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Cite this as: *BMJ* 2022;378:e069094

<http://dx.doi.org/10.1136/bmj-2021-069094>

Published: 25 July 2022

PRACTICE POINTER

Safety-netting in the consultation

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What you need to know

- Aggressively treating or investigating all patients with early undifferentiated illness is poor medical practice and can be harmful
- Time is an important diagnostic tool but creates a period of uncertainty and risk for patients with serious underlying conditions
- Safety-netting can help mitigate this risk, and the traffic light framework provides a structure for delivering safety-netting advice

Safety-netting has become a widely used term to describe an array of activities both within the consultation and on systems levels. Within the consultation, safety-netting is considered best practice, and often an expected clinical standard, particularly in primary and emergency care.^{1,2} The term was first coined by Roger Neighbour in 1987 as an in-consultation tool for managing clinical uncertainty.³ Safety-netting advice has since been defined as: "Information shared with a patient or their carer, designed to help them identify the need to seek further medical help if their condition fails to improve, changes, or if they have concerns about their health."^{4,5} This article outlines the principles and evidence base (box 1) of safety-netting and offers an approach to giving effective safety-netting advice.

Box 1: Is there an evidence base for safety-netting?

A literature review in 2019 reported the most common type of safety-netting article was an expert opinion (n=25), followed by qualitative studies (n=12), with no completed randomised controlled trial (RCT).⁶ An updated realist review in 2022, which produced 15 recommendations to enhance the communication of safety-netting advice, included reference to two randomised trials, but neither had a primary intervention of safety-netting or referred to this term.⁷

However, there have been multiple RCTs of treating common infections with arms comparing patient information leaflets (which commonly contain safety-netting advice) against no leaflets. In a systematic review of such studies, six of the seven RCT leaflets included safety-netting advice (one was unclear), which demonstrated an overall trend towards reduced antibiotic use and fewer repeat consultations.⁸ None of the studies or the review used the phrase "safety-netting"; hence their omission from the aforementioned literature review. Newer trials have started adopting the term.⁹ However, the inconsistencies in previous studies, plus the fact that these patient leaflets contain other information besides safety-netting advice, and the variable verbal content in the trial arms, mean the effectiveness of the leaflets cannot directly be attributed to safety-netting alone.

One commonly cited observational study of parents with feverish children (349 contacts) found that those who

recalled being given safety-netting advice were less likely to reconsult than those who did not recall receiving such advice.¹⁰ However, retrospective reviews of recorded consultations have shown that patients do not always recall safety-netting advice given to them and the content of the advice given by healthcare professionals is highly variable.^{11,12}

Currently, there is one ongoing cluster RCT comparing usual care against enhanced electronic safety-netting for cancer diagnosis.¹³ Although safety-netting is widely agreed by clinicians and patients to be of value, the evidence base is too small to reach any firm conclusion about its effectiveness on patient outcomes.

Are there any harms of safety-netting?

The English National cancer audit in 2014 (n=14 259 patients diagnosed with cancer) reported documented safety-netting was associated with a higher odds (odds ratio 1.19; 95% confidence interval 1.08–1.30) of an avoidable delay before cancer diagnosis.¹⁴ One hypothesis is that clinicians were using safety-netting as a substitute for early referral. However, the delays included those caused by factors outside of the GP consultation such as pre-consultation delays and within secondary care hence we conclude no attributable outcome can be drawn on in-consultation safety-netting from this study. Furthermore, it has been reported that GP documentation of safety-netting advice is sporadic and biased, with one study of recorded GP consultations (n=295 patients, 23 GPs) demonstrating a less than 50% documentation rate of verbalised safety-netting advice.¹⁵ Further research is required to determine the optimal format and delivery of safety-netting advice and evaluate potential harms. Certainly there is a need to determine whether poor quality safety-netting is worse than no safety-netting.

Why safety-net?

The aim of safety-netting advice is to protect patients and clinicians from harm by empowering appropriate health seeking behaviours in patients with undifferentiated disease and those at risk of deterioration or developing a serious complication. After a consultation, patients depend on the quality of this advice to make critical decisions about when, where, and how quickly they should seek medical attention. Inadequate safety-netting can lead to various harms and has been highlighted as a key form of communication failure in primary care when evaluating paediatric patient safety incidents.¹⁶ Without this information, there is a risk that the patient may not recognise the symptoms of a developing serious illness or complication.¹⁷ Conversely if not given safety-netting advice, or it is communicated poorly, patients may seek further help when in fact there are no significant dangers to their health. This risks additional crowding of stretched healthcare systems, which is associated with increased morbidity and mortality.¹⁸ Medicolegally,

safety-netting is often an expected standard of care, and a doctor's omission of this advice has been judged by the health service ombudsman to be part of a "service failure" in a case of serious patient harm.¹⁹

