

## Title Page

*Giving hope, ticking boxes or securing services? A qualitative study of respiratory physiotherapists' views on goal-setting with people with chronic obstructive pulmonary disease*

Original Research

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## **Introduction**

Goal-setting is considered to be a core element of rehabilitative work [1, 2]. Setting goals which are specific, measurable, achievable, realistic and timed ('SMART') is strongly advocated [3], as is patient-clinician collaboration during goal-setting [4]. Despite advocacy for collaborative goal-setting, research suggests that in practice collaborative goal-setting can be challenging [5, 6] and is not always fully achieved [7, 8]. Problems associated with collaborative goal-setting [5, 6] include: patients not having goals; patients having difficulty identifying, and setting, realistic goals; lack of time within rehabilitation to negotiate goals; and differences between goals identified by patients and those by professionals.

To date, most current knowledge of goal-setting perspectives and practices in rehabilitation has been developed in the neurological field [7-12]. By contrast, few studies have explored goal-setting in respiratory rehabilitation [5, 13]. Differences in service provision between neurological and respiratory settings, and the characteristics of the conditions managed, make the transferability of findings uncertain. For example, stroke and head injury (two of the most researched conditions in relation to goal-setting) are commonly experienced as a sudden traumatic event, and the subsequent disability is often immediate and profound [14]. In contrast, chronic obstructive pulmonary disease (COPD) is characterised by a gradual spiral of decline, during which changes to usual function are not always immediately apparent to individuals [15]. Clinician perspectives on, and experiences of, goal-setting may therefore differ depending on the disease characteristics of the population explored.

The lack of research into goal-setting in respiratory rehabilitation leaves an important knowledge gap. Over 10% of the population in the United Kingdom have a chronic respiratory disease and these diseases are associated with increased disability and mortality, and reduced quality of life [16]. COPD is one of the most commonly managed respiratory conditions in the National Health Service (NHS) [17]. Physiotherapists play a key role in respiratory rehabilitation [18] however,

their perspectives on goal-setting are currently unknown. The aim of this study was to explore respiratory physiotherapists' views of goals, and their experiences of goal-setting, with people with chronic obstructive pulmonary disease (COPD) in respiratory rehabilitation settings.

## **Methods**

A qualitative design was employed, and a subtle realist, pragmatic approach was adopted [19]. Respiratory physiotherapists with at least 1 years' experience of working with people with COPD were eligible to participate. Physiotherapists were recruited from the Chartered Society of Physiotherapy's (CSP) interactive member forum called 'iCSP', a post qualifying University Masters module on pulmonary rehabilitation for qualified allied health professionals, and via snowballing. Adverts were posted on iCSP and emailed to students on the University Masters module by one of the authors (RG). Within these adverts the requirement to have experience of working with people with COPD and some goal-setting experience was explicit.

Participants were selected using purposive, maximum variation sampling aiming to reflect diversity in age, sex, geographic location, and clinical experience which is signified by the Agenda for Change [AfC] band associated with each physiotherapist. The AfC banding is a UK-based system used in the NHS to denote varying levels of knowledge and skill required amongst NHS workers, with band 5 (B5) being the starting band for a newly qualified physiotherapist through to band 8 (B8) 'Physiotherapist Consultant' level [20]. Data collection continued until further interviews yielded no new information and data saturation [19] was considered to be reached.

Face-to-face, semi-structured interviews, which followed an interview guide (Appendix 1), were used to explore physiotherapists' perspectives on goal-setting. The interview guide was

developed based on goal-setting literature in physiotherapy, rehabilitation, and psychology [1, 5, 10, 11]. The draft guide was peer reviewed by two of the authors (ML and RG) and by three clinicians specialising in COPD (1 physiotherapist, 1 well-being practitioner, 1 specialist occupational therapist) and their feedback was incorporated. The guide was piloted in the first interview; no changes were required and data from this interview were therefore included in the analysis. Interviews were held at a time and place convenient to participants (own home, public place, university). All interviews were audio-recorded and transcribed verbatim within 1-3 days of collection. Data collection and analysis occurred concurrently.

Data were analysed using thematic analysis [21]. Thematic analysis is recognised as a versatile approach, not tied to a particular set of epistemological assumptions [19, 21] and was therefore congruent with the pragmatic approach adopted. Table 1 outlines the key stages to the thematic analysis approach described by Braun and Clarke [21], and how this approach was adopted within the study. NVivo 8 was used to manage and organise the data.

Table 1: Stages of thematic analysis

Collecting and analysing the interview data in tandem enabled constant comparison, where data were compared within and between interviews [22]. Accordingly, insights gleaned from previous interviews could inform the next, and codes and themes could be continually developed and refined [23]. Instances where participant accounts were at variance with the majority (known as negative cases [22]) were particularly considered in terms of how they differed demographically or circumstantially from other participants' accounts. Author RS acted as Primary Analyst responsible for undertaking all coding and theme formulation. Authors CB, DN, RG, AB and ML peer reviewed the developing analysis; review occurred throughout the

analytic process from the early coding stage through to theme development and write up. This process created continual opportunity for the interpretations of the primary analyst to be challenged and refined thereby enhancing confirmability.

Ethical approval for the study was obtained from the Faculty of Health and Social Care Science Research Ethics Committee, at St George's, University of London. All participants were given a minimum of 24 hours to consider the study information before deciding to participate, and all gave informed consent prior to the interview. The names presented in this paper are pseudonyms and data such as sex, geographic location and ethnicity are intentionally presented unlinked in order to protect participant anonymity.

