**Mock Abstract**

**The Association between Systolic Blood Pressure and Congestive Heart Failure**

**in Hypertensive Patients**

**Background**: Of all the potential complications of hypertension, congestive heart failure (CHF) was most consistently found. In addition, cardiovascular disease is responsible for one-third of global deaths. Although the treatment of hypertension has been shown to prevent CHF, hypertension remains inadequately managed everywhere. Once considered the systolic blood pressure (SBP) occurs as a consequence of increased arterial stiffness. However, there is not much epidemiologic evidence of association between SBP and CHF among hypertensive patients.

**Objective**: To investigate the association between SBP and CHF and to determine the prevalence of CHF complication among hypertensive patients in Thailand.

**Methods**: This cross-sectional study is a part of the survey of the An Assessment on Quality of Care among Patients Diagnosed with Type 2 Diabetes (DM) and Hypertension (HT) Visiting Hospitals of Ministry of Public Health and Bangkok Metropolitan Administration in Thailand, conducted from 2010 to 2012 involving 174,578 nationally representative samples of DM and HT patients. Data was collected from medical records. This paper included 60,059 HT patients only who were attained these screening. Multiple logistic regression was used for data analysis.

**Results**: Of 60,059 HT patients, 66.2% were female, and a mean age of 61.4±11.3 years old (range: 36-86). The prevalence of CHF complication in hypertensive patients was xx.x (95%CI: x.xx -x.xx). The categorical of SBP which showed the most prevalent of CHF complication was xxx-xxx mmHg. Factors significantly, *p* < 0.001, associated with CHF included gender (OR = x.xx; 95%CI: x.xx-x.xx), age (OR = x.xx; 95%CI: x.xx-x.xx), BMI (OR = x.xx; 95%CI: x.xx-x.xx), and SBP (OR = x.xx; 95%CI: x.xx-x.xx). In addition, there was a linear trend in CHF risk across the range of SBP.

**Conclusions**: Hypertensive patients who had high level of systolic blood pressure obtained high risk of congestive heart failure, particularly those women more than 50 years of age along with obesity.

**Key words**: cross-sectional study, hypertension, systolic blood pressure,

 congestive heart failure.