Principles

A working diagnosis is based on clinical assessment at the time the patient is reviewed. A subsequent change in a patient's condition may lead to a change in the differential diagnosis. Illness is a dynamic process, and patients may present at any time point,

including at a very early stage when it can be difficult to distinguish between a serious and self limiting illness because the findings that enable a correct diagnosis to be made have yet to develop (see [fig 1](#)).^{20 21} Furthermore, many diseases, such as covid-19, can result in either a serious or self limiting illness without clear differentiation at early presentation. Investigating or aggressively treating all patients at this early stage is likely to be harmful overall and has associated harms and opportunity costs for individuals and organisations.

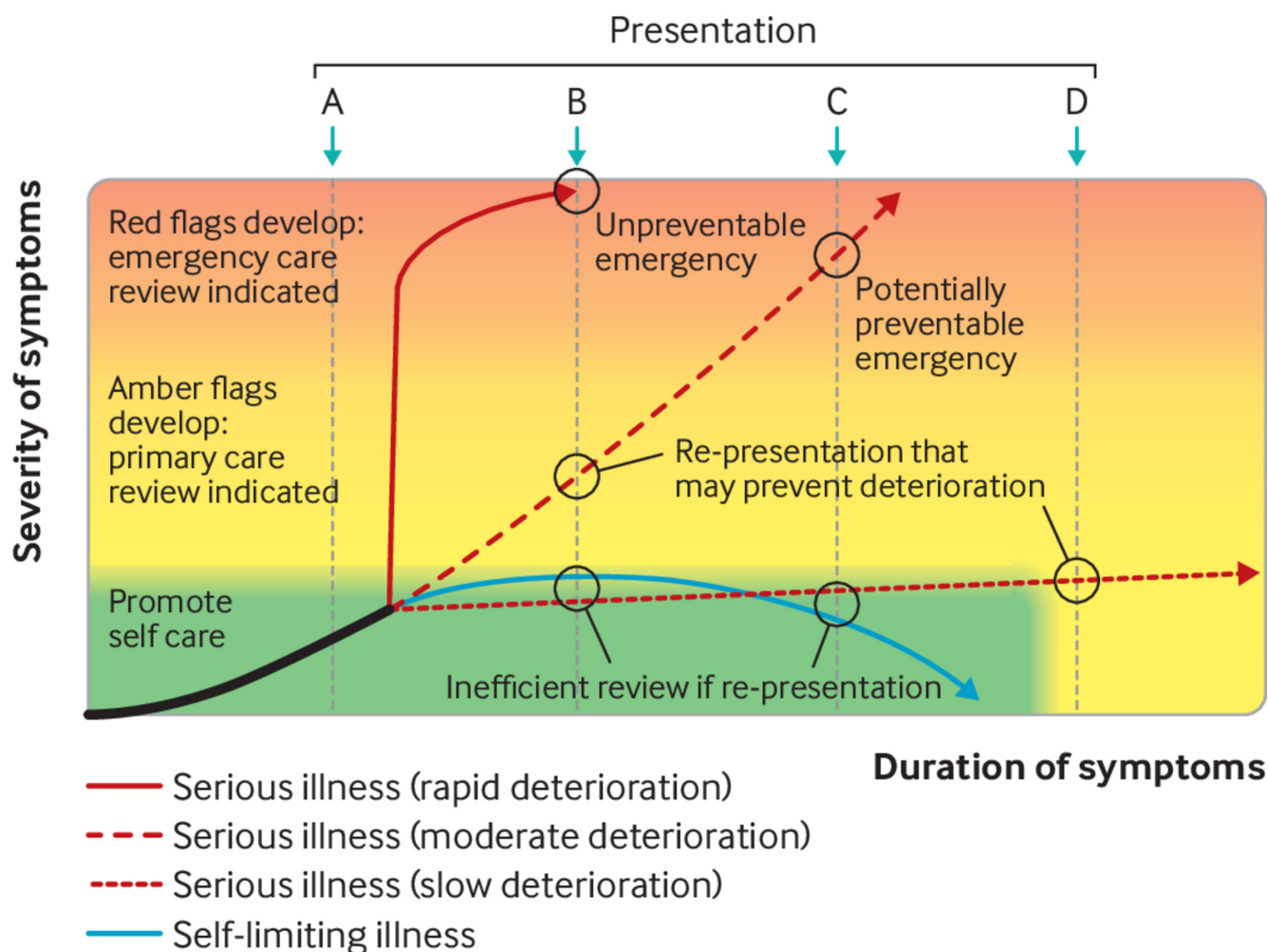


Fig 1 | The relationship between time and the severity of symptoms for four conditions. At presentation A, there are no discernible features to tell the conditions apart, so time may be used as a diagnostic tool and patients informed of the red and amber flag symptoms to look out for. Effective safety-netting advice promotes review of the patients with serious underlying illnesses on the broad and thin dashed red arrows at time points B and D, respectively, where a review in primary care may prevent further decline into a medical emergency (broad dashed red arrow, point C). Some patients will deteriorate rapidly (solid red arrow), requiring emergency medical treatment that was not foreseeable or preventable at presentation A. Safety-netting advice should include the expected duration of symptoms, where known, to avoid inefficient reviews when insufficient time has passed to distinguish between a serious and self limiting illness where the severity of symptoms has not significantly changed (blue arrow and thin dashed red arrow at points B and C).

Whether it is the diagnosis or the disease trajectory that is uncertain, providing safety-netting advice is a key tool for mitigating the clinical risk that comes from this uncertainty, particularly when time is appropriately being used as a diagnostic tool in those initially presenting with no concerning features. A traffic light framework, of "green" symptoms being suitable for self care, "amber" symptoms requiring a medical review (usually in primary care), and "red" symptoms requiring an urgent medical review (usually in emergency

care) can provide structure when discussing safety-netting advice.^{22 23}

What should a safety net include?

In 2009 a modified Delphi consensus study involving 28 general practitioners and 13 emergency medicine or paediatric consultants agreed four key principles that are widely considered as the fundamental components of safety-netting advice.²⁴

What to expect

Explaining what a patient or carer should expect to happen and reassuring them which “green flag” symptoms can safely be managed at home are as important as discussing which symptoms need further medical evaluation. Having a good understanding of the patient’s concerns is an important prerequisite of giving effective safety-netting advice, as they may be worried about a specific symptom that is not an indicator of serious illness—for example, whether a childhood fever responds to antipyretics.²⁵

