Center for Strategic and International Studies

TRANSCRIPT

Event

"Book Launch – The Formula for Better Health: How to Save Millions of Lives – Including Your Own"

DATE

Wednesday, October 15, 2025 at 4:00 p.m. ET

FEATURING

Tom Frieden, M.D.

Former Director, CDC; President and CEO, Resolve to Save Lives; and Author, "The Formula for Better Health"

Julie Gerberding, M.D.

Former Director, CDC; CEO, Foundation for the National Institutes of Health; and Co-Chair, CSIS Bipartisan Alliance for Global Health Security

CSIS EXPERTS

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J. Stephen Morrison:

Welcome. I'm J. Stephen Morrison, senior vice president here at the Center for Strategic and International Studies – CSIS – in Washington, D.C.

We're delighted tonight that the CSIS Bipartisan Alliance for Global Health Security can host this event in honor of Tom Frieden's – the occasion of the publication of Tom Frieden's new book, "The Formula for Better Health." Congratulations, Tom.

Julie Gerberding, president and CEO of the NIH Foundation and former CDC director, will moderate the conversation. She and former Senator Richard Burr co-chair the CSIS Bipartisan Alliance. Tom has been a very active member of the alliance, and I'm grateful to both of you for all of your contributions.

I'd like to welcome everyone who's here in person today, including those members of the China Medical Board. A reception and a book signing will follow. I want to welcome everyone who's coming online. We will post the video and a transcript on the CSIS homepage, CSIS.org.

Special thanks in order to my colleagues Michaela Simoneau, Sophia Hirshfield, and Caitlin Noe; to the production team, Arturo Munoz and Qi Yu; and to the staff at Resolve to Save Lives who helped us put this all together. We have Priya Parikh with us this evening.

We'll be selling copies of the book at the reception. Marianne Wald from the East City Bookshop, Capitol Hill's best bookshop – (laughter) – will be downstairs selling books where we can have a signing during the reception.

Tom will explain many things to us tonight in this conversation, including Cassandra's curse, I'm hoping. I want to quickly recount before we get started just three very quick memories of Tom that stick with me. And they all come from the period of Ebola, 2014-2015, and they just represented to me how tough and courageous and unpredictable Tom can be.

Tom had just returned to Washington at the end of August around Labor Day in 2014 from a visit to West Africa when things were really on fire in West Africa. And Tom returned to Washington on fire himself and was pounding on doors all over town, including at the White House, which was at that moment in time a bit resistant to the message that this was a crisis that required major, major action and change of course. Well, two weeks later we had President Obama in Atlanta at CDC announcing the unprecedented deployment of up to 3,000 U.S. military to West Africa to break the paralysis, open the lines, and the like. And those events were very connected, Tom's willingness to come back and really speak forcefully and truthfully to power to what was happening and to get action in response.

Another memory. About eight weeks later, in October, we'd had some of the early cases come into the United States. There was panic, there was hysteria, and there were calls for Tom's head coming from all sorts of directions. That was another illuminating moment about just how these events unfold and how rapidly opinion climate changes and the like. We spent a weekend writing an op-ed in the third week of October saying that it would be a really stupid choice to fire Tom Frieden. You survived and went on with some support from Tom – from Klain, Ron Klain, and others.

Later, in the next year, we put together a documentary on the Ebola crisis, and in that 33-minute documentary, "Ebola in America: Epidemic of Fear," Tom came on and said – very early on in that interview he said we made three big mistakes and went on to enumerate those mistakes. And that was really the highlight of this, was through all of that, when we came around to say what are your reflections on this, it was let me just tell you the mistakes that we need to learn from. And that was also another moment of great courage.

So, I want to thank you, Tom, for being here. Thank you, Julie, for all you've done. And thank you for this conversation.

Julie Gerberding: Thank you, Steve.

This is a really exciting moment. I'm delighted to be here this evening to introduce you to Dr. Frieden and to have a chance to talk about his book, "The Formula for Better Health: How to Save Millions of Lives – Including Your Own."

Before I jump into that, though, I want to read you something from the book which really sticks in my mind from chapter nine: "Imagine a joyous, healthy birth, a thriving infancy with only minor infections, all development milestones met; a young adult, normal weight, good sleep, physical activity, a preference for healthy foods, and free from addiction to drugs, tobacco, and alcohol; aging without major illness, et cetera; in later years, no elevation of blood pressure, no hearing loss or major decline in mental faculties; a gentle slowing with a peaceful death at age 103. Sounds utopian, but it's within reach if we implement the "see, believe, create formula," which is the framework for Tom's book. So that's what we are going to address, how can we get from where we are today, with the tremendous health gaps that we experience across not just our country but everywhere, to that vision of what's within reach because of the incredible science and the tools that we have at our disposal.

