

Protocol Title: Hypertension	
Effective Date: 8/25/2015	Version: 1.1 (Revised: 6/29/2015) Version 1.2 (Revised/Approved 8/25/2015)
Approval By: CCC Clinical Delivery System Steering Group	Planned Review Date: 8/2016

## 1 Purpose & Objective

This protocol provides evidence-based care recommendations in the screening and treatment of patients with Hypertension in the primary care setting.

## 2 Scope of Protocol

### 2.1 Target Population

This protocol was derived from clinical guidelines for individuals in the CCC population diagnosed with Hypertension, 18 years of age or older.

### 2.2 Target Users

This protocol is developed for use in primary care settings.

### 2.3 Excluded Topics

This protocol does not address the clinical management of patients with Pre-Hypertension or Malignant Hypertension.

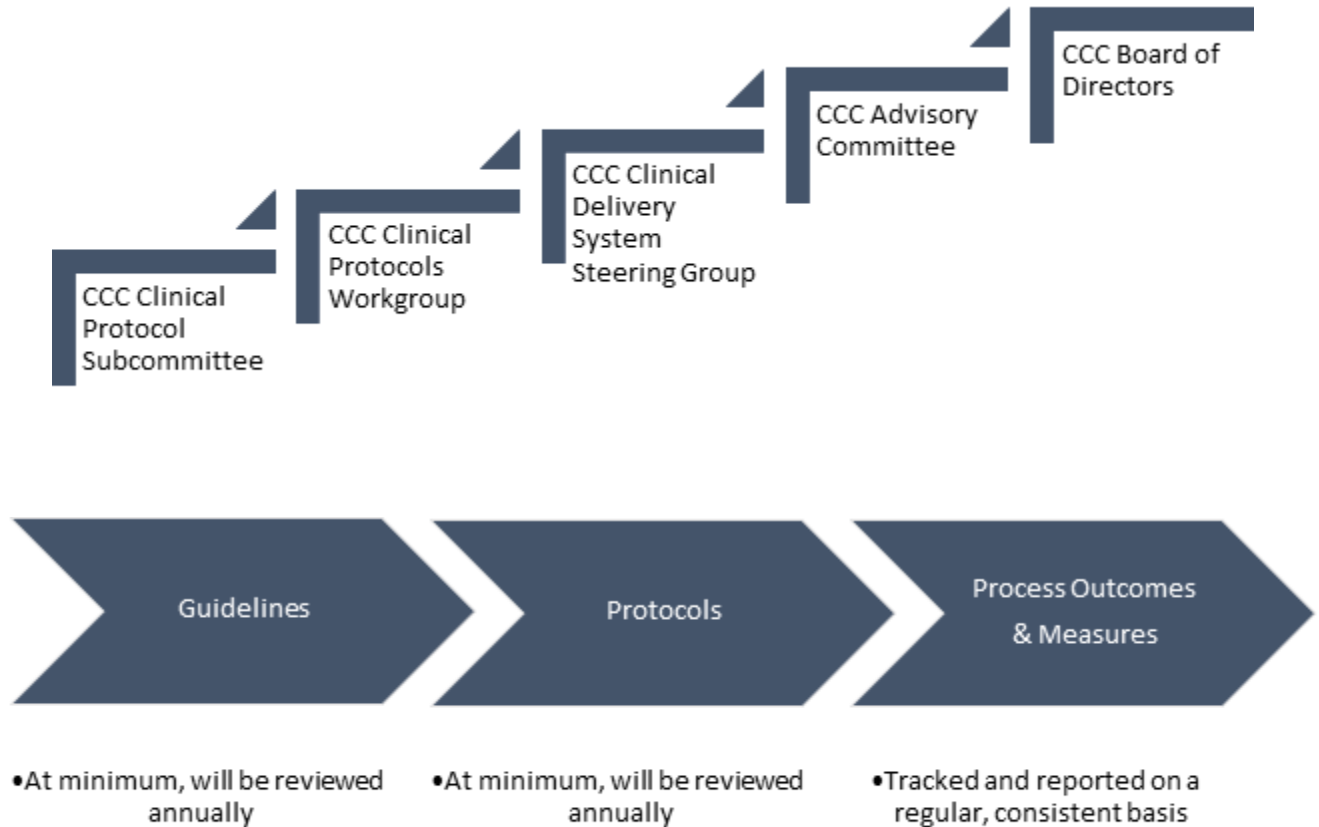
### 2.4 Related Guidelines

James P.A. et al. (2014) Evidence-based guideline for the management of high blood pressure in adults: Report from the panel members appointed to the Eighth Joint National Committee (JNC 8). JAMA

Understand Your Risk for High Blood Pressure. (2012, April 4). . Retrieved February 4, 2014, from [http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/UnderstandYourRiskforHighBloodPressure/Understand-Your-Risk-for-High-Blood-Pressure\\_UCM\\_002052\\_Article.jsp](http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/UnderstandYourRiskforHighBloodPressure/Understand-Your-Risk-for-High-Blood-Pressure_UCM_002052_Article.jsp)

# 1 Protocol Development & Review Process

## Protocol Development & Review Process



This protocol originated in the CCC Clinical Protocol Subcommittee, led by a Cardiologist specializing in Hypertension. A group of clinical staff met and converged on the items in this document via a Rapid Design Session. In this session, a facilitator guided the group through the process to extract evidence-based elements to adequately care for the CCC population impacted by Hypertension. The above depiction describes the approval and subsequent review process for this protocol.

Group Name	Approval Date
CCC Hypertension Protocol Subcommittee	6/29/2015
CCC Clinical Protocols Workgroup	6/29/2015
CCC Clinical Delivery System Steering Group	10/25/2015
CCC Advisory Committee	
CCC Board of Directors	

## 2 Screening Criteria & Risk Factors

### 2.1 Assessing Risk

All CCC patients 18 years of age or older should have a blood pressure reading taken at every encounter within the healthcare system. Providers should check the health record for past blood pressure readings and review for trends.

#### 1. Risk Factors:

- Family history
- Advanced age
- Gender-related risk patterns
- Lack of physical activity
- Poor diet, especially one that includes too much salt
- Overweight and obesity
- Drinking too much alcohol

