Additional file 3a: Topic guide for patients – 1st interview

1. Introduction
   • Introduce myself
   • Purpose of the interview
   • Inform patient about confidentiality
   • Get patient’s consent
   • Inform patient the interview will take around an hour
   • Patient can withdraw from the study at any stage
   • Will contact patient for a 2nd interview 6 months later
   • Interview will be tape recorded for transcribing purposes
   • Ask the name and age of patient
   • Occupation

2. Impact about using Light Touch Monitor
   • Can you tell me about your experience about the Light Touch monitor?
     o Prompts:
       ▪ Is it helping you?
         ➢ What is the best about it?
         ➢ What is the worst about it?
       ▪ How has it affected you? Was it helpful?
       ▪ Has it made any difference to your life?
         ➢ What is difference? Can you give me an example?
       ▪ If step down from the full kit tele-monitoring, ask about the difference.
       ▪ If on the full kit tele-monitoring, ask whether patient perform the spirometry?
     o Ask briefly:
       ▪ When did you start experiencing problems with your breathing?
       ▪ When were you told that you had COPD?
       ▪ Do you know the cause of your COPD?
         ➢ Do you smoke?

3. Practical issues
   ▪ How have you found using it?
   ▪ Is it helpful – why? Why not?
   ▪ Is it easy to use?
   ▪ Do you recommend this for patients with the same condition as you?
   • Can you tell me how you normally use it?
     o Prompts:
       ▪ When do you normally take your reading?
What do you consider is your normal reading?
Are there any changes in the reading during the day/night?
  ➢ How do you feel about these changes?
Are there any activities that change the reading?
  ➢ How do you feel about your concern at the moment?
Do you have your condition under control?
• Can you tell me if/how Light Touch has helped you managed your health at home?
• What are your expectations of the Light Touch monitor?

4. Impact of Light Touch on daily life (Oximetry and symptom diary)
• Can you tell me how does the Light Touch affect your daily life?
  o Prompts:
    ▪ Do you notice symptoms/listen to what your body tells you?
    ▪ Does keeping a diary helps you take your symptoms into account?
    ▪ Do you sometimes do extra checks in the day?
    ▪ Can you give an example of what a good day would be like for you?
    ▪ Can you give an example of what a bad day is like for you?
    ▪ When you feel poorly, do you make any other checks?
      ➢ What are they?
    ▪ Do you think of your condition all the time?
    ▪ Do you think of the Light Touch monitor all the time?

5. Decision making
• How do you decide what actions (if any) to take after you take your reading?
  o Prompts
    ▪ How do you work out what to do?
    ▪ Is there anything else you take into account?
    ▪ Do you have more faith in the reading you get or your symptoms?
    ▪ How do you balance the reading and your symptoms?
    ▪ What do you do if you have a low reading?
      ➢ What actions do you take?
      ➢ When do you take action?
      ➢ Who decides what action you take?
      ➢ Who do you contact if you have any concerns?
      ➢ What symptoms do you normally look out for?
• Can you tell me about your last exacerbation (difficulty in breathing)?
6. Use of booklet
   • Can you tell me your thoughts about the self-help booklet
     o Prompts:
       ▪ How does the booklet help you?
         ➢ Does it help to give you information?
         ➢ Does it help you take action (make decision)?
       ▪ Would you recommend this to someone with the same condition as you?
       ▪ Is there anything in the booklet that needs improvement?
   • Do you have/use any other sources of information/advice?

7. Family
   • Can you tell me whether your family are involved in monitoring your condition?
     o Prompts:
       ▪ How do they help you?
       ▪ Do they help you take your reading?
       ▪ Do they remind you to take your reading as you used to?
       ▪ Do they remind you to use it to check whether you are okay?
       ▪ Are your family worried about you?
       ▪ Do you confide to them about your concerns?
   • Can you tell me whether anybody in the family tries out or uses the Light Touch monitor?
     o Prompts:
       ▪ If yes, do you compare your reading with theirs?
       ▪ Are there times you might be concerned?
       ▪ Do you take any actions?

8. Healthcare professionals
   • Who are the healthcare professionals who look after you?
     o Prompts:
       ▪ How do they help you?
       ▪ How do you feel about their help?
       ▪ How do you feel about these interactions?
       ▪ Do you know who takes the information you sent to?
   • What happens out of hours?
9. Employment (only if the patient is in employment)
   • Can you tell me whether your condition affects your work (if working)?
     o Prompts:
       ▪ Does your employer support you?
       ▪ In what way does your employer support you?
       ▪ How frequent do you use the Light Touch monitor at work?

10. Pulmonary rehabilitation
    • Have you been offered any pulmonary rehabilitation programme (or exercise)?
      o Prompts:
        ▪ If no, do you know the reason for this?
        ▪ If yes, how long did you attend the programme?
        ▪ Do you think attending the programme helps you in making decision about your condition?

11. Future plans
    • Do you see yourself continuing to use the Light Touch in the next 6 months/a year?
    • Do you see monitoring with the Light Touch something you want to do forever?

12. Are there any concerns that you would like to share with me?
    o Prompts:
      o Do you anticipate any concerns?

13. Is there anything you would like to add?

Thank the participant
Additional file 3b: Topic guide for professionals – 1st focus group

Focus group protocol: Healthcare professionals

Introduction:
• Welcome and thank you for coming today.
• Introduce self and the co-facilitator
• Housekeeping issues - fire alarm and exits.
• This session will take around an hour.
• You are free to withdraw at any point.
• Please sign the consent form.
• The discussion will be recorded and confidentiality will be maintained.
• The purpose of this focus group is to hear your views/opinions/thoughts about the Light Touch Monitoring service.

