

# Testing a new approach to manage high blood pressure among low-income urban residents through community pharmacies in Bangladesh and Pakistan - a feasibility trial

<b>Submission date</b> 11/08/2025	<b>Recruitment status</b> Not yet recruiting	<input checked="" type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 26/08/2025	<b>Overall study status</b> Ongoing	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
<b>Last Edited</b> 06/03/2026	<b>Condition category</b> Circulatory System	<input type="checkbox"/> Individual participant data <input checked="" type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

High blood pressure is a common and serious health issue in Bangladesh and Pakistan, particularly in low-income urban communities. If not managed well, it can lead to heart disease and strokes. We believe that local community pharmacies, which are easy for people to access, could play a bigger role in helping people manage their blood pressure.

We aim to design a new support programme called COPE-BP that will be delivered by specially trained pharmacists. Before running a large-scale trial to test its effectiveness, we will first carry out this smaller "feasibility" study to check whether our study methods work in practice. We will assess how best to recruit participants, whether pharmacists can deliver the programme as planned, and how acceptable it is to participants and providers. The findings will help refine the design for a future, larger trial.

### Who can participate?

To take part, individual participants must be:

- Aged 30 years or older.
- Having uncontrolled blood pressure.
- A long-term resident of one of the low-income urban study communities and available for follow-up visits.
- People who are pregnant or have certain other advanced medical conditions cannot take part.

To take part, community pharmacies must:

- Have a valid registration to operate.
- Employ at least one qualified (degree-holder) pharmacist.
- Have staff who are willing to be trained and to deliver the assigned care (either the COPE-BP intervention or usual care) for the entire study period.
- Pharmacies with unresolved legal or regulatory issues will not be included.

### What does the study involve?

The study involves community pharmacies that will be randomly placed into one of two groups. Participants will join the group that their local pharmacy has been assigned to.

If a participant is in the first group, they will receive the new COPE-BP support programme from their pharmacist for 4 months. This involves regular blood pressure checks, advice on medications and healthy lifestyle choices, and a referral to a doctor if their blood pressure is too high.

If a participant is in the second group, they will receive the normal 'usual care' from their pharmacy and doctor, just as they would if they were not in the study.

All participants will be asked to attend two main appointments at their pharmacy: one at the beginning of the study and one after 4 months. During these visits, pharmacists will take measurements like blood pressure and the researchers will ask them to complete questionnaires.

### What are the possible benefits and risks of participating?

Participants receiving the new support might benefit from better blood pressure control. The main benefit of taking part is helping researchers understand how to run a future large-scale study, which could improve blood pressure care for many people in Bangladesh and Pakistan. The risks of taking part are very low. The COPE-BP programme is based on current best practices for managing high blood pressure and does not involve any new medicines. The main inconvenience is the time needed for study appointments, but participants will be reimbursed for their travel costs.

### Where is the study run from?

The study is being run in communities within four cities: Dhaka and Narsingdi in Bangladesh, and Peshawar and Abbottabad in Pakistan. The lead research institutions are Khyber Medical University in Pakistan and the ARK Foundation in Bangladesh.

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

The study is planned to start recruiting participants from October 2026. This feasibility study will last for 8 months in total, with each participant's involvement lasting for approximately 4 months. The study is anticipated to be completed in July 2027.

### Who is funding the study?

The National Institute for Health and Care Research (NIHR) in the United Kingdom.

### Who is the main contact?

Dr Saima Afaq, saima.afaq@york.ac.uk  
University of York, UK

## Contact information

### Type(s)

Public, Scientific, Principal investigator

### Contact name

Dr Saima Afaq

### ORCID ID

<https://orcid.org/0000-0002-9080-2220>

### Contact details

Heslington East  
York  
United Kingdom  
YO10 5DD  
+44 7803414852  
saima.afaq@york.ac.uk

## Additional identifiers

**National Institute for Health and Care Research (NIHR)**  
206976

## Study information

### Scientific Title

Community-pharmacy based intervention to improve hypertension control among low-income urban residents in Bangladesh and Pakistan (COPE-BP) - A cluster randomised feasibility trial

### Acronym

COPE-BP

### Study objectives

This feasibility trial aims to determine whether a structured, community pharmacy-based intervention for hypertension management can be delivered and sustained for low-income urban residents in Bangladesh and Pakistan. The study will assess feasibility through recruitment, retention, and intervention fidelity, and evaluate acceptability among participants and pharmacy staff. The level of contamination between intervention and control groups will be assessed. Preliminary effects on blood pressure control will be explored. In addition, the standard deviation for the primary outcome(s) in this population will be estimated to inform the sample size for a future definitive trial.

