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Optimising treatment for mild systolic hypertension in the elderly - long-term follow-up

Submission date 06/03/2017	**Recruitment status** No longer recruiting	[X] Prospectively registered [X] Protocol [_] Statistical analysis plan [X] Results [_] Individual participant data
Registration date 15/03/2017	**Overall study status** Completed	
Last Edited 06/08/2024	**Condition category** Circulatory System	

Plain English summary of protocol

Background and study aims

The population is getting older, with over 3 million people in the UK aged 80 years or older. This means that the number of people living with multiple illnesses and taking lots of tablets to manage these illnesses is increasing. High blood pressure is one of the most common medical conditions in older people and many take two or more drugs to treat it. Recent scientific studies suggest that large reductions in blood pressure and too many drug prescriptions may be associated with an increase in falls and death in older patients, particularly in those suffering from lots of medical conditions. This study aims to assess the safety of reducing the number of drugs prescribed to people aged 80 years or older who have blood pressure in a normal range and are taking two or more medications.

Who can participate?

People over 80 years old who are being prescribed two or more blood pressure medications.

What does the study involve?

Participants are randomly allocated by a computer to one of two groups. Those in the first group continue with their current medication for the duration of the study. Those in the second group have one medication, chosen by their GP, removed. Participants in this group are given the opportunity to measure their blood pressure at home, to see if taking fewer medications causes blood pressure to change. There is a 1 in 2 chance of being in the group taking fewer medications to lower blood pressure. The researcher will ask some questions about background and medical history as well as taking some measurements, including height, weight and blood pressure. Finally, participants are asked to complete some simple questionnaires about daily activities and general quality of life. Some patients may also be asked if these initial visits with the GP and trained researcher may be tape-recorded. This may happen whether the patient goes on to agree to take part in the trial or not. The recordings will help the research team to better understand what happens in these discussions and make sure patients are able to ask all the questions they need when deciding whether to take part in the trial. The trial will be conducted over 12 weeks and participants need to attend their GP surgery for follow-up appointments at week 4 (in the stopping medication group) and week 12 (a minimum of 3 visits to the GP

surgery). The doctor may wish to book further appointments in addition to these. At each follow-up visit the participant has their blood pressure measured and depending on the reading, the GP or nurse may adjust the participant's medication again. At the final visit (week 12), participants are asked to complete the same questionnaires completed at the first visit again.

The researchers also planned from the start of the study to do a longer-term follow-up of OPTiMISE patients to see whether there have been any differences in hospital admissions or the general health of participants associated with deprescribing over the 3 years since the last participant joined the trial. This longer-term follow-up involves a notes review for which participants have already consented and will be done via:
1. An in-person notes review at the practice, or
2. A remote notes review using EMIS-Anywhere Consult (were possible and appropriate) and/or via
3. The Oxford Royal College of General Practitioners Clinical Informatics Digital Hub (ORCHID) and/or
4. NHS Digital's Patient Tracking Service
The researchers will gather information on health outcomes (such as hospital admissions) for everyone who took part in OPTiMISE. They will then look at the information to see if there are any differences between the participants in the "control" group, whose care did not change, with those participants in the "intervention" group who had one of their blood pressure medications removed. Participant identifiable data (name, date of birth, and NHS number) will be shared in a secure manner with NHS Digital to collect data on hospital admissions if they occur and participant health status. This information will be provided by NHS Digital via their patient tracking service and from primary care records (such as medical notes held by GPs).

What are the possible benefits and risks of participating?
If participants are in the group who are cutting down their medications, then they may benefit from a reduced risk of falls or other side effects which could affect their quality of life. For participants who continue as normal, there are no direct benefits of taking part. There is a risk that blood pressure may increase when patients stop taking one of their blood pressure medications but this is closely monitored.

Where is the study run from?
1. Thames Valley and South Midlands CRN (UK)
2. Wessex CRN (UK)
3. CRN Eastern (UK)
4. CRN West Midlands (UK)
5. CRN West of England (UK)

When is the study starting and how long is it expected to run for?
July 2016 to December 2024

Who is funding the study?
1. National Institute for Health Research (UK)
2. OPTiMISE longer-term follow-up funded by the British Heart Foundation (UK)

Who is the main contact?
Mrs Anne Smith, optimise@phc.ox.ac.uk

Contact information

Type(s)
Public

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Additional identifiers

Clinical Trials Information System (CTIS)
2016-004236-38

Protocol serial number
33014

Study information

Scientific Title
OPtimising Treatment for MIld Systolic hypertension in the Elderly: a randomised controlled trial - long-term follow-up

Acronym
OPTiMISE X

Study objectives
OPTiMISE:
The aim of this study is to assess the safety of reducing the number of drugs prescribed to older people (defined as being aged 80 years or older) who have blood pressure in a normal range and are taking two or more blood pressure medications.

