



Supplementary material

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1 Screening questionnaire for COPD

Screening potential participants

If the potential participant is uncertain about their COPD diagnosis it may be useful ask some questions to make a judgement yourself and help you both determine whether they may be eligible for the study. A COPD information sheet is attached to help you – this text comes directly from the Asthma & Lung web-site. Bear in mind COPD does affect people in different ways and in mild cases lung damage may be minimal with few symptoms and in others damage may be severe where people are very limited in what they are able to do. If you are in doubt we will consult our clinical colleagues. It is envisaged that this would be used if the potential participant is not quite sure of their diagnosis or if you are not sure that the participant is genuine.

If someone is positive about their diagnosis and if you are sure they are genuine then they can just confirm the screening questions at the end.

The questions below may help guide the conversation.

<p>Have you seen a doctor about your lung health/breathing? Did they give your condition a name or give you a specific diagnosis? When was the diagnosis? Did you have any kind of test?</p> <p>Is there evidence of COPD diagnosis from your discussion?</p> <p>Yes/No</p>	<p>If they talk about emphysema or long -term/chronic bronchitis this is likely to be related to COPD.</p> <p>If they had a spirometry test at the doctor they may have been screened for COPD. A diagnosis of COPD before COVID was unlikely if they hadn't had this test. More recently, they may have been diagnosed without spirometry.</p> <p>Do they remember doing a breathing test where you had to blow into a machine to measure their lung capacity. The pictures below may help someone remember if they have had this test:</p> 
<p>What are your symptoms? How often have you had to go to hospital as a result of your symptoms (outside routine appointments).</p>	<p>Usually, people would talk about being breathless when doing routine everyday things like housework and walking. They may have a wheezy cough that lasts a long time.</p>

<p>Is there evidence of COPD symptoms from your discussion?</p> <p>Yes/No</p>	<p>They may have a lot of phlegm and mucus. In advanced COPD people may get oedema (swelling). People may also have flare-ups when breathing gets suddenly worse and they need hospital treatment. They may also be admitted to hospital for chest infections more than someone with asthma for example.</p>							
<p>How frequently do you feel breathless? Is it triggered by something – dust, pollen, tobacco, animal hair? Does your inhaler resolve your symptoms completely?</p> <p>Is there evidence that symptoms may be related to allergies or asthma from your discussion?</p> <p>Yes/No</p>	<p>It's hard to distinguish asthma and COPD and also some people will have both conditions. However, in asthma the breathlessness will come and go more depending on exposure to these triggers. If a person has some symptoms like wheezing, cough, breathlessness and a tight chest which are not always present and which are relieved with medication, this is more likely to be asthma. In COPD the damage to the lungs is permanent so inhaled medication will only help to some extent. The symptoms will be more evident therefore consistently from day to day.</p>							
<p>Have you ever smoked? Have you been exposed to indoor cooking with biomass fuels like wood, charcoal, coal? Have you been exposed to air pollution, dust, fumes or chemicals through your work?</p> <p>Is there evidence of environmental exposure from your discussion?</p> <p>Yes/No</p>	<p>COPD will be triggered by some exposure to environmental pollution in most cases (there is a genetic link which can cause COPD but this will be rare). If they do not report this exposure they are unlikely to have COPD.</p>							
<p>What medications do they have?</p> <p>Is there evidence of COPD/inhaler medication from your discussion?</p> <p>Yes/No</p>	<p>They will use an inhaler regularly if they have COPD. They will usually administer this via a nebulizer or spacer device attached to the inhaler.</p> <div data-bbox="810 1272 1347 1451" data-label="Image"> </div> <p>Medications they are taking may include the following (although this isn't an exhaustive list):</p> <table border="1" data-bbox="810 1590 1385 1960"> <tr> <td data-bbox="810 1590 1072 1960" rowspan="5">Long acting muscarinic Antagonists (LAMAs), containing tiotropium or glycoponium</td> <td data-bbox="1078 1590 1385 1653">Brand name</td> </tr> <tr> <td data-bbox="1078 1653 1385 1715">Spirivia</td> </tr> <tr> <td data-bbox="1078 1715 1385 1778">Eklira Genuair</td> </tr> <tr> <td data-bbox="1078 1778 1385 1841">Seebri Braltus</td> </tr> <tr> <td data-bbox="1078 1841 1385 1904">Tiogiva</td> </tr> <tr> <td data-bbox="1078 1904 1385 1960">Acopair</td> </tr> </table>	Long acting muscarinic Antagonists (LAMAs), containing tiotropium or glycoponium	Brand name	Spirivia	Eklira Genuair	Seebri Braltus	Tiogiva	Acopair
Long acting muscarinic Antagonists (LAMAs), containing tiotropium or glycoponium	Brand name							
	Spirivia							
	Eklira Genuair							
	Seebri Braltus							
	Tiogiva							
Acopair								

