HYPERTENSION

New hypertension guidelines will reignite controversy about appropriate BP goals and when to start treatment.

We’re used to thinking of a BP goal of less than 140/90 mmHg for most patients. In 2013, JNC 8 actually relaxed the goal to less than 150/90 for patients age 60 or older without diabetes or kidney disease.

Now the new AHA guidelines recommend a stricter goal of less than 130/80 across the board...mainly due to recent evidence that a lower target may further lower CV risk. And they recommend using the ACC/AHA risk estimator to evaluate CV risk.

See a guideline summary below...and use your clinical judgment.

<table>
<thead>
<tr>
<th>Blood Pressure (mmHg)</th>
<th>ACC/AHA Guideline Treatment Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal: &lt; 120/80</td>
<td>Maintain healthy lifestyle habits</td>
</tr>
<tr>
<td>Elevated:</td>
<td></td>
</tr>
<tr>
<td>120 – 129/&lt; 80</td>
<td>Encourage lifestyle changes</td>
</tr>
<tr>
<td></td>
<td>Check for meds that can increase BP (NSAIDs, SNRIs, estrogen, etc)</td>
</tr>
<tr>
<td>Stage 1 hypertension:</td>
<td>Implement lifestyle changes alone if ACC/AHA 10-year CV risk &lt; 10%</td>
</tr>
<tr>
<td>130 – 139/80 – 89</td>
<td>Use BP meds for patients with CV disease, diabetes, chronic kidney disease, or 10-year CV risk ≥ 10%</td>
</tr>
<tr>
<td>Stage 2 hypertension:</td>
<td>Reinforce lifestyle changes and use BP meds</td>
</tr>
<tr>
<td>≥ 140/90</td>
<td></td>
</tr>
</tbody>
</table>

Tailor BP goals to your patient. Many will do well with a goal of less than 130/80...but this may not be practical or safe for others.

For example, don’t push for this goal if it’s not tolerated in frail patients...or in those with orthostatic hypotension, high fall risk, etc. In this case, consider aiming for less than 140/90...or even below 150/90.

Focus on treatment for the highest-risk patients. These are patients with stage 2 hypertension...or stage 1 plus CV disease, diabetes, chronic kidney disease, or multiple risk factors.

Recommend treating these patients with BP meds shown to improve outcomes...thiazides, ACEIs, ARBs, or calcium channel blockers. Encourage home BP monitoring to help evaluate BP control and minimize overtreatment.

Emphasize lifestyle changes alone for lower-risk patients with stage 1 hypertension...and suggest meds if BP or CV risk goes up.

See our chart, Treatment of Hypertension, for the latest recommendations. And listen to PL Voices for a terrific, practical discussion with guideline authors about managing hypertension.

(For more on this topic, see Clinical Resource #340101 at PharmacistsLetter.com.)

DISCUSSION QUESTIONS

OVERVIEW OF CURRENT THERAPY

1. How do organizations’ blood pressure goals differ? What is the impact of blood pressure goals on outcomes?

ANALYSIS OF NEW STUDY

2. What type of study was this?

3. What was the search strategy for identification of information?

4. How were studies selected for inclusion in the meta-analysis?

5. How were data extracted and analyzed from selected studies?

See LEADER NOTES for answers to discussion questions.
6. How many studies were identified? What was the patient population?

7. What were the results of the meta-analysis?

8. What were the strengths and limitations of the meta-analysis?

9. Were the results expressed in terms we care about and can use?

HOW SHOULD THE NEW FINDINGS CHANGE CURRENT THERAPY?

10. Do the results change your practice? How?
APPLY THE NEW FINDINGS TO THE FOLLOWING CASE

G.S. is a new patient establishing with you today in clinic. G.S. is a 62-year-old female with a medical history significant for type 2 diabetes and hypertension. G.S. has brought in her medications along with recent lab results from her prior PCP. In clinic, G.S.’s vitals are BP 172/89 mmHg, HR 73, RR 14, and BMI 28. She reports compliance with her medication regimen of indapamide 2.5 mg daily, atorvastatin 80mg daily, and metformin 1,000mg twice daily. You review her recent labs from two weeks ago and note HgbA1C 6.8%, potassium 3.6 mEq/L, serum creatinine 1.0 mg/dL, and urine albumin-to-creatinine ratio (UACR) 230 mcg/mg. She denies any current complaints and just needs medication refills today.