### Ethics approval required

Ethics approval required

### Ethics approval(s)

1. approved 21/03/2025, Health Sciences' Research Governance Committee, University of York (Heslington East, York, YO10 5DD, United Kingdom; +44 7803414852; stephen.holland@york.ac.uk), ref: HSRGC/2025/677/C
2. approved 04/02/2025, Khyber Medical University-IPHSS Ethics Committee (KMU main campus, near PDA building, Phase 5, Hayatabad, Peshawar, 25000, Pakistan; +92-91-9217268; rec.iph@kmu.edu.pk), ref: KMU/IPHSS/Ethics/2024/CP/248
3. approved 11/02/2025, Khyber Medical University Ethics Board (KMU main campus, near PDA building, Phase 5, Hayatabad, Peshawar, 25000, Pakistan; +92-091-9217258; reb@kmu.edu.pk), ref: DIR/KMU-EB/CP/000999
4. approved 27/05/2025, National Bioethics Committee for Research (NBC-R) (Health Research Institute, Shahrah-e-Jamhuriat, Off Constitution Avenue, Sector G-5/2, Islamabad, Islamabad, 44000, Pakistan; +92-51-9224325; nbcpakistan@nih.org.pk), ref: NBCR-1227

5. approved 03/07/2025, Bangladesh Medical Research Council (BMRC) (BMRC Bhaban, Mohakhali, Dhaka, Dhaka-1212, Bangladesh; +88-029848396; info@bmrcbd.org), ref: BMRC/NREC/2025-2027/209

6. approved 26/02/2025, Institutional Review Board of the Institute of Health Economics, University of Dhaka (Arts Building (4th Floor) Dhaka-1000, University of Dhaka, Ramna, Dhaka, Dhaka-1000, Bangladesh; +88-09666911463; director.ihe@du.ac.bd), ref: IHE/IRB/DU/07/2025/Final

## **Study design**

Multicentre interventional two-arm cluster randomized controlled feasibility trial

## **Primary study design**

Interventional

## **Study type(s)**

Prevention, Treatment

## **Health condition(s) or problem(s) studied**

Prevention and management of hypertension to reduce cardiovascular disease risk in low-income urban residents (LIURs) in Bangladesh and Pakistan.

## **Interventions**

Current interventions as of 06/03/2026:

Clusters of community pharmacies will be randomly allocated to one of two arms using minimisation:

1. Intervention Arm: Participants in the intervention arm will receive the COPE-BP intervention from trained community pharmacists for a period of 4 months. This multicomponent intervention includes blood pressure monitoring, medication adherence advice, health education, and a referral pathway to a linked primary care physician for participants with poorly controlled blood pressure or at high cardiovascular risk.

2. Control Arm: Participants in the control arm will receive usual care, which consists of the standard healthcare services available in their communities, which do not typically include a structured, pharmacist-led support programme like the COPE-BP intervention.

The study will begin on 1 October 2026 and end on 31 July 2027 for both the intervention and control arms. Recruitment will take place during the first two months in both arms, followed by a four-month follow-up for each participant from their recruitment date. This is a cluster randomised controlled trial (cRCT). The randomisation process is as follows:

-The unit of randomisation is a "cluster", which is a predefined geographical area (based on our initial geospatial mapping and survey conducted before the trial). Each cluster will contain aggregated registered community pharmacies.

-The randomisation of these clusters to either the intervention or the control arm will be performed through minimisation by a statistician who is independent of the recruitment team to ensure allocation is concealed and free from bias. All eligible participants who provide consent will be enrolled in the study arm (intervention or control) to which the pharmacy cluster they were recruited from has been allocated.

## Previous interventions:

Clusters of community pharmacies will be randomly allocated to one of two arms using minimisation:

1. **Intervention Arm:** Participants in the intervention arm will receive the COPE-BP intervention from trained community pharmacists for a period of 6 months. This multicomponent intervention includes blood pressure monitoring, medication adherence advice, health education, and a referral pathway to a linked primary care physician for participants with poorly controlled blood pressure or at high cardiovascular risk.
2. **Control Arm:** Participants in the control arm will receive usual care, which consists of the standard healthcare services available in their communities which does not typically include a structured, pharmacist-led support programme like the COPE-BP intervention.

