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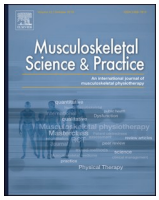

Original article

Communicating safety-netting information in primary care physiotherapy consultations for people with low back pain

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ABSTRACT

Background: Safety-netting involves communicating information to patients about diagnostic uncertainty, the likely time-course of their condition and how to appropriately seek help from a healthcare professional if their condition persists or worsens. Little is known about how physiotherapists communicate safety-netting information to people with low back pain (LBP).
Objectives: This research aimed to use a Safety-Netting Coding Tool (SaNCoT) to explore how physiotherapists communicate safety-netting information to people with LBP.
Methods: The SaNCoT was used to conduct a secondary analysis of audio-recordings and transcripts from 79 primary care physiotherapy consultations (41 initial and 38 follow-up) involving 12 physiotherapists and 41 patients with LBP in Southern England. Quantitative data from the SaNCoT were analysed descriptively.
Findings: The study found evidence of diagnostic uncertainty in 53 (67%) appointments and no examples of physiotherapists providing patients with specific information about their condition time-course. Eight patients were given safety-netting advice, but most (57.9%, n = 11) episodes of safety-netting advice did not include specific signs and symptoms for patients to monitor. Potential missed opportunities for safety-netting advice were identified in 19 appointments (24.1%) which tended to relate to the patient's associated leg symptoms but also included possible serious pathology.
Conclusion: The SaNCoT was successfully used to measure safety-netting communication within physiotherapy consultations and found missed opportunities for providing clear safety-netting advice. Physiotherapists can use the findings to reflect on how they can provide clear safety-netting information to patients with LBP to effectively support patients to self-manage and help them seek appropriate care if their condition deteriorates.

1. Background

Safety-netting is a term used to describe the process of communicating information to patients about how they monitor their condition, and what action they should take if their symptoms persist or worsen (Almond et al., 2009; Jones et al., 2019). This involves communicating uncertainty about a diagnosis, explaining important symptoms patients should look out for, informing them about the likely time-course of their condition and advising them about how and where to seek further care if needed (Jones et al., 2019). Safety-netting has been recognised as an essential component of musculoskeletal physiotherapy practice to effectively manage diagnostic uncertainty, or when there is a risk of harm associated with a delay in seeking care if the person's condition persists or worsens (Greenhalgh et al., 2020; Hutting et al., 2023). With the advent of first contact practitioner roles[1] and the increased use of remote (video or telephone) consultations, managing this risk and diagnostic uncertainty is of increasing importance within contemporary physiotherapy practice when caring for patients with undifferentiated conditions (Greenhalgh et al., 2020; Goodwin et al., 2024; Rice 2024).

Safety-netting is recommended within the international framework for managing patients presenting with potential features of serious spinal pathology (Finucane et al., 2020). This includes Cauda Equina

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[1] First contact physiotherapists were introduced in UK primary care settings in 2014 to assess and manage patients with undifferentiated and undiagnosed MSK presentations (Health Education England 2021).

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Syndrome (CES), which is a serious spinal condition involving compression of the nerves in the lumbar or sacral spinal canal (NHS England 2023). It is crucial that patients who may be at risk of developing CES know how and when to seek help because treatment delay can result in permanent loss of bladder and bowel function, loss of sexual function and lower limb paralysis, whereas prompt surgical treatment can reduce the risk of permanent disability (Thakur et al., 2017; NHS England 2023). Due to these profound life-changing implications, delays in care for people with CES carries significant medicolegal costs (NHS Resolution 2020). Between 2008 and 2018 the NHS received 827 litigation claims for incidents related to CES, with 340 being settled with damages and associated legal costs of over £186 million (NHS Resolution 2020). At least 51 CES litigation claims between 2012 and 2021 in the UK have been specifically attributed to physiotherapists (Yeowell et al., 2022). Previous qualitative research exploring patients' experiences of CES to the point of diagnosis found inadequacies in the communication of safety-netting information and therefore a written credit-card sized resource was developed to enhance safety-netting for CES (Greenhalgh et al. 2015, 2016). Whilst safety-netting has been studied specifically relating to CES, little is known about how safety-netting information is communicated to patients with low back pain (LBP) in physiotherapy practice.

