John Clymer: Our next speaker is Tom Frieden. Dr. Frieden is the President and CEO of Resolve to Save Lives, and a former director of the Centers for Disease Control and Prevention and New York City Health Commissioner. Dr. Frieden.

Dr. Frieden: I'm so glad to be with you today. I'll be addressing what is the single most neglected and the single most widespread pandemic of our time. Every year, nearly two million people in the United States suffer a heart attack or a stroke, and close to a million of them die from it. Every year, this costs our economy more than $400 billion in direct and indirect health costs, and every year this is the single largest contributor the difference in life expectancy among Black Americans and White Americans. Cardiovascular disease is public health enemy number one. It's the number one killer both in the U.S. and worldwide.

Hypertension is itself the deadliest and most neglected of all health conditions. If we look globally, hypertension kills 15 times more people than HIV, but receives less than one percent of the funding that HIV receives. Support for HIV prevention and treatment decreased AIDS deaths globally by two-thirds, saving nearly 1.5 million lives every year over the last 20 years, between 2004 and today. In those same 20 years, when HIV deaths were decreasing by two-thirds, by one-half million deaths per year, what happened to hypertension deaths? They increased by 3 million deaths per year, from 8 million to 11 million globally. Support for hypertension control can save millions of lives.

If we look globally, more than 50 million lives are in the balance over the next 25 years. If we keep on doing what we've always done, we'll get the results we've always gotten, which is because of the aging and growing population, an increasing number of deaths from hypertension down from in 2004, as I just mentioned, about 8 million up to today, about 11 million, and going up to 14 million by 2050. That's what will happen if we don't change what we're doing. But if we can achieve the basic goal all over the world of at least half of all patients with high blood pressure in every community having it under control, and in countries like the U.S. we should certainly be able to get the two-thirds or 70 or 80 percent under control, at least to 140 over 90. That will reduce the number of deaths per year and instead of an increasing number of deaths globally, we'll have a decreasing number, and what you can see in the best health systems around the world and around the U.S. is that heart disease and stroke are quite preventable. Many, likely most, of the heart attacks and strokes that happen today could have been prevented with today's low-cost effective

technology, but we won't get there without a different approach.

Million Hearts relies on both community and clinical prevention, looking at how public health and healthcare can work together; in the community, tobacco control, sodium reduction, and promotion of low sodium salt to increase potassium levels and transcend elimination; on the clinical side, the ABCs, aspirin, blood pressure, cholesterol, smoking cessation, supported by health information technology and clinical interventions. Globally, hypertension control can save more lives than any other healthcare intervention, because hypertension kills more people than any other condition and more than all infectious diseases combined. It's the leading risk factor for preventable death worldwide. Every 20-millimeter increase in systolic blood pressure starting at 115 over 75 doubles vascular mortality between ages 35 and 69.

Now, the fact that it begins to increase the death rate at 115 emphasizes that it's not enough to improve treatment, though we must do that. We also have to improve prevention, and our best way of doing that is by improving the sodium potassium ratio, reducing sodium consumption, increasing potassium consumption, including through the use of low sodium, potassium enriched salt. Most people with hypertension globally do not have it under control. Only about 1 in 7 people with hypertension worldwide have it under control. Hypertension in the U.S. has better control, but not well. For more than $4 trillion a year, we can't even get the single most important thing that healthcare can do right at the time. That's pretty pathetic, to be frank.

Eighty-one million Americans have hypertension; 64 million are aware of it. Most of them are on treatment, but only 35 million are controlled. That means nearly 50 million Americans have uncontrolled high blood pressure, and that's just with the 140 over 90 target. For many people, 130 over 80 is a much more appropriate target. Just think about that. Close to 50 million people, every second of the day their heart is beating, pounding into their brain, into their heart, into their kidneys, increasing the risk that they'll have a stroke, a heart attack, kidney failure, be disabled, or die, leaving tragedy behind, preventable tragedy.