		Incruse Elipta
	Combination inhalers, containing long acting Beta agonist (LABA) and a LAMA e.g. umeclidinium/vilanterol	Brand name
		Duaklir
		Anoro Ellipta
		Spiolto
		Bevespi
		Ultibro
	Triple therapy Inhalers LABA / LAMA/ ICS	Brand name
		Trixio
		Trelegly
		Trimbow
How old were you when you were diagnosed? How old are you now? Is there evidence of diagnosis over the age of 35 from your discussion? Yes/No	Most people are diagnosed with COPD over the age of 35.	

If it seems from this discussion that someone has been diagnosed with COPD you can screen them on these final 3 eligibility questions on the attached screening questionnaire.

2 Topic guides

2.1 Patient topic guide

Patient topic guide

Opening question	
So, could we start by you telling me a bit about yourself and your health in general?	

	Could you tell me a bit more aboutprobe ethnicity, age, country of birth)?	
Exploratory questions		
1. Living with COPD		
What impacts does COPD have on your daily life?	What symptoms do you experience? How has life changed since you were diagnosed with COPD? What challenges do you face in your day to day life because of your COPD??	C
	What does daily routine look like?	O
What do you know about the causes of COPD?	Why do you think you developed COPD? What did you do for work earlier in your life? Do you think that had an impact on your health?	C
How does COPD affect your wider family?	How do other family members get involved in caring for you, if at all? Does your COPD impact on others in your home in anyway?	O
Summary & exit question	... is there anything else you'd like to add about the impact of COPD on your everyday life	
2. Medical Care		
Access to healthcare		
What has been your experience of medical care for your COPD from your doctor?	How did your diagnosis come about? What has gone well? What about your medical care could be improved?	O
How does your family and/or the people who care for you support you in getting medical support?	How do they get involved with healthcare organising appointments? (Prompt around appointment booking, reading letters, making phone calls). How do they get involved with practical logistics like Attending appointments, transport, other support?	O
Other sources of health guidance		
Besides your medicines what other things do you do to support your health and wellbeing?	<ul style="list-style-type: none"> • What role does exercise play in your health? • How do you think diet influences your wellbeing? • What role does faith and prayer play in your life and wellbeing? • Where else do you get information about your health from, apart from your doctor? (friend? family? internet? other) 	M O C
Community attitudes to health in older age		
In the [ethnicity] community around you, what attitudes do you notice about health in old age?	How does the family get involved in supporting older people? How does your faith influence how you feel about your health? What differences do you notice, if any, between attitudes towards aging between the UK and [Bangladesh/Africa/Caribbean]?	O
Summary & exit question is there anything else about your medical care that we haven't covered that you think is important?	
3. Pulmonary Rehabilitation		
What do you know, if anything, about Pulmonary Rehabilitation for patients with COPD?	If they have heard of it prompt for further knowledge about what it involves.	C
Have you ever been offered PR?	Yes/No	

Have you ever attended PR?	Yes/No	
If they have attended PR ask the 3a questions if not go to 3b		

3a for those who have attended PR previously		
Deciding to attend and referral		
How did you find the referral process?	What information were you given? How did you expect PR to help you and what did you expect the sessions to involve? Was there anything that was unclear when you were given your referral to PR? Is there anything that could be improved in the referral process?	C: knowledge
What factors influenced your decision to attend PR?	How did you think PR would help your condition? How important was it for you and your health that you attended?	M: belief in cons & decision making
How did your healthcare team influence your intention to attend?		
What support did you have from others around you to help you attend?	How did your friends and family support you being able to attend? (transport? organising appointments? cancelling carers?) What attitudes did those around you have about you attending?	O-social
Experience of taking part		
What was your experience like?	What did you find helpful? What would you change?	M
How did you find taking part in the activities?	How did you cope physically with the exercise? How did you find having the sessions delivered in English? Which bits did you enjoy most?	C: phys,psych M: emotion
What did you think of the venue?	How was the location for you? What was the space/room like and how did you feel about it as a venue?	O
How did you find getting to the sessions?	What transport did you use? How did that work for you? (what were the challenges, if any?) How did you cope physically with getting there? Is there anything that could be improved to help you get there?	C-Phys O-time
How did you find fitting in 2 sessions a week on top of your existing commitments?	What challenges did you have in making time? How did you manage to overcome these? Did you ever forget to go to any sessions? Is there anything that helped you remember? (texts and reminders?) How did you change you change your routines to fit in the sessions?	O-time, C- Behav Reg
Views about the value of the sessions		
What could have been improved or done differently?	How would you improve the referral process, if at all? How would you improve the location and timing of sessions, if at all? How would you improve the delivery of the sessions, if at all?	O
For you what was the most valuable thing about the sessions you attended?	What changes did you notice to your health and well-being? Did the sessions influence your plans and motivation to improve your health in the future?	M: Belief in cons, optimism, goals