The study will begin on 1 March 2026 and end on 28 February 2027 for both the intervention and control arms. Recruitment will take place during the first three months in both arms, followed by a six-monthly follow-up for each participant from their recruitment date. This is a cluster randomised controlled trial (cRCT). The randomisation process is as follows:

- The unit of randomisation is a "cluster", which is a predefined geographical area (based on our initial geospatial mapping and survey conducted before the trial). Each cluster will contain aggregated registered community pharmacies.
- The randomisation of these clusters to either the intervention or the control arm will be performed through minimisation by a statistician who is independent of the recruitment team to ensure allocation is concealed and free from bias. All eligible participants who provide consent will be enrolled in the study arm (intervention or control) to which the pharmacy cluster they were recruited from has been allocated.

## Intervention Type

Behavioural

## Primary outcome(s)

Current primary outcomes as of 06/03/2026:

1. Feasibility of the COPE-BP intervention, assessed by recruitment rate (% of eligible participants enrolled) and retention rate (% completing 4-month follow-up), measured from study screening logs and participant records at baseline and 4 months.
2. Intervention acceptability measured using validated questionnaires: 'Acceptability of Intervention Measure' (AIM), 'Feasibility of Intervention Measure' (FIM) and Intervention Appropriateness Measure (IAM) at the end of the 4-month implementation period .
3. Data completeness measured by the proportion of participants with complete outcome data at 4 months post-randomisation.
4. Contamination between trial arms measured using a survey of control-arm pharmacies during the trial period.
5. Feasibility of collecting economic data measured using Resource Use questionnaires at baseline and 4 months post-randomisation.
6. Standard Deviation of the mean difference in systolic blood pressure between trial arms will be determined to inform the main trial sample size calculation.

Previous primary outcomes:

1. Feasibility of the COPE-BP intervention, assessed by recruitment rate (% of eligible participants enrolled) and retention rate (% completing 6-month follow-up), measured from study screening logs and participant records at baseline and 6 months.

2. Intervention acceptability measured using validated questionnaires: 'Acceptability of Intervention Measure' (AIM), 'Feasibility of Intervention Measure' (FIM) and Intervention Appropriateness Measure (IAM) at the end of the 6-month implementation period.
3. Data completeness measured by the proportion of participants with complete outcome data at 6 months post-randomisation.
4. Contamination between trial arms measured using a survey of control-arm pharmacies during the trial period.
5. Feasibility of collecting economic data measured using Resource Use questionnaires at baseline and 6 months post-randomisation.
6. Standard Deviation of the mean difference in systolic blood pressure between trial arms will be determined to inform the main trial sample size calculation.

### **Key secondary outcome(s)**

Current key secondary outcomes as of 06/03/2026:

1. Systolic Blood Pressure measured using standardised digital blood pressure monitors at baseline (month 0) and follow-up (month 4).
2. Diastolic Blood Pressure measured using standardised digital blood pressure monitors at baseline (month 0) and follow-up (month 4).
3. Blood Pressure Control (defined as systolic BP <140 mm Hg and diastolic BP <90 mm Hg) measured using standardised digital blood pressure monitors at baseline (month 0) and follow-up (month 4).
4. Very Poorly Controlled Blood Pressure (defined as systolic BP  $\geq$ 160 mm Hg or diastolic BP  $\geq$ 100 mm Hg) measured using standardised digital blood pressure monitors at baseline (month 0) and follow-up (month 4).
5. Adherence to Antihypertensive Medications measured using the Hill-Bone Compliance to High Blood Pressure Therapy Scale (HB-HBP) at baseline (month 0, for those already diagnosed) and follow-up (month 4).
6. Body Mass Index (BMI) and Waist Circumference measured using a stadiometer, weight machine, and standard measuring tape at baseline (month 0) and follow-up (month 4).
7. Lifestyle Risk Factors (including physical activity, smoking status, fruit and vegetable intake) measured using the International Physical Activity Questionnaire - Short Form (IPAQ-SF), a smoking status questionnaire, and a Food Frequency Questionnaire (FFQ) at baseline (month 0) and follow-up (month 4).
8. Dietary Salt Intake measured using a urine sodium excretion test from a spot urine sample at baseline (month 0) and follow-up (month 4).
9. Lipid Profile measured using a fasting blood sample at baseline (month 0) and follow-up (month 4).
10. Diabetes measured using HbA1c levels from a blood sample at baseline (month 0) and follow-up (month 4).
11. Kidney Function (including eGFR and urine albumin excretion) measured using a serum creatinine test and a urine albumin-to-creatinine ratio (UACR) at baseline (month 0) and follow-up (month 4).
12. Health-Related Quality of Life measured using the EQ-5D-5L questionnaire at baseline (month 0) and follow-up (month 4).

