

Public and clinicians' views and experiences of diagnosing and monitoring lung disease: interviews

Submission date 13/12/2024	Recruitment status No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
Registration date 16/12/2024	Overall study status Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
Last Edited 16/12/2024	Condition category Respiratory	<input type="checkbox"/> Individual participant data <input checked="" type="checkbox"/> Record updated in last year

Plain English summary of protocol

Background and study aims

Airways disease refers to lung disease where the airways become narrowed and/or inflamed. Airways disease can be hard to diagnose for several reasons. First, as airway narrowing does not necessarily cause symptoms in the early stages, and can come on gradually, it can go unnoticed for many years before diagnosis. Second, those who have smoked may not think there is anything that can be done and may be reluctant to seek help for a condition they might feel is self-inflicted. Third, even once patients seek help for symptoms, current diagnostic techniques (measurement of lung function using spirometry) are difficult to perform for patients and require skills training to deliver and interpret the test. For this reason, there is interest in novel technologies to help diagnose and monitor airways disease, particularly those which could be done at large scale by patients in their own homes, or by professionals without training. One of these is Eupnoos, a novel technology which uses Artificial Intelligence (machine learning) pattern recognition of exhaled breath sounds to identify airway limitation (similar concepts to those used in the widely used music identification app "Shazam"). In order to further research and develop this technology, they first need to understand how such a technology could be used in airways disease diagnosis and monitoring, and have asked for our expertise at the University of Oxford in delivering research to address this. Therefore, this study aims to explore patient and clinician views of app-based technologies to diagnose and monitor airways disease.

Who can participate?

You may be able to take part if you have been diagnosed with a lung disease affecting the airways (COPD or asthma) OR are a current or ex-smoker (more than 10 cigarettes per day for more than 10 years on average, not including e-cigarettes/vapes)

What does the study involve?

You will take part in an online or telephone interview e.g., using Teams, or a group discussion (focus group), depending on your preference to tell us your views on the new technology which has been developed to diagnose and monitor lung disease.

What are the possible benefits and risks of participating?

There are no direct advantages for you if you take part. Talking and reflecting on your lung condition (if you have one) might help guide how you manage it or your future discussions with your usual health care professional. Findings from the study will be used to help inform future strategies for delivering patient-centred healthcare in lung disease, so taking part in the study could help other people in future.

There are no real risks or disadvantages to taking part in this study. The main thing that you must consider is whether you're happy to take part in an interview to discuss how you manage your lung health. This could involve discussion about how it was diagnosed, or your views about the risk of having a condition in the future. You do not need to answer any questions you don't want to.

Where is study run from?

University of Oxford (UK)

When is study starting and long is expected to run for?

May 2024 to May 2025

Who is funding the study?

National Institute for Health and Care Research (NIHR) I4IFAST-588 Invention for Innovation (i4i) Programme (reference number: NIHR207332) (UK)

Who is the main contact?

Dr Marta Wanat, marta.wanat@phc.ox.ac.uk

Study website

<https://www.phc.ox.ac.uk/research/airways-disease-smartphone-diagnosis-monitoring>

Contact information

Type(s)

Public, Scientific, Principal Investigator

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Additional identifiers

EudraCT/CTIS number

Nil known

IRAS number

ClinicalTrials.gov number

Nil known

Secondary identifying numbers

NIHR207332

Study information

Scientific Title

Public and clinicians' views and experiences of diagnosing and monitoring lung disease: a qualitative study

Study objectives

Airways disease refers to lung disease where the airways become narrowed and/or inflamed. They cause daily symptoms including cough and breathlessness which can be severe, as well as flare-ups which can result in hospital admission or even death.

Traditionally these have been divided into asthma (temporary or reversible airway obstruction, usually caused by inflammation and presenting in earlier life) and chronic obstructive pulmonary disease or COPD (permanent or irreversible airway obstruction, usually caused by smoking and presenting in later life), but it is increasingly recognised that there is overlap, and treatments are similar.

Airways disease can be hard to diagnose for several reasons. First, as airway narrowing does not necessarily cause symptoms in the early stages, and can come on gradually, it can go unnoticed for many years before diagnosis. Second, those who have smoked may not think there is anything that can be done and may be reluctant to seek help for a condition they might feel is self-inflicted. Third, even once patients seek help for symptoms, current diagnostic techniques (measurement of lung function using spirometry) are difficult to perform for patients and require skills training to deliver and interpret the test.

For this reason, there is interest in novel technologies to help diagnose and monitor airway disease, particularly those which could be done at large scale by patients in their own homes, or by professionals without training. One of these is Eupnoos, a novel technology which uses Artificial Intelligence (machine learning) pattern recognition of exhaled breath sounds to identify airway limitation (similar concepts to those used in the widely used music identification app Shazam). In order to further research and develop this technology, they first need to understand how such a technology could be used in airway disease diagnosis and monitoring, and have asked for our expertise at the University of Oxford in delivering research to address this.

Therefore, this study aims to explore patient and clinician views of app-based technologies to diagnose and monitor airway disease.

Ethics approval required

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Ethics approval(s)

Approved 18/09/2024, Medical Sciences Interdivisional Research Ethics Committee (The Research Services, Boundary Brook House, Churchill Drive, Headington, Oxford, OX3 7GB, United Kingdom; +44 (0)1865 616575; ethics@medsci.ox.ac.uk), ref: R95717/RE001

Study design

Qualitative study using interviews

Primary study design

Observational

Secondary study design

Qualitative study

Study setting(s)

Community, Internet/virtual

Study type(s)

Quality of life

Participant information sheet

Not available in web format; please use contact details to request a participant information sheet

Health condition(s) or problem(s) studied

Airways disease

Interventions

Participants will be asked about their views and experiences of diagnosing and monitoring airways disease including their views on the new app.

Intervention Type

Not Specified

Primary outcome measure

Views and experiences collected via interviews at a single time point

Secondary outcome measures

There are no secondary outcome measures

Overall study start date

01/05/2024

Completion date

01/05/2025

Eligibility

Key inclusion criteria

1. A diagnosis of airway disease (COPD or asthma) as reported by the participant OR current /previous cigarette smoker (more than 10 cigarettes per day for more than 10 years)
AND
2. Good standard of speaking English and able to read and understand study materials
3. Willing and able to give informed consent for participation in the study
4. Well enough to participate in an interview/focus group

Participant type(s)

Healthy volunteer, Patient

Age group

Adult

Lower age limit

18 Years

Upper age limit

100 Years

Sex

Both

Target number of participants

25

Key exclusion criteria

Not able to give consent

Date of first enrolment

18/09/2024

Date of final enrolment

31/03/2025

Locations**Countries of recruitment**

England

United Kingdom

Study participating centre**University of Oxford**

Nuffield Department of Primary Care Health Sciences
Radcliffe Observatory Quarter
Woodstock Road
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OX2 6GG

Sponsor information

Organisation

University of Oxford

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Sponsor type

University/education

Funder(s)

Funder type

Government

Funder Name

National Institute for Health and Care Research

Alternative Name(s)

National Institute for Health Research, NIHR Research, NIHRresearch, NIHR - National Institute for Health Research, NIHR (The National Institute for Health and Care Research), NIHR

Funding Body Type

Government organisation

Funding Body Subtype

National government

Location

United Kingdom

Results and Publications

Publication and dissemination plan

Publications in peer-reviewed journal and lay summary

Intention to publish date

31/03/2026

Individual participant data (IPD) sharing plan

The datasets generated and/or analysed during the current study are not expected to be made available due to data confidentiality.

IPD sharing plan summary

Not expected to be made available