

*John Clymer:*

Hypertension is a major cause of stroke, heart failure, kidney disease, vision loss, and cognitive decline. It doesn't just kill people; it disables millions, keeping them from earning a living, providing for their families, and just doing things they enjoy. Forty-five percent of adults in the US, about 108 million people, have hypertension. Only one in four has it under control. But it does not have to be that way.

Hi, I'm John Clymer, Executive Director of The National Forum for Heart Disease and Stroke Prevention. Welcome to the 2023 Midyear Virtual Convening. We know how to prevent and control hypertension. We know how clinicians can work as a team to empower people to control their blood pressure and maintain their health. Every segment of today's convening will include actions that you can take as early as next week to improve hypertension control and equity.

Now, I want to share a few housekeeping details with you. First, an expression of gratitude to The National Forum's contributing members: Amgen, AstraZeneca, Johnson & Johnson, Bristol Myers Squibb, Pfizer, Novartis, Boehringer Ingelheim, and Merck. Their generous support makes possible today's convening of organizations committed to health equity and optimal cardiovascular health. Second: this meeting is being recorded. The National Forum will send you a link to the recorded meeting so that you can refer back to it and share it with colleagues who cannot attend right now.

Third: please feel free to share your comments and watch for resource links in the Zoom chat box. If you have a question for one or more of the speakers, use the Zoom Q&A button to pose it. We'll collect those questions throughout the segments and try to answer as many as possible during the Q&A time. But with so many participants today, I hope you will understand if we can't get to all of the questions. Fourth: you can find the speakers BIOS sketches, slides and resources here in Zoom and on the webpage for today's meeting.

Fifth: The National Forum wants to know what you think about this convening. Towards the end of the meeting, we will put a link to an online evaluation in the chat box. Please click on the link and take a couple of minutes to fill out the survey while the meeting is fresh in your mind. And, finally, we encourage you to post your thoughts about this convening on hypertension control on social media. Please use the #NFHTN23. Speakers Twitter handles will

appear on screen and are on the event webpage at National Forum dot-org.

Now, I'm pleased to introduce our first speakers. They will tell us about a successful pilot that harnesses text messages and a community clinical intervention that improves hypertension control and equity. Karol Watson and Keith C. Ferdinand are well-known to many of us, so I will keep this brief. Professor Watson is director of the UCLA-Barbra Streisand Women's Heart Health Program, co-director of the UCLA Program in Preventive Cardiology, and a member of The National Forum Board of Directors. Dr. Ferdinand holds the Gerald Berenson Endowed Chair in Preventive Cardiology at the Tulane University School of Medicine, and is past chair of The National Forum. Dr. Watson?

*Karol Watson:* Thank you so much. It's such a pleasure to be here speaking with one of my favorite people in the entire world: Dr. Keith Ferdinand. And talking about one of my favorite topics, hypertension. So we're gonna start off by talking about this study "Text My BP Meds Nola". It's a pilot study conducted by Dr. Ferdinand and his colleagues that addresses the benefits of self-measured blood pressure with daily text messaging prompts on medication adherence, quality of life, and lowering blood pressure. The study demonstrated that mobile phone text messaging interventions may be used successfully to reduce blood pressure in these resource-limited communities. So Dr. Ferdinand, thank you so much for having this discussion with me. Can you tell me who was the target audience for the study?

*Keith C. Ferdinand:* Well, first of all, I like to thank The National Forum, and, of course, you Dr. Watson for this opportunity. Text My BP Meds is the somewhat slogan that we use. The actual name of it is: "Simple Text Messaging To Increase Hypertension Medication Adherence". And it was funded by the National Institutes of Health. Our target audience was a combination of persons with hypertension that were in my cardiac clinic, and people from the community. And what we were trying to see if there are some novel means by which we can improve adherence to blood pressure medications.

*Karol Watson:* Great. Well, how exactly was adherence to hypertension medications increased? Like, you showed some benefits. How do you think that happened?

*Keith C. Ferdinand:* Well, first of all, you know, adherence is terrible. Even if you look at many of the randomized trials, like SPRINT, people do really

well. Once they get out of the trial, the blood pressure drifts back to baseline. And across the population of people with hypertension, it's perhaps more than 50 percent after two years. So what we did was we got persons who had hypertension, this is New Orleans, this is in the South. Ninety percent were African Americans, a fourth of them had diabetes, many of them were female. So these were the typical patients that you would see in the clinic setting and in the community setting. We partnered with Healthy Heart Community Prevention Project, our longstanding community outreach program.

