

Supported rescue packs (medications and instructions) post-discharge in chronic obstructive pulmonary disease

Submission date 22/02/2024	Recruitment status Recruiting	☒ Prospectively registered ☒ Protocol
Registration date 04/07/2024	Overall study status Ongoing	☐ Statistical analysis plan ☐ Results
Last Edited 16/07/2025	Condition category Respiratory	☐ Individual participant data ☒ Record updated in last year

Plain English summary of protocol

Background and study aims

Chronic obstructive pulmonary disease (COPD) is a chronic lung disease affecting approximately 10% of the adult population globally. COPD is recognised to be an important area of focus, as part of one of the healthcare challenges defined by the Office of Life Sciences. Patients with COPD often experience exacerbations which are triggered episodes leading to disease worsening. Exacerbations are associated with increased morbidity and a risk of mortality.

Severe exacerbations, where patients are hospitalised, are of particular concern to patients, carers and healthcare givers. The National Institute for Health and Care Excellence (NICE) recommends that hospital clinicians looking after patients with COPD should provide rescue packs (a course of prednisolone and antibiotics) and a basic management plan to patients on discharge. It is recognised that there is a high-risk 90-day period to patients with COPD following discharge from hospital, where there is a 43% risk of readmission and a 12% risk of mortality; however repeated national audit data has shown that, despite NICE recommendations this high risk of readmission and mortality has not changed.

We will conduct a multicentre randomised clinical trial of 1400 patients in 30 acute NHS trusts. This will test the hypothesis that a self-supported rescue pack management plan consisting of rescue packs + written self-management plan + twice weekly telephone/text symptom alert assessments in the high-risk 90-day period is better than standard care in reducing 90-day readmission by 20%. If successful, this intervention would be rapidly implementable, improve patient clinical outcomes and have a cost saving of approximately £350 million per annum.

Who can participate?

Adults aged 40 years and over, to be discharged from hospital with exacerbation of COPD

What does the study involve?

Patients who consent will be randomly assigned to one of two groups, akin to flipping a coin:

1. Intervention Group: Receives a rescue pack and biweekly automated calls for 90 days, monitoring their health. Calls, lasting over 2 minutes, occur from 10am to 6.30pm Monday to

Thursday. If unanswered, up to five callbacks will be made, or a message left.

2. Comparison Group: Receives standard care, without a rescue pack, and no automated calls.

Study Schedule:

- Screening: Eligibility confirmed upon discharge, with consent obtained. Basic medical information collected, optionally including nasal samples.
- Baseline (Day 0): Random assignment, routine investigation results collected, and questionnaires on quality of life and COPD impact completed. Optional stool and nasal samples taken.
- Days 30, 90, 180: Participants interviewed regarding healthcare utilization and medication usage. Questionnaires repeated over the phone. Optionally, stool and nasal samples collected.
- One Year/End of Study: Follow-up call to assess healthcare utilization and adverse events.

What are the possible benefits and risks of participating?

Taking part in the study may help participants better manage your COPD through closer monitoring. We also hope that the knowledge gained from the study will improve our understanding of COPD and the provision of rescue packs, which may help to inform future treatment for COPD patients. Specifically, we will generate evidence on whether use of rescue packs with phone support is something that reduces the likelihood of being re-admitted to hospital. We will also understand more about the potential risks of rescue packs, such as the development of antibiotic-resistant bacteria.

Participants may experience side effects from taking the antibiotics and steroids in a rescue pack, if they need to take them. These can include:

Antibiotics: side effects would depend on which antibiotic has been selected, but more common side-effects might include

- Nausea or vomiting
- Bloating and indigestion
- Diarrhoea
- Thrush
- Rash

Steroids: short term use of corticosteroids is not associated with long term risks, however, but short courses can cause:

- Indigestion or heartburn
- Increased appetite
- Difficulty sleeping (insomnia)
- Changes in mood and behaviour, such as feeling irritable or anxious
- An increased risk of infections – especially chickenpox, shingles, and measles
- High blood sugar (hyperglycemia or diabetes).

Where is the study run from?

King's College London (UK)

Guy's and St Thomas' NHS Foundation Trust (UK)

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

January 2024 to December 2027

Who is funding the study?

National Institute for Health and Care Research (NIHR) (UK).