### *The participants*

Of the 49 physiotherapists responding to recruitment invitations, 18 were interviewed (Table 2). One digital file was corrupt and consequently the results presented are based on 17 interviews.

### Table 2: Recruitment overview

Interviews lasted between 40-70 minutes. The sample included physiotherapists of various ages (25-49 years), sex (13 female) and AfC band (6-8) (Table 3). The physiotherapists were from different geographic locations across the UK: South West (N=4), South East (N=2), London (N=6), East of England (N=2), North West (N=2), Scotland (N=3), and their ethnicities were White British (N=14), Black African (N=1) and White South African (N=2).

### Table 3: Sample demographics

## Results

Three themes emerged from the analysis:

**Theme 1: 'Explaining goal-setting'** describes how goals were conceptualised by physiotherapists, their perceived purpose and value in rehabilitation.

**Theme 2 'Working with goals'** explores physiotherapist accounts of either working with goals or not, and the practicalities associated with collaborative goal-setting.

**Theme3: 'Influences on collaborative goal-setting'** highlights the factors perceived as facilitating or hindering collaborative goal-setting.

### Theme 1 - Explaining goal-setting

#### *Definitions of goals*

Almost all the physiotherapists interviewed described goals as being desirable achievements. Most accounts underscored a need for goals to be personally meaningful to the individual patient. For some, it was important for goals to be identified from the outset, rather than retrospectively identified following the realisation of some achievement. Within the descriptions, aspects of the mnemonic SMART (that of being Specific, Measurable, Achievable, Realistic and Timed) featured heavily. In some cases, SMART goals were referred to as desirable properties of a goal that could not always be attained, whereas for some physiotherapists SMART principles were essential distinguishing features of a goal.

*'I think "What am I trying to achieve with them?" I think that's what a goal is. It's what ultimately you're trying to achieve. And the goal has to be something that's relevant to the patient.'* (Emma, B7, Community)

*“I want to achieve” is, “I want to get a bit better”, “I want to be less breathless”, “I want to be able to physically do more”. That to me is more achievements as opposed to a goal which is timed, measureable whatever that jargon that we went into [RS: SMART?] yes exactly’ (Bernice, B8, Acute and pulmonary rehabilitation)*

Two physiotherapists provided non-conventional accounts: Unlike the other physiotherapists, who used the term ‘goal’ to include any desirable achievement irrespective of whether this was a mundane/ everyday task or not, Bernice associated goals specifically with aspirational undertakings (like mountain climbing). Lisa was unsure how to define goals. Of note, both of the above ‘negative cases’ arose from two of the most senior (B8) physiotherapists.

*‘Functional things, like walking or stair climbing, rather than their goal might be to climb Mount Everest er, do you know what I mean? I find it quite difficult really to put a goal to something that’s just a general practical improvement really’ (Bernice, B8, Acute and pulmonary rehabilitation)*

*‘I think if you think of a goal as something that facilitates behaviour change then that’s why it’s different from an outcome. An outcome is the end result of doing your goals really, in a way. Or using, I suppose a goal is working towards an outcome. I’d.. yeah.. I think it’s really tricky I don’t think I really know. I’m not sure it’s that clear’ (Lisa, B8, pulmonary rehabilitation)*

#### *Types of goals*

The physiotherapists reported setting a variety of goals with patients, which could be considered as falling into one of four broad ‘types’; a) Aspirational, b) Functional, c) Condition understanding and d) Exercise related goals (Table 4).

Table 4: Goal types: descriptions and exemplary quotes.

#### *Purposes of GS*

The physiotherapists attributed a number of purposes to collaborative goal-setting in respiratory rehabilitation; some were patient-oriented, having direct relevance to patients' concerns, whereas others reflected concerns of a purely professional nature. This distinction was explicitly noted by several of the physiotherapists interviewed, who described some goals as being 'physio goals' and others 'patient goals'.

*'You do have your generalised goals of, you know, broad things like improving anticipatory care erm but I don't think ....that's something you want all COPD patients [...] When I think of patient specific goals I think of what does this patient want to be able to do, go to the hairdresser, the pub, get to the bathroom you know, be able to have a shower, you know things like that. I think that's different, it's very individualised thing, it's very different for every patient' (Emma, B7, Community)*

Patient-oriented purposes of goal-setting included: 1) goal-setting as a means of giving patients hope: for example, hope that despite their difficulties with physical activity there was reason to continue; 2) goal-setting as a vehicle for enabling patients to return to valued activities and pursuits and so enhancing their quality of life; 3) goal-setting as a tool to enable the clinician to individualise rehabilitation; and 4) goal-setting as a means of demonstrating progress to patients. The physiotherapists associated 'functional', 'aspirational' and 'condition understanding' goals strongly with patient-oriented purposes.

*'It's not pleasant to start exercising, for these patients, it's not pleasant for anyone who's unfit to get fit again, it's even, you know, it, it's much, much worse for them so they need to have that little bit of light at the end of the*



*tunnel, something that they're aiming for.'* (Hazel, B7, pulmonary rehabilitation and Community)

*'We'll ask the patients "What are your main problems?" "What do you want us to do?" so we get an idea of what the patients actually, what the patient goals are and then tailor our treatment around what they actually want'* (Jackie, B7, pulmonary rehabilitation)

Profession-oriented purposes of goals were also discussed. Adhering to professional expectations was one such purpose. It was noted that goals were required within hospital documentation and by the Chartered Society of Physiotherapy, and that goal-setting was emphasised during undergraduate training. Those who had been qualified longest highlighted how training had evolved, from a time when goals were not explicitly encouraged, to the current widespread advocacy. It was apparent that the expectation to set goals in respiratory rehabilitation could be experienced negatively. Whilst some physiotherapists were clearly advocates of goal-setting, others questioned whether goal-setting was anything more than a "tick-box exercise" and some felt there was a lack of evidence to support the usefulness of goal-setting.

