Assessing the Importance of Ambulatory Blood Pressure Monitoring for Hypertensive Patients

The following is a synopsis of “Is It Possible to Manage Hypertension and Evaluate Therapy Without Ambulatory Blood Pressure Monitoring?” published in the August 2012 issue of *Current Hypertension Reports*.

What is already known on this topic?

Nearly one out of three American adults has high blood pressure, also known as hypertension. High blood pressure is a major risk factor for heart disease and stroke, which are leading causes of death in the United States. Less than half of adults with hypertension have the condition under control.

Ambulatory blood pressure monitoring (ABPM) is an out-of-office method of diagnosing or managing hypertension. ABPM measures blood pressure automatically and continually while patients perform daily activities. ABPM can provide the ability to detect masked or white-coat hypertension, determine nocturnal blood pressure patterns, and evaluate the impact of antihypertensive treatment.

What is added by this document?

This review summarized the clinical importance of ABPM as well as the advantages and disadvantages of clinic blood pressure measurement, home blood pressure monitoring (HBPM), and ABPM. Overall, the authors concluded that 24-hour ABPM provides the best prediction of cardiovascular disease risk in hypertensive patients. The authors indicated that clinic measurements and HBPM are not specific or sensitive enough to provide a definitive diagnosis of hypertension in many patients. HBPM can, however, be used for ongoing follow-up, can provide unique information that may help guide important treatment decisions, and can empower patients to participate more proactively in their own care.

The authors concluded the following about the different methods of blood pressure measurement:

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<th>Pros</th>
<th>Cons</th>
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<tr>
<td>Clinic</td>
<td>• Ease of measurement</td>
<td>• Lack of reproducibility</td>
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<tr>
<td></td>
<td>• Associated with clinical trial outcome data</td>
<td>• White-coat effect</td>
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<td></td>
<td>•</td>
<td>• Masked hypertension</td>
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<tr>
<td>Home (Self)</td>
<td>• Inexpensive</td>
<td>• Little outcome data</td>
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<td></td>
<td>• Empowers patient involvement in own care</td>
<td>• Can cause patient anxiety</td>
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<td></td>
<td>•</td>
<td>• Device variability</td>
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<tr>
<td>ABPM</td>
<td>• Large number of measurements obtained</td>
<td>• Most expensive blood pressure method</td>
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<td></td>
<td>• Sleep measurements obtained</td>
<td>• Inconvenient for patient to do repeatedly</td>
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<td></td>
<td>• Provides the ability to evaluate drug treatment effect</td>
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What are the applications for these findings?

The findings from this review support most current national and international guidelines that recommend the routine use of ABPM to make the initial diagnosis of hypertension and use of HBPM for ongoing follow-up. Using ABPM, possibly in conjunction with HBPM, may be a better way to manage hypertensive patients, especially those with increased cardiovascular risk (e.g., diabetes, high cholesterol) and those who already
have cardiovascular disease. ABPM also can be used to
detect masked or white-coat hypertension and assess
antihypertensive therapy.

However, the Seventh Report of the Joint National Committee
on Prevention, Detection, Evaluation, and Treatment of High
Blood Pressure (JNC 7)—the guidelines published in 2003 and
used in the United States—does not recommend ABPM for
diagnosis of hypertension or assessment of antihypertensive
therapy. Instead, JNC 7 recommends ABPM for suspected
white-coat hypertension, apparent drug resistance, and other
specific conditions. The JNC 8 guidelines are forthcoming and
may reconsider these recommendations.

What are the implications for
public health practice?
The routine use of ABPM to make the initial diagnosis of
hypertension and use of HBPM for ongoing follow-up may
lead to a reduced number of patients incorrectly diagnosed
with hypertension and thus unnecessarily started on
antihypertensive therapy. In addition, ABPM use may add to
the trend for more self-management of hypertensive patients,
which might help control hypertension especially in the
context of reduced access to primary care physicians.

Resources
Centers for Disease Control and Prevention
www.cdc.gov/mmwr/preview/mmwrhtml/mm6135a3.htm
Fast Stats: Leading Causes of Death
www.cdc.gov/nchs/fastats/lcod.htm

National Institutes of Health
The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7)
www.nhlbi.nih.gov/guidelines/hypertension


Citation