

# Combating Severe Hypertension in the Community: Strategies to Enhance Clinical Safety in a Primary Care Setting

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## Introduction

Hypertension (HT) is the most common chronic disease managed in the primary care. Severe hypertension (SHT) is defined as severely elevated blood pressure (BP) of 180 mm Hg or more systolic, or 110 mm Hg or more diastolic. Acute SHT accompanied by acute target-organ injury (hypertensive emergency) requires immediate treatment, whereas asymptomatic SHT patients often have preexisting poorly controlled HT and usually can be managed in the outpatient setting. Inappropriate referral of patients with asymptomatic SHT to emergency hospital may impose unnecessary burdens on the health care system.

## Objectives

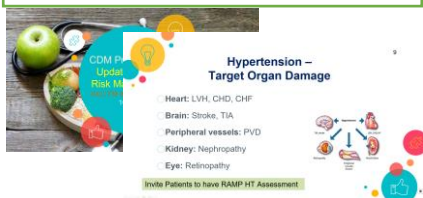
To implement community interventions in management of patients with SHT  
 To evaluate the clinical outcomes of patients with SHT after implementation of interventions

## Methodology

From year 2017, different interventions were implemented to enhance clinical safety among SHT patients:

### Staff Engagement

Departmental wide promulgations with series of educational meetings on hypertensive management to all front-line doctors, regular audit on proper BP measurement technique among supporting staff and standardized protocol on home BP machine validation

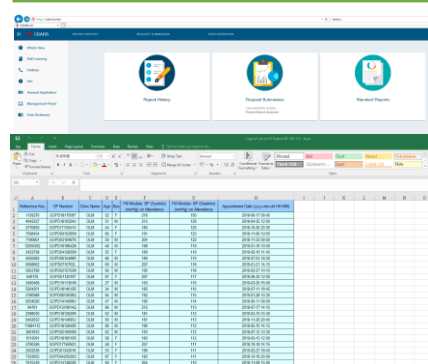


### Clinical Guideline Update

Guideline for managing patients with hypertension was updated in 2019. Doctors should attend patient who have SHT with symptoms of central nervous system with priority. Patient who were suspected to have hypertensive emergency should be referred to emergency department. Asymptomatic SHT patient should be managed according to clinical guideline and follow-up should be provided within two weeks.

### Data-Driven Approach

List of SHT patients were sent to clinic in-charge of individual clinics regularly for review of patients' clinical conditions.

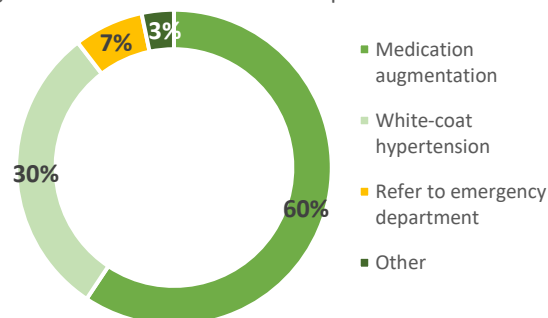


SHT patients who had been regularly followed up in 6 GOPCs of KCC from 1st Apr 2018 to 31st Mar 2019 were retrieved from the CDARS. Electronic medical records of patients in CMS were reviewed.

## Results

Totally 182 patients with SHT were managed in 6 GOPCs of KCC during the study period. Their average age was 61.8 ( $\pm 14.1$ ) years old and the proportion of male (51.1%) and female patients (48.9%) were similar. Clinical outcomes of SHT patients were shown in Figure 1. For those who were followed up in GOPCs, none of them had documented cardiovascular events within a 6 months follow-up.

Figure 1. Clinical outcomes of SHT patients



## Conclusions

In conclusion, with the implementation of comprehensive strategies via a team-based approach, SHT patients could be managed safely in the primary care setting and hence reduce the burden to the hospital.