*'I guess it's just that the CSP tell us that we've got to do this, that and the other and set patient-directed goals, [...] And we haven't really analysed whether it's that important or not and it is difficult because we're told to do this with everyone but we've not really looked at everyone to see if it's important, with everyone.'* (Oliver, B6, pulmonary rehabilitation)

*'You know I think some health care professionals think they're a lot better than they are 'coz they can tick a whole lot of boxes because they can achieve goals with patients. But you turn around and ask that patient what do they actually*

*think of that healthcare professional, and they probably tell you a completely different story' (Danielle, B7, Community)*

A key profession-oriented purpose was the use of goals to demonstrate service effectiveness to commissioners in order to secure continued investment in services. Goals linked to exercise, where objective measurements such as the 6 minute walk test [24], could be taken prior to and after rehabilitation, were associated with this purpose. Clarity regarding the purpose of exercise goals varied amongst the physiotherapists. Some physiotherapists described exercise as enabling the patients' treatment to be individualised in order to facilitate meeting their functional goals. Others describe exercise goals in isolation, removed from an intended, specific, functional achievement. One physiotherapist explicitly described the 'patient goals' set during goal-setting as "*incentives*" to facilitate the achievement of goals aligned to demonstrating service effectiveness. Problems with focusing on exercise goals were commented on by some, chiefly that exercise goals may not equate to the attainment of the patients' own functional goals.

*'Most people make a significant improvement in sort of exercise tolerance and general well-being through the programme. They're sort of the goals we sort of look towards from a service point of view, functional ones are there more as an incentive.'* (Richard, B6, pulmonary rehabilitation)

*'And their goal [i.e. patients'] is their quality of life I suppose, so if you haven't really achieved any goal they want, then have you made any impact on their quality of life? You might have increased exercise tolerance but you might not necessarily have had an effect on the quality of life if that makes sense?'* (Abbey, B7, Acute and pulmonary rehabilitation).

## Theme 2 - Working with goals

Of the physiotherapists interviewed, only Bernice and Kay reported not setting goals with patients; all others described their experiences of attempting carry out collaborative goal-setting. In most of these accounts, the difficulties associated with collaborative goal-setting were highlighted at various stages of the goal-setting process.

### *Finding goals*

The process of goal-setting was described as being a “negotiation” by a number of the physiotherapists interviewed. However, this idea of a negotiation seemed to be at odds with the realities of the physiotherapists’ accounts of goal-setting. Whilst the physiotherapists acknowledged that some patients came to respiratory rehabilitation knowing what they wanted to achieve, this was not perceived as being the norm. Rather, patients were described as struggling to identify goals, and the process of collaboration within goal identification was portrayed as challenging; for some, this created tension between a desire for goals to be identified by, and personally meaningful to, the patient, versus the time available.

*‘In our own practice we still believe that setting goals by yourself is not something you can just [...]..they can’t do it for the first time, they don’t even know what pulmonary rehab is, they don’t know what they gonna achieve’.*

*(Clint, B7, pulmonary rehabilitation)*

*‘You know time constraints and assessments as well, you just really want to get this goal and they’re going “Oh I don’t know really’ (Tammy, B6, pulmonary rehabilitation)*

In recognition that collaborative goal-setting was challenging, the physiotherapists described a number of approaches to facilitating the identification of goals which were relevant or in some way meaningful to the individual patient. These approaches included:

1.) Listening to the patient in the initial assessment, and hearing how their lives were affected by their condition and what was important to them. Such strategies were noted by some to help in developing a sense of what a patient's goal might be.

*'I think the process of getting in there, again, for me is to do with [...] finding out what it is that makes that patient tick so what it is that is high on their, functionally really what it is what they would like to achieve' (Danielle, B7, Community)*

2) Prompting patients to think about what they wanted to achieve initially, before following this up in the second or third week of rehabilitation to formally agree any goals. This was also perceived as a useful approach.

*'So we kind of tell them to be thinking about goals on the first day as well, on the assessment day [...] goal setting used to be the 3rd week, but now we've moved it to the 2nd week' (Clint, Band 7, Pulmonary Rehabilitation)*

3) Using responses from a disease specific questionnaire, such as the Chronic Respiratory Questionnaire (CRQ). This was perceived to help patients identify activities, or areas of deficit.

*'If they can't think of a goal, I then go on to say "Well what are you having problems with?" if they can't tell me then we get the CRQ out and say "Well you've ticked that you can't bend down and you're struggling to get dressed, is that something you want to improve on?" (Jackie, Band 7, Pulmonary Rehabilitation)*

However, some physiotherapists identified issues with a problem-focused approach to collaborative goal-setting. The main issue reported was that a patient's reported problems did not always equate to a desirable goal from the patient's perspective, and that patients might not

perceive themselves to have a particular difficulty or deficit. Some patients did not perceive themselves to have any goals at all, because relinquished activities had been given up gradually, due to the gradual onset of COPD, or because the patient did not perceive COPD to have significantly affected their lifestyle.