So, before we jump into that I do want to tell you a little bit about Tom. He is a physician; an internist trained in infectious diseases. He's a public health expert, obviously, and an epidemiologist. But he also was the commissioner

of the New York Health Department and implemented a number of kind of "see, believe, create" activities in that context. He also went on to be the CDC director during the Obama administration and dealt with all kinds of health emergencies in addition to Ebola but also took on some of the chronic disease challenges that were the highest priority for our nation. Tom then worked with Mayor Bloomberg in launching an important tobacco initiative, and in 2017 became the leader of Resolve to Save Lives, which is trying to give that global opportunity to really intervene effectively to save lives.

I'll just share my first encounter with Tom, which was very indirect. Tom, I was in India in a little community tuberculosis clinic, and I walked into this room, and it was stacked from floor to ceiling with shoeboxes that had each patient's name on the box and inside each box was the entire course of tuberculosis medicine that that patient was going to require for a cure. And I said: What on Earth is this? I've never seen such a thing. And they said: Well, that's the TB czar's. That's the cure for tuberculosis – his very pragmatic, very inexpensive, very effective intervention to assure that the patients were able to complete their therapy. So, he was heroic in the minds of the community health workers there. I didn't meet him, but I sure heard a lot about him and his heroic measures. So, it doesn't really surprise me that you've gone on to present this framework for a healthier future for all of us in the context of the book.

So, Tom, what I'm hoping we could do to kind of get started here is for you to just tell us the formula, and we'll kind of get a big-picture view of that, and then we'll dive into the individual components in a little more detail. So, tell us the formula. Give us the secret.

Tom Frieden: Thanks so much, Julie. And thanks, Steve, and the staff of CSIS.

We're living in very unusual times and very difficult times, but the fact is that there is an approach that has already saved millions of lives, it can save millions more, and it's also relevant for personal health. And it is, as you say, see/believe/create.

To give you the Monarch Note version –

Dr. Gerberding: (Laughs.)

Dr. Frieden: – see is really easy. You just have to start with seeing what's invisible. But that is actually the superpower of public health because we can see microbes, toxins, population trends. Steve mentioned Ebola. It was really one graph that got people to pay attention that showed that unless urgent action was taken there would be a million cases of Ebola by seven months from the day that graph was circulated. So, seeing the future, seeing the present, seeing the trends is important.

But it's also about seeing whether programs are succeeding or failing. Because we could have great intentions and we think a program is doing great, but it turns out if we look at that public health superpower it's failing. And we need to see that bluntly to make a difference.

And as Steve mentioned, another thing that we have to see is why we don't take action to stop the things that might kill us, and that's what the Cassandra curse is about. Cassandra, a priestess from Greek mythology, was blessed with foresight. She could see the future, but she was cursed that nobody believed the predictions she made. And, therefore, the tragedies that she foresaw didn't get prevented. And in public health, we've been way too much like Cassandra for way too long, where we can tell you how many people will die from what causes roughly when in what groups, but we haven't been able to change it. Now we can break that curse. But we first have to understand – to see, to reveal – why it exists.

And the final thing to see is the path to progress, because the concept that follow the science is very sloppy thinking. Science doesn't tell you what to do; science learns. Science doesn't lead to certainty, science leads to humility. And if you really look at the evidence that goes into the major decisions that have saved millions of lives, some of them are from randomized controlled trials – I'm a tuberculosis doctor at heart. You know, the RCTs started with tuberculosis. They're fantastic. But they're not for everything. They can't answer all the questions.

So that's about seeing the invisible. That's the easy part.

Then comes believing the impossible, because we can believe that there's just nothing we can do, especially now. It may seem delusional to think that, given the divisions in society, given the misinformation, given the undermining of health and public health, that it's hopeless. But actually, there are specific focused ways to build confidence in a healthier future. And that includes recognizing that there has been progress. We can talk more about that. It's against type in public health to say, you know, things are better than they were, because people are afraid that that means we're saying mission accomplished, we don't need to do anything more. But there are other ways to build confidence systematically with phased progress, with cultivating optimism.

Bill Foege, one of our predecessors as CDC director, said that when he was living in India and working on smallpox eradication, someone came to see what he was doing and he had all of these different things he was doing – ordering supplies, and supervising things, and meeting with politicians, and training health-care workers. And they asked him: Well, what's your job description? And he said: Resident conman.

Dr. Gerberding: (Laughs.)

Dr. Frieden: My job is to keep people believing that we can do this. And it wasn't a con; it was real. With that confidence, more than 200,000 health-care workers in more than 70 countries found more than 10 million contacts of smallpox patients, quarantined them, vaccinated them, and ended smallpox – eradicated smallpox.

