

Improving the heart health of individuals with abdominal aortic aneurysms: the CRISP Study

Submission date 10/11/2020	Recruitment status No longer recruiting	☐ Prospectively registered ☒ Protocol
Registration date 18/11/2020	Overall study status Completed	☐ Statistical analysis plan ☒ Results
Last Edited 24/10/2024	Condition category Circulatory System	☐ Individual participant data

Plain English summary of protocol

Background and study aims

Abdominal Aortic Aneurysm or AAA is an abnormal swelling of the aorta, the biggest artery in the body. It usually occurs in men aged over 65. An AAA can occasionally burst, leading to life-threatening bleeding. An AAA can be easily detected using a simple ultrasound scan. AAA screening programmes are now available across the UK through the NHS. These programmes invite all men at the age of 65 to have an ultrasound scan to check for AAA. Most of the men found to have an AAA in screening do not need surgery as their AAA is small in size. These men are, however, offered regular ultrasound scans to check the growth of the AAA. We already know that if someone has even a small AAA, they are far more likely to develop heart attacks and strokes compared to people without AAA. In fact, most people who have a small AAA will not die because of their AAA but because of a heart attack or a stroke. Despite this, individuals with AAAs in the UK AAA screening programmes do not receive adequate help and support to prevent these problems. This is an important missed opportunity. Simple things like taking an aspirin, lowering cholesterol, lowering blood pressure and improving one's diet can greatly decrease the chances of heart attacks and strokes. Unfortunately there hasn't been much research in this area and we do not know how to best support people with AAA to help them take advantage of these treatments.

The existing NHS AAA screening programmes can be used to improve the treatment of people with small AAAs by offering them medication, diet support, and other help to prevent heart attacks and strokes. The aim of this research is to develop and then test a health intervention specifically for men with AAA, which will improve their health and reduce their chances of heart attacks and strokes.

Who can participate?

Adult men with an abdominal aortic aneurysm identified through the existing NHS Abdominal Aortic Aneurysm (AAA) Screening Programme (NAAASP)

What does the study involve?

This research will consist of two stages:

1) In the first stage, patients with AAA, their relatives, and experts in this area will work together to develop the health intervention aimed to improve the heart health of those with AAA. First,

patients with AAAs and their families will be approached and invited to take part in the research. Experts including General Practitioners (GPs), public health doctors, surgeons who treat AAA, NHS staff from NHS AAA screening programmes and psychologists will also be invited. The first step will be to identify the barriers that prevent good heart care in people with AAA. Then, the patients and experts will discuss how these barriers can be overcome. The health intervention will eventually be designed using the information from those discussions

2) In the second stage, the intervention will be tested in the Leicestershire AAA screening unit to assess how many men with AAA will take it up. Eventually, a national study will confirm whether it works and whether it offers value-for-money in the NHS

What are the possible benefits and risks of participating?

If this study is successful, the existing NHS AAA screening programmes will be used as a platform to offer people with small AAAs better medical care and reduce the chance of heart attacks and strokes. This will benefit thousands of patients across the UK and prevent hundreds of admissions and deaths every year. It will bring significant cost savings to the NHS as the treatment of these health problems is very expensive.

No risks.

Where is the study run from?

NHS Abdominal Aortic Aneurysm Screening Programme, Public Health England (UK)

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

August 2019 to October 2024

Who is funding the study?

National Institute for Health Research (NIHR) (UK)

Who is the main contact?

1. Professor Colin Greaves, c.j.greaves@bham.ac.uk

2. Dr Tom Withers, t.m.withers@bham.ac.uk

3. Professor Matt Bown, mjb42@le.ac.uk

4. Ms Ann Elsworth, ame29@le.ac.uk

Contact information

Type(s)

Scientific

Contact name

Mr Athanasios Saratzis

ORCID ID

<https://orcid.org/0000-0002-3399-094X>

Contact details

500 Groby Road

BHF Cardiovascular Research Facility

Glenfield Hospital

Leicester

United Kingdom

LE3 9QP

+44 (0)121 252 4785
as875@le.ac.uk

Type(s)
Scientific

Contact name
Prof Colin Greaves

Contact details
School of Sport, Exercise and Rehabilitation Sciences
University of Birmingham
Edgbaston
Birmingham
United Kingdom
B15 2TT
+44 (0)121 414 8061
c.j.greaves@bham.ac.uk

Type(s)
Scientific

Contact name
Dr Tom Withers

ORCID ID
<https://orcid.org/0000-0002-5286-7189>

Contact details
School of Sport, Exercise and Rehabilitation Sciences
University of Birmingham
Edgbaston
Birmingham
United Kingdom
B15 2TT
+44 (0)121 414 8061
t.m.withers@bham.ac.uk

Type(s)
Scientific

Contact name
Prof Matt Bown

ORCID ID
<https://orcid.org/0000-0002-6180-3611>

Contact details
Department of Cardiovascular Sciences
University of Leicester
BHF Cardiovascular Research Centre

Glenfield General Hospital
Leicester
United Kingdom
LE2 7LX
+44 (0)116 252 3190
mjb42@le.ac.uk

Type(s)

Public

Contact name

Ms Ann Elsworth

Contact details

Office 65
Clinical Sciences Building
Glenfield Hospital
Leicester
United Kingdom
LE3 9QP
+44 (0)116 2502381
ame29@le.ac.uk

Additional identifiers

Integrated Research Application System (IRAS)

273793

Protocol serial number

0746

Study information

Scientific Title

Cardiovascular Risk reduction In the NHS abdominal aortic aneurysm (AAA) Screening Programme: a co-developed cardiovascular prevention intervention (CRISP)