Symptoms may also persist for longer than patients anticipate. In one observational study of recorded GP consultations (318 patients, 23 GPs), the most common condition patients were told to reconsult for was if their symptoms persisted, but often patients were not told how long they should wait.¹¹ Explaining the expected duration of symptoms, where known, can help empower patients to self care for their condition,²⁶ and help avoid early or delayed re-presentation.

What to look out for

For some illnesses there are well recognised red and amber flags that patients should be warned to look out for: symptoms of cauda equina syndrome in patients with back pain or the signs of sepsis in patients with localised infections, for example. In these cases, standardised SMS text message templates or leaflets can be time saving and ensure key elements are not missed. For other conditions, especially patients with vague undifferentiated symptoms, a more nuanced approach is required. Opinions on the helpfulness of generic safety-netting advice such as “If you feel worse or have further concerns” is mixed.²⁷ Parents of feverish children have criticised that generic safety-netting advice is often too vague to be useful.²⁸ Conversely, our advisory group described finding generic safety-netting advice helpful in feeling they had “permission” when seeking further help. Other qualitative interview studies in paediatric²⁷ and cancer¹⁷ care have endorsed generic phrases, and we recommend that a mixture of generic and specific safety-netting advice is likely to be optimal.

Where and how to seek further help

Getting patients with specific symptoms to seek help in the most clinically appropriate healthcare setting can prevent delays to potentially lifesaving treatment and duplication of work. Avoid ambiguous terms such as “seek medical help”; instead, direct the patient to specific services. Comprehensive safety-netting advice will often include signposting patients to multiple sources of help, depending on the severity of symptoms and time of day. Patients also need to be informed how quickly they need to seek medical help: a patient with red flag symptoms of cauda equina syndrome needs to act immediately, but a patient with an amber flag symptom such as a persistent cough is best seen by their regular GP.

Diagnostic uncertainty

Discussing diagnostic uncertainty is a complex yet essential skill. Reassurance, where clinically appropriate, plays an important part in patient care, but one of the roles of safety-netting is to give patients a framework to navigate the complexity of the diagnostic process and to understand the relationship between illness and time in a physician’s ability to form a diagnosis.²⁹ Explaining this process, and the reason why you are giving safety-netting advice, can help patients appreciate the importance of time in the diagnostic process and may help minimise unmerited complaints.

