

# RESEARCH QUESTIONNAIRE

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## **Hypertension Prevalence and Associated Lifestyle Risk Factors Among Adults in Urban Rwanda: A Cross-Sectional Study at Remera Health Centre**

**PRINCIPAL INVESTIGATOR:**

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**STUDY PERIOD:**

June - September 2024

**STUDY LOCATION:**

Remera Health Centre

Gasabo District, Kigali City, Rwanda

*Ethical Approval:*

*University of Rwanda, College of Medicine and Health Sciences*

*Institutional Review Board*

*Reference Number: CMHS.IRBS/987/2024*

## QUESTIONNAIRE ADMINISTRATION INFORMATION

<b>Study ID Number:</b>	
<b>Date of Interview:</b>	/ /
<b>Day of Week:</b>	<input type="checkbox"/> Mon <input type="checkbox"/> Tue <input type="checkbox"/> Wed <input type="checkbox"/> Thu <input type="checkbox"/> Fri <input type="checkbox"/> Sat <input type="checkbox"/> Sun
<b>Time of Interview:</b>	: (24-hour format)
<b>Interviewer Name:</b>	
<b>Interviewer Code:</b>	
<b>Location:</b>	Remera Health Centre
<b>Interview Language:</b>	<input type="checkbox"/> Kinyarwanda <input type="checkbox"/> English <input type="checkbox"/> French
<b>Data Quality Check:</b>	<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete <input type="checkbox"/> Requires Follow-up
<b>Supervisor Verification:</b>	Name: _____ Signature: _____

## PARTICIPANT SCREENING AND ELIGIBILITY

**Instructions for Interviewer:** Before proceeding with informed consent, verify that the participant meets all inclusion criteria and has no exclusion criteria. Complete this section first.

### Inclusion Criteria (All must be YES to proceed):

No.	Inclusion Criteria	Response
1	Age between 19-65 years?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2	Permanent resident of Gasabo District?	<input type="checkbox"/> Yes <input type="checkbox"/> No
3	Living in catchment area for $\geq$ 6 months?	<input type="checkbox"/> Yes <input type="checkbox"/> No
4	Able to provide informed consent?	<input type="checkbox"/> Yes <input type="checkbox"/> No

### Exclusion Criteria (All must be NO to proceed):

No.	Exclusion Criteria	Response
1	Currently pregnant or $<6$ weeks postpartum?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2	Acute severe illness requiring emergency care?	<input type="checkbox"/> Yes <input type="checkbox"/> No
3	Cognitive impairment preventing consent?	<input type="checkbox"/> Yes <input type="checkbox"/> No

**ELIGIBILITY DECISION:**  ELIGIBLE (Proceed to Informed Consent)  NOT ELIGIBLE (Thank and discontinue)

## **INFORMED CONSENT**

**Instructions:** Read the following information to the participant in their preferred language. Ensure they understand before obtaining consent. Answer any questions they may have.

### **CONSENT SCRIPT (Read aloud to participant):**

Good morning/afternoon. My name is \_\_\_\_\_. I am working with researchers from the University of Rwanda on a health study.

### **PURPOSE OF THE STUDY:**

We are conducting research to understand how common high blood pressure (hypertension) is among adults in Kigali and what lifestyle factors may be related to it. This information will help improve health programs in our community.

### **WHAT WILL HAPPEN IF YOU PARTICIPATE:**

If you agree to participate, we will:

1. Ask you questions about your background, health history, eating habits, physical activity, and lifestyle (about 15 minutes)
2. Measure your blood pressure three times (about 5 minutes)
3. Measure your height and weight (about 2 minutes)

Total time: Approximately 20-25 minutes

### **RISKS AND DISCOMFORTS:**

There are minimal risks. The blood pressure cuff may feel tight but should not hurt. Some questions may feel personal, but you can skip any question you don't want to answer.

