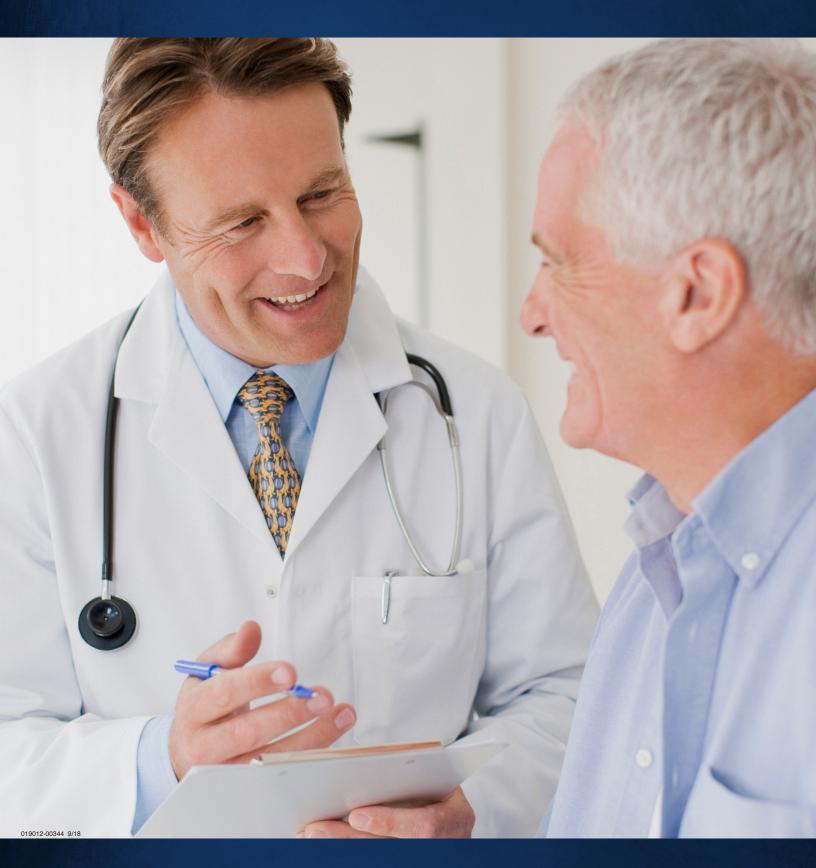


SANFORD HYPERTENSION PRACTICE GUIDELINE

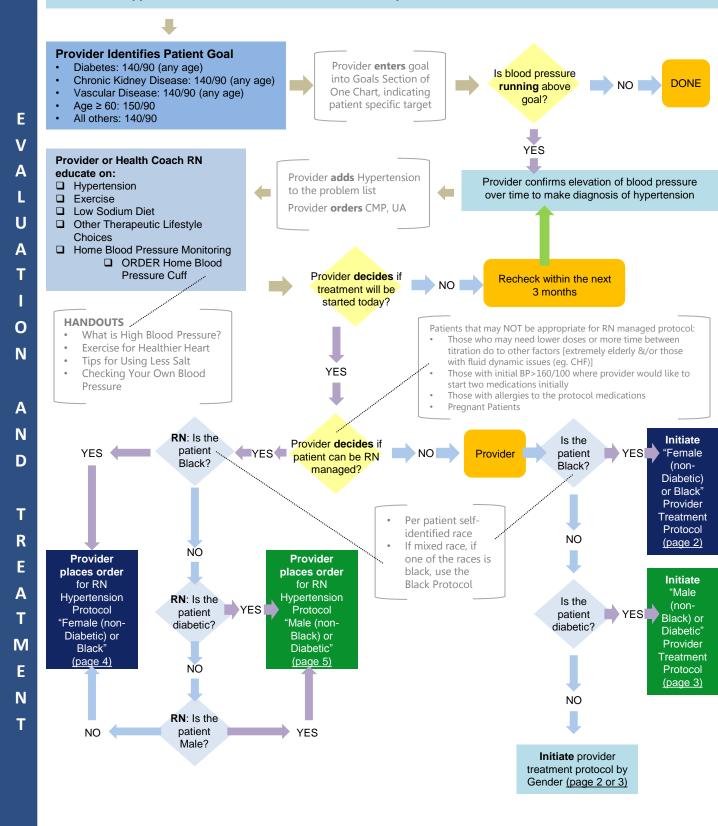


Attached you will find guidelines that Sanford has developed, and which Sanford is providing for your example purposes only. Before these materials are implemented or used by a third party, we urge each facility to conduct its own operational and legal review. Sanford guarantees no specific results from the use of these guidelines, and Sanford reserves all rights in these copyrighted materials. Express consent from Sanford must be obtained before these materials are distributed.

