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A study to explore knowledge, views and behaviours surrounding inhaler selection and whether knowledge of the carbon footprint of inhalers is important to patients

Submission date
25/10/2023

Recruitment status
No longer recruiting

Registration date
09/11/2023

Overall study status
Completed

Last Edited
09/11/2023

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
The NHS contributes substantially to the UKs carbon footprint with an estimated 23 million tonnes gCO2Eq per year, 3% of which comes from pMDIs. There are a number of alternative inhalers, such as DPIs, which do not use propellant and therefore have a significantly lower carbon footprint. There is a call to move towards greener inhalers as part of the NHS long term plan for sustainability, to reduce the carbon footprint and therefore the environmental impact and help protect the health of our patients today and in the future.

We are looking to explore knowledge, views and behaviours surrounding inhaler selection and in particular whether knowledge of the carbon footprint of inhalers is important to patients when discussing their inhaled treatments as well as to better understand how carbon footprint information should be provided to patients. This will potentially facilitate a drive to greener inhaler prescribing practices whilst further empowering patients to have an active role in decisions around their inhaler treatments.

Who can participate?
All inpatients, outpatients, staff and visitors attending primary and secondary care sites across the Wessex Asthma Network, who regularly use an inhaler for a diagnosed respiratory condition will be invited to take part.

What does the study involve?
We have designed a online questionnaire which should take no longer than 10 minutes to complete. It includes questions to determine attitudes towards and current knowledge of the carbon footprint of inhalers and whether participants feel this is something that should be included in discussions around inhaler choice and how this information is best presented. There are also 2 very simple case scenarios which are not a test of knowledge, but which will assess

thoughts on inhaler switching with participants being automatically randomised into one of two groups (one with the carbon footprint of each inhaler, and the other without). We will also assess current inhaler recycling practices.

What are the possible benefits and risks of participating?
None

Where is the study run from?
Portsmouth Hospitals NHS Trust (UK)

When is the study starting and how long is it expected to run for?
August 2023 to October 2026

Who is funding the study?
RESPIACTION CIC (UK)

Who is the main contact?
Laura.wiffen@porthosp.nhs.uk

Contact information

Type(s)
Scientific

Contact name
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Additional identifiers

Integrated Research Application System (IRAS)
332630

Central Portfolio Management System (CPMS)
58381

Study information

Scientific Title
A randomised controlled trial to explore knowledge, views and behaviours surrounding inhaler selection and whether the carbon footprint of inhalers is important to patients

Acronym
REDUCE- Carbon for Patients

Study objectives
We are looking to explore knowledge, views and behaviours surrounding inhaler selection and in particular whether knowledge of the carbon footprint of inhalers is important to patients when discussing their inhaled treatments as well as to better understand how carbon footprint information should be provided to patients.

Ethics approval required
Ethics approval required

Ethics approval(s)
Approved 13/10/2023, South Central Berkshire Research Ethics Committee (2 Redman Place, Stratford, London, E20 1JQ, United Kingdom; +44 207 1048233; berkshire.rec@hra.nhs.uk), ref: 23/SC/0310

Primary study design
Interventional

Study design
Interventional randomized controlled trial

Study type(s)
Other

Health condition(s) or problem(s) studied
Asthma

Interventions
Participants will be randomised into either:
- The Control arm- Participants will not receive any information regarding the carbon footprint of individual inhalers
- The Intervention arm- Participants will be provided with the carbon footprint for individual inhalers.

The study is an online questionnaire based on the Wessex Asthma Network inhaler guidelines consisting of questions and two very simple case scenarios. It is not a test of knowledge and will take about 10 minutes to complete.

Intervention Type
Behavioural

Primary outcome(s)
Measured by questionnaire at point of questionnaire completion:
1. The number and proportion of participants preferring high or low carbon inhalers
2. The number and proportion of participants who think carbon footprint should be included in inhaler choice discussions
3. The number and proportion of participants who would be willing to change their inhaler to a lower carbon option

Key secondary outcome(s)
Measured by questionnaire at point of questionnaire completion:
1. The rank order of preference of the following factors in carbon-containing and non-carbon containing groups: Cost of the inhaler, Carbon footprint of the inhaler, How many times a day the inhaler needs to be used, The view of the healthcare professional prescribing the inhaler
2. With sensitivity analyses of the order of preference for the following factors in both groups: Age, Respiratory condition, Level of education attainment, Number of inhalers used by the participant, Length of time participant has been using inhalers
3. The number and proportion of participants who are aware of the environmental impact of inhalers
4. The number and proportion of participants matching the inhaler carbon footprint to the equivalent car journey
5. The rank order of preference of the following options in the provision of inhaler carbon footprint: By the healthcare professional prescribing the inhaler, as gCO2Eq on the inhaler packaging, access to a website displaying the carbon footprint of all inhalers, by the pharmacist when collecting prescriptions, would not want to receive the information
6. The rank order of preference of the following options of how inhaler carbon footprint should be made available : By using a traffic light system to demonstrate high/medium/low carbon footprints, As an exact value (in grams of carbon dioxide equivalent), Using everyday measures as a comparator, Would not want to receive the information
7. The proportion of participants that try to recycle their inhalers.
8. The proportion of participants that would use inhaler recycling facilities if available

Completion date
24/10/2026

Eligibility

Key inclusion criteria
1. Aged >= 18 years
2. Have a diagnosed respiratory condition and take an inhaler regularly
3. Able to provide e-consent
4. Able to understand and complete the clinical case scenarios

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
18 Years

Sex
All

Key exclusion criteria

Inability to understand or comply with study procedures and/or inability to give fully informed consent.

Date of first enrolment
25/10/2023

Date of final enrolment
24/10/2026

Locations

Countries of recruitment
United Kingdom

Study participating centre
Portsmouth Hospitals University National Health Service Trust
Queen Alexandra Hospital
Southwick Hill Road
Cosham
Portsmouth
United Kingdom
PO6 3LY

Study participating centre
Hampshire Hospitals NHS Foundation Trust
Basingstoke and North Hampshire Hos
Aldermaston Road
Basingstoke
United Kingdom
RG24 9NA

Sponsor information

Organisation
Portsmouth Hospitals NHS Trust

ROR
https://ror.org/009fk3b63

Funder(s)

Funder type
Industry

Funder Name
RESPIACTION CIC

Results and Publications

Individual participant data (IPD) sharing plan
All data generated or analysed during this study will be included in the subsequent results publication

IPD sharing plan summary
Published as a supplement to the results publication

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Participant information sheet	version 1.1	26/09/2023	08/11/2023	No	Yes
Study website	Study website	11/11/2025	11/11/2025	No	Yes