

# FROM THE NEWS DESK

## Addressing social determinants of health could reduce racial disparities in hypertension

Addressing social determinants of health could reduce racial disparities in hypertension and reduce excess cardiovascular disease among Black adults, researchers in a new study have concluded.

A research team from the United States looked at the association between social determinants of health - such as education and income levels - and incident apparent treatment-resistant hypertension (aTRH).

The team analysed data from 2774 White and 2257 Black adults taking antihypertensive medication from across the US. Participants were from a study called REGARDS (Reasons for Geographic and Racial Differences in Stroke).

Over a median follow up of 9.5 years, 24% of Black adults, compared with 15.9% of White adults, developed incident apparent treatment-resistant hypertension.

The research team found that social determinants of health contributed to a higher risk of incident aTRH among Black compared with White adults.

Social determinants of health included lower education levels, lower income, not seeing a friend or relative in the past month, lack of health insurance, living in a disadvantaged neighbourhood, and a lack of public health infrastructure.

Authors of the paper, published in the Journal of the American Heart Association, noted examples of interventions addressing social determinants of health that have successfully improved BP control among Black adults: for example, team-based

care delivered at barbershops serving mainly low-income Black men has been linked with a decrease in systolic blood pressure.

### Read the full paper:

Akinyelure, O. P., Jaeger, B. C., Safford, M. M., Oparil, S., Carson, A. P., Sims, A., Hannon, L., Howard, G., Muntner, P., & Hardy, S. T. (2024). Social Determinants of Health and Incident Apparent Treatment-Resistant Hypertension among White and Black US adults: the REGARDS Study. *Journal of the American Heart Association. Cardiovascular and Cerebrovascular Disease*. <https://doi.org/10.1161/jaha.123.031695>

## Using real-world data to identify effective hypertension drugs

A team in the United States will use data routinely collected in health care settings to identify the most effective hypertension drugs.

Researchers from Yale University will analyze data from more than 100 million patients held in five electronic health record databases in the US to compare the effectiveness of second antihypertensive drugs on major cardiovascular events, as well as their comparative risk on potential drug-related adverse events.

The project - 'Real-World Evidence to Inform Decisions for Hypertension Treatment Escalation' - will also look at the effectiveness and safety of each second antihypertensive agent in different patient subgroups based on age, sex, race, ethnicity and comorbidities - with the aim of addressing disparities for patients with hypertension.

The team said it is the first study of its kind using real-world data and reproducible methods to comprehensively evaluate the safety and effectiveness of second anti-hypertensive drugs added after monotherapy.

Yuan Lu, ScD, assistant professor of medicine (cardiology) and assistant professor of biomedical informatics and data science and of epidemiology (chronic disease) at Yale, recently received funding from the National Institutes of Health in the US for the project.

In a news release from Yale School of Medicine, she said: “The question is: when the first drug is not enough, what is the optimal second drug to add?”

“There are more than 50 drugs across five major classes available for treating hypertension. Conducting clinical trials to compare every possible drug and combination thereof is impractical; it would be incredibly time-consuming and costly.”

Lu said her team would combine the power of computing, data science and clinical knowledge to generate new evidence around effective antihypertensive treatment.

“We hope our research will inform the prioritization of future clinical trials, assisting investigators in selecting the most promising drug combinations for testing,” she said.

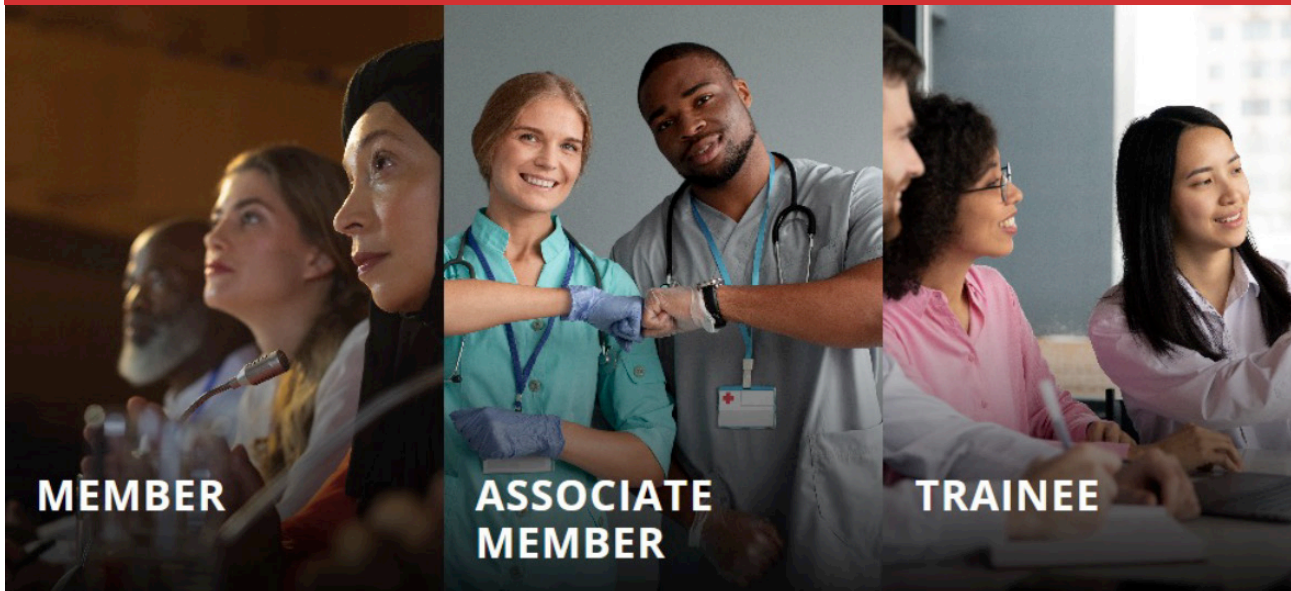
The team also hopes the research will inform the development of clinical guidelines.

Eventually, the team plan to develop a clinical decision support tool that would incorporate the knowledge gained from their project. The tool would help doctors quickly and easily see recommendations about the types of combination therapies that may work best for their individual patients.

Visit the Yale website to find out more:  
<https://medicine.yale.edu/news-article/research-real-world-data-effective-hypertension-drugs/>

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