THE UNIVERSITY of EDINBURGH

Co-production of a primary health care hypertension intervention for rural African adults: The CO-HEART Study

Sandra M. Peniston

SCPHRP and Nursing Research Seminar

15th October, 10-11.00

The CO-HEART Study

Personal Background

GRID & NEA

2022


Leyaata
HOSPITAL
Ghana Health Partners
November 2023

Personal Background

- Witnessed firsthand the **incredible injustice of health inequity.**

- **Hypertension was rampant.**

Background: 2018 Study

Hypertension was noted as a clinically significant risk factor with females at 37.3% versus males at 32%.

Global Journal of Health Science; Vol. 13, No. 6; 2021
ISSN 1916-9736 E-ISSN 1916-9744
Published by Canadian Center of Science and Education

Assessment of Cardiovascular Risk for Prevention and Control of Cardiovascular Disease in Ghana's Northern Region

A Cross-Sectional Study of 4 Rural Districts Using World Health Organization/International Society of Hypertension (WHO/ISH) Risk Prediction Charts

Sandra M. Skerratt[1] & Olivia G. Wilson[2]

[1] School of Nursing & School of Global Health, York University, Toronto, Canada

[2] School of Interdisciplinary Studies, McMaster University, Hamilton, Canada

Correspondence: Sandra M. Skerratt, School of Nursing, York University, 4700 Keele Street, HNES 331, Toronto ON M3J 1P3, Canada.

The Problem: Cardiovascular Diseases or Heart Diseases

- Cardiovascular diseases (CVDs) are the **leading cause of death globally.**
- Over three-quarters of CVD deaths take place in **low- and middle-income countries.**

The Bigger Problem: Hypertension

- Also known as….High Blood Pressure, Raised Blood Pressure
- Is the **#1 risk factor** for cardiovascular disease

Hypertension – It's a *silent killer*…

- **Silent, leading cause** of 10.8 million avoidable deaths annually
- The highest rates of hypertension are in **Africa**

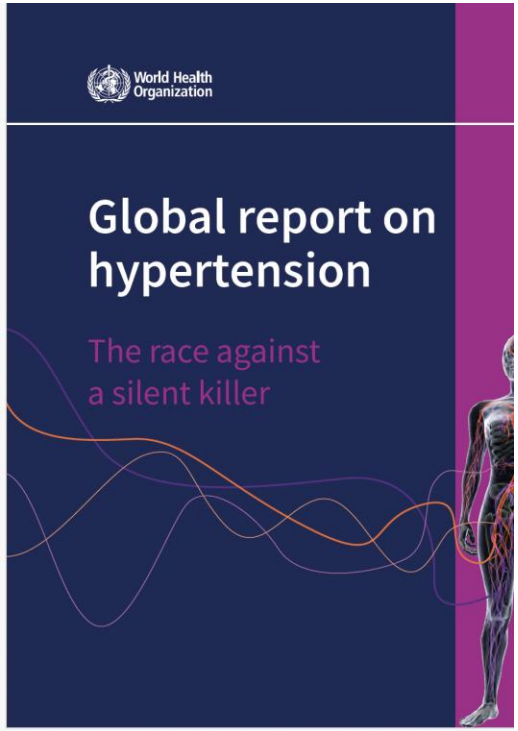


Table 2. Age-standardized prevalence of hypertension among adults aged 30–79 years, and among those with hypertension, diagnosis, treatment and effective treatment coverage in 2019, by WHO region

Region	Hypertension (%)
African	36 (38, 33)
The Americas	35 (38, 33)
South-East Asia	32 (36, 29)
European	37 (39, 35)
Eastern Mediterranean	38 (41, 35)
Western Pacific	28 (32, 25)
Global	33 (35, 32)

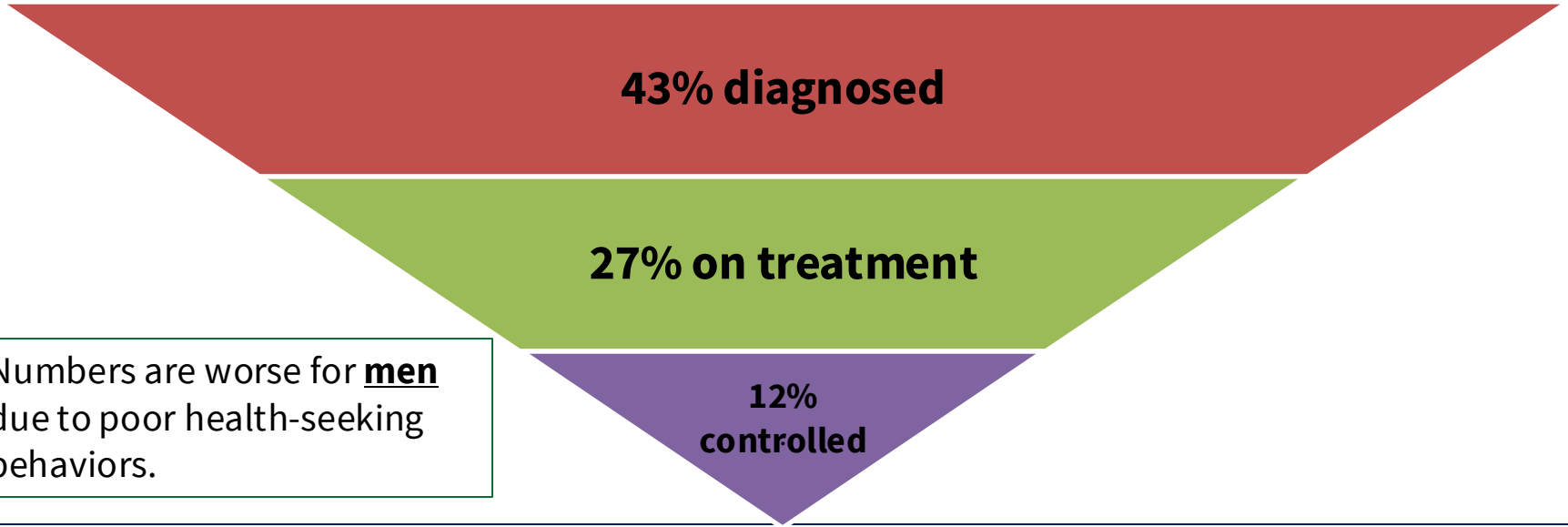
Hypertension in Ghana

- **34%** aged 30-79 have hypertension (2023)
  - Linked to **61%** of heart disease death
  - **Premature mortality**
  - Responsible for 91% of **strokes** in young and middle-aged adults
- Ghana's **rural population** most vulnerable…

Ghana's rural population most vulnerable

- **Prevalence** matches urban areas with **less health care resources/access**
- Awareness, treatment, and control are **remarkably lower**

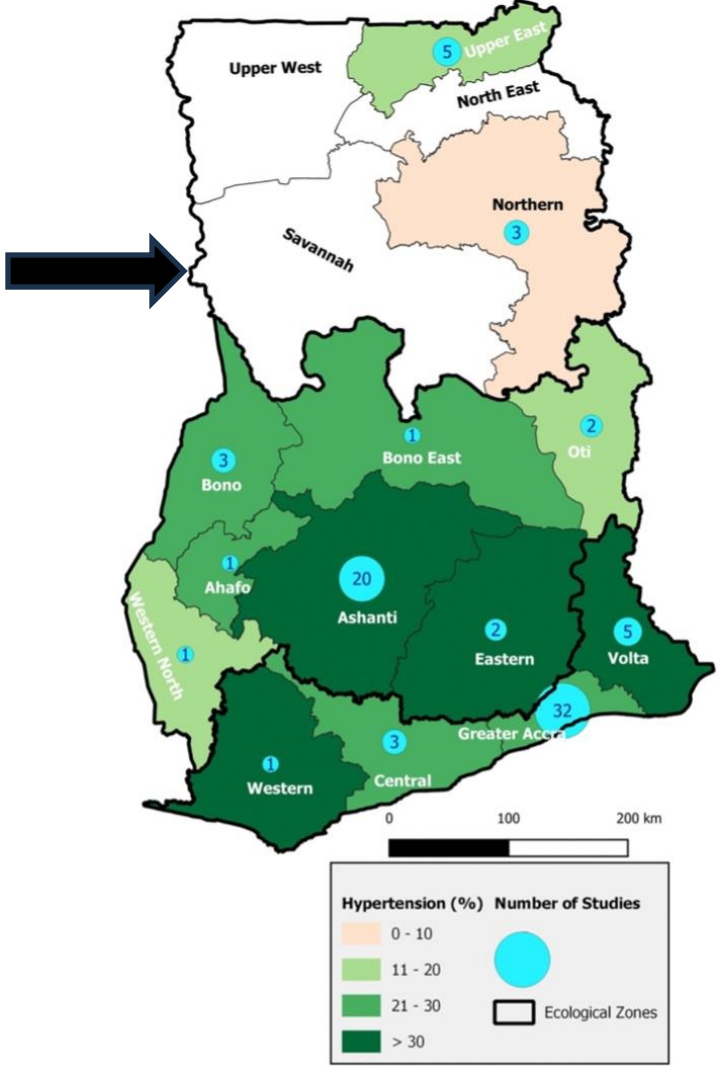
The Biggest Problem:
Undiagnosed and uncontrolled hypertension



Numbers are worse for **men** due to poor health-seeking behaviors.

Ghana's rural population most vulnerable

- **Prevalence** matches urban areas with **less health care resources/access**
- Awareness, treatment, and control are **remarkably lower**
- **Lower SES** coupled with **chronic stressors of poverty**
- Reduced **education** attainment / Higher **health illiteracy** rates
- Not familiar with **chronic** nature of disease & **incurability**
- **No hypertension research** in Savannah Region



Map of Ghana showing regional distributions of number of studies and hypertension prevalence

Bosu, W. K. and D. K. Bosu (2021). "Prevalence, awareness and control of hypertension in Ghana: A systematic review and meta-analysis." PLoS ONE **16**(3 March).

Primary Health Care

- The WHO asserts that the best way to tackle rising hypertension in **underserved rural** areas is through **coordinated primary health care**
- This requires **feasible, acceptable and sustainable** team-based interventions
- Tailored to the **local context**
- **Co-produced** with local health care providers and the rural adults they serve.

