ISRCTN43561070 https://doi.org/10.1186/ISRCTN43561070

Manchester Asthma and Allergy Study (MAAS) age 25 plus follow up

Submission date
11/08/2025

Recruitment status
Recruiting

Registration date
26/08/2025

Overall study status
Ongoing

Last Edited
12/05/2026

Condition category
Respiratory

[X] Prospectively registered
[X] Protocol
[_] Statistical analysis plan
[_] Results
[_] Individual participant data
[X] Record updated in last year

Plain English summary of protocol

Background and study aims
Asthma is the most common long-term illness in children, but we still don't fully understand what causes it. It tends to run in families, but it's not linked to a single gene, and environmental factors like pollution, allergens, tobacco smoke and viruses also play a role. Most asthma begins early in life, and researchers believe it's caused by a mix of genetic and environmental factors. This study builds on a long-running research project called the Manchester Asthma and Allergy Study (MAAS), which has followed children born in the mid-1990s to learn more about asthma. The aim now is to invite these participants, who are now adults aged 25 and over, to take part in a new follow-up to help researchers understand why asthma continues into adulthood for some people.

Who can participate?
People who were part of the original MAAS birth cohort study, recruited from Wythenshawe and Stepping Hill Hospitals in 1995, are being invited to take part.

What does the study involve?
Participants will be asked to attend a single visit lasting about 2 hours. This can take place at Wythenshawe Hospital, at home, or online/by post if preferred. During the visit, they'll complete questionnaires and have lung function and blood tests.

What are the possible benefits and risks of participating?
There are no direct medical benefits to taking part, but the information collected could help improve understanding of asthma and lead to better treatments in the future. The risks are minimal and similar to those of routine medical tests, such as a small amount of discomfort during blood sampling.

Where is the study run from?
Wythenshawe Hospital in Manchester (UK)

When is the study starting and how long is it expected to run for?
July 2024 to May 2028

Who is funding the study?
North West Lung Centre Charity (UK)

Who is the main contact?
Prof Clare Murray, clare.murray@manchester.ac.uk

Contact information

Type(s)
Public, Scientific, Principal investigator

Contact name
Prof Clare Murray

ORCID ID
https://orcid.org/0000-0002-8961-8055

Contact details
DIIIRM), School of Biological Sciences
Faculty of Medicine
Oxford Road
Manchester
United Kingdom
M13 9PL
+44 161 291 5818
clare.murray@manchester.ac.uk

Type(s)
Scientific

Contact name
Prof Angela Simpson

Contact details
DIIIRM), School of Biological Sciences
Faculty of Medicine
Oxford Road
Manchester
United Kingdom
M13 9PL
+44 1612915871
angela.simpson@manchester.ac.uk

Type(s)
Public

Contact name
Mrs Gina Kerry

Contact details

DIIIRM), School of Biological Sciences
Faculty of Medicine
Oxford Road
Manchester
United Kingdom
M13 9PL
+44 161 9987070
gina.kerry@mft.nhs.uk

Additional identifiers

Integrated Research Application System (IRAS)
351417

Study information

Scientific Title
Manchester Asthma and Allergy Study (MAAS) age 25 plus follow up

Acronym
MAAS25

Study objectives
Primary Question/Objective:
To identify the predictors of and risk factors for persistence of childhood asthma

Secondary Question/Objective:
1. To investigate the genetic, environmental and temporal factors which predict lung function, asthma and phenotypes and endotypes of wheeze
2. To determine predictors and biomarkers for development of lung function deficits into young adult life (e.g. CC16).
3. To investigate the genetic, environmental and temporal factors which predict onset and persistence of eczema, hay fever and food allergies
4. To investigate the determinants of symptom severity and exacerbations of wheezing illness.
5. To investigate the molecular mechanisms underlying genetic, environmental and temporal factors which predict onset and persistence and severity of eczema, hay fever, food allergies and exacerbations of wheezing illness.
6. To describe the patterns of sensitisation (to inhalant and food allergens) through childhood to adulthood and determine their associates
7. To model indoor and outdoor pollutants in relation to wheeze and atopic outcomes
8. To validate the clinical outcomes collected from questionnaire data with information collected from the GP record (such as prescriptions issued and hospital attendances)
9. To identify determinants of circulating CC16 from birth to adulthood.
10. To describe the association between self-reported ADHD symptoms and asthma and other allergies, and explore associated genetic, environmental and temporal factors.

Ethics approval required
Ethics approval required

Ethics approval(s)

Approved 02/10/2025, South Central – Oxford B Research Ethics Committee (2 Redman Place, Stratford, London, E20 1JQ, United Kingdom; +44 (0)207 1048032; oxford.rec@hra.nhs.uk), ref: 25/SC/0291

