

Hypertension Care Guide

August 2021



CALIFORNIA CORRECTIONAL
HEALTH CARE SERVICES

SUMMARY

CCHCS' BLOOD PRESSURE (BP) GOALS*

- ✓ < 140/90 mmHg for most patients < 60 years old (yo)
- ✓ < 140-150/90 mmHg and shared decision-making for most patients > 60 yo
- ✓ < 130/80* mmHg if have or at high risk for atherosclerotic cardiovascular disease (ASCVD), and in chronic kidney disease (CKD), and diabetes (DM)
- ✓ < 140/90 for DM patients with no or low ASCVD risk

ALERTS

- Systolic BP > 180
- Diastolic BP > 120
- Evidence of target organ damage (TOD) (See page 3)
- Hypertension (HTN) with chest pain or symptoms of acute coronary syndrome
- Signs of secondary HTN

*Research supports a lower BP target for patients with ASCVD (includes cardio, peripheral and cerebro-vascular), CKD, and ASCVD Risk > 10%. (See page 6)

DIAGNOSTIC CRITERIA/EVALUATION

RISK FACTORS: Include: African American, DM, CKD, obesity, sedentary, low consumption fresh fruits and vegetables, pregnancy, “white coat” HTN, sleep apnea, sleep < 6 hours and age (incidences approaches 90% of patients in their 80s).

BP average more precise if more measurements. If diagnosis is in question, consider short duration of more frequent BP measurements.

DEFINITION: The definition of HTN varies depending on which guidelines are reviewed. Normal BP is accepted as < 120/80 mmHg. The Joint National Committee (JNC) released the JNC 8 HTN guidelines in 2014. No further update. These were endorsed by the American College of Physicians (ACP) and American Academy of Family Practitioners (AAFP) in 2018. The European Guidelines released in 2018 were closely aligned with JNC 8. In the 2019 American Heart Association/American College of Cardiology (AHA/ACC) ASCVD Prevention Guideline, the 2017 recommendations for BP targets are maintained.

Hypertension Diagnostic Criteria and Treatment RECS

1. JNC 8- 2014

- **DEFINITION**
 - Pre HTN: 120-139/80-89
- **TREATMENT RECS.***
 - Lifestyle
- **DEFINITION**
 - Stage 1: 140-159/90-99
- **TREATMENT RECS.***
 - Lifestyle and Medications to keep BP < 140/90
- **DEFINITION**
 - Stage 2: $\geq 160/\geq 100$
- **TREATMENT RECS***
 - Lifestyle and Medications to keep BP < 140/90

2. ACC/AHA-2017

- **DEFINITION**
 - Elevated: 120-129/< 80
- **TREATMENT RECS.***
 - Lifestyle
- **DEFINITION**
 - Stage 1: 130-139/80-89

- **TREATMENT RECS.***
 - Lifestyle for all. Medications to keep BP < 130/80 if ASCVD, ASCVD risk, DM or CKD
- **DEFINITION**
 - Stage 2: ≥ 140/90
- **TREATMENT RECS.***
 - Lifestyle and Medications to keep BP < 140/90

3. EUROPEAN 2018

- **DEFINITION**
 - High NL: 130-139/85-89
- **TREATMENT RECS.***
 - Lifestyle
- **DEFINITION**
 - Grade 1: 140-159/90-99
- **TREATMENT RECS.***
 - Lifestyle for all. Medications to keep BP < 130/80 if ASCVD, ASCVD risk, DM or CKD
- **DEFINITION**
 - Grade 2: 160-179/100-109
- **TREATMENT RECS.***
 - Lifestyle and Medications to keep BP<140/90 if <75 years old; and SBP<160 for 75-80 years old.

***When Choosing a target:** Take into account patient characteristics, such as age, any existing co-morbidities and CV risk, and **document the patient's BP target**. Population management goals are not individual goals, for which patients' unique medical scenario and the weighing of risks and benefits must be taken into account. (See pages 2 and 6)

ASSESSMENT

- **History:** Complete history including age of onset, pertinent symptom review for cardiovascular disease (CVD) or TOD, medication use (including over-the-counter [OTC] and herbals), illicit drug use history, cigarette use last 12 mos., personal or family history of cardiac disease, HTN, DM, cerebrovascular accident (CVA)/transient ischaemic attack (TIA), CKD, peripheral vascular disease (PVD), or other coronary heart disease (CHD) equivalent, sleep time, and apnea.
- **Calculate ASCVD Risk Level: All adults age 40-79 routinely**, if DM annually, and consider for all age 20-39, every 4-6 years if 10 year risk ≤ 7.5%. Document CV risk based pooled cohort equation **ASCVD Risk Estimator Plus Equation**. Provides 10-year and lifetime/30 year risk, decision support and therapy impacts. Consider risk enhancing factors/risk trajectories in deciding when to repeat the ASCVD risk level. (See page 4). See discussions on CV risk also in the **Dyslipidemia Care Guide** and **Diabetes Care Guide**
- **Physical Exam:** Accurate BP measurements (See page 2) in both arms (use higher reading), heart and lung exam, pulses, assess for carotid, abdominal, & femoral bruits, thyroid palpation, abdominal exam for masses, organomegaly, pulsatile aorta, edema and neurologic exam.
- **Initial Diagnostic Evaluation:** ECG, UA, blood glucose, hematocrit, potassium, creatinine/GFR, calcium, lipid profile, urine albumin if DM. Consider secondary causes of HTN and test for these if clinically indicated. (See page 5)

TREATMENT

- **Education:** Diet, decrease sedentary time, increase aerobic exercise, maintaining weight or weight loss (if BMI > 25), smoking avoidance, importance of HTN management, and adherence with therapy. Dietary consults.
- **Therapeutic lifestyle changes:** Diet: decrease daily intake of sodium, increase exercise (e.g., brisk walking at least 30 min/day most days of week), limiting alcohol consumption, and weight loss if needed.
- **Medication:** Choose based on comorbid clinical conditions and patient preference (See pages 7-20).

- Initial drug therapy: Typically a diuretic, angiotensin converting enzyme inhibitor (ACEI) or calcium channel blocker (CCB). (See table page 7). Note: Beta Blockers are less effective and NOT first line.
- Initiate therapy with two medications if BP \geq 160/100 at diagnosis, or if goal is lowering BP > 20mmHg/10mmHg. Two or more medications are often required to achieve BP goal.
- Diuretics should usually be included in any regimen of three or more drugs.
- BP not controlled with 3 meds: evaluate for adherence, secondary HTN and need for specialist.

MONITORING

- **Follow-up visits:** Check BP every visit. In general, see a primary care team member at least every 1 month until controlled. BP checks can be nurse visits, but the provider must review and act as clinically indicated. **Monitor adequacy and aggressively control all other ASCVD risk factors, see [Dyslipidemia Care Guide](#), [Diabetes Care Guide](#), and [Weight Management Care Guide](#).**