Previous key secondary outcomes:

1. Systolic Blood Pressure measured using standardised digital blood pressure monitors at baseline (month 0) and follow-up (month 6).
2. Diastolic Blood Pressure measured using standardised digital blood pressure monitors at baseline (month 0) and follow-up (month 6).
3. Blood Pressure Control (defined as systolic BP <140 mm Hg and diastolic BP <90 mm Hg)

measured using standardised digital blood pressure monitors at baseline (month 0) and follow-up (month 6).

4. Very Poorly Controlled Blood Pressure (defined as systolic BP  $\geq 160$  mm Hg or diastolic BP  $\geq 100$  mm Hg) measured using standardised digital blood pressure monitors at baseline (month 0) and follow-up (month 6).

5. Adherence to Antihypertensive Medications measured using the Hill-Bone Compliance to High Blood Pressure Therapy Scale (HB-HBP) at baseline (month 0, for those already diagnosed) and follow-up (month 6).

6. Body Mass Index (BMI) and Waist Circumference measured using a stadiometer, weight machine, and standard measuring tape at baseline (month 0) and follow-up (month 6).

7. Lifestyle Risk Factors (including physical activity, smoking status, fruit and vegetable intake) measured using the International Physical Activity Questionnaire - Short Form (IPAQ-SF), a smoking status questionnaire, and a Food Frequency Questionnaire (FFQ) at baseline (month 0) and follow-up (month 6).

8. Dietary Salt Intake measured using a urine sodium excretion test from a spot urine sample at baseline (month 0) and follow-up (month 6).

9. Lipid Profile measured using a fasting blood sample at baseline (month 0) and follow-up (month 6).

10. Incident Diabetes measured using fasting plasma glucose levels from a blood sample at baseline (month 0) and follow-up (month 6).

11. Kidney Function (including eGFR and urine albumin excretion) measured using a serum creatinine test and a urine albumin-to-creatinine ratio (UACR) at baseline (month 0) and follow-up (month 6).

12. Health-Related Quality of Life measured using the EQ-5D-5L questionnaire at baseline (month 0) and follow-up (month 6).

### **Completion date**

31/07/2027

## **Eligibility**

### **Key inclusion criteria**

Current key inclusion criteria as of 06/03/2026:

1. Aged 30 years or older.
2. Having uncontrolled hypertension, defined as having a systolic BP  $\geq 140$  mm Hg or a diastolic BP  $\geq 90$  mm Hg. This includes both newly diagnosed patients and those with a previous diagnosis of hypertension.
3. A stable resident (living for 6 months or more) of the defined cluster locality and available for follow-up visits.
4. Able to provide informed consent.

Previous key inclusion criteria:

1. Aged 30 years or older.
2. Diagnosed with hypertension, which is defined as either the current use of antihypertensive medications or having a persistently elevated blood pressure (systolic BP  $\geq 140$  mm Hg or diastolic BP  $\geq 90$  mm Hg).
3. A stable resident (living for 6 months or more) of the defined cluster locality and available for follow-up visits.
4. Able to provide informed consent.

### **Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Mixed

**Lower age limit**

30 years

**Upper age limit**

120 years

**Sex**

All

**Total final enrolment**

0

**Key exclusion criteria**

1. Pregnancy.
2. Individuals with advanced medical diseases, such as those on dialysis, with liver cirrhosis, or with cancer.
3. Individuals with a history of severe allergies or severe adverse reactions to antihypertensive medications.

**Date of first enrolment**

01/10/2026

**Date of final enrolment**

30/11/2026

**Locations**

**Countries of recruitment**

Bangladesh

Pakistan

**Study participating centre**

**Not yet identified.**

Peshawar and Abbottabad

Pakistan

25000

**Study participating centre**

**Not yet identified.**  
Dhaka and Narsingdi  
Bangladesh  
1000

## Sponsor information

### Organisation

National Institute for Health and Care Research

## 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

The datasets generated during and/or analysed during the current study will be stored in a publicly available repository.

- A fully anonymised individual participant data (IPD) file containing all quantitative variables (questionnaire responses and biochemical measurements) will be shared. Anonymised transcripts from qualitative interviews and focus groups will also be made available where explicit consent has been given for public sharing.

- The data will be deposited and made publicly available after the completion of the feasibility study.

- Informed consent from participants will include permission to share their anonymised data through a public repository for future research. Before deposit, all direct and indirect identifiers will be removed from the dataset to ensure participant confidentiality is protected, in line with the study's data management plan.

- The sharing of data is contingent upon the permissions granted in the informed consent process and must comply with the ethical approvals obtained from the Ethics Committees in Bangladesh and Pakistan, and the University of York, UK.

### **IPD sharing plan summary**

Stored in publicly available repository