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PROGRAM FOR EDUCATION IN GLOBAL AND POPULATION HEALTH

Testing a mobile, on-demand hypertension management training app in Abuja, Nigeria

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Research Question: Can a mobile phone-based, on-demand course for the diagnosis and management of hypertension (HTN) demonstrate acceptability in Nigerian health care workers?

BACKGROUND

Hypertension (HTN) is the number one single cause of mortality and morbidity around the world. In Nigeria alone, HTN accounts for around 234,000 deaths annually and population HTN control rate is only 2.8%. Training of healthcare workers in HTN management is crucial for diagnosing and treating HTN and preventing cardiovascular disease. Current in-person HTN trainings are inefficient, and knowledge gained can be lost over time. Non-profit organization Resolve To Save Lives (RTSL) is developing and piloting a new self-paced, on-demand digital mobile app that will train Nigeria health workers on HTN diagnosis and management. The goal is that the app will support and complement ongoing hypertension training of healthcare workers in Nigeria.

DESCRIPTION OF ORGANIZATION

Resolve To Save Lives(RTSL) is non-profit organization that prioritizes working with low- and middle-income countries on a national and local level to implement and scale up standardized HTN control programs in primary health care settings. The RTSL approach is to base diagnosis and treatment on simple treatment protocols(**Figure 1**). These protocols name specific medications, dosages and action steps for managing uncontrolled blood pressure. These simple protocols have been successfully implemented in 31 low- and middle— income countries, including Nigeria.

Currently, RTSL is working closely alongside the Nigerian government and hypertension experts from Johns Hopkins University to pilot a **self-paced online hypertension course** to complement the existing training curriculum for healthcare workers primary health centers in Nigeria. Healthcare workers can access the app on their own mobile phone.
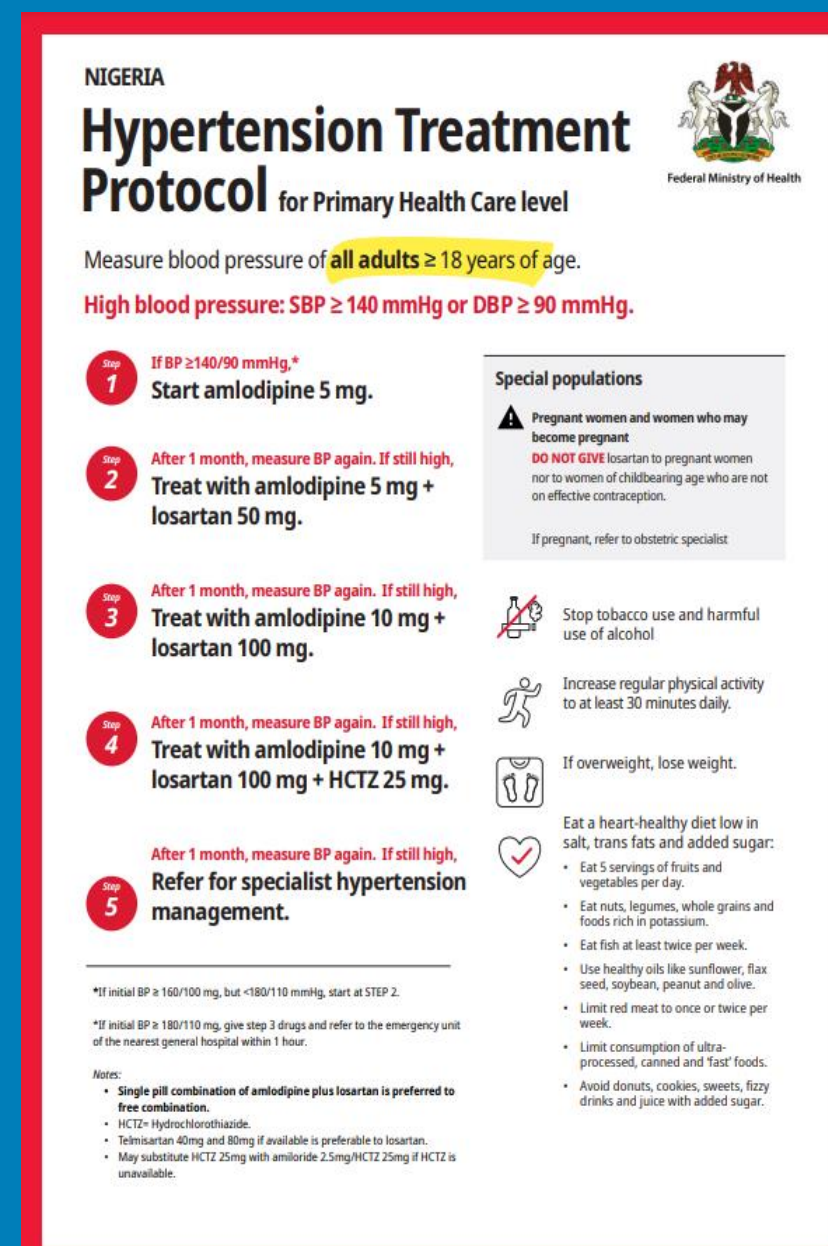
TABLES AND FIGURES

