record system to reduce the workload involved in informing patients about normal test results, but one GP

Recommendation	Status	Suggested facilitators
With the patient		
Explain the expected time course of symptoms	Useful, partly implemented	Provide further guidance for GPs on the expected time course of symptoms based on literature review
Describe any specific warning symptoms or signs of serious disease or cancer	Limited GP response	n/a
Give specific information about when and how best to re-consult, including specifying who is responsible for making the appointment	Useful, implemented	n/a
Explain any uncertainty to the patient together with the reasons for tests, investigations, watchful waiting, or a trial of management	Useful, partly implemented	Longer appointments to enable time for full explanations
Ensure patients understand safety-netting advice, with written instructions if needed, and clearly document the advice in the medical record	Useful, partly implemented	Development of patient information regarding undifferentiated symptoms; and safety-netting macros for electronic medical record system The latter would facilitate future safety-netting audits
Clinician actions		
Keep up to date with urgent referral guidelines for suspected cancer	Useful, partly implemented	An online resource collating current guidelines and referral forms. These documents could be combined so that referral forms act as an educational prompt for the referring GP
If symptoms do not resolve, or persist intermittently, further investigations should be conducted even if previous tests were negative and referral considered ('three strikes and you are in')	Unhelpful in current wording	Further research with GPs to consider if and how to include such activities in safety-netting guidelines
Perform an annual audit of new cancer diagnoses and conduct significant event analysis of delayed and emergency cancer diagnosis	Useful, implemented in different forms	Consider revising guideline to include more informal audit methodologies
Participate in cancer awareness campaigns and screening	Deemed low priority	n/a
Improved systems		
To ensure up-to-date patient contact details	Useful, implemented	n/a
To ensure results are viewed and acted on by someone with knowledge of cancer guidelines	Useful, implemented	Protected administration time for GPs
To ensure patients receive test results even if they do not attend for follow-up	Useful, difficult to implement	Investment in the strengthening of primary care test-reporting systems, development of lay test-reporting templates
To ensure consultations for unexplained recurrent symptoms are highlighted	Useful, difficult to implement	Retrospective recoding of medical records using standardised codes to repeated

said their practice had decided not to use this because of the potential to create unnecessary confusion or anxiety:

We have chosen not to because we actually are not at all convinced it doesn't create more work, because you so often will see mild abnormalities on these blood tests that are of absolutely no consequence. (GP 21)

Furthermore, GPs might order multiple tests as part of safety-netting activities, the collation of which enables the bigger picture to be elucidated. Receptionist or text message reporting of single results can be problematic if not all the ordered test results have arrived:

'I think the biggest risk in that regard is that we ask for five tests, let's say. Four of them are back and one of them hasn't come back yet. Patient rings up, is told they're normal on the basis of the first four being normal, and then never rings back for the fifth one ... What we don't record is when the patient has rung up and ... been told that they're normal.'(GP 19)

consultations for the same/related symptoms This would be a significant additional workload

Though most talk was about blood test results, reporting scan results was also raised; concerns included whether to share the whole report or just the outcome and how best to deliver this information to patients in an accessible, comprehensible form. This applied to blood results too:

'How much increased workload you're going to have of patients not understanding words on results and therefore booking with their GP and wasting another 10 minutes?

n/a = not applicable.

Not wasting it, because they're anxious. But we've caused them anxiety because they don't understand medical language. Therefore are, are reports going to be done in layman's language.' (GP 25)

The recommendation that consultations for unexplained recurrent symptoms should be highlighted was widely felt to be ambiguous, with interviewees explaining that they could not see how it could be achieved. other than in hindsight. Inconsistent coding within the medical records of similar symptoms was identified as an additional barrier.

'If you come in with breathlessness it could be Read coded as, "breathlessness" or "shortness of breath" or "dyspnoea". And so if you don't choose the same one as the person before, it's going to be quite hard.' (GP 24)

How best to alert GPs to similar symptoms having been coded differently on multiple occasions was also raised. No matter how consistent the coding, interviewees reported that, if they did not have time to review medical records before the consultation, they were dependent on the patient disclosing if they had consulted previously for the same symptoms.

Box 2 summarises study participants' views on which of the guidelines are helpful, their current implementation status, and suggested facilitators for further implementation.

DISCUSSION

Summary

Overall, the guidelines were felt to be a good description of safety-netting best practice for suspected cancer but there were concerns that their implementation would be hampered by their lack of specific detail combined with the time pressures and workload challenges faced by GPs.

This study identified how structural factors, such as staffing and funding, may prevent GPs following proposed safety-netting guidelines. The same structural factors may inhibit GPs carrying out safety-netting behaviour in the first place, for example, by not having enough time to read a patient's case history to assess the presence of unexplained recurrent symptoms. Whether quidelines can support more clinicians to adopt robust safety- netting practices without broader factors in primary care being addressed seems unlikely.

Current conditions in primary care have resulted in the metaphorical safety net being stretched wider and, as a result, the gaps through which patients can fall are being made larger. The uptake of any guideline is likely to be dependent on how they could be embedded within current primary care practice without adding to GP workload. Investment in general practice, for example, by tackling short staffing and supporting continuity of care, would foster conditions conducive to high-quality general practice, a feature of which is safety netting. In such circumstances, guidelines may help support safety netting and reduce variation in care.