3b if they have never attended PR (if they were offered it but did not attend, acknowledge this but still go through these questions)		
Describe Pulmonary Rehabilitation (PR):		
<ul style="list-style-type: none"> • Exercise and education programme • Helps increase exercise tolerance, reduce breathlessness and provides detailed education on a range of subjects – nutrition, medication, mental health • Clinically proven to reduce symptoms and improve well-being • Commitment is 2 sessions a week for 6 weeks • Run in range of venues – community gyms, community centres and hospital rehab facility • Group sessions • Run by respiratory physiotherapists • Process to attend: <ul style="list-style-type: none"> ○ Referral by GP or Nurse ○ Triage call with patient e.g. via zoom ○ Patient attends an assessment – 1 hour, questionnaire and exercise/bleep test 		
Show photos of PR sessions		
Motivation, knowledge and deciding to attend		
Now you know more about PR what factors would influence whether or not you decided to attend?		All
How do you think PR would help your health?	What do you think the main benefits would be?	M
What else would you need to know before attending?	What would be your main concerns or problems about attending?	C
How might the opinion of people around you influence your decision to attend?	Whose opinion would you most value? How important is the opinion or recommendation from your healthcare team? How would the views of people around you (your family, friends and carers) influence your decision?	O
Thoughts about taking part		
How would you feel about attending and taking part in the sessions?	How do you feel you would manage physically with the exercise session? Would you have any worries about exercising in a group? How do you think the education sessions would help you? What would you want to learn about most? Would you expect any problems with the sessions being delivered in English?	C M
How easy or difficult do you think it would be to get to the sessions?	Is there anything that could help (hospital transport, free parking etc)?	O
In terms of your everyday life and current commitments how easy would it be for you to attend x2 per week for 6 weeks?	What do you think would be the biggest challenge? What times of day would suit you best? How would it alter your ability and willingness to attend if the course was online so you could attend at home?	O M

What do you think about exercising and having education talks in a group?	How would it influence your answer if the groups were either all men/women or with people from your ethnic background? PR sessions are held in community halls, community gyms and hospital gyms. Which of these venues do you think would be best for you? Why do you say that? What do you think about having the course online at home, compared to going to a community venue in person?	M C
Role and influence of others		
What help would you need from people around you to attend?	What help would you need to plan your attendance? (phone calls, booking the session, rearranging existing carers and commitments) What help would you need to get to the sessions? (closed) Is there any other help you would need?	O
Summary and exit question	Is there anything you'd like to add about your thoughts about PR before we move on?	

4. Supporting your community		
Generally, in the [ethnicity] community, there is poor engagement with this programme called Pulmonary Rehabilitation. Our study aims to develop a programme to improve attendance at PR following referral.		
What do you think we need to consider in supporting people from [ethnicity] heritage to attend PR?	<p>What do you think is the best way to raise awareness about this kind of programme in your community?</p> <p>How do you think the programme should be designed and communicated to encourage people to find out more and attend?</p> <p>What role (if any) can trusted community organisations and faith institutions play?</p> <p>What do you think are the biggest barriers we will face?</p>	
Exit question	Is there anything else we need to consider?	
5. Closing question		
We've discussed life with COPD, medical care, pulmonary rehabilitation and factors within your community that may influence update of PR. The key things I have taken from this discussion are..... Is there anything else you'd like to add before we close?		