THE UNIVERSITY of EDINBURGH

The CO-HEART Study

CO-Produced HypErtension Adult InteRvenTion

Supervisors:

Prof. Aisha Holloway (Edinburgh)

Dr. Divya Sivaramakrishnan (Edinburgh)

Dr. Princess Acheampong (Ghana)

LEYAATA HOSPITAL
(Member of CHAG)
OUR GOD RESCUES

WHAT is the CO-HEART Study?

Aim: To develop a feasible, acceptable, and sustainable primary health care hypertension intervention for rural adults in Ghana

Dr. Benjamin Asubiojo (Medical Director, Leyaata Hospital

The CO-HEART Study

WHAT is the CO-HEART Study?

Objectives: Based on the Six Steps in Quality Intervention Development (6SQuID) framework & principles of co-production.


BURKINA FASO
BENIN
TOGO
COTE D'IVOIRE
UPPER WEST
UPPER EAST
NORTHERN EAST
NORTHERN
SAVANNAH
BONO
BONO EAST
AHAFO
WESTERN NORTH
ASHANTI
EASTERN
VOLTA
OTI
GREATER ACCRA
CENTRAL
WESTERN
Bolgatanga
Nalerigu
Wa
Tamala
Damongo
Dambai
Techiman
Sunyani
Goaso
Kumasi
Ho
Sefwi Wiawso
Koforidua
ACCRA
Cape Coast
Takoradi
Gulf of Guinea
GHANA
POLITICAL
Country Boundary
Country Capital
Region Boundary
Region Capital
0 50 100 Miles
0 50 100 150 Kilometers
Projection - wgs84 World Mercator
Copyright © BurningCompass.Com. All Rights Reserved

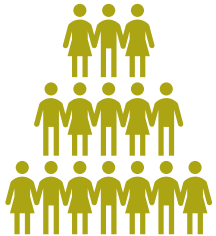
Participants/Settings

CHPS = Community Health Planning and Services Clinics

Leyaata Hospital

Primary Care Hospital

Physicians, physician assistants, registered nurses, pharmacists



CHPS Health Clinics

Primary Care Centers in Communities

Community members, community health workers, community health nurses

Research Design based on 6SQuID - Mixed Methods

Steps in Quality Intervention Development (6SQuID)	Application of (6SQuID) to the research context	Method(s) used in research
Step 1: Define and understand the problem and causes	Clarify the problem of undiagnosed and uncontrolled HTN in rural adults in Ghana's Savannah Region Establish causes and consequences	Review of evidence Semi-structured Interviews with health care professionals and Focus Group with community members Workshop 1: Co-produce a model/framework outlining the various causal pathways based on SEM of health

Research Design based on Six Steps in Quality Development (6SQuID) - Mixed Methods

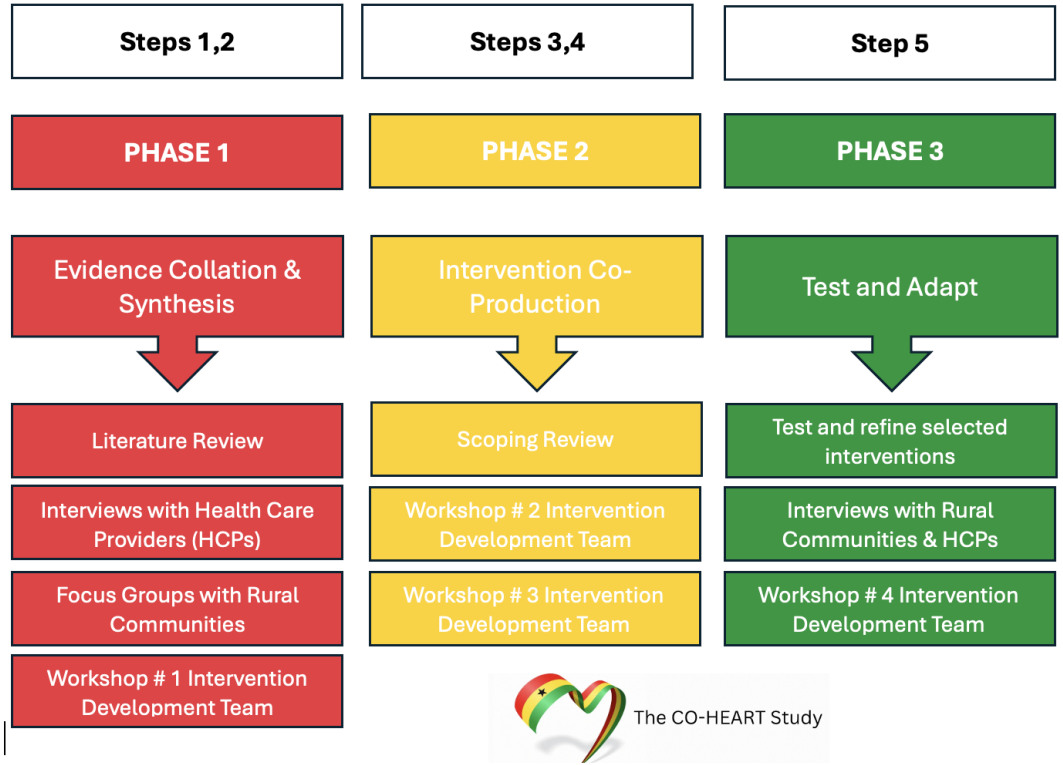
Step 2: Identify modifiable causal or contextual factors with greatest scope for change and who would benefit most	Based on the review of the above data Use a fishbone diagram to help establish the most effective intervention point(s) in the causal pathway	Workshop 1: Augment Model/Framework in Step 1
Step 3: Identify how to bring out the change: theory of change	Development of working theory, short term outcomes, medium term outcomes, long term outcomes	Review of evidence Focus groups (workshop) with IDT Development of logic model for theory of change

Research Design based on Six Steps in Quality Development (6SQuID) - Mixed Methods

Step 4: Identify how to deliver change mechanism: theory of action	Development of programme theory based on theory of action and theory of change (activities, intervention, responsibilities)	Review of evidence Focus groups (workshop) with IDT Design the components (activities) of the intervention. Development of a logic model for the theory of action and action plan (programme theory)
Step 5: Test and adapt the intervention	Pilot setting: CHPS compound / Leyaata hospital	Piloting of intervention activities Survey (APEASE) Interviews with community members, HCPs Workshop #4/ Focus Group with IDT

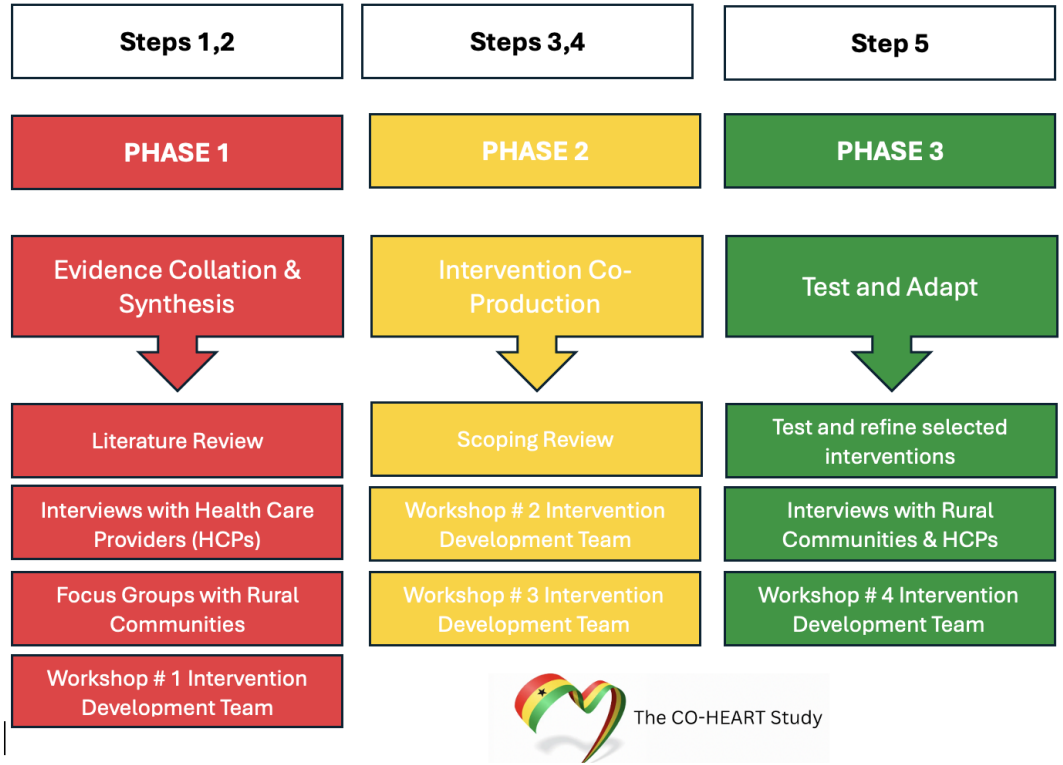
Three Phase PhD Project

6SQuID framework for intervention development



Three Phase PhD Project

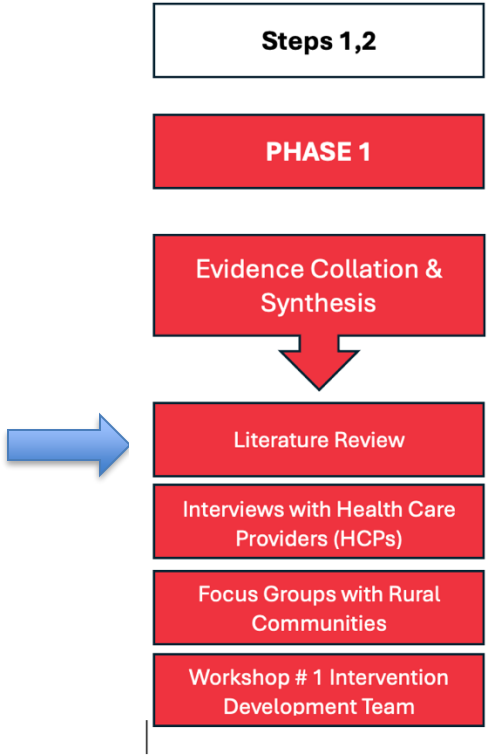
6SQuID framework for intervention development



Phase 1: Evidence Collation and Synthesis

6SQuID Steps 1&2

1. Define/understand problem & Causes
2. Identify modifiable causal or contextual factors with greatest scope for change and who would benefit most