Who is the main contact?

rapid-rescue@kcl.ac.uk

Contact information

Type(s)

Scientific, Principal investigator

Contact name

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ORCID ID

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Type(s)

Public

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Additional identifiers

ClinicalTrials.gov (NCT)
NCT06347536

Integrated Research Application System (IRAS)
331831

Central Portfolio Management System (CPMS)
63008

National Institute for Health and Care Research (NIHR)
156698

Study information

Scientific Title

Supported rescue packs post-discharge in chronic obstructive pulmonary disease: An open-label multicenter randomised controlled trial

Acronym

RAPID

Study objectives

Provision of a rescue pack of antibiotics and corticosteroids, together with written (and translated) education on their use and twice-weekly telephone (or text) based support for when to use rescue packs, can reduce all-cause hospital re-admission in the 90-day high-risk period following discharge from hospital after an exacerbation of COPD.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Approved 03/07/2024, South Central - Oxford B Research Ethics Committee (Health Research Authority, 2 Redman Place Stratford E20 1JQ, Stratford, E20 1JQ, United Kingdom; +44 207 104 8134; oxfordb.rec@hra.nhs.uk), ref: 24/SC/0186

Primary study design

Interventional

Study design

Open-label multicenter randomized controlled trial

Study type(s)

Quality of life, Treatment

Health condition(s) or problem(s) studied

Chronic obstructive pulmonary disease (COPD)

Interventions

Patients allocated to the intervention arm will receive:

1. A rescue pack (prednisolone and antibiotics for 5-7 days). The prescription will conform to local prescribing guidelines for antibiotic and systemic corticosteroids for exacerbations of COPD.
2. A written rescue pack management plan.
3. Twice-weekly automated telephone symptom reminder calls and/or text messages for 90 days.

Comparator Intervention: Usual care (to be studied and described) – but no provision of a rescue pack at discharge.

The method of randomisation in the trial is stratified randomisation, using blocking within strata defined by Previous exacerbations in the last year and COPD Hospitalisation in the last year.

Randomisation implementation: The randomisation sequence will be generated dynamically by the KCTU team via the KCTU web based randomisation system, in accordance with the specification agreed with the CI and Senior Statistician. The Chief Investigator, Senior Statistician and TMG will be blinded to the sequence generation.

Intervention Type

Mixed

Primary outcome(s)

Time to first all-cause readmission within 90 days of discharge measured using patient records

Key secondary outcome(s)

Measured using patient records:

1. Time to and frequency of COPD-related readmissions at 30 and 90 days
2. Days alive and out of hospital at day 90
3. Time to and frequency of all COPD exacerbations at days 30 and 90
4. Cumulative systemic oral corticosteroids use over 90 days
5. Cumulative systemic antibiotic use over 90 days
6. Health care contacts at baseline, days 90 and 180, and 1 year
7. All cause readmission at 30 days
8. All cause-, cardiovascular- and COPD- related mortality at day 90 and over 12 months
9. Quality of life (COPD assessment Test (CAT) score and EQ-5D-5L) at baseline , days 90 and 180, and 1 year
10. Incremental cost-effectiveness ratio (ICER, a ratio of the additional cost divided by the additional effectiveness of SRP compared to UC) at days 90 and 180 and 1 year
11. Qualitative description of usual care
12. Qualitative examination of fidelity to and adaptation of the plan in the intervention arm
13. Adverse events
14. Antimicrobial resistance

Completion date

31/12/2027

Eligibility

Key inclusion criteria

1. Adults aged 40 years and over
2. Patient to be discharged from hospital with exacerbation of COPD
3. Able to provide informed consent

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Lower age limit

40 Years

Sex

All

Key exclusion criteria

Current participant exclusion criteria as of 07/02/2025:

1. Requirement for invasive ventilation during the hospital admission
2. Patients with signs of new consolidation on chest X-ray (if available)
3. Patients who have an expected survival of less than 90 days
4. Discharge to a residential or nursing home
5. Inability to engage with supported self-management
6. No access to telephone
7. Participation in another intervention study
8. Previous participation in the RAPID trial.

Previous participant exclusion criteria as of 28/11/2024 to 07/02/2025:

1. Requirement for invasive ventilation during the hospital admission
2. Patients who have an expected survival of less than 90 days
3. Discharge to a residential or nursing home
4. Inability to engage with supported self-management
5. No access to telephone
6. Participation in another intervention study

Previous participant exclusion criteria:

1. Requirement for invasive ventilation during the hospital admission
2. Patients who have an expected survival of less than 90 days
3. Discharge to a residential or nursing home
4. Inability to engage with supported self-management
5. No access to telephone
6. Participation in another intervention study
7. Individuals discharged from hospital to a non-physical virtual ward

