

Medium cost effectiveness of automated non-invasive ventilation outpatient set up vs standard fixed level non-invasive ventilation inpatient set up in obese patients with chronic respiratory disease

Submission date 12/06/2014	Recruitment status No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
Registration date 12/06/2014	Overall study status Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
Last Edited 08/11/2022	Condition category Respiratory	<input type="checkbox"/> Individual participant data

Plain English summary of protocol

Background and study aims

Patients with obesity and breathing failure often require a mask overnight to help them breathe. At present, the length of hospital stay for such mask ventilation [Non Invasive Ventilation (NIV)] is between 4.5 and 6 days. There is no evidence to support the clinical or cost effectiveness of setting up mask ventilation on an outpatient basis in the clinic, compared to inpatient set-up on the ward by specialist respiratory nurses, although this is increasingly used as a strategy in smaller units without inpatient facilities. In essence, financial constraints are driving a practice that has no current evidence base in this patient group. Obese patients with long-term respiratory failure have complex physiological changes and often require much higher mask ventilation pressures than other patients needing hospital admission to gain control of their sleep disordered breathing. This will be the first study to test whether outpatient set-up mask ventilation in obese patients with chronic respiratory failure is clinically effective and cost effective at 3 months.

Who can participate?

Stable obese patients attending for management of chronic respiratory failure related to obesity.

What does the study involve?

Patients are randomly allocated to one of two groups: intervention and standard treatment. Intervention group patients are initiated on NIV during an optional outpatient clinic review during which an arterial blood gas measurement (from the wrist) is taken to confirm the presence of long-term respiratory failure. Patients in the standard treatment group are admitted for an inpatient initiation of NIV.

What are the possible benefits and risks of participating?

By taking part in the research, participants are helping shape the future management of patients with the same condition. All of the other research tests are not invasive so there will be no direct risk to participants.

Where is the study run from?

1. St Thomas' Hospital, London, UK (lead site)
2. St James' Hospital, Leeds, UK
3. Royal Brompton Hospital, London, UK
4. Royal Free Hospital, London, UK
5. University Hospital of Grenoble, France
6. University Hospital of Rouen, France

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

April 2014 to April 2018

Who is funding the study?

Phillips Respironics (UK)

Who is the main contact?

Gill Arbane (Project Coordinator)

gill.arbane@gstt.nhs.uk

Contact information

Type(s)

Scientific

Contact name

Ms Gill Arbane

Contact details

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Additional identifiers

Clinical Trials Information System (CTIS)

Nil known

Integrated Research Application System (IRAS)

139750

ClinicalTrials.gov (NCT)

NCT02342899

Protocol serial number

16392; IRAS 139750

Study information

Scientific Title

Medium cost effectiveness of automated non-invasive ventilation outpatient set up vs standard fixed level non-invasive ventilation inpatient set up in obese patients with chronic respiratory disease: a randomised controlled trial

Acronym

OPIP

Study objectives

The OPIP Trial will be a randomised controlled trial by an international group to evaluate the cost effectiveness on an automated non-invasive ventilation outpatient set up vs. standard fixed level non-invasive ventilation inpatient set up (mask ventilation) for initiation for obese patients with chronic respiratory failure. OPIP will evaluate standard treatment costs and patients health related quality of life and change in a gas exchange.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Current ethics approval as of 10/02/2020:

Approved 27/05/2014, NRES Committee London- Westminster (Bristol REC Centre Level 3, Block B, Whitefriars Lewins Mead, Bristol, BS1 2NT; +44 0117 342 138; nrescommittee.london-westminster@nhs.net), ref: 14/LO/0414

Previous ethics approval:

NRES Committee London, Westminster, 27/05/2014, ref: 13/LO/1362

Study design

Randomised; Interventional; Design type: Not specified

Primary study design

Interventional

Study type(s)

Treatment

Health condition(s) or problem(s) studied

Topic: Metabolic and endocrine disorders, Respiratory disorders; Subtopic: Metabolic and Endocrine (all Subtopics), Respiratory (all Subtopics); Disease: Metabolic & Endocrine (not diabetes), Respiratory

Interventions

A randomised controlled trial of Outpatient vs Inpatient NIV Set Up, randomised by site, gender and previous mask use, to determine clinical and cost effectiveness of outpatient set up. All patients will keep a record of Health Care Utilisation and be followed up with telephone calls from the research team throughout the trial.

Patients will be seen at baseline, 6 weeks and 3 months, primary outcome measure will be cost effectiveness.

Intervention Type

Other

Phase

Not Applicable

Primary outcome(s)

Cost effectiveness of standard treatment costs and health related quality of life (SRI and Eq-5D);
Timepoint(s): Baseline, 6 weeks and 3 months

Key secondary outcome(s)

Not provided at time of registration

Completion date

30/04/2018

Eligibility**Key inclusion criteria**

1. Obese patients with chronic respiratory failure
2. Age >18 years
3. Chronic hypercapnia (daytime pCO₂>6.5kPa)
4. Evidence of sleep disordered breathing on overnight oximetry study (4% oxygen desaturation index>10 events per hour and/or >30% of the total analysis time with an SpO₂ <90%)
5. BMI>35kg/m²
6. FEV₁/FVC>70%
7. Tolerates NIV>4 hours on first night during initiation of NIV

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Lower age limit

18 years

Sex

All

Total final enrolment

82

Key exclusion criteria

1. Persistent hypercapnic respiratory failure with acidosis (defined as pH <7.30)
2. Severe hypoxic and/or hypercapnic respiratory failure defined as PaO₂<7.0kPa and/or PaCO₂>9kPa
3. Failure to tolerate NIV during initiation or if required to treat acute decompensation
4. Prior acute hypercapnic respiratory failure requiring intubation
5. Hypercapnic respiratory failure secondary to an identifiable cause other than obesity
6. Unstable coronary artery syndrome
7. Cognitive impairment that would prevent informed consent into the trial and/or inability to comply with the protocol
8. Psychiatric disease necessitating anti-psychotic medication, ongoing treatment for drug or alcohol addiction, persons of no fixed abode post-discharge
9. Patients undergoing renal replacement therapy
10. Patients with co-existent cancer and a prognosis likely to be less than 12-months
11. Critical peripheral vascular disease awaiting re-vascularisation procedure (or claudication distance <100 metres)
12. Stroke with hemiparesis
13. Age <18 years
14. Pregnant

Date of first enrolment

01/07/2014

Date of final enrolment

01/04/2016

Locations**Countries of recruitment**

United Kingdom

England

France

Switzerland

Study participating centre

St Thomas's Hospital

London

United Kingdom

SE1 7EH

Study participating centre

St James' Hospital
Leeds
United Kingdom
LS9 7TF

Study participating centre
Royal Brompton Hospital
London
United Kingdom
SW3 6NP

Study participating centre
Royal Free Hospital
United Kingdom
NW3 2QG

Study participating centre
University Hospital of Grenoble
Grenoble
France
38700

Study participating centre
University Hospital of Rouen
France
76000

Sponsor information

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

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

Funder(s)

Funder type

Industry

Funder Name

Philips Respironics Inc (UK)

Results and Publications

Individual participant data (IPD) sharing plan

The datasets generated and/or analysed during the current study will be included in the subsequent results publication.

IPD sharing plan summary

Other

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		02/09/2022	08/11/2022	Yes	No
Protocol article	protocol	23/04/2015		Yes	No
HRA research summary			28/06/2023	No	No
HRA research summary			28/06/2023	No	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes