

Team-Based Care to Improve Blood Pressure Control

Recommendation of the Community Preventive Services Task Force

Community Preventive Services Task Force

Task Force Finding

The Community Preventive Services Task Force recommends team-based care to improve blood pressure control on the basis of strong evidence of effectiveness in improving the proportion of patients with controlled blood pressure (BP) and reducing systolic BP (SBP) and diastolic BP (DBP). Evidence was considered strong based on findings from 80 studies of team-based care organized primarily with nurses and pharmacists working in collaboration with primary care providers, other professionals, and patients. The economic evidence indicates that team-based care is cost-effective.

A summary of the Task Force finding and rationale is available at www.thecommunityguide.org/cvd/teambasedcare.html.

Definition

Team-based care to improve BP control is a health systems-level, organizational intervention that incorporates a multidisciplinary team to improve the quality of hypertension care for patients. Team-based care is established by adding new staff or changing the roles of existing staff to work with a primary care provider.

Each team includes the patient, the patient's primary care provider, and other professionals such as nurses, pharmacists, dietitians, social workers, and community health workers. Team members provide process support and share responsibilities of hypertension care to complement activities of the primary care provider. These responsibilities include medication management, patient follow-up, and adherence and self-management support.

Names and affiliations of Task Force members can be found at www.thecommunityguide.org/about/task-force-members.html.

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Team-based care interventions typically include activities to

- facilitate communication and coordination of care support among various team members;
- enhance use of evidence-based guidelines by team members;
- establish regular, structured follow-up mechanisms to monitor patients' progress and schedule additional visits as needed;
- actively engage patients in their own care by educating them about hypertension medication; adherence support (for medication and other treatments); and tools and resources for self-management (including health behavior change).

Basis of Finding

The Task Force finding is based on evidence from a Community Guide systematic review¹ (52 studies; search period, July 2003–May 2012) and a previous systematic review published in 2006² (28 studies; search period, January 1980–July 2003), in which the conceptual approach and methods matched those of the Community Guide review. Results from both reviews demonstrate the effectiveness of team-based care in improving the proportion of patients with controlled BP and reduced SBP and DBP. Magnitude of effect estimates, number of studies, and consistency of effects provide the basis for the strong evidence finding.

A separate systematic review examining the economic evidence (31 studies; search period, January 1980–May 2012) found most cost-effectiveness estimates to be below the conservative threshold of \$50,000 per quality-adjusted life year (QALY) saved. This suggests that implementation of team-based care for BP control is cost-effective. Findings from the economic review are available at www.thecommunityguide.org/cvd/teambasedcare.html.

The current Community Guide review (July 2003–May 2012) found that, in addition to improvements in BP outcomes, team-based care was effective in improving

diabetes outcomes and lipid outcomes, especially total cholesterol and low-density lipoprotein cholesterol.

Applicability

The available evidence on the effectiveness of a team-based approach to managing hypertension is compelling both within the organization of the healthcare system and from the broader public health perspective. These findings are applicable to primary care delivery across a broad range of settings. Although evidence on effectiveness was not available for every population group, results from this systematic review should be broadly applicable to diverse populations. Moreover, a small number of studies that targeted groups affected by health disparities, such as racial/ethnic minorities and low-income populations, found team-based care to be effective in improving BP outcomes.

Considerations for Implementation

The team-based care model is the essence of the shifting paradigm of U.S. healthcare delivery to an approach that is more coordinated and integrated. Central to this approach is organizing care around the patient with the support of multiple providers. Team members who worked with patients and primary care providers in the studies included in the systematic review were most frequently nurses and pharmacists. There were larger improvements in the proportion of patients achieving BP control when pharmacists were included in the team, whereas reductions in SBP and DBP were similar to overall estimates when either nurses or pharmacists were part of the team. Involvement of additional team members related to medication management (e.g., pharmacists and nurses) was conceptualized in three levels. Team-based care models in which team members could make changes to medications independent of the patient's primary care provider or make suggestions for medication changes to the primary care provider based on evidence-based clinical protocols achieved larger improvements in BP outcomes than those that only provided education on hypertension and support for medication adherence to patients.

Moreover, the improvement in outcomes for common comorbidities such as diabetes and cholesterol using team-based care suggest the great potential for applying this approach to managing chronic disease. Studies that used team-based care for comprehensive cardiovascular disease (CVD) risk reduction most commonly employed nurse practitioners to work with primary care providers and patients to both manage patient medications and provide vital self-management support.

With the advent of the Patient-Centered Medical Home and accountable care organizations, many health systems are looking to implement value-based models of

chronic care—where reimbursement is tied to improvements in health outcomes for entire panels of patients.³ At the center of this systems-level organizational change are models like team-based care that improve the efficiency, quality, and value of care.

Health systems will need to consider the needs of their patients and resources at their disposal when establishing team-based care to manage CVD risk factors. Clear decisions about team constitution and team member roles as well as reimbursement mechanisms are needed. Activities to foster team building and achieve provider buy-in could prove invaluable. Training resources for providers need to provide orientation and exposure to skills necessary to address multiple CVD risk factors while working with a team that includes the patient. Screening and proactive follow-up processes, as well as access to self-management resources including tools such as BP home monitors, seem to facilitate the success of team-based care. Support for self-management includes developing patient knowledge and skills as well as improving patient attitudes and health behavior aimed at addressing high BP and related risk factors.

The arrival of new technologies presents many opportunities to further harness the potential of team-based care. Various modalities (e.g., web-based, app-based, text message-based, and electronic health records) could serve to improve communication between providers and patients, clinical decisions by providers, and patient support.

Information from Other Advisory Groups

The *Seventh Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure* (JNC-VII)⁴ guidelines recommend that

clinicians work with other healthcare professionals (e.g., nurses, pharmacists, physician assistants, registered dietitians, licensed nutritionists, and nutrition educators) to influence or reinforce instructions to improve patient lifestyles and BP control. In addition, all healthcare professionals must be committed to enhancing BP control through reinforcing messages about the risks of hypertension; the importance of managing both systolic and diastolic BP, and achieving goal BP; education about effective lifestyle interventions; pharmacological therapies; and treatment adherence.

The American Heart Association⁵ emphasizes four strategies to maintain BP control that should be integrated into effective healthcare policies: (1) focusing on clinical outcomes; (2) empowering patients to be informed and actively involved; (3) implementing a team approach based on close cooperation among patients,

physicians, nurses, pharmacists, and allied health professionals within a chronic illness management paradigm; and (4) advocating for health policy reform.

An IOM report⁶ identified high-priority areas in which public health professionals can focus their efforts to achieve BP control. These areas include strategies to promote policy and system changes to improve the quality of hypertension care, ensure that individuals receive hypertension care consistent with current treatment guidelines, remove economic barriers to obtaining effective antihypertensive medications, and provide community-based support for individuals through community health workers who can assist healthcare providers and patients by serving as lay educators and liaisons to the healthcare system.

Evidence Gaps

Although evidence on the effectiveness of team-based care in improving BP outcomes is robust, implementation will benefit from more research on the type of provider–patient interaction and use of this model to serve disadvantaged populations who face CVD-related health disparities. It will also be important to learn the effect of these models on patient perceptions of care received. Further, information from successful implementers of

team-based care in terms of strategies employed to develop teams, resources needed, infrastructural and technologic support established, reimbursement mechanisms for team members, and optimal stakeholder engagement will all contribute to the evidence base on effective implementation of team-based care for BP control.

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