Figure 1: Nigerian Hypertension Treatment Protocol that will be used by healthcare workers in Abuja
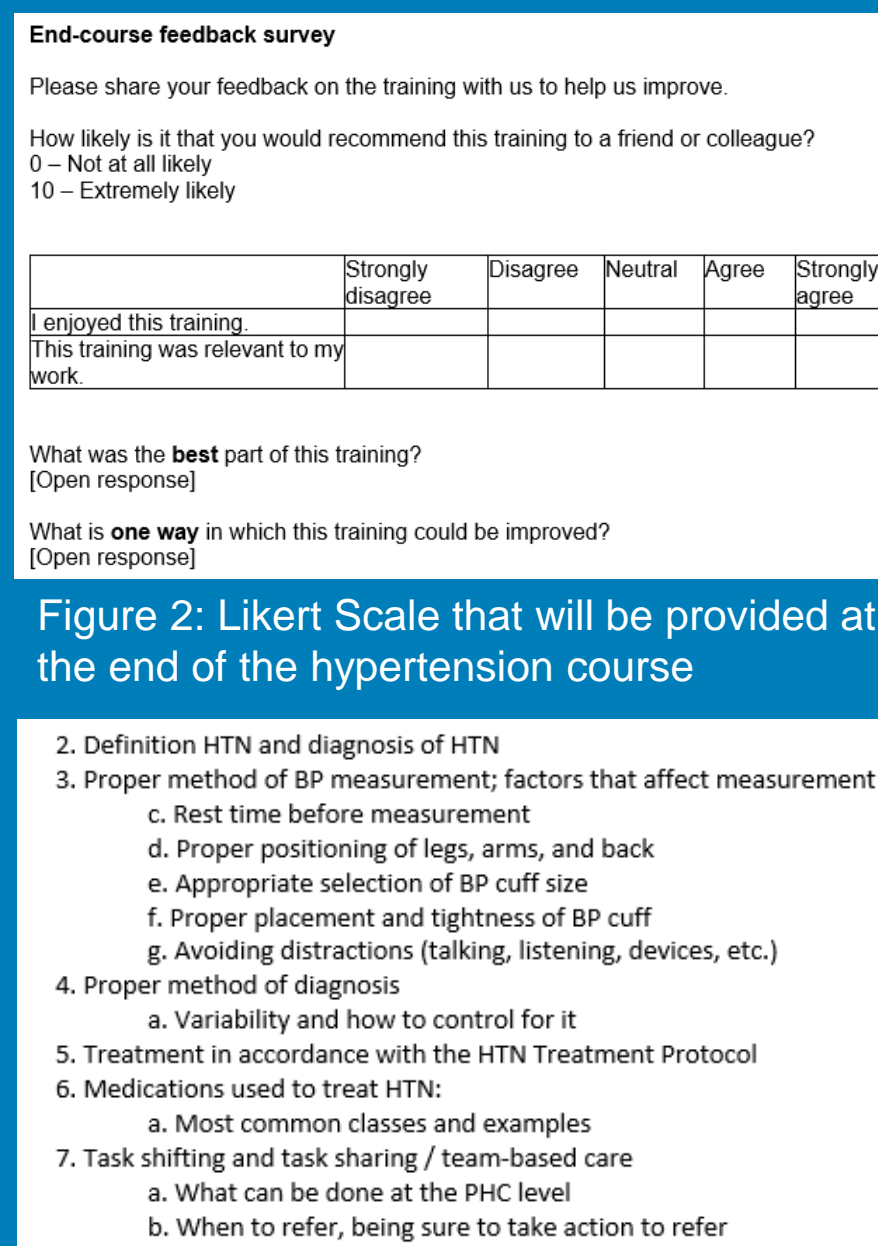

Figure 2: Likert Scale that will be provided at the end of the hypertension course