### **BENEFITS:**

You will receive:

- Your blood pressure results today
- Information about healthy living to prevent high blood pressure
- Referral to our chronic disease clinic if we find high blood pressure
- The satisfaction of contributing to important health research for Rwanda

### **CONFIDENTIALITY:**

All information you provide will be kept strictly confidential. Your name will not be used in any reports. We will use a study ID number instead. Only the research team will have access to the data, which will be stored securely.

### **VOLUNTARY PARTICIPATION:**

Your participation is completely voluntary. You may:

- Refuse to participate without any consequences
- Stop at any time without giving a reason
- Skip any questions you don't want to answer

Your decision will NOT affect the healthcare services you receive at this facility.

**CONTACTS:**

If you have questions now or later, you may contact:

- Principal Investigator: Gisubizo Fabien, gisubizofabien@gmail.com
- Ethics Committee: University of Rwanda IRB, CMHS.IRBS/987/2024

**Do you have any questions about the study?****CONSENT QUESTIONS:**

1. Do you understand what the study is about?

Yes  No (If No, re-explain)

2. Do you understand that participation is voluntary?

Yes  No (If No, re-explain)

3. Do you understand that you can stop at any time?

Yes  No (If No, re-explain)

4. Do you agree to participate in this study?

YES, I AGREE TO PARTICIPATE  
 NO, I DO NOT WISH TO PARTICIPATE

**PARTICIPANT CONSENT:**

Participant Name (Print): \_\_\_\_\_

Participant Signature or Thumbprint: \_\_\_\_\_ Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

*OR (if participant cannot read/write):*

Consent obtained verbally and witnessed:

Witness Name: \_\_\_\_\_

Witness Signature: \_\_\_\_\_ Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

**INTERVIEWER CERTIFICATION:**

I certify that I have explained the study to the participant and answered all questions.

Interviewer Name: \_\_\_\_\_

Interviewer Signature: \_\_\_\_\_ Date: \_\_\_ / \_\_\_ / \_\_\_

## SECTION A: SOCIODEMOGRAPHIC CHARACTERISTICS

**Instructions:** I will now ask you some questions about yourself and your background.

### A1. What is your age in completed years?

\_\_\_\_ years

Age Category (Interviewer completes):

- 19-35 years (Younger adults)
- 36-50 years (Middle-aged adults)
- 51-65 years (Older adults)

### A2. What is your biological sex?

- Male
- Female

### A3. What is your current marital status?

- Single (never married)
- Married or living with partner (cohabiting)
- Divorced or separated
- Widowed

### A4. What is the highest level of education you have completed?

- No formal education
- Primary education (some or completed)
- Secondary education (some or completed)
- Tertiary education (College, University, or higher)

### A5. What is your current employment status?

- Employed (formal employment with regular salary)
- Self-employed (own business, farming, informal work)
- Unemployed (not working, looking for work)
- Student (full-time)
- Retired
- Homemaker
- Unable to work (due to health/disability)

### A6. How long have you been living in Gasabo District?

\_\_\_\_ months OR \_\_\_\_ years

(Note: Must be  $\geq 6$  months to be eligible)

**A7. Which sector do you live in?**

- Remera
- Kimironko
- Other in Gasabo: \_\_\_\_\_

**A8. What is your household's main source of income?**

- Salary/wages from employment
- Business/self-employment
- Farming/agriculture
- Remittances from family
- Government assistance
- Other: \_\_\_\_\_

## SECTION B: MEDICAL HISTORY AND HYPERTENSION STATUS

**Instructions:** Now I will ask you about your health and medical history.

**B1. Have you EVER been told by a doctor, nurse, or other health worker that you have high blood pressure or hypertension?**

- Yes (Continue to B2)
- No (Skip to B6)
- Don't know / Not sure (Skip to B6)

**B2. If YES to B1: How long ago were you first told you had high blood pressure?**

- Less than 6 months ago
- 6 months to 1 year ago
- 1-5 years ago
- More than 5 years ago
- Don't remember

Specific date if known: Month \_\_\_\_\_ Year \_\_\_\_\_

**B3. Are you currently taking any medicine (pills or other treatment) for high blood pressure?**

- Yes (Continue to B4)
- No (Skip to B6)
- Don't know

**B4. If YES to B3: What high blood pressure medication(s) are you currently taking?**

(List all medications. Ask to see medication bottles if available)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

