INTRODUCTION

Hypertension is a major modifiable risk factor for cardiovascular disease, the leading cause of death and disability in Nepal. The reported prevalence of hypertension in Nepal varies from 22.4% to 38.6%, and the prevalence has tripled in the last 25 years. Poor adherence to antihypertensive medication intake increases the risk of uncontrolled blood pressure and complications, contributing to poor health outcomes. Female Community Health Volunteers (FCHVs) are central in maintaining overall community health throughout Nepal. There are over 50,000 FCHVs in Nepal, and with a nearly 100% cell ownership rate in Nepal, cell phone technology has opened up avenues for combining traditional FCHV program with digital techniques.

OBJECTIVES

The aim of this project is to create a user-centered, feature-phone based (FPB) tool to connect FCHVs with hypertensive patients in Nepal to reduce blood pressure. The initial assessment phase sought to answer the following three questions:

1. What is the prevalence of hypertension?
2. What is self-awareness of hypertensive status?
3. What mobile intervention is preferred?

METHODOLOGY

FCHVs were recruited from two sites in Nepal, Dhulikhel and Panchkhal, and a training session was conducted regarding hypertension awareness and care. FCHVs held primary screenings in their respective wards through which a total of 1113 participants above the age of 40 were screened for hypertension. These findings were analyzed and participants with high blood pressure (above 140 systolic and/or 90 diastolic pressure) were selected for secondary surveys. For the secondary phase, each FCHV returned to their respective wards to complete a more detailed face to face survey with each screened participant. This phase was used to confirm whether these patients were hypertensive and to collect data about their lifestyle, hypertension awareness and preferred method of receiving health information.

In addition, qualitative data was also collected in the form of interviews with FCHVs, patients, hospital staff and policymakers. This was done to gather diverse perspectives from stakeholders regarding hypertension awareness in the context of rural Nepali communities.

RESULTS

1. Baseline Characteristics

- Distribution of Female and Male
- Distribution of Education Level
- Distribution of Participants Diagnosed with Hypertension
- Distribution of Participants Taking Antihypertensive Medication

2. Awareness & Treatment

- Distribution of Hypertension (HTN) Awareness
- Distribution of Satisfaction with Hypertension Treatment

3. Phone Utilization

- Distribution of Participants Having a Cellphone
- Distribution of Participants Interested in Getting Health Information (such as Medication-Taking Reminder)

CONCLUSIONS

Hypertension management remains inadequate in rural Nepal. 53% of hypertensive patients were not aware of their hypertensive status and 73% of the patients were not taking hypertension medication. Given the high prevalence of feature-phone use among hypertensive patients in rural Nepal and their interests of getting health information via voice call, we strongly believe that a feature-phone-based application using the existing female community health volunteer infrastructure in Nepal is very feasible. Future directions include analyzing qualitative data (interviews with various stakeholders and screened patients) to assess the specific risk factors for hypertension in the rural Nepali context as well as to determine the best type of feature phone-based application to develop.

REFERENCES


ACKNOWLEDGEMENTS: This study was funded by Duke University Bass Connections grant. We would like to thank the Dhulikhel Hospital for their collaboration and generous support in carrying out this project, local research assistants Maneesha Makaju and Rijan Mulmi for their assistance in data collection and translation, and the female community health volunteers for their cooperation.