When Bill Foege was asked what next after smallpox he replied, the eradication of bad management. And the third phase in the see/believe/create approach is creating a healthier future, and it is the hardest. Hard enough to see the invisible, believe the impossible, but creating a healthier future means first getting organized. It means prioritizing. It means simplifying. It means communicating well, a crucial issue, and that starts with listening well. And then it involves overcoming barriers, including barriers created by that same Cassandra curse, to understand why we don't take those actions and then to systematically overcome those barriers.

And, with that, we can have a healthier future. We can have a future without the same risk of pandemics we have today. We can have a future with public health departments that are able to find and stop threats, to address people's needs and concerns and beliefs more effectively. And we can have a future where that quasi-utopian future described in the book actually comes to pass. Because huge as the gap is – and in your current work, Julie, I know this is front and center – huge as that gap is between what we know and what we wish we knew, the gap between what we know and what we do is even bigger.

Dr. Gerberding: Yeah. I always say that not knowing what to do is really challenging, but not doing what you know is tragic.

And so, let's come back to this point about seeing. Like, you know, when I was in medical school we talked about something called mural dyslexia, the inability to read the handwriting on the wall, and I think that's really what the Cassandra curse is all about. It's complacency, in a sense. People can have information; they're told things that might happen or explained about what is in the future – the pandemic threat being a classic example of that – or that if you don't start doing some of these healthy things you have a really high chance of having cardiovascular disease when you're 65 years old. There's a number of different psychological phenomena at play here and you might want to say a little bit more about that. But I think that complacency is kind of a human nature phenomenon, and I'd like to hear you talk a little bit more about how to break through that. How do you get people to really see and yet

not be impaired with the paralysis of fear and concern that gets in the way of doing anything constructive?

Dr. Frieden: It does come back to the Cassandra curse and complacency. And in looking deeply at this, what I came to understand is that what drives the Cassandra curse is inaccurate perceptions of reality; that we don't have accurate perceptions of ourselves, of the factors that drive societal behavior, or of our future. I won't go into all the details – it's in the book – but I'll mention two of the drivers.

One of them is the prevention paradox. It's a very important concept from Geoffrey Rose, a wonderful public health thinker, that makes the point that for many situations the biggest health either gain, or loss will not come from the dramatic changes but from small changes across entire populations. Whether that's reducing lead exposures or reducing the risk of perinatal hepatitis B, these are small changes that benefit everyone a little but may get on the wrong side of some groups, whether it's the tobacco industry or another polluter. And what that means is not only is there this prevention paradox – a very interesting concept – it has a political corollary, which is that in order to succeed public health has to recognize that there will be powerful concentrated interests opposed to what the public's interest is and that the benefits will be diffuse. Concentrated costs, diffuse benefits. And to overcome that means a very systematic approach.

I'll just mention the second cause of complacency or the Cassandra curse, which is hyperbolic discounting. It's a really complicated term, but it's a very simple concept: We shortchange the future. If smokers knew that they had a 50/50 chance of dropping dead after their next cigarette, very few people would smoke. And yet, 50 percent of smokers will get killed by tobacco, by smoking.

So, what can you do? There are some strategies – mental strategies, societal strategies – to overcome the drivers of the Cassandra curse. If you think about, how do we not shortchange the future, there's an example from time management. I used to end up at events where I said: Why did I agree to this? Well, it was six months ago that I agreed and you kind of think it's never going to come around. I assure you this passed the hyperbolic discounting test; I'm very much looking forward to this discussion. But this issue, if you have an event or a commitment and you say, well, it's in a year, but if it were tomorrow would I do it and you say no, then you avoid it.

In the same way, we can take societally whether it's a health risk or individually and you can do two things. You can, one, use your mind, use your rationality, use your emotion to imagine that faraway consequence happening tomorrow. And second, you can reward yourself with something short term. Or we can say to an industry that's being adversely affected: Hey,

let's compensate you because there's a societal good here. So, there are ways to overcome that complacency.

Dr. Gerberding: So, you know, you and I both have lived and worked in two worlds – the world of the single patient who has to make those kinds of decisions that you're talking about and the world of public health, where at a population level we know what are the important population-level interventions. Now, at an individual level it's tricky, right? Because I've gone to a tool that allows me to determine whether or not I should take a drug to lower cholesterol, and the fact is, based on my risk and my age and so on and so forth, my family history, that if I were to take a statin my risk of cardiovascular – of dropping dead of a heart attack in 10 years would be reduced by 50 percent. That's pretty compelling. But if you look at the actual tool, it shows you that if a hundred people like me did not take a cholesterol drug six of them would die. If they did take a cholesterol drug, only three of them would die. So that's a 50 percent reduction, but if you're looking at that chart you're thinking: I'm far more likely to be in the 94 percent that aren't going to drop dead. So, you know, the translation of population-level data into the individual who's facing a personal decision is a trick. I mean, it's hard to do that. And you know, this discounting is a part of that, I think, right?