2.2 Carer topic guide

Topic Guide Carer Interview

Thanks & welcome

Introduction to the UPTURN study and the interview

Opening broad question		
So, could we start by you telling me a bit about yourself and who it is you care for?		
	Could you tell me a bit more about [patient] (probe ethnicity, age, country of birth)?	
Exploratory questions		
1. Living with COPD		
How does the caring role impact your own life?	<p>What do you personally find most challenging in supporting [patient] with their COPD/health?</p> <p>What, if anything, do you enjoy about your caring role?</p>	M
What impacts of COPD have you observed on [patient's] life?	<p>What symptoms are you aware of?</p> <p>What challenges with day to day living have you observed?</p>	O C
	What does [patient's] daily routine look like?	O
How does COPD affect your wider family?	<p>How do other family members get involved in caring for [patient] if at all?</p> <p>Does your COPD impact on others in your home in anyway? How?</p>	O
What do you know about the causes of COPD?	<p>Why do you think [patient] developed COPD?</p> <p>What do you know about why the breathlessness occurs with COPD?</p>	C
Summary & exit question	So you've said..... is there anything else you'd like to add?	
2. Medical Care		
What has been your experience of [Patient's] medical care for COPD	<p>How have you found the NHS medical care?</p> <ul style="list-style-type: none"> Did you have any involvement in the medical diagnosis? How did it come about? <p>What challenges have you had with medical care?</p>	O

	What has gone well?	
What's your involvement in [patients] medical care?	How do you get involved with healthcare organising appointments? (Prompt around appointment booking, reading letters, making phone calls). How do you get involved with practical logistics like Attending appointments, transport, other support?	O
Besides your medicines what other things do you think are important for [patients] health and wellbeing?	What role does exercise play in [patients] health? How do you think diet influences [patients] wellbeing? What role does faith and prayer play wellbeing? Where else do you get information about your and [patients] health from, apart from your doctor? (friend? family? internet? other)	M O C
In the [ethnicity] community around you, what attitudes do you notice about health in old age?	How does the family get involved in supporting older people? How does your faith influence how you feel about your health? What differences do you notice, if any, between attitudes towards aging between the UK and [Bangladesh/Africa/Caribbean]?	O
Summary & exit question	So it seems..... is there anything else about COPD care you'd like to mention that we haven't covered?	
3. Pulmonary Rehabilitation		
What do you know, if anything, about Pulmonary Rehabilitation for patients with COPD?	If they have heard of it prompt for further knowledge about what it involves.	C
Has [patient] ever been offered PR?	Yes/No	
Has [patient] ever attended PR?	Yes/No	
If patient has attended PR ask the 3a questions if not go to 3b		

3a for those who have attended PR previously		
Referral and decision to attend		
What was your experience of the referral process for PR?	What information were you given? Is there anything more you would have liked to know?	
What factors were important for you in considering support [patient] to attend?		
How important did you feel attending PR was for [patient's] health?	Why did you think it was important?	
Experience of patient attending PR		
How were you involved in supporting [patient to attend, if at all?	(organising booking, talking to healthcare team, arranging transport, cancelling commitments etc)	
What did you think of the venue?	Was it easy to get to? How did you feel about the space?	O
How did [patient] find getting to the sessions?	What transport did you use? How did that work for you? (what were the challenges, if any?) Is there anything that could be improved to help you get there?	C O
How did you find fitting in 2 sessions a week on top of your existing commitments?	What challenges did you have in making time? How did you manage to overcome these? How did you plan for the sessions and remember to attend?	O
What influence did others have around you on supporting attendance?	Did anyone around you encourage [patient] to go? (friend, family?) Did you hear any stories or experiences from others who have attended? How important was your healthcare team in supporting your decision to attend?	
Value of the PR sessions		
How do you think PR helped [patient]?	Did you notice any changes in [patients] health as a result of attending? What would you say to others about attending PR if they were offered it?	M

