

# SANFORD HYPERTENSION PRACTICE GUIDELINE



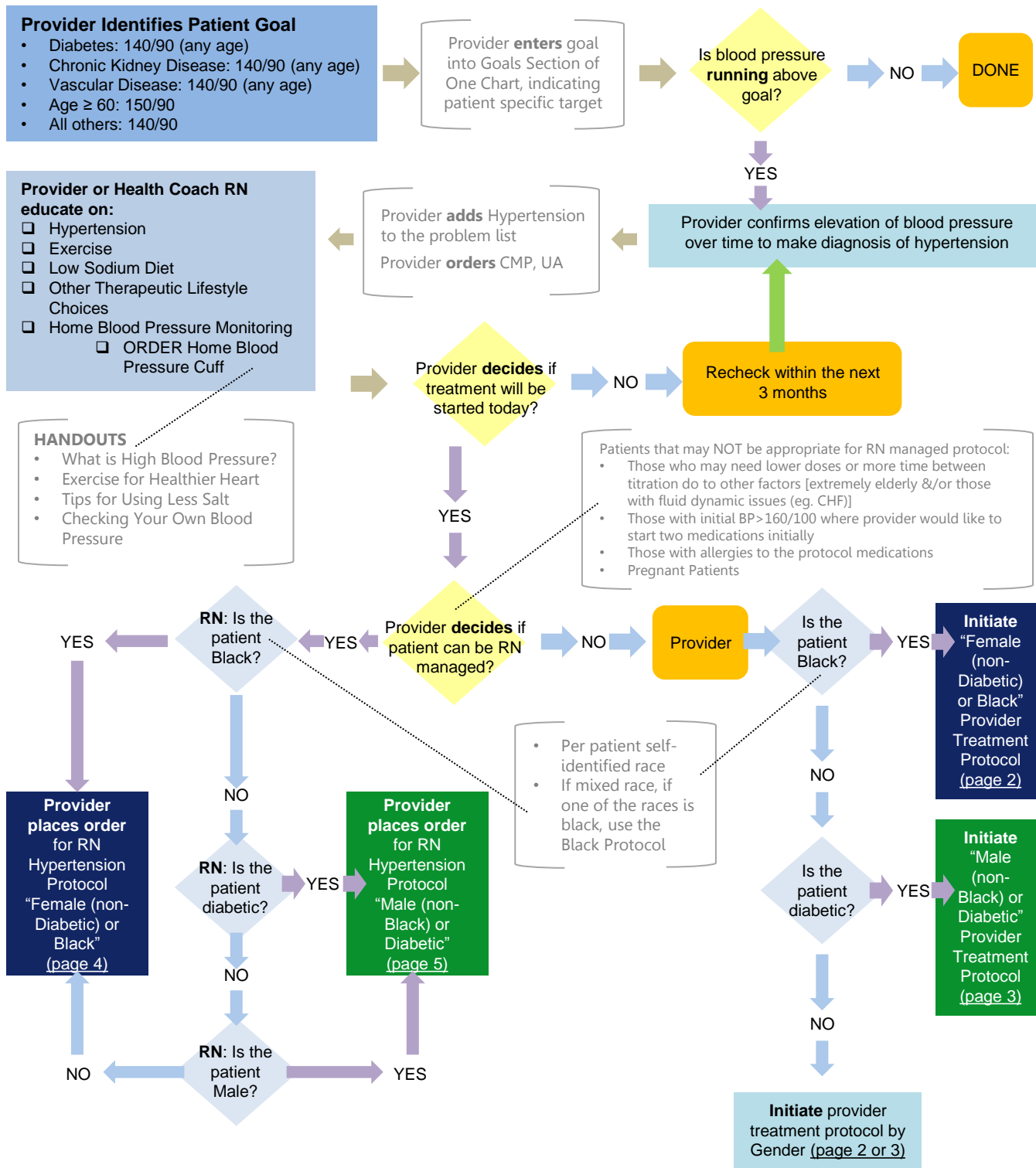
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## Sanford Health Hypertension Clinical Practice Guideline©