The disparities are even more shocking. About one in four Black American adults has uncontrolled hypertension, and about one in seven White American adults have uncontrolled hypertension. These are shockingly high rates for both Blacks and Whites, and we need to do so much better. Of all adult primary care interventions, improvement in hypertension control can save the

most lives. This is a really dramatic finding, that blood pressure control is far and away the most lifesaving of all of the interventions. But we've lost momentum controlling hypertension. We saw a steady increase from 2000 to 2010. Since 2010, we've basically stagnated. We have not been able to see a steady increase. Now, Korea, Canada, Costa Rica are all at 50 percent control or higher. Canada was almost at 70 percent control before they had some problems and dropped down to the low 60s. But there's no reason we can't have two-thirds of Americans with hypertension controlled. Just think about it. More than $4 trillion and we can't get the most important thing done right even half the time.

We've not yet bridged the implementation gap, the gap between what we know and what we do. We have prevented a lot of heart attacks and strokes. That's what drove the increase in life expectancy in the US. But there are many heart attacks and strokes preventable today that we're not preventing. That's the implementation gift. There's also a knowledge gap. We need to know how to do some things better. We know that there are many hurdles for blood pressure control. Screening isn't done, diagnosis isn't made, patients don't show up, that measurement is inaccurate. There may not be a clear treatment protocol. There are drug shortages or difficulties patients getting drugs. Therapeutic inertia is a big problem. Doctors see a high reading, they don't intensify. It's a big mistake. Sometimes the private sector isn't well regulated. The patient flow in clinics may be very difficult. There may not be a reminder on recall systems. Even the smallest copayment can deter adherence. There may not be the right information system. Adherence is only one of many problems. Healthcare providers kind of blame adherence, but frankly we've seen from Kaiser Permanente and other facilities and other systems, easily 80, 90 percent control rates. But it means focusing.

The WHO Heart’s approach is highly effective. In fact, it was adapted from what Kaiser Permanente showed, a standard protocol, reliable drug supply, team-based care, patient-centered services, and an effective information system. Self-measurement of blood pressure is a patient-centered service. Scientific evidence shows that self-measured blood pressure monitoring, also known as home blood pressure monitoring, with clinical support, helps people with hypertension reduce their blood pressure. It can improve access to care and quality of care for people with hypertension while making blood pressure control more convenient and accessible. CMS should approve the national coverage determination proposal to allow Medicare coverage of

validated devices for home use as durable medical equipment. Frankly, this is a no-brainer. We're talking about $30.00, $40.00, $50.00 for a piece of equipment that's going to last for years and will prevent strokes and heart attacks that are very expensive.

Self-monitoring blood pressure is not the be-all and end-all. It's not going to solve all of our problems, but it's part of a solution. Some health systems do better than others. I've mentioned Kaiser Permanente before. Before Kaiser focused on this, their control rate was below the national average, only around 40, 42 percent. Once they focused on it, they got to 90 percent control, that includes in their Medicaid population. They did that by first and foremost agreeing that it was important, agreeing that the single most important indicator of how a health care system does is whether or not it controls hypertension. They agreed on a simple treatment protocol that improves the quality of care, it reduces medication costs, it reduces malpractice.

I'm going to tell you a story. I have a relative who has uncontrolled blood pressure, and they called me last night, and they said, “Oh, I'm on lisinopril and metoprolol. My blood pressure was way up. The doctor added irbesartan. Now, it's not malpractice, but it's really close to malpractice. There's really no reason that person shouldn't be on a much better regimen. So, there's so much bad care, and bad care happens because we don't follow protocols. When doctors go to medical school, they take the part of our brain out that allows us to follow protocol. Nurses and pharmacists are much better at that. Kaiser Permanente uses a team-based system with nurses and pharmacists, and they make sure that it's not just the primary care doctor's responsibility. Any healthcare worker who identifies an elevated blood pressure needs to ensure that something is done about it. Now, why does Kaiser do this? Do they do this because they're better doctors? Not particularly. Do they do this because they care more about their patients? Not particularly. They do it for one reason and one reason only. They do it because the financial incentives are aligned. Kaiser knows that if someone has a heart attack or a stroke, that's going to cost them a lot of money.