Strengths and limitations

To the authors' knowledge, this is the first study to explore GPs' views on proposed quidelines to support safety netting in primary care and how to optimise them. This study included a purposive sample of GPs, whose interview transcripts were analysed by a multidisciplinary research team. These strategies enabled a range of perspectives to be included.

The interviewees in this study were drawn from Oxfordshire, a relatively affluent county. Almost one-third of the interviewees were personal contacts of the research team. The authors cannot be sure that the participants' opinions and attitudes towards safety netting reflect those of the broader profession or be representative of those working elsewhere in the UK or internationally.

Though the proposed guidelines extend beyond clinician behaviour, views of practice managers, administrators, or information technology specialists were not included. These groups could provide valuable insight regarding supporting safety netting in primary care. The authors invited patients to comment but this yielded scant data, perhaps unsurprisingly for guidelines targeting primary healthcare providers rather than patient behaviours.

Interview participants may be inclined to give socially desirable responses. A project utilising the One in a Million video archive has enabled the study of enacted, rather than reported, safety-netting practices in primary care.4, 17,18

Comparison with existing literature

Workload and time pressures have been previously reported as barriers to GPs enacting safety netting.5 Over the last decade, English general practice has absorbed major rises in patient care workload, particularly for GPs,19 with consultations lasting, on average, around 9 minutes.²⁰ Such working conditions, as the interviewees explained, are not conducive for safety netting. Furthermore, recruitment and

retention issues with increased part-time working have reduced the continuity of care on offer, a feature held central by many GPs to their profession,²¹ and one that facilitates safety netting. Studies of older patients and those with ambulatory-sensitive conditions concluded that strategies to improve the continuity of care in general practice may reduce secondary care admissions and improve the experience of patients and those working in general practice. 22,23 Such strategies may well also support effective safety netting.

The fragmentation of communication between practice staff and patients during cancer presentation, detection, and referral has been noted elsewhere.²⁴ One of the key safety-netting concerns raised in the present study was ensuring that patients receive their test results and access care in a timely way. Difficulties accessing the practice by telephone may act as a barrier for patients seeking to receive test results and make follow-up appointments: the UK's 2018 National Patient Survey found that three in ten responders did not find it easy to get through to their practice on the telephone.²⁵ Previous research has demonstrated that patients frequently experience delays and inconsistency during the reporting of test results in primary care. 26 A service co-design project sought to address these weaknesses and, although able to make some changes that were well received by patients and staff, time and resource constraints limited its impact.²⁷ Ensuring that a robust and fit-forpurpose system is in place is vital given the increasing number of test results handled in primary care.28

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Ethical approval

The study was approved by the South East Coast-Brighton and Sussex Research Ethics Committee (reference: 16/L0/1468).

Provenance

Freely submitted; externally peer reviewed.

Competing interests

The authors have declared no competing interests.

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Implications for research and practice

Study participants' views on which of the guidelines are helpful, their current implementation status, and suggested facilitators for further implementation (Box 2), together, help to prioritise future research in this area. For example, though included in the proposed guidelines and NICE guidance, GPs commented on the lack of specific detail regarding the accepted time course of symptoms in order to advise patients. Future systematic reviews could synthesise this information ready for dissemination to frontline GPs undertaking safety-netting activities. The test of time can be a helpful diagnostic strategy in primary care but is dependent on a good understanding of the clinical course of conditions.²⁹ Test result follow-up was also included in both guidelines and was deemed important but only achievable if GPs had protected administrative time. Investment in robust test-reporting systems is also required if patients are to safely receive. positive and negative, test results.

The impact of the proposed safety-netting guidelines on clinical outcomes is yet to be evaluated. Careful consideration needs to be given to the benefits of rolling out an additional, untested set of guidelines in the current resource-restrained setting. Primary care staff are known to be concerned about the number of cancer detection and referral guidelines already in place, voicing doubts about the ability of national initiatives to fully capture the local work of managing risk.²² The interviewees in the presented study expressed misgivings at the ability of a single set of guidelines to fully describe the activities associated with managing uncertainty across multiple conditions. GPs have previously described how they necessarily develop a bespoke approach to safety netting based on their own clinical experience, communication style, practice organisation, and patient population.5

Since the guidelines were produced in 2011, the safety-netting literature has developed^{6,7} and conditions in primary care changed.¹⁶ Therefore, a further Delphi process is planned to build on the present findings and update the guidelines. For example, the recommendation: 'If symptoms do not resolve, or persist intermittently, further investigations should be conducted even if previous tests were negative and referral considered, such as "three strikes and you are in" requires reworking to prevent confusion among GPs. Interviewees also described the need for safety-netting activities to be triggered when patients returned from hospital investigations without a diagnosis despite still having symptoms. In their current form, the guidelines do not acknowledge this aspect of safety netting. Revised guidelines could recognise that safety netting is needed at the interface between primary and secondary care to prevent the diffusion of responsibility.^{29,30} Inviting secondary care clinicians to participate in the planned Delphi process could ensure this aspect is included.

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