*‘Sometimes it is really hard to find a goal for people. I’ve had quite a few patients who I actually haven’t been able to set and usually no matter how, which way you ask them you know to get a goal they just can’t come up with anything and then you feel like you’re telling them goals to achieve, because then you say “Well, what about if you can walk to the shops without stopping?” and they’re like “Ok” but it might not be important to them they might not care that they have to stop 5 times, they might be so used to doing that be now that it doesn’t make a difference?’ (Tammy, B6, pulmonary rehabilitation)*

### *Setting goals*

In those cases when patients did have goals, a lack of specificity was perceived as a frequent issue. Patients reportedly attended with general, non-specific ideas relating to broad improvements rather than precise goals. This made setting SMART goals more difficult as it was not possible to determine how achievable a goal was, to set a realistic time frame for completion, or know how the goal should be evaluated or measured.

*‘I think it has to be a specific thing, I think that’s one of our big problems when they’re trying to set goals is making them specific or specific enough to be able to measure whether someone’s done it.’ (Penny, B7, pulmonary rehabilitation and Community)*

The need to ensure that goals were 'realistic' was a source of contention. Setting unrealistic goals was noted by some physiotherapists as having possibly deleterious effects, potentially demotivating patients and making their experience of respiratory rehabilitation a negative one. Accordingly, these physiotherapists reported attempting to avoid setting unrealistic goals with their patients.

*'You know you've got to be realistic as well because [...] if people don't achieve stuff then they will actually become more disillusioned. You want to give them wins, so they feel like, you know, they've actually done something good'*  
(Georgina, B6, pulmonary rehabilitation)

By contrast, other physiotherapists disagreed.

*'I don't necessarily think it has to be realistic either [...] I think sometimes you need to fail your goal to set realistic goals so I don't think that, I think it's wrong to give people false hope but I think if they have set an unrealistic target in their head unless they fail to achieve it then they're not going to readjust, they're not going to reset their goal because they've got something higher'* (Abbey, B7, Acute and pulmonary rehabilitation)

Perhaps in recognition of this difficulty, unless the goal was something completely unobtainable (like wanting a new pair of lungs), most physiotherapists used the strategy of breaking large, potentially confounding, goals down into smaller ones, rather than not working towards their patients' goals at all, in an effort to keep patients' experiences of respiratory rehabilitation positive.

### *Reviewing goals*

Review practices for goals varied considerably. Some physiotherapists reported reviewing goals throughout the rehabilitation programme, some only at the end, some not at all, and some only reviewed specific types of goals.

*'Once we've managed to get something down on paper, keeping them motivated to actually see through that goal, [...] we used to kind of review it half way and review it at the end and now we kind of probably every week we do a little five minutes at the end of, how we going with our goals, we give them sheets to take home so it's pinned up, we have a copy, they have a copy'*  
(Penny, B7, pulmonary rehabilitation and Community)

*'I must admit it's not very formal our goal-setting and in the past certainly with [service name] it's always been sort of at the back of their minds rather than the forefront. Unfortunately, although we do identify [goals] there and then they're generally not addressed throughout the programme. [...] I mean we do keep score sheets, its more objective [...] So obviously we've got good objective outcomes each time they come which we're constantly reviewing. But in terms of the more practical, functional goals they come up with themselves it's not very well documented.'* (Richard, B6, pulmonary rehabilitation)

A need for objective measurement during review was evident from the physiotherapist accounts. However, goals important to patients were not always considered easy to measure and there was recognition amongst some, that patient and physiotherapist needs regarding measurement differed.

*'Everything we do has to have a measurable difference, [...] and I agree with that because I think that that's absolutely important I just don't necessarily think*

*that all the objective outcome measures that we use actually capture what we need to capture' (Bernice, B8, Acute and pulmonary rehabilitation)*

*'I find it really difficult to make goals SMART [...] like getting them to even measure how far they can walk now versus what they'd like to be able to do because it's like so abstract, isn't it? [...] (Nat, B7, pulmonary rehabilitation and Community)*

### Theme 3 - Influences on collaborative goal-setting

Many individual and organisational barriers and facilitators to the ideal of collaborative goal-setting were described during the interviews.

#### *Individual Influences*

Individual influences were discussed in relation to both patients and physiotherapists. From the physiotherapists' experiences, influential factors specific to the patient included: their general health, comorbidities, awareness of COPD, understanding of pulmonary rehabilitation, and desire for change. The general health of an individual patient was considered pertinent: the presence of comorbidities was considered to potentially complicate collaborative goal-setting, not only in relation to identifying what might be a realistic goal, but also in relation to the impact either COPD or co-morbid exacerbations could have on patient motivation and progress towards goals. Anxiety and depression were recognised as influential.

As noted previously, patient awareness of the impact of COPD on their day-to-day lives, understanding of how pulmonary rehabilitation could potentially benefit them, along with desire for change, could either facilitate or inhibit collaborative goal-setting. The degree to which



individuals thought about their lives in terms of goals was also considered to be an important contributor by some. This was not only in relation to whether patients found goal-setting accessible but also how comfortable the physiotherapists were with goal-setting. Nat, for example, was somebody who described herself as an enthusiastic goal-setter but who saw that this enthusiasm was not always shared by her patients.

