Appendix 5 Study Protocol

SECTION A
STUDY OUTLINE

A.1 TITLE OF PROJECT:

Experiences and Perspectives of Patients with Hypertension in Mbarara, Uganda

A.2 SUMMARY
Explain why this study is being conducted, using lay terminology.
Guidance note:

Please convey what you think is the importance of the research and WHY it is being carried out.

The World Health Organization estimates that 71% of global deaths in 2016 were attributed to non-communicable diseases (NCDs), with cardiovascular disease accounting for the largest portion of those deaths. The burden of these diseases is rising, with disproportionate growth occurring in low- and middle-income countries (LMICs) (1). According to a 2016 estimate, NCDs are responsible for at least a third of all deaths in Uganda, and cardiovascular disease is estimated to cause 10% of all annual deaths (2). Hypertension is a condition of elevated blood pressure, which can put strain on the heart and ultimately contribute to cardiovascular disease. Worldwide, the WHO estimates that hypertension causes 12% of all annual deaths (3).

An important factor in hypertension care is the patient's experience of disease to ensure quality, patient-centered care delivery. Patient-centered care is health delivery in which individual patient needs and desired outcomes are used to tailor decisions and plans (4). Patient understanding, adherence, and feelings toward their diagnosis can help shape treatment. This study seeks to interview patients with diagnosed hypertension to identify key themes in their experience of their disease. By interviewing patients with hypertension alone and with other comorbidities, elements important for health care delivery can be identified and expanded to other NCDs. These interviews will explore how patients become diagnosed with hypertension and initiate treatment, patient understanding of hypertension and its treatment, and their experience with their care.

Sources
1. Global Health Observatory (GHO) data: NCD mortality and morbidity. World Health Organization, 2018. http://www.who.int/gho/ncd/mortality_morbidity/en/.
2. Uganda. World Health Organization - Noncommunicable Diseases (NCD) Country Profiles, 2018. http://www.who.int/nmh/countries/uga_en.pdf.
3. Global Health Observatory (GHO) data: Raised Blood Pressure. World Health Organization, 2018. https://www.who.int/gho/ncd/risk_factors/blood_pressure_prevalence_text/en/.
4. "What is Patient-Centered Care?" NEJM Catalyst, 1 January 2017. https://catalyst.nejm.org/what-is-patient-centered-care/.

A.3 OBJECTIVES
List the major objectives/hypothesis, which have governed your choice of study design

1. To understand the patient experience of living with hypertension, including the process of diagnosis, understanding of disease, medication adherence, and treatment regimens.

A.4 METHODOLOGY

Outline how you intend to achieve the objectives of the study.

Guidance notes:

For each objective/hypothesis:-

- *define the target population*
- *describe how the sample(s) is(are) to be recruited from the target population(s)*

Even if the main thrust of the research is biomedical, the rationale behind your use of social science methods (e.g. patient interviews) should be clear.

We will carry out qualitative, semi-structured interviews with selected patients with hypertension at the Hypertension Clinic at MRRH. We will purposively sample participants with the following categories: duration of hypertension diagnosis, a diagnosis of hypertension alone versus at least 1 other condition (e.g., diabetes mellitus, HIV, hypo/hyperthyroidism); male and female; and patients from both rural and urban communities.

Interviews will be confidential and will be conducted in a private space near MRRH, lasting less than one hour. Interviews will be conducted in the participant's language of choice (Runyankole or English), recorded, and transcribed into English. Qualitative analysis will be applied to transcripts following a content analysis approach.

Interviews will cover the following domains:

-Receiving diagnosis of hypertension

-Patient understanding of hypertension

-Patient management of hypertension

-Patient experience receiving medical care for hypertension

-Lifestyle choices related to hypertension (like exercise and diet)

A.5 PARTICIPANTS

Please provide the following information on the participants with/from whom you expect to be collecting data:

A.5.1 Age / Sex: (please enter the expected number in each of the boxes)

	Neonates (<28 days)	Infants (1-11 months)	Young children (1-9 years)	Adolescents (10-17 years)	Adults (18 yrs & above)
Males	**0**	**0**	**0**	**0**	**15**
Females	**0**	**0**	**0**	**0**	**15**

Guidance notes:-

This age/sex breakdown helps convey how vulnerable the participants will be

If you are unable to give precise figures, state estimates and give an explanatory sentence in the space below

A.5.2 What specific measures are in place to take into account women of childbearing age?

Guidance notes:

Pregnant women may have different responses to disease processes

The developing foetus may be particularly vulnerable in intervention trials

While further research on hypertension care in pregnancy is an important research need, we will exclude pregnant women as that is out of the scope of this project's goals.

A.5.3 Describe how and where the participants are to be recruited?