Date of first enrolment

23/01/2025

Date of final enrolment

31/12/2026

Locations**Countries of recruitment**

United Kingdom

England

Wales

Study participating centre**Guy's and St Thomas' Hospitals**

Trust Offices

Guy's Hospital

Great Maze Pond

London

United Kingdom

SE1 9RT

Study participating centre**Royal Free London NHS Foundation Trust**

Royal Free Hospital

Pond Street

London

United Kingdom

NW3 2QG

Study participating centre**Blackpool Teaching Hospitals NHS Foundation Trust**

Victoria Hospital

Whinney Heys Road

Blackpool

United Kingdom

FY3 8NR

Study participating centre

University Hospitals Sussex NHS Foundation Trust
Worthing Hospital
Lyndhurst Road
Worthing
United Kingdom
BN11 2DH

Study participating centre
County Durham and Darlington NHS Foundation Trust
Darlington Memorial Hospital
Hollyhurst Road
Darlington
United Kingdom
DL3 6HX

Study participating centre
Sherwood Forest Hospitals NHS Foundation Trust
Kings Mill Hospital
Mansfield Road
Sutton-in-ashfield
United Kingdom
NG17 4JL

Study participating centre
Imperial College Healthcare NHS Trust
The Bays
St Marys Hospital
South Wharf Road
London
United Kingdom
W2 1BL

Study participating centre
East Suffolk and North Essex NHS Foundation Trust
Colchester Dist General Hospital
Turner Road
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United Kingdom
CO4 5JL

Study participating centre

University Hospitals of Morecambe Bay NHS Foundation Trust
Westmorland General Hospital
Burton Road
Kendal
United Kingdom
LA9 7RG

Study participating centre
University Hospitals of Leicester NHS Trust
Leicester Royal Infirmary
Infirmary Square
Leicester
United Kingdom
LE1 5WW

Study participating centre
Maidstone and Tunbridge Wells NHS Trust
The Maidstone Hospital
Hermitage Lane
Maidstone
United Kingdom
ME16 9QQ

Study participating centre
Milton Keynes University Hospital NHS Foundation Trust
Standing Way
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Milton Keynes
United Kingdom
MK6 5LD

Study participating centre
Nottingham University Hospitals NHS Trust - Queen's Medical Centre Campus
Nottingham University Hospital
Derby Road
Nottingham
United Kingdom
NG7 2UH

Study participating centre

Oxford University Hospitals NHS Foundation Trust
John Radcliffe Hospital
Headley Way
Headington
Oxford
United Kingdom
OX3 9DU

Study participating centre
North Tees and Hartlepool NHS Foundation Trust
Hardwick Road
Stockton-on-tees
United Kingdom
TS19 8PE

Study participating centre
Salisbury NHS Foundation Trust
Salisbury District Hospital
Odstock Road
Salisbury
United Kingdom
SP2 8BJ

Study participating centre
Somerset NHS Foundation Trust
Trust Management
Lydeard House
Musgrove Park Hospital
Taunton
United Kingdom
TA1 5DA

Study participating centre
Yeovil Hospital
Yeovil District Hospital
Higher Kingston
Yeovil
United Kingdom
BA21 4AT

Study participating centre

Stockport NHS Foundation Trust

Stepping Hill Hospital
Poplar Grove
Stockport
United Kingdom
SK2 7JE

Study participating centre

South Tyneside and Sunderland NHS Foundation Trust

Sunderland Royal Hospital
Kayll Road
South Shields
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Study participating centre

Cardiff & Vale University Health Board

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CF64 2XX

Study participating centre

Bradford Teaching Hospitals NHS Foundation Trust

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Study participating centre

University Hospitals Birmingham NHS Foundation Trust

Queen Elizabeth Hospital
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Study participating centre

North Bristol University Trust

Bristol

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Portsmouth Road
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The Newcastle upon Tyne Hospitals NHS Foundation Trust
Freeman Hospital
Freeman Road
High Heaton
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Study participating centre
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Study participating centre
Northumbria Healthcare NHS Foundation Trust
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Sponsor information

Organisation

King's College London

ROR

<https://ror.org/0220mzb33>

Organisation

Guy's and St Thomas' NHS Foundation Trust

ROR

<https://ror.org/00j161312>

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

When the study is complete, a data sharing dataset will be created from the raw data by the study analyst, which will not include any other identifiable data and study PIN will be altered so that individuals are not recognisable from the dataset.

The datasets generated during and/or analysed during the current study will be available upon request from Mona Bafadhel and John Hurst (mona.bafadhel@kcl.ac.uk; j.hurst@ucl.ac.uk).

IPD sharing plan summary

Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol file	version 4.0	05/11/2024	07/02/2025	No	No
Protocol file	version 4.2	04/07/2025	16/07/2025	No	No
Study website	Study website	11/11/2025	11/11/2025	No	Yes