

# Non-communicable disease evaluation as the basis for primary care improvement in the Nam Giang district of central Viet Nam.

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## Introduction

Chronic disease continues to be a major contributor to mortality and morbidity worldwide, and low and middle income countries (LMICs) like Viet Nam share an increasingly heavy burden. Viet Nam's rapidly transitioning economy and well-established public health system have allowed for morbidity and mortality improvements beyond those seen in peer nations. However, this rapid and uneven growth has presented its own set of health risk factors. A growing Vietnamese middle class has increased access to clean water and safe housing, but it also has increased access to tobacco, processed foods, and alcohol. That said, increased access alone does not explain the changing disease burden in Viet Nam. For instance, previous studies have shown that tobacco use and binge drinking have been largely confined to people with lower income and education levels, a population much less affected by the current economic boom. Further, distinct cultural and geographic divides between rural and urban populations obscure the true health risk factors of each community.

A highly agrarian nation, Viet Nam has maintained much of its traditional eating habits, but has seen a per-capita increase in nearly all types of food consumption. Both Vietnamese men and women use alcohol less frequently than people in both upper income and economic peer nations, but alcohol use remains a major cause of hypertension, particularly in rural areas. And although significant improvements have been made to smoking rates nationwide, tobacco use is still highly prevalent. The country has a well developed public and private hospital system, but most people do not have regular access to primary care. Lack of access to primary care has previously been established as an independent risk factor for chronic disease.

The Vietnamese government at the central, provincial, and local levels is highly motivated to addressing the non-communicable disease burden in the country. But like any country, they are limited by finite human and financial resources. Private healthcare organizations have filled some gaps in the care system, but these organizations are generally not focused on community-wide prevention, and are inaccessible to many Vietnamese. Most previous NCD studies and interventions have been focused on urban areas, and the major rural studies were in the extreme north and south. Little investigation has been performed to date on the rural population of central Vietnam, which has its own health risk factors and assets distinct from those in the north and south of the country. This is a sizable population of 1.4 million people in Quang Nam province alone.

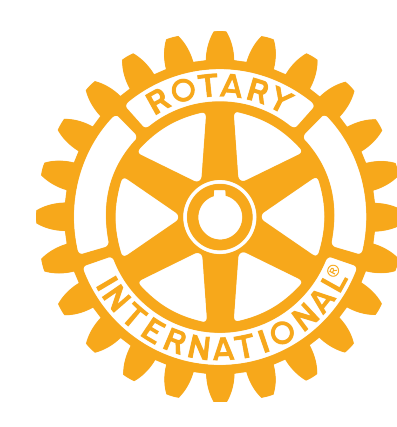
Our investigation seeks to quantify the NCD burden in rural central Viet Nam as the first step in regional health system improvement. We used a demographic survey and biometric data collection built upon the WHO STEPwise framework. Three previous studies have been performed in Viet Nam using this framework in other regions of the country, and our findings have shown that the rural central region has several important differences in its risk factors.

## Acknowledgments

We would like to recognize the gracious support of the Socialist Republic of Vietnam, as well as the government of Nam Giang province and Quang Nam district. Financial support was provided by Vietnam Health Improvement Project and Rotary International. Technical support was provided by the STEPwise team of the World Health Organization.



