

# Optimising the use of azithromycin antibiotic to reduce Bronchiectasis flare-ups

<b>Submission date</b> 15/03/2025	<b>Recruitment status</b> Recruiting	<input checked="" type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 08/05/2025	<b>Overall study status</b> Ongoing	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
<b>Last Edited</b> 08/05/2025	<b>Condition category</b> 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

People living with bronchiectasis may experience worsening symptoms such as shortness of breath, cough and wheezing in addition to changes that may be expected for having bronchiectasis. The worsening of symptoms is called exacerbation or flare-up and can be debilitating and frightening, requiring additional treatment, often with azithromycin. This is an antibiotic medicine that also has anti-inflammatory properties. It is prescribed as long-term prevention to reduce the risk of flare-ups. Some people may be affected by side effects from azithromycin. Antibiotic resistance is another concern, especially when using azithromycin for prevention rather than to treat active infection. It is currently unknown whether to advise people to stop taking azithromycin once bronchiectasis has stabilised. It is also unknown if azithromycin is more effective in some people or more likely to cause side effects in others. Given these uncertainties, it is challenging to know how best to use azithromycin in managing bronchiectasis. Azithromycin is a valuable antibiotic. To maintain its benefit while avoiding unnecessary side effects it is necessary to reduce the chances of bacteria becoming resistant to it. This trial aims to establish the effects of stopping azithromycin in people whose bronchiectasis has stabilized after taking it for at least 3 months. It will compare continuing azithromycin with stopping it completely, examining the effects of these two treatments on flare-ups, symptoms, and quality of life, and identifying factors that may affect individual responses.

### Who can participate?

Patients aged 16 years old and over with clinically stable bronchiectasis and prescribed prophylactic azithromycin or an equivalent long-term macrolide for at least 90 days in the past 12 months due to reduce the risk of bronchiectasis exacerbations

### What does the study involve?

In this study, patients will continue taking azithromycin or switch to a placebo for 12 months. The dosage will match what they were already taking, which could be 250mg once a day three times a week, 500mg once a day three times a week, or 250mg once a day every day. The medication will be taken orally.

What are the possible benefits and risks of participating?

Participants may have no personal benefit from taking part in this trial. They will have trial-related monitoring and interactions with healthcare professionals during the trial. They may experience fewer azithromycin-related side effects. However, the results from this trial will benefit patients with bronchiectasis in the future because it will help the researchers know how best to use azithromycin long-term treatment for people with bronchiectasis. Information from the trial will also help the researchers better understand frailty in bronchiectasis from the data that are collected as participants will be followed up. The researchers also hope to gain information about the best approaches to aid recruitment into clinical trials.

Participants may experience more flare-ups of their bronchiectasis or may experience side effects from the azithromycin which will be closely monitored by the trial teams at participating sites. If they experience 3 or more flare-ups within the year, the participant will be advised to stop the trial medication and possibly re-start their standard azithromycin treatment (clinician's decision).

Although the participants would have been on azithromycin for at least 90 days before recruitment to the trial, there may be some burden linked to participants being asked to self-administer oral medication. There may be a risk that tablets may not be taken (underdose) or taken too much (overdose). This will be mitigated by regular checks of compliance over the telephone/visits. The regimen will also match that of the patient's routine prescription for the IMP that they had been taking for at least the previous 90 days to minimise any further burden on the participants.

There may be a risk with IMP delivery for participants unable to collect the IMP at baseline / 6 months visit whereby there is either a delay of the participant receiving the IMP, or not receiving the IMP at all. This could be due to delivery issues, the participant not being at home, or someone else taking the delivery, etc. This will be mitigated by trial team contact with the participant within a week of the participant's enrolment to the trial and the 6 months visit.

If trial visits cannot coincide with the participant's standard of care (SoC) appointments, there may be the burden of additional visits to the hospital. This burden will be mitigated by carrying out those visits remotely.

Where is the study run from?

Newcastle University, UK

When is the study starting and how long is it expected to run for?

March 2025 to May 2029

Who is funding the study?

NIHR Health Technology Assessment Programme (HTA)

Who is the main contact?