11. What is G.S.’s goal blood pressure? What treatment changes should you consider for G.S. today?

You discuss G.S.’s elevated UACR, and its link with chronic kidney disease. Due to G.S.’s elevated UACR, you start her on lisinopril 20 mg daily and gradually titrate up over the next month to 40mg daily. The next month, her BP is still uncontrolled and you start amlodipine 2.5 mg, titrating up to 10 mg daily.

12. Should G.S. monitor her blood pressure at home?

G.S. is back in clinic today to review recent labs and discuss her BP control. She denies any new complaints. Her repeat BMP is normal. Today her BP is 155/70 mmHg. Her home BP monitoring shows readings generally between 150 to 160 mmHg systolic, and 65 to 75 mmHg diastolic. It does not reveal significant lows that might reflect post-dose hypotension.

13. How is G.S.’s hypertension classified? What medication changes might you consider?

G.S. confirms that she is adherent with her BP medication regimen, and that she isn’t taking additional medications that may increase her blood pressure. You suggest adding spironolactone 12.5 mg daily to help lower her blood pressure, and G.S. agrees. You discuss that adding spironolactone may increase her potassium level, and recommend that she have her labs checked about a week after starting it, one month later, and about every three months while it’s continued.

See LEADER NOTES for answers to discussion questions.
REFERENCES


Additional Pharmacist's Letter Resources available at PharmacistsLetter.com


See LEADER NOTES for answers to discussion questions.
PL Journal Club Contributing Editors:

Lori Dickerson, PharmD, FCCP, Editor; J. Jennifer Nieman, PharmD, BCPS, Assistant Editor; Lisa D. Mims, MD, Department of Family Medicine, Medical Univ of South Carolina, Charleston, SC; Maribeth Porter, MD, Department of Community Health and Family Medicine, Univ of Florida, Gainesville, FL.

Editors and Authors: Jeff J. Ellin, PharmD, Editor-in-Chief; Shen Boehringer, PharmD, BCPS, Assistant Editor; VP Content; Karen Davidson, PharmD, Senior Editor; Tammie Armeni, RPh, PharmD, Editor, Director of Continuing Education; Melissa Blair, PharmD, FASHP, FCCP, BCPS; Sandye Chabot, PharmD; Lori Dickerson, PharmD, FCCP; Rachel Maynard, PharmD; Kimberly Palacioz, PharmD, Editor; Stacy Hester, RPh, BCPS; Crystal Maric, BSc Pharm, MBA, ACCP, Associate Editors; Bethany Bryant, PharmD, BCPS; Vickie Danaher, PharmD; Leslie Gingo, PharmD, BCPS; Flora Harp, PharmD; Tannin Higginbotham, PharmD; Jennifer Nieman, PharmD, BCPS; Don Weinberger, PharmD; Maria Wellen, PharmD, BCPS, Assistant Editors; Karen Wilson, BA, Manuscript Editor; Minda Paginawian, BA, Assistant Manuscript Editor; Jenni Mangrum, BS, CPhT, Assistant Education and Accreditation Editor; Mark Graber, MD, MSCE, FACP, Associate Clinical Editor; Consultants: Jill Allen, PharmD, BCPS; Melanie Cupp, PharmD, BCPS; J. John Greiss, BSc Pharm, JD, LLM; Katie Lacaria, BSc Pharm, ACP, Associate Editor; Heidi Liston, BSc Pharm, PharmD; Lu-Anne Murdock, BSc Pharm; Annette Murray, BSc Pharm; Jennifer Pennington, RN, BSN. Editorial Advisors: Christophe Anslinger, PA-C; Thomas Baringer, MD, FAHA, FNLH; Christopher Barry, PA-C, MMS; William Bednar, MD; Larissa Bossaer, PharmD, BCPS; Robert Browne, MD, FAAFP; Stephen Brunton, MD; Holley Bush, PharmD; Peter Carek, MD, MS; Gary Choy, PharmD; Matthew Cline, MD; John Connolly, MD, FACP, FCCP; Sandra Counts, PharmD; Himat Pikaat, PhD; Rex Force, PharmD, FCCP, BCPS; Lawrence Frank, MD, FACP; Peter Garber, MD; Mark Garofoli, PharmD, MBA, CGP; Denise Gonz. RN; Charles Green, RPh; John Hambrick, PharmD; Roland Hart, MD; Kyle Herbolt, MD; Patricia Hatton, MD; Sydney Hendry, MD; Raissa Hill, DO; Jeny Jones, MD; Sheila Kapre, MD, FACP, FCCP; Adam Kaye, PharmD, FASCP, FCPhA; William Keohoe, PharmD, MA, FCCP; Barbara Lenuch, DO, RPh, FACP, SFHIM; Stanley Leong, PharmD; Kevin Maeda, PharmD; Christine Marsh, RPh; Eric Matheson, MD, MS; Christina McLaughlin, FNP, MScHC; Kay Niguel, RPh; Mike Padrick, RPh; Ernest Pieper, PharmD; Daren Primack, MD, FACC; Barbara Rankin, MD; Jenna Reel, PharmD, BCPS, CPP, CDE; George Rishwain, MD; Sandy Robertson, PharmD; Edward Rogan, PharmD, BCACP; Gerald Rubley, MSN, PharmD; Ruth Ruffe, PharmD; Annie Marie Santos, MD; David Schneider, MD; Allen Shaugnnessy, PharmD, MMED; Jonathan Szkotak, PharmD, BCACP; Joshua Tessier, DO; Bruce Uch, PharmD; John David Williamson, MD, FAAFP; Raymond Wong, MD; William Yee, PharmD, FASHP, FCSHP; Kent Yee, RPh.