*'Goal-setting is a nightmare. [laughs] That's how I would describe it! With some people, not with all. I think if you goal-set with someone like me, it's really easy because I'm goal-orientated [...] and I set goals with people both in pulmonary rehab and like things like my staff and oh my God, for some people [...] it's like getting blood out of a stone'. (Nat, B7, pulmonary rehabilitation and Community)*

Physiotherapist training in goal-setting was highlighted as important. Undergraduate training was perceived to be where exposure to, and training on, goal-setting usually occurred. However, not all physiotherapists had covered goal-setting in their training, with goal-setting not having featured in the physiotherapy education of some of those longer qualified.

*'I don't do goals per se. I suppose I carry goals round in my head, but they're probably more my goals for the patients rather than the patient orientated goals. Whereas I say, more junior staff tend then to write a problem list and a goal plan I would probably qualify that by saying maybe it's just the difference in [...] university courses. You know, when I qualified 12 years ago, was that a priority? Whereas what's being taught now, is more the goal perspective and the patient, you know, sort of collaborative working?' (Kay, B8, Acute and pulmonary rehabilitation)*

This may explain why Bernice and Kay reported not goal-setting and why Fiona had not used goal-setting before starting in pulmonary rehabilitation. Those who remembered undergraduate training featuring goal-setting, recalled being introduced to SMART principles, the use of short and long term goals, and thinking about problem lists and goals. Importantly, even amongst those who did receive training at university, uncertainty was expressed regarding how goal-setting should be implemented.

*'Well we've talked quite a lot about this [goal-setting] over the last few months, within our team. Basically it's difficult at the moment because I think all of us do things differently and I don't know whether... no one really knows really whether they're doing it right or wrong, or what'. (Oliver, B6, pulmonary rehabilitation)*

### *Organisational Influences*

The environment in which respiratory rehabilitation was set, and the resources afforded within, reportedly shaped both goal-setting practice and the delivery of rehabilitation. The main issues arising concerned time, setting, the availability of support and the funding of the service.

"Giving time" (Steve, Band 8, Acute and pulmonary rehabilitation) to patients in consultations was spoken of with frequency and was considered a desirable and important thing. Time for patients to consider and understand their condition, time for them to think about their condition-related questions and time to explore how rehabilitation could influence their lives, are a few examples. Whilst time across different settings was noted as influencing the practice of goal-setting, physiotherapists' accounts of working in pulmonary rehabilitation indicated that time varied within the same setting with time allocated for new patient assessments reportedly varying across programmes from 30 minutes to 1 hour.

Goal-setting was identified by some to be demanding both in terms of time and energy. This was largely attributed to the difficulty associated with identifying goals collaboratively; some also related this to the emotional reactions prompted by goal discussions, which were challenging in a time-limited environment.

*'I think goal setting is quite a time consuming, energy draining kind of task and I think that if no one else in the team can kind of do it, very well, or avoids it shall we say, then it's quite a draining thing for you to have to do'. (Nat, B7, pulmonary rehabilitation and Community)*

*'I think it's just the time thing again you've got to fit in the all your assessment, you've done the objective things, you spoke to them a lot during the subjective and then you start asking them about goals [...] it opens up the floodgates sometimes doesn't it?' (Abbey, B7, Acute and pulmonary rehabilitation)*

It is worth noting that physiotherapists working in the community did not describe being limited by time as much as those based in pulmonary rehabilitation. However, in this setting, caseload challenges were influential; acutely unwell patients would take priority over more stable patients who were consequently left to pursue their goals alone. The need to prioritise patients according to severity was perceived as more pronounced in the acute medical setting; with a heavy caseload of sick people to manage, time spent with any one individual patient was noted as brief. In these areas, goal-setting was seen as less collaborative and more based around acute needs and discharge.

*'I mean I don't know that many people still do goals on, on the wards. I think mainly on the wards it's more this is acute admission we've got to get you better and well enough to go home and goals aren't necessarily thought about' (Penny, B7, pulmonary rehabilitation and Community)*

In contrast to many of the physiotherapists interviewed, Clint (B7, pulmonary rehabilitation) felt that he “*did not spend so much time*” with his patients goal-setting, perhaps spending a “*maximum of 10 minutes*”. This may have been facilitated by Clint having access to a large multidisciplinary team, which he readily acknowledged as beneficial for collaborative goal-setting. Others, such as Kay also below, felt team support was important, but a number described having little access or input from other disciplines.

*‘We have the OT, the physio, the assistants, the nurse as well. I think quite a lot of people actually [Clint laughs]. [...] this can be difficult and that is the reason we have all these people in goal setting. We don’t have them every time we do discussion’. (Clint, B7, pulmonary rehabilitation)*

*‘So, things are getting done at probably 60%, coz there’s only me, rather than a team of four of us you know, everybody getting 100% of their job [...] There’s only so much one person can do really. (Kay, B8, Acute and pulmonary rehabilitation)*

Service structure, degree of support and programme content was perceived to be driven by funding. The current economic climate was perceived as leaving services “financially strapped” (Steve, Band 8, Acute and pulmonary rehabilitation), and some physiotherapists spoke of how financial cuts had left their multidisciplinary programmes marginalised by the loss of professional input. Consequently, staffing issues and lack of time led to some feeling unable to include every recommended component, or to do everything that might be considered ‘ideal’; collaborative goal-setting was one such component.