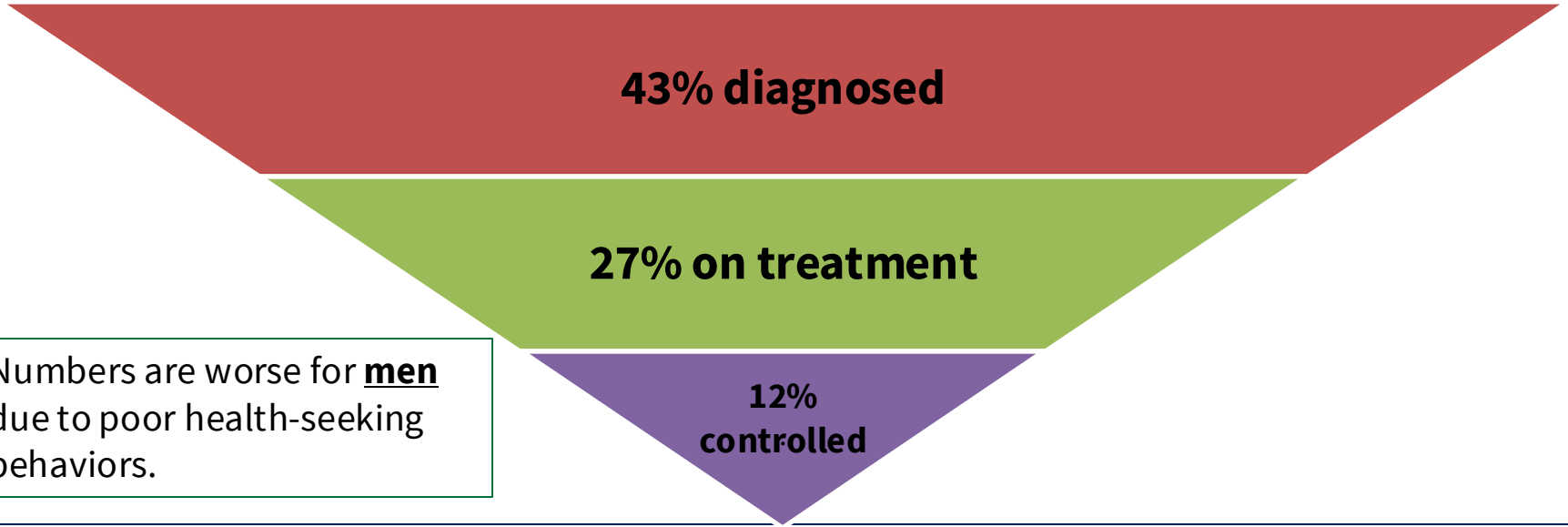
Phase 1: Evidence Collation and Synthesis

Outcome #1

Literature Review:

- Step 1: Define Problem and Causes
- Define the problem: *Not just about the rates/prevalence of hypertension !!*
- The Bigger Problem: *Rates of undiagnosed and uncontrolled hypertension*

The Biggest Problem:
Undiagnosed and uncontrolled hypertension



Numbers are worse for **men** due to poor health-seeking behaviors.

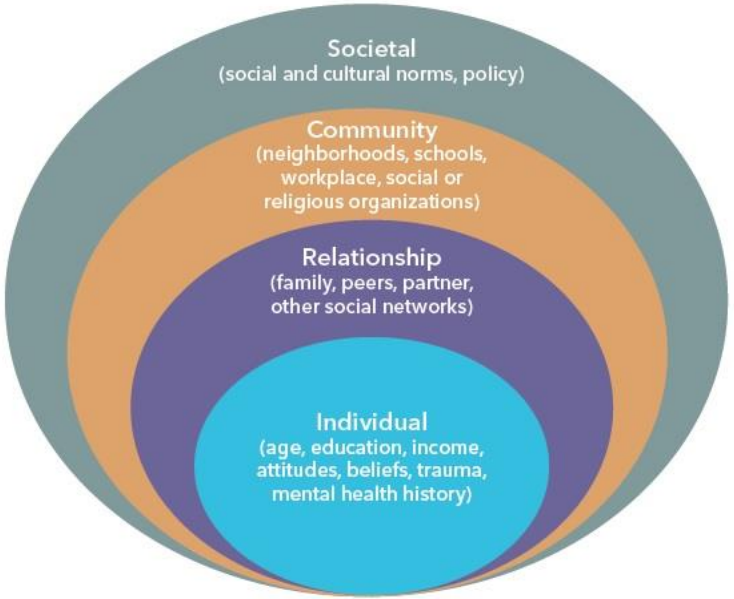
Phase 1: Evidence Collation and Synthesis

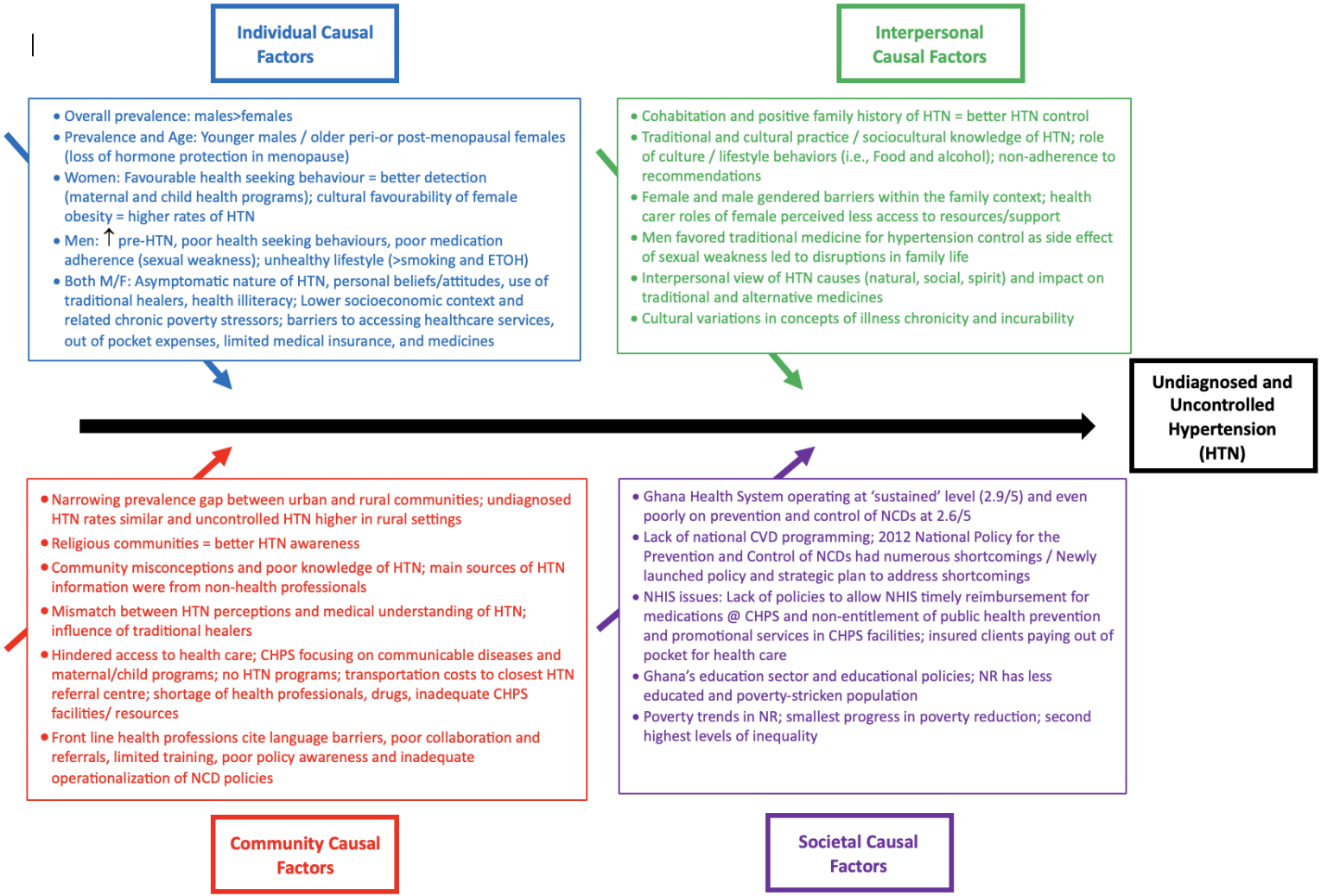
Outcome #2

Literature Review:

- Step 1: Define Problem and Causes
- Define the problem: Undiagnosed and uncontrolled hypertension
- Define Causes: Multifactorial causes
- Socio-ecological framework / model

Socio-ecological Model/Framework (Broffenbrenner, 1977)




Individual Causal Factors
• Overall prevalence: males>females
• Prevalence and Age: Younger males / older peri-or post-menopausal females (loss of hormone protection in menopause)
• Women: Favourable health seeking behaviour = better detection (maternal and child health programs); cultural favourability of female obesity = higher rates of HTN
• Men: ↑ pre-HTN, poor health seeking behaviours, poor medication adherence (sexual weakness); unhealthy lifestyle (>smoking and ETOH)
• Both M/F: Asymptomatic nature of HTN, personal beliefs/attitudes, use of traditional healers, health illiteracy; Lower socioeconomic context and related chronic poverty stressors; barriers to accessing healthcare services, out of pocket expenses, limited medical insurance, and medicines
Interpersonal Causal Factors
• Cohabitation and positive family history of HTN = better HTN control
• Traditional and cultural practice / sociocultural knowledge of HTN; role of culture / lifestyle behaviors (i.e., Food and alcohol); non-adherence to recommendations
• Female and male gendered barriers within the family context; health carer roles of female perceived less access to resources/support
• Men favored traditional medicine for hypertension control as side effect of sexual weakness led to disruptions in family life
• Interpersonal view of HTN causes (natural, social, spirit) and impact on traditional and alternative medicines
• Cultural variations in concepts of illness chronicity and incurability
Undiagnosed and Uncontrolled Hypertension (HTN)
• Narrowing prevalence gap between urban and rural communities; undiagnosed HTN rates similar and uncontrolled HTN higher in rural settings
• Religious communities = better HTN awareness
• Community misconceptions and poor knowledge of HTN; main sources of HTN information were from non-health professionals
• Mismatch between HTN perceptions and medical understanding of HTN; influence of traditional healers
• Hindered access to health care; CHPS focusing on communicable diseases and maternal/child programs; no HTN programs; transportation costs to closest HTN referral centre; shortage of health professionals, drugs, inadequate CHPS facilities/ resources
• Front line health professions cite language barriers, poor collaboration and referrals, limited training, poor policy awareness and inadequate operationalization of NCD policies
Community Causal Factors
• Ghana Health System operating at 'sustained' level (2.9/5) and even poorly on prevention and control of NCDs at 2.6/5
• Lack of national CVD programming; 2012 National Policy for the Prevention and Control of NCDs had numerous shortcomings / Newly launched policy and strategic plan to address shortcomings
• NHIS issues: Lack of policies to allow NHIS timely reimbursement for medications @ CHPS and non-entitlement of public health prevention and promotional services in CHPS facilities; insured clients paying out of pocket for health care
• Ghana's education sector and educational policies; NR has less educated and poverty-stricken population
• Poverty trends in NR; smallest progress in poverty reduction; second highest levels of inequality
Societal Causal Factors