- Don't know medication names

**B5. If taking medication: During the past two weeks, how often did you take your blood pressure medicine exactly as prescribed?**

- Every day (100% adherence)
- Most days (missed 1-2 days)
- Some days (missed 3-5 days)
- Few days (missed more than 5 days)
- Did not take at all
- Don't remember

**B6. Does anyone in your immediate family (father, mother, brother, sister) have or had high blood pressure?**

- Yes
- No
- Don't know

**B7. Have you EVER been told by a health worker that you have any of the following conditions?**

(Check ALL that apply)

- Diabetes (high blood sugar)
- Heart disease or heart problems
- Kidney disease or kidney problems
- Stroke
- High cholesterol or high fat in blood
- Asthma or chronic lung disease
- Cancer
- None of the above
- Other: \_\_\_\_\_

**B8. Are you currently taking any other medications regularly (not for blood pressure)?**

- Yes (Specify): \_\_\_\_\_
- No

**B9. When was the last time you had your blood pressure checked before today?**

- Within the past month
- 1-6 months ago
- 6-12 months ago
- More than 1 year ago
- Never checked / Can't remember

## SECTION C: DIETARY HABITS AND NUTRITION

**Instructions:** Now I will ask you about your usual eating and drinking habits. Please think about what you typically eat and drink, not just in the past few days.

### C1. FRUIT AND VEGETABLE CONSUMPTION

#### C1.1 In a typical week, on how many days do you eat fruit?

days per week  
 Never or less than once per week (Enter 0)

#### C1.2 On a typical day when you eat fruit, how many servings do you eat?

(One serving = 1 medium fruit, 1/2 cup cut fruit, 1 small glass 100% fruit juice)

servings per day

#### C1.3 In a typical week, on how many days do you eat vegetables?

(Do not include potatoes, cassava, or other starchy roots)

days per week  
 Never or less than once per week (Enter 0)

#### C1.4 On a typical day when you eat vegetables, how many servings do you eat?

(One serving = 1/2 cup cooked vegetables, 1 cup raw leafy vegetables)

servings per day

#### INTERVIEWER CALCULATION:

Total fruit + vegetable servings per day:  servings

Adequate ( $\geq 5$  servings/day)  Inadequate ( $< 5$  servings/day)

### C2. SALT/SODIUM INTAKE

#### C2.1 How would you describe the amount of salt you use when cooking or preparing food?

I use very little salt (less than 1 teaspoon per day) [ $< 5\text{g/day}$ ]  
 I use a moderate amount of salt (about 1 teaspoon per day) [ $\approx 5\text{g/day}$ ]  
 I use a lot of salt (more than 1 teaspoon per day) [ $> 5\text{g/day}$ ]  
 I don't cook / Someone else cooks

#### C2.2 Do you add salt or salty seasoning (like bouillon cubes) to your food after it has been cooked or prepared?

Always  
 Often (most meals)  
 Sometimes (a few meals per week)  
 Rarely (less than once per week)  
 Never

### **C2.3 How often do you eat foods that are naturally HIGH in salt?**

*(Examples: salted fish, pickled foods, salted snacks, instant soups, bouillon cubes)*

- Daily or almost daily
- 4-6 times per week
- 1-3 times per week
- Rarely (less than once per week)
- Never

## **C3. COOKING OIL AND FAT INTAKE**

### **C3.1 What type of oil or fat do you use MOST OFTEN for cooking in your household?**

- Palm oil
- Vegetable oil (mixed/blended)
- Sunflower oil
- Olive oil
- Butter or margarine
- Animal fat (lard, tallow)
- Other: \_\_\_\_\_
- Don't use oil/fat for cooking
- Don't know

### **C3.2 How often do you eat fried foods?**

*(Examples: fried potatoes, fried fish, fried dough, samosas)*

- Daily or almost daily
- 4-6 times per week
- 1-3 times per week
- Rarely (less than once per week)
- Never

