

# Breakthroughs

Feinberg School of Medicine Research Office

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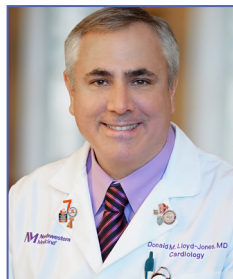


## Feinberg Leaders Tackle Cardiovascular Research and Advocacy in Chicago and Nationally

By Will Doss

The COVID-19 pandemic has exposed deep structural inequities in American health. Though vaccines are illuminating a path through the pandemic's tunnel, health inequities faced by many Americans remain. Chief among those problems are cardiovascular conditions; heart disease, obesity and diabetes represent an enormous disease burden, a burden that is not shared equally.

"COVID really brought to the fore how communities of color are disproportionately affected by disease — not because of any genetic predisposition, but because of the social determinants of health," said [Donald Lloyd-Jones, MD ScM](#), the Eileen M. Foell Professor and chair of [Preventive Medicine](#) and the newly elected president of the American Heart Association (AHA). "This is a major focus and I'm very excited to help lead Feinberg and the AHA in becoming a champion for health equity."



Donald Lloyd-Jones, MD

### A Close Partnership

Feinberg and the AHA have a longstanding partnership in translational science, with Feinberg participating in a nation-leading six Strategically Focused Research Networks (SFRN). The centers study topics including the arc of cardiovascular health from childhood across the life course, cardiovascular disease prevention, health disparities, atrial fibrillation, peripheral vascular disease and sudden cardiac death. The resources of Northwestern University, Feinberg School of Medicine and the Chicagoland area afford a unique opportunity to study a broad array of research questions, according to [Clyde Yancy, MD, MSc](#), the Magerstadt Professor, vice dean for [Diversity and Inclusion](#) and past president of the AHA.

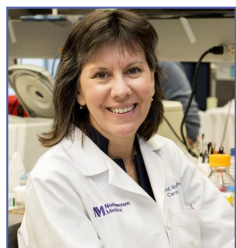


Clyde Yancy, MD, MSc

"In many ways, Chicago is an epicenter of the U.S.; things that work in Chicago are exportable and should work anywhere else," said Yancy, who is also chief of [Cardiology](#) in the Department of [Medicine](#) and a professor of [Medical Social Sciences](#). "This becomes an incredible incubator for the messaging and initiatives of the AHA."

**Cardiovascular Research** *(continued from cover page)*

[Elizabeth McNally, MD, PhD](#), the Elizabeth J. Ward Professor of Genetic Medicine, leads a SFRN that examines how sudden cardiac death intertwines with arrhythmia. Feinberg scientists are using genetic data from young patients who have experienced sudden cardiac death and arrhythmias, running large-scale analyses to tease out how these conditions are related, before testing the impact of variants in stem cell models of heart tissue.



*Elizabeth McNally, MD, PhD*

“Even with all the rapid advances in the genetics of arrhythmias, there are still many patients for whom we do not find clear-cut mutations,” said McNally, who is also director of the [Center for Genetic Medicine](#), a professor of Medicine in the Division of Cardiology and of [Biochemistry and Molecular Genetics](#). “This is because we don’t yet know all the genes, and in some cases the risk correlates with having combinations of gene variants. Because of this complexity, we are also studying how to better communicate genetic cardiovascular risk to patients and families.”

Lloyd-Jones is the fourth Feinberg faculty to ascend to the helm of the AHA, along with Yancy, [Robert Bonow, MD](#), the Max and Lilly Goldberg Distinguished Professor of Cardiology and the late Oglesby Paul, MD. This means the connections between Feinberg and the AHA are deeply intertwined and capable of spawning new initiatives, including new investigations studying the social determinants of health.

“I think we have many more things to discover at a very basic science level about health and disease,” Lloyd-Jones said. “But I think that we must also transform our approach to improving public health.”

**Bettering Public Health**

Inequalities in the delivery of healthcare are present in clinical cardiovascular care, from underfunded hospitals in poor neighborhoods to areas that may not have adequate care capacity at all. Potentially more important, however, are broader

social determinants of health: jobs, housing, education and nutrition that greatly impact an individual’s cardiovascular health. This is especially the case for children who already bear a disproportionate burden of potential cardiovascular disease risk, despite their young age.

For clinical care, the AHA operates the [Get with The Guidelines](#) program, encouraging hospitals to monitor and implement metrics that improve cardiovascular care quality. Discharge checklists can help ensure patients go home with the prescriptions they need, or are connected to the appropriate rehabilitation and therapy providers. All of which can help produce long-lasting change in the cardiovascular health of patients, according to Lloyd-Jones.

“This is very much in the AHA’s sweet spot because it is so tightly linked to many health systems across the country,” Lloyd-Jones said. “Implementing the Get with the Guidelines modules actually abolishes racial disparities in care received and health outcomes.”

To study and hopefully improve the impact of social determinants of health on cardiovascular disease, the AHA has committed to invest \$100 million by 2024 through [social impact funds](#); grants or loans to local organizations and businesses who can address social cohesion, employment, food access or education. The funds are current operating in Boston, Chicago and Flint, Mich.

“We’re committed to improving the social position of our neighborhoods so that there isn’t a 16-year-difference in life expectancy across zip codes, such as from South Chicago to right here where I’m sitting in Streeterville,” Lloyd-Jones said.

These programs are a reflection of the public health mission of both the AHA and Feinberg, according to Yancy.

“To state that Feinberg and the AHA are in simpatico, still doesn’t fully capture the natural alignment in research, advocacy and leadership,” Yancy said. “We are aligned with AHA as advocates for lives free from heart disease and stroke; we are aligned as researchers to explore cardiovascular science; and we are connected as investigators to discover meaningful next steps for all people to realize their best health.”

Cardiovascular disease is unlike other chronic non-communicable diseases such as cancer; 80 to 90 percent of cardiovascular disease is preventable, according to Lloyd-Jones. The synergistic relationship between the AHA and Feinberg strives to improve cardiovascular health both in the clinic and in the community, with the goal of reducing the burden of cardiovascular disease — especially for populations who are disproportionately affected.

“There are really important things we need to do better to implement our knowledge into care settings so that we help our patients prevent and receive better treatment for cardiovascular disease,” Lloyd-Jones said. “Beyond that, we also need to design better public health; better ability to access healthy foods and safe spaces for exercise. All of these things would be transformative and realize a shared aspiration to prevent cardiovascular disease.”

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