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Antibiotics for uncomplicated lower respiratory tract infection in older adults

Submission date 29/08/2024	**Recruitment status** Recruiting	[X] Prospectively registered [ ] Protocol [ ] Statistical analysis plan [ ] Results [ ] Individual participant data [ ] Record updated in last year
Registration date 17/10/2024	**Overall study status** Ongoing	
Last Edited 23/06/2025	**Condition category** Respiratory	

Plain English summary of protocol

Background and study aims

AFLOAT is a two-arm, double-blinded non-inferiority trial at multiple primary care sites. Non-complicated lower respiratory tract infections (LRTIs) are the most common reason for antibiotic prescription in the UK, despite most infections being viral in origin, to which antibiotics confer no meaningful results. Older people, aged 75+ are prescribed more antibiotics than any other age group in the UK. LRTI was estimated to cost the NHS ≈£190 million in 2005. Older people are at increased risk of a prolonged and more severe illness, development of pneumonia and exacerbation of pre-existing chronic conditions. Whether older patients with risk factors for complications benefit from antibiotics is unknown and NICE guidance recommends considering immediate or delayed antibiotics for this group when presenting with non-complicated LRTIs. This leaves prescribing clinicians with frequent dilemmas over whether to prescribe antibiotics in this patient population. Antibiotic overuse can increase the risk of carriage of antibiotic-resistant organisms, which is a threat both for the individual treated and wider society. Antibiotic prescriptions also lead to the medicalisation of self-limiting illness and double re-consultation rates. However, under-prescription of antibiotics may put older people at increased risk of prolonged and more severe illness and pneumonia. This study will look at whether a placebo is non-inferior to antibiotics. The study assesses whether the duration of illness (time until all symptoms are rated absent or mild) is no worse in those who take placebo versus antibiotics in adults aged 65 years old and over who are seen in primary care with LRTI and risk factors for complications.

Who can participate?

Adult patients aged 65 years old and over with symptoms of uncomplicated LRTI and 1 or more risk factors for complications (aged > 80 years, recent hospital admission, chronic conditions, frailty).

What does the study involve?

Participants will be randomised into the doxycycline arm or matched placebo arm and asked to complete a daily diary for a 28-day follow-up period.

What are the possible benefits and risks of participating?

Benefits not given at time of publication.

There is a risk of potentially worsening of LRTI. As detailed above, patients will be given safety netting information for when to contact their healthcare providers.

Where is the study run from?
University Hospital Southampton, UK

When is the study starting and how long is it expected to run for?
August 2024 to July 2027

Who is funding the study?
NIHR Health Technology Assessment Programme (HTA)

Who is the main contact?
afloat@soton.ac.uk

Contact information

Type(s)
Scientific

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Public

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Additional identifiers

Integrated Research Application System (IRAS)
1010353

Central Portfolio Management System (CPMS)
56324

National Institute for Health and Care Research (NIHR)
157478

Protocol serial number
ERGO77292

Study information

Scientific Title
Antibiotics for uncomplicated Lower respiratory tract infection in Older AdulTs

Acronym
AFLOAT

Study objectives
Primary objective:
To test whether placebo is non-inferior to antibiotics in terms of time until all symptoms are rated mild or absent in the population.

Secondary objectives:
1. To compare the effect of placebo vs oral doxycycline antibiotic in terms of deterioration of illness, symptom severity, and healthcare consultations.
2. To undertake a cost consequence analysis of placebo vs oral doxycycline antibiotic.

Ethics approval required
Ethics approval required

Ethics approval(s)
Approved 16/10/2024, East Midlands – Nottingham 2 REC (2 Redman Place, Stratford, London, E20 1JQ, United Kingdom; +44 207 104 8009; nottingham2.rec@hra.nhs.uk), ref: 24/EM/0205

Primary study design
Interventional

Study design
Randomized double-blind parallel-group placebo-controlled study

Study type(s)
Efficacy

Health condition(s) or problem(s) studied
Medical condition: Non-complicated lower respiratory tract infection
Medical condition in lay language: non-complicated chest infection
Therapeutic areas: Diseases [C] - Respiratory Tract Diseases [C08]

Interventions
Doxycycline 100mg orally for five days. Two tablets on day 1 and one tablet on days 2-5, OR matched placebo. Participants will be randomised using the ALEA Clinical randomisation tool on a 1:1 ratio.