Current State of Evidence on Primary Health Care in Rural Ghana

Outcome #3

PHC Models for Hypertension Management

Addresses shortage of health professionals (i.e.. MDs)
Improves access to care
Earlier detection, prevention education, referrals

- **Feasible** BUT issues with acceptability and sustainability

Current State of Evidence on Primary Health Care in Rural Ghana

Outcome #4

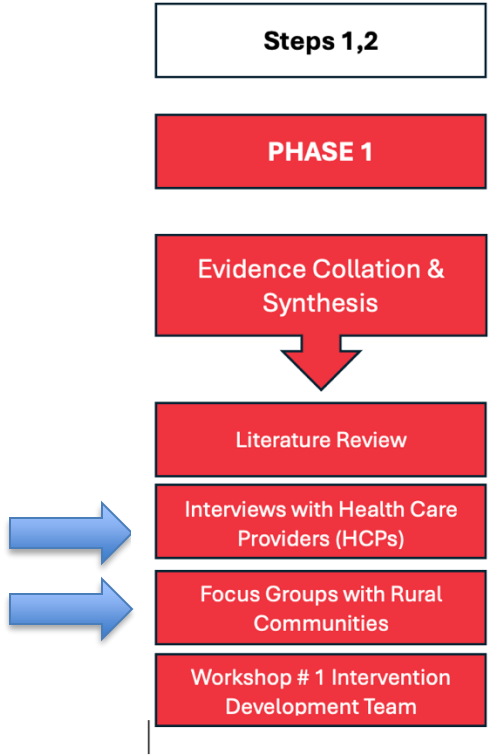
Current Gaps in the Literature:

1. Lack of co-production of intervention
2. Human Resources for Health: Skill mix
3. Integrated Primary Health Care

Phase 1: Evidence Collation and Synthesis

6SQuID Steps 1&2

1. Define/understand problem & Causes
2. Identify modifiable causal or contextual factors with greatest scope for change and who would benefit most



Interviews with Health Care Providers (n=10)

6 Staff – Leyaata Hospital

4 Staff- Rural Health Centers

Interviews

- *"It is one of the top 3 diseases we see"*
- *"We see strokes in young people. One of my patients was a 22 year-old man…he died…the specialty hospital was four hours away"*
- *"They self-medicate…treat headache, treat dizziness…but it's hypertension"*
- *The chemical sellers don't know…they are not regulated, they are teenagers running the shops"*
- *The wife doesn't have a say…if she has hypertension and we need her to stay in hospital to treat her…he will say 'NO"*
- *They don't understand…they want a quick fix…there is no cure."*

Focus Groups with Rural Communities

- 4 villages
- 24 participants per village
- Total: 96 participants
- Topic Guide based on Health Belief Model and Socio-ecological model

High Blood Pressure Knowledge and Awareness

1. What do you know about [hypertension]?
2. How can a person get [**]? What kinds of people are more likely to get [**]?
3. Can a person prevent getting [**]?
4. Do you think [**] is curable? How?
5. Do you know the signs and symptoms of [**]?
   (Headache, heart beating fast, chest pains, unable to sleep, unable to concentrate, general body weakness and noise in your ears when you sleep like your heart is beating in your ears)
6. Can people have [**] and not know it? No symptoms.

Screening/Diagnosis (Perceived benefits and barriers, cues to action)

7. What should one do if they have symptoms of HTN?
   - If participants mention getting blood pressure checked, ask where?
   - If unsure: Have you heard of checking your blood pressure to find out if you have [**]? Is there somewhere you can go to have your blood pressure checked? Where?
8. What positive things (benefits) could come from getting your blood pressure?
9. What wo
   - Indiv
   - Struc

   k, attitude of he
10. Cues to ure checked (Prompt ess messag

Perceived

11. Do you

Perceived

12. How sev
13. What would be your reaction if you found out you have [**]? Who would you talk to about your illness?
14. What kind of problems does it cause if not treated? For you, your family?
15. What do you fear most about [**]? Why?

Treatment and Control (Perceived benefits and barriers, self-efficacy)

16. Is there a treatment for [**]?
17. If a doctor prescribes medicine for [**], how long should you take the medicine?
18. What would stop you from taking prescription medication?
    - Individual (fears/concerns about taking medication, sexual weakness), family/cultural reasons
    - Structural (access, money, healthcare providers, transport, time/distance, others)
19. If you were told by the CHPS nurse that you have [**] and that treatment is available at Leyaata Hospital, what would stop (barriers) you from seeking care at Leyaata Hospital?
20. What positive things (benefits) could come from getting treatment at Leyaata Hospital and taking medicine?

Sources of Information

21. Where do you usually get health information? (Family, radio, CHPS nurse, healers)
22. How should information about [**] be given or provided to you and your community?

Version 7

From 45 questions to 22 questions !!

Moderator/Translator Team

Focus Groups: Chiefs/Elders Focus Groups




Women's Focus Groups




Men's Focus Groups

Focus Groups

- *“It affects all of us…men, women, young and old”*
- *”We are fearful…causes lots of distress”*
- *“It kills more easily than HIV”*
- *”It kills anytime…it is silent”*
- *“It’s serious if you are the breadwinner...not able to go to farm…children will suffer”*
- *“Barriers to care…transportation, poverty, fear of knowing, attitudes of health care providers at hospital, we don’t have enough knowledge about it”*

Qualitative Study: In Progress

- Analyzing focus group discussions from rural Ghanaian community members and semi-structured interviews with primary health care providers
- Questions focus on exploring the individual, social, and structural factors that influence hypertension awareness/perception and care engagement
- Through lens of the Health Belief Model and Socio-ecological Model

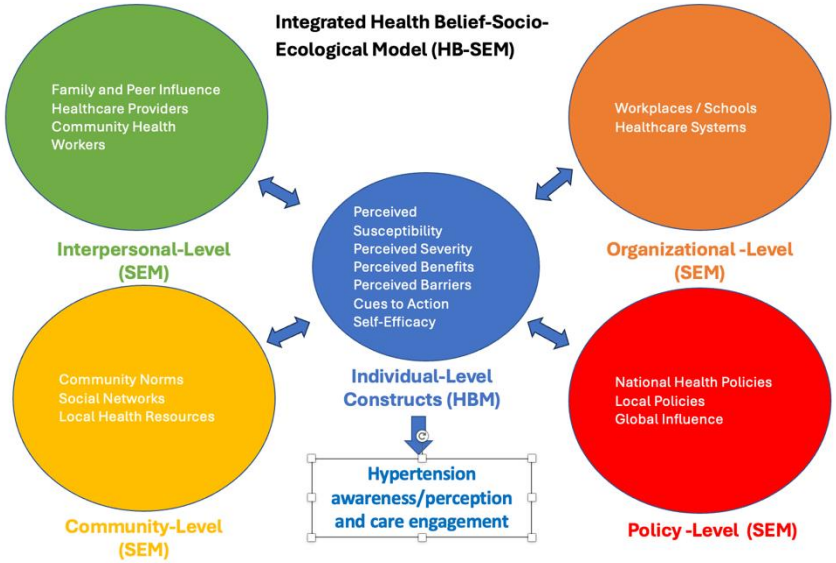
Qualitative Study

- Data analysis will follow a two-stage process:
  - Deductive categorization using the Socio-Ecological Model and Health Belief Model as theoretical frameworks,
  - Followed by inductive thematic analysis to identify emergent themes.

Emerging Themes

Level of SEM	Emerging Themes
Individual	Pending: Using Health Belief Model Constructs
Interpersonal	• Family influence and support • Cultural beliefs and gender roles • Economic and Emotional Burden on Family
Community	• Access to healthcare and resources • Cultural beliefs and misinformation • Community education and health promotion
Society	• Lack of healthcare infrastructure and accessibility • Neglect of hypertension as a public health priority • Misinformation and unregulated practices

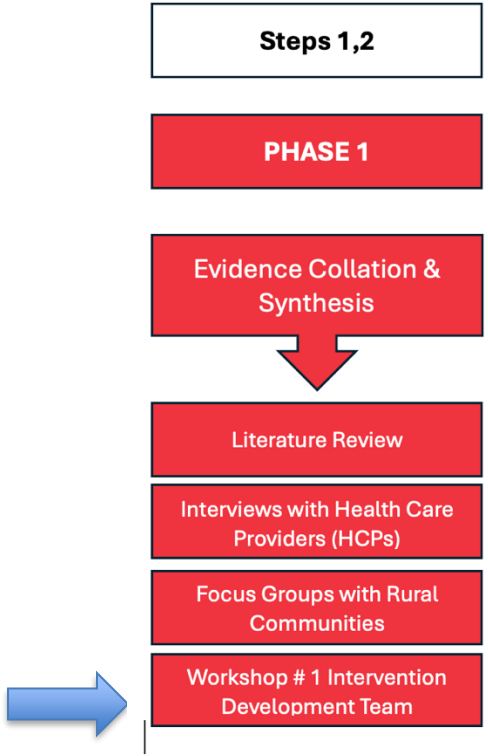
Integrated Health Belief-Socio-Ecological Model (HB-SEM)