A literature review by Jones et al. (2019) reported limited empirical research in the field of safety-netting within primary care and called for further studies to investigate its use in practice. A study by Edwards et al. (2019a) used an empirically-derived Safety-Netting Coding Tool (SaNCoT) to analyse 318 video or audio-recorded UK General Practice (GP) consultations and found variation in safety-netting practice. This tool has not been used to measure safety-netting in physiotherapy consultations. This study aimed to use the SaNCoT to explore how physiotherapists in primary care communicate safety-netting information with people receiving care for LBP.

2. Methods

2.1. Design

This was a secondary analysis of a qualitative dataset from previous research which explored communication during consultations with people who had LBP within an outpatient musculoskeletal physiotherapy department in Southern England (Roberts et al., 2013; Chester et al., 2014; Jones et al., 2014; Roberts and Burrow 2018).

2.2. Ethics

Ethical approval (ref: 56341) and patient consent from the initial research studies permitted the storage and re-use of the data. Ethical approval for the current study was granted by the University of Southampton (ref: 80983).

2.3. Participants

The participant sample comprised 42 patients and 12 physiotherapists. Patients were adults (≥18 years) who had been referred to physiotherapy by their GP because of LBP with or without referred leg pain. The physiotherapists' clinical experience ranged from six months to 21 years (median six years) and their reported experience within a musculoskeletal speciality ranged from eight days to 18 years (median four years). Full details of participant recruitment, eligibility criteria and sample characteristics can be found in publications from the initial research studies (Jones et al., 2014).

2.4. Data collection and analysis

The dataset comprised audio-recordings with verbatim transcripts of 80 physiotherapy consultations. This included 25 new patient consultations within a cross-sectional study and 17 new patient consultations with 38 associated follow-up consultations from a longitudinal study (ranging from one to six appointments).

Data were collected and analysed by the first author using a Microsoft Excel-based SaNCoT in line with the SaNCoT codebook guidelines (Edwards et al., 2019a). The SaNCoT was developed by Edwards et al. (2019b) through research analysing safety-netting communication within 318 video or audio-recorded UK-based GP consultations from 23 clinicians across 12 GP practices. Edwards and colleagues reported the tool to be a valid measure of safety-netting within the consultations, demonstrating good inter-rater reliability (K score of 0.66) when two coders independently analysed a random sample of 10% ($n = 32$) of the consultations (Edwards et al., 2019b).

Data in the present study were analysed using the SaNCoT to quantitatively code safety-netting communication including evidence of diagnostic uncertainty, conversations about the expected time-course of a condition and advice regarding signs and symptoms to monitor or what action the patient should take if their symptoms worsen. This enabled the frequency of the different components of safety-netting communication to be measured and participant quotes were captured to evidence the quantitative codes. This approach to content analysis was chosen over a thematic analysis because the categorisation and measurement of safety-netting practice was more-closely aligned to the research question (Vaismoradi et al., 2013). All authors met to discuss data analysis, and five patient and public members were involved in a consultation meeting to help interpret the findings from a lay-person's perspective. In addition, the first author made analytical memos throughout data analysis to record developing findings. The quantitatve codes from the SaNCoT were analysed descriptively.

3. Findings

3.1. Presenting problem

Table 1 summarises the patients' main problems disclosed during the consultations, and subsequently coded using the International Classification of Primary Care (ICPC) version 3 (Ten Napel et al., 2022). Table 1 shows how 50.0% ($n = 21$) of the patients had LBP without associated leg symptoms and 47.6% ($n = 20$) had LBP with associated leg symptoms. One patient's LBP had resolved at the initial examination and their main concern was their neck pain. Therefore, the data from this patient's single initial appointment were excluded from the analysis because it was not relevant to the research question.