Advisory Board: Evan Ballard, MD, Jonesville Family Medical Ctr; Melvin Baron, PharmD, MPA, Univ of Southern Calif; Jan Basle, MD, FACP, Medical Univ of South Carolina; Robert Bickerton, MD, FACP; Reid B. Blackwelder, MD, FAAFP, East Tennessee State Univ; Kevin Brown, MD, FACOG, Texas A&M; Andrea Darby-Stewart, MD, HonorHealth; Anthony A. Donato, Jr., MD, MPH, Reading Health System; Jan Druitz, MD, Baylor College of Med; Margaret A. Fitzgerald, DNP, FNP-BC, NP-C, FAANP, CS, FAAN, DCC, Fitzgerald Health Ed Associates; Barry Gidal, PharmD, RPh, Univ of Wis; Robert Gottfried, DO, FAAFP; Martin Grajower, MD, FACP, FACE, Albert Einstein College of Med; B. Joseph Guglielmo, PharmD, UC San Francisco; Stuart Haines, PharmD, BCPS, BCACP, BC-ADM, FCCP, FASHP, FPha, Univ of Miss; Jeffson Harman, Jr, MD, Col, USAF, MC, FASCP, BCACP; J. John Holman, MD, MPH, FAAFP; Eric Jackson, PharmD, FCCP, BCPS, Univ of Conn; Peter Jacobson, PhD, DDS, Univ of the Pacific; Paul Jensen, MD, PharmD, FAAFP; Alan David Kaye, PhD, DABA, DABPM, DABPP, Louisiana State Univ; Steve Kayser, PharmD, UC San Francisco; Brian Kessler, DO, FACOFP, Lincoln-Memorial Univ; Edgar Lemna, MD, FACP, FASN, FAHA, Univ of Illinois at Chicago; Evan L. Lipka, MD; Mark McConnell, MD; Oscar G. Johnson VA Medical Ctr; Stephen L. McKean, BSc Pharm, MD, DO, FAAFP, Sam Houston State Univ; Steven E. Nisen, MD, MACC, Cleveland Clinic; Bren Den O’Hara, RPh, BCACP, Blue Cross/Blue Shield of NC; Douglas S. Pauw, MD, MACP, Univ of Washington; Dan Perri, BSc Pharm, MD, FACP, FCSHP, FCSHP, FCSHP; Karen Porter, DDS, Univ of Pennsylvania; Dan Steiber, RPh, Genesis Pharma Consultants; Tom Vickery, PharmD, OPTION Care; C. Wayne Weart, PharmD, FAMA, FASHP, BCPS, Medical Univ of South Carolina; Craig D. Williams, PharmD, FNLA, FCP, BCPS, Oregon Health & Science Univ.

Disclosure: The editors of this activity and its publisher, Therapeutic Research Center, have no relevant financial interests related to the products or services covered by this activity. Therapeutic Research Center/Pharmacist's Letter does not receive any commercial support and does not accept any advertising. It is completely independent and is supported entirely by subscriptions.

Unbiased Evidence and Recommendations for the Pharmacist
on New Developments in Drug Therapy

The contents are copyrighted. © 2018 Therapeutic Research Center. All Rights Reserved.

See LEADER NOTES for answers to discussion questions.