*‘I don’t have the luxury of time necessarily, so I’ll probably home in on what I perceive as the important elements, so I don’t know whether I’m doing a, a, a*

*token gesture at goal-setting to some extent. If, if it's not simple to do, have I got the time to go back and revisit it on an individual basis with patients? Probably not'. (Kay, B8, Acute and pulmonary rehabilitation)*

Services were seen as needing to prove their efficacy by providing evidence of short and long term improvements, not only to gain additional funding but also to maintain the existing funding. Clinical outcomes demonstrating patient benefit were required, and in this respect exercise goals could be seen as contributory. This contextualises earlier accounts where one physiotherapist spoke of prioritising more service or profession-oriented goals, over more patient-oriented goals achieved in collaboration.

*'We use lots of outcomes, just as a service we're always trying to prove that we're worthwhile. That we're worth spending all that money on, so we use lots of outcomes, and then a lot of the goals are built around those outcomes themselves'. (Richard, B6, pulmonary rehabilitation)*

*'How much does pulmonary rehab cost? Well not a lot so the investment is probably worthwhile and if you can demonstrate that to the commissioners surely that's of benefit. So there are other benefits of looking at how you set your goals in a wider setting.' (Steve, Band 8, Acute)*

The above accounts highlight the competing demands physiotherapists may face when goal-setting collaboratively in respiratory rehabilitation. The time-limited nature of some rehabilitation settings and a pressure to demonstrate service effectiveness using objective measures, particularly amongst pulmonary rehabilitation services, poses a serious challenge to the practice of collaborative goal-setting, which is a time demanding activity, affected by numerous influencing factors.

## **Discussion**

Our main findings were that physiotherapists found goal-setting challenging for patients with COPD, and used a variety of approaches to address these challenges. There was also conflict between patient needs and service needs. Respiratory physiotherapists in this sample ascribed various purposes to goal-setting. Some explanations, such as tailoring rehabilitation to the patient and enabling patients to achieve valued activities, were patient-focused and described positively. Other were more professionally-focused explanations, such as adhering to rehabilitation culture and demonstrating service effectiveness using goals as service outcomes.

Patient-focused goals were described as being challenging to identify and measure objectively. On the other hand, professionally-focused goals were deemed to be more amenable to objective measurement (such as formal exercise tests). The potential for these professionally-focused goals to be prioritised over the more functional goals identified by patients was evident. This suggests that, at times, patient-centred or collaborative goal-setting is not realised in respiratory rehabilitation.

Goal-setting practices differed considerably in relation to whether, and how, goals were identified and reviewed, and some uncertainty was expressed in relation to how goal-setting should be undertaken. Goal identification was largely problem-focused and was emphasised as being particularly challenging in respiratory rehabilitation. Key explanations for this included: 1) the insidious nature of COPD, 2) a lack of patient understanding around respiratory rehabilitation, and 3) patients being satisfied with their current level of activity, thus not perceiving a need for goals.

### *Comparison with other studies*

Elements commonly ascribed to goals during physiotherapist explanations included their challenging nature and holding to SMART principles, which suggests the understandings of some respiratory physiotherapists may be similar to rehabilitation professionals in the neurological field [3, 11]. However, two physiotherapists in this study offered less conventional responses. There may be a number of explanations for the differences found between this study and other published work including: 1) some studies used participants who were 'experts' in goal-setting [11]; 2) differences in goal-setting culture between the neurological and cardiorespiratory fields; 3) changes to undergraduate training (discussed in further detail later); and 4) a lack of understanding over the term 'goal' and its varying usage and meaning across disciplines [10].

Challenges to collaborative goal-setting have been highlighted. Some of these, such as the time required to engage in collaborative goal-setting, the reported difficulties patients face in identifying specific and realistic goals, and the impact of comorbidities on goal-setting, have been noted elsewhere [6]. Previously, authors working with people with COPD have identified the phenomenon of patients with no goals [13]. This study offers three explanations for this in COPD: 1) the slow decline associated with COPD results in such gradual activity relinquishment that these lost activities are not always apparent to patients when initiating goal discussions; 2) patients may have a lack of understanding about pulmonary rehabilitation, which may prevent goal identification; and 3) patients may still be relatively fit and able to participate in their valued activities and therefore have no need to identify goals.

To our knowledge, no other studies in COPD have identified these as issues in relation to goal-setting. However, there is a wealth of literature describing COPD as a spiral of decline, with associated activity-related losses that are either not recognised, or not acknowledged, until later

in the disease course [15]. This would therefore seem to be a plausible influence on goal identification. Whilst research has not explicitly noted lack of patients' understanding of rehabilitation in COPD as hindering collaborative goal-setting, there is evidence that patients attending respiratory rehabilitation do so without fully understanding its potential benefits [25]. That this can inhibit collaborative goal-setting seems feasible, and work in the neurological field has suggested that patient education may enhance patients' ability to offer realistic goals [6]. Most of the physiotherapists in this study reported employing a problem-focused approach to goal-setting, which is usual in the context of rehabilitation [26]. It is therefore unsurprising that they reported goal identification as difficult when patients reported being satisfied with their current physical capacity and functional performance. In such instances, goals around maintenance may be more relevant than those relating to improvement.

Previous studies have focused on the elicitation of goals, particularly with regard to who identifies the goal, and how collaborative goals are set [7, 8]. There has been less attention, however, paid to the review of goals. In this study, just as practices surrounding goal elicitation varied, so too did the frequency and content of goals reviewed. In neurological rehabilitation researchers have reported that professionals may prioritise discharge-related goals [7, 8], and goals which are deemed to be achievable [7]. By contrast, most of the respiratory physiotherapists in this study reported setting a variety of patient goals and were reluctant to discount patient goals, because it was often difficult to know whether a goal was unrealistic. However, there was evidence that in some cases a form of prioritisation could occur at the point of review, when exercise goals indicative of service effectiveness, rather than patients' functional goals, were reviewed more formally.