And here was the idea. I wouldn't do anything as a physician. I wouldn't write prescriptions. I wouldn't call. I wouldn't intervene. And just see if we were somehow able to give them a valid blood pressure device, then have the information Bluetoothed back to medical students with text messaging going back to the patient's to remind them to take their medicines, adhere to their diet, etcetera, whether it would make a difference.

*Karol Watson:* That's fascinating. So it's pretty clear from your description, that there is a strong connection between the community and whatever intervention you were doing. Can you describe the importance of that, and exactly how you did that?

*Keith C. Ferdinand:* So Tulane University is an academic medical center, but our partner was the Healthy Heart community prevention project. As you know, my spouse, Dr. Daphne Ferdinand, has a Ph.D. in nursing. And she's been doing community outreach for a long time. So –

*Karol Watson:* You meant your better half, I think. But go ahead.

*Keith C. Ferdinand:* All right. My better half. You got me.

*Karol Watson:* I'm sorry for interrupting.

*Keith C. Ferdinand:* *[Laughter]* And, you know, she's been doing community interventions for decades. So some of the patients I had never seen before, other patients I had seen in the clinic setting, but during the trial, and this was a true trial, we did not know what would be the outcome. I did not talk to the patients. They didn't come in for a visit. And over eight weeks, what we saw was that there was an increase in adherence, and, to our surprise, an increase in blood pressure control.

*Karol Watson:* That's fantastic. And we all know how hard it is to achieve any level of blood pressure control. So it's phenomenal that you were able to see that. So what were the main outcome measures in this trial?

*Keith C. Ferdinand:* The main outcome was the home blood pressure. We did two blood pressures in the morning, two blood pressures in the evening. And then adherence, we use a simple tool. It's called the crew Krousel-Wood Adherence Scale, in which the patients would fill out a form electronically, as to whether or not they were adhering to their medicines. And what we saw was, from a mean blood pressure of 141, we dropped the systolic blood pressure mean of 10 points. And adherence scores went up. Some improvement in quality of life, but not statistically significant.

Here's what I think happened. If patients are in a clinical trial, we know they get more attention. But many times the clinical trial is the use of a medication and device. In this particular case, the clinical trial was check your blood pressure, we're going to see it, and we're going to talk back through text messaging.

*Karol Watson:* That's fantastic. So I mean, I guess what we can conclude from this is that, you know, this pretty, I mean, it was high tech, but pretty simple intervention, where you just were feeding back information. You were getting the information from the patient. You were giving them text message reminders, and things improved. So any other conclusions you take from this study?

*Keith C. Ferdinand:* Well, there's no magic bullet. And I'm certainly not going to suggest that this is going to overcome the disparities that we see in hypertension across multiple racial ethnic minority populations, not just African Americans. We've seen this in certain Hispanic populations, certain Asian American populations, persons who don't have insurance, persons who are disadvantaged So I'm not making the case that we found a solution to all of those overarching disparities in hypertension control.

But here's what I think it suggests. If you provide patients with valid blood pressure devices, and we were able to do that. We were able to have, in the grant, the means by which we could give the person a valid device. And you're able to keep patients in some contact with the clinicians. In this particular case, it wasn't the doctor; simple medical students. They didn't do anything with the medicine.

*Karol Watson:* Medical students might be the most effective.

*Keith C. Ferdinand:* It might be better than the doctor.

*Karol Watson:* They have more time and more investment. I think it's a fantastic marriage of, you know, different clinicians helping out.

*Keith C. Ferdinand:* Well, there's certain barriers of course. We know that most insurances don't pay for valid blood pressure devices. And the reason I keep saying valid, we didn't go to a big box department store and just buy something off the shelf. We went to Validate BP dot-org. We got devices that worked. We use applications, both to see the blood pressure and respond. Both of the applications were tested in peer-reviewed literature. So it takes a lot in order to do something like that. And I'm not going to suggest that we can go to community centers, and usual practices, and easily replicate these outcomes.

But here's what it does suggest: shared decision making where the patient participates in his or her care. Patients understanding the importance of blood pressure control. And patients being able to communicate with the clinical setting, even if it's just text messaging, will increase adherence. And blood pressure medicines work. We know that. If patients take their medicines, their blood pressures will improve.

*Karol Watson:* And giving patients a sense of control of their own health. That always helps, and bringing things closer to the community, you know, always works. So congratulations on this important study. Do you think it can be sustained? And how what would it require to sustain efforts like this?

*Keith C. Ferdinand:* Yeah, boy, that's the big question. We know that people who have valid blood pressure devices tend to do somewhat better. The first hurdle is to make sure that those same populations who are disadvantaged are able to get these devices, we had a grant. So that's not the same as just telling persons to go out and buy a valid blood pressure device. We also know that medical students are not going to be available in all clinical settings. So perhaps we can use nonprofessional medical clinicians.