In the rest of our healthcare system, if someone has a heart attack or a stroke, hey, that may be a whole lot more revenue, or angioplasty, or stent placement, but that's a terrible way to run a healthcare system. The WHO Heart Strategy can triple blood pressure control rates. This is actual data from Bangladesh, where the control rate went from around 20 percent to more than 60 percent, and this is the actual number of patients with blood

pressure under 140 over 90 treated in the most rural areas all around the country, covering about a quarter of the country now, up to 300,000 patients with blood pressure documented to be controlled up from close to zero. Improving blood pressure control in the U.S. would save millions of lives. Here's a quick estimate. If we had another 50 million people controlled at 90 percent control, that would prevent something like 600,000 heart attacks and strokes and save about 200,000 lives just in this country every single year, and it's doable. The medications cost pennies. The systems require that we support patients and hold ourselves accountable for controlling blood pressure and emphasize that this is the single most important thing that a healthcare system can do.

Now I also want to talk about prevention. Excess salt increases blood pressure. There are about three million deaths every year because of excess salt consumption. Globally, about 1.6 million lives could be saved each year by reducing sodium consumption by 30 percent. There are important opportunities here. Front-of-pack warnings, promotion of low sodium salt, food specific targets, government buying standards, and weakest, but in conjunction with the other, government buying standards — I'm sorry, educational approaches. Salt reduction interventions can be effective. In the United Kingdom, salt consumption was quickly reduced by focused effort. Blood pressures fell and deaths fell as well.

FDA guidance on voluntary sodium reduction targets was issued in 2021, but mandated reductions with mandatory maximums are more effective and new interim voluntary targets are needed. The first 2.5-year period ends now, in April 2024, and FDA has suggested this kind of an approach, high in saturated fat, sodium, added sugar — actually, I don't think this is optimal because there isn't great nutrition literacy. Someone may think “That's good, right? I want something that's high in it.” I think we should say something along lines of excess, or too much, or dangerously high in. Front-of-pack warnings are challenging in the U.S. because the regulatory process is slow, obstructed by industry interests, and obstructed by the current judicial context. We can, though, think about promotion of potassium enriched, low sodium salt. Potassium enriched, low sodium salt is one of the latest interventions that can make a really big difference. Just think of it. You change the brand of salt you use and you reduce your risk of a heart attack, stroke, or death from a heart attack or a stroke by 10 or 15 percent. That's pretty amazing. It doesn't need to cost more than $10.00 or $20.00 a year or less to change the brand. We need to think about how to increase the use of low sodium, potassium-

enriched salts. No country has really done that in a systematic way. The U.S. could take action.

Fundamentally, we need to change the way our healthcare system pays for care. There's no reason, theoretically speaking, why a facility that has a patient whose blood pressure was uncontrolled and who has a heart attack or stroke shouldn't have a substantial financial penalty for having failed to do that. It's not ‘cause I want to penalize anyone. It's because I know that if that were the case and if it were paired with a substantial financial reward or control, it would change dramatically the dynamic. It would increase dramatically the proportion of people whose blood pressure is controlled. We can't allow our system to keep pretending that it's doing a good job. It's not. We have some of the greatest medical care institutions in the world and one of the worst healthcare systems in the world, and one essential driver of health progress, one way of resuming the increase in life expectancy in the U.S. is by controlling hypertension and preventing it as well with sodium and potassium measures.

So with that, thank you very much for what you do, and let's go from calls to action to action. Let's go from resolution to change. Let's go from stagnation to progress, controlling hypertension, preventing heart attacks and strokes, extending healthy life expectancy and making our healthcare system work for Americans. Thank you.

John Clymer: Thank you, Dr. Frieden. Your call to action is clear. We must drive the system and environmental changes by which we can halt the growing hypertension pandemic.

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