Guidance notes:

This is distinct from the statistical sampling method described in A.4. You should outline the procedures for recruitment of each group of participants, include details on:

- *the setting (e.g. Country, Town, District, on the ward, out-patient department ,in the home)*
- *inclusion and exclusion criteria for selection, if relevant (e.g. "Women of child-bearing age will be excluded")*

Patients of the MRRH hypertension clinic will be recruited through coordination with the clinic staff. Criteria for inclusion will be: >18 years old, diagnosis of hypertension, and/or taking medication for hypertension, and ability to speak Runyankole or English.

The study research assistant will approach patients to will explain that the team is studying hypertension at the clinic and would like to interview them about their experiences.

A.5.4 Please justify your choice of sample size (as described in A.4)

We will interview participants until we reach thematic saturation. We anticipate a maximum of 30 individuals will be needed for this purpose.

A.6 PROCEDURES

A.6.1 What procedures or methods will be employed in the collection of data (e.g. patient interviews / focus group discussions / blood sampling / biopsies) and by whom (e.g. experienced facilitator / social scientist / teacher/ qualified doctor / nurse, auxiliary, etc.)?

Attach additional sheets if necessary.

Procedure	**To be carried out by:**
Participant interviews	Research assistant (TBD)
Transcription of Interviews	
Translation of Interviews	
Coding	
Analysis	

A.6.2 State the extent to which the procedures to be used are a part of usual clinical management (if appropriate).

N/A

A.6.3 Please indicate that the persons identified in A.6.1 are competent to carry out these procedures. List any training of staff that may be required prior to commencement of the study.

The research assistant will have a background in qualitative research and may undergo additional training in qualitative methods as part of this study. He/she will also be trained in the responsible conduct of research and good clinical practice.

A.7 ANALYSIS

A.7.1 What are the major statistical (or other) methods that you intend to use to analyse the data to fulfill each of the objectives/hypothesis stated in A.3

The qualitative interviews will be analyzed according to conventional content analysis. Specifically, interview transcripts will carefully reviewed, identifying concepts or factors influencing each patient's process of diagnosis, understanding of disease, and medical adherence. Investigators will thematically code the interviews and develop a codebook that can then be iteratively applied to subsequent interviews. These themes will be used to create a descriptive analysis of the patient experience of hypertension in this community. Quotations from the interviews will be chosen to highlight the thoughts and beliefs of the participants that comprise each theme.

A.8 QUALITY ASSURANCE

A.8.1 What procedures are in place to ensure the quality of the data?
Guidance notes:
For qualitative data (for example) what procedures will be used to check translations or compare data obtained from different sources?
For quantitative data (for example) how will transcription errors be minimised?
Give some detail on how methods are going to be piloted, if appropriate

Interview questions will be standardized using an interview guide composed of key questions with probe questions for elaboration. All recorded interviews will be transcribed the interviewer.

A.9 DISSEMINATION OF RESULTS
Please outline what plans you have for dissemination of results.
Guidance notes:
Where possible a mechanism should be in place to inform study participants of the outcomes of the study.
It is important that study findings are made known to local services / policy makers before they are discussed (e.g.) at international scientific meetings

Presentation at the MRRH
Abstract for the annual MUST Dissemination Conference
Publication in a peer reviewed journal
Scholarly Project Report for Harvard Medical School

SECTION B
CONSEQUENCES FOR THE LOCAL COMMUNITY / ENVIRONMENT AND PARTICIPANTS

B.1 Outline the potential adverse effects, discomfort or risks that may result from the study in the following areas:

B.1.1 Participants
Guidance note:
In addition to the physical effects of tissue sampling (for example blood sampling) it should be borne in mind that interviews and focus group discussions may sometimes trigger painful or distressing memories (e.g. questions about sexual practice or the death of a child)

We believe this study poses little risk to participants. The main possibilities are fatigue from the interview and potential concern about expressing any negative comments about the clinic.

B.1.2 Investigators
Guidance notes:
Include here (for example)
- *the biomedical risks to investigators (including local staff) involved in tissue sampling (e.g. Hepatitis B, HIV)*
- *the psychological consequences for social science investigators exposed to narratives of violence or severe grief*
- *the risks from the environment (e.g. in a war zone)*

None expected.

B.1.3 Members of the public

None expected.

B.2 Outline what steps will be taken to minimize the adverse effects, discomfort or risks described above.
B.2.1 For participants
Guidance notes:
In biomedical research, appropriate use of anesthesia prior to procedures (for example) is important.
For social science research it may be necessary to ensure that counseling services are available for those who re-live traumatic experiences through (for example) an in depth interview.

We will protect against fatigue by limiting the interview to a maximum of one hour. Participants will also be given the opportunity to take breaks during the interview as needed. To protect against concern for expressing negative comments, we will keep all data confidential. No identifying information will be included in presentations of study findings.

B.2.2 For investigators
Guidance notes:
Where the research may involve adverse experiences for investigators (see B.3.2), de-briefing / support meetings may be important.