3.2. Communicating diagnostic uncertainty

Diagnostic uncertainty was communicated in 53 out of 79 (67.1%) appointments (33 out of 41 [80.5%] new patient appointments and 20 out of 38 [52.6%] follow-up appointments). In five new patient consultations a diagnosis was not given as the examination was incomplete, and in one new patient consultation the relevant section of audio-recording discussing the diagnosis was inaudible and therefore could not be reliably coded. There were only two initial consultations where a diagnosis was given without using language of diagnostic uncertainty.

Table 1
Patients' main problems.

ICPC-3 codes	Number of patients
LD67 Back syndrome with radiating pain	19
LD67 and LSO1 Neck symptom/complaint	1
LD66 Back syndrome without radiating pain	19
LD66 and LS12 Hip symptom/complaint	1
LS03 Low back symptom/complaint and LS01 Neck symptom/complaint	1
LSO1 Neck symptom/complaint	1

Most examples of diagnostic uncertainty were indirect statements where physiotherapists used language such as "I *think* it is …" or "it *could* be …" when discussing the patient's diagnosis:

> Physiotherapist: "so **it could be** the stenosis narrowing that's compressing on the nerve" (Patient 5, initial appointment, LBP with leg symptoms)

Whilst less common than the indirect statements, there were examples of physiotherapists communicating uncertainty about the diagnosis in a more direct manner.

> Physiotherapist: "It's **difficult to say exactly** what's causing the, the um, spasms that you do get …" (Patient 4, initial appointment, LBP)

> Physiotherapist: "but **we still don't quite know why,** why you're suffering from your aches and pains." (Patient 41, follow-up 1, LBP and neck pain)

There was evidence of diagnostic uncertainty throughout the care episodes of two patients within the longitudinal dataset. For example, diagnostic uncertainty was communicated with a patient who had persistent LBP within all four of their appointments (Patient 39). The patient often questioned the diagnosis, and the physiotherapist communicated their uncertainty both directly and indirectly:

> *Patient: "So you think it's muscles?* Physiotherapist: *"**I think** it's muscular, but I think there's a bit of stiffness in this joint as well. So I think **that's probably** the, **maybe, possibly** the, what **may** have been the underlying cause in the first place …". (First appointment)*

> Patient: "**You think it's definitely** some sort of muscle problem then?" (Follow-up 1)

> Patient: "It's just um, **I'm not 100% sure** what it is, you know, I mean, if it's a muscle and exercise is helping it I'd do that**. I'm not entirely sure what it is**." (Follow-up 3)

> Physiotherapist: "Um, I mean, it, you know the body's a, a, **a difficult thing to explain**; everyone's different, and it's **very difficult to explain** why you get muscles spasms at a certain time, or severe pain at certain times, (um) you know, it's, **it's impossible for me to say**, (um) do you know what I mean, and, like I can only reassure you of what I find that there's nothing to be concerned about". (Follow-up 3)

3.3. Time-course of condition

There were no examples of the physiotherapists providing information about the expected time-course of the patients' condition to recovery or expected rehabilitation period. There were some examples of the physiotherapists discussing the patient's prognosis, but these did not provide a specific timeframe:

> Patient: "Will it …. Will it get back to the way it should be? …" Physiotherapist: "… with what we've found today, um, it should, **I would hope, get down, yep, completely resolve**" (Patient 2, initial appointment, LBP)

> *Physiotherapist: "… we'll start treatment and **see if we get any improvement**. I mean, normally, because the pain's been there for two years, **it's always harder to say that we're going to improve it 100%** …"* (Patient 3, initial appointment, LBP with leg symptoms)

> Physiotherapist: "Sometimes nerves take quite a while to settle down … **it should, I think it should fully resolve** … " (Patient 4, initial appointment, LBP)

3.4. Safety-netting advice

Eight patients were given safety-netting information regarding signs and symptoms to monitor or actions to take if their condition worsens. When safety-netting information was provided, it was given between one to four times within a consultation (mode = one). There was a total of 19 episodes of physiotherapists communicating safety-netting information across 12 consultations. Safety-netting information was only provided in one new patient consultation, whereas it was given in 11 follow-up appointments, four of which were the patient's final consultation where discharge was agreed.