### **C3.3 How often do you eat fatty meats or foods high in animal fat?**

*(Examples: fatty beef/pork, organ meats, full-fat dairy products)*

- Daily or almost daily
- 4-6 times per week
- 1-3 times per week
- Rarely (less than once per week)
- Never

## C4. PROCESSED FOODS AND BEVERAGES

### C4.1 How often do you eat processed or packaged foods?

*(Examples: canned foods, instant noodles, packaged snacks, processed meats like sausages)*

- Daily or almost daily
- 4-6 times per week
- 1-3 times per week
- Rarely (less than once per week)
- Never

### C4.2 How often do you drink sweetened beverages?

*(Examples: sodas, sweetened tea, fruit drinks with added sugar, energy drinks)*

- Daily or almost daily
- 4-6 times per week
- 1-3 times per week
- Rarely (less than once per week)
- Never

If daily: How many bottles/glasses per day?     

### C4.3 How many meals do you typically eat per day?

   meals per day

### C4.4 How often do you eat meals outside your home (at restaurants, street vendors, etc.)?

- Daily or almost daily
- 4-6 times per week
- 1-3 times per week
- Rarely (less than once per week)
- Never

## SECTION D: PHYSICAL ACTIVITY

**Instructions:** Now I will ask you about the time you spend doing different types of physical activity. Please think about activities that make you breathe harder or make your heart beat faster. We will ask about activities at work, for travel, and in your free time.

**IMPORTANT:** When answering, think about activities that last AT LEAST 10 MINUTES continuously.

### D1. WORK-RELATED PHYSICAL ACTIVITY

The next questions are about physical activity as part of your work. This includes paid and unpaid work, including household chores, farming, fishing, construction, etc.

#### D1.1 Does your work involve VIGOROUS-intensity activity that causes large increases in breathing or heart rate for at least 10 minutes continuously?

(Examples: *heavy lifting, digging, construction work, carrying heavy loads*)

Yes (Continue to D1.2)

No (Skip to D1.4)

#### D1.2 In a typical week, on how many days do you do vigorous-intensity activities as part of your work?

days per week

#### D1.3 How much time do you spend doing vigorous-intensity activities at work on a typical day?

hours  minutes per day

#### D1.4 Does your work involve MODERATE-intensity activity that causes small increases in breathing or heart rate for at least 10 minutes continuously?

(Examples: *brisk walking, carrying light loads, cleaning, light construction*)

Yes (Continue to D1.5)

No (Skip to D2)

#### D1.5 In a typical week, on how many days do you do moderate-intensity activities as part of your work?

days per week

#### D1.6 How much time do you spend doing moderate-intensity activities at work on a typical day?

hours  minutes per day

## D2. TRAVEL TO AND FROM PLACES

The next questions are about how you travel to and from places, including to work, to market, to church/mosque, etc.

### D2.1 Do you walk or use a bicycle (pedal cycle) for at least 10 minutes continuously to get to and from places?

- Yes (Continue to D2.2)
- No (Skip to D3)

### D2.2 In a typical week, on how many days do you walk or bicycle for at least 10 minutes continuously to get to and from places?

\_\_\_\_\_ days per week

### D2.3 How much time do you spend walking or bicycling for travel on a typical day?

\_\_\_\_\_ hours \_\_\_\_\_ minutes per day

## D3. RECREATIONAL/LEISURE-TIME PHYSICAL ACTIVITY

The next questions are about sports, fitness, and recreational activities you do in your free time.

### D3.1 Do you do any VIGOROUS-intensity sports, fitness, or recreational activities that cause large increases in breathing or heart rate for at least 10 minutes continuously?

(Examples: running, football/soccer, basketball, fast cycling, aerobics, swimming fast)

- Yes (Continue to D3.2)
- No (Skip to D3.4)

### D3.2 In a typical week, on how many days do you do vigorous-intensity sports, fitness, or recreational activities?

\_\_\_\_\_ days per week

### D3.3 How much time do you spend doing vigorous-intensity sports, fitness, or recreational activities on a typical day?