Phase 1: Evidence Collation and Synthesis

6SQuID Steps 1&2

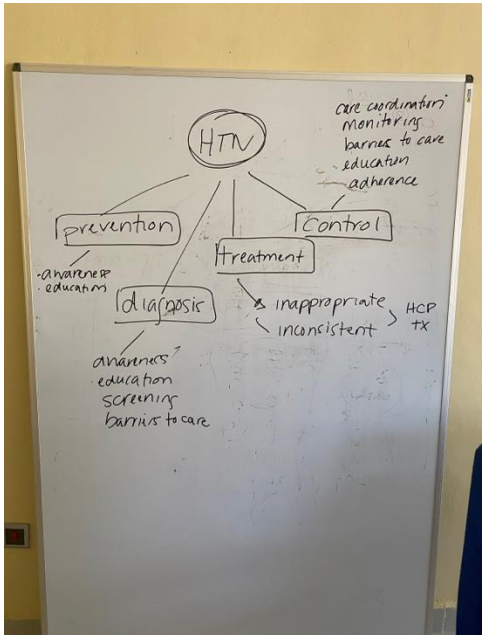
1. Define/understand problem & Causes
2. Identify modifiable causal or contextual factors with greatest scope for change and who would benefit most

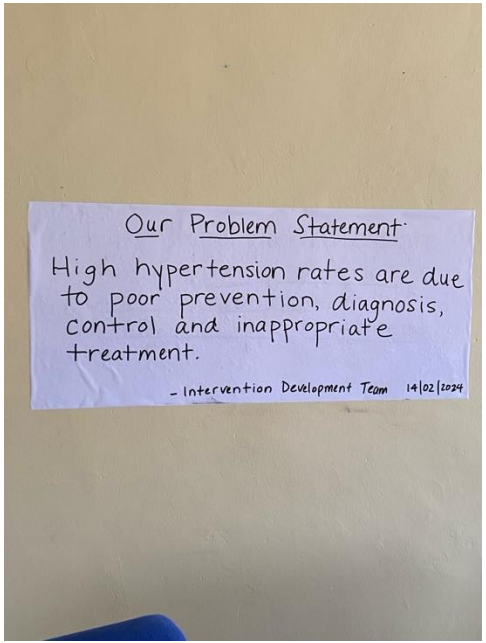


Intervention Development Team : Co-Production Workshops

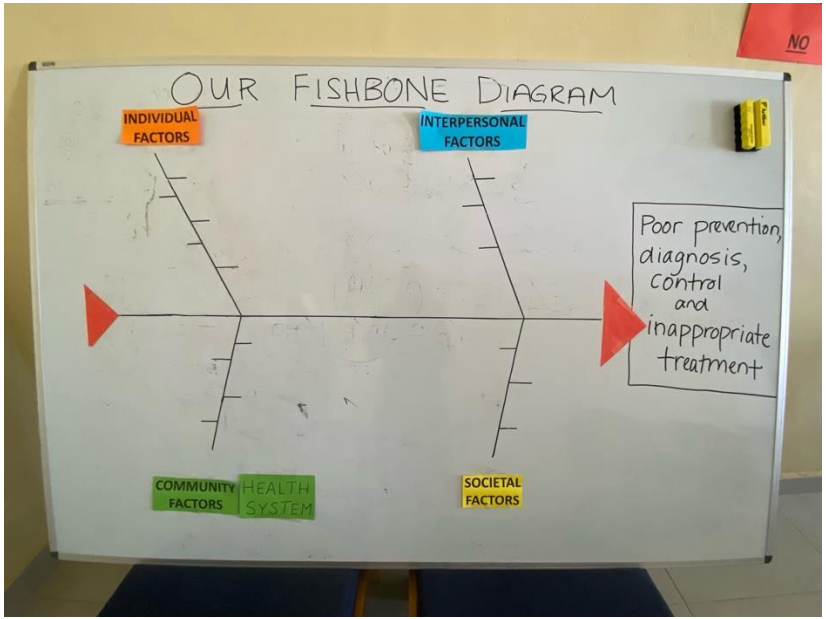
1. Medical Lead for Hospital
2. Two Senior Medical Officers
3. Two Physician Assistants
4. Two Community Health Nurses
5. Head Nurse (Ernestina)
6. Pharmacist
7. Hospital Administrator
8. Hospital Accountant

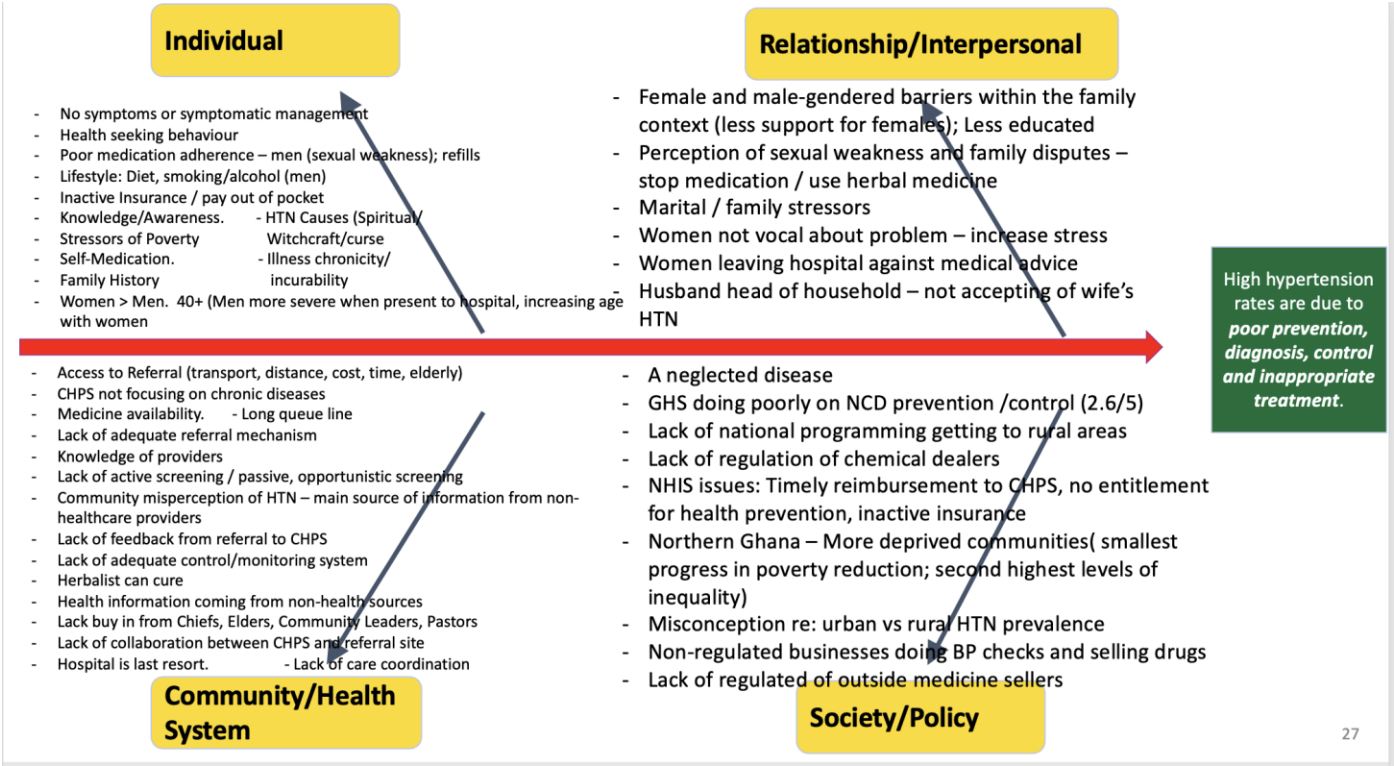
Step 1: Define and Understand the Problem and It's Causes





Step 1: Define and Understand the Problem and It's Causes




Individual
- No symptoms or symptomatic management
- Health seeking behaviour
- Poor medication adherence – men (sexual weakness); refills
- Lifestyle: Diet, smoking/alcohol (men)
- Inactive Insurance / pay out of pocket
- Knowledge/Awareness. - HTN Causes (Spiritual/ Witchcraft/curse
- Stressors of Poverty
- Self-Medication. - Illness chronicity/ incurability
- Family History
- Women > Men. 40+ (Men more severe when present to hospital, increasing age with women
Relationship/Interpersonal
- Female and male-gendered barriers within the family context (less support for females); Less educated
- Perception of sexual weakness and family disputes – stop medication / use herbal medicine
- Marital / family stressors
- Women not vocal about problem – increase stress
- Women leaving hospital against medical advice
- Husband head of household – not accepting of wife's HTN
High hypertension rates are due to poor prevention, diagnosis, control and inappropriate treatment.
- Access to Referral (transport, distance, cost, time, elderly)
- CHPS not focusing on chronic diseases
- Medicine availability. - Long queue line
- Lack of adequate referral mechanism
- Knowledge of providers
- Lack of active screening / passive, opportunistic screening
- Community misperception of HTN – main source of information from non-healthcare providers
- Lack of feedback from referral to CHPS
- Lack of adequate control/monitoring system
- Herbalist can cure
- Health information coming from non-health sources
- Lack buy in from Chiefs, Elders, Community Leaders, Pastors
- Lack of collaboration between CHPS and referral site
- Hospital is last resort. - Lack of care coordination
Community/Health System
- A neglected disease
- GHS doing poorly on NCD prevention /control (2.6/5)
- Lack of national programming getting to rural areas
- Lack of regulation of chemical dealers
- NHIS issues: Timely reimbursement to CHPS, no entitlement for health prevention, inactive insurance
- Northern Ghana – More deprived communities(smallest progress in poverty reduction; second highest levels of inequality)
- Misconception re: urban vs rural HTN prevalence
- Non-regulated businesses doing BP checks and selling drugs
- Lack of regulated of outside medicine sellers
Society/Policy
27

Step 2:Identify modifiable and non-modifiable factors, and deciding which have the greatest scope for change

Step 2:Identify modifiable and non-modifiable factors, and deciding which have the greatest scope for change