Table 2 shows how the 19 episodes of safety-netting information were categorised within the SaNCoT and demonstrates how the safety-netting information was often generic and did not include specific timeframes. Six of the eight episodes that were coded as 'specific advice' met this criterion because they provided a timeframe, even though the information was still generic:

Table 2
Safety-netting advice within the consultations coded using the SaNCoT (Edwards et al., 2019a).

Content	Codes	Episode Frequency	
		n	%
Applicable to problem, treatment/management, or both	Problem	4	21.1%
	Treatment or management	0	0%
	Both/Vague	15	78.9%
Stage of consultation	Establishing reason for consultation	0	0%
	Gathering information	0	0%
	Delivering diagnosis	0	0%
	Treatment planning	8	42.1%
	Closing	11	57.9%
Initiation	Patient	1	5.3%
	Physiotherapist	18	94.7%
Format	Advice about what signs and symptoms to monitor and what action to take	16	84.2%
	Information about what signs and symptoms to monitor only	3	15.8%
Strength of endorsement	Weaker (e.g can, could)	7	36.8%
	Neutral	12	63.2%
	Stronger (e.g must, should)	0	0%
Number of problems/symptoms to look out for, for example, worsening pain or weakness.	1	14	73.7%
	2	3	15.8%
	3	2	10.5%
Generic or specific advice	Specific (e.g weakness worsens and/or specific timeframe)	8	42.1%
	Generic (e.g problems, issues, concerns, worse)	11	57.9%
Action advised	No action advice	3	15.8%
	Contact other in-hours medical service	0	0%
	Contact physiotherapy department	7	36.8%
	Contact/return to same physiotherapist	9	47.4%
	Contact out of hours service	0	0%
	Contact emergency services	0	0%
Focus of action	No action advice	3	15.8%
	Patient (e.g '**you** come back')	15	78.9%
	Physiotherapist ('**I** will have another look at it')	0	0%
	Both ('**you** come back and **I** will have another look at it')	1	5.3%
Timescale of action	Not specified	13	68.4%
	Names/fixed time ('2 weeks')	6	31.6%
	Immediate ('go straight to A&E')	0	0%
Patient response	No response	0	0%
	Resists/misaligns	1	5.3%
	Acknowledgement/acceptance	18	94.7%
Communication	Verbal only	0	0%
	Verbal and written	0	0%
	Unclear	19	100%

Physiotherapist: "But if any time in that **six weeks**, if you find it's **getting worse** and despite you doing the exercises it's just **not getting any better**, then you can phone up and make another appointment." (Patient 29, follow-up 3/discharge appointment, 'sciatica' symptoms)

There were only two episodes that provided specific safety-netting information regarding signs and symptoms to monitor. However, these were still communicated in a relatively non-specific manner:

Physiotherapist: "When I tested the muscles there was a tiny bit of difference [strength], a really, really minimal difference. I'll re-test that next time as well just to make sure um, it's … but that, that's **one of the signs that perhaps you need to be aware of**, that, that the muscles, particularly the big toe, um, that foot movement maybe be affected if the nerve gets worse … I think the er, **pain might be worse** as well, and maybe the symptom, **pins and needles** as well, so (um) there are a number of signs there, you just need to sort of …" Patient: "Keep an eye on them." Physiotherapist: "… **be quietly aware of**, yeah, don't think about it too much, but, that's why we test them every time". (Patient 41, follow-up 1, LBP with leg symptoms and neck pain)

Most episodes ($n = 16$, 84.2%) included information about why and how to seek further help. Three episodes of safety-netting advice did not provide information about what action to take if the condition worsens and this is illustrated in the quote above (Patient 41). However, two of these episodes were provided within consultations where further safety-netting information was provided which did include advice to seek help.

The number of signs and symptoms to monitor within each safety-netting episode ranged from one to three (mode = one). Table 3 summarises the main categories of safety-netting information provided and highlights that worsening symptoms or general problems/questions were the main reasons given to seek further help. The quote below provides an example of general safety-netting if the person had any questions.