Primary study design
Observational

Study design
Longitudinal birth cohort study

Study type(s)
Other

Health condition(s) or problem(s) studied
Asthma and allergic diseases

Interventions
The study will comprise a single visit lasting approximately 2 hours. During the visit the study participants will complete questionnaires, lung function tests, skin prick tests and have blood taken. In order to take part in the study, it is necessary to complete the questionnaires. All other tests are optional. Tests include:
Height, weight and body composition; blood pressure, heart rate and pulse oximetry.
Skin prick testing to a panel of inhalant and food allergens (including house dust mite, cat, dog, grass, trees, mould, milk, egg, peanut, hazelnut, walnut, Brazil nut, cashew and peach).
Lung function
a. Fractional Exhaled nitric oxide (FeNO)- a non-invasive method of evaluating airway inflammation.
b. Airways Oscillometry - Airways resistance and reactance will be measured using the THORASYS tremoFlo® or similar, in accordance with department SOP. In brief, participants will be seated with their head in the neutral position. Wearing a nose-clip, participants will be instructed to firmly hold their cheeks, as to minimize the upper airway shunt artefact, and breathe tidally through the device. Measurements consist of 16 seconds recordings and the procedure will be repeated in triplicate.
c. Airway resistance and static lung volumes will be measured pre and post bronchodilator, using whole body plethysmography, to assess airway calibre, total lung capacity and air trapping. This is a highly sensitive and accurate method of measuring lung function and provides essential diagnostic information. We have previously performed these tests at age 13-16 years.
d. Spirometry and bronchodilator reversibility: Spirometry enables us to measure the volume and flow generated by a forced expiration and has been done at each visit since age 5 years. Flow measurements as they relate to lung volume give an indication of any flow limitation in the small airways. Measurement of spirometry before and after the administration of a bronchodilator (400µg salbutamol via a metered dose inhaler and large volume spacer) is the most commonly used test for the diagnosis and monitoring of lung disease. Where possible, participants who do not want to attend clinic and are too far away for a home visit (see below) will be offered the opportunity to perform home spirometry following video training on the technique, with a spirometer that will be posted to the participant (subject to equipment being available).
Questionnaires regarding current and previous asthma and allergy symptoms, exacerbations, medications, hospital admissions and diagnoses will be asked.
e. Respiratory Questionnaire, based on the European Community Respiratory Health Survey Questionnaire (ECRHS), with additional questions from International study of Asthma and

Allergies in childhood (ISAAC) for continuity, and previous asthma exacerbations and prescriptions, where participants will be asked to check on the NHS app where possible.
f. Health Survey– SF-12.
g. food allergy questionnaire (based on the EUROPREVALL questionnaire).
h. Asthma Control Test – (ACT).
i. Adult ADHD self-report Scale (ASRS).
Outdoor Environment and Pollution Monitoring questionnaire (previously administered at age 10-12 years; a short questionnaire about where participants lived and went to school during childhood, so that we can model exposure to pollutants and the effects on lung function and asthma).
Up to 20mls of blood will be taken by the research team. This will be collected in the clinic for a clinic visit and at home for a home visit. The measurement of the FBC will be done in the clinical laboratories at Wythenshawe Hospital (MFT, the site of the study visit). The remaining sample will be processed in the research laboratories at Wythenshawe Hospital (MFT) and stored in the freezers pending further analysis or shipment. This will be for measurement of IgE, RNA and proteins (including CC16). Cells will be separated so that peripheral blood mononuclear cells (PBMCs) can either be analysed immediately or cryopreserved in liquid nitrogen for future cell culture and functional studies. Aliquots will be sent securely packaged via courier to research collaborators with whom we will have a Material Transfer Agreement, in the UK and abroad, once funding for this work has been secured. Samples will be shared in line with contractual requirements for analysis for this study where collaborators have not yet been identified
Data analysis will be conducted by University of Manchester Researchers and also by collaborators at Imperial College London, and University of Arizona, with whom we will have Material Transfer Agreements.
GP information: Participants will be asked to consent for the research team to access their primary care records to extract information on healthcare utilisation, diagnoses and medication prescriptions (this has been done previously up to age 10 years, and consent was sought at age 18+ years).
An Equality, Diversity and Inclusion (EDI) survey. This will not be linked to the research data but will be stored anonymously.

Intervention Type
Other

Primary outcome(s)
Prevalence of asthma in the cohort, as defined by responses to the respiratory questionnaire measured at a single time point

Key secondary outcome(s)
Measured at a single time point:
1. Prevalence of eczema, hay fever and food allergy as defined by questionnaires
2. Prevalence of allergy to inhalant allergens (dust mite cat and dog and pollen) and to foods
3. Classes of trajectories of measures of lung function (to identify predictors)
4. Classes of wheezing illness - defined by frequency of episodes and exacerbations
5. Measurement of CC16 in relation to asthma and lung function outcomes
6. Classes of exposure to outdoor air pollutants - to relate to clinical outcomes

Completion date
31/05/2028

Eligibility

Key inclusion criteria
Membership of MAAS Birth Cohort

Participant type(s)
Other

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
24 Years

Upper age limit
34 Years

Sex
All

Total final enrolment
0

Key exclusion criteria
Not member of MAAS birth cohort

Date of first enrolment
04/02/2026

Date of final enrolment
01/12/2027

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
Wythenshawe Hospital
Southmoor Road
Wythenshawe
Manchester
England
M23 9LT

Sponsor information

Organisation
University of Manchester

ROR
https://ror.org/027m9bs27

Funder(s)

Funder type
Charity

Funder Name
North West Lung Centre Charity

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated during the current study will be available upon request from clare.murray@manchester.ac.uk

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Participant information sheet		30/05/2025	22/08/2025	No	Yes
Protocol file		08/04/2025	22/08/2025	No	No
Study website	Study website	11/11/2025	11/11/2025	No	Yes