Dr. Frieden: It is. It is. And it's also that many behaviors will not definitely yield you progress, and yet –

Dr. Gerberding: Yeah. But at a population level, yeah.

Dr. Frieden: So that also, I think, leads to the importance of better primary health care, because you really need to have a primary health-care team to understand your health, your preferences, what are the pros and cons, to listen to you, to listen to your concerns, and then to address them; and then to say, hey, you know, maybe you want to try this drug and see how you feel after six months or a year. Maybe you say, hey, three out of a hundred, that's a – that's a pretty high chance of dying; I don't want that. So, some of that is going to be individual.

But if we look as a society, we have massive underuse of medicines that treat asymptomatic conditions and some overuse of medicines that treat symptomatic conditions. And some of that is driven by inappropriate profiteering by industries, pharmaceutical and other. And that's another driver of the Cassandra curse, these economic forces that may be not very visible and that are, I think, driving a lot of the real suspicion that people have of health and public health advice.

Dr. Gerberding: Yeah. You know, one of the things about seeing is that if people were just seeing what's in your book they'd probably, you know, feel confident in their decision, but they're seeing all kinds of information, not much of which is

reliable. So that kind of gets to the issue of believing. What should you believe?

Dr. Frieden: Well, there's –

Dr. Gerberding: How can you make a decision when you see the latest, you know, threat or the latest risk assessment? How should you know if that's helpful? Should you take this supplement? You know, should you take Tylenol? Like, these things are in our ecosystem bombarding us all the time. So how can people figure out what to believe.

Dr. Frieden: It is tricky because the technically accurate, rigorous truth is not always so straightforward. You can look at places like the Mayo Clinic that generally don't have any major conflicts of interest. You can look now at some other countries that have general sources of information, or professional groups like the American Academy of Pediatrics or American Academy of Family Physicians that don't have an axe to grind and don't have an inappropriate desire, because even groups that are not conflicted can have biased advice based on their economic incentives. And that's why it's so important that there not be an economic incentive to prescribe or not prescribe, recommend or not recommend. And that's why the structure of our health-care system needs to change those fundamental incentives so that the – that it's in everyone's interest if someone stays out of the hospital and stays healthy.

Dr. Gerberding: Yeah. It also kind of gets into the whole issue of trust, the tremendous decline in trust not just in CDC or in science but broadly across our society. There's just a decrease overall in people willing to trust information, even from ostensibly reliable sources.

So, you mentioned good referenced, nonbiased sources of information as being one aspect of that. But what are some of the other ways that people can find their trust again? What can we do?

Dr. Frieden: Yeah. I think – I kind of cringe when people say trust the science. We don't want people to trust the science; we want people to understand the science, and then to understand that if someone is recommending something and selling something they probably shouldn't be believed. And incidentally, all of the proceeds from sale of this book go to programs and organizations that work for health around the world.

The issue of understanding the – where the evidence takes us, what the science shows isn't so straightforward. And the challenge we have is that some of the disseminators of disinformation cherry-pick studies and it's really hard to keep up with a firehose of falsehoods. The term that some of us have learned recently is Brandolini's law, that it takes exponentially more

time to debunk nonsense than it does to spread it. One incorrect statement can take days of very careful study to figure out why it's wrong. And that's part of the "see", seeing the path to progress.

But I think there's another issue here, which is believing that we really can make progress. Most of the heart attacks and strokes that happened today in the U.S. didn't have to happen. They happened because people didn't get the proven treatments that could have prevented those. And, yeah, maybe it was only three out of 100, but with 300 million people that's a lot of people.

Dr. Gerberding: That's a lot of people. Yeah. So, you know, you mentioned in your book that you have to have confidence that it's not inevitable that bad things are going to happen. You have to believe that you can create interventions that are successful. You're saying that inevitability is not inevitable, right? There are things that we can do. So, talk to us a little bit at a personal level. What's the list? What are the things that we should be doing? You know, what we probably learned in kindergarten, but let's go over them again. What are the things that we should be doing to really help manage our own health outlook?

Dr. Frieden: When you look at personal health advice from an epidemiologist's lens, and you ask, actually, how many months of healthy life expectancy do you gain from each behavior – and I outline this in the book – you get past the profiteering, past the hype, and past, frankly, what's a lot of sloppy thinking about what's important and what's not. And there are six main drivers of a long, healthy life. And all of them have nuance. Blood pressure is one. And, frankly, 120 over 80 is healthier – substantially healthier – than anything above that. Healthy lipids is a second. And exactly which numbers – but, you know, down to pretty low levels. Now, LDL of less than 70, Apo B of less than 70.