#### 2. Possible Contributing Factors:

- Stress
- Smoking and second-hand smoke
- Sleep apnea

#### 3. Secondary Hypertension

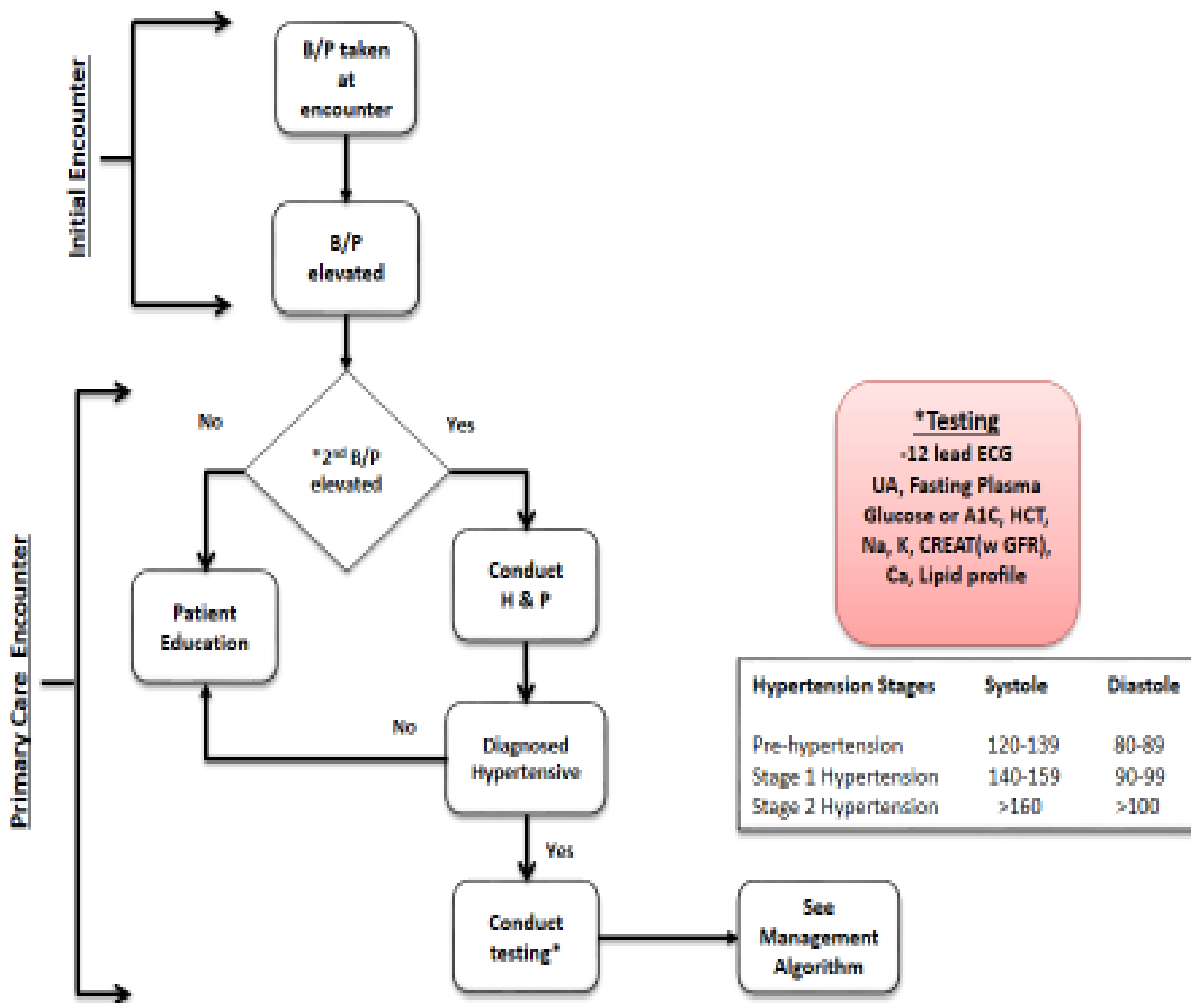
- High blood pressure caused by a pre-existing problem (i.e. Kidney abnormality, structural abnormality of the aorta that has existed since birth, narrowing of certain arteries)