Physiotherapist: "If you've got **any queries** about it in the next sort of **two or three weeks**, just give us, **give us a shout**." (Patient 30, follow-up 1/discharge, LBP)

Most safety-netting episodes were initiated by the physiotherapist, but one episode was initiated by the patient. This took part in the closing stage of their first follow-up appointment, when planning to book the next follow-up. No safety-netting information was provided to this patient within the initial consultation preceding this appointment.

Patient: "But **if anything untoward happens**, **then I phone up**." Physiotherapist: "By all means, yeah … Yeah, that's not a problem." (Patient 35, LBP with leg symptoms).

Most patients acknowledged or accepted the safety-netting information with a brief reply such as *"Yeah. That's fine" (Patient 30)* and no patients asked questions about the safety-netting advice. One patient's reply to the safety-netting information was coded as 'resisting/misaligning' with their response below.

Physiotherapist: "If you have any problems at all ring me, come in and see me"

Patient: "**No, I'll be all right, thank you**." (Patient 36, follow-up 1, LBP with leg symptoms)

Table 3
Categories of safety-netting advice for why to seek further help.

Category	Frequency[a]
Problem/symptoms worsening	13
Problem/symptoms not improving	3
Symptoms return	1
General 'problems'/'questions'	9

[a] Note some safety-netting advice related to more than one category.

3.5. Missed opportunities

There were potential missed opportunities for safety-netting within 19 appointments (24.1%) and these mostly related to the patients' associated leg symptoms but also included CES or inflammatory back pain symptoms as illustrated in Table 4.

4. Discussion

4.1. The safety-netting tool

The SaNCoT demonstrated good face and content validity in measuring safety-netting communication within the initial and follow-up physiotherapy consultations. One possible limitation to the tool relates to the measurement of diagnostic uncertainty. Phrases such as 'I think' were coded as evidence of in-direct uncertainty when used by the physiotherapists to explain the patients' diagnosis. This is consistent with findings from a systematic review of primary care physicians' communication of diagnostic uncertainty that showed that implicit diagnostic uncertainty language included modal verbs (e.g 'could'), modal adverbs/adjectives (e.g 'probably'), perception verbs (e.g 'it looks like') or introductory phases (e.g 'I think') (Dahm et al., 2023). Previous research by Gordon et al. (2000) described how the authors found it

Table 4
Potential missed opportunities for safety-netting advice.

Category	F**	Example	Missed opportunity
Possible signs/ symptoms of 'sciatica', radicular leg pain or radiculopathy including leg pain, pins and needles, numbness or weakness.	13	Patient 5 had low back and bilateral leg pain with constant numbness in one leg and a working diagnosis of lumbar stenosis.	People with lumbar spinal stenosis should be given information for when to seek medical review because worsening neurological symptoms warrant further investigation and surgical consideration (Comer et al., 2022).
Possible signs/ symptoms of CES*	6	Patient 27 had two previous bladder operations but worsened symptoms of urinary incontinence with bilateral leg pain and paraesthesia.	Safety-netting is recommended when there is suspicion that the person may be at risk of developing CES (Finucane et al., 2020; NHS England 2023).
Possible signs/ symptoms of inflammatory back pain.	3	Patient 41 had neck and LBP prolonged early morning stiffness (1–2 h) and the physiotherapist is asking the GP to follow up for blood tests to exclude inflammatory causes.	The patient could have also been advised to inform his health professionals if further signs and symptoms of axial spondyloarthropathy develop (National Institute for Health and Care Excellence, 2017).
Other, such as recurrence of symptoms or addressing patient's concerns.	3	Patient 19 made a comment at the end of the consultation about checking their symptom progression at their next follow-up appointment. The physiotherapist said their problem should not get worse but did not provide further advice.	The physiotherapist could have explained how to seek further help if their symptoms change (Smith et al., 2022).

*As per NHS England (2023) **F= Frequency. Note some missed opportunities related to more than one category.

challenging to measure indirect expressions of uncertainty during audio-recordings of physician consultations and reported poor inter-rater reliability in this coding method, which resulted in the authors deciding to only include direct expressions of uncertainty within their analysis (Gordon et al., 2000). Conversely, Edwards et al. (2019b) demonstrated good inter-rater reliability during the empirical development of the SaNCoT used in the present study. Furthermore, unlike Gordon et al. (2000), the current study only measured whether there was evidence of communicating diagnostic uncertainty within each consultation rather than the frequency of uncertainty expressions within each consultation.