Prof Anthony De Soya, [anthony.de-soya@newcastle.ac.uk](mailto:anthony.de-soya@newcastle.ac.uk)

## Contact information

Type(s)

Scientific

**Contact name**

Prof Anthony De Soyza

**Contact details**

Dpt Respiratory Medicine, Population Health Sciences Institute, Newcastle University  
Newcastle Upon Tyne  
United Kingdom  
NE2 4HH  
+44 (0)191 2231439  
anthony.de-soyza@newcastle.ac.uk

**Additional identifiers****EudraCT/CTIS number**

Nil known

**IRAS number**

1010479

**ClinicalTrials.gov number**

Nil known

**Secondary identifying numbers**

10730

**Study information****Scientific Title**

Bronchiectasis: Optimising Azithromycin prevention Treatment to reduce exacerbations (BOAT):  
A double blind pragmatic 2 arm phase IV randomised controlled trial

**Acronym**

BOAT

**Study objectives**

To evaluate the benefits and risks of complete discontinuation of azithromycin chemoprophylaxis vs continued azithromycin chemoprophylaxis treatment in people with stable Bronchiectasis at high risk of exacerbations and assess these effects in specific patient subgroups.

Further evaluation of clinical effectiveness defined by effect on exacerbations (specifically number/rate and severity of exacerbations).

Health status as measured by symptoms and quality of life.

Hospitalisation and healthcare use.

Mortality (all-cause, respiratory, cardiac).

Adverse events of special interest and serious adverse reactions.

To determine what factors or patient subgroups impact interventions assessed.

To estimate the cost-effectiveness of complete discontinuation of azithromycin chemoprophylaxis in people with Bronchiectasis at high risk of exacerbations.

To evaluate adherence to the trial medication.

**Ethics approval required**

Ethics approval required

**Ethics approval(s)**

Approved 29/04/2025, North of Scotland Research Ethics Committee (Summerfield House, 2 Eday Road, Aberdeen , AB15 6RE , United Kingdom; +44 (0)1224 558458 ; gram.nosres@nhs.scot), ref: 25/NS/0027

**Study design**

Randomized placebo-controlled double-blind parallel-group-assignment study

**Primary study design**

Interventional

**Secondary study design**

Randomised controlled trial

**Study setting(s)**

Hospital

**Study type(s)**

Efficacy

**Participant information sheet****Health condition(s) or problem(s) studied**

Medical condition: Bronchiectasis

Medical condition in lay language: Bronchiectasis

Therapeutic areas: Diseases [C] - Respiratory Tract Diseases [C08]

**Interventions**

The intervention is the continuation of long-term azithromycin compared to a matched placebo. The dose is matched to the patient's pre-existing long-term macrolide dose commonly 250mg once a day azithromycin thrice weekly, azithromycin 500mg once a day thrice weekly or azithromycin 250mg once a day every day. The route of administration is enteral. Randomisation will be performed using the "Sealed envelope" online system. The duration of treatment is 12 months.

**Intervention Type**

Drug

**Pharmaceutical study type(s)**

Prophylaxis

**Phase**

Phase IV

**Drug/device/biological/vaccine name(s)**

Azithromycin [Azithromycin]

## **Primary outcome measure**

Time to first exacerbation of bronchiectasis, as defined by a sustained increase in symptoms, usually of 72 hours, requiring antibiotic therapy measured using data collected from electronic case report forms (eCRF). The primary endpoint does not have a fixed time point of evaluation. The maximum treatment period is 12 months with further follow-up after trial allocation medication ends from 13-24 months.

## **Secondary outcome measures**

The following secondary outcome measures are assessed at 3, 6, 12, 18, and 24 months unless otherwise stated:

1. Further evaluation of clinical effectiveness, defined by the effect on exacerbations (specifically number/rate and severity of exacerbations) measured using data collected from eCRF
2. Health status as measured using the following tools for symptoms and quality of life:
  - 2.1. EuroQol 5-Dimension 5-Level (EQ-5D-5L)
  - 2.2. Quality of Life Bronchiectasis (QoLB)
  - 2.3. Chronic Airways Assessment Tool (CAAT)
  - 2.4. Visual Analog Scale (VAS)
  - 2.5. Patient Health Questionnaire-2 (PHQ-2)
  - 2.6. Generalized Anxiety Disorder-2 (GAD-2)
  - 2.7. Clinical Frailty Score (CFS)
  - 2.8. Self-Rated Health Scale (SRHS)
3. Hospitalisation and healthcare use measured using a Health Utilisation Questionnaire at 6, 12, 18, 24 months
4. Mortality (all-cause, respiratory, cardiac) measured using data collected from eCRF
5. Adverse events of special interest and serious adverse reactions measured using data collected from eCRF
6. Factors or patient subgroups that impact interventions measured using data collected from eCRF
7. To estimate the cost-effectiveness of complete discontinuation of azithromycin chemoprophylaxis in people with Bronchiectasis at high risk of exacerbations measured using a Health Utilisation Questionnaire
8. To evaluate adherence measured using pill counts at trial visits