# Hypertension Treatment Protocol (18+ Years)

Clinical support staff check Blood Pressure at each visit per Sanford Blood Pressure Measurement Standard

EVALUATION AND TREATMENT



**Used for all Blacks (even if Diabetic or mixed race) & Female without Diabetes**

- Visit every two weeks until controlled
- Dose/medication adjustment at every visit until controlled
- Controlled defined as BP to goal on all readings, including in clinic value
- Assess for non-adherence/medication understanding at each visit
- If home blood pressures are controlled, but clinic blood pressures are not, consider ambulatory blood pressure monitoring

**Other HANDOUTS as Needed**

- Controlling High Blood Pressure
- Manage Stress with a Healthy Lifestyle
- Walking for Fitness
- Low-Salt Choices
- Tips for Quitting Smoking
- Coping with Smoking Withdrawal

## Visit & Treatment Schedule

<b>1</b>	<ul style="list-style-type: none"> <li>○ Start HCTZ 12.5mg daily in morning</li> <li>• Give HCTZ handout</li> </ul>
<b>2</b>	<ul style="list-style-type: none"> <li>○ BMP Today</li> <li>○ If not to goal, increase HCTZ to 25mg daily in morning</li> </ul>
<b>3</b>	<ul style="list-style-type: none"> <li>○ BMP today</li> <li>○ If not to goal, add amlodipine 5mg daily in evening</li> <li>• Give amlodipine handout</li> </ul>
<b>4</b>	<ul style="list-style-type: none"> <li>○ If not to goal, increase amlodipine to 10mg daily in evening</li> </ul>
<b>5</b>	<ul style="list-style-type: none"> <li>○ If not to goal, add lisinopril 10mg daily</li> <li>• Give lisinopril handout</li> </ul>
<b>6</b>	<ul style="list-style-type: none"> <li>○ BMP Today</li> <li>○ If not to goal, increase lisinopril to 10mg twice daily</li> <li>○ If cough has developed, discontinue lisinopril, switch to losartan 25mg daily</li> <li>• Give losartan handout</li> </ul>
<b>7</b>	<ul style="list-style-type: none"> <li>○ BMP Today</li> <li>○ If not to goal, increase lisinopril to 20mg twice daily</li> <li>○ If using losartan and not controlled, increase to 50mg daily</li> </ul>
<b>8</b>	<ul style="list-style-type: none"> <li>○ BMP Today</li> <li>○ If not to goal, consider further evaluation for underlying cause of resistant hypertension</li> <li>• SEE SIDEBAR</li> </ul>
<b>9</b>	<ul style="list-style-type: none"> <li>○ If not to goal, start Metoprolol XL 50mg daily</li> <li>○ Do not initiate Metoprolol XL if:                             <ul style="list-style-type: none"> <li>▪ Patient has short gut or feeding tube (use non-XL formulation of beta blocker)</li> <li>▪ Patient has heart rate of &lt;60</li> </ul> </li> <li>• Give Metoprolol handout</li> </ul>
<b>10</b>	<ul style="list-style-type: none"> <li>○ If not to goal, increase Metoprolol XL to 100mg daily</li> <li>○ Do not increase if heart rate is &lt;60</li> </ul>
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<b>12</b>	<ul style="list-style-type: none"> <li>○ If not to goal, referral to hypertension specialty clinic or nephrology depending on local resources</li> </ul>

**Further evaluation of resistant hypertension**

- If PCP is an APP, then APP will touch base with a doctor regarding the patient and the direction to proceed with evaluation/treatment.