The third is the wonder drug, the thing that will be more powerful than any pill you can take, which is physical activity – regular physical activity, with the minimum dose of this wonder drug being 30 minutes, vigorous – moderately vigorous, get winded a bit, at least four days a week. A walk outdoors, something you enjoy. This is really important. The fourth is healthy nutrition. It's complicated, but important. The fifth is getting enough sleep. Hard for a lot of us, but at least seven to nine hours a night. Really important. Much more important than recognized when you look rigorously at the studies. And then finally, avoiding toxins – tobacco, alcohol, PM 2.5. And the new ones, microplastics, endocrine disruptors, nanoparticles, that are really damaging that we're learning more and more about.

Dr. Gerberding: Now, that last point is tricky, right, because how are people going to avoid those new toxins? Or, not new, but newly recognized toxins?

Dr. Frieden: One of the ways is to learn more, because these are broad categories. Not all of them are equally harmful. One of the main ways we have of learning about this is, as you know, the National Health and Examination Survey. And this is why a survey like this, which measures thousands of contaminants in blood, urine on a regular, continuous basis, and tracks contamination in the U.S., and tracks the control of that contamination – showing, for example, lead poisoning going up then coming down, showing the risk of PFAS and other forever chemicals – that kind of tracking system makes visible the invisible. And also shows what can happen. In the 1970s, the average lead level in American kids was 15. Currently, a level of 15 would cause an urgent investigation. And that level is in less than one out of 3,000 kids in the country today. And that's the result of public health action.

Dr. Gerberding: And that's a reason to believe.

Dr. Frieden: That's a reason to believe that there is progress possible. There also are some tips. In the "create" aspect, one of the important things is organization. Another is simplification. If you come up with a complex protocol, whatever it is – for your food, for your medicine, for your nutrition – you're less likely to stick with it than a simple approach.

Dr. Gerberding: So, let's talk about blood pressure, because you've referred to that as a pandemic, right? The pandemic of blood pressure. And I think in the book, you say $4 trillion is spent on health care in the United States every year and we can't even get 50 percent of our population to be 120 over 80 or less.

Dr. Frieden: One-forty over 90.

Dr. Gerberding: One-forty-over – (laughs) – that's worse. So – and yet, you also point out that patients at Kaiser Permanente, 90 percent of them have controlled blood pressure. What's going on here?

Dr. Frieden: It's really interesting. And the group I lead, Resolve to Save Lives, works on this issue of control of high blood pressure in more than 40 countries. We've supported those countries to improve treatment for more than 40 million patients, getting more than 10 million of them controlled. So, progress is possible. Kaiser is so instructive because when I was CDC director, we did this big effort, big emphasis on controlling blood pressure. We got the secretary, got the White House, we got 50 national organizations, we got all of the different parts of HHS, and we failed.

And we failed because we didn't see the economic driver that was preventing progress. If you do a great job controlling blood pressure for your patients in America, in most of the health-care world, great. You may have a gold star on your quality measure. But you won't make a nickel more.

Dr. Gerberding: You'll lose money.

Dr. Frieden: You will lose money. And if because you've done that your hospital has fewer heart attacks, strokes, bypasses, they'll lose a lot of money. If you fail to control your blood – the blood pressure of your patients, the hospital will make a lot more money. Now, I don't think there is a single doctor in America who leaves their patient's blood pressure uncontrolled so that they will have a heart attack or stroke. But that's what the system determines will happen.

In Kaiser, as a pure contrasting reality, when they first looked at blood pressure their control rate was what it is in the U.S. as a whole now, about 40 percent. And they realized at Kaiser the payer who pays for health care is the person who also delivers the health care. That's different from the rest of the health care system. And their members stay members for decades.

So, they realized, hey, if we prevent heart attacks and stroke, we're going to make a lot more money. If we don't, we're going to lose a lot of money. If we can have that kind of incentive in our health care system more broadly, we can dramatically improve blood pressure control and drastically reduce the number of heart attacks and strokes.

Dr. Gerberding: It's just another illustration of you get what you pay for, right? That's exactly what's happening here. I want to remind our audience here to, please, if you have questions, to fill out the cards. We'll be collecting them in a few minutes, and we'll be able to take some questions from the audience.

So, Tom, let's move on and talk a little bit more about "create" in the context of pandemics. You know, obviously you and I both lived through several really serious infectious disease outbreaks. And we've all lived through the most recent COVID outbreak. But, you know, when I read the book I really tried to put my mind into the space of, well, if I had the formula at the beginning of COVID, how could we have done a better job, or maybe flipping that a little bit, going forward how would this formula help us prevent pandemics? Talk a little bit about how this works in that space.

Dr. Frieden: So, I think there are a few aspects to the answer to that question. One of them is, we can get better at stopping the next pandemic by stopping a current pandemic. Since the early 1960s the world has been living through a cholera pandemic. It's getting worse because of climate change. It's affecting more countries. It's killing more people. And just think of what it would take to end the cholera pandemic. When I was an EIS officer Peru had an outbreak of cholera. And they stopped it.