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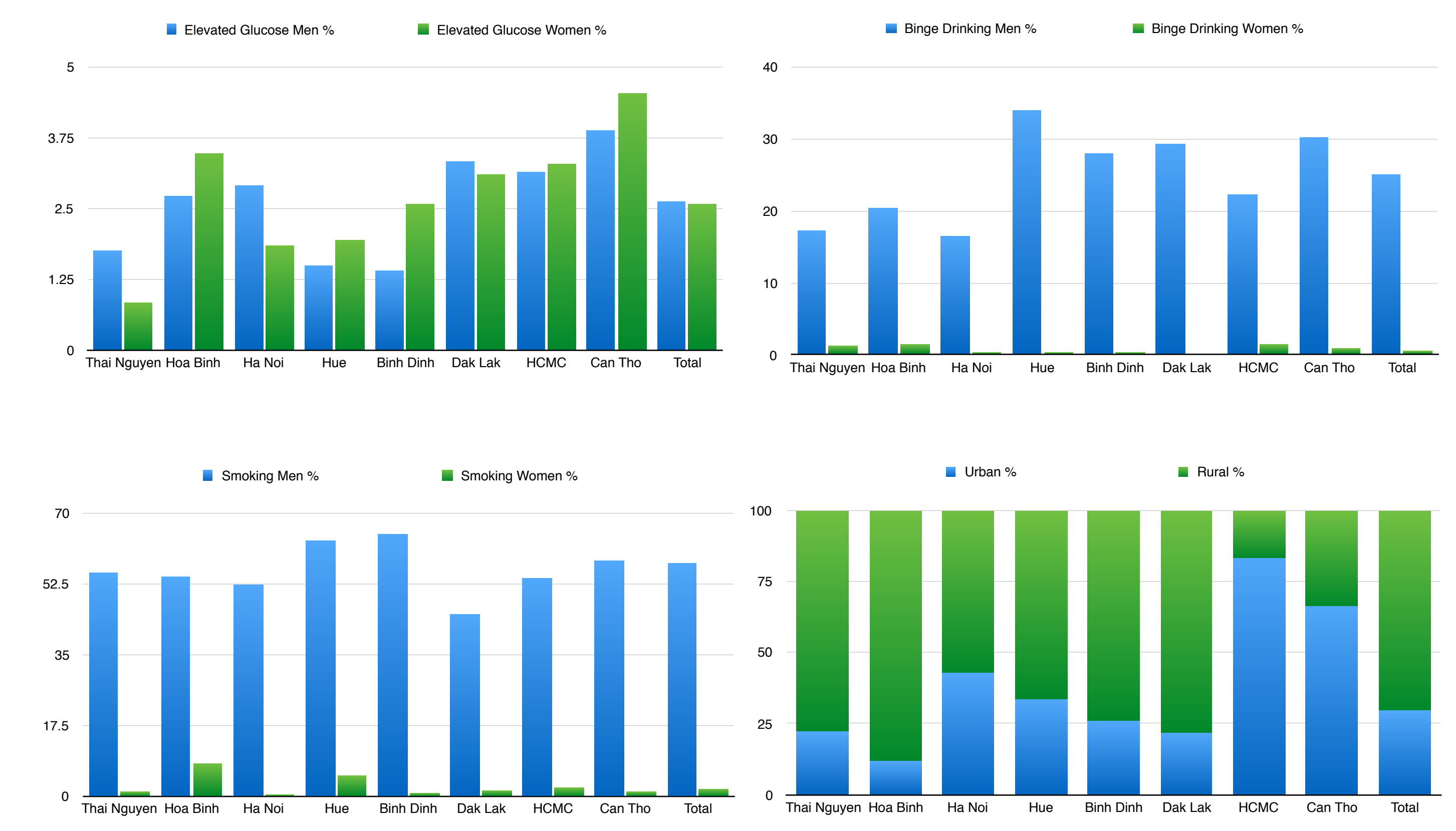


## Methods

Our approach closely follows the WHO STEPwise framework, with certain modifications to suit the circumstances of the region. Nam Giang is made up of two communes, each with four villages housing 200-300 residents. A survey team was sent to four villages to survey every member of the community. Residents were asked about sociodemographic factors, smoking status, alcohol use, and diet. Biometric measurements were taken from all participants, and included height/weight/BMI, hip circumference, waist circumference, fasting blood glucose, and resting blood pressure. Patients with risk factors suggesting more advanced disease were referred to the commune medical center for further lab testing (total cholesterol, HDL) and medical evaluation. 10% of participants were selected for more in-depth interviews to qualitatively assess health knowledge, and four focus groups were held to plan the next steps of regional primary care infrastructure improvements. One focus group was held with community members at large, another with people managing chronic disease, another with healthcare providers, and another with civic leaders. Each focus group had 8-10 participants.

## Results

Data collection for this study is ongoing, and expected to be completed by July 2017. A nationwide STEP's survey performed two years ago showed high rates of smoking, high rates of alcohol use among men (although lower than that of most western countries), and high rates of elevated glucose (particularly in the urban provinces). Of the surveyed regions below, Hue is geographically closest to Nam Giang, and Binh Dinh is the most demographically similar.



## Conclusions

Although data collection is still ongoing, some early conclusions have become clear. Smoking remains a major target for risk factor reduction. Although alcohol use is lower than in most other countries (and virtually non-existent among women) it is still a major contributor to early morbidity and mortality, particularly in the rural areas that this project is focusing on.

There remains a degree of skepticism among the rural population that non-hospital health services can provide a benefit to their lives. Non-communicable and other silent diseases do not have an immediate impact on peoples' daily lives, and so they prioritize other issues. However, as food scarcity becomes less of an acute concern and the infectious disease burden continues to decrease, both patients' expectations of the health system and the health system itself continue to progress towards chronic disease prevention and management.

Elevated blood sugars are relatively contained to urban areas at this time, but elevated blood pressures are a problem throughout the country. High salt diets and increased reliance on motorized vehicles and other physical exertion reduction tools are likely playing a major role.

Health care professionals are motivated to lead the shift in healthcare delivery in Viet Nam, but feel relatively constrained by limited training and operational funding. Government leaders at all levels have also voiced their support for NCD management at commune health centers. Their constituents are already beginning to exert political pressure for improved non-acute health services as health literacy improves. However, both demand for NCD management and the services available are still far below the true need.



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## Further Information

<http://www.vnhp.org>  
<http://www.who.int/chp/steps/en/>