Cardiovascular disease refers to several types of conditions that affect the heart and blood vessels. Cardiovascular diseases, including heart disease and stroke, account for one-third of all U.S. deaths and contribute an estimated $315 billion annually in healthcare costs and lost productivity.  

Many cardiovascular disease risk factors, such as high blood pressure, high cholesterol, excess weight, poor diet, smoking and diabetes, can be prevented or treated through behavior change and appropriate medication.

This fact sheet provides proven intervention strategies—including programs and services—to reduce patients’ risk for cardiovascular disease. It can help decision makers in both public and private sectors make choices about what intervention strategies are best for their communities. This fact sheet summarizes information in The Guide to Community Preventive Services (The Community Guide), an evidence-based resource of what works in public health.

Use the information in this fact sheet to select from the following intervention strategies you can use in your community and healthcare organizations:

- Incorporate team-based care interventions using a multidisciplinary team such as primary care providers, nurses, and pharmacists or engaging community health workers to help patients improve blood pressure control.
- Introduce clinical decision-support systems within healthcare systems to implement clinical guidelines at the point of care.
- Reduce out-of-pocket costs for medications to control high blood pressure and high cholesterol in patients.
- Implement self-measured blood pressure monitoring interventions used alone or combined with additional support such as counseling, education, or web-based tools to improve blood pressure outcomes in patients.

The Community Guide provides evidence-based findings and recommendations from the Community Preventive Services Task Force (CPSTF) about preventive services and programs to improve health. The CPSTF—an independent, nonfederal panel of public health and prevention experts—bases its findings on systematic reviews of the scientific literature. Learn more about The Community Guide and what works to prevent cardiovascular disease by visiting www.thecommunityguide.org/topic/cardiovascular-disease.
Cardiovascular disease is the leading cause of death globally.

- Nearly 800,000 people die in the U.S. each year from cardiovascular diseases—that’s almost 1 out of every 3 deaths.
- Approximately every 1 minute and 23 seconds, an American will die from a coronary event.
- Almost half of Americans (47%) exhibit at least one of the key cardiovascular disease risk factors: uncontrolled hypertension, high levels of low-density lipoprotein cholesterol and smoking.
- Smoking, physical inactivity, and poor diet increase the risk of cardiovascular disease.

High blood pressure is a leading cause of heart disease and stroke in the U.S.

About 1 in 3 U.S. adults—or 75 million people—have high blood pressure.

High blood pressure was the main or contributing cause of death for more than 410,000 Americans in 2014.

About half of adults with high blood pressure (nearly 35 million) do not have their blood pressure under control.

An estimated 46,000 deaths might be prevented each year if 70% of patients under the age of 80 with high blood pressure were treated according to goals established in current clinical guidelines.

For more about cardiovascular disease prevention and control, visit www.cdc.gov/dhdsp/index.htm.
SUMMARIZING THE FINDINGS ON CARDIOVASCULAR DISEASE

All CPSTF findings and recommendations on preventing cardiovascular disease are available online at www.thecommunityguide.org/topic/cardiovascular-disease. Some of the CPSTF recommendations related to preventing cardiovascular disease are below.

- **Implementing Clinical Decision-Support Systems at the point-of-care.** Provider practices related to cardiovascular disease preventive care services, clinical tests and treatments can be improved through the use of clinical decision-support systems. These computer-based information systems are designed to assist healthcare providers by providing patient-specific information during healthcare visits. Clinical decision-support systems allow healthcare providers to screen for cardiovascular disease risk factors, assess a patient’s risk for developing cardiovascular disease, and alert patients during visits when health indicators for cardiovascular disease risk factors are elevated.

- **Reducing out of pocket costs for patients.** Reducing out-of-pocket costs for medications to control high blood pressure and high cholesterol can be implemented alone or in combination with other interventions including team-based care. In addition, reducing out-of-pocket costs can increase medication adherence, which subsequently helps increase the proportion of patients that meet the recommended blood pressure goal by a median of 18 percentage points, as well as a median increase of 13 percentage points for the proportion of patients who meet the recommended cholesterol goal.

- **Incorporating team-based care in health systems.** Team-based care consists of a health care team that works together to improve patient care. The coordinated team includes the patient, the patient’s primary care provider, as well as other health professionals (e.g., nurses, pharmacists and dietitians). Team-based care interventions allow for communication between team members, the use of clinical guidelines by team members, consistent monitoring of patient progress, and engagement of patients in their own care. Healthcare systems that used team-based care increased the proportion of patients with controlled blood pressure by a median of 12 percentage points when compared to usual care.

- **Implementing self-measured blood pressure monitoring interventions.** Self-measured blood pressure monitoring interventions allow patients who are trained to use validated blood pressure measurement devices, to share their blood pressure readings with their healthcare providers during clinic visits, by telephone, or electronically. These interventions may be used alone or combined with additional support. When used alone, patients receive self-measured blood pressure tools, training, and monitoring. When combined with additional support, patients receive one-on-one counseling, blood pressure management education, and web-based support to communicate with health care providers.

PUTTING THE CPSTF FINDINGS TO WORK

As a public health decision maker, practitioner, community leader, or someone who can influence the health of your community, you can use The Community Guide to create a blueprint for success.

- See how other communities have applied the CPSTF recommendations for cardiovascular disease prevention and control at www.thecommunityguide.org/content/the-community-guide-in-action. Get ideas from their Community Guide in Action stories.

- Visit the Department of Health and Human Services Million Hearts® initiative at millionhearts.hhs.gov to identify ways to reduce cardiovascular disease risk across the U.S.