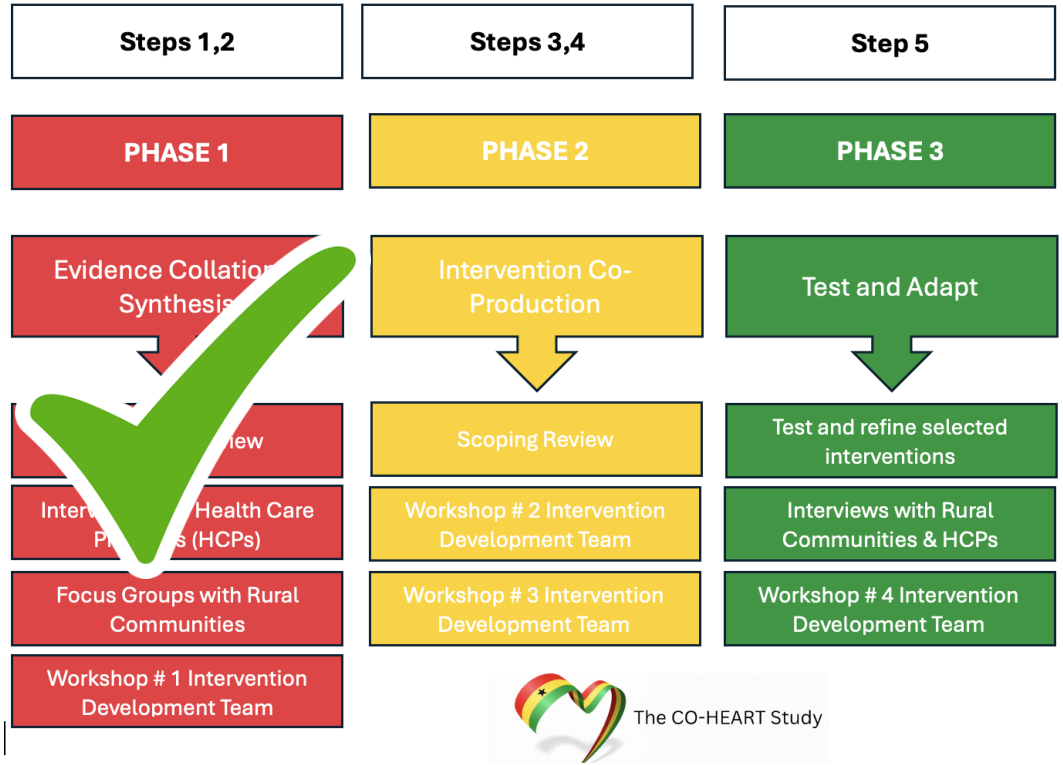
Factors (Causes)	Level of SEM
Multiple Individual Risk Factors for HTN	Individual
Low Awareness / Knowledge about hypertension	Individual
Wrong / lack of correct Health Information	Individual
Poor Heath Seeking especially Males	Individual
	Interpersonal
Barriers to accessing healthcare at Leyaata Hospital	Community / Health System
Poor Health Seeking	Individual
Inadequate hypertension care at CHPS and Health Centers (primary care)	Community / Health System
Lack of Care Coordination between community and hospital settings for HTN care	Community / Health System
Inactive NHIS (insurance)	Individual / Society
	Society
	Society

Factors (Causes)	Level of SEM
Multiple Individual Risk Factors for HTN	Individual
Low Awareness / Knowledge about hypertension	Individual
Wrong / lack of correct Health Information	Individual
Poor Heath Seeking especially Males	Individual
Family System	Interpersonal
Barriers to accessing healthcare at Leyaata Hospital	Community / Health System
Poor Health Seeking	Individual
Inadequate hypertension care at CHPS and Health Centers (primary care)	Community / Health System
Lack of Care Coordination between community and hospital settings for HTN care	Community / Health System
Inactive NHIS (insurance)	Individual / Society
No Integration of HTN care into current Wellness Clinic	Society
Lack of Referral Policy	Society

Change Mechanisms	Factors (Causes)	Level of SEM
Enhance Health Literacy Increases awareness, corrects misinformation and promotes proactive health seeking behaviours	Multiple Individual Risk Factors for HTN	Individual
	Low Awareness / Knowledge about hypertension	Individual
	Wrong / lack of correct Health Information	Individual
	Poor Heath Seeking especially Males	Individual
	Family System	Interpersonal
Address Barriers to Leyaata Hospital Enhances individual's ability to seek timely care	Barriers to accessing healthcare at Leyaata Hospital	Community / Health System
	Poor Health Seeking	Individual
Improve Access to and Delivery of Quality Health Service Ensures continuous and effective management of hypertension	Inadequate hypertension care at CHPS and Health Centers (primary care)	Community / Health System
	Lack of Care Coordination between community and hospital settings for HTN care	Community / Health System
	Inactive NHIS (insurance)	Individual / Society
Partner with District Health Directorate Improve integration of HTN into primary care and ensures sustainability	No Integration of HTN care into current Wellness Clinic	Society
	Lack of Referral Policy	Society

Three Phase PhD Project

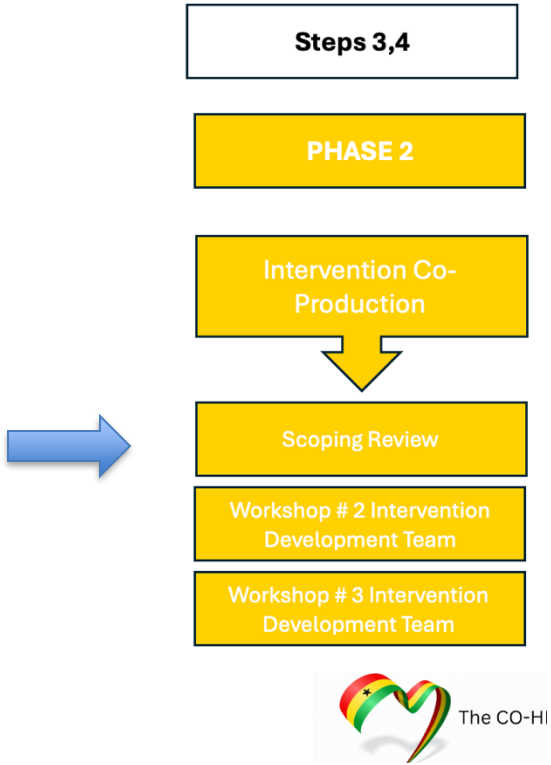
6SQuID framework for intervention development



Phase 2: Intervention Co-Production

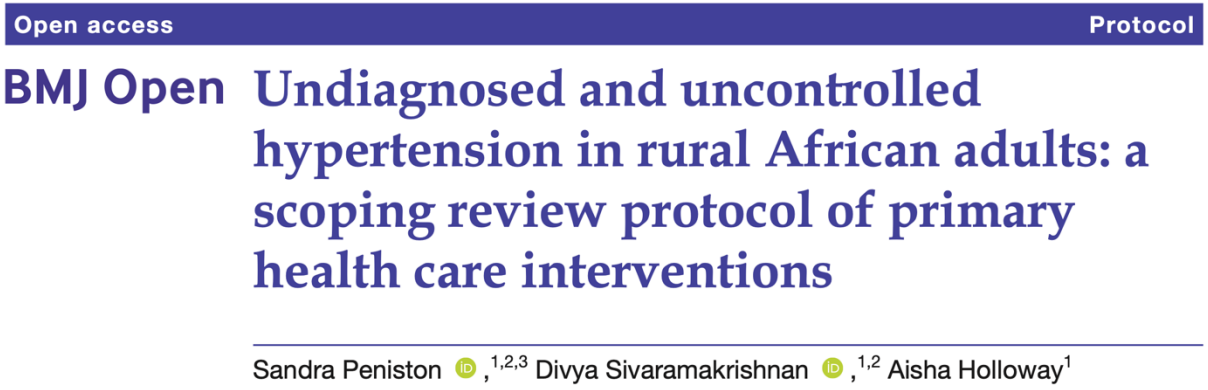
6SQuID Steps 3&4

3. Identify how to bring out the theory of change (theory of change)
4. Identify how to deliver the change mechanism (theory of action)



Scoping Review

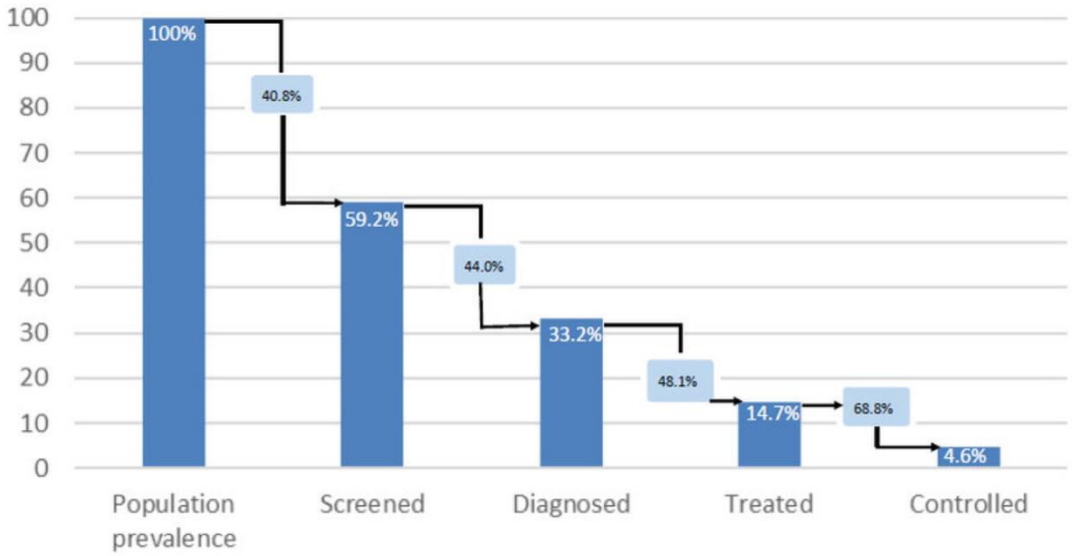
- Protocol Published: BJM Open (2024)
- Manuscript Submitted to Global Public Health (with Christopher Sweeney)



Aim

- To categorise primary health care interventions targeting undiagnosed and uncontrolled hypertension in rural African adults.
  - TIDieR checklist (Template for Intervention Description & Replication Checklist)
- To map the intervention components to the four stages outlined in the hypertension care cascade to develop a pilot intervention logic model for rural African adults with hypertension.