#### 4. Risks among Certain Groups

- Women
- African-Americans

## 2.2 Initial Screening & Diagnosis

### Hypertension Screening & Diagnosis



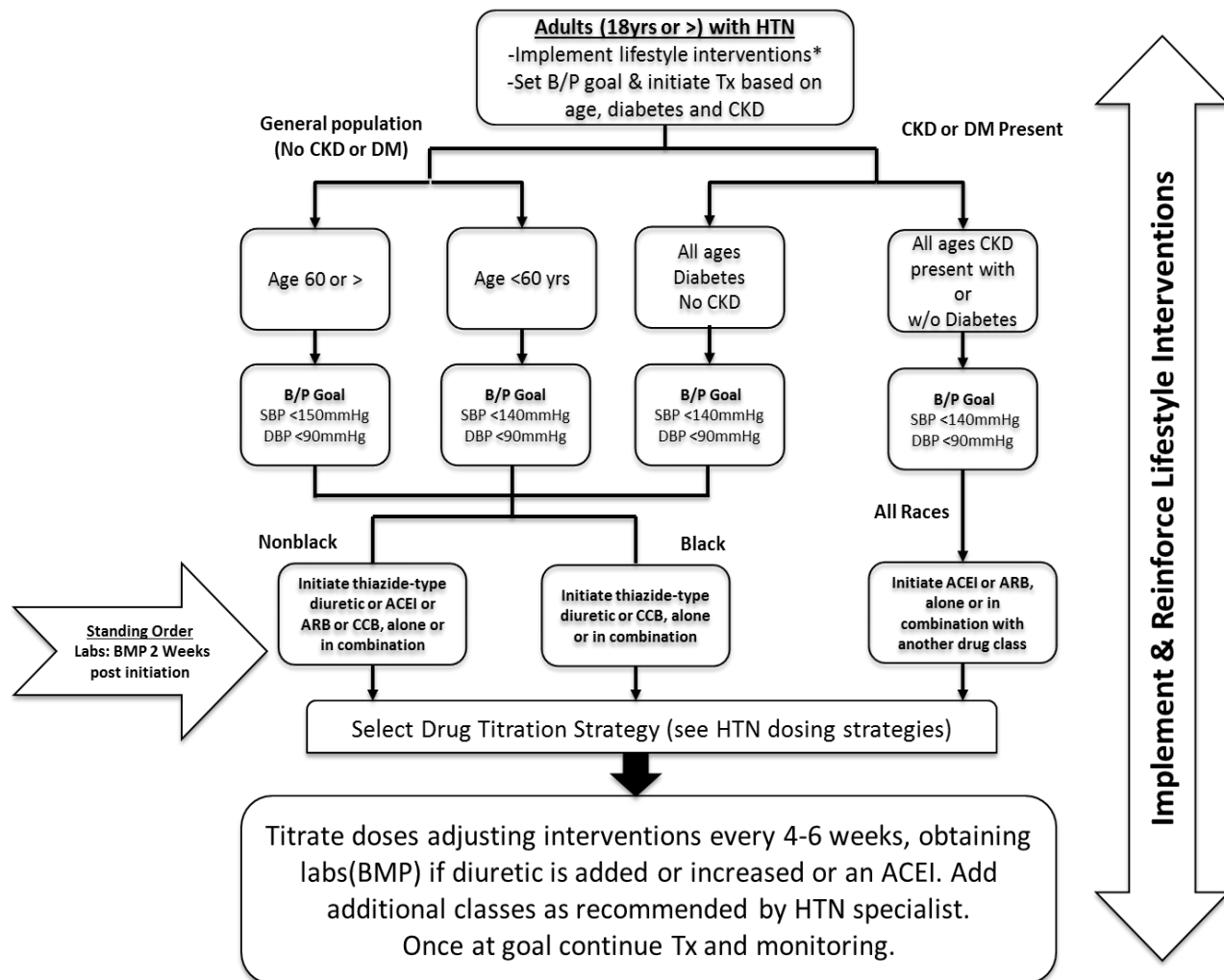
### Other Considerations:

- Patients in pre-hypertensive range should receive lifestyle education (low salt diet)
- Optional Testing: TSH level
- If blood pressure single reading is 160/90 consider hypertensive; unless extenuating circumstances such as white coat syndrome, pain or stress
- Ensure medication adherence via assessing the degree to which the patient's behavior and/or compliance corresponds with agreed upon prescribed medication recommendations

### 3 Medication Treatment, Management & Referrals

(Refer to Hypertension Medications Spreadsheet Attachment)

#### 3.1 Clinical Management



#### Monitoring-

- Consider patient visit with Nurse at a 3 or 6 month interval once Blood Pressure in control

#### 3.2 Strategies to Dosing

- **Strategy A**
  - Start one drug, titrate to maximum dose, and then add a second drug.

- **Strategy B**
  - Start one drug and then add a second drug before achieving maximum dose of the initial drug.
- **Strategy C**
  - Begin with 2 drugs at the same time either as 2 separate pills or as a single pill combination.