**Provider(s) should consider:**

- 1) Further evaluation for secondary causes:
  - a. Laboratory Studies including
    - TSH
    - PTH (if baseline Ca [prior to starting HCTZ] > 10.7)
    - Renin (done in AM)
    - Aldosterone
  - b. Imaging with Renal Ultrasound with doppler
  - c. Sleep Apnea evaluation
- 2) Other Contributing Factors
  - a. Consider non-adherence or medication confusion
    - Obtain dispensing history from Pharmacy
    - Ask patient to bring in pill bottles & explain what they are taking & when
  - b. Considering interfering agents (NSAIDs, allergy medications)
  - c. Review alcohol, nicotine, recreational drug usage
  - d. Evaluate for depression
  - e. Evaluation for patient activation or engagement
  - f. Diet/exercise patterns
- 3) Medication adjustment
  - a. Consider change of HCTZ to Chlorthalidone if HCTZ does not seem to be achieving 24 hour coverage
- 4) Referral to
  - a. Behavioral health regarding activation
  - b. Designated hypertension specialist (HTN clinic, nephrology, etc., depending on local resources)
  - c. Dietician

**Used for all Diabetics (except Blacks) and all Men (except Blacks)**

- Visit every two weeks until controlled
- Dose/medication adjustment at every visit until controlled
- Controlled defined as BP to goal on all readings, including in clinic value
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**Other HANDOUTS as Needed**

- Controlling High Blood Pressure
- Manage Stress with a Healthy Lifestyle
- Walking for Fitness
- Low-Salt Choices
- Tips for Quitting Smoking
- Coping with Smoking Withdrawal

**Visit & Treatment Schedule**

<b>1</b>	<ul style="list-style-type: none"> <li>○ Start lisinopril 10mg daily</li> <li>• Give lisinopril handout</li> </ul>
<b>2</b>	<ul style="list-style-type: none"> <li>○ BMP Today</li> <li>○ If not to goal, increase lisinopril to 10mg twice daily</li> <li>○ If cough has developed, discontinue lisinopril, switch to losartan 25mg daily</li> <li>• Give losartan handout</li> </ul>
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- 2) Other Contributing Factors
  - a. Consider non-adherence or medication confusion
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    - Ask patient to bring in pill bottles & explain what they are taking & when
  - b. Considering interfering agents (NSAIDs, allergy medications)
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  - d. Evaluate for depression
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- 4) Referral to
  - a. Behavioral health regarding activation
  - b. Designated hypertension specialist (HTN clinic, nephrology, etc., depending on local resources)
  - c. Dietician

EVALUATION AND TREATMENT

## Used for all Blacks (even if mixed race or Diabetic) & all Women (without Diabetes)

- RN blood pressure check visit or health coach visit scheduled every two weeks (12-17 days) until to goal (visits falling outside those parameters must be reviewed with provider). Two missed visits will result in provider discontinuation of protocol.
- Dose/medication adjustment at every visit until blood pressures are to goal.
- To goal defined as BP to goal on all readings, including in clinic value
- Place all orders "per protocol with cosign"

- Assess for non-adherence/medication understanding at each visit
- Seek provider direction if...
  - Patient develops weakness or dizziness
  - Patient is hospitalized during the course of the protocol
  - Home blood pressures are controlled, but clinic blood pressures are not (consider ambulatory blood pressure monitoring)
- New medications have been started by another provider since last appointment

- If patient becomes pregnant during course of protocol, discontinue protocol
- Link all visits through Hypertension Protocol Episode in One Chart
- When patient reaches goal: Schedule a nurse blood pressure check at one month and a provider follow up visit within three months

### Other HANDOUTS as Needed

- Controlling High Blood Pressure
- Manage Stress with a Healthy Lifestyle
- Walking for Fitness
- Low-Salt Choices
- Tips for Quitting Smoking
- Coping with Smoking Withdrawal

