



EVIDENCE SUMMARY

Control High Blood Pressure

WHAT IS CDC'S 6|18 INITIATIVE?

The CDC is partnering with health care purchasers, payers, and providers to improve health and control health care costs. CDC provides these partners with rigorous evidence about high-burden health conditions and associated interventions to inform their decisions to have the greatest health and cost impact. This initiative aligns evidence-based preventive practices with emerging value-based payment and delivery models.

WHO'S AT RISK?

Heart disease and stroke are the first and fifth leading causes of death in the United States respectively. Heart disease and stroke and other vascular diseases contribute to 800,000 deaths per year and 200,000 preventable deaths (under age 75).¹ Two main reasons people have heart disease or stroke are high blood pressure and high cholesterol, which are common and preventable.

About 70 million U.S. adults have high blood pressure and high cholesterol. Only about half of adults with high blood pressure and 1 in 3 of those with high cholesterol have their condition under control. High blood pressure was associated with \$42.8 billion in direct medical costs in 2011.²

PROPOSED PAYER INTERVENTION

1

Promote strategies that improve access and adherence to antihypertensive and lipid-lowering medications.



OPPORTUNITIES FOR PAYERS AND PROVIDERS

Promote strategies that improve access and adherence to antihypertensive and lipid-lowering medications.



KEY HEALTH AND COST EVIDENCE MESSAGES FOR PAYERS AND PROVIDERS

The Community Preventive Services Task Force found strong evidence of effectiveness in improving (1) medication adherence and (2) blood pressure and cholesterol outcomes when reduced patient out-of-pocket costs (ROPC) for medications to control high blood pressure and high cholesterol are also combined with additional interventions aimed at improving patient-provider interaction and patient knowledge (e.g., team-based care with medication counseling, and patient education).³

Research is needed to determine whether medication adherence strategies reduce costs for patients and insurers and whether medication costs affect adherence for primary (no heart-related events) versus secondary (post-cardiac event) prevention. Research is also needed to understand (1) how socioeconomic variables (e.g., race, income) and selection of pharmacy plan are integrated with claims and administrative data and (2) what the effect is on medication cost sharing.⁴

CURRENT PAYER COVERAGE (AS OF AUGUST 2015)

MEDICARE

- ✓ Varies; cost sharing may apply for patients.

MEDICAID

- ✓ Coverage varies by state.

COMMERCIAL/PRIVATE

- ✓ Coverage varies by plan.

SUPPORTING HEALTH AND COST EVIDENCE: SCIENCE BEHIND THE ISSUE

Adherence to anti-hypertensive medications in a value-based payment system (e.g., reduced or eliminated copayments for generic drugs for hypertension, hyperlipidemia,) when combined with the support of a disease management program, demonstrated that patient compliance increased from 1.4% to 3.2% one year into the study. Patient medication adherence increased by 2.1% to 5.2% two years after value-based payments were started. Adherence changes were most notable by researchers among patients who were not consistently taking their medications before a value-based system was implemented.⁵



A study of 6.3 million adults found that a pharmacy benefit that varies copayments for cholesterol-lowering therapy based on expected therapeutic benefit will improve patient medication compliance and reduce use of other services (e.g., hospitalizations, emergency department services). In this study, copayments for high- and medium-risk patients were eliminated but increased (from \$10 to \$22) for low-risk patients. This simulation analysis resulted in the avoidance of 79,837 hospitalizations and 31,411 emergency department admissions annually. Researchers found that varying copayments for cholesterol-lowering therapy by therapeutic need would reduce hospitalizations and emergency department use—with total savings of more than \$1 billion annually.⁶



A systematic review of 13 studies assessing the effects of value-based insurance design programs where medication copayments were reduced found that the programs were consistently associated with improved adherence (average change of 3.0 % over one year) and with lower out-of-pocket spending for drugs. Findings suggest that generous coverage did not lead to significant changes in medical spending by patients and insurers. Research is needed to understand how best to structure value-based programs to improve quality of healthcare and reduce spending.⁷