What does that mean? Community health workers. It could be someone who doesn't even have letters behind his name, or her name, who is able to communicate with the patient using text messaging. Some of the centers around the country are trying to integrate it directly into the health electronic record, where they can see what the blood pressure is doing at home. Now, doctors specifically kind of recoiled in horror with something else being

dumped into the medical record, because we have so much that we have to look at on an ongoing basis. We get X rays. We get blood tests. We get messages sent by nurses. So it can be really difficult.

But I think what it does suggest is that the magic 15-minute visit, two to three times per year, is not going to control a condition that people live with 24/7, that is a chronic ongoing condition. And if patients don't control blood pressure, we know what happens: heart attack, strokes...

*Karol Watson:* We know what happens...

*Keith C. Ferdinand:* ...chronic kidney disease, and stage renal disease, peripheral arterial disease.

*Karol Watson:* Cognitive decline. We know what happens.

*Keith C. Ferdinand:* Yeah. Yeah.

*Karol Watson:* It's all bad. So you did this in New Orleans, a community where you have such deep roots. And, literally, if I go there and mention your name, I'm not more than one to two people away from someone who knows you. Everyone knows you. So you getting things done in your home community makes sense. How can it be implemented in other communities?

*Keith C. Ferdinand:* Well, it was an academic community collaboration. I think those of us who want to do research and want to do interventions need to partner with community groups, use trusted messengers. The Trusted messenger doesn't necessarily mean physicians. It could be ministers. It could be neighborhood leaders, people who belong to social and pleasure clubs, and work with them in order to inform and educate patients, even if it's just a clinical trial. Talk about the benefits of the trial, and how it may help advance science, and help people in the future.

I don't think we can just sit back in clinical settings, and wait for people to come in with heart attacks, strokes, and heart failure. That's not going to bend the curve. In fact, cardiovascular mortality is going up. It makes more sense to do community interventions, academic community collaborations, and that way we can control these chronic conditions. Just waiting to people show up with acute events, I don't think is going to bend the curve. And the proof of the pudding is that we're not seeing the decreases in cardiovascular diseases that we've seen previously. We are now seeing increases in mortality.

*Karol Watson:* You are absolutely right. And this is something that I don't think a lot of people realize. After decades of reductions in cardiovascular mortality from the 50s up, until the 2000s and something, we got complacent. We got used to things just going the right way. Things started to flatten out around 2010 and 2015. And since 2015, the numbers have ticked up. We are seeing more people dying of cardiovascular disease every year than the year before. That's unacceptable. So we've got to do something different. And I think you're exactly right, that bringing healthcare closer to the community, that's never the wrong answer. So I think your intervention makes so much sense.

*Keith C. Ferdinand:* If I can make one more point that I think is really important. If you look at the disparities in cardiovascular disease, especially in the African American community, Black Americans, there's a White/Black mortality gap. So I'm not talking about social science. This is not about a bad tweet, awkward Facebook posts. We're talking about life and death, itself. And this White/Black mortality to cap is mainly driven by cardiovascular disease. The two main cardiovascular risk factors are elevated LDL cholesterol and elevated blood pressure.

If we don't control these risk factors, what we're going to see is that we will continue over the next five, ten years to have this White/Black mortality gap. And if we do that, we will not have equity in our society. So I think it's a justice. It's a fairness issue. It's not social science; it's life and death, itself. We need to address these cardiovascular risk factors.

*Karol Watson:* And one of the really important things you guys did was institute self-monitoring of blood pressure. Giving people control of their own health has been shown so many times to improve control. What can The National Forum members do to increase the use of self-monitoring blood pressure?

*Keith C. Ferdinand:* National Forum should continue to lobby or push our providers to get access to these devices, see if we can get them paid for, seek grants, nonprofits, and then educate people how to use their blood pressures at home. And in all cases, even if the person doesn't have a valid device, when you go to the clinician, they check your blood pressure, don't let them tell you it's okay. Know your numbers.

*Karol Watson:* Couldn't agree more. Well, thank you. This has been so illustrative and so invigorating. I love everything you do, and you've been such a leader in this field. Is there any final words you'd like to share with National Forum members?

*Keith C. Ferdinand:* Well, I'm proud to have been a member of the National Forum leadership for many years, and I'm so glad to see that they're keeping the faith. They're moving forward. They're addressing cardiovascular disease, and burdens of heart attack and stroke across all populations.

*Karol Watson:* Thank you so much, my friend. And thank you for doing the good, hard work that you've done for a lifetime. Thank you all for joining us.

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