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



Revised 20150323 PM

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Provider Hypertension Treatment Protocol – Female (non-diabetic) or Black

PAGE 2 • This protocol is used when the provider is managing the patient • PAGE 2

 Visit e Dose, Contr Asses If hom 	r <u>all</u> Blacks (even if Diabetic or mixed race) & Female with every two weeks until controlled /medication adjustment at every visit until controlled rolled defined as BP to goal on all readings, including in clinic value ss for non-adherence/medication understanding at each visit ne blood pressures are controlled, but clinic blood pressures are not, ilatory blood pressure monitoring	Other HANDOUTS as Needed
	Visit & Treatment Schedule Start HCTZ 12.5mg daily in morning	 Walking for Fitness Low-Salt Choices Tips for Quitting Smoking Coping with Smoking
1	 Give HCTZ handout BMP Today If not to goal, increase HCTZ to 25mg daily in 	Withdrawal
3	o BMP today	 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
4	 If not to goal, add amlodipine 5mg daily in evening Give amlodipine handout If not to goal, increase amlodipine to 10mg daily in evening 	Provider(s) should consider: 1) Further evaluation for secondary causes:
5	 evening If not to goal, add lisinopril 10mg daily Give lisinopril handout 	 a. Laboratory Studies including TSH PTH (if baseline Ca [prior to starting HCTZ] > 10.7)
6	 BMP Today If not to goal, increase lisnopril to 10mg twice daily If cough has developed, discontinue lisinopril, switch to losartan 25mg daily Give losartan handout 	 Renin (done in AM) Aldosterone b. Imaging with Renal Ultrasound with doppler c. Sleep Apnea evaluation 2) Other Contributing Factors
7	 BMP Today If not to goal, increase lisinopril to 20mg twice daily If using losartan and not controlled, increase to 50mg daily 	 a. Consider non-adherence or medication confusion Obtain dispensing history from Pharmacy Ask patient to bring in rill bottlos & avalar
8	 BMP Today If not to goal, consider further evaluation for underlying cause of resistant hypertension SEE SIDEBAR 	pill bottles & explain what they are taking & when b. Considering interfering agents (NSAIDs, allergy medications) c. Review alcohol, nicotine,
9	 If not to goal, start Metoprolol XL 50mg daily Do not initiate Metoprolol XL if: Patient has short gut or feeding tube (use non-XL formulation of beta blocker) Patient has heart rate of <60 Give Metoprolol handout 	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
10	 If not to goal, increase Metoprolol XL to 100mg daily Do not increase if heart rate is <60 	Chlorthalidone if HCTZ does not seem to be achieving 24 hour coverage
11	 If not to goal, increase Metoprolol XL to 200mg daily Do not increase if heart rate is <60 	 Referral to Behavioral health regarding activation Desirected here extension are significated.
12	 If not to goal, referral to hypertension specialty clinic or nephrology depending on local resources 	 b. Designated hypertension specialist (HTN clinic, nephology, etc., depending on local resources) c. Dietician

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PAGE 3 • This protocol is used when the provider is managing the patient • PAGE 3