- Visit CDC’s Division of Heart Disease and Stroke Prevention at www.cdc.gov/dhdsp to learn more about programs that support healthy behaviors to prevent and manage conditions related to cardiovascular health.

- Use the Healthy People 2020 initiative at www.healthypeople.gov/2020/topics-objectives/topic/heart-disease-and-stroke/ebrs to learn more about how to improve cardiovascular health.
Kaiser Permanente Colorado Implements Hypertension Management Program

With more than 85,000 adult patients diagnosed with high blood pressure in the Denver metropolitan area alone, Kaiser Permanente Colorado implemented several evidence-based strategies aimed at increasing the hypertension control rate within its patient population. The Hypertension Management Program emphasizes a team-based, integrated approach to care for patients with high blood pressure, utilizing some of the strategies recommended in The Community Guide. As a result of these changes, hypertension control rates rose from just over 61 percent in January 2008 to nearly 83 percent by fall 2012.

West End Medical Centers Implements Patient-Centered Medical Home Model

West End Medical Centers, Inc. (WEMC) provides comprehensive primary healthcare services in seven locations throughout Georgia’s Fulton and Cobb counties. WEMC is a patient-centered medical home and a nonprofit organization of federally qualified health centers. WEMC’s patient population is predominantly African American, female and nearly half are uninsured. WEMC’s care model utilizes many of the strategies recommended by The Community Guide, including a focus on physician-led provider teams who work with patients to develop and manage their hypertension. Referrals for additional care and support services include medications, access to a dietician, and fitness instruction as part of a health education program. As a result of these changes, 63 percent of WEMC’s 4,000 hypertensive patients had controlled blood pressure by 2012.

Read more on these stories and others at www.thecommunityguide.org/content/the-community-guide-in-action.

REFERENCES

1 Centers for Disease Control and Prevention DHSP. Heart Disease Fact Sheet. 2014; Available from: http://www.cdc.gov/nchs/data/dhsp/data_statistics/fact_sheets/fs_heart_disease.htm
The Community Preventive Services Task Force (CPSTF) has released the following findings on what works in public health to prevent cardiovascular disease. These findings are compiled in The Guide to Community Preventive Services (The Community Guide) and listed in the table below. Use the findings to identify strategies and interventions you could use for your community.

Legend for CPSTF Findings:  
- **Recommended**  
- **Insufficient Evidence**  
- **Recommended Against**  
(See reverse for detailed descriptions.)

<table>
<thead>
<tr>
<th>Intervention</th>
<th>CPSTF Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical decision-support systems</td>
<td></td>
</tr>
<tr>
<td>Interventions engaging community health workers</td>
<td></td>
</tr>
<tr>
<td>Reducing out-of-pocket costs for cardiovascular disease preventive services for patients with high blood pressure and high cholesterol</td>
<td></td>
</tr>
<tr>
<td>Team-based care to improve blood pressure control</td>
<td></td>
</tr>
<tr>
<td>Self-measured blood pressure monitoring interventions for improved blood pressure control when used alone</td>
<td></td>
</tr>
<tr>
<td>Self-measured blood pressure monitoring interventions for improved blood pressure control when combined with additional support</td>
<td></td>
</tr>
</tbody>
</table>

For more information on Cardiovascular Disease findings, visit The Community Guide website at [www.thecommunityguide.org/topic/cardiovascular-disease](http://www.thecommunityguide.org/topic/cardiovascular-disease). Other related resources include one pagers and Community Guide in Action stories.
UNDERSTANDING THE FINDINGS

The CPSTF bases its findings and recommendations on systematic reviews of the scientific literature. With oversight from the CPSTF, scientists and subject matter experts from the Centers for Disease Control and Prevention conduct these reviews in collaboration with a wide range of government, academic, policy, and practice-based partners. Based on the strength of the evidence, the CPSTF assigns each intervention to one of the categories below.

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Icon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended</td>
<td>There is strong or sufficient evidence that the intervention strategy is effective. This finding is based on the number of studies, how well the studies were designed and carried out, and the consistency and strength of the results.</td>
<td></td>
</tr>
<tr>
<td>Insufficient Evidence</td>
<td>There is not enough evidence to determine whether the intervention strategy is effective. This does not mean the intervention does not work. There is not enough research available or the results are too inconsistent to make a firm conclusion about the intervention strategy’s effectiveness. The CPSTF encourages those who use interventions with insufficient evidence to evaluate their efforts.</td>
<td></td>
</tr>
<tr>
<td>Recommended Against</td>
<td>There is strong or sufficient evidence that the intervention strategy is harmful or not effective.</td>
<td></td>
</tr>
</tbody>
</table>

EVALUATING THE EVIDENCE

- The CPSTF findings and recommendations for intervention strategies related to cardiovascular disease prevention and control are based on systematic reviews of the available evidence.
- The systematic reviews look at the results of research and evaluation studies published in peer-reviewed journals and other sources.
- Each systematic review looks at each intervention strategy’s effectiveness and how it works in different populations and settings. If found effective, cost and return on investment are also reviewed when available.
- For each intervention, a summary of the systematic review, included studies, evidence gaps, and journal publications can be found on the Diabetes Prevention and Control section of the website at www.thecommunityguide.org/topic/cardiovascular-disease.

Visit the “Our Methodology” page on The Community Guide website at www.thecommunityguide.org/about/our-methodology for more information about the methods used to conduct the systematic reviews and the criteria the CPSTF uses to make findings and recommendations.