Hypertension Care Cascade



Key Findings

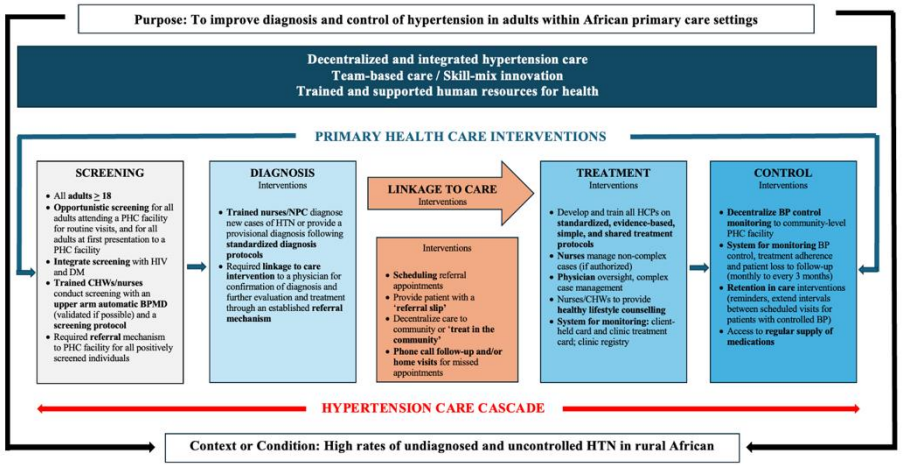
- Decentralized nurse-led clinics and team-based care models are effective
- Skill-mix innovation, training, mentorship, and education were essential

Key Findings (cont.)

- Future interventions should integrate:
  - A well-defined programme theory
  - A standardized core outcome set
  - Co-production with community and health care professionals
  - Implementation requires measuring intervention fidelity
  - Establishing a robust intervention monitoring and evaluation system.

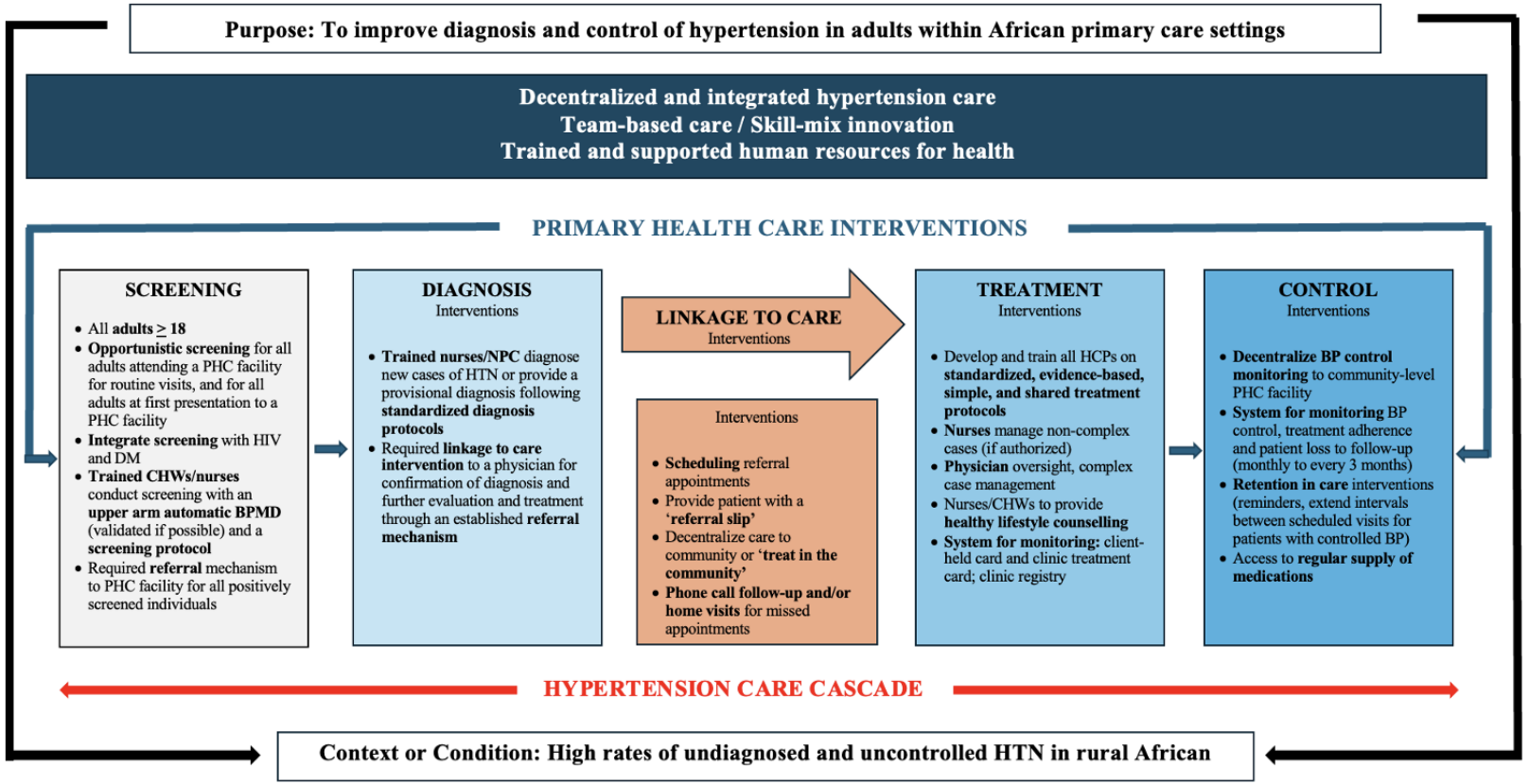
CO-HEART Framework: Primary Health Care Intervention for Undiagnosed and Uncontrolled HTN in Rural Africa

Figure 4: The CO-HEART Framework: Primary Health Care Interventions for Undiagnosed and Uncontrolled HTN in Rural Africa



PHC (primary health care); NPHW (Non-physicians health workers); BP (Blood pressure); BPMD (blood pressure monitoring device); CHW (community health worker); NPC (Non-physician clinician); CO-HEART (CO-produced HypertEnsion Adult InteRvenTion)

Figure 4: The CO-HEART Framework: Primary Health Care Interventions for Undiagnosed and Uncontrolled HTN in Rural Africa

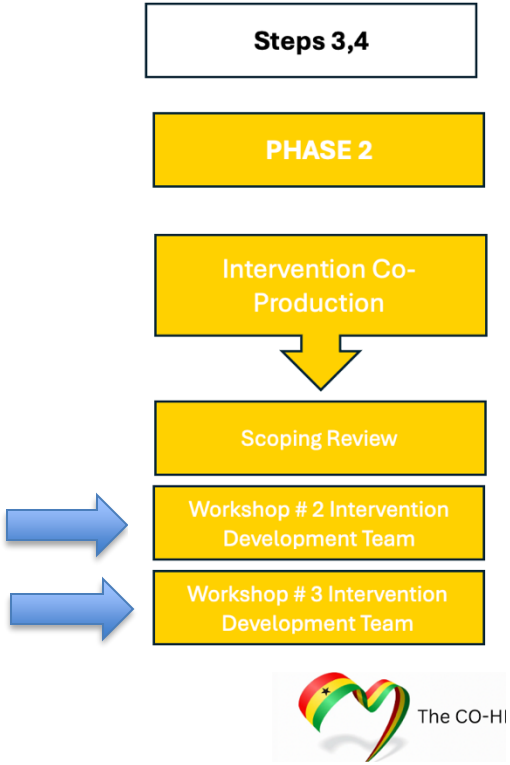


PHC (primary health care); NPHW (Non-physicians health workers); BP (Blood pressure); BPMD (blood pressure monitoring device); CHW (community health worker); NPC (Non-physician clinician); CO-HEART (CO-produced HypertEnsion Adult InteRvenTion)

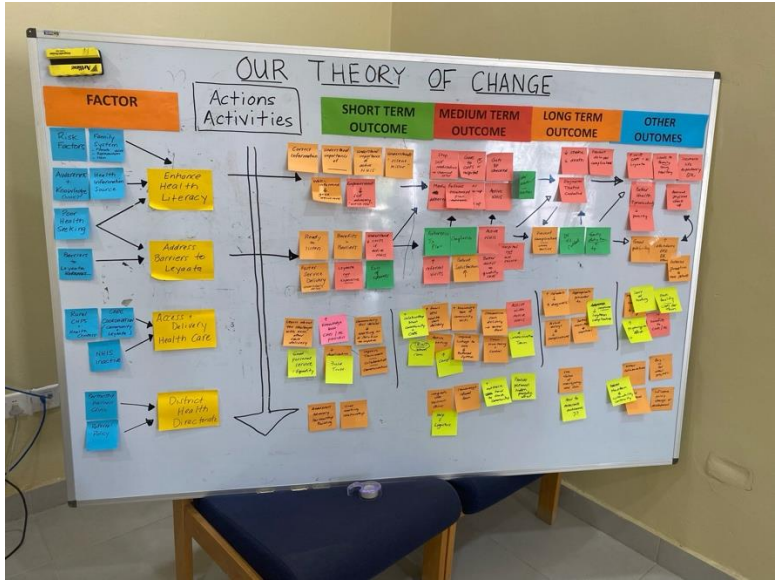
Phase 2: Intervention Co-Production

6SQuID Steps 3&4

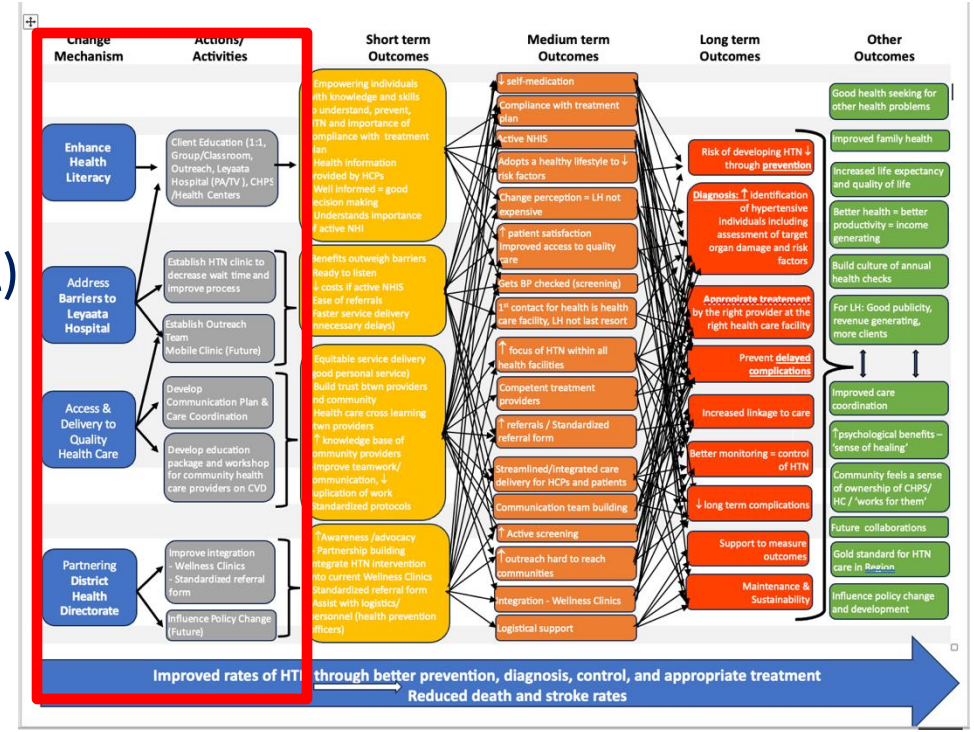
3. Identify how to bring out the theory of change (theory of change)
4. Identify how to deliver the change mechanism (theory of action)