Ground rules:
- Please feel free to express your opinion
- We won’t be telling people outside this room who said what.
- Everyone has a chance to talk, respect others when they are talking.
- There is no right or wrong answers; even negative comments are useful in gaining an insight about the service
- Is there any question before I start?

Let’s start by introducing yourself:
  o Name, professional post, how long you have been in your post.

1. Implementation of the LTM
   • How do you select patients for the Light Touch monitoring service?
     - What barriers do you faced in the implementation of the LTM service?
     - How things could have been managed?
   • What facilitate/helped you in the implementation of the LTM service?
     - Information needs of staff/patient/carer
     - Training for staff/patient/carer
   • What instructions/advice do you give the patients regarding:
     - The channel of communications
     - The symptom diary
       o Supply of symptom diary
       o Do you think daily recording is necessary?
       o What to record and for how long?
     - The self management plan booklet – do all patients receive this?
     - The patient’s management plan
     - What is your view on the pulse oximeter?
       o Replacement of batteries

2. Technology and service provision
• Can you tell me your perceptions and experiences of the technology and Light Touch Monitoring service provision?
  ▪ Is there any changes in the way patients and healthcare professionals relate to each other?
  ▪ Can you provide the service to all who may benefit?
  ▪ What is your view on the pulse oximeter?
• Do you think the LTM helps you to prevent admissions/visits to the Accident & Emergency Department?
  ▪ Is there any increase or reduction in home visits?
  ▪ Is there any difference on patient admission and emergency department visits?
  ▪ Is there any change in the prescribing of medications?
• How do you evaluate the effectiveness of this service?
  ▪ Resources
  ▪ Support for staff/patient/carer
• Do you think receiving a text message from patients on their oxygen saturation level would enhance the service?

3. Perception of the patient's decision making process
• How do you think patients make decisions regarding:
  ▪ Treatment
  ▪ Response to deterioration
  ▪ Need for professional advice
• How do you think the LTM influence this process?
• Do you think the LTM has made a difference on how patients perceive their condition and in self management?
  ▪ How confident are you when the patients take their own oxygen saturation measurement?

4. Healthcare professionals perceptions and experiences of the LTM process
• What is your experience in making decision when a COPD patient using the LTM rings up with low oxygen saturation?
  ▪ Protocol/procedure
  ▪ Confidence in making decisions
  ▪ Steps taken if any concerns
  ▪ How do you feel about the lack of face to face consultation?
• What do you do with the information in patient’s symptom diary?
• Do you look at the readings on an exacerbation routinely?
  ▪ If the patients record in scraps of paper
  ▪ If patients did not record
  ▪ Help in decision making
  ▪ Other information to consider
  ▪ Any changes to the symptom diary
• What do you do with the self management plan booklet?
  ▪ Update on self management plan booklet
• How do you handle incoming calls for help?
  ▪ On a rota
  ▪ How do you record?
  ▪ Co-ordination of information

**End the session:**
• Is there anything else you would like to add?
• Thank the participants
Additional file 3c: Topic guide for managers – 1st interview

Light Touch Monitoring Study
Interviews with managers

Introduction:
- Introduce self
- Purpose of the interview
- Inform that the interview will take an hour
- Participant can withdraw at any point
- Get consent
- Inform confidentiality will be maintained
- Interview will be recorded for transcribing purposes

1. Participant’s details
   - Ask the participant’s name, professional post and how long the participant has been in the post.

2. Implementation of the LTM service
   - What is your perception and experience in implementing the Light touch monitoring service?
     ▪ What barriers do you faced in the implementation of the LTM service?
     ▪ How things could have been managed?
   - What facilitate/helped you in the implementation of the LTM service?
     ▪ Information needs staff/patient/carer
     ▪ Training and education for staff/selection of patients
   - What is your experience in setting up the LTM contact facilities?

3. Technology and service provision
   - Can you tell me your perception and experiences of the technology and Light Touch monitoring service provision?
   - Is there any changes in the way patients and healthcare professionals relate to each other?
   - How do you evaluate the effectiveness of this service?
   - How do you feel about the lack of face to face consultation?
   - What are your views on the resources?
     ▪ Pulse oximeters
     ▪ Replacement of batteries
     ▪ Self-management plan booklets
     ▪ Symptom diary
     ▪ Support for staff/patients/carers
     ▪ Managing contacts/phone calls from patients/carers
4. Future vision for the Light Touch Monitoring service
   • What is your future vision on the Light Touch monitoring service?
     ▪ Can you provide the service to all who may benefit?
     ▪ Do you intend to collect the pulse oximeters back once patients are self-managing with their symptoms?
     ▪ Is there any progress on the Florence service?
     ▪ Is there any plan to refer patients to the LTM service earlier rather than at critical points (presently most patients are referred from hospitals)?
     ▪ What plans are in place to highlight this service to other healthcare professionals?

5. Is there anything you would like to add?
COPD Light Touch Study

Additional file 3d: Topic guide for patients – 2\textsuperscript{nd} interview

Introduction

- Purpose of the 2\textsuperscript{nd} interview
- Inform patient about confidentiality
- Get patient’s consent
- Inform patient the interview will take up to ½ an hour
- Interview will be tape recorded for transcribing purposes

1. How is your health since the last time I saw you?

2. Impact of LTM on daily life
   - Can you tell me how you are getting on with the pulse oximeter since then?
   - Has it made any difference to your life?

3. Practical issues using the pulse oximeter
   - How have you found using the pulse oximeter?

4. Decision making
   - Has using the pulse oximeter helped you manage your health at home?
   - How have you been keeping with the symptom diary?
   - Can you tell me whether you have any exacerbation since the last time we met?
     - If yes: What did you do and who did you contact?
     - Were you admitted to the hospital?

5. Future plans
   - How long do you think you will be using this?

6. Is there anything you would like to add?

Thank the participant