\_\_\_\_\_ hours \_\_\_\_\_ minutes per day

### D3.4 Do you do any MODERATE-intensity sports, fitness, or recreational activities that cause small increases in breathing or heart rate for at least 10 minutes continuously?

(Examples: brisk walking, cycling at regular pace, volleyball, swimming leisurely, dancing, recreational gardening)

Yes (Continue to D3.5)

No (Skip to D4)

**D3.5 In a typical week, on how many days do you do moderate-intensity sports, fitness, or recreational activities?**

   days per week

**D3.6 How much time do you spend doing moderate-intensity sports, fitness, or recreational activities on a typical day?**

   hours    minutes per day

**D4. SEDENTARY BEHAVIOR**

**D4.1 How much time do you usually spend sitting or reclining on a typical day?**

*(Include time spent sitting at work, at home, getting to and from places, or with friends. Include time spent sitting at a desk, visiting friends, reading, watching television, using a computer/phone)*

   hours    minutes per day

**PHYSICAL ACTIVITY CLASSIFICATION (Interviewer completes):**

*Calculate total minutes of moderate-to-vigorous physical activity per week:*

- Vigorous activity minutes =  $(D1.3 + D3.3) \times 2$
- Moderate activity minutes =  $(D1.6 + D2.3 + D3.6)$
- Total weekly minutes:    minutes

Classification:

ACTIVE ( $\geq 150$  minutes moderate OR  $\geq 75$  minutes vigorous per week)

INACTIVE ( $< 150$  minutes moderate-to-vigorous activity per week)

## SECTION E: TOBACCO USE

**Instructions:** Now I will ask you about tobacco use. Remember, all information is confidential.

### **E1. Do you currently smoke any tobacco products?**

*(Examples: cigarettes, cigars, pipes, shisha/hookah)*

- Yes, daily (Continue to E2)
- Yes, occasionally/less than daily (Continue to E2)
- No, I quit smoking (Continue to E4)
- No, I have never smoked (Skip to E6)

### **E2. If you currently smoke: At what age did you first start smoking regularly?**

\_\_\_\_\_ years old

### **E3. On average, how many cigarettes or tobacco products do you smoke per day?**

\_\_\_\_\_ cigarettes/products per day

OR if less than daily: How many per week? \_\_\_\_\_ per week

### **E4. If you quit smoking: How long ago did you stop smoking?**

- Less than 6 months ago
- 6 months to 1 year ago
- 1-5 years ago
- More than 5 years ago

### **E5. Do you currently use any smokeless tobacco products?**

*(Examples: chewing tobacco, snuff, other oral tobacco)*

- Yes, daily
- Yes, occasionally
- No

### **E6. Are you regularly exposed to tobacco smoke from other people?**

*(Passive smoking or secondhand smoke at home, work, or social places)*

- Yes, daily at home
- Yes, daily at work
- Yes, daily at both home and work
- Yes, several times per week
- Yes, occasionally
- No, rarely or never exposed

### **E7. If exposed to secondhand smoke: Where are you most often exposed?**

*(Check ALL that apply)*

- At home

- At work/workplace
- In public places (bars, restaurants, etc.)
- In transport (buses, taxis)
- Other: \_\_\_\_\_
- Not applicable

## SECTION F: ALCOHOL CONSUMPTION

**Instructions:** The next questions are about alcoholic beverages. Remember, this information is confidential.

**F1. Have you consumed any alcoholic beverages (beer, wine, spirits, or traditional alcoholic drinks) in the past 30 days?**

- Yes (Continue to F2)
- No (Skip to Section G)

**F2. On how many days in the past 30 days did you have at least one alcoholic drink?**

\_\_\_\_\_ days in the past 30 days

**F3. What type of alcoholic beverages do you usually consume?**

(Check ALL that apply)

- Beer (regular or light)
- Wine
- Spirits/liquor (whiskey, gin, vodka, etc.)
- Traditional/local alcoholic beverages (specify): \_\_\_\_\_
- Other (specify): \_\_\_\_\_

