SCIENCE-IN-BRIEF

TURNING SCIENCE INTO ACTION

Regular Use of Home Blood Pressure Monitors

The following is a synopsis of "Regular Use of a Home Blood Pressure Monitor by Hypertensive Adults—HealthStyles, 2005 and 2008," published in the March 2012 issue of the *Journal of Clinical Hypertension*.

What is already known on this topic?

Although control of high blood pressure, also known as hypertension, has improved during the past two decades, recent studies estimate that less than half of hypertensive adults in the United States have their blood pressure (BP) under control. Controlling BP levels is important because hypertension is a major risk factor for several life-threatening conditions, including heart disease and stroke.

Research has shown that regular use of home blood pressure monitors (HBPMs) by individuals with hypertension improves medication adherence and attainment of goal BP levels. Additionally, data indicate that benefits improve significantly when HPBM use is combined with clinic-based programs involving telemonitoring or titration, the adjustment of medication dosage in response to changes in BP. Studies also suggest that HBPMs are superior to clinic BP measurements for predicting cardiovascular prognosis and can help identify white-coat effect, a phenomenon in which patient BP levels are higher in a clinical setting than in a nonclinical setting, possibly due to anxiety. Furthermore, regular use of HBPMs has been found to help overcome therapeutic inertia, a situation in which health care professionals fail to adjust medication in response to elevated BP.

What is added by this document?

This study analyzes data from the 2005 and 2008 HealthStyles surveys to assess:

- The relative percentage change in the proportion of hypertensive adults who regularly use HBPMs from 2005 to 2008.
- Associations between selected sociodemographic characteristics and the proportion of hypertensive adults who regularly use HBPMs.
- Associations between the regular use of HBPMs and the perception that they help control BP.

Although the study found that fewer than half of American hypertensive adults were regular HBPM users, results showed a significant relative increase (14.2%) in regular HBPM use between 2005 and 2008. By analyzing sociodemographic data, the authors concluded that younger adults (18–45 years), females, Hispanics and non-Hispanic blacks, those from low-income households, and those with modest educations were less likely than other groups to use HBPMs regularly. Additionally, significantly more hypertensive adults who used an HBPM daily or weekly perceived that it helped control their BP, compared to those who used an HBPM only monthly.

What are the applications for these findings?

Regular HBPM use has been shown to be effective and should be integrated into strategies to improve hypertension control. Health care professionals should promote regular HBPM use, especially among hypertensive adults who are younger, are non-Hispanic blacks or Hispanics, or come from a lower income level. To ensure accurate BP measurements, health care providers should educate patients on timing, techniques, and proper use of HBPMs.

Because a higher percentage of hypertensive adults perceived a benefit when monitoring their BP more frequently, health care providers should consider methods to incorporate regular HBPM use to improve motivation and medication compliance among patients.

What are the implications for public health practice?

The authors suggest that education and income may affect whether someone will buy an HBPM, which can cost between $30 and $150. The article's authors pointed to a 2008 call to action by the American Heart Association, American Society of Hypertension, and Preventive Cardiovascular Nurses Association, which encourages HBPM use and insurance reimbursement to help prevent common barriers to HBPM use.

Additional research is needed to assess whether HBPM use is a cost-effective strategy to reduce the rates of other diseases and conditions that result from untreated hypertension.

Resources

Centers for Disease Control and Prevention
How to Prevent High Blood Pressure
www.cdc.gov/bloodpressure/what_you_can_do.htm

American Heart Association
Home Blood Pressure Monitoring
www.heart.org/HEARTORG/Conditions/HighBloodPressure/SymptomsDiagnosisMonitoringofHighBloodPressure/Home-Blood-Pressure-Monitoring_UCM_301874_Article.jsp

dabl Educational Trust
Recommended Devices
www.dableducational.org/sphygmomanometers/recommended_cat.html

Citation

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National Center for Chronic Disease Prevention and Health Promotion
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