



# PRESS RELEASE

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## INSIGHTS FROM AMBULATORY BLOOD PRESSURE MONITORING IN PATIENTS WITH KIDNEY DISEASE

### Highlight

- Two studies examine potential benefits of blood pressure monitoring outside of doctors' offices for patients with kidney disease.

**Washington, DC (March 26, 2020)** — High blood pressure has a range of effects on the body that can influence both physical and mental health. Two studies in an upcoming issue of *CJASN* offer insights gained from “ambulatory” blood pressure monitoring, which is conducted while people go about their daily activities, including during sleep. This type of monitoring can provide more information than blood pressure measurements taken only in clinics.

In an analysis of 561 African Americans with and without chronic kidney disease who underwent ambulatory blood pressure monitoring, Paul Muntner, MD, Stanford Mwasongwe, MPH (University of Alabama at Birmingham), and their colleagues found that having kidney disease was associated with uncontrolled blood pressure measured in the clinic and outside of the clinic. Also, among participants with kidney disease, uncontrolled ambulatory blood pressure was associated with a higher prevalence of left ventricular hypertrophy, a marker of cardiovascular disease.

“Getting an accurate estimate of blood pressure is important for people with kidney disease given the association of blood pressure with cardiovascular disease and kidney disease progression in this population,” said Dr. Muntner. “The current study showed that a high proportion of people with kidney disease have high blood pressure when measured outside of the doctor’s office.”

In another study that followed 1,502 adults with chronic kidney disease for 4 years, Lama Ghazi, MD (University of Minnesota) and her colleagues found that ambulatory blood pressure patterns were not linked with cognitive impairment or frailty. “However, among participants older than 60 years, those who demonstrated at least a 20% drop in average systolic blood pressure from day to night—called extreme dippers—had a higher risk of developing cognitive impairment,” said Dr. Ghazi. Also, participants with masked hypertension (normal clinic-measured blood pressure but elevated ambulatory blood pressure) had worse physical functioning than participants with hypertension controlled with medication.

Dr. Ghazi noted that future research should assess links between ambulatory blood pressure and physical and cognitive function over a longer follow-up period.

An editorial accompanies the *CJASN* studies.

Muntner/ Mwasongwe study co-authors include Rikki M. Tanner, PhD, Bharat Poudel, MSPH, Daniel N. Pugliese, MD, Bessie Young, MD, MPH, Marwah Abdalla, MD, MPH, Solomon K. Musani, PhD, Orlando M. Gutiérrez, MD, Adolfo Correa, MD, PhD, and Daichi Shimbo, MD.

Ghazi study co-authors include Kristine Yaffe, MD, Manjula K. Tamura, MD, Mahboob Rahman, MD, Chi-yuan Hsu, MD, MSc, Amanda H. Anderson, PhD, MPH, Jordana B. Cohen, MD, MSCE, Michael J. Fischer, MD, MSPH, Edgar R Miller III, MD, PhD, Sankar D. Navaneethan, MD, Jiang He, MD, PhD, Matthew R. Weir, MD, Raymond R. Townsend, MD, Debbie L. Cohen, MD, Harold I. Feldman, MD, MSCE, and Paul Drawz, MD, MS.

#### Disclosures

Muntner/ Mwasongwe study: no financial disclosures beyond the Jackson Heart Study's funding by the National Institutes of Health.

Ghazi study: Dr. Hsu reports receiving a grant from and a scientific advisory board position at Satellite Healthcare; consulting fees from EcoR1 Capital Fund, Health Advances, and Ice Miller LLP; blood pressure devices from Microlife; and royalties from UptoDate, Inc., all outside of the submitted work. Dr. Kurella Tamura reports consultant work for Alkahest. Dr. Navaneethan reports receiving consultant fees from Tricida and Reta Pharmaceuticals and event adjudication committee positions with Bayer and Boehringer Ingelheim, outside of the submitted work. Dr. Townsend reports receiving consultant fees from Welch-Allyn. Dr. Anderson, Dr. D. Cohen, Dr. J. Cohen, Dr. Drawz, Dr. Feldman, Dr. Fischer, Dr. Ghazi, Dr. He, Dr. Miller, Dr. Rahman, Dr. Weir, and Dr. Yaffe have nothing to disclose.

The articles, entitled "Ambulatory Blood Pressure Phenotypes in Adults Taking Antihypertensive Medication with and without CKD" and "Association of 24 hour Ambulatory Blood Pressure Patterns with Cognitive Function and Physical Functioning in Chronic Kidney Disease," will appear online at <http://cjasn.asnjournals.org/> on March 26, 2020, doi: 10.2215/CJN.08840719 and doi: 10.2215/CJN.10570919.

The editorial, entitled, "Ambulatory BP phenotypes and their association with target-organ damage and clinical outcomes in CKD," will appear online at <http://cjasn.asnjournals.org/> on March 26, 2020, doi: 10.2215/CJN.02590220.

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