CoMiTED: investigating whether a collapsed lung (pneumothorax) due to injury (trauma) can be safely and effectively treated without immediately inserting a tube into the chest (chest drain)

Submission date 27/06/2022	Recruitment status No longer recruiting	[X] Prospectively registered		
		[X] Protocol		
Registration date	Overall study status	[X] Statistical analysis plan		
04/07/2022	Completed	☐ Results		
Last Edited 13/05/2025	Condition category Injury, Occupational Diseases, Poisoning	☐ Individual participant data		
		[X] Record updated in last year		

Plain English summary of protocol

Background and study aims

A collapsed lung (also known as a 'pneumothorax') can occur following trauma such as falls, road traffic accidents, or knife injuries. We are doing a study to compare different treatment options for a collapsed lung. Currently, doctors treat this condition by inserting a tube (chest drain) through the chest wall, to help the lung re-inflate. Every year, around 25,000 patients in England and Wales have a chest drain inserted. We think that more patients with a collapsed lung could be safely treated without a chest drain, but there is currently no good research evidence one way or the other. The National Institute for Health Research (NIHR) identified this as an area of need and funded our research study to answer the question.

Both treatments for a collapsed lung (treatment with or without a chest drain) have advantages and disadvantages, but we do not know if one is better than the other. This research will help us find out which treatment is better and whether doctors should change their practice and potentially treat fewer patients with a chest drain.

Who can participate?

Patients aged 16 years or older who have been admitted to the Accident and Emergency department (A&E), with a collapsed lung due to injury.

What does the study involve?

Participants, when they join the study, will be put into one of two groups. One group will have treatment with a chest drain (current usual care) and the other group will be treated without a chest drain to start with. Participants will be allocated randomly (like tossing a coin) and have an equal chance of receiving either treatment. All participants will be assessed and monitored according to the usual care of the hospital.

Participants will complete questionnaires at 30 days, 3, and 6 months and the study team will review their medical notes.

What are the possible benefits and risks of participating?

In general, the trial will not expose participants to risks additional to routine care. The trial will, however, expose trauma victims to the potential downsides of the established pathways used in clinical practice: those allocated to usual care may have a chest drain inserted without the opportunity for conservative management (and potentially unnecessarily), while a proportion of those allocated to conservative management may be perceived as suffering a delay to the insertion of chest drain that becomes necessary at a later stage in their care. This is supported by PPI. Study procedures will include questionnaires at each time point. This will use the participant's time, but no other inconvenience or risk is expected. The questionnaires have been reviewed by our PPI team to ensure they are acceptable to patients.

By taking part in this study, participants will help to demonstrate whether conservative management is effective and cost-effective in the initial management of traumatic pneumothoraces. This may help and influence the treatment of patients in the future.

Where is the study run from? North Bristol NHS Trust (UK)

When is the study starting and how long is it expected to run for? From October 2021 to March 2025

Who is funding the study? National Institute for Health and Care Research (UK)

Who is the main contact?
Miss Nikki Blythe, nikki.blythe@bristol.ac.uk

Contact information

Type(s)

Principal investigator

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Type(s)

Public

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Additional identifiers

Clinical Trials Information System (CTIS)

Nil known

Integrated Research Application System (IRAS)

312833

ClinicalTrials.gov (NCT)

Nil known

Protocol serial number

IRAS 312833, CPMS 52683, Grant Codes: NIHR132889

Study information

Scientific Title

Conservative Management in Traumatic Pneumothoraces in the Emergency Department (CoMiTED): A Randomised Controlled Trial

Acronym

CoMiTED

Study objectives

The aim of this study is to establish whether initial conservative management of significant traumatic pneumothoraces is non-inferior to invasive management in terms of subsequent emergency pleural interventions, complications, pain, breathlessness, and quality of life.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Approved 23/05/2022, Wales REC 4 (Health and Care Research Wales Support Centre, Castlebridge 4, CF11 9AB; +44 (0)7976 982591; Wales.REC4@wales.nhs.uk), ref: 22/WA/0118

Study design

Multicentre parallel-group individually randomized controlled non-inferiority trial with an internal pilot, an economic evaluation, and an integrated qualitative study

Primary study design

Interventional

Study type(s)

Treatment

Health condition(s) or problem(s) studied

Traumatic pneumothorax

Interventions

Participants will be allocated in a 1:1 ratio to either "initial conservative management (intervention group)" or "chest drain insertion in the ED (control group)".

Randomisation will be carried out using an online system and the randomisation sequence will be generated by the company called "Sealed EnvelopeTM". Appropriate staff at all sites, as delegated by the PI, will be provided with log-in details for the secure online randomisation system, and study database where applicable.

In the intervention (initial conservative management) group, the treating clinician will be advised to manage the participant without chest drain insertion and undertake observation and admission to a hospital ward or ICU.

In the control group (chest drain insertion in the ED), it is assumed that all patients will have a chest drain inserted. It is standard practice for chest drains to be inserted immediately after an imaging diagnosis in the ED.

