Adult and Elderly Hypertension: What's Next?

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Jennifer Brull, MD, FAAFP

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Dr. Brull lives and practices full-scope rural family medicine in Plainville, Kansas. She sees patients in office, hospital (critical access), emergency room, nursing home, hospice, and home settings. Her patients range in age from birth to more than 100 years old. Dr. Brull has volunteered as a clinical faculty member for the University of Kansas School of Medicine since 2002 and has been teaching at conferences for 12 years. Her areas of specialty include quality/performance improvement, EHR/HIE, social media, and the patient-centered medical home. In 2014, Dr. Brull received the University of Kansas School of Medicine's Student Assembly Ad Astra Outstanding Volunteer Award, and the CDC named her a Million Hearts Hypertension Control Challenge Champion.

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Learning Objectives

1. Evaluate current management of hypertension in adult patients, as compared to current JNC 8 guidelines.
2. Counsel patients on how to make healthy behavior changes to reduce their risk for developing hypertension or prehypertension.
3. Address barriers to care among patients in your practice, especially elderly and minority patients, and identify or develop tools to help address hypertension.
4. Prepare treatment regimens of antihypertensive medications and tools with an emphasis on patient adherence.

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Audience Engagement System

Step 1

Step 2

Step 3

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"Hypertension is the most common condition seen in primary care and leads to myocardial infarction, stroke, renal failure, and death if not detected early and treated appropriately."

{JNC8}

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AES Question

What is the target blood pressure for a 75 year old male patient with diabetes?

A. <120/90
B. <130/80
C. <140/80
D. <140/90
E. <140/85
F. <150/90

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Current Published Guidelines

GUIDELINE	POPULATION	BP GOAL	INITIAL TREATMENT OPTIONS
ADA (2013)	Patients with diabetes mellitus	< 140/80	ACE inhibitor or ARB
American + International Society of HTN (2014)	General ≥ 80 years	< 150/90	Nonblacks: thiazide diuretic, ACE inhibitor, ARB, or CCB
	General < 80 years	< 140/90	Blacks: thiazide diuretic or CCB
JNC8 (2014)	General ≥ 60 years	< 150/90	Nonblacks: thiazide diuretic, ACE inhibitor, ARB, or CCB
	General < 60 years	< 140/90	Blacks: thiazide diuretic or CCB
	Patients with diabetes	< 140/90	
	Patients with CKD	< 140/90	ACE inhibitor or ARB
European Society of HTN + Society of Cardiology (2013)	General ≥ 80 years	< 150/90	Thiazide diuretic, beta blocker, CCB, ACE inhibitor, or ARB
	General < 80 years	< 140/90	
	Patients with diabetes	< 140/85	ACE inhibitor or ARB
	Patients with CKD without proteinuria	< 140/90	ACE inhibitor or ARB
	Patients with CKD with proteinuria	< 130/90	
Kidney Disease: IGO (2012)	Patients with CKD without proteinuria	≤ 140/90	ACE inhibitor or ARB
	Patients with CKD with proteinuria	≤ 130/80	

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SPRINT (Old) News

NIH-funded study to examine effect of more intensive BP treatment than currently recommended

- Population: age 50+ with HTN AND 1(+) other risk factor for heart disease
- Trial stopped on August 20, 2015 due to significant differences between intensive and standard groups
- Findings: lowering SBP to ≤120mm Hg
  - reduced composite of MI, ACS, HF and Stroke by 25%
  - reduced death from any cause by 27%

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SPRINT (New) News

Among ambulatory adults aged 75 years or older, treating to an SBP target of less than 120 mm Hg compared with an SBP target of less than 140 mm Hg resulted in significantly lower rates of fatal and nonfatal major cardiovascular events and death from any cause.

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What is the target blood pressure for a 75 year old male patient with diabetes?

A. <120/90
B. <130/80
C. <140/80
D. <140/90
E. <140/85
F. <150/90

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Let's Start at the Very Beginning…

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Screening for Hypertension

- All adults over age 18 years should be screened for hypertension [Level A] {USPSTF}
- Screening interval: 1-5! years based on risk factors (age, weight, race) and blood pressure at most recent screening [Level C] {USPSTF, JNC7}
- Screening test: office measurement using sphygmomanometer; two elevated measurements over two(+) visits over one(+) week(s), confirmed with measurements outside the clinical setting! {USPSTF}

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Office v. Home v. Ambulatory

- Office: readily available tool; variable accuracy in predicting true hypertension
- Home: less evidence available; potential reasonable confirmatory method
- Ambulatory: best confirmatory test; potential for increased cost and access challenges

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Using that Sphygmomanometer

- Ensure proper cuff size and fit (measure if needed).
- Ask about elevating factors (tobacco, caffeine, recent exercise).
- Seat patient in a chair, feet flat on the floor, arm supported with upper arm at heart level.
- Allow patient to sit quietly for five minutes before taking blood pressure.
- Repeat blood pressure in 5-10 minutes if abnormal on first check.

{AHA}

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AES Question

Which patient can be diagnosed with hypertension based on the information?

