

# Team-Based Care

## A Step in the Right Direction for Hypertension Control

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A recent series of articles reflecting the work of the Community Preventive Services Task Force provides clear-cut evidence that team-based care of hypertension in medical settings lowers blood pressure and results in higher rates of hypertension control.<sup>1-3</sup> Team-based care teams may include non-primary care provider (PCP) healthcare personnel such as nurse practitioners, nurses, pharmacists, integrated care managers, medical assistants, behavioral interventionists, and community health workers. Involvement of team members in medication management can include the ability to make changes in medications independent of the PCP, provision of medication recommendations with the PCP's approval, and provision of adherence support and information on medication and hypertension only.

The Task Force reviewed 52 studies published from July 2003 through May 2012 that addressed the effects of team-based care of hypertension. Overall, these studies showed that the median increase in blood pressure control was 12%, whereas the mean systolic and diastolic blood pressure declined by 5.4% and 1.8%, respectively.<sup>1</sup> Results tended to be better when the team included a pharmacist. Additional analyses from ten of the studies showed that team-based care was cost effective based on cost per quality-adjusted life-year saved estimates below \$50,000 in the vast majority of cases.<sup>3</sup>

This is good news in the approach to a highly prevalent medical condition, affecting about 30% of the U.S. population and a major risk factor for cardiovascular morbidity and mortality as well as for chronic kidney disease. However, we have a long way to go in addressing hypertension in the U.S., with the control rate in hypertensive adults only slightly more than 50%.<sup>4</sup> Recognizing that non-medical approaches to preventing and treating hypertension (e.g., diet, physical activity, and maintenance of optimal weight) may be successful, the fact is that many people will develop hypertension that can benefit from medical therapy.

Team-based care is part of an effective medical therapy approach to hypertension, but it is not the entirety of it. The Kaiser Permanente Northern California hypertension program included additional key elements in its successful effort to nearly double its hypertension control rate from 44% to 80% from 2001 to 2009,<sup>5</sup> with a further increase to 86% in 2012.<sup>6</sup> These elements included a comprehensive hypertension registry, development and sharing of performance metrics, evidence-based guidelines, and single-pill combination pharmacotherapy, as well as a team-based approach that included medical assistant visits with no copayment charge to patients for follow-up blood pressure measurements. A hypertension registry in combination with reporting of performance metrics for quality assurance purposes enables the charting of progress and can be used to identify successful practices by individual providers and work units, enabling the dissemination of effective strategies to others. Evidence-based guidelines provide the basis for a consistent treatment approach that is particularly useful in a team-based care approach in enabling pharmacists or other qualified non-PCPs to make changes in medications independent of the PCP. As most patients require two or more medications to control blood pressure, single-pill combination pharmacotherapy can help enable better compliance.

One of the assumptions for inclusion in the Task Force review was that the study was conducted in a high-income economy, defined as a gross national income per capita of \$12,476.<sup>7</sup> This serves as a reminder that a significant proportion of the U.S. population, 14.5%, representing 45 million people, lives below the poverty line at an income level that is substantially lower than a per capita of \$12,476.<sup>8</sup> The prevalence (33%) of hypertension is higher and the control rate (46%) is lower among those with family income below the poverty threshold.<sup>9</sup> The Affordable Care Act has resulted in a significant decline in the proportion of the U.S. population that is uninsured, down from 17.1% to 12.9%, during a 1-year period from the fourth quarter of 2013 to the fourth quarter of 2014.<sup>10</sup> However, the proportion of uninsured among those in the lowest income category in this report, less than \$36,000 per year, is nearly twice as high at 23.8%. The hypertension control rate of 28% in

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those who are uninsured is only about half the control rate in the general population.<sup>9</sup>

Only eight of 52 reviewed studies focused predominantly on populations in which more than 50% of the participants had low income.<sup>1</sup> Of these, three included data on change in blood pressure control, of which two showed a statistically significant increase in the control rate. In four of eight studies, the mean systolic blood pressure declined significantly, whereas non-statistically significant changes were present in the other four studies. The evaluation of the role of team-based care in hypertension management is limited and needs more study.

The Community Preventive Services Task Force established that team-based care of hypertension works and should be implemented in medical care systems as part of a comprehensive approach to blood pressure treatment. The optimal composition of the team and the role of team members have not been established and may vary according to the setting. The team-based approach to uninsured and low-income populations that may not have regular medical care or may have recently acquired medical insurance through the Affordable Care Act is unclear.

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