## **Overall study start date**

13/03/2025

## **Completion date**

31/05/2029

# **Eligibility**

## **Key inclusion criteria**

1. Age 16 years or older (no upper age limit)
2. Be able and willing to provide informed consent.
3. Have clinically stable Bronchiectasis, i.e. no Bronchiectasis exacerbation for at least 30 days.
4. Established clinical diagnosis of Bronchiectasis and prescribed receiving prophylactic azithromycin or an equivalent long-term macrolide for at least 90 days in the past 12 months to reduce risk of Bronchiectasis exacerbations
5. Historical CT scan report confirming bronchiectasis (or equivalent e.g. bronchogram)
6. Any suspected aetiology of Bronchiectasis can be included

7. Any treatment regimen of azithromycin or an equivalent long-term macrolide (noting current guidelines allow 250mg OD thrice weekly, 250mg each day or 500mg OD thrice weekly of azithromycin)

8. Available data (more than 5 parameters from the following routinely collected data) to calculate Bronchiectasis Severity Index (BSI) (1) age, 2) sex, 3) FEV1% predicted current or historical in last 12 months), 4) number of prior exacerbations, 5) prior hospitalisations in last 24 months, 6) MRC dyspnoea score, 7) microbiology status (Pseudomonas colonies or other) , 8) BMI. CT Reiff scoring also preferred but not essential.

In addition to the main trial inclusion criteria:

Participants who are able may choose to provide informed consent for the optional sub-study.

This will be a separate consent question to tick on the consent form (for the feedback questionnaire only, or feedback questionnaire and possibility of telephone call to gain further in-depth feedback).

### **Participant type(s)**

Patient

### **Age group**

Mixed

### **Lower age limit**

16 Years

### **Sex**

Both

### **Target number of participants**

1000

### **Key exclusion criteria**

1. Known hypersensitivity to any of the trial drugs or excipients.
2. Current breast feeding, pregnancy or planned pregnancy during the trial.
3. Any medical history or clinically relevant abnormality that makes patient ineligible for inclusion because of a safety concern relating to continuing or discontinuing azithromycin or other considerations.
4. Bronchiectasis exacerbation requiring treatment with antibiotics and/or steroids up to 30 days prior to study enrolment (can be re-screened after 30 days).
5. Azithromycin prophylaxis prescribed for non-Bronchiectasis condition or as part of treatment regimen for Non-tuberculosis mycobacteria.
6. Azithromycin prophylaxis prescribed for <90 days.
7. Participation in other trial of investigational medicinal product of bronchiectasis (unless a co-enrolment agreement has been developed and approved). Participation in observational studies is allowed.
8. Where participant / supervising clinician does not feel at equipoise for randomisation to either continuation or withdrawal of macrolide.
9. Participant has usual regimen of azithromycin of winter on therapy/ summer cessation of therapy AND patient unwilling to be randomised to trial allocation for 12 months.

### **Date of first enrolment**

01/07/2025

**Date of final enrolment**

31/12/2026

**Locations****Countries of recruitment**

England

Scotland

United Kingdom

Wales

**Study participating centre****Freeman Hospital [Lead site]**

Freeman Road

High Heaton

Newcastle upon Tyne

United Kingdom

NE7 7DN

**Study participating centre****Royal Brompton & Harefield Hospital**

Sydney Street

London

United Kingdom

SW3 6NP

**Study participating centre****North Tyneside General Hospital**

Rake Lane

North Shields

United Kingdom

NE29 8NH

**Study participating centre****Royal Papworth Hospital**

Papworth Road

Cambridge Biomedical Campus

Cambridge

United Kingdom

CB2 0AY

**Study participating centre**  
**Southampton General Hospital**  
Tremona Road  
Southampton  
United Kingdom  
SO16 6YD