Uncertainty surrounding goal-setting was expressed in several different ways, from questions regarding the evidence for goal-setting, to more practical queries, such as how possible it was



to identify unrealistic goals, and how collaborative goal-setting should be implemented. This is a novel finding, not previously highlighted elsewhere, despite it being acknowledged that there is no 'gold standard' approach to goal-setting [3]. This perhaps reflects the fact that most goal-setting research has been undertaken in the neurological field, which has a long established goal-setting culture. In contrast, there is a dearth of literature focusing on goal-setting in respiratory rehabilitation, despite collaborative goal-setting being a professional requirement [4]. Research addressing these uncertainties is needed to support physiotherapists in all fields to work in this way.

The suggestion that undergraduate physiotherapy education may not adequately prepare future physiotherapists to undertake GS is important. To date, very little has been published on how goal-setting is taught in undergraduate physiotherapy education. Only O'Donoghue et al. [27, 28], who focused on physical activity and exercise prescription teaching in Irish physiotherapy schools, and Roskell [29], who looked at identity in cardiorespiratory teaching in UK schools, have explored this area. None reported any emphasis on goal-setting. It may be that goal-setting is considered so fundamental to practice that it is interwoven throughout the curriculum and a discrete module on goal-setting is not included. O'Donoghue [27] found 77% of practice tutors reported covering goal-setting in student education despite its lack of visibility in the curriculum. This evidence does not indicate that goal-setting is not taught, but it does make it difficult to assess the extent to which goal-setting is taught to physiotherapists, and how the communication skills associated with collaborative care [30] are developed.

Some of the more senior physiotherapists interviewed reported difficulty and/ or scepticism with goal-setting. This is in contrast to a previous study by Van De Weyer et al [12] who reported less experienced therapists to find facilitating collaborative goal-setting more difficult than more experienced clinicians. However, participants offered their own explanation for this; that

collaborative goal-setting had not been emphasised as strongly when some of the interviewees trained, as it is in recent times. This suggestion seems feasible, because ideas such as patient collaboration and partnership are associated with a paradigm shift [6] that may take time to filter through all levels of training. The uncertainties and difficulties associated with goal-setting identified in this study indicate that undergraduate and postgraduate training would be worthy of further research.

### *Strengths and limitations*

A reflexive approach, peer review and negative case analysis were employed to enhance the trustworthiness of this work [23]. Identifying negative cases such as Kay and Bernice's accounts of not goal-setting, and Bernice and Lisa's definitions of goals, was particularly useful in this analysis because it prompted a more focused consideration of the accounts to try and understand why these reports differed from the others. Differences in educational ethos following paradigm shifts in health care were offered as an explanation and this has informed our research recommendations.

The sample obtained was diverse in key demographics, such as geographic location and respiratory setting, and contained a range of clinical experience, which enhances the transferability of this work. The interviews ceased when no new cases emerged. However, it was not possible to recruit a sample with as diverse demographics as originally planned, which Ziebland and McPherson [23] note as a common problem. The lack of AfC B5 perspectives may be a limiting factor; the inclusion of this group may have further enriched the analysis since the changing emphasis on goal-setting in physiotherapy education was noted as influential, as would the inclusion of interview 18 (Table 3), had the data file not been corrupt.

Although the data appeared to be saturated within the confines of the sample obtained, it is possible that other perspectives exist but have not been included in this analysis. This study focused on respiratory physiotherapists' perspectives, so some of the issues identified may have less relevance for other groups. However, some of the issues identified by this study relate to organisational drivers and condition-specific challenges, which are likely to have transferability to other professions working in this field. The pragmatic, data driven approach adopted for this study enabled goal-setting to be explored broadly to describe the range of participant accounts captured. We believe this is a strength of the current study. However, this approach precluded a more focused inquiry undertaken from a particular theoretical perspective.

There are four main areas for future research on goal setting in respiratory rehabilitation that would build on this work. 1) Exploration of the tension between patient-focused and professional-focused goals, 2) Consideration of goal-setting in respiratory rehabilitation in relation to existing theoretical frameworks, 3) Consideration of band five physiotherapists, other professionals', and patients' experiences of goal-setting and collaborative goal-setting in respiratory rehabilitation, ,4) Research into undergraduate and postgraduate training related to goal-setting .

Goal-setting in relation to COPD has been found to be challenging for respiratory physiotherapists and practices vary. There is considerable uncertainty as to how goal-setting should be approached in this patient group and there are times when goal-setting is driven by service need, rather than patient values. This creates tension for clinicians who have to fulfil both patient needs and service needs. In addition to being given the time and resources necessary to undertake goal-setting, clinicians may also need additional training to help them

resolve some of these issues. This work highlights a need for wider discussion to clarify the purpose and implementation of goal-setting in respiratory rehabilitation.

### **Clinical Messages**

- Varying goal-setting practices between respiratory rehabilitation services and demand on services to demonstrate efficacy can inhibit the pursuit of patient goals.
- Adequate time and resources provision by respiratory rehabilitation services are needed to enable collaborative goal-setting.
- Undergraduate and postgraduate training is needed to facilitate collaborative goal-setting in respiratory rehabilitation.