Added 04/07/2022:
OPTiMISE X - long-term follow-up:
This is a longer-term follow-up of OPTiMISE participants to see whether there have been any differences in hospital admissions or the general health of participants associated with deprescribing over the 3 years since the last participant was randomised. We received research ethics approval for this longer-term follow-up and this involves a notes review for which participants have already consented.
This will be achieved via:
1. An in-person notes review at the practice, or
2. A remote notes review using EMIS-Anywhere Consult (were possible and appropriate) and/or via

3. The Oxford Royal College of General Practitioners Clinical Informatics Digital Hub (ORCHID) and/or
4. NHS Digital's Patient Tracking Service (added 20/07/2022)

Ethics approval required
Old ethics approval format

Ethics approval(s)
1. OPTiMISE X: Substantial amendment approved 13/01/2022, South Central - Oxford A Research Ethics Committee
2. OPTiMISE: Approved 12/12/2016, South Central - Oxford A Research Ethics Committee, ref: 16/SC/0628

Study design
Randomized; Both; Design type: Treatment, Process of Care, Drug, Management of Care, Qualitative; OPTiMISE X: long-term follow-up

Primary study design
Interventional

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Specialty: Primary Care, Primary sub-specialty: Ageing; UKCRC code/ Disease: Cardiovascular/ Hypertensive diseases

Interventions
Participants are randomised in a 1:1 ratio to medication reduction (intervention) vs usual care (control).

Intervention arm: GP's will choose the most appropriate blood pressure medication to withdraw for those randomised to the medication reduction arm. Participants will be invited to self-monitor their blood pressure, reporting any consistently high readings to their GP (see specific self-monitoring guidance below). All individuals will be asked to attend a routine safety follow-up visit with their GP or nurse, four weeks (±2 weeks) after randomisation.

Control arm: Participants receive usual care only for the duration of the study.

All patients will attend a 12 week (±2 weeks) follow-up with the trial facilitator, either at their GP practice or at their home; the trial facilitator will repeat all measurements taken at baseline. After 12 week follow-up the trial will formally end, but passive long-term follow-up of mortality and hospital admissions will be undertaken via NHS Digital's patient tracking service.

Intervention Type
Other

Phase
Phase IV

Primary outcome(s)

Proportion of patients with controlled blood pressure levels is measured by taking blood pressure readings at baseline and 12 weeks.

Key secondary outcome(s))
1. Proportion of patients randomized to the intervention arm who maintain medication reduction throughout is assessed by asking the patient if they have taken any withdrawn medication since the baseline visit, at the 12 week appointment
2. The difference in quality of life between the two groups is measured using the EQ-5D-5L score at baseline and 12 weeks
3. The difference in frailty between the two groups is measured using the FRAIL scale score /frailty index at baseline and 12 weeks
4. The mean difference in the change in mean clinic systolic blood pressure (from baseline) between the two groups at 12 week follow up is measured by taking blood pressure readings at baseline and 12 weeks
5. The mean difference in the change in mean clinic diastolic blood pressure (from baseline) between the two groups at 12 week follow up is measured by taking blood pressure readings at baseline and 12 weeks (added 04/01/2019, , following HRA approval of Substantial Amendment 4 on 12/10/2018)
6. The difference in the proportion of patients reporting potential side effects to medication (e. g. coughs, dizziness, syncope, ankle swelling, etc.) between the two groups at 12 week follow up is measured by collecting details of side effects from the patient at 12 week
7. The difference in the proportion of patients reporting adverse events (hospitalisation due to serious falls, myocardial infarction, stroke or all-cause mortality) between the two groups is measured by collecting details of adverse events from the patient at 12 week
8. Characteristics of the baseline screening population, sample population and how these relate to individuals eligible/not eligible for the recent SPRINT trial, using descriptive statistics of screening and baseline populations at baseline

Completion date
31/12/2024

Eligibility

Key inclusion criteria
Added 04/07/2022:
OPTiMISE X
Current inclusion is all original OPTiMISE trial participants unless they have opted out of longer-term follow-up.