 Visit e Dose/ Control Asses If horr 	ry two weeks until con edication adjustment a ed defined as BP to go or non-adherence/med	t every visit until controlled al on all readings, including in clinic va dication understanding at each visit ontrolled, but clinic blood pressures are	lue o not, consider • Controlling High Blood Pressure • Manage Stress with a Healthy Lifestyle
	Visit & Trea	tment Schedule	 Walking for Fitness Low-Salt Choices Tips for Quitting Smoking
1	Start lisinopril 10Give lisinopril ha		Coping with Smoking Withdrawal
2			 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
3		rease lisinopril to 20mg twice daily and not controlled, increase to 50r	evaluation/treatment.
4	 BMP Today If not to goal, add Give amlodipine 	d amlodipine 5mg daily in evening handout	 TSH PTH (if baseline Ca [prior to starting HCTZ] > 10.7) Renin (done in AM)
5	 If not to goal, inc evening 	rease amlodipine to 10mg daily in	 Aldosterone b. Imaging with Renal Ultrasound with doppler
6	 If not to goal, sta Give HCTZ hand 	rt HCTZ 12.5mg daily in morning lout	c. Sleep Apnea evaluation 2) Other Contributing Factors a. Consider non-adherence or
7	 BMP Today If not to goal, inc morning 	rease HCTZ to 25mg daily in	medication confusion Obtain dispensing history from Pharmacy Ask patient to bring in
8		nsider further evaluation for of resistant hypertension	pill bottles & explain what they are taking & when b. Considering interfering agents (NSAIDs, allergy medications) c. Review alcohol, nicotine,
9	 Do not initiate Me Patient non-XL 	has short gut or feeding tube (use formulation of beta blocker) has heart rate of <60	 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
10		rease Metoprolol XL to 100mg dail f heart rate is <60	y Chlorthalidone if HCTZ does not seem to be achieving 24 hour coverage
11		rease Metoprolol XL to 200mg dail f heart rate is <60	 4) Referral to a. Behavioral health regarding activation
12		erral to hypertension specialty clini pending on local resources	c b. Designated hypertension specialist (HTN clinic, nephology, etc., depending on local resources) c. Dietician

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RN Hypertension Treatment Protocol – Female (non-Diabetic) or Black

PAGE 4 • This hypertension treatment protocol is used when the RN is managing the patient • PAGE 4

Used for <u>all</u> Blacks (even if mixed race or Diabetic) & <u>all</u> 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"

Visit & Treatment Schedule

Assess for non-adherence/medication understanding at each visit Seek provider direction if...

- Patient develops weakness or
 - dizziness
 Patient is hospitalized during
 - 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

Visit & Treatment Schedule

- Tips for Quitting Smoking
- Coping with Smoking Withdrawal

	1 2		Start Episode (Type: Multidiscipline. Name: Hypertension Protocol) in One Chart Start HCTZ 12.5mg • Order HCTZ 12.5mg by mouth once daily in morning #90 with 4 refills Give HCTZ handout Order BMP to be done today If not to goal, increase HCTZ to 25mg • Order HCTZ 25mg by mouth once daily in morning #90 with 4 refills Give dose adjustment handout per smart set		7	0 0 0	Order BMP to be done today If not to goal, increase lisinopril to 20mg twice daily o Order lisinopril 20mg twice daily by mouth #180 with 4 refills Give dose adjustment handout per smart set If using losartan and not controlled, increase to 50mg daily o Order losartan 50mg by mouth once daily #90 with 4 refills If on lisinopril & cough has developed, seek provider direction	
	3	0			8	0	Order BMP to be done today If not to goal, appointment with PCP or another provider in the department within one month	
		•	Give amlodipine handout per smart set			Provider visit for consideration of further evaluation or referral		
	4	0	If not to goal, increase amlodipine to 10mg Order amlodipine 10mg by mouth once daily in evening #90 with 4 refills Give dose adjustment handout per smart set		If at provider visit, provider gives direction to continue with protocol, advance to Ninth Visit.			
	5	•	If not to goal, add lisinopril 10mg Order lisinopril 10mg by mouth once daily #90 with 4 refills Give lisinopril handout 		9	0	If not to goal, start Metoprolol XL 50mg daily o Order Metoprolol XL 50mg by mouth once daily #90 with 4 refills Do not initiate Metoprolol XL if: Patient has short gut or feeding tube	
		0 0				•	(use non-XL formulation of beta blocker) Patient has heart rate of <60 Give Metoprolol handout	
	6	 #180 with 4 refills Give dose adjustment handout per smart set If cough has developed, discuss with provider for direction regarding switch to losartan 25mg daily & discontinue lisinopril. Obtain order from provider for change. Order losartan 25mg by mouth once daily #90 with 4 refills Give losartan handout 		10	0	If not to goal, increase Metoprolol XL to 100mg daily • Order Metoprolol XL 100mg by mouth once daily #90 with 4 refills Do not increase if heart rate is <60		
				11	0	If not to goal, increase Metoprolol XL to 200mg daily • Order Metoprolol XL 200mg by mouth once daily #90 with 4 refills		
	 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 				0	Do not increase if heart rate is <60		
				12	0	If not to goal, referral to hypertension specialty clinic or nephrology depending on local resources		

