

Heart Disease and Stroke Prevention: Reducing Out-of-Pocket Costs for Cardiovascular Disease Preventive Services for Patients with High Blood Pressure and High Cholesterol

Findings and Recommendations

The [Community Preventive Services Task Force \(CPSTF\) recommends](#) interventions that combine reduced patient out-of-pocket costs (ROPC) for blood pressure and cholesterol medications with additional components aimed at improving patient provider interaction and patient knowledge (e.g., team-based care with medication counseling, patient education). Evidence shows that when used together, these interventions improve medication adherence and blood pressure and cholesterol outcomes.

There was not enough evidence to support ROPC for behavioral counseling or behavioral support services independent of reducing patient costs for medications.

The full CPSTF Finding and Rationale Statement and supporting documents for [Heart Disease and Stroke Prevention: Reducing Out-of-Pocket Costs for Cardiovascular Disease Preventive Services for Patients with High Blood Pressure and High Cholesterol](#) [↗](#) are available in [The Community Guide Collection](#) [↗](#) on CDC Stacks.

Intervention

Reducing out-of-pocket costs (ROPC) for patients with high blood pressure and high cholesterol involves program and policy changes that make cardiovascular disease preventive services more affordable. These services include:

- Medications
- Behavioral counseling (e.g., nutrition counseling)
- Behavioral support (e.g., community-based weight management programs, gym membership)

Costs for these services can be reduced by providing new or expanded treatment coverage and lowering or eliminating patient out-of-pocket expenses (e.g., copayments, coinsurances, deductibles).

ROPC is coordinated through the healthcare system and preventive services may be delivered in clinical or non-clinical settings (e.g., worksite, community). ROPC can be implemented alone or in combination with additional interventions to enhance patient-provider interaction (e.g., team-based care, medication counseling, patient education). Program and policy changes may be communicated to patients and providers using targeted messages to increase awareness and use of covered services.

About The Systematic Review

The CPSTF finding is based on evidence from a systematic review of 18 studies (search period: January 1980 to July 2015).

Study Characteristics

- Included studies came from the United States (15 studies), Israel (1 study), Italy (1 study), and Australia (1 study).
- Seven of the studies used Value-based Insurance Design plans, and three used pharmaceutical medication assistance programs (PMAP) programs to procure medications for low-income patients.
- Most studies reported implementing ROPC for medications with one or more health care intervention components, such as medication counseling; seven studies used a team-based care approach combined with medication

- counseling.
- Study populations primarily included working-age adults (median age of 55 years).
- Populations included diverse racial and ethnic groups, which were predominantly white in three studies; African American in 2 studies, and Hispanic in one study.
- Patients in 12 studies were fully insured. Patients in the remaining six studies were mostly uninsured or underinsured.

Summary of Results

- Reducing out-of-pocket costs for patients was associated with improvements in medication adherence, and blood pressure and cholesterol outcomes.

Medication Adherence

- Patients' adherence to blood pressure and cholesterol-lowering medications: median increase of 3.0 [percentage points](#) in greatest/moderate suitability studies (6 studies, 15 [study arms](#)).
- Proportion of patients achieving 80% adherence: increase of 5.1 percentage points in greatest/moderate suitability studies (1 study)

Blood Pressure

- Patients' systolic blood pressure: median decrease of 5.9 mmHg in greatest/moderate suitability studies (4 studies)
- Patients' diastolic blood pressure: median decrease of 3.8 mmHg in greatest/moderate suitability studies (4 studies)
- Proportion of patients achieving blood pressure goal: median increase of 6.0 percentage points in greatest/moderate suitability studies (3 studies)

Cholesterol

- Patients' total cholesterol: decrease of 15.0 mg/dL in greatest/moderate suitability studies (1 study)
- Patients' low-density lipoprotein (LDL): median decrease of 14 mg/dL in greatest suitability studies (3 studies)
- Patients LDL level at goal: increases of 13.0 and 24.0 percentage points in greatest suitability studies (2 studies)

Summary of Economic Evidence

The economic review included nine studies. Monetary values are reported in 2014 U.S. dollars.

- No studies reported cost-effectiveness results.
- The median intervention cost per person per year was \$172 (9 studies).
- Healthcare cost decreased by a median of \$127 (7 studies)

An overall economic conclusion cannot be reached because the net benefit evidence is small and inconsistent and no studies reported cost-effectiveness.

Applicability

The CPSTF finding should be applicable to various groups with access to health care, including:

- Adults (18-64 years old)
- Women and men
- Hispanic, white, and African-American patients
- Low-income patients

Evidence Gaps

- Does ROPC for behavioral counseling or behavioral support interventions independent of ROPC for medications improve health outcomes?
- How does the dollar amount saved by patients affect intervention effectiveness? What is the effectiveness of ROPC by total medication cost, proportional cost-reduction, patient income, or drug patent type?
- When the cost for generic medications is eliminated and the cost for brand name medications is reduced, are patients more or less likely to choose generic options?
- What clinical outcomes are associated with policies that reduce out-of-pocket costs for an entire patient population? How is medication adherence affected by multicomponent programs that include ROPC?
- What are the most effective strategies to promote covered benefits to patients and providers?
- What costs are associated with each component of a combined ROPC intervention?

Implementation Considerations and Resources

- Program or policy changes can be made by many implementers, including insurance companies, government agencies, and employers.
- To increase awareness and use of covered services, it is important to promote these programs and policies to both patients and providers.
- Broad programs and policies that reduce out-of-pocket costs to reduce patients' overall cardiovascular disease risks should coordinate coverage for blood pressure and cholesterol management with coverage for diabetes management and evidence-based tobacco cessation treatments.
- ROPC combined with additional interventions, such as medication counseling, may increase opportunities for patient-provider interaction on treatment issues.

Crosswalks

 Healthy People 2030 includes the following objectives related to this CPSTF recommendation.

- [Improve cardiovascular health in adults – HDS-01](#) 
- [Reduce coronary heart disease deaths – HDS-02](#) 
- [Reduce stroke deaths – HDS-03](#) 
- [Increase control of high blood pressure in adults – HDS-05](#) 
- [Increase cholesterol treatment in adults – HD-07](#) 