### 3.3 Referrals

Criteria	When to Refer	To Whom
Resistant Hypertension*	Within 30 days	Cardiology or Nephrology (if at CKD stage 3)
Chest pain	Immediately	Emergency Department
Shortness of Breath with Clinical signs of Heart Failure (Jugular Vein Distention, Pulmonary Rales, Edema)	Immediately	Emergency Department
Headache with changes in vision	Immediately	Emergency Department
Neurological Deficit	Immediately	Emergency Department
Abnormal EKG (with ischemic changes – i.e. BP 180/100)	Immediately	Emergency Department

**\*Intent is that hypertension is the culprit in affecting other organs\***

**\*Resistant Hypertension-**

- Patients who have failed to reach target BP on three anti-hypertensive medications (in three different drug categories) at maximum dose
- Consider advising patients on 2 gram/day sodium diet and verification of medication adherence
- In addition to dietary changes, consider advising patients on other life style changes

### Considerations for Mode of Transportation to Emergency Department –

- Ability to maintain airway
- No focal neurologic changes
- No cardiac signs and symptoms

If patient goes by private car, patient should not drive.

## 4 Protocol Development Team

Name	Affiliation
Mark Hernandez MD <b>*Chief Medical Officer</b> <b>Acting Chief Medical Officer</b>	Community Care Collaborative (CCC) & Seton Healthcare Family CommUnityCare
George Rodgers MD <b>*Clinical Champion</b>	Seton Healthcare Family
Richard Peavey MD	People’s Community Clinic
Tracy Angelocci MD	Lone Star Circle of Care
Lisa Doggett MD	El Buen Samaritano
Curk McFall MSN, RN	Community Care Collaborative
Veronica Buitron-Camacho MSN, RN	Community Care Collaborative

## 5 Metrics

Metric	Metric Description
High Blood Pressure Screening (Cat 3)	Process Metric
Blood Pressure Control in Diabetics (Cat 3)	Outcome Metric
Blood Pressure reading taken at every encounter	Process Metric
Diagnosis of Hypertension and testing within a month of beginning medication treatment	Process Metric
Blood Pressure control in patient less than 60 years of age (SBP < 140 mmHg, DBP < 90 mmHg)	Outcome Metric
Blood Pressure control in patient greater than 60 years of age ( SBP < 150 mmHg, DBP < 90 mmHg)	Outcome Metric

## 6 References

James P.A. et al. (2014) Evidence-based guideline for the management of high blood pressure in adults: Report from the panel members appointed to the Eighth Joint National Committee (JNC 8). JAMA

Understand Your Risk for High Blood Pressure. (2012, April 4). . Retrieved February 4, 2014, from [http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/UnderstandYourRiskforHighBloodPressure/Understand-Your-Risk-for-High-Blood-Pressure\\_UCM\\_002052\\_Article.jsp](http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/UnderstandYourRiskforHighBloodPressure/Understand-Your-Risk-for-High-Blood-Pressure_UCM_002052_Article.jsp)



## 5 Glossary of Abbreviations

Abbreviation	Term
A1C	Hemoglobin A1C
ACEI	Angiotensin-Converting Enzyme Inhibitor
ARB	Angiotensin Receptor Blocker
BMP	Basic Metabolic Panel
B/P	Blood Pressure
BP	Blood Pressure
Ca	Calcium
CCB	Calcium-Channel Blocker
CCC	Community Care Collaborative
CKD	Chronic Kidney Disease
CREAT	Creatinine
DM	Diabetes Mellitus
ECG	Electrocardiogram
EKG	Electrocardiogram
GFR	Glomerular Filtration Rate
H & P	History and Physical
HCT	Hematocrit
HTN	Hypertension
K	Potassium
Na	Sodium
SBP	Systolic Blood Pressure
TSH	Thyroid Stimulating Hormone
Tx	Treatment
UA	Urinalysis