Internal pilot:

Following set-up, we will carry out an internal pilot for up to six months, at approximately five sites. In this pilot, we aim to confirm the feasibility of the trial processes including, recruitment of participants, randomisation, and adherence to the allocated intervention arm. Detailed information will be gathered during the internal pilot from both the qualitative and quantitative elements of the study to inform optimisation and refinement of study processes. Completeness of TARN data and number of randomised trial patients who are eligible for TARN inclusion will be established during the internal pilot to streamline data collection for the main trial. The pilot will be evaluated using quantitative progression criteria and a qualitative exploration of the acceptability of the trial. Participants recruited to the internal pilot will be included in the final analysis.

On progressing to the main trial recruitment period, we will immediately extend recruitment to approximately 20 additional sites for a further 12 months recruitment.

Baseline questionnaire:

"Baseline" data collection will take place after initial enrolment (randomisation) in the ED has taken place. Participants will be asked to complete the questionnaire according to how they feel at the time of completion, rather than retrospectively.

Follow up:

Participants will be contacted at 30 days (+10 days) following randomisation, 3 months, and 6 months (-/+ 10 days) to complete a follow-up study questionnaire, which will include questions about their pain and function, breathlessness, quality of life and wellbeing.

Intervention Type

Procedure/Surgery

Primary outcome(s)

Need for one or more subsequent emergency pleural interventions (excluding chest drain insertion in the ED) measured using patient records/electronic patient tracking systems up to 30 days

Key secondary outcome(s))

The following will be measured at specified timepoints post-randomisation:

- 1. All pleural interventions (including chest drain insertion in the ED) measured using patient records/electronic patient tracking systems up to 30 days
- 2. All complications of pleural intervention measured using patient records/electronic patient tracking systems up to 30 days
- 3. Total days of pleural drainage measured using patient records/electronic patient tracking systems up to 30 days
- 4. Patient-reported pain, function, and breathlessness measured using validated Brief Pain Inventory and MRC dyspnoea scale (Patient Reported Outcome Measures) at baseline, 30 days, 3 and 6 months
- 5. Quality of life measured using EQ-5D-5L questionnaire and Impact of Events Scale-Revised at 30 days, 3 and 6 months
- 6. Total length of stay (hospital and Intensive Care Unit (ICU), including readmission) measured

using patient records/electronic patient tracking systems up to 30 days

- 7. Adjudicated mortality (pneumothorax or chest injury related) measured using patient records /electronic patient tracking systems at 30 days
- 8. All-cause mortality measured using patient records/electronic patient tracking systems at 6 months
- 9. Cost per quality-adjusted life year (QALY) measured using the data collected in secondary outcomes "1., 2., 4., 5., 6., 7., and 8." supplemented by a study-specific patient resource use questionnaire at 6 months
- 10. Patient/consultee views and experiences of conservative management/chest drain measured using qualitative interviews at 30 days and 6 months
- 11. Clinician views of conservative management/chest drain measured using qualitative interviews throughout the trial

Completion date

02/03/2025

Eligibility

Key inclusion criteria

- 1. Presenting to the Emergency Department with traumatic pneumothoraces
- 2. Aged, or believed to be aged, ≥16 years
- 3. The treating clinician(s) are uncertain if a chest drain is required

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Lower age limit

16 years

Sex

All

Total final enrolment

400

Key exclusion criteria

- 1. Treating clinician(s) believe injuries are incompatible with life
- 2. Respiratory arrest
- 3. Haemothorax requiring a chest drain in the opinion of the treating clinician(s)
- 4. Clinical and imaging evidence of tension pneumothorax
- 5. Prisoners (does not include those in police custody; only those detained in prison establishments)
- 6. Retrospective paediatric exclusion if patient confirmed to be aged <16 years

Date of first enrolment 08/08/2022

Date of final enrolment 31/01/2025

Locations

Countries of recruitment

United Kingdom

England

Northern Ireland

Scotland

Wales

Study participating centre North Bristol NHS Trust

Southmead Hospital
Southmead Road
Westbury-on-Trym
Bristol
United Kingdom
BS10 5NB

Study participating centre University Hospitals Plymouth NHS Trust

Derriford Hospital Derriford Road Derriford Plymouth United Kingdom PL6 8DH

Study participating centre Northumbria Healthcare NHS Foundation Trust

North Tyneside General Hospital Rake Lane North Shields United Kingdom NE29 8NH

Study participating centre Manchester University NHS Foundation Trust

Manchester Royal Infirmary Cobbett House Oxford Road Manchester United Kingdom M13 9WL

Study participating centre Royal Cornwall Hospitals NHS Trust

Royal Cornwall Hospital Treliske Truro United Kingdom TR1 3LJ

Study participating centre

St George's University Hospitals NHS Foundation Trust

St George's Hospital Blackshaw Road Tooting London United Kingdom SW17 0QT

Study participating centre Barts Health NHS Trust

The Royal London Hospital 80 Newark Street London United Kingdom E1 2ES

Study participating centre Royal Berkshire NHS Foundation Trust

Royal Berkshire Hospital London Road Reading United Kingdom RG1 5AN

Study participating centre Torbay And South Devon NHS Foundation Trust

Torbay Hospital Newton Road Torquay United Kingdom TQ2 7AA

Study participating centre Addenbrookes

Addenbrookes Hospital Hills Road Cambridge United Kingdom CB2 0QQ

Study participating centre Musgrove Park Hospital (taunton)

