Panel Members Appointed to the Eighth Joint National Committee (JNC 8)


Publication:

*4 members had relationships to disclose; 13 had no relationships to disclose. Panel members disclosed their relationships and recused themselves from voting on evidence statements and recommendations relevant to their relationships.

Learning Objectives:
Participants will be able to:

• Describe the Process for creating the 2014 HTN evidence-based Guideline and how it differs from a Consensus Guideline.
• Establish goal BP’s for patients based on their age, race and presence of Diabetes or Kidney Disease
• Select initial medications of choice for treating high blood pressure.
Guidelines: What’s wrong with a Consensus Panel?

- Experts may have biases or conflicts of interests.
- Literature review tends to support the prevailing opinions.
- Recommendations are more likely opinions supported by selective evidence.
- This increases likelihood that guidelines will not be trustworthy.
Evidence-based Guideline Development

- Requires diverse panel of experts
- Uses “external methodology” team to avoid conflicts of interest and support the panel
- Requires an explicit methodology for literature review and crafting of evidence statements and crafting clinical recommendations based on level of evidence.
- Evidence takes priority over expert opinion.

The Panel Process

- Identify most important critical questions in the management of high blood pressure.
- Using “PICOTSS,” develop systematic literature review criteria for Methodology Team. In our case: randomized controlled trials assessing important health outcomes
  - Every included study is rated for quality by two independent reviewers using standardized tools
- Evidence statements are crafted and graded for quality using prespecified criteria
- Based on evidence or lack of evidence, clinical recommendations are crafted with prespecified grading of strength of recommendations, especially identifying when evidence is lacking.

The 3 Most Important Questions in managing patients with high blood pressure

1. In adults with HTN, does initiating antihypertensive pharmacologic therapy at specific BP thresholds improve health outcomes?
2. In adults with HTN, does treatment with antihypertensive pharmacologic therapy to a specified BP goal lead to improvements in health outcomes?
3. In adults with HTN, do various antihypertensive drugs or drug classes differ in comparative benefits and harms on specific health outcomes?

Inclusion/Exclusion Criteria: Using PICOTSS

- “P”: population: Hypertensive adults
- “I” : interventions: Medications
- “C”: comparator: different BP goals or medications
- “O”: outcomes that matter to patients
- “T”: timing: duration of study
- “S”: setting: where conducted
- “S”: study design: RCT’s
**Inclusion/Exclusion Criteria**

- Randomized Controlled Trials
  - RCTs are subject to less bias and represent the gold standard for determining efficacy and effectiveness\(^1\)
- Search dates: 1966 to present
- Minimum one-year follow-up period
- Studies with sample sizes less than 100 excluded


**Outcomes Required to Include a Randomized Controlled Trial**

- Overall mortality, CVD-related mortality, myocardial infarction, heart failure, hospitalization for heart failure, stroke
- Coronary revascularization (includes coronary artery bypass surgery, coronary angioplasty and coronary stent placement), peripheral revascularization (includes carotid, renal, and lower extremity revascularization)
- End stage renal disease (i.e., kidney failure resulting in dialysis or transplant), doubling of creatinine, halving of eGFR

**NHLBI Systematic Review and Guideline Development Process**

- Topic Area Identified
- Expert Panel Selected
- Critical Questions & Study Eligibility Criteria Identified
- Evidence Tables Developed; Body of Evidence Summarized
- Studies Quality Rated; Data Abstracted
- Literature Searched; Eligible Studies Identified
- Graded Evidence Statements & Recommendations Developed
- External Review of Guideline Drafts; Revised as Needed
- Guidelines Disseminated & Implemented

**NHLBI Evidence Quality Grading and Recommendation Strength**

- **Evidence Quality**
  - High
    - Well-designed and conducted RCTs
  - Moderate
    - RCTs with minor limitations
    - Well-conducted observational studies
  - Low
    - RCTs with major limitations
    - Observational studies with major limitations

- **Recommendation Strength**
  - A – Strong
  - B – Moderate
  - C – Weak
  - D – Against
  - E – Expert Opinion
  - N – No Recommendation
What is different about the New Guidelines?
• Strict adherence to an evidence-based process.
• Limited scope - it does not answer all questions about the management of high blood pressure.
• New BP Goals for treatment and different first-line medications

We examined studies for both Thresholds for treatment and Goals for treatment
• Although some trials had higher thresholds for eligibility than the goals tested, the panel elected to simplify treatment by making the same thresholds and goals for blood pressure treatment.

New Goal Blood Pressures for Adults: Quick Summary
• For age 60 years and older without diabetes or kidney disease, strong evidence to support Goal BP < 150/90 based on Grade A level evidence
• For all others, we recommend Goal BP < 140/90 based on expert opinion

Initial Drug Treatment Recommendations for High Blood Pressure
• Non-Black Population without DM or CKD: Thiazide-type diuretic, CCB, ACEI or ARB – B Level Evidence
• Black Population including those with DM: Thiazide-type diuretic or CCB – B Level Evidence for general Population and C Level Evidence for DM
Initial Drug Treatment Recommendations for High Blood Pressure

- CKD Population (Black and non-Black, DM or not DM): ACEI or ARB (but not both together in any circumstance)
  - B Level Evidence

Why is it important not to recommend intensifying medications to reduce BP below the level proven in trials?

- Lower thresholds/goals identify a much larger population as having “HTN” and presumably needing drug therapy. (e.g., reducing definition of HTN from 140/90 to 120/80 mm Hg doubles those with “HTN”)
- Millions classified as “HTN” based on higher BP goals require more drugs to achieve lower BP goals.
- Treating to lower BP levels may be harmful (J-curve?).
- If neither beneficial nor harmful, resources would be wasted and patient adherence may suffer.

Drug Therapy Recommendations

BLOOD PRESSURE GOALS
- > 60 YO:
  - SBP <150mmHg
  - DBP < 90mmHg
- <60 YO, DM, CKD:
  - SBP < 140mmHg
  - DBP < 90mmHg

SPECIFIC RECOMMENDATIONS
- African Americans: Diuretic/CCB
- CKD: ACEI/ARB

- Don’t use ACEI + ARB
- Use evidence-based dosing (HCTZ)
- Only use Beta Blockers with compelling indication

Select a drug treatment initiation strategy:
- A. Monotherapy failure to achieve goal
- B. Add small medication before reaching maximum dose of initial medication
- C. Start with 3 medications initially, repeating as needed dose in increments.
Controlling High Blood Pressure: NCQA added age and condition specific treatment goals that align with the 2014 Hypertension Guidelines:

- 18-59 years (<140/90 mm Hg)
- 60-85 years with diabetes (<140/90 mm Hg)
- 60-85 years without diabetes (<150/90 mm Hg)

*Effective Retroactive to 1/1/2014

Addendum Slides
Case Study:

- 76 yo black male in your clinic with HTN, CAD but no MI, and Stage 2 CKD w/o proteinuria (eGFR 68 mL/min/1.73 m²) for follow-up.
- Meds: ASA 81 mg, atorvastatin 20 mg, HCTZ 25 mg, lisinopril 40 mg & metoprolol succinate 25 mg all daily.
- He reports good health w/o angina or dyspnea, denies adverse drug effects and denies orthostatic light-headedness. Is active though does not exercise.
- Exam: P= 67, BP = 108/62. BMI = 24 kg/m² with normal findings otherwise.

How would you proceed with further management of this gentleman?