



Measure Title	ADHERENCE TO ANTI-HYPERTENSIVE MEDICATION		
Disease State	Hypertension	Indicator Classification¹	Adherence
Strength of Recommendation²	A (<i>Anti-Hypertensive Medication</i>) C (<i>Physician Impact on Adherence</i>)		
Physician Specialties	Cardiovascular Disease, Endocrinology, Family Practice, Gerontology, Internal Medicine		
Clinical Rationale	<p>Disease Burden</p> <ul style="list-style-type: none"> • According to the Seventh Report of the Joint National Committee (JNC) on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC VII) guidelines, approximately 60% of adults in the United States have either hypertension (SBP > 140 mm Hg or DBP > 90 mm Hg) or pre-hypertension (SBP of 120 to 139 mm Hg or DBP of 80 to 89 mm Hg).[1, 2] • Hypertension is the most frequently reported primary diagnosis for office visits of non-pregnant adults to physicians in the United States, accounting for approximately 17.2 million visits per year.[3] • Fewer than half of the patients in the United States with hypertension are being treated, and less than 35% of those treated have well-controlled blood pressures (SBP < 140 and DBP < 90).[2, 4] • A large proportion of patients do not adhere to their hypertension medication regimens, both for intentional reasons and unintentional reasons. Both intentional and non-intentional lack of adherence may stem from perceived negative effects of the medication. [5] <p>Reason for Indicated Intervention or Treatment</p> <ul style="list-style-type: none"> • Evidence suggests that physician counseling regarding disease risk factors and medication persistence plays an important role in maximizing patient adherence. <p>Evidence supporting Intervention or Treatment</p> <ul style="list-style-type: none"> • Multiple meta-analyses of randomized, controlled trials show that blood pressure reduction decreased the risk of coronary heart disease by approximately 20% and the risk of stroke by approximately 30-40% within only a few years of beginning treatment.[6-9] • While there are few large scale, randomly controlled trials that assess effective tools for encouraging medication adherence, and some of the current evidence comes from smaller, widely varying trials.[10] .[11], some strategies have been effective. For example, one study of hypertensive patients who were resistant to their drug regimes showed that monitoring of compliance with electronic monitors led to significant improvement of blood pressure at two months. [12] • A large review article in the New England Journal of Medicine suggested that “practitioners should always look for poor adherence and can enhance adherence by emphasizing the value of a patient’s regime, making the regime simple, and customizing the regime to a patient’s lifestyle. Asking patients non-judgmentally about medication-taking behavior is a practical strategy for identifying poor adherence. A collaborative approach to care augments adherence. Patients who have difficulty maintaining adequate adherence need more intensive strategies 		

than do patients who have less difficulty with adherence, a more forgiving regime, or both... new technologies such as reminders through cell phones and personal digital assistants and pillboxes with paging systems may be needed to help patients who have the most difficulty meeting the goals of a regime.” [13] Another review in the Canadian Journal of Public Health included similar suggestions. [14]

Clinical Recommendations

- The American Heart Association expert panel on compliance recommends that patients, providers and healthcare organizations need to integrate efforts to reduce noncompliance with medications. This includes improved patient education, contracts, self-monitoring, telephone follow-ups, and social support.[15]
- The World Health Organization (WHO) states that ‘adherence is a multidimensional issue where different health care actors’ efforts meet, and recommends multi-level approaches to improve adherence.[16]
- The Institute for Clinical Systems Improvement suggests that “Asking non-threatening, open-ended questions during patient interviews can be a useful method of assessing medication adherence. The interview should include probes for factors that contribute to non-adherence including adverse reactions, misunderstandings of asymptomatic or chronic disease treatment, depression, cognitive impairment, complex dosing regimens, and financial constraints.”[17]
- The ACC/AHA Guidelines for the management of patients with ST-elevation myocardial infarction suggest that “Patient counseling to maximize adherence to evidence-based post-STEMI treatments (e.g., compliance with taking medication, exercise prescription, and smoking cessation) should begin during the early phase of hospitalization, occur intensively at discharge, and continue at follow-up visits with providers and through cardiac rehabilitation programs and community support groups, as appropriate.[18]

Source	Health Benchmarks, Inc.
Denominator	Continuously enrolled members ages 19 years or older by the end of the measurement year, who had a diagnosis of hypertension and at least a 60 day supply of an anti-hypertensive medication during the six months following the index prescription (index prescription = first script during the one year period beginning six months prior to the measurement year).
Denominator Exclusion	Members without pharmacy benefits or members who had hypertension associated with pregnancy, childbirth, and the puerperium during the measurement year.
Numerator	Members who received anti-hypertensive prescription coverage for at least 80 percent of the days in the six months after the index prescription date (includes overlapping days).
Interpretation of Score	High score implies better performance.
Physician Attribution	All physicians in the applicable specialty areas who came in contact with the member starting on the index date (date of service of the first prescription)

through the 0-6 months after the index date (inclusive).