They stopped it with water and sanitation, but it would also take scaling up vaccines. We have better vaccines now, so that's production. Distributing vaccines, so you know how to get those out. Improving the detection, so you

have rapid diagnosis. Improving control, to have rapid response. And that's a reflection of "see, believe, create." First, "see." See where cholera is spreading. See the pathway to stop it spread. See why we're assuming that we can't stop it, when we could. Believe we can make progress by looking at what we've done for things like tetanus, and trachoma, and formerly neglected diseases, and smallpox. And then use a phased manner to phase out – to phase out the false sense of inevitability. Cholera doesn't have to be here.

And just think, if we did that, we'd get so much better. Whatever came along, we'd be better at it. We'd be better at tracking. We'd be better at making vaccines and delivering them. We'd be better at engaging with communities, at responding rapidly. There are some broader issues. The world will probably never know, and certainly never agree, on what caused the COVID pandemic. But it is undoubtedly the case that we are at way too much risk from laboratory releases and from animal spillover. And for each of those problems, there's a lot we could do to mitigate that risk. We can't eliminate it. We can't get to zero. But just because you can't get to perfection doesn't mean you can't make things a lot better.

Dr. Gerberding: So, what would you do?

Dr. Frieden: I'd start with those things one by one. So, take laboratory danger.

Dr. Gerberding: Safety.

Dr. Frieden: Laboratory safety, biosecurity. There are a series of things that could be done globally to restrict access, to improve controls. There are too many dangerous experiments being done in too many laboratories with too many people, with not enough clarity of is the risk of this research worth taking given the potential benefit. In terms of spillover, there's a lot we could do to reduce risk in the areas with the greatest animal-human interfaces. In Brazil, they showed a huge reduction in deforestation, huge reduction in animal-human interface, and increased production. But it also showed how fragile progress is because political change led to wiping out many of those gains.

So, a lot of this does come down to overcoming barriers. As you say, it's a complacency issue or a Cassandra curse issue. It means getting the winners from a safer world together and figuring out how to mitigate those who don't want to take those actions, whether that's people running wet markets in Asia or laboratory researchers who don't want to take the measures that would reduce the risk of an intentional or unintentional release.

Dr. Gerberding: I mean, obviously implicit in this is if there's money, right? Investments in laboratory safety, investments in improved surveillance, investments in better recognition and response and counter measures. All of these things take money. And we're in a world right now where prioritization of

pandemic preparedness is not on the front burner, right? People want – COVID is in the rearview mirror right now, so we've got the Cassandra curse, again. People don't want to believe that this could happen again soon, right? So how do you galvanize the decision makers who have to prioritize this? They don't seem to have any problem prioritizing national security from a Defense Department perspective, but this doesn't seem to get the same degree of attention focus.

Dr. Frieden: One of the great leaders in New York City public health history was a guy named Hermann Biggs, a doctor. And he wrote that public health is purchasable. Within natural limitations, a community can determine its own death rate. I think there is actually broad bipartisan recognition that we don't want to have another COVID. We don't want to have another pandemic. And we should do what's proven to reduce that risk. One of the things that Resolve to Save Lives has advanced is a 717 target, that every outbreak should be found within seven days, reported to public health within one day, and all essential control measures in place within seven days.

In many countries that occurs in less than one out of four outbreaks. And that puts all of us at greater risk. I think one of the challenges with preparedness has been that not only is there a panic and neglect cycle, there's also a planning and more planning and more planning cycle. And what the 717 approach does, and it's part of the speed part of the "create" formula, is it allows us to use reality as our drill and use every outbreak as an opportunity to improve and increase, not only the speed with which we respond but the speed with which we improve systems, and our accountability to funders to say, hey, we were at 25 percent last year. We're at 35 percent this year. We think we can get to 50 percent, but we need these resources. So, we can increase the accountability to see whether programs are succeeding or failing, and to use that vision to generate more political will, and therefore more money.

Dr. Gerberding: So, Tom, you know, when we were CDC directors, we were kind of on top of the world in that sense. Everyone looked at the CDC for technical guidance and for advice. That is probably not the same today. From where you sit and your, you know, knowledge of the CDC, how do you think we're going to rebuild that national capacity, that national treasure that we have? I'm sure you were as heartbroken as I was when I saw the 500 bullets go into the windows of the building that I used to have an office in. We recognize that global leadership in this space is so critically important, and yet the CDC is not there in the way that, I think, it aspires to be, and that we were hopeful would be sustained. What's the action – what's the "create" in that space?