Acronym

CRISP

Study objectives

All 65 year-old men in the UK are invited for an ultrasound (US) to screen for AAA. The vast majority of those with AAA enter a disease-surveillance programme, undergoing regular repeat US. There are 11,601 men in AAA-surveillance, spending an average 4-7 years in follow-up. Screening has minimal effect on all-cause mortality. The principal preventable cause of mortality in AAA-surveillance is cardiovascular disease. Regular attendance at surveillance clinics represents an excellent opportunity to address cardiovascular-risk. Unfortunately, AAA-surveillance was not designed to deliver cardiovascular-risk modification. Consequently, uptake of cardiovascular-risk management in AAA-surveillance is poor and does not follow National Institute for Health and Care Excellence (NICE) guidance in most instances. In this study we are

therefore going to develop and test a cardiovascular-risk reduction intervention for the specific needs of individuals with AAA.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Approved 15/01/2020, East Midlands - Leicester Central Research Ethics Committee (The Old Chapel, Royal Standard Place, Nottingham, NG1 6FS; +44 0207 972 2568; nrescommittee.eastmidlands-leicestercentral@nhs.net), ref: 19/EM/0366.

Primary study design

Other

Study design

Qualitative study with additional quantitative feasibility study (mixed methodology)

Study type(s)

Prevention, Quality of life, Screening

Health condition(s) or problem(s) studied

Abdominal aortic aneurysm

Interventions

There are two phases to this study, this registration concerns phase 2.

In Phase 1, we will develop an intervention that will help patients with an abdominal aortic aneurysm improve their heart health. Invited participants who have provided written informed consent will take part in remote focus groups (up to 90 minutes each, up to 4 focus group sessions) and, if necessary, in one hour long interviews (telephone or via a computer). Both patients with aneurysms (or carers/partners) will be invited to take part in these focus groups as well as healthcare professionals. This process will take a year. Once we have the necessary data from the participants, we will finalise the structure of the intervention.

Phase 2

In the second phase (Phase 2) of the research, we will test whether the intervention can be used in current NHS care and within aneurysm screening programmes. We will invite patients from phase 1 and additional patients with aneurysms to use the intervention for six months. We will record their cardiovascular health when they are invited to take part and after six months. We will also assess how easy it was to use the intervention.

The CRISP intervention aims to address the following areas of best medical care/therapy in individuals who have an abdominal aortic aneurysm (small or moderate size) and are having surveillance using ultrasound scans:

1. Smoking cessation: A clear and easy to follow pathway, including patient-centred discussion of barriers and referral to existing NHS smoking cessation services available locally and regionally.
2. Lifestyle modifications: physical activity and diet assessed when one is diagnosed with an aneurysm in screening programmes and then the individual (if needed) is supported in setting and achieving specific targets for change (lose weight, eat healthy based on current guidance).
3. Antiplatelet agents: Aspirin 75mg (or Clopidogrel 75mg if Aspirin is contra-indicated) offered to all individuals and their primary care doctor is updated via direct communication.
4. Lipid control: Atorvastatin 80mg offered to all individuals regardless of baseline lipid levels

and their primary care doctor is updated via direct communication.

5. Blood pressure control: A target of 140/90mmHg should be achieved; the primary care doctor is contacted via direct communication in order to achieve that target with appropriate pharmacotherapy

The intervention will include:

1. One initial face-to-face consultation (to assess and discuss risk-factors, address motivation and barriers and decide what actions and specific risk-factors to initially target)
2. Telephone-based remote follow-up (potentially with further face to face catch-up meetings)

Intervention Type

Mixed

Primary outcome(s)

1. Proportion of patients agreeing to take part out of all patients invited at six months (recruitment rate) measured using case report forms
2. Proportion of people recruited who provide data at the end of the intervention period i.e. at six months (retention rate) measured using case report forms
3. Percentage of intervention sessions that participants complete at six months (intervention uptake) measured using case report forms
4. Intervention acceptability to patients (assessed qualitatively using semi-structured interviews and a satisfaction questionnaire) and service providers (assessed qualitatively)

Key secondary outcome(s)

There are no secondary outcome measures

Completion date

01/10/2024

Eligibility

Key inclusion criteria

1. Men with an abdominal aortic aneurysm identified through the existing NHS Abdominal Aortic Aneurysm (AAA) Screening Programme (NAAASP)
2. Any healthcare professional involved in the care of individuals with an abdominal aortic aneurysm

Participant type(s)

Patient, Health professional

Healthy volunteers allowed

No

Age group

Adult

Lower age limit

18 Years

Sex

Male

Total final enrolment

153

Key exclusion criteria

Age <18 years

Date of first enrolment

01/04/2020

Date of final enrolment

01/04/2024

Locations

Countries of recruitment

United Kingdom

England

Study participating centre

NHS Abdominal Aortic Aneurysm Screening Programme

Public Health England

Zone B, Floor 2

Skipton House

80 London Road

London

United Kingdom

SE1 6LH

Sponsor information

Organisation

University of Leicester

ROR

<https://ror.org/04h699437>

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

Results and Publications

Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request. Data will become available on 01/10/2022 and for five years.

Data will only be shared for qualitative analyses with qualified researchers, once a request has been made to the chief investigator and once the request has been reviewed and approved by the study Sponsor; all data will be anonymised and non-identifiable. No patient quotes will be shared. No individual patient level data will be shared at any time. Data will only be shared via an NHS computer or NHS email.

IPD sharing plan summary

Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		03/09/2024	03/09/2024	Yes	No
HRA research summary			28/06/2023	No	No
Other publications	intervention development	29/01/2024	01/02/2024	Yes	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes
Protocol file	version 1.4	11/01/2023	28/08/2024	No	No