Written advice

Although the 2009 Delphi study²⁴ did not reach a consensus on whether written safety-netting advice should be given, there is patient demand for it.^{10 27 30} Written information can also improve clinician documentation when printed leaflets or copies of SMS text messages are automatically recorded in patient records. Where automation is not available, documentation efficiency can still be improved using leaflets—for example, “Highlighted red flags as per x leaflet.” A list of useful resources is provided in [box 2](#).

Box 2: Useful resources for clinicians

- Healthier Together (<https://what0-18.nhs.uk/professionals/gp-primary-care-staff/safety-netting-documents-parents>)—Paediatric safety-netting sheets for parents highlighting red, amber and green flags. Translatable into over 100 languages. Also available as app
- RCGP Learning. TARGET antibiotics toolkit hub (<https://elearning.rcgp.org.uk/course/view.php?id=553>)—Includes antibiotic leaflets for common infections
- Musculoskeletal Association of Chartered Physiotherapists. Cauda equina information cards (<https://www.macpweb.org/Cauda-Equina-Information-cards>)—Available in 29 languages
- Royal College of Obstetricians & Gynaecologists. Browse all patient information leaflets (<https://www.rcog.org.uk/for-the-public/browse-all-patient-information-leaflets/>)
- Royal College of Psychiatrists. Problems and disorders (<https://www.rcpsych.ac.uk/mental-health/problems-disorders>)
- NHS.UK. Find a local NHS urgent mental health helpline (England only) (<https://www.nhs.uk/service-search/mental-health/find-an-urgent-mental-health-helpline>)
- Patient.info (<https://patient.info/>)—Egton Medical Information Systems (EMIS) integrated leaflets

Safety-netting pearls and pitfalls

The mnemonic SAFER ([box 3](#)) can be used as a prompt to help clinicians think of the serious illnesses or complications that patient are at risk of when providing safety-netting advice.²¹ Our patient advisory group stressed the importance of using comprehensible language and checking patient understanding as key areas where clinicians could improve their safety-netting advice. Finally, observation of GP practice has shown that when multiple problems are assessed in a single consultation GPs were less likely to give or document safety-netting advice.^{11 15} Although difficulty accessing health care was a key issue raised by our patient groups, trying to assess multiple problems in the standard 10-15 minute consultation may increase the risk of omitting important safety-netting information, which can have harmful consequences for both patients and GPs.

Box 3: SAFER safety-netting

- **S**—Which serious illnesses and complications is this patient at risk of developing?
- **A**—Which alternative diagnoses are often missed with this symptom?
- **F**—Which findings fit with each of these serious or alternative causes and do not fit with a minor illness?
- **E**—What are the early and atypical signs of serious illness that could present with this symptom?
- **R**—What are the red or amber flag findings that I need to inform the patient to check for?

How this article was created

PJE, PS, and DR are academic clinicians with a special interest in safety-netting. In 2016 PJE performed a search of the major databases, including EMBASE, MEDLINE, CINAHL, Cochrane Library, Web of Science Core Collection, Scopus, PubMed, and PubMed Central for the term “safety-netting” and has received Google Scholar notifications ever since whenever the term is mentioned in a new article. The article is based on the published literature and supplemented by the authors’ clinical experience and JS’s experience as a service user, along with PS’s lectures on safety-netting skills for Anglia Ruskin University.

Education into practice

- Next time you are discussing safety-netting advice with a patient, try using the traffic light framework to give structure to your advice:
 - Green flags—Promote self care at home
 - Amber flags—Primary care review
 - Red flags—Urgent or emergency care review
- Do you have pre-prepared advice sheets (hard copy or electronic) or weblinks for common conditions to give to patients, and in a language your patients can read?

How patients were involved in the creation of this article

JS is a patient advisor co-author. Ideas fed into this article were obtained from two patient advisory groups ran by PJE related to safety-netting based research, and another advisory group that helped create a patient information leaflet for covid-19 early in the pandemic. Ideas from the patient groups are specifically highlighted in the article.

Contributors: PJE conceived the article, wrote the first draft, and is the guarantor. All authors helped plan the article and edited multiple versions after the first draft. PS created the SAFER mnemonic.

Funding: PJE is a National Institute for Health and Care Research (NIHR)-badged GP academic clinical fellow funded by Health Education England South West / Severn Postgraduate Medical Education (ACF-2018-25-502). This grant was also used to support JS’s time as a patient advisor and the second advisory group meeting. The first advisory group was reimbursed on grant ISSF3: 204813/Z/16/Z.

Competing interests: We have read and understood *BMJ* policy on declaration of interests and have no relevant interests to declare.

Provenance and peer review: Commissioned; externally peer reviewed.

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