Dr. Frieden: There are unprecedented challenges here. We are really in uncharted water. And there's no silver lining to what's happening now, because there is a fundamental undermining of the basic structures that allow the CDC to

understand what's happening, to communicate what's happening, and to support communities to address the problems that they choose to address. And I think it has to start with – chapter eight, communication – listening, right? Communication starts with listening, understanding, what are people's perceptions, what are their concerns, what are their hearing – what are they hearing? And then, identifying the messages that will resonate and the messengers who can deliver them, and the timing of it.

One of the things – we talked earlier about science and what to understand. One of the things to understand is the world changes. Microbes evolve. Our immunity changes. The vaccines change. The environment changes. And with that, our understanding of it changes. Similarly, our understanding of people's perception needs to evolve with time. And if public health can listen well, deliver tangible gains to people, and limit the times we're telling people what to do – you know, when we tell people what to do it's not a reflection of public health success. It's a reflection of public health failure. When public health succeeds, if you go with the flow, you don't get sick or injured.

Dr. Gerberding: I think there's a related question here, Tom, from the audience. Given this environment that we're talking about right now, what is our message to young people who are thinking about a career in public health?

Dr. Frieden: Public health will always be needed. Facts are stubborn things. There is no better field than public health. Where else can you go to work in the morning and think, if I do my job right someone who would have died is going to survive, or would have been disabled, or would have been injured, or ill? And in fact, that's what public health can deliver – saving lives, as the Hopkins School of Public Health – Johns Hopkins Bloomberg School of Public Health motto says – saving lives, millions at a time.

Dr. Gerberding: Hence your book, saving lives, millions of lives, including your own. Here's a kind of related question to the future of how we can modernize our public health system. How could we use AI to sort of power up the "see, believe, create approach?"

Dr. Frieden: I think AI is transformational. It certainly transformed how I work. And, like any tool, it can be used for good or for ill. But there are huge things that it can provide. Some of the medical AIs are astonishingly impressive. It's like having the best senior resident at your fingertips immediately for any case at all times.

Dr. Gerberding: Fast.

Dr. Frieden: Fast. But, of course, it has limitations. Some of the tools continue to hallucinate. But if you think about "see, believe, create," there are AI methods that will improve our ability to track health trends, to track whether

programs are working, and to track what is the most effective way forward. There are AI tools that are going to help us to make phased progress. That's a critical aspect of phasing out the false sense of inevitability, is making phased progress in some areas, with some populations, in some programs, to try things and see what works. And in the "create" phase, at every step of the way organizing, simplifying, scaling, communicating effectively, identifying and overcoming barriers. AI is a tool that can make it faster and more effective.

Dr. Gerberding: You know, there's this incredible disruption of COVID, and then incredible disruption and change that's going on right now. The philosophic framework for what HHS is aiming for is to make America healthy again. Do you see alignment between that agenda and some of the tools and approaches that are outlined in your book?

Dr. Frieden: I think the goals are important. Make America healthier. And it's possible. And it taps into a deep distrust and dissatisfaction in society with what's happening, why are people making recommendations, what's in my water, how am I getting poisoned? And these are valid concerns. What we need to do is to see the economic factors that are driving some of the false solutions, to see the pathway to progress, which can be very straightforward in terms of improving primary health care so people can get those six basic things supported, if they choose to. And then to build confidence that we can make progress, and to do that step by step.

Dr. Gerberding: You know, we talked about the CDC. We haven't really talked about the whole system of public health. And while there's obvious invisible changes happening at CDC, it's happening throughout our whole system – at state and local, tribal, territorial level. And so, we can't just fix the CDC. We have to really, I think, look at the whole system and how it operates. One of the things you mentioned in your book is the importance of private-public partnerships. Or another way of saying that is getting the private sector involved in the solution, getting other pieces of the health ecosystem to kind of come together. So, it isn't health care over here and public health over here, or business and insurers over here, and, you know, citizens over here. How do we kind of reframe the system of public health?

Dr. Frieden: One of the major ways of overcoming barriers, which is crucial to the formula – to the "create" part of the formula – is to identify allies, alliances. They don't have to agree on everything. You know, Coke and Pepsi fight with each other, but they get together to block soda taxes, which are very effective. We can think about industries that are inimical to health, that are selling harmful products. We can think about industries that are actually supportive of health, whether they're promoting economic progress or selling things that are healthy. And there are ways to align with those that are health promoting and figure out how to mitigate the interests of those that are harmful.

There's a misconception that public health is hostile to industry. That's really not true. We are hostile to industries that harm people, because we think they need to be regulated fairly, transparently, effectively. But lots of industries are very helpful. Industries that create tools that people can use to learn, or get more physical activity, or eat healthier. These are all things that are productive and helpful. Public health progress is in everyone's interest. The challenge is to harness those interests and make that progress visible.