3b if they have never attended PR (if they were offered it acknowledge this but still go through these questions)		
Describe Pulmonary Rehabilitation (PR):		
<ul style="list-style-type: none"> • Exercise and education programme • Helps increase exercise tolerance, reduce breathlessness and provides detailed education on a range of subjects – nutrition, medication, mental health • Clinically proven to reduce symptoms and improve well-being • Commitment is 2 sessions a week for 6 weeks • Run in range of venues – community gyms, community centres and hospital rehab facility • Group sessions • Run by respiratory physiotherapists • Process to attend: <ul style="list-style-type: none"> ○ Referral by GP or Nurse ○ Triage call with patient e.g. via zoom ○ Patient attends an assessment – 1 hour, questionnaire and exercise/bleep test 		
Show photos of PR		
Motivation, knowledge and decision to attend		
In deciding whether [patient] attends PR what are the most important factors for you?		All
How do you think PR would help [patient's] health?	What do you think the main benefits would be?	M
What else would you need to know before attending?	(more information about the content? the location? who else would be there? The times?)	C, O
How might people around you influence the decision to attend?	Whose opinion would you most value? How important is the opinion or recommendation from your healthcare team? How would the views of people around you (your family, friends and carers) influence your decision?	O
Practical considerations about taking part		
How would [patient] get to the sessions?	Can you see any difficulties or have any concerns about getting there? Is there anything that could help (hospital transport, free parking etc)?	O
What additional help would you need to provide?	(help with transport, phone calls, organisation, accompany to group?)	O
In terms of your everyday life and current commitments how easy would it be for [patient] to attend x2 per week for 6 weeks?	What do you think would be the biggest challenge? What times of day would suit you best? How would it alter your ability and willingness to attend if the course was online so you could attend at home? Would [patient] remember to attend? Is there anything that would help with this?	O M
How do you think [patient] would cope physically with getting to the session and a group exercise class?		C
What other support would [patient] need, if any, to take part (e.g. translation,		C M

support with hearing or other)		
Value of PR		
If [patient] was offered PR , how important is it to you that they attend?		
Summary and exit question	Is there anything you'd like to add about your thoughts about PR before we move on	

4. Supporting your community		
Generally, in the [ethnicity] community, there is poor engagement with PR. Our study aims to develop a programme to improve attendance at PR following referral.		
What do you think we need to consider in supporting people from [ethnicity] heritage to attend?	<p>What do you think is the best way to raise awareness about this kind of programme in your community?</p> <p>How do you think the programme should be designed and communicated to encourage people to find out more and attend?</p> <p>What role (if any) can trusted community organisations and faith institutions play?</p> <p>What do you think are the biggest barriers we will face?</p>	
Exit question	Is there anything else we need to consider?	
Closing		
We've discussed life with COPD, medical care, pulmonary rehabilitation and factors within your community that may influence update of PR. The key things I have taken from this discussion are..... Is there anything else you'd like to add before we close?		

Carer details

Current age	
Identifying gender	<p>Male</p> <p>Female</p> <p>Other</p> <p>Please specify _____</p>
Ethnicity	<p>Bangladeshi/S.Asian British</p> <p>Black African/Black British</p> <p>Black Caribbean/Black British</p> <p>Mixed:</p> <p>Please specify _____</p>
Country of Birth	
If born in UK country of Birth of parents	<p>Mother _____</p> <p>Father _____</p>
Town of residence	
County of residence	
Education	<p>Left school under 16</p> <p>Left school at 16</p> <p>Left school at 18</p> <p>Graduated from university</p>
Occupation If retired previous occupation	

2.3 Community leader topic guide

African & Caribbean Community Leader Topic Guide: Understanding Community Attitudes Towards COPD, Healthcare and Research Participation, and Cultural Considerations

At the beginning of the Interview

- Introduction to the UPTURN study: Briefly describe the study.
- Explain that we are speaking today about a lung condition called COPD which has high prevalence amongst Black communities.
- Inform participants about interview Structure:
 - Estimated duration of the interview.
 - Purpose of gathering community insights.
 - Explanation of consent form and recording of the session for accuracy.

1. Opening Questions

- Could you start by telling me a bit about your role in the community? (Location, who supports, any role in health?)
- What do you, yourself, know about COPD?

2. Community challenges and attitudes towards health

- What do you think are the key health and social challenges people in your community face? (O)
- In your experience, how well do people in your community understand COPD and its causes? (C)
 - What is your view about the prevalence of, and attitudes towards smoking within the community? (C, O, M)
- Where do people in your community tend to get their health information from? (O, C)
 - What do you think are the most trusted sources of health knowledge? (M, O)
- What cultural factors shape people's attitude towards their health in older age? (probe for myths, misunderstandings, beliefs) (M)
- How important are family and community networks in supporting health-related decisions? (o)
- What are the common barriers that prevent community members from participating in healthcare activities, such as screenings, medical checkups, or rehabilitation programmes?

- What factors would improve engagement?
- What cultural practices, beliefs, or values we should be aware of when conducting research around respiratory health in your community? (Probe for cultural sensitivities or taboos). (O)
- In your community, what role does faith, prayer, going to church, or spirituality play in managing health issues like COPD?
- How important is incorporating faith in health programmes or research for your community?
 - *Probe:* Are there any specific practices or beliefs linked to spirituality or religion that influence how health decisions are made, especially around chronic illness?