NA

B.2.3 For members of the public

NA

B.3 CONSEQUENCES FOR LOCAL HEALTH SERVICES

B.3.1 What demands will this research place on local health services?
Guidance notes:
For example, how much of a nurse's usual work time will be taken up in acting as an interpreter for an outside investigator?

The project will require coordination with one of the members of the clinic to identify patients who may be candidates for the study.

B.3.2 Detail how the design of the research project takes into account the demands described in 3.1.
Guidance notes:
Disruption to routine services should be kept to a minimum.

A member of the clinic who is already involved in registering patients for the clinic will help identify potential participants present at the clinic for the research team to approach.

B.4 CONFIDENTIALITY AND PRIVACY

B.4.1 What steps will be taken to ensure privacy and confidentiality for participants?

All interviews and patient answers will be completely confidential. No identifying information for patients will be incorporated into the analysis of the interviews.

B.5 INFORMED CONSENT

B.5.1 Information given to participants:

Please indicate what you will tell the participants in simple language. The purpose of the study, type of questions that will be asked, and procedure or treatment which will be applied should be described and reference should be made to possible side effects, discomfort, complications and/or benefits. Please attach consent form typed on MUST-IRC official consent form.

It must be made clear to the participant that he/she is free to decline to participate or to withdraw at any time without suffering any disadvantage or prejudice.

We are studying what it is like for patients to live with hypertension and receive care at this hospital clinic. We would like to ask you some questions about your experience with hypertension and taking care of it. The interview will take less than an hour, and will include a series of questions about hypertension and your feelings toward it. The interview will be recorded to ensure all of your responses are well understood, but the interview will be confidential. You will have the opportunity to stop participating in the interview if you are uncomfortable with any of the questions or no longer wish to participate.

B.5.2 Outline who will deliver the above information and how?

The research assistant will go through the informed consent form prior to the interview.

Obtaining consent from minors requires both consent from the guardian and, where possible, the minor.

Consent will be obtained by a research in the language preferred by the participant (English or Runyankole) in a private, quiet space. The consent form will comprehensively provide the following information: (a) introduction to the consent process, explaining the consent form and compliance with institution policy and country laws; (b) emphasis that participation is voluntary; (c) nature and purpose of the study; (d) explanation of study procedures; (e) potential discomforts and risks, as well as plans to protect participants from these risks; (f) potential benefits; (g) alternatives to participation in the study; (h) confidentiality, including how data will be used and how it will be kept private; (i) refusal/withdrawal, including right to withdraw consent and leave the study at any time; and (j) rights and complaints. After each major section, research staff obtaining consent will pause and check for understanding -- for example, by asking the potential participant to repeat, in their own words, what "the right to refuse" means.

B.5.4 Are any inducements to be offered to either participants or the individuals who will be recruiting them? (e.g. improved patient care / cash) (please tick appropriate box)

Yes	No
X	

B.5.5 If yes, please give details:

Participants will be given a reimbursement of a medication voucher, as well as refreshments during the interview, for their time participating in the study.

B.5.6 Outline any hidden constraints to consent.

Guidance notes:

Examples where hidden constraints may be important include:

- *situations where participants are employees of the investigator*
- *patients who may feel their care could be compromised if they do not consent to research initiated by their carers.*

N/A

SECTION C
RESPONSIBILITY

C.1 Litigation:

In respect of any litigation which may result from this research
a) Who will provide compensation?

(Please provide documentary evidence where appropriate.)

b) What insurance arrangements have been made by the applicant and his/her delegated assistants?

Insurance is not required given the low-risk study consisting of a one-time qualitative interview.

(Please ensure that any professional indemnity insurance is logged with the Director's office)

C.2 **DECLARATION: TO BE SIGNED BY MAIN APPLICANT**

- I confirm that the details of this proposal are a true representation of the research to be undertaken.
- I will ensure that the research does not deviate from the protocol described.
- If significant protocol amendments are required as the research progresses, I will submit these to the Mbarara University Faculty Medicine Research Ethics Committee for approval.
- Where an appropriate mechanism exists, I undertake to seek additional local Ethical Approval in the country(ies) where the research is to be carried out.

I expect the project to commence on (Date): and be completed by (Date):

_____

Signed Date

SECTION D
APPROVALS

D.1 List research team and all collaborators.
(Please include all overseas collaborators and give their affiliations, qualifications and role in the study).

Dr. Samson Okello, MD MSc, Mbarara University of Science and Technology, Principle Investigator
Dr. Jessica Haberer, MD MSc, Massachusetts General Hospital/Harvard Medical School, Principle Investigator
Dr. Peter Olds, MD, Massachusetts General Hospital/Harvard Medical School, Principle Investigator
Austin Herbst, Massachusetts General Hospital/Harvard Medical School, Principle Investigator