**F4. On a typical day when you drink alcohol, how many standard drinks do you have?**

*(One standard drink = 1 bottle/can of beer [330ml], 1 glass of wine [150ml],  
1 shot of spirits [45ml])*

\_\_\_\_\_ standard drinks per drinking day

**F5. In the past 30 days, on how many days did you have 5 or more standard drinks on a single occasion (binge drinking)?**

\_\_\_\_\_ days  
 Never in the past 30 days

**F6. At what age did you first start drinking alcohol regularly?**

\_\_\_\_\_ years old  
 Don't remember

**F7. Have you ever felt you should cut down on your drinking?**

- Yes
- No

## SECTION G: SLEEP PATTERNS

**Instructions:** Now I will ask you about your sleep habits.

**G1. On average, how many hours of sleep do you get in a 24-hour period?**

*(Think about your typical sleep pattern over the past month)*

|\_\_| hours per day

**G2. Which of the following best describes your usual sleep duration?**

- Less than 6 hours per night (short sleep)
- 6-8 hours per night (adequate sleep)
- More than 8 hours per night (long sleep)

**G3. What time do you usually go to bed on weeknights?**

|\_\_|:|\_\_| (24-hour format, e.g., 22:30)

**G4. What time do you usually wake up on weekday mornings?**

|\_\_|:|\_\_| (24-hour format, e.g., 06:00)

**G5. How would you rate the overall quality of your sleep?**

- Very good
- Fairly good
- Fairly bad
- Very bad

**G6. During the past month, how often have you had trouble falling asleep or staying asleep?**

- Never
- Rarely (once or twice per month)
- Sometimes (once or twice per week)
- Often (3-5 times per week)
- Always or almost always (6-7 times per week)

**G7. Do you take naps during the day?**

- Yes, regularly
- Yes, occasionally
- Rarely
- Never

If yes: How long do you usually nap? |\_\_| minutes

**G8. Have you ever been told by a doctor that you have a sleep disorder?**

*(Examples: insomnia, sleep apnea)*

Yes (Specify): \_\_\_\_\_

No

Don't know

## SECTION H: STRESS AND MENTAL HEALTH

**Instructions:** Now I will ask you about stress and your emotional well-being.

### **H1. During the past month, how often have you felt stressed or under pressure?**

- Never
- Almost never
- Sometimes
- Fairly often
- Very often or always

### **H2. How would you rate your overall level of stress?**

- Low stress (I feel relaxed most of the time)
- Moderate stress (I feel stressed sometimes but can manage it well)
- High stress (I feel stressed frequently and have difficulty coping)

### **H3. What are the main sources of stress in your life?**

(Check ALL that apply)

- Work or job-related problems
- Financial difficulties or money problems
- Family or relationship problems
- Health concerns (your own or family member's)
- Housing or living conditions
- Social relationships or loneliness
- Community or neighborhood issues
- Other (specify): \_\_\_\_\_
- No significant sources of stress

### **H4. During the past 2 weeks, how often have you felt down, depressed, or hopeless?**

- Not at all
- Several days
- More than half the days
- Nearly every day

### **H5. During the past 2 weeks, how often have you had little interest or pleasure in doing things?**

- Not at all
- Several days
- More than half the days
- Nearly every day

**H6. Do you have someone you can talk to about your problems or stress?**

- Yes, always
- Yes, sometimes
- Rarely
- No, I have no one to talk to

**H7. How do you usually cope with stress? (Check ALL that apply)**

- Talk to family or friends
- Prayer or religious activities
- Physical exercise
- Relaxation techniques (meditation, deep breathing)
- Hobbies or recreational activities
- Eating
- Drinking alcohol
- Smoking
- Sleep or rest
- Seek professional help (counselor, doctor)
- Other: \_\_\_\_\_
- I don't know how to cope

## SECTION I: PHYSICAL MEASUREMENTS

**NOTE:** This section MUST be completed by the trained research assistant or health worker. Follow standardized measurement procedures carefully.