Dr. Gerberding: Let me just add to that – or ask you to add to that. Because, you know, we live in a country where a great deal of health insurance, health care insurance, is employer-based, right? People who are working in at least larger companies generally have their health insurance covered by that mechanism. And yet, employers feel like, OK, we provided health insurance. But they're not really necessarily contributing directly to public health. They are contributing because they pay taxes, but it's kind of a circuitous route. Do you think there's a way to engage employers more consciously in the process of helping us become a healthier nation?

Dr. Frieden: I think so. I think, basically, we pay a huge amount for health care. And there's no question –

Dr. Gerberding: Four trillion. (Laughs.)

Dr. Frieden: If you have a complicated health problem and you get yourself to one of the top medical facilities in this country, you will get the best care in the world. But there's also no question that, on average, our health system fails, repeatedly. We spend more and get less for health care. And the pivot here is primary health care. If we can get a coalition of employers, insurers, citizens, doctors, nurses, pharmacists, and others –

Dr. Gerberding: Public health officials.

Dr. Frieden: Public health officials, to see the path forward to a stronger primary health care system. A hundred million Americans don't have their own doctor. A hundred million Americans. It's amazing. It would be really hard to do less and spend more than what the U.S. does with health care. And yet, there's also a potential there, because there are savings to be had. Costs are increasing again. The lack of primary health care is costly in lives and in dollars. And I think there should be a way to get progress on this issue.

Dr. Gerberding: Well, Tom, you know, I hope everyone reads every word in this book because there's so much in here. If there is one overarching impression I have of you, which I might not have appreciated from knowing you as long as I have, is that you're an optimist, right? You're very optimistic. You really believe – you see, you believe, and you have personal experience where you've been able

to create solutions. How does – how do you pass that on? How do you – how do you spread that?

Dr. Frieden: You know, in the epilogue of the book I tell a story. When I was in India it was really hard. I mean, CDC was hard. New York City Health Department commissioner was hard. India was way, way, way harder. And at one point we brought over a wonderful, wonderful man, Sir John Crofton, who had actually figured out how to treat tuberculosis and been knighted for it. And we had had a lot of opposition to the program in India. And Sir John and John Spiro had been able to kind of get a coalition of the top Indian academic physicians to agree. I invited them over to my living room. It was a beautiful, sunny day. And I said, you know, it really feels like with progress technologically, and so many ways and expanding life expectancy, that progress is inevitable. And it was as if all of the air had gone out of the room. (Laughter.)

Sir John was this, you know, bright, chipper guy. And he got so deathly serious. And he said, I was in World War II as a doctor in the British Army. And I retreated across Africa and Europe as we lost one battle after another. And a tear came to his eyes. And he said, if FDR hadn't gotten into the war when he did Hitler would have won. Progress is not inevitable. So, I don't think we can afford complacency. But if you think about it, we are living longer than ever in human history. We do have better tools to prevent and treat disease than ever in human history. We do understand better what's driving disease and disability than ever in human history. We do have the tools to learn more, faster than ever in human history. So yeah, there are huge challenges. We should never underestimate those. But there are also huge potentials. And besides, optimists live longer. (Laughter.)

Dr. Gerberding: That's not on your list. Should be on your list. (Laughs.) Well, Tom, our time is almost up. And I think I've covered the questions that came in from the audience. So just, you know, like you to just kind of end by, you know, where do you think we're going to be in five years? You know, you see kind of the track that we're on. Are you optimistic? Do you think we're going to be able to live the formula and really begin the process of creating that utopian opportunity? What's your prediction?

Dr. Frieden: Well, as an economist once said, give them a date or give them a number, but don't give them both at the same time, right? (Laughter.) I think that really much – that depends on the people here. That depends on the readers, the nonreaders, what we do with the tools that we have in our power to make progress on it. I can't predict with absolute certainty what's going to happen to life expectancy or deaths under the age of 70 in the U.S. or globally. I can say with certainty that we have the ability to dramatically improve health with the tools that we have today.

And with that, I think building a health care system and a public health

system that's faster, that's more connected, that's more accountable, that listens better, that communicates better, that delivers results more, that has a broader set of allies and alliances, to focus on those winnable battles that we can make progress on, to figure out where there is common cause with different groups and make progress, I think with that we can live much longer, much healthier, much safer lives.

Dr. Gerberding: Well, on that note, Tom, I thank you for – thank you for your leadership, your public health leadership for your entire career. But I thank you for this book and for this conversation. I think there's a lot of food for thought here. And if it only inspires people to believe and try harder and not give up, I think that's a job well done. So thank you so much. And I thank Steve and CSIS for letting us have this conversation today. And I certainly thank the CSIS team for their support. And to the audience for being here and enjoying this. See you at the book signing to come. Thank you, Tom.

Dr. Frieden: Thank you, Julie. And thanks to CSIS. (Applause.)

(END).