The Post-Myocardial Infarction Free Rx Event and Economic Evaluation (MI FREEE) prospective trial of a cohort of 2,387 people (41% of the trial population) for whom self-reported race or ethnicity was available assessed whether reducing patients' out-of-pocket costs increased medication adherence in patients discharged from the hospital after a heart attack. Rates of medication adherence were significantly lower, and rates of adverse clinical outcomes were significantly higher for nonwhite patients than for white patients. Providing full-drug coverage increased medication adherence in both groups. Among nonwhite patients, full-drug coverage also reduced the rates of major vascular events or revascularization by 35% and reduced total health care spending by 70%. Providing full coverage had no effect on clinical outcomes and costs for white patients. This study found that lowering copayments for medications after heart attacks may reduce racial and ethnic disparities for cardiovascular disease.⁸

PROPOSED PAYER INTERVENTION

2

Promote a team-based approach to controlling hypertension (e.g., combinations of physician, nurse, pharmacist, community health worker, and patient teams). Provide access to devices for self-measured blood pressure monitoring (SMBP) for home use and create individual, provider, and health-system incentives for compliance and meeting goals.



OPPORTUNITIES FOR PAYERS AND PROVIDERS

A team-based approach to blood pressure control (e.g., physician, pharmacist, nurse, community health worker, and patient teams), if more widely implemented in clinical practice, has potential to improve blood pressure control.

Payers can increase patient access to devices for self-measured blood pressure monitoring for confirmatory diagnosis (rule out white coat hypertension) and home use in self-monitoring. SMBP can be an important clinical tool to assist clinicians in making a definitive diagnosis, and use of SMBP for those with high blood pressure, combined with individual, provider, and health-system incentives for blood pressure goals, can improve blood pressure control.



KEY HEALTH AND COST EVIDENCE MESSAGES FOR PAYERS AND PROVIDERS

Team-based blood pressure control efforts that include physician, pharmacist, nurse, community health worker, and patient teams, can improve blood pressure control and payer costs.

CURRENT PAYER COVERAGE (AS OF AUGUST 2015)

MEDICARE

- ✓ Medicare Part B (traditional fee-for-service) does not cover home blood pressure monitors used for SMBP.
- ✓ Medicare Part C (Medicare Advantage): Coverage is not mandated but may cover supplemental coverage of home blood pressure monitors or additional support programs for enrollees.⁹

MEDICAID

- ✓ Coverage varies by state. A 2013 ruling by the Centers for Medicaid Services (CMS) allows states to provide Medicaid reimbursement for United States Preventive Services Task Force-recommended preventive services when “recommended by a physician or other licensed practitioner” and delivered by an array of health professionals, including community health workers. Under this ruling, states determine which services will be covered, who will provide them (including required education, training, experience, credentialing, certification, or registration), and how providers will be reimbursed.

COMMERCIAL/PRIVATE

- ✓ Decision to cover home blood pressure monitors and additional support is made by individual plans.
- ✓ Some private insurance plans provide these benefits only for beneficiaries enrolled in disease-management programs for high blood pressure or other medical conditions that increase the risk of heart disease and stroke.¹⁰

SUPPORTING HEALTH AND COST EVIDENCE: SCIENCE BEHIND THE ISSUE

In a review of the use of team-based care to treat blood pressure, the proportion of patients with controlled blood pressure improved (median increase by 12%); systolic blood pressure decreased (median reduction by 5.4 mmHg); and diastolic blood pressure also decreased (median reduction by 1.8 mmHg). This review concluded that team-based care increased the proportion of people with controlled blood pressure and reduced systolic and diastolic blood pressure, especially when pharmacists and nurses were part of the team.¹¹



A CDC Community Guide Task Force review found that there is strong evidence of effectiveness for interventions that engage community health workers in a team-based care model to improve blood pressure and cholesterol in patients at increased risk for heart disease. Findings suggest that the use of community health workers alongside physicians and nurses in team-based care was associated with large improvements blood pressure and cholesterol outcomes. In the studies reviewed, community health workers used more than one mode of delivery to communicate with clients, the most common combination being face-to-face sessions accompanied by telephone contact. As most of the review studies evaluated outcomes at 12 months, more evidence is needed on programs evaluated over a longer time period. It also would be useful to have research on larger-scale interventions (i.e., more than 500 patients) and how these programs can be funded and continued in ways other than public grants.¹²



A CDC Community Guide review examining cost estimates (31 studies; search period, January 1980–May 2012) of team-based care found most cost-effectiveness estimates below the conservative threshold of \$50,000 per quality-adjusted life year (QALY) saved.¹³



SMBP plus clinical support was more effective than usual care in lowering blood pressure and improving control among patients with hypertension.¹⁴

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