

Evidence Matters

By Robert Harrington, M.D., FAHA, President, American Heart Association. Presented Sunday, Nov. 17, 2019, during the 2019 Scientific Sessions.

Greetings and good afternoon. I hope you are all enjoying the 2019 annual Scientific Sessions

organization committed to public health, people trust us. Along with that trust comes an obligation to accurately communicate the evidence and its implications. This goes beyond publishing our science. We need to combat the misinformation that can be so damaging to the health of our patients and the public.

On the other hand, of course, it's exciting to pursue ideas that might make a real difference in the lives of others. I see that excitement in students and early career scientists. But some of you may still be sorting out career choices and considering a life spent pursuing new ideas. This leads

we [e committed to strong advocacy to protect and expand essential funding options, particularly the NIH and other federal research agencies

Let me tell you a little about what led me to the pursuit of evidence. / [À o Á Ç • v Æ] /
to figure out clinical problems. I fully understood. Luckily for me, that [• I Ç o % Æ Š
the evidence generation cycle. t [o o } u more of the cycle later.

When I began my cardiology fellowship at Duke University in 1990, a major problem in interventional cardiology was coronary thrombosis during balloon angioplasty. In the present era and all we had was unfractionated heparin and aspirin. These clots could close vessels, so our patients needed urgent bypass surgery. Some had myocardial infarction and some died. We needed solutions. And fortunately for me, I had the chance to pursue clinical questions in a supportive environment with mentors like Rob Califf, Richard Stack and Kerry Lee.

So, what did we need to solve this clinical problem? The basic science in thrombosis and vascular biology. Á • v [Š v. We had to stratify the risk of our patients and test whether novel antithrombotic therapies could modify that risk. The evidence needed for the clinical development of these drugs required a series of large-scale, often global, randomized clinical trials, many designed and coordinated by our research group, and implemented with hundreds of collaborators worldwide. These clinical investigators recruited tens of thousands of patients. Teams of study coordinators and research assistants collected the data we needed.

As an interventional fellow and junior faculty member, I was increasingly included in protocol design discussions, steering committees, and in learning how to coordinate these global trials. I learned how to assemble, analyze and present the data at meetings and ultimately to

more resources are needed. What if we created a nationwide learning healthcare system? And could we do this worldwide? Because evidence matters, we need to find a way!

^} (Æ U Á [À v o}}| In my favorite prior patches of clinical trials and outcomes research. But some of you are pursuing careers in epidemiology, health services or health policy research, trying to benefit populations. The AHA thinks about that kind of research too, especially when we set organizational goals. You may know that in 2000, we set a goal of reducing deaths from coronary heart disease and stroke in the US by 25% by 2010. Our metrics were age-adjusted death rates provided by our partners at the CDC. We worked especially hard to foster evidence-based therapies via guidelines, performance measures and quality improvement initiatives. One of the most impactful QI initiatives has been Get With the Guidelines, which continues to help healthcare providers improve the acute care and prevention they deliver, now in nearly 2,500 hospitals in the US and proudly in partnership with hundreds more worldwide. Altogether, we did very well, accelerating the decline in deaths that had begun decades before. While we also had some success in reducing disparities in care, substantial health inequities still persisted at the end of that decade, and we took that into account as we moved toward the next ten years.

In 2010, we announced our next goal: W ^ Ç î î î ì U š }] u % Æ } À š Z AEL] } À • Americans by 20 percent, while reducing deaths from cardiovascular diseases and stroke by 20%. Æ v š X _ t] š Z ALZ u % Æ] E v • U _ ^ Á to be doing everything through a health equity lens, and we expanded our reach to address ALL cardiovascular diseases as well as stroke. We started off well, but the decline in deaths began plateauing around 2014 and there

been an increase in age-adjusted stroke deaths over the last four years. The unfortunate reality is that our progress has stalled.

On a scale of 1 to 10, with 10 being the highest, how much does the flattening of the death rate worry you?

Statistics show pockets of success, such as with our old foe coronary heart disease. Deaths from coronary heart disease have declined more than 20% over this period, and the decline is seen across racial and ethnic subgroups. While we're close to full equity, there is progress. Heart failure, on the other hand, seems to be responsible for at least part of the plateauing. And although recent advances in acute treatment hold promise.

Population data, another important form of evidence, tells us that improvements in cardiovascular health are strongly related to education, income, and race. And not even more than genetic code. This recent study reported that low-income counties in the U.S. had less improvement in cardiovascular health than high-income counties. In an upcoming AHA Presidential Advisory points out a major health divide between urban America and the 60 million people living in rural communities. So when we look at the entire landscape, we see opportunities to make a difference. This has nothing to do with ideology. This is about truth. Because evidence matters.

Evidence also matters in issues such as diversity in the workforce. Investigators who choose the science they do are often more sensitive to the needs of others like themselves, and those of us who train and hire them need to find and nurture individuals reflecting our diverse population.

Over the last 30 years, I've mentored and trained hundreds of individuals. As a department and cardiovascular medicine.

A particular type of student I've seen is the first-generation college student. Not only was I the first person in my family to attend college, I think I was the first in my neighborhood. I can relate to the struggles these students face—everything from imposter syndrome to not understanding career opportunities that might be readily available. First-generation medical students face many of the same issues. I'm personally committed to helping them. I've shared this story on a blog, and sometimes a path will share your time and expertise with these students and trainees. Sharing your story is a way of making another kind of

AHA is fully invested in using big data resources, technology tools and novel computational methods to better understand issues related to heart disease in women. The AHA has partnered with the American Heart Association's Go Red for Women campaign to engage a million women to contribute their health data for investigation into heart and brain health. With the input of these women, we will design a competitive research portfolio that addresses their needs and concerns.

Different as they are, these examples share a common theme: vast amounts of data alone are not enough. The evidence gleaned from analyzing data matters.

As we come to the end of our journey, let us go back to where we began with one more message for our career investigators and clinicians.

This is the most exciting time ever to be engaged in science and its application to clinical medicine and public policy. Sure, we have challenges. But every generation has challenges. What makes our opportunity so wickedly spectacular is that we have unprecedented ways to gather data and to generate insights at a scale and speed our predecessors dreamed about. I believe in our future because I believe in everyone everywhere who is creating it. Together, we will provide the curiosity to raise the right questions, the passion to find the answers, the willingness to publish and speak the truth to decision makers, and a commitment through an equity lens

that evidence for the decisions we make. A world of longer, healthier lives will be the ultimate evidence of our success.

Thank you.