

Study confirms 'white coat effect;' value of home blood pressure monitoring

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(Medical Xpress) -- People with hypertension often experience a spike in blood pressure when the reading is taken in a doctor's office, leaving doctors with inaccurate information to determine the course of treatment, according to researchers at Duke University Medical Center and the Durham Veterans Affairs Medical Center.

To account for this "white coat effect," researchers found significantly greater accuracy when several [blood pressure](#) readings were combined from measurements taken at home or in the doctor's office.

The new study is published in the *Annals of Internal Medicine*.

"Blood pressure fluctuates from hour to hour and day to day, and can skyrocket when introducing a life stress such as a medical appointment," said Benjamin Powers, MD, assistant professor of medicine at Duke and the Durham VA and the study's lead author.

"Current decisions about medical therapy are often based on one or two clinic measurements, which provide a skewed snapshot of a patient's level of control. It's clear that multiple measurements are needed."

The new study included 444 veterans with [hypertension](#) who were followed for 18 months. Researchers compared the results from three different approaches for measuring blood pressure: during a clinic appointment, at home with a blood pressure cuff, or in a "research setting," where multiple readings were taken in five-minute intervals.

Only 33 percent of patients were consistently reported as having controlled or uncontrolled blood pressure across all three settings. And no single in-office reading of systolic blood pressure between 120 and 157 mm Hg was sufficient to correctly classify a patient as in or out of control with at least 80 percent certainty.

“Measuring and treating blood pressure is one of the most common and important reasons for visiting a doctor but we lack a consensus in treatment guidelines on the setting, timing and total number of measurements that should be used for making treatment decisions,” Powers said.

Researchers found the accuracy of readings greatly increased after five to six measurements, but note that it is not practical to achieve this through clinic visits alone.

“Our findings support recent calls for increased use and reimbursement for home blood [pressure monitoring](#),” Powers said.

Monitoring blood pressure at home is becoming increasingly common. Recent surveys report approximately 43 percent of people with hypertension use home monitors.

Powers also contends that doctors who treat hypertension should consider adopting standards used in managing other chronic conditions, such as diabetes, where home monitoring provides essential information for treatment decisions.

“Hypertension is the most common reason older adults go to the doctor,” Powers said. “By shifting from clinic-based to home-based blood pressure monitoring, we could explore new models for telemedicine and create new efficiencies in care.”

Study co-authors include Maren Olsen, Valerie Smith, Robert Woolson, Hayden Bosworth, and Eugene Oddone.

Provided by Duke University

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