Coding based only on the words used does not account for the tone and context of how the terms are expressed, and these factors could change the meaning of the language (Gordon et al., 2000). Whilst the authors endeavoured to remain sensitive to the context and tone of the language within the audio-recordings during data analysis, diagnostic uncertainty may be over-reported within this study because the coding focused on the words used with less attention to the mode of delivery and sequential positioning within the ongoing conversation.

4.2. Communicating safety-netting information to people with LBP

4.2.1. Diagnostic uncertainty

The finding of diagnostic uncertainty language within most ($n = 53$, 67.1%) consultations resonates with research involving physician consultations within general medicine practice in the United States, which found communication of uncertainty during 71.3% ($n = 154$) of appointments (Gordon et al., 2000). Conversely, Edwards et al. (2019a), found evidence of diagnostic uncertainty for only 46.1% ($n = 256$) of the problems discussed within the UK-based GP consultations. The lower percentage of diagnostic uncertainty in the study by Edwards et al. (2019a) maybe related to their method of reporting diagnostic uncertainty in relation to each patient problem discussed during the consultation rather than per appointment. This was not done in the current study as 92.7% ($n = 38$) of the final sample were assessed for only one musculoskeletal problem.

Whilst it is unclear to what extent the language used by participants in this study reflects actual uncertainty of the diagnosis, managing diagnostic uncertainty is an integral part of physiotherapy practice due to the complex multifactorial nature of musculoskeletal conditions (Forbes and Toloui-Wallace 2022; Ingram et al., 2023). The multidimensional nature of LBP includes biological, psychological, and social factors and 90% of cases are described as being non-specific because there are no clear pathoanatomical causes (Koes et al., 2006; Hartvigsen et al., 2018). The challenge of communicating uncertainty about the diagnosis during the care of people with LBP has been highlighted within qualitative research (Slade et al., 2012; Costa et al. 2023a, 2023b). Findings from these studies highlight how clinicians should work in partnership with patients to openly and honestly navigate diagnostic uncertainty to enhance the therapeutic relationship and facilitate person-centred care (Costa et al. 2023a, 2023b).

4.2.2. Prognosis

Whilst there were some conversations about prognosis found in this study, these lacked specific information about the expected time-course of the condition. This corresponds with ethnographic observations by Costa et al. (2023b) who found LBP prognosis was often an area of uncertainty for clinicians and patients. Conversely, people with LBP often want clear information about the natural history and prognosis of their condition (Lim et al., 2019; Costa et al., 2023b). Whilst there is research to guide evidenced-based conversations about the clinical course of LBP, the heterogeneity in research definitions of what constitutes recovery makes estimations of recovery timeframes challenging (Costa et al., 2012). Furthermore, LBP is increasingly characterised as a long-term or lifelong condition rather than individual pain episodes (Dunn et al., 2013; Hartvigsen et al., 2018).

4.2.3. Safety-netting advice

Safety-netting advice was only provided to eight out of the 41 participating patients (19.5%) which is considerably lower than findings from Edwards et al. (2019a) who found GPs in primary care provided safety-netting advice in 64.5% of consultations. Whilst safety-netting advice may be provided more frequently in a primary care setting for non-musculoskeletal health conditions such as cardiovascular problems, Edwards and colleagues found safety-netting advice was also given in 50.0% of cases of musculoskeletal problems.

Considering the high level of diagnostic uncertainty language found in the present study, the relatively low frequency of safety-netting advice suggests that there may be missed opportunities for safety-netting because it is recognised as a patient-centred approach to managing uncertainty (Dahm et al., 2023). Furthermore, this study has highlighted more specific missed opportunities for safety-netting relating to patients presenting with signs and symptoms of potentially more serious pathology such as CES. These missed opportunities could pose a risk of patient harm associated with delays in care which could have potential medicolegal implications (Edwards et al., 2022).