3. Pulmonary Rehabilitation

Are you aware of a support programme called PR for people with COPD?

Explain the key factors about the PR programme and show the pictures or bits of the video:

1. 6 weeks, twice a week, for two hours (12 sessions)
2. Hospital or community gym or community hall setting
3. Run by physiotherapists
4. 1 hour exercise, 1 hour education
5. Groups sessions, mixed sexes, offering social support and access to respiratory experts
6. Healthcare PR assessment on person before enrolment on PR programme

Promoting the programme

- Have you heard of PR or do you know anyone who has attended it?
- What do you think would be the key benefits of this kind of programme?
- What challenges should we consider when promoting this programme to people in your community?
- If you were going to promote this programme to people in your community what features would you highlight?
 - Are there any features you'd change or adapt for your community?
- What role do you believe community leaders like yourself can play in promoting health and wellbeing, particularly in raising awareness about COPD?
 - How can community leaders influence health decisions and behaviours?
 - Is there anything that would help you promote this healthcare programme to others? (like resources, information, involvement of local healthcare teams, testimonials from others?)

Logistics of the programme:

- Thinking specifically about the timing and frequency of the programme, some community leaders have suggested there are days of the week or times that may be difficult for people for cultural reasons such as around prayer times. Is there anything you are aware of that may influence people's flexibility to attend 2 hourly twice weekly sessions for 6 weeks?
- What type of environment or venue would make pulmonary rehabilitation more accessible and appealing to members of your community?
- Would it be more effective if held in community centres, churches, hospitals?
 - Why do you say that?

What other practical barriers can you foresee in people being able to attend? (e.g. Financial, transport links and access)

Content of the programme:

- How common/acceptable is it for people in your community to exercise in a gym-based setting? (O)
- Are you aware yourself of the value of physiotherapy-based exercise to improve lung health? What do you think are the best ways to communicate these benefits to people?
- What influence, if any, do you think it would have on people's motivation to attend that the sessions include men and women? (O)
- What value do you think social support and group health-related activity for people in your community?

4. Final Thoughts and Recommendations

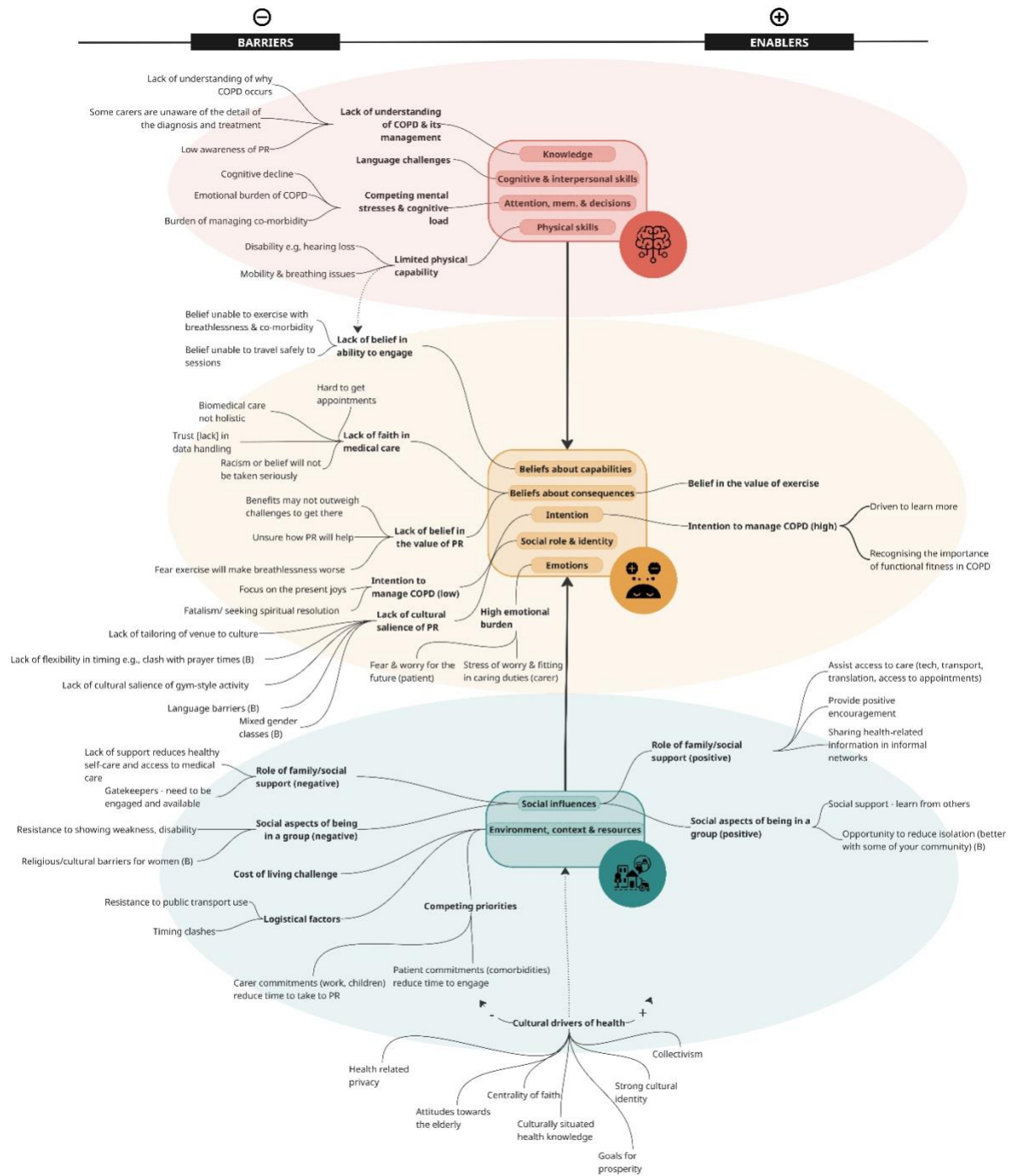
- Are there any additional thoughts or concerns you have regarding COPD and the health of your community that we haven't covered?
- What suggestions do you have for making COPD healthcare and research more culturally appropriate and effective for your community?
- What other topics would you like researchers to work on?