A. 62 year old African American male establishing care for diabetes with blood pressure of 146/82; home readings from the last two weeks are 110-128/68-74

B. 22 year old white female seen for annual well exam, no history of chronic disease, with blood pressure of 154/92; no home readings available

C. 54 year old white male seen for BP recheck due to elevated value of 146/94 last week in office; blood pressure today is 142/82; interval home readings are 134-158/76-92

D. 48 year old African American female in for follow up on diabetes with blood pressure of 138/76; home readings are 120-132/64-70

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DX: Hypertension

Option 1 (more patients treated)		
Patients ≥80	<150/90	{Am/IntSH}
Patients <80	<140/90	{Am/IntSH}
Diabetes	<140/80	{ADA}
CKD + Proteinuria	≤130/80	{KD:IGO}
CKD no Proteinuria	<140/90	{All}

Option 2 (fewer patients treated)		
Patients ≥60	<150/90	{JNC8}
Patients <60	<140/90	{JNC8}
Diabetes	<140/90	{JNC8}
CKD + Proteinuria	<140/90	{JNC8}
CKD no Proteinuria	<140/90	{All}

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So Now You Have Hypertension…

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AES Question

What testing does not need to be routinely performed in a new hypertension patient?

A. EKG
B. TSH
C. Serum Calcium
D. Hematocrit
E. Fasting Lipid Panel

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New Hypertension Baseline Evaluation

- EKG (12-lead)
- Blood glucose level
- Fasting cholesterol panel
- Glomerular filtration rate
- Hematocrit level
- Serum calcium level
- Serum potassium level
- Urinalysis

{JNC7}

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Lifestyle Recommendations

- Consume a diet that emphasizes intake of vegetables, fruits, and whole grains; includes low-fat dairy products, poultry, fish, legumes, nontropical vegetable oils, and nuts; and limits intake of sweets, sugar-sweetened beverages, and red meat. Examples: DASH diet, USDA Food Patterns, or AHA diet.
- Limit daily diet to 2400mg of sodium. Reduction of intake to 1500mg of sodium per day is associated with even greater reduction in blood pressure. Reducing intake by 1000mg per day will lower blood pressure, even if the desired daily intake is not achieved.
- Combine the DASH diet with low sodium to increase effect.
- Engage in aerobic physical activity to lower blood pressure (three or four 40-minute sessions of moderate to vigorous activity per week).

{Eckel RH, et al. 2013 AHA/ACC guideline on lifestyle management to reduce cardiovascular risk.*Circulation*. 2014;129(25 suppl 2):S76–S99.}

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What Good Does it Do?

Intervention	Reduction in mm Hg SBP	DBP
DASH diet plus sodium restriction	11.5	5.7
Sodium restriction (< 1,500 mg per day)	7	3
DASH diet	5.5	3
Weight loss (approximately 9 lb)	4.5	3.2
Exercise	4	3
Restriction of alcohol consumption	3	2

{See Reference Slide}

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AES Question

Which agent(s) would be the best choice for a 56 year old hypertensive black male without diabetes?

A. Chlorthalidone
B. Enalapril
C. Amlodipine
D. Losartan

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Medication Initiation

Population	First Line Recommendations
Nonblacks, no DM or CKD	Thiazide Diuretic, ACE, ARB or CCB
African Americans	Thiazide Diuretic or CCB
Diabetes or Chronic Kidney Disease	ACE or ARB

{JNC8}

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AES Question

Which agent(s) would be the best choice for a 71 year old hypertensive white female without diabetes?

A. HCTZ
B. Lisinopril
C. Amlodipine
D. Losartan

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Treating "Elderly" HTN Patients

GUIDELINE	DATE	DEFINITION OF ELDERLY (YRS)	SBP THRESHOLD (MM HG)	PRIMARY DRUGS FOR "ELDERLY"	SECONDARY DRUGS FOR "ELDERLY"
NICE (United Kingdom)	2011	≥ 55	140	Thiazide, CCB	ACEi, ARB, BB
ASH-IntSH Writing Group	2013	≥ 60	150	Thiazide, CCB	ACEi, ARB, BB
ESH/ECC (Europe)	2013	≥ 80	160; target 150	Diuretic, CCB, ACEi, ARB, BB; thiazide or CCB for ISH	Same as primary
JNC 8	2013	≥ 60	150	Thiazide, CCB	ACEi, ARB, BB, spironolactone
CHEP (Canada)	2015	None	140	Thiazide, CCB, ACEi, ARB	Add among primary, include BB

{See Reference Slide}

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Treating to Goal

- Initiate lifestyle changes with drug therapy
- Reevaluate at one-month intervals
- If not at treatment goal, increase dose or add another first-line medication
- Continue pattern until BP at treatment goal
- Add second-line medication if not at goal using all three classes in first-line medications

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Taking it Back Home…

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	Patients with CKD with proteinuria	≤ 130/80	

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SPRINT Recommendation

Treat systolic blood pressure to less than 120 mm Hg in all patients who tolerate that level without significant side effect, including those patients ≥ age 75.

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Practice Recommendations

- Determine which guideline your office will utilize for hypertension diagnosis and control.
- Make a plan for monitoring ambulatory blood pressures.
- Educate providers and staff re: importance of BP control and treatment goals.
- Don't ignore the borderline blood pressure!

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Questions

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Contact Information

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Reference Slide

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www.nhlbi.nih.gov; Systolic Blood Pressure Intervention Trial (SPRINT) Overview

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Billing & Coding

When services performed in conjunction with:
Office Visit + EKG 992xx - 25 + 93000
Preventive + EKG 9938x/9939x - 25 + 93000
MCR IPPE/AWV + EKG G0402/G0438 - 25 + 93000 (if dx is present)
MCR IPPE + EKG G0402 + G0403 (if screening only-no dx present)

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Billing & Coding (Continued)

Additional tests to confirm or monitor:	
99490	Chronic Care Management-20 minutes monthly
85025	CBC
82565	Creatnine
84132	Potassium
81003	Urinalysis (dipstick)
93784	Ambulatory blood pressure monitor-24 hours or longer

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Associated Session

- Adult and Elderly Hypertension: PBL

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Interested in More CME on this topic?

aafp.org/fmx-cardio

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