Figure 3: List of topics that will be assessed in the pre and post hypertension training
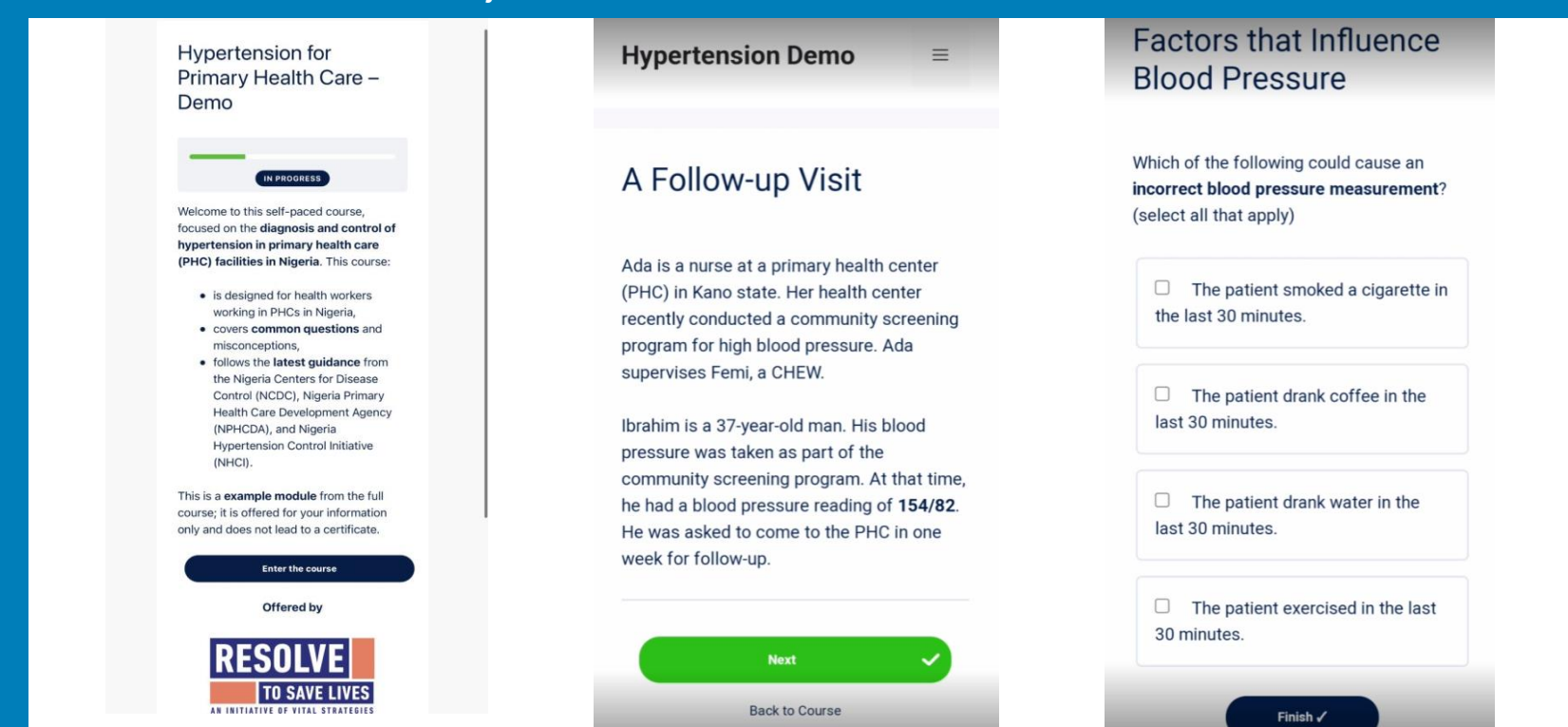

Figure 4: Screenshots of a demo module from the full hypertension course that was implemented into the app for beta testing

METHODS

• Over the summer, 12 hypertension training modules were drafted by Mr. Nguyen under the supervision of Drs. Moran and Thomas. After going through detailed review by partners from Johns Hopkins University and the Nigerian Federal Ministry of Health officials, the modules will be implemented into an on-demand mobile digital app for beta testing and to gain feedback.

• 5-10 healthcare workers at primary health care centers in Abuja will be randomly recruited to demo the hypertension training modules. The participants will be required to have their own mobile device, Wi-Fi or access to cellular data, and an email account.

• Each healthcare worker will complete pre and post training hypertension knowledge assessments. At the end of the course, they will complete a Likert-scale rating of acceptability (**Figure 2**) and some open-ended responses. In addition, they will also and go through a structured HTN knowledge assessment (**Figure 3**).

• **Although a lot of progress has been made, there have been bottle necks and delays in implementing the hypertension modules into the app for beta testing**
• **The goal is to have the demo modules launched around late October 2022 and to have 5-10 healthcare workers from various primary health centers in Abuja to evaluate the app.**

DISCUSSION

Although there are currently limited results from the research conducted this summer, this summer project helped with the completion of a mobile digital app hypertension training course. If successful, the digital app will provide an easy way to initiate training of health care workers of all cadres (doctors, nurses, community health workers) in standard hypertension care, thus saving many lives. Hopefully by the end of next year, there will be sufficient feedback to formally launch the app in not only Nigeria, but potentially other countries as well.

REFERENCES

• **Nigeria Hypertension Control Initiative Manual: Chapters 1 and 2.**
• **Johns Hopkins Global Hypertension Courses**
• **Johns Hopkins Global Hypertension Videos**
• **Nigeria Hypertension Control Initiative Manual: Chapters 3-6.**

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