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	RN Hypertension Treatment Protocol – Male (non-Black) or Diabetic (non-Black)						
F	PAGE 5 • This hypertension treatment protocol is used when the RN is managing the patient • PAGE 5						
& <u>a</u> • •	 Used for <u>all</u> Diabetics (except Blacks) <u>A all Men (except Blacks)</u> 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 understanding at each visit Sek provider direction if Patient develops weakness or dizziness Patient is hospitalized during the course of the protocol Home blood pressures are not (consider ambulatory blood pressure are not (consider ambulatory blood pressure monitoring) New medications have been started by another provider started by						
	Visit & Treatment Schedule		Visit & Treatment Schedule				
1	 Start Episode (Type: Multidiscipline. Name: Hypertension Protocol) in One Chart Start lisinopril 10mg Order lisinopril 10mg by mouth once daily 	6	 If not to goal, add HCTZ 12.5mg Order HCTZ 12.5mg by mouth once daily in morning #90 with 4 refills Give HCTZ handout 				
	 #90 with 4 refills Give lisinopril handout per smart set Order BMP to be done today 	7	 Order BMP to be done today If not to goal, increase HCTZ to 25mg Order HCTZ 25mg by mouth once daily 				
	 If not to goal, increase lisnopril to 10mg twice daily Order lisinopril 10mg by mouth twice daily #180 with 4 refills 		in morning #90 with 4 refills o Give dose adjustment handout per smart set				
2	 Give dose adjustment handout per smart set If cough has developed, discuss with provider for direction regarding switch to <u>losartan 25mg</u> daily & 	8	 Order BMP to be done today If not to goal, appointment with PCP or another provider in the department within one month 				
	 discontinue lisinopril. Obtain order from provider for change. Order losartan 25mg by mouth once daily 	Provid	Provider visit for consideration of further evaluation or referral				
	 #90 with 4 refills Give losartan handout per smart set 	If at	If at provider visit, provider gives direction to continue with protocol, advance to Ninth Visit.				
3	 Order BMP to be done today If not to goal, increase lisinopril to 20mg twice daily Order lisinopril 20mg by mouth twice daily #180 with 4 refills Give dose adjustment handout per smart set If using losartan and not controlled, increase to 50mg daily Order losartan 50mg by mouth once daily #90with 4 refills Order losartan 50mg by mouth once daily Order losartan 50mg by mouth once daily 	9	 If not to goal, start Metoprolol XL 50mg daily Order Metoprolol XL 50mg by mouth once daily #90with 4 refills Do not initiate Metoprolol XL if: Patient has short gut or feeding tube (use non-XL formulation of beta blocker) Patient has heart rate of <60 Give Metoprolol handout 				
	 If on lisinopril & cough has developed, seek provider direction Order BMP to be done today If not to goal, add amlodipine 5mg once daily Order amlodipine 5mg by mouth once daily is avaniar 400 with 4 refile 	10	 If not to goal, increase Metoprolol XL to 100mg daily Order Metoprolol XL 100mg by mouth 				
4			 once daily #90 with 4 refills Do not increase if heart rate is <60 				
	in evening #90 with 4 refills Give amlodipine handout per smart set 		 If not to goal, increase Metoprolol XL to 200mg daily 				

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5	 If not to goal, increase amlodipine to 10mg Order amlodipine 10mg by mouth once dai in evening #90 with 4 refills 					
	~	Give dose adjustment handout per smart set				
	0	one dose adjustment nandout per smart set				

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

 Order Metoprolol XL 200mg by mouth once daily #90 with 4 refills

Do not increase if heart rate is <60

o If not to goal, referral to hypertension specialty

clinic or nephrology depending on local resources

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Hypertention Treatment Protocol

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