### I1. BLOOD PRESSURE MEASUREMENTS

#### STANDARD PROTOCOL FOR BLOOD PRESSURE MEASUREMENT:

Before measurement:

- Verify participant has not consumed caffeine, smoked, or exercised in past 30 minutes
- Ask participant to empty bladder if needed
- Allow participant to sit quietly for 5 minutes

During measurement:

- Participant seated comfortably with back supported
- Feet flat on floor, legs uncrossed
- Arm supported at heart level
- Use appropriate cuff size based on arm circumference
- Take 3 readings at 3-minute intervals
- Record each reading

#### PRE-MEASUREMENT CHECKLIST:

Has participant consumed caffeine in past 30 minutes?  Yes  No

Has participant smoked in past 30 minutes?  Yes  No

Has participant done vigorous exercise in past 30 minutes?  Yes  No

If YES to any: Reschedule or wait \_\_\_\_\_ minutes

Participant rested quietly for 5 minutes?  Yes

Participant positioned correctly?  Yes

Appropriate cuff size selected?  Yes

#### I1.1 Arm circumference (for cuff size selection):

Right arm: \_\_\_\_\_ cm

Left arm: \_\_\_\_\_ cm

Arm used for measurement:  Right  Left

#### I1.2 Cuff size used:

- Small (arm circumference 22-26 cm)
- Medium/Standard (arm circumference 27-34 cm)

- Large (arm circumference 35-44 cm)
- Extra Large (arm circumference 45-52 cm)

### I1.3 BLOOD PRESSURE READINGS:

Reading	Systolic BP (mmHg)	Diastolic BP (mmHg)	Heart Rate (bpm)	Time
Reading 1				:
Reading 2				:
Reading 3				:
Average (Readings 2 & 3)				
FINAL BP				

### I1.4 Measurement Notes:

Position of blood pressure device:  Automated digital  Mercury  Aneroid

Device ID/Serial Number: \_\_\_\_\_

Last calibration date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

Any irregularities or problems during measurement?

No problems

Yes (Specify): \_\_\_\_\_

## 12. ANTHROPOMETRIC MEASUREMENTS

### STANDARD PROTOCOL FOR ANTHROPOMETRIC MEASUREMENTS:

- Remove shoes, heavy clothing, and items from pockets
- Height: measured to nearest 0.1 cm, participant standing upright
- Weight: measured to nearest 0.1 kg, participant standing still on scale
- Take each measurement twice; if difference >0.5 cm (height) or >0.2 kg (weight), take third measurement

#### 12.1 HEIGHT MEASUREMENT:

Equipment used:  Stadiometer  Height rod  Other: \_\_\_\_\_

First measurement: | | | |. | | cm

Second measurement: | | | |. | | cm

Third measurement (if needed): | | | |. | | cm

**FINAL HEIGHT:** | | | |. | | cm

#### 12.2 WEIGHT MEASUREMENT:

Equipment used:  Digital scale  Mechanical scale  Other: \_\_\_\_\_

Scale ID: \_\_\_\_\_

First measurement: | | | |. | | kg

Second measurement: | | | |. | | kg

Third measurement (if needed): | | | |. | | kg

**FINAL WEIGHT:** | | | |. | | kg

#### 12.3 BODY MASS INDEX (BMI) CALCULATION:

*Formula:  $BMI = \frac{Weight \ (kg)}{[Height \ (m)]^2}$*

Height in meters: | |. | | | m

Height squared: | |. | | | | m<sup>2</sup>

**CALCULATED BMI:** | | | |. | | kg/m<sup>2</sup>

#### BMI CLASSIFICATION (WHO criteria):

- Underweight (BMI < 18.5 kg/m<sup>2</sup>)
- Normal weight (BMI 18.5 - 24.9 kg/m<sup>2</sup>)

- Overweight (BMI 25.0 - 29.9 kg/m<sup>2</sup>)
- Obese (BMI  $\geq$  30.0 kg/m<sup>2</sup>)