3 Code book

TDF Domain	Coding guidance
Knowledge	- Reflecting knowledge (or false knowledge) about COPD and PR. Including causes and treatments for COPD
Physical skills	- Reflecting stamina or physical ability e.g., mobility constraints or being unable to perform normal activities associated with PR uptake because of

Psychological skills	<ul style="list-style-type: none"> - Cognitive of interpersonal skills - Ability to communicate in language of the consultation
Attention, memory & decision making	<ul style="list-style-type: none"> - Factors that may detract from ability to remember, to plan and to make decisions - Includes multiple things influencing cognitive burden e.g., lots of medication, care appointment etc, cognitive impairment & dementia
Belief in consequences	<ul style="list-style-type: none"> - Data that reflects assessment of whether the results of going to PR will be worth it - Assessments of benefits in relation to challenges or personal cost of engaging, even if they see some value - Faith in medical care and so belief in value of the recommendations - Belief (or lack of) in the value of exercise
Belief in capabilities	<ul style="list-style-type: none"> - Belief in personal ability to attend and participate in PR - Includes lack of faith in personal ability to exercise in a PR class with COPD-related symptoms or due to other reasons - Lack of confidence to leave the house or use public transport
Intention	<ul style="list-style-type: none"> - Lack of intention to proactively manage COPD - Lack of intention to every attend PR
Social role and identity	<ul style="list-style-type: none"> - Whether people feel PR or exercising (in PR class style) fits with their view of their identity - Data that suggests match or mis match with cultural identity and social norms associated with identity e.g., with religious values about gender, female privacy, ability to accommodate prayer times.
Emotions	<ul style="list-style-type: none"> - Emotions – fear, anxiety, anger etc - Drive states – hunger
Social influences	<ul style="list-style-type: none"> - Social norms - Attitudes to social interaction - Role and influence of others in social orbit towards PR - Reliance on others to attend PR
Environment, Context and Resources	<ul style="list-style-type: none"> - Any factors relating to context e.g. lack of public transport, convenience of venues - Economic factors - Lack of resources, either personal such as finances, time OR lack of healthcare resource provision, such as materials in appropriate languages

4 Graphical illustration of themes and subthemes



5 COREQ checklist

Section/Topic	Item No	Checklist item	Reported on page No
Domain 1: Research team and reflexivity			
Personal Characteristics			
Interviewer/facilitator	1	Which authors conducted the interview or focus group?	7/8