Musgrove Park Hospital Taunton United Kingdom TA1 5DA

Study participating centre Hull Royal Infirmary

Anlaby Road Hull United Kingdom HU3 2JZ

Study participating centre James Cook University Hospital

Marton Road Middlesbrough United Kingdom TS4 3BW

Study participating centre

Macclesfield District General Hospital

Macclesfield District Hospital Victoria Road Macclesfield United Kingdom SK10 3BL

Study participating centre The Royal Victoria Infirmary

Queen Victoria Road Newcastle upon Tyne United Kingdom TS1 4LP

Study participating centre Leeds General Infirmary

Great George Street Leeds United Kingdom LS1 3EX

Study participating centre St Mary's Hospital

Praed Street London United Kingdom W2 1NY

Study participating centre The Grange University Hospital

Caerleon Road Cwmbran United Kingdom NP44 8YN

Study participating centre Royal United Hospital

Combe Park Bath United Kingdom BA1 3NG

Study participating centre Milton Keynes University Hospital

Standing Way Eaglestone Milton Keynes United Kingdom MK6 5LD

Study participating centre Aintree University Hospital

Lower Lane Liverpool United Kingdom L9 7AL

Study participating centre John Radcliffe Hospital

Headley Way Headington Oxford United Kingdom OX3 9DU

Study participating centre Poole Hospital

Longfleet Road Poole United Kingdom BH15 2JB

Study participating centre Northwick Park Hospital

Watford Road Harrow United Kingdom HA1 3UJ

Study participating centre

University Hospital (coventry)

Clifford Bridge Road Coventry United Kingdom CV2 2DX

Study participating centre Northumbria Specialist Emergency Care Hospital

Northumbria Way Cramlington United Kingdom NE23 6NZ

Study participating centre Southampton General Hospital

Tremona Road Southampton United Kingdom SO16 6YD

Study participating centre Tunbridge Wells Hospital

The Tunbridge Wells Hospital
Tonbridge Road
Pembury
Tunbridge Wells
United Kingdom
TN2 4QJ

Study participating centre West Suffolk Hospital

Hardwick Lane Bury St Edmunds United Kingdom IP33 2QZ

Study participating centre University Hospital of Wales

Heath Park

Cardiff United Kingdom CF14 4XW

Study participating centre Gloucestershire Royal Hospital

Great Western Road Gloucester United Kingdom GL1 3NN

Study participating centre Bristol Royal Infirmary

Marlborough Street Bristol United Kingdom BS2 8HW

Study participating centre Broomfield Hospital

Court Road
Broomfield
Chelmsford
United Kingdom
CM1 7ET

Study participating centre Watford General Hospital

60 Vicarage Road Watford United Kingdom WD18 0HB

Study participating centre Queen Elizabeth Hospital

Edgbaston Birmingham United Kingdom B15 2TH

Study participating centre University College London

University College London Hospitals NHS Foundation Trust 250 Euston Road London United Kingdom NW1 2PG

Study participating centre The Royal Victoria Hospital

Grosvenor Road Belfast United Kingdom BT12 6BA

Study participating centre Princess Alexandra Hospital

Hamstel Road Harlow United Kingdom CM20 1QX

Study participating centre Victoria Hospital

Hayfield Road Kirkcaldy United Kingdom KY2 5AH

Study participating centre The Royal Infirmary of Edinburgh

51 Little France Crescent Edinburgh United Kingdom EH16 4SA

Study participating centre Prince Charles Hospital Merthyr/cynon Unit

Merthyr Tydfil

Study participating centre Sheffield Teaching Hospitals NHS Foundation Trust

Northern General Hospital Herries Road Sheffield United Kingdom S5 7AU

Study participating centre Royal Liverpool University Hospital

Royal Liverpool University Hospital NHS Trust Prescot Street Liverpool United Kingdom L7 8XP

Sponsor information

Organisation

North Bristol NHS Trust

ROR

https://ror.org/036x6gt55

Funder(s)

Funder type

Government

Funder Name

National Institute for Health 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

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 dataset will be published in the publicly available University of Bristol Research Data repository (https://www.bristol.ac.uk/staff/researchers/data/accessing-research-data/).

IPD sharing plan summary

Stored in publicly available repository

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol article		17/06/2024	19/06/2024	Yes	No
HRA research summary			28/06/2023	No	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes
Protocol file	version 3.0	07/07/2022	19/07/2022	No	No
Protocol file	version 6.0	23/02/2024	29/04/2024	No	No
Protocol file	version 7.0	23/07/2024	08/10/2024	No	No
Statistical Analysis Plan	version 1.0	12/05/2025	13/05/2025	No	No
Study website	Study website	11/11/2025	11/11/2025	No	Yes