



Blood Pressure Control

Rationale for Blood Pressure Control

High blood pressure is a major risk factor for heart attack, heart failure, stroke, and chronic kidney disease. High blood pressure is very common, affecting about 30 percent of adults in the United States. It is the most commonly diagnosed condition at primary care visits. In 2010, high blood pressure was the main or a contributing cause of death for more than 360,000 people in the United States.¹ Substantial PCOR evidence shows that controlling high blood pressure results in a significant reduction in heart attacks and strokes.²

Findings from PCOR

The U.S. Preventive Services Task Force reviewed all of the research on screening for high blood pressure (Sui, 2015).

- Based on the evidence, the USPSTF recommends that doctors and nurses screen all adults for high blood pressure.

In 2004, the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC7) conducted a comprehensive review of the literature and previous guidelines to develop an evidence-based approach to the management of high blood pressure (NHLBI, 2004).

- Based on these PCOR findings, the JNC7 guidelines recommend that nearly all people with high blood pressure manage their blood pressure and keep it less than 140/90mm Hg.

EvidenceNOW supports using the JNC7 blood pressure goals, but recognizes that PCOR findings to guide blood pressure management are evolving. A 2013 panel issued similar guidelines, but recommended that the goal for individuals aged 60 and older be a systolic blood pressure of 150mm Hg or less unless they are already tolerating treatment to less than 140mm Hg (James, 2014). A subgroup of this panel issued a dissenting opinion (Wright, 2014), and results from a more recent PCOR study called SPRINT supported lower systolic blood pressures (SPRINT Research Group, 2015). An American Heart Association/American College of Cardiology panel is currently developing a new guideline. As new PCOR evidence emerges, it will be incorporated into implementation efforts with primary care practices.

Improving Health Care Through Patient-centered Outcomes Research (PCOR)

PCOR is research that compares the impact of two or more preventive, diagnostic, treatment, or health care delivery approaches on health outcomes. PCOR outcomes are those that are meaningful to patients and families, such as pain, symptoms, quality of life, and premature death. PCOR research can focus on specific clinical interventions (such as a medication or surgical procedure) or on ways of delivering care (such as the use of text messages to remind people to take a medication daily). PCOR evidence can come from individual studies, but often comes from comprehensive reviews of a large group of studies. Using PCOR evidence gives clinicians confidence that they are providing the best care to their patients.

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2. Xie X, Atkins E, Lv J, Bennett A, Neal B, Ninomiya T, Woodward M, MacMahon S, Turnbull F, Hillis GS, Chalmers J, Mant J, Salam A, Rahimi K, Perkovic V, Rodgers A. Effects of intensive blood pressure lowering on cardiovascular and renal outcomes: Updated systematic review and meta-analysis. *Lancet*. 2016;387(10017):435–443. [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(15\)00805-3/abstract](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(15)00805-3/abstract)



Evaluating and Measuring Use of PCOR-supported Recommendations

- The measure used by EvidenceNOW to evaluate blood pressure control assesses the percentage of patients ages 18-85 who have been diagnosed with hypertension and whose blood pressure is controlled at 140/90mm Hg or less. This measure has been endorsed by the National Quality Forum and is used by the Centers for Medicare & Medicaid Services.
- The EvidenceNOW goal is to have at least 70 percent of eligible patients cared for in primary care practices achieve blood pressure control at this level.

Additional Tools and Resources

- The HHS Million Hearts® initiative offers a range of resources on blood pressure control for health care professionals and patients, including a [fact sheet](#) for patients on steps to meet blood pressure goals, and a [wallet card](#) to help patients keep track of important blood pressure information on the go.
- An [infographic](#) developed by the Food and Drug Administration contains basic information for patients about high blood pressure, such as who may be at risk, types of medicines to control high blood pressure, and potential consequences of leaving high blood pressure untreated.

PCOR Evidence Sources

- Siu A, on behalf of the U.S. Preventive Services Task Force. Screening for high blood pressure in adults: U.S. Preventive Services Task Force recommendation statement. *Annals of Internal Medicine*, 2015;163(10):778-787. <http://annals.org/article.aspx?articleid=2456129>
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- James PA, Oparil S, Carter BL, et al. 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. <http://jama.jamanetwork.com/article.aspx?articleid=1791497>
- Wright JT, Fine LJ, Lackland DT, Ogedegbe G, Dennison Himmelfarb CR. Evidence supporting a systolic blood pressure goal of less than 150 mm Hg in patients aged 60 years or older: The minority view. *Ann Intern Med*, 2014;160:499-503. <http://annals.org/article.aspx?articleid=1813288>
- The SPRINT Research Group. A Randomized Trial of Intensive versus Standard Blood-Pressure Control. *NEJM*. 2015; 373:2103-2116.

About EvidenceNOW

EvidenceNOW is an Agency for Healthcare Research and Quality grant initiative dedicated to helping small- and medium-sized primary care practices across the country use the latest evidence to improve the heart health of millions of Americans. The initiative is focusing on the ABCS of heart health—**A**spirin use by high-risk individuals, **B**lood pressure control, **C**holesterol management, and **S**moking cessation—while helping primary care practices improve their capacity to use new PCOR evidence to improve the care they deliver.