OPTiMISE:
Current inclusion criteria as of 04/05/2018, following HRA approval of Substantial Amendment 2 on 15/01/2018:
1. Participant is willing and able to give informed consent for participation in the trial
2. Male or female, aged 80 years or above
3. Clinic systolic blood pressure less than 150 mmHg (according to screening measurement at baseline – clinic blood pressure defined as the mean of the 2nd and 3rd readings taken at 1-minute intervals)
4. Prescribed two or more antihypertensive medications to lower blood pressure for at least 12 months prior to trial entry. Antihypertensive medications defined as any ACE inhibitor, angiotensin II receptor blocker, calcium channel blocker, thiazide and thiazide-like diuretic, potassium-sparing diuretic, alpha-blocker, beta-blocker, vasodilator antihypertensives, centrally

acting antihypertensives, direct renin inhibitors, adrenergic neurone blocking drugs or loop diuretics.
5. Stable dose of antihypertensive medications for at least 4 weeks prior to trial entry.
6. In the Investigator's opinion, could potentially benefit from medication reduction due to existing polypharmacy, co-morbidity, non-adherence or dislike of medicines and/or frailty (i.e. is different from those to which the results of the SPRINT trial are likely to apply)*
7. In the Investigator's opinion, is able and willing to comply with all trial requirements.
*GPs will be given training from the research team during the site initiation visit on the findings of the SPRINT trial and other relevant trials and how these apply to patients in their practice.

Previous inclusion criteria:
1. Participant is willing and able to give informed consent for participation in the trial
2. Male or Female, aged 80 years or above
3. Clinic systolic blood pressure less than 150 mmHg (according to screening measurement at baseline – clinic blood pressure defined as the mean of the 2nd and 3rd readings taken at 1-minute intervals)
4. Prescribed two or more antihypertensive medications to lower blood pressure for at least 12 months prior to trial entry. Antihypertensive medications defined as any ACE inhibitor, angiotensin II receptor blocker, calcium channel blocker, thiazide and thiazide-like diuretic, potassium-sparing diuretic, alpha-blocker or beta-blocker.
5. Stable dose of current antihypertensive medications for at least 4 weeks prior to trial entry.
6. In the Investigator's opinion, could potentially benefit from medication reduction due to existing polypharmacy, co-morbidity, non-adherence or dislike of medicines and/or frailty (i.e. is different from those to which the results of the SPRINT trial are likely to apply)
7. In the Investigator's opinion, is able and willing to comply with all trial requirements

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
18 years

Sex
All

Total final enrolment
569

Key exclusion criteria
Exclusion criteria for the main trial:
1. A participant has heart failure due to LVSD and is on only ACE inhibitors/ARBs and/or beta-blockers and/or spironolactone (removing any of which would be contraindicated).
2. A participant has heart failure but has not had an echocardiogram since its onset (might have undiagnosed LVSD and a compelling need for ACEI/ARB and Betablockers).
3. Investigator deems that there is a compelling indication for medication continuation.

4. Suffered a myocardial infarction or stroke within the past 12 months.
5. Blood pressure being managed outside of primary care.
6. Secondary hypertension.
7. Previous accelerated or malignant hypertension.
8. Unable to provide consent unless a consultee is available to provide assent in cases of incapacity.
9. Any other significant disease or disorder which, in the opinion of the Investigator, may either put the participants at risk because of participation in the trial, or may influence the result of the trial, or the participant's ability to participate in the trial (e.g. terminal illness, house bound and unable to attend baseline and follow up clinics).
10. Participants who have participated in another research trial involving antihypertensive medication in the past 4 weeks.

Exclusion criteria for the qualitative study 1:
Capacity to consent and participate in an interview.

Exclusion criteria for the qualitative study 2:
None

Date of first enrolment
20/03/2017

Date of final enrolment
30/09/2018

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
Thames Valley and South Midlands CRN
Block 8,
Nuffield Orthopaedic Centre,
Windmill Road,
Headington
Oxford
United Kingdom
OX3 7LD

Study participating centre
Wessex CRN
Sovereign Room, Unit 7,
Berrywood Business Village,
Tollbar Way,

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SO30 2UN

Study participating centre
CRN Eastern
20 Rouen Road
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NR1 1QQ

Study participating centre
CRN West Midlands
West Wing
Birmingham Research Park
Vincent Drive
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Birmingham
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B15 2SQ

Study participating centre
CRN West of England
Whitefriars
Lewins Mead
Bristol
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BS1 2NT

Sponsor information

Organisation
University of Oxford

ROR
https://ror.org/052gg0110

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
British Heart Foundation

Alternative Name(s)
The British Heart Foundation, the_bhf, BHF

Funding Body Type
Private sector organisation

Funding Body Subtype
Trusts, charities, foundations (both public and private)

Location
United Kingdom

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study are/will be available upon request from optimise@phc.ox.ac.uk

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?

Results article	results	26/05/2020	27/05/2020	Yes	No
Results article	long-term follow-up	24/07/2024	06/08/2024	Yes	No
Protocol article	protocol	04/10/2018	29/10/2019	Yes	No
HRA research summary			28/06/2023	No	No
Study website	Study website	11/11/2025	11/11/2025	No	Yes