**I2.4 WAIST CIRCUMFERENCE (Optional):**

*Measured at midpoint between lower rib and iliac crest*

First measurement: | | | |. | | cm

Second measurement: | | | |. | | cm

FINAL WAIST CIRCUMFERENCE: | | | |. | | cm

### **I3. HYPERTENSION CLASSIFICATION**

*Based on measurements and medication history, classify participant:*

#### **HYPERTENSION DEFINITION:**

- Systolic BP  $\geq$  140 mmHg, OR
- Diastolic BP  $\geq$  90 mmHg, OR
- Currently taking antihypertensive medication

#### **I3.1 HYPERTENSION STATUS:**

NORMOTENSIVE  
(SBP  $<$  140 mmHg AND DBP  $<$  90 mmHg, no medication)

HYPERTENSIVE - Newly Diagnosed  
(SBP  $\geq$  140 mmHg OR DBP  $\geq$  90 mmHg, no prior diagnosis)

HYPERTENSIVE - Previously Known  
(Prior diagnosis, with or without medication)

#### **I3.2 BLOOD PRESSURE CATEGORY (for all participants):**

Normal (SBP  $<$  120 AND DBP  $<$  80)

Elevated (SBP 120-129 AND DBP  $<$  80)

Stage 1 Hypertension (SBP 130-139 OR DBP 80-89)

Stage 2 Hypertension (SBP  $\geq$  140 OR DBP  $\geq$  90)

Hypertensive Crisis (SBP  $>$  180 OR DBP  $>$  120) - URGENT REFERRAL NEEDED

#### **I3.3 REFERRAL AND FOLLOW-UP:**

Participant requires referral for further evaluation/treatment?

Yes - Urgent (hypertensive crisis, very high BP)

Yes - Routine (newly diagnosed hypertension)

Yes - For medication review (poor control on medication)

No referral needed

If referral given:

Referral note provided:  Yes  No

Referral to:  Chronic Disease Clinic  Doctor  Hospital  Other: \_\_\_\_\_

Appointment date (if given): \_\_\_\_ / \_\_\_\_ / \_\_\_\_

## SECTION J: INTERVIEWER OBSERVATIONS AND NOTES

### J1. DATA QUALITY ASSESSMENT:

Overall quality of responses:

- Excellent (participant very cooperative, all questions answered)
- Good (participant cooperative, most questions answered)
- Fair (some difficulty, several questions skipped)
- Poor (participant uncooperative or many incomplete responses)

### J2. Language difficulties or comprehension issues?

- No difficulties
- Minor difficulties
- Major difficulties

If yes, describe: \_\_\_\_\_

### J3. Additional observations or comments:

*(Note any unusual circumstances, environmental factors, participant mood/behavior, or anything else relevant to data interpretation)*

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### J4. Were any sections incomplete or skipped?

- No, questionnaire is complete
- Yes

If yes, which sections and why:

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### J5. Health education provided to participant?

- Yes - Blood pressure results explained
- Yes - Healthy lifestyle information given
- Yes - Referral provided
- No

## INTERVIEWER CERTIFICATION:

I certify that:

- I have administered this questionnaire according to standard procedures

- All measurements were taken using calibrated equipment and standard protocols
- The information recorded is accurate to the best of my knowledge
- Participant confidentiality has been maintained

Interviewer Name: \_\_\_\_\_

Interviewer Signature: \_\_\_\_\_ Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

Time interview completed: |\_\_|\_|:|\_\_|\_| (24-hour format)

Total interview duration: |\_\_|\_| minutes

**SUPERVISOR VERIFICATION:**

I have reviewed this questionnaire and verified:

- All required sections completed
- Data entries are legible and logical
- Measurements recorded correctly
- Quality assurance check passed

Supervisor Name: \_\_\_\_\_

Supervisor Signature: \_\_\_\_\_ Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

## END OF QUESTIONNAIRE

Thank you very much for your participation in this study!

Your contribution to this research will help us better understand hypertension and its risk factors in our community, and will contribute to developing better health programs and interventions in Rwanda.

### FOR MORE INFORMATION:

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Ethics Committee:  
University of Rwanda IRB  
College of Medicine and Health Sciences  
Reference Number: CMHS.IRBS/987/2024

*University of Rwanda | Remera Health Centre | June-September 2024*