Intervention Type
Drug

Phase
Phase III

Drug/device/biological/vaccine name(s)
Doxycycline Capsules BP 100mg [Doxycycline hyclate]

Primary outcome(s)
Time until all symptoms (cough, phlegm, shortness of breath, wheeze, blocked or runny nose, chest pain, muscle aches, headaches, disturbed sleep, general feeling of being unwell, fever and interference with normal activities) are rated as “absent” or “mild” (scoring 2 or less on a 0-6 point scale) by patients in their self-reported daily diaries

Key secondary outcome(s)
1. Deterioration of illness (return to the doctor with a worsening of symptoms, new symptoms or signs, illness requiring hospital admission, or death within four weeks) measured using the self-reported patient diaries, on Days 7, 14, 21 and 28
2. Symptom severity during days 2-4 after the initial consultation (patients tell us that this is the period when their symptoms are worst) measured daily, using the self-reported patient diary
3. Antibiotic consumption over 28 days measured using patient self-reporting in a daily diary
4. Total symptom score over time by a patient measured using self-reporting in a daily diary
5. Personal costs to patients and productivity costs measured using a health economist questionnaire in the patient-reported diary at day 28
6. Health-related quality of life measured using the EuroQol EQ-5D-5L questionnaire on day 0 (day of consent), and then every 7 days until day 28
7. Time until return to usual activities (effect on usual activities rated as ‘no problem’) measured using the health-related quality of life questionnaire] at baseline, and days 7, 14, 21 and 28

Completion date
31/07/2027

Eligibility

Key inclusion criteria
1. Age 65 years and over
2. Presenting in primary care with signs and symptoms suggestive of an uncomplicated LRTI, defined as acute cough (rated moderately severe or worse and lasting for 14 days or less), and at least one of the following signs or symptoms: productive cough, rhonchi on auscultation, temperature ≥38oC, dyspnoea
3. One or more of the following risk factors for complicated illness:
3.1. Age 80 or over
3.2. >=1 unplanned hospital admissions in the previous year
3.3. Type 1 or 2 diabetes, chronic cardiovascular disease, chronic lung disease, chronic kidney disease, chronic liver disease, chronic neuromuscular disease
3.4. Clinical frailty score >=4

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Senior

Lower age limit
65 Years

Sex
All

Key exclusion criteria
1. Clinical diagnosis of pneumonia
2. A known positive test for a viral respiratory pathogen (e.g. COVID-19 or influenza) during current illness (testing will only occur if part of routine practice)
3. Cough thought to most likely have a non-infective origin (e.g. PE, LVF)
4. Patient needs same-day secondary care assessment or hospital admission
5. Significant impaired immunity, e.g. hematologic malignancy, chronic use of oral steroids (≥5mg prednisolone (or equivalent) per day for 7 days or more), known immunodeficiencies
6. Moderate to severe COPD
7. Hospitalisation in the month before index consultation
8. Antibiotic use for respiratory tract infection in the month before index consultation
9. Tetracycline allergy
10. Patient with bronchiectasis, cystic fibrosis or primary ciliary dyskinesia (not often seen in primary care)
11. Inability to complete the patient diary
12. Taking part in another CTIMP

Date of first enrolment
18/02/2025

Date of final enrolment
14/03/2027

Locations

Countries of recruitment
United Kingdom

England

Wales

Study participating centre
Oaks Healthcare
26-30 London Road
Waterlooville, Hampshire
United Kingdom
PO8 8DL

Study participating centre
Bicester Health Centre
The Health Centre
Coker Close
Bicester
United Kingdom
OX26 6AT

Study participating centre
Hedena Health
207 London Road
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OX3 9JA

Study participating centre
The Boathouse Surgery
Whitchurch Road
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RG8 7DP

Study participating centre
Melrose Surgery
73 London Road
Reading
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RG1 5BS

Study participating centre
Marine Lake Medical Practice
Marine Lake Health & Wellbeing Ctr
Orrysdale Road
West Kirby
Wirral
United Kingdom
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Study participating centre
Vauxhall Health Centre
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Study participating centre
Shifa Surgery
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BB1 6DY

Study participating centre
Station House Surgery
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Kendal, Cumbria
United Kingdom
LA9 6SA

Study participating centre

Nettleham Medical Practice
14 Lodge Lane
Nettleham
Lincoln
United Kingdom
LN2 2RS

Study participating centre
Albany House Medical Centre
3 Queen Street
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United Kingdom
NN8 4RW

Study participating centre
Oaklands Health Centre
Huddersfield Road
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United Kingdom
HD9 3TP

Study participating centre
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Goole Health Centre
Woodland Avenue
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DN14 6RU

Study participating centre
James Alexander Family Practice
Bransholme Health Centre
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121 Preston Hill

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Study participating centre
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Study participating centre
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Study participating centre
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Study participating centre
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Sponsor information

Organisation
University of Southampton

ROR
https://ror.org/01ryk1543

Funder(s)

Funder type
Government

Funder Name
Health Technology Assessment Programme

Alternative Name(s)
NIHR Health Technology Assessment Programme, Health Technology Assessment (HTA), HTA

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 during and/or analysed during the current study are/will be available upon request from afloat@soton.ac.uk

IPD sharing plan summary

Available on request