External Files Required for Analysis

Filename: htn_den_medlist_2006.xls
Source: HBI, Master NDC

References

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Practice Guidelines (Writing Committee to Revise the 1999 Guidelines for the Management of Patients With Acute Myocardial Infarction). Circulation, 2004. **110**(5): p. 588-636.

¹ **Indicator Classification** (Adapted from Health Plan Employer Data Information Set (HEDIS®) technical specifications)

Diagnosis	Measures applicable to patients receiving diagnostic workups for a symptom or condition that delineate appropriate laboratory or radiological testing to be performed (e.g. evaluation of thyroid nodule; pregnancy test in patients with vaginal bleeding or abdominal pain)
Effectiveness of Care	
Prevention	Measures applicable to asymptomatic individuals that are designed to prevent the onset of the targeted condition (e.g. immunizations).
Screening	Measures applicable to asymptomatic patients who have risk factors or pre-clinical disease, but in whom the condition has not become clinically apparent (e.g. pap smears; screening for elevated blood pressure).
Disease Management	Measures applicable to individuals diagnosed with a condition that are part of the treatment or management of the condition (e.g. cholesterol reduction in patients with diabetes; radiation therapy following breast conserving surgery; appropriate follow-up after acute event).
Medication Monitoring	Measures applicable to patients taking medications with narrow therapeutic windows and / or potential preventable significant side effects or adverse reactions (e.g. thyroid stimulating hormone (TSH) testing after levothyroxine dose change; hepatic enzyme monitoring for patients using antimycotic pharmacotherapy)
Medication Adherence	Measures applicable to patients taking medications for chronic conditions that are designed to assess patient adherence to medication (e.g. adherence to lipid lowering medication).
Utilization	Measures applicable to patients receiving treatment for a symptom or condition that advocate appropriate utilization of laboratory and pharmaceutical resources (e.g. conservative use of imaging for low back pain; inappropriate use of antibiotics for viral upper respiratory infection).

² Strength of Recommendation

Strength of Recommendation Based on a Body of Evidence

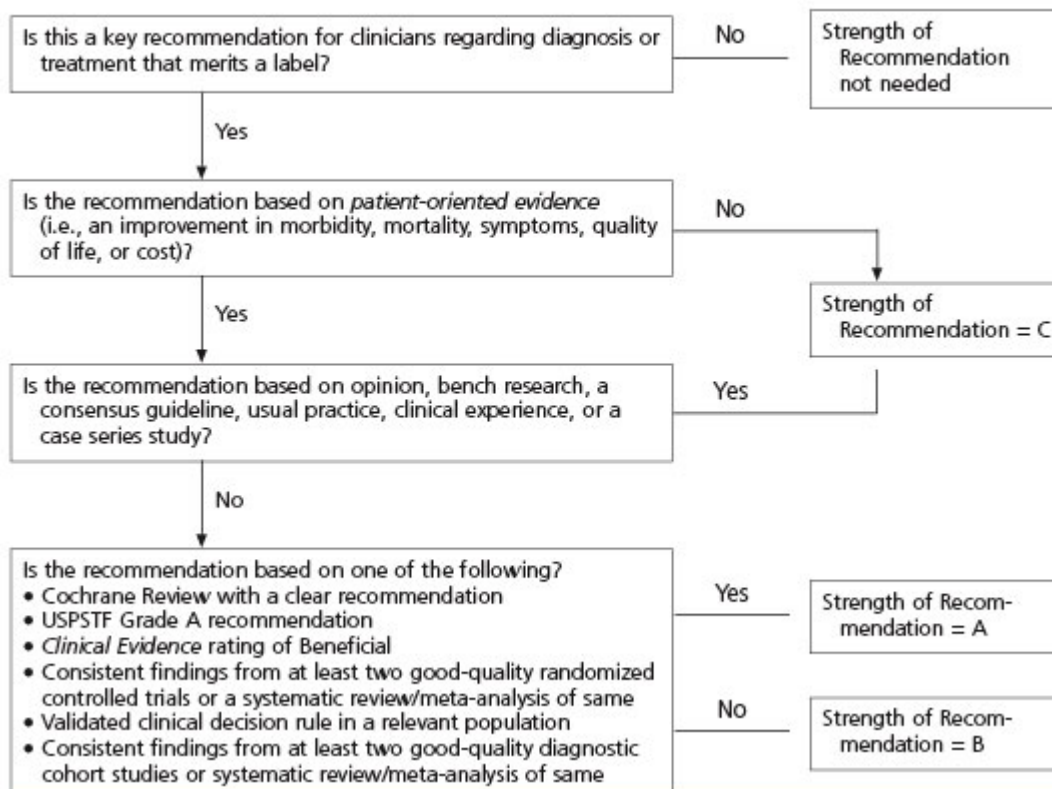


FIGURE 2. Algorithm for determining the strength of a recommendation based on a body of evidence (applies to clinical recommendations regarding diagnosis, treatment, prevention, or screening). While this algorithm provides a general guideline, authors and editors may adjust the strength of recommendation based on the benefits, harms, and costs of the intervention being recommended. (USPSTF = U.S. Preventive Services Task Force)