

Blood Pressure Control among U.S. Veterans

The following is a synopsis of “Blood Pressure Control Among US Veterans: A Large Multi-Year Analysis of Blood Pressure Data from the VA Health Data Repository,” published in the April 2012 issue of *Circulation*.



What is already known on this topic?

After landmark studies that examined hypertension in patients treated by the Department of Veterans Affairs (VA) during the late 1960s and early 1970s, numerous institutions and community-based programs were established in an effort to improve awareness, treatment, and control of hypertension. Decades later, blood pressure control is still a medical priority; despite years of effort and steady improvements in control rates, the number of hypertensive patients treated and controlled in the United States still remains low. In 2010, the Department of Health and Human Services launched Healthy People 2020, a national health promotion and disease prevention initiative that includes aggressive goals for blood pressure control.

What is added by this document?

This study assessed improvements in blood pressure control for 1.54 million patients in 15 cities in the VA health care system between 2000 and 2010. During the study period, the

VA established hypertension screening and treatment clinics and implemented interventions across the health system. To facilitate better blood pressure control, the clinics employed a range of interventions to address patient, provider, and health care system barriers. Interventions that targeted poor medication adherence rates, clinician inertia, clinician and patient education, and unhealthy lifestyles included:

- ▶ Focus on blood pressure as a system-wide performance measure.
- ▶ Electronic health records that notified providers the last time a patient's blood pressure was above 140/90 mmHg and reminded providers to treat elevated blood pressure using a combination of medication and lifestyle modification.
- ▶ More frequent visits for patients with elevated blood pressure until control was achieved.
- ▶ Referrals to specialized hypertension clinics for patients with resistant or difficult-to-control blood pressure.
- ▶ Inclusion of non-physician health care professionals such as nurses, physician assistants, nutritionists, and pharmacists in management teams.

- ▶ Home blood pressure monitors (BPMs) and access to an online patient portal that allowed patients to transmit readings and communicate virtually with providers.

During the study period, blood pressure control rates improved steadily; average blood pressure decreased by 11.3/2.3 mmHg. Overall control rates improved from 43.0% in 2000 to 76.6% in 2010, exceeding the nationwide control rate increase from 35% to 50% during a similar time period. Improvement in control rates occurred across all racial/ethnic, gender, and age groups. Although Caucasians had the highest original control rates, Hispanics achieved the same level of control by the end of the study. Improvement among African Americans was steady but slower and did not reach the same level of control as Caucasians. Although women demonstrated better control rates at the beginning of the study, control rates were similar between men and women by 2004. Younger patients had better controlled blood pressure at the beginning of the study, but control rates soon became similar among all age groups, and by the end of the study, middle and older age groups exhibited higher control rates. The study also found that, on average,

patients with hypertension were significantly older, were more likely to be male and African American, and had more frequent blood pressure readings than patients with normal blood pressure.

What are the implications for public health practice?

Although no single intervention can be credited for the improvement in control rates, a number of interventions likely contributed. One important intervention was providing frequent appointments to patients with elevated blood pressure until they achieved control. Outcomes of this intervention included improved patient involvement, medication adherence rates, and patient compliance. Patient involvement also was enhanced by use of home BPMs provided to patients at no cost. Furthermore, patients at VA clinics receive care for free or little cost, which removed one of the largest barriers to access to health care. The study supports adoption of system-wide strategies to achieve high rates of blood pressure control in men and women of all ages and all racial/ethnic groups.

Resources

Department of Veterans Affairs

Management of Hypertension in Primary Care

www.healthquality.va.gov/Hypertension_Clinical_practice_Guideline.asp

Centers for Disease Control and Prevention

High Blood Pressure: Guidelines and Recommendations

www.cdc.gov/bloodpressure/guidelines_recommendations.htm

Million Hearts™

About Heart Disease & Stroke: Prevention

<http://millionhearts.hhs.gov/abouthds/prevention.html>

Citation

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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

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