**Study participating centre**  
**Bradford Royal Infirmary**  
Duckworth Lane  
Bradford  
United Kingdom  
BD9 6RJ

**Study participating centre**  
**Addenbrookes Hospital**  
Hills Road  
Cambridge  
United Kingdom  
CB2 0QQ

**Study participating centre**  
**Torbay Hospital**  
Newton Road  
Torquay  
United Kingdom  
TQ2 7AA

**Study participating centre**  
**Greater Lancashire Hospitals**  
Wyder Court  
Ribbleton  
Preston  
United Kingdom  
PR2 5BW

**Study participating centre**



**Westmorland General Hospital**

Burton Rd  
Kendal  
United Kingdom  
LA9 7RG

**Study participating centre**

**Bristol Royal Infirmary**

Marlborough Street  
Bristol  
United Kingdom  
BS2 8HW

**Study participating centre**

**Wythenshawe Hospital**

Southmoor Road  
Wythenshawe  
Manchester  
United Kingdom  
M23 9LT

**Study participating centre**

**Liverpool Heart & Chest Hospital**

Broadgreen Hospital  
Thomas Drive  
Liverpool  
United Kingdom  
L14 3PE

**Study participating centre**

**Glenfield Hospital**

Groby Road  
Leicester  
United Kingdom  
LE3 9QP

**Study participating centre**

**University Hospital of North Tees**

Hardwick Road

Stockton-on-tees  
United Kingdom  
TS19 8PE

**Study participating centre**  
**Kingston Hospital**  
Galsworthy Road  
Kingston upon Thames  
United Kingdom  
KT2 7QB

**Study participating centre**  
**Royal Devon & Exeter Hospital**  
Barrack Road  
Exeter  
United Kingdom  
EX2 5DW

**Study participating centre**  
**South Tyneside District Hospital**  
Harton Lane  
South Shields  
United Kingdom  
NE34 0PL

**Study participating centre**  
**Royal Derby Hospital (nuh)**  
Uttoxeter Road  
Derby  
United Kingdom  
DE22 3NE

**Study participating centre**  
**University Hospital (coventry)**  
Clifford Bridge Road  
Coventry  
United Kingdom  
CV2 2DX

**Study participating centre**  
**Ninewells Hospital**  
Ninewells Avenue  
Dundee  
United Kingdom  
DD1 9SY

**Study participating centre**  
**Victoria Hospital - NHS Fife**  
Hayfield House  
Hayfield Road  
Kirkcaldy  
United Kingdom  
KY2 5AH

**Study participating centre**  
**Royal Infirmary of Edinburgh**  
51 Little France Crescent  
Old Dalkeith Road  
Edinburgh  
United Kingdom  
EH16 4SA

**Study participating centre**  
**Glasgow Royal Infirmary**  
84 Castle Street  
Glasgow  
United Kingdom  
G4 0SF

**Study participating centre**  
**University Hospital Llandough**  
Penlan Road  
Llandough  
Penarth  
United Kingdom  
CF64 2XX

**Study participating centre**  
**Prince Philip Hospital**  
Bryngwynmawr

Dafen  
Llanelli  
United Kingdom  
SA14 8QF

## Sponsor information

### Organisation

Newcastle upon Tyne Hospitals NHS Foundation Trust

### Sponsor details

Level 1, Regent Point, Regent Farm Road, Gosforth  
Newcastle Upon Tyne  
England  
United Kingdom  
NE3 3HD  
+44 191 2826774  
tnu-tr.sponsormanagement@nhs.net

### Sponsor type

Hospital/treatment centre

### Website

<http://www.newcastle-hospitals.org.uk/>

### ROR

<https://ror.org/05p40t847>

## Funder(s)

### Funder type

Government

### Funder Name

Health Technology Assessment Programme

### Alternative Name(s)

NIHR Health Technology Assessment Programme, HTA

### Funding Body Type

Government organisation

### Funding Body Subtype

National government

**Location**

United Kingdom

## **Results and Publications**

**Publication and dissemination plan**

1. Peer reviewed scientific journals
2. Internal report
3. Conference presentation
4. Publication on website
5. Other publication
6. Submission to regulatory authorities

**Intention to publish date**

31/05/2030

**Individual participant data (IPD) sharing plan**

A separate data sharing policy with appropriate safeguards (i.e. controlled access, as advised by NHS England) will be established and in keeping with the policies of the Sponsor and funder.

**IPD sharing plan summary**

Data sharing statement to be made available at a later date