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

**Submission date**
13/12/2024

**Recruitment status**
No longer recruiting

**Registration date**
16/12/2024

**Overall study status**
Completed

**Last Edited**
16/12/2024

**Condition category**
Respiratory

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[ ] Results
[ ] Individual participant data
[ ] 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

# Contact information

### Type(s)
Public, Scientific, Principal investigator

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# Additional identifiers

### National Institute for Health and Care Research (NIHR)

207332

# 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
Ethics approval required

## 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

## Primary study design
Observational

### Study design
Qualitative study using interviews

### Study type(s)
Quality of life

### 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(s)
Views and experiences collected via interviews at a single time point

### Key secondary outcome(s)
There are no secondary outcome measures

### 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

### Healthy volunteers allowed
No

### Age group
Adult

### Lower age limit
18 Years

### Upper age limit
100 Years

**Sex**
All

**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**
United Kingdom

England

**Study participating centre**
**University of Oxford**
Nuffield Department of Primary Care Health Sciences
Radcliffe Observatory Quarter
Woodstock Road
Oxford
United Kingdom
OX2 6GG

# Sponsor information

**Organisation**
University of Oxford

# 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

### 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

### Study outputs

| Output type | Details | Date created | Date added | Peer reviewed? | Patient-facing? |
|---|---|---|---|---|---|
| Study website | Study website | 11/11/2025 | 11/11/2025 | No | Yes |