Whilst the focus of the study was on the communication of safety-netting information, there were planned follow-up appointments after 91.1% of the consultations ($n = 72$) and these follow-up appointments could also be a safety-netting strategy (Jones et al., 2019). Nevertheless, safety-netting advice was often missing in initial consultations which could be a missed opportunity to support the person to self-manage (Smith et al., 2022). Conceptualising safety-netting as an approach to supporting self-management aligns with the NHS long term plan to improve personalised care including the use of patient-initiated follow-up appointments (NHS England, 2022). However, in contrast to the generic safety-netting statements found in the present study such as advice to 'come back if symptoms worsen', clinicians need to provide patients with more specific information about how to monitor their symptoms and what action they need to take if their condition worsens to effectively support them to self-manage (Smith et al., 2022).

4.2.4. Strengths and limitations

This is the first study to measure safety-netting in musculoskeletal physiotherapy practice. The large dataset of consultation recordings provides an insight into what happens in clinical practice and includes physiotherapists with a wide range of clinical experience. The use of an empirically validated coding tool enabled the data to be analysed in a standardised format.

The data for this study were collected in a UK-based outpatient physiotherapy rehabilitation setting thus limiting transferability to other UK and international contexts. Another limitation to the study is that the data were collected more than 10 years ago, and clinical practice may have evolved over time. On one hand, there has been limited research into safety-netting in physiotherapy since the data were collected and any research findings in the field can take 17 years to be implemented in clinical practice (Morris et al., 2011; Rubin 2023). On the other hand, safety-netting has been emphasised in contemporary practice following the COVID-19 pandemic (Greenhalgh et al., 2020) and recommended in publications such as the international serious spinal pathology clinical reasoning framework (Finucane et al., 2020). One area of practice that has likely evolved since data collection is the safety-netting for CES following the development of the CES warning card (Greenhalgh et al., 2016) and the national CES care pathway (NHS England 2023).

4.2.5. Implications for practice and future research

The findings from this study can be used by physiotherapists to reflect on their own safety-netting practice such as the prevalence of advice offered, its timing within the care episode and the specificity of the information. Clinicians should consider using more specific safety-netting advice within their initial consultations and reflect on how they convey diagnostic uncertainty and discuss prognosis. With the

patient's consent, it may be possible for clinicians to audio-record consultations and apply the SaNCoT tool to measure these behaviours or use the SaNCoT Consultation Assessment form for peer feedback (University of Bristol 2024). This would facilitate self-awareness of their communication approach including the use of indirect uncertainty phrases such as 'I think' and the potential impact of this language from the patient's perspective.

Whilst this paper has focused on the communication of safety-netting information, the possible missed opportunities for safety-netting identified in this study provide an opportunity for clinicians to reflect on the indications for using safety-netting within a clinical reasoning framework for managing risk related to diagnostic uncertainty or complications associated with the patient's condition persisting or worsening. The use of safety-netting within a clinical reasoning framework for serious spinal pathology has been discussed by Finucane et al. (2020). Further research is in progress to investigate safety-netting across different contexts of physiotherapy practice including observing clinicians working within first contact and advanced practice roles and exploring the patient's perspective.

5. Conclusion

This study has provided novel insight into safety-netting practice during 79 physiotherapy consultations for people with LBP within a primary care outpatient setting. The findings highlight how the physiotherapists often used language reflecting indirect diagnostic uncertainty and did not provide specific timeframe information about the patient's condition recovery prognosis. Similarly, safety-netting advice was often non-specific and absent from initial consultations leading to potential missed opportunities to support patients to self-manage or increasing the risk of patient harm and medicolegal consequences. The findings from this paper will enable physiotherapists to reflect on their own practice and provides a foundation for future studies to explore and improve how safety-netting information is communicated to patients within musculoskeletal physiotherapy.

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Ethics

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CRediT authorship contribution statement

Christopher Horler: Writing – review & editing, Writing – original draft, Methodology, Funding acquisition, Formal analysis, Conceptualization. **Geraldine Leydon:** Writing – review & editing, Supervision, Methodology, Funding acquisition, Formal analysis, Conceptualization. **Lisa Roberts:** Writing – review & editing, Supervision, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization.

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