Section/Topic	Item No	Checklist item	Reported on page No
Credentials	2	What were the researcher's credentials? E.g. PhD, MD	Below
Occupation	3	What was their occupation at the time of the study?	7/8
Gender	4	Was the researcher male or female?	Below
Experience and training	5	What experience or training did the researcher have? Relationship with participants	Below
Relationship with participants			
Relationship established	6	Was a relationship established prior to study commencement?	Below
Participant knowledge of the interviewer	7	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	Below
Interviewer characteristics	8	What characteristics were reported about the interviewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	Below
Domain 2: study design			
Theoretical framework			
Methodological orientation and Theory	9	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	6
Participant selection			
Sampling	10	How were participants selected? e.g. purposive, convenience, consecutive, snowball	Below
Method of approach	11	How were participants approached? e.g. face-to-face, telephone, mail, email	8
Sample size	12	How many participants were in the study?	10
Non-participation	13	How many people refused to participate or dropped out? Reasons?	Below
Setting of data collection	14	Where was the data collected? e.g. home, clinic, workplace	10
Presence of non-participants	15	Was anyone else present besides the participants and researchers?	9
Description of sample	16	What are the important characteristics of the sample? e.g. demographic data, date	16
Data collection			
Interview guide	17	Were questions, prompts, guides provided by the authors? Was it pilot tested?	8
Repeat interviews	18	Were repeat interviews carried out? If yes, how many?	Below
Audio/visual recording	19	Did the research use audio or visual recording to collect the data?	8
Field notes	20	Were field notes made during and/or after the interview or focus group?	Below
Duration	21	What was the duration of the interviews or focus group?	8
Data saturation	22	Was data saturation discussed?	Below
Transcripts returned	23	Were transcripts returned to participants for comment and/or correction?	Below
Domain 3: Analysis and findings			
Data analysis			
Number of data coders	24	How many data coders coded the data?	Below
Description of the coding tree	25	Did authors provide a description of the coding tree?	This file
Derivation of themes	26	Were themes identified in advance or derived from the data?	Below
Software	27	What software, if applicable, was used to manage the data?	9
Participant checking	28	Did participants provide feedback on the findings?	9
Reporting			
Quotations presented	29	Were participant quotations presented to illustrate the themes / findings? Was each quotation identified? e.g. participant number	22-24

Section/Topic	Item No	Checklist item	Reported on page No
Data and findings consistent	30	Was there consistency between the data presented and the findings?	Yes
Clarity of major themes	31	Were major themes clearly presented in the findings?	22-24
Clarity of minor themes	32	Is there a description of diverse cases or discussion of minor themes?	Yes. Table 3

Additional data to support COREQ checklist

Item	Detail
2	All interviews held a PhD
4	There was one male researcher of Bangladeshi origin and one female; One female of Caribbean ethnicity, one female of African ethnicity and one White British female
5	All interviewers were trained in interviewing techniques and trained with the topic guides by the first author. Participants were not known to the researchers before the interview and focus group sessions.
6	To some degree a relationship was established during the period the interview sessions were planned and when the screening questionnaire was carried out
7	Participants were given detailed background about the research and the connection of the interviewers/facilitators to the research. Where relevant the researcher ethnicity was discussed e.g. in relation to the preferred language for the interview.
8	The researchers were all part of the UPTURN study team. The community researchers involved in data collection GMMR, TT, LL, AA are part of the study EDI workstream and work at the University of York. They are of Black African, Caribbean, and Bangladeshi descent. AM is a behavioural scientist, based at University College London and is of White British ethnicity. The community engagement work with people in these chosen communities was based on the research data indicating relative low engagement in PR amongst these communities. This research knowledge shaped the researchers' assumptions to some degree.
10	Participants were selected based on convenience sampling influenced by the research group and PPI outreach activities.
13	No-one approached refused to take part but nevertheless it was hard to recruit participants to the study.
18	No repeat interviews were carried out.
20	Field notes were made in the focus groups. The notes informed the translation. Field notes were not part of the main analysis data.
22	Common themes were consistent amongst the Bangladeshi participants but given the smaller number of Black African and Caribbean participants it is possible that data saturation was not achieved. This is not uncommon in this kind of research given the heterogeneity amongst UK ethnic minority populations.
23	Transcripts were not returned to participants for checking. However, our PPI group reviewed the translations of the Sylheti interviews and focus groups.
24	The data was coded to the COM-B framework by AM and checked by FL.
26	The data was deductively coded to the TDF framework and inductively coded within domains.