Workshop #2:
Step 3: Preliminary Theory of Change (Logic Model) - Step 3



Workshop 3
Step 4:
Preliminary
Theory of Action (Logic Model)



Intervention Components

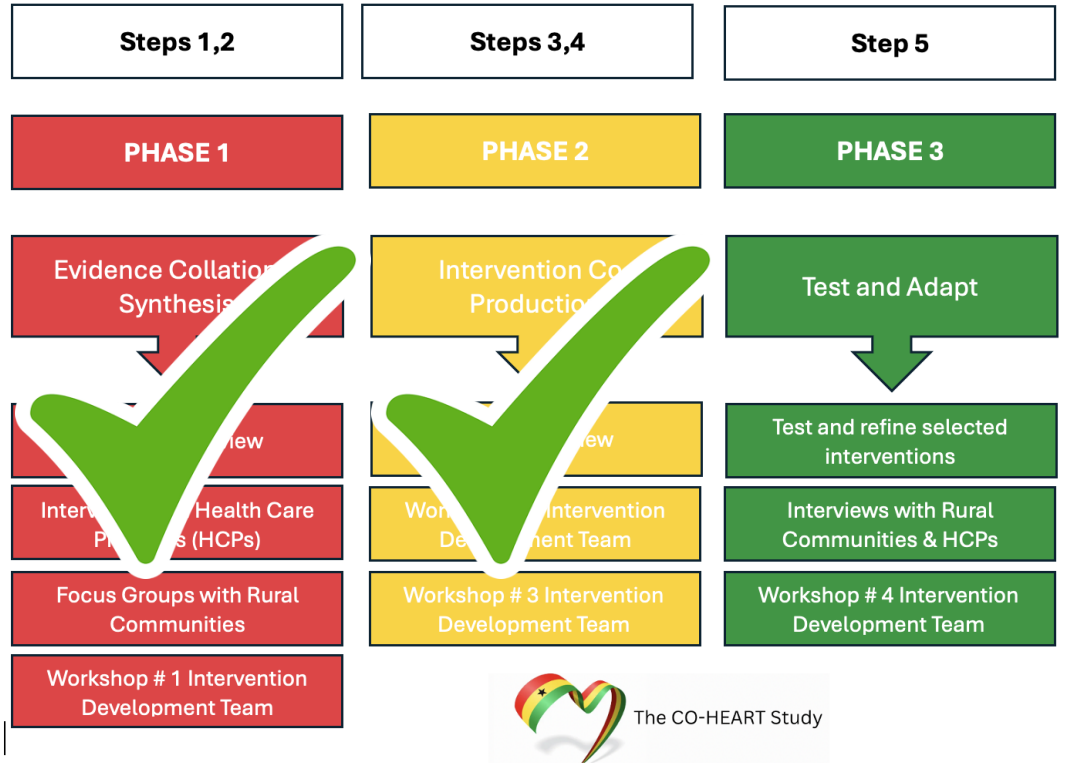
Enhance Health Literacy	• Community Outreach • Monthly client education on review dates / when enough clients increase to group education sessions • Leyaata PA system / TVs • CHPS/HC – Information centers
Address Barriers to Leyaata Hospital	• Awareness LH not expensive • Strongly encourage active NHI • Education package/sessions at LH • Improve existing screening and referral form • Stable patient guideline
Improve access to and delivery of quality health care	• Strong follow-up / BP checks in the community • Establish communication plan for care coordination • Rapid high throughput screenings and referral • HCP Education • Establish an interim HTN clinic
Partner with the District Health Directorate	• Provide monthly reports to DHD on progress • Integrate HTN into wellness clinics • Standardize referral process

Proposed Action Plan

Activity	Tasks	Who will be responsible? (Lead)	Who will be involved? (internal & external)	Facilities / Resources	Cost implications	Timelines
Client Education (Health Literacy)	**Where?** • 1 on 1 • Group – OPD Classroom • Outreach visits • Leyaata Hospital PA/TVs • CHPS/HCs **Develop educational material** • What are the key messages? • Visual aids • Recorded messages • Patient handouts	Prince Beatrice	Intervention Development Team Other Community CHPS and Health Centers within the pilot	Existing health facilities	Visual aids Patient handouts Outreach visits	End of April: key messages End of May: outreach sites End of June: printing / recorded messages

Three Phase PhD Project

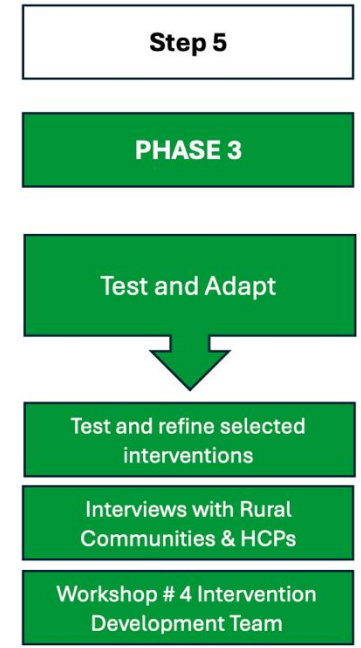
6SQuID framework for intervention development



Phase 3: Test & Adapt

6SQuID Steps 5

3. Test & Adapt the Intervention



HEART Study

Phase 3: Test & Adapt

(June 23 – July 5)

- Completed work on **selected interventions**

Activity	Tasks	Who will be responsible? (Lead)	Who will be involved? (internal & external)	Facilities / Resources	Cost implications	Timelines
Client Education (Health Literacy)	Develop client education material (Stage 1) • HBP handbook complete • Educational posters for consultation rooms / CHPS / Health Centers / OPD • Flipcharts for educating clients • 'Know your BP" notes/cards for screening	Team to develop key messages / pictures	Team	Existing	Posters Flipcharts Know your number cards (Sandra from Grant)	-End of August: key messages / pictures -End of Sept: Designs finalized / Sent to printing -October: Pick up
	Recorded messages for PA system at LH (Stage 1) • Decide when to play messages / how often	Martin (IT) / Sandra Team to decide on messages	Team	Existing PA system	Microphone MP3 player (Sandra from Grant)	-End of September: Team to develop messages to be recorded on HBP -End of September: Sandra to connect with Martin re: microphone / MP3 player -October: Team to record messages
	Messages for Information centers CHPS/Health Centers on HBP (Stage 1)	Phillips / Collins	Phillips / Collins	Existing	No cost	To be decided

APEASE Evaluation

APEASE (Affordability, Practicability, Effectiveness, Acceptability, Side-effects/Safety, Equity)

- Evaluates interventions, assess their feasibility and impact
- Ensures interventions are not only effective but also practical, affordable, acceptable to the target population, safe and equitable
- Allows for a well-rounded, sustainable, and scalable healthcare intervention

APEASE Evaluation

APEASE (Affordability, Practicability, Effectiveness, Acceptability, Side-effects/Safety, Equity)

- Evaluate draft logic model
- Evaluate select intervention components

Workshop with Health Care Providers

	ACCEPTABILITY	PRACTICALITY	EFFECTIVENESS	AFFORDABILITY	SIDE EFFECTS	EQUITY
Intervention Components	Health care providers would find this intervention acceptable.	Health care providers would find this intervention practical and sustainable.	Health care providers would find this intervention would reach the intended target group and a have a large effect on those who are reached?	Health care providers would find this intervention is affordable to people and the health ministry.	Health care providers would find this intervention safe and free from unwanted side effects.	Health care providers would find this intervention fair and will not disadvantage certain groups of people.
ENHANCE HEALTH LITERACY						
HTN Client held Handbook						
Educational posters for consultation rooms						
Flipcharts for educating clients						
Know your BP cards						
Recorded messages for PA system at LH						
Messages for information						

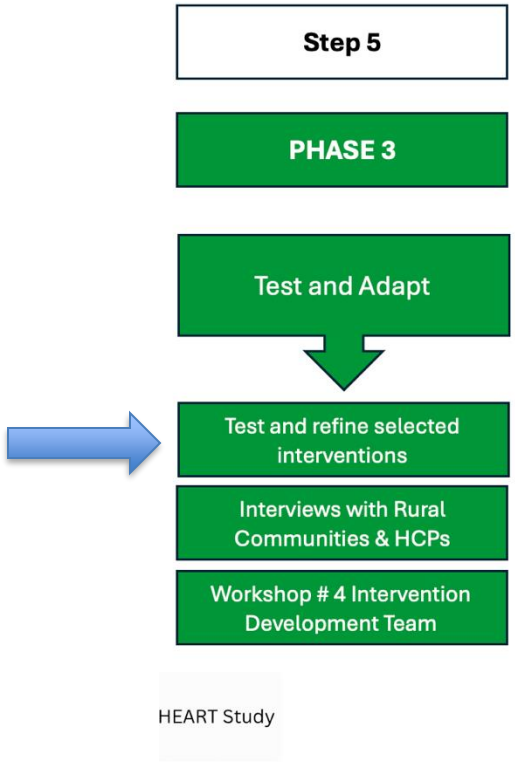
Workshop with Chiefs/Elders

- Applying the APEASE criteria to assess their perspectives on intervention components
  - Affordability
  - Practicability
  - Effectiveness
  - Acceptability
  - Side-effects/Safety
  - Equity

Phase 3: Test & Adapt

6SQuID Steps 5

3. Test & Adapt the Intervention



Now time to write…

- Thanks for listening.
- Feedback / suggestions / recommendations welcomed.