## Visit & Treatment Schedule

1	<ul style="list-style-type: none"> <li>o <b>Start</b> Episode (Type: Multidiscipline. Name: Hypertension Protocol) in One Chart</li> <li>o <b>Start</b> HCTZ 12.5mg                             <ul style="list-style-type: none"> <li>▪ <b>Order</b> HCTZ 12.5mg by mouth once daily in morning #90 with 4 refills</li> </ul> </li> <li>• Give HCTZ handout</li> </ul>
2	<ul style="list-style-type: none"> <li>o <b>Order</b> BMP to be done today</li> <li>o If not to goal, <b>increase</b> HCTZ to 25mg                             <ul style="list-style-type: none"> <li>▪ <b>Order</b> HCTZ 25mg by mouth once daily in morning #90 with 4 refills</li> </ul> </li> <li>o Give dose adjustment handout per smart set</li> </ul>
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5	<ul style="list-style-type: none"> <li>o If not to goal, <b>add</b> lisinopril 10mg                             <ul style="list-style-type: none"> <li>▪ <b>Order</b> lisinopril 10mg by mouth once daily #90 with 4 refills</li> </ul> </li> <li>• Give lisinopril handout</li> </ul>
6	<ul style="list-style-type: none"> <li>o <b>Order</b> BMP to be done today</li> <li>o If not to goal, <b>increase</b> lisinopril to 10mg twice daily                             <ul style="list-style-type: none"> <li>▪ <b>Order</b> lisinopril 10mg by mouth twice daily #180 with 4 refills</li> </ul> </li> <li>• Give dose adjustment handout per smart set</li> <li>o If cough has developed, <b>discuss</b> with provider for direction regarding switch to <u>losartan 25mg</u> daily &amp; discontinue lisinopril.                             <ul style="list-style-type: none"> <li>o <b>Obtain</b> order from provider for change.</li> <li>o <b>Order</b> losartan 25mg by mouth once daily #90 with 4 refills</li> </ul> </li> <li>o Give losartan handout</li> </ul>

### At any point when patient reaches goal:

- When patient reaches goal: Schedule a nurse blood pressure check at one month
- Provider follow up visit within three months
- Resolve Hypertension Protocol episode in One Chart

## Visit & Treatment Schedule

7	<ul style="list-style-type: none"> <li>o <b>Order</b> BMP to be done today</li> <li>o If not to goal, <b>increase</b> lisinopril to 20mg twice daily                             <ul style="list-style-type: none"> <li>o <b>Order</b> lisinopril 20mg twice daily by mouth #180 with 4 refills</li> </ul> </li> <li>o Give dose adjustment handout per smart set</li> <li>o If using losartan and not controlled, <b>increase</b> to 50mg daily                             <ul style="list-style-type: none"> <li>o <b>Order</b> losartan 50mg by mouth once daily #90 with 4 refills</li> </ul> </li> <li>o If on lisinopril &amp; cough has developed, <b>seek</b> provider direction</li> </ul>
8	<ul style="list-style-type: none"> <li>o <b>Order</b> BMP to be done today</li> <li>o If not to goal, appointment with PCP or another provider in the department within one month</li> </ul>
<p>Provider visit for consideration of further evaluation or referral</p>	
<p>If at provider visit, provider gives direction to continue with protocol, <b>advance</b> to Ninth Visit.</p>	
9	<ul style="list-style-type: none"> <li>o If not to goal, <b>start</b> Metoprolol XL 50mg daily                             <ul style="list-style-type: none"> <li>o <b>Order</b> Metoprolol XL 50mg by mouth once daily #90 with 4 refills</li> </ul> </li> <li>o <b>Do not</b> initiate Metoprolol XL if:                             <ul style="list-style-type: none"> <li>▪ Patient has short gut or feeding tube (use non-XL formulation of beta blocker)</li> <li>▪ Patient has heart rate of &lt;60</li> </ul> </li> <li>• Give Metoprolol handout</li> </ul>
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## References

1. James PA, Oparil S, Carter BL, 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*. 2014;311(5):507-520. doi:10.1001/jama.2013.284427