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## Tables

Table 1: Stages of thematic analysis

<b>Thematic stage</b>	<b>Stage procedure</b>
<b>Familiarisation</b>	The primary analyst (RS) repeatedly read the interview transcripts, noting initial ideas and thoughts on the data.
<b>Initial code generation</b>	All transcripts were read line by line and concepts within the data were labelled (i.e. "coded") and defined.
<b>Searching for themes</b>	Related codes were collated into draft or "potential" themes.
<b>Reviewing themes</b>	Themes were considered as to whether they adequately reflected coded extracts and the data set. Where themes contained a large number of codes, related codes were arranged into 'subthemes'. A thematic map of the analysis was drafted. Peer review at this stage was provided by the research team (ML, RG)
<b>Defining and naming themes</b>	Themes were refined further; definitions and names for each theme were checked and clarified. Peer review at this stage was provided by the research team (ML, RG, DN)
<b>Reporting themes</b>	The findings were written up with extracts from interviews used to exemplify/evidence theme content and the findings are considered in relation to the original research aim and literature. Peer review at this stage was provided by the research team (ML, CB, DN, AB,)



Table 2: Recruitment overview

<b>Recruitment source</b>	<b>No. Invited (No. Excluded)</b>	<b>No. Responding (No. Excluded)</b>	<b>Total sample available</b>
iCSP	N/A*	42(5)	49
Pulmonary Rehabilitation module	8(4)	4	
Snowballing	4	3	

\*As iCSP is an interactive forum which does not explicitly log post 'views' the number who viewed the post it unknown.

Table 3: Sample demographics

Physiotherapist (All Pseudonyms)	Demographics				
	Age	AfC Band	Work setting		
			Acute care	Pulmonary rehabilitation	Community
Abbey	25	7	✓	✓	
Jackie	25	7		✓	
Richard	25	6		✓	
Oliver	26	6		✓	
Emma	27	7			✓
Tammy	27	6		✓	
Danielle	32	7			✓
Penny	32	7		✓	✓
Nat	33	7		✓	✓
Clint	36	7		✓	
Kay	38	8	✓	✓	
Georgina	41	6		✓	
Steve	41	8	✓	✓	
Lisa	42	8		✓	
Bernice	43	8	✓	✓	
Fiona	44	7	✓	✓	
Hazel	49	7		✓	✓
Margaret*	52	7			✓

\*Please note, this interview was lost due to audio file corruption

Table 4: Goal types: descriptions and exemplary quotes.

Goal type	Description	Example quotation
Aspirational	The term 'aspirational' distinguishes between everyday pursuits and those which were considered more unusual or 'important' life goals. Sometimes these types of goals were considered possible. Other times this term was used to describe patient desires considered to be unrealistic or 'non-goals'.	<i>'we had one man in the current group he said 'I want to walk up [name of hill], which is one of the tall peaks. [...] So we put him on the programme [...] and he actually managed to get up [name of hill] after.'</i> (Jackie, B7, pulmonary rehabilitation)  <i>'sometimes you think you know that it's unrealistic [...] it's a non-goal, like a new pair of lungs or I never want to be breathless again'</i> (Hazel, B7, pulmonary rehabilitation and Community)
Functional	Use of the term 'function' reflects its use in the physiotherapist interviews. Such goals had a direct and meaningful translation into the patient's life, as opposed to those which purely related to exercise. It encompassed an array of pursuits from very mundane activities of daily living to the more unique.	<i>'We had one guy who turned around and said [laughs], he said there's a pub at the top of [name of road] but it's a huge hill to get there [...] it was important to him because his grandchildren liked going up there and, he was feeling he wasn't being able to be a granddad properly because he couldn't go out with them so much and we worked really hard with him and he managed to go and do these things'</i> (Penny, B7, pulmonary rehabilitation and Community)
Condition Understanding	Goals to increase patients' understanding of their own condition were widely discussed; patients were perceived to attend having received very little information about their condition and eager to know more.	<i>'They [patients] don't know why they're breathless, their G.P or whoever's diagnosed them, practice nurses or consultants, never really explain to them in a huge amount of detail. [...] So they're very keen to learn, they're very keen to find out more to be able to maintain their health for as long as possible.'</i> (Richard, B6, pulmonary rehabilitation)
Exercise	Exercise goals were those which related to improving physical performance in a specific exercise or physical outcome such as an increase in walking distance, or lower BORG breathlessness scores.	<i>'I have target goals and actual goals on an exercise programme, on an exercise sheet. [rustles papers; gets sheet to show RS] So what we would do then if that person did actually achieve one and a half minutes, what he actually achieved the following week then I would give him a target of one minute 50 seconds, constantly progressing, yeah? So then you are moving on, the goals are continually changing.'</i> (Georgina, B6, pulmonary rehabilitation)

## **Appendix 1 – study interview questions**

1. Could you tell me about the area you're working in at the moment?
2. In what ways do you feel physiotherapy has a role to play in the treatment of chronic obstructive pulmonary disease?
3. Could you tell me of a time that has highlighted for you what the important parts of managing someone with COPD have been?
4. Could you tell me what you think goals are, and goal-setting?
5. What do you feel is the purpose of goal-setting?
6. In terms of goal setting, what do you feel are the important elements of goal-setting?
7. What's your experience of the goal-setting process?
8. In your experience, what do you see as being the biggest challenges when goal-setting with this patient group?
9. Could you tell me of a positive case of using goal-setting?
10. Could you tell me of time when your experience of goal setting was negative?