CDC's 29th Annual Joseph W. Mountin Lecture

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[Announcer] This podcast is presented by the Centers for Disease Control and Prevention. CDC – safer, healthier people.

[Dr. Thomas Frieden] Good afternoon everyone and welcome to the 29th Mountin Lecture. When I called Bill Foege and asked him to do this, he insisted that he had done it before, but I told him that the statute of limitations was 25 years and so he couldn't get out of it this time.

And I want to first welcome CDC staff here in the overflow room and in Envision Land, as they call it now, to this event and recognize that we have many leaders here in public health who are attending. Former Directors of CDC, Jeff Copeland, Dave Sencer, as well as Walt Dowdle and Dr. and Mrs. Rhodes Haverty, and a special thanks to former CDC staff who are here today and who were part of the smallpox eradication effort. We honor you with this, as well, and perhaps we could have those who were involved with smallpox eradication to stand up.

As you know, we're coming up to the thirtieth anniversary of the World Health Assembly announcement of the eradication, and we've passed by thirty years, and thirty-two years to the day, the day when the last case of endemic smallpox was diagnosed - October 26, 1977.

And it's a great day for introductions. I also want to put in a plug for the Global Health Chronicles, which you have in your, as a bookmark and you can bookmark it on your computer as well and has wonderful oral history and background and information about so many of the important efforts in global health.

It's an honor for me to introduce Bill Foege to give this lecture and I want to say a few words about his accomplishments. I want to also, in doing this, remember about five years ago, Bill and I sat together for a Rockefeller Foundation event—or a Rockefeller University event, I think, actually—and we were sitting next to each other as Bill was being introduced and, of course, you can go on for a half hour or so and only scratch the surface of some of the wonderful things that Bill has done and Bill—now it's pretty hard at his height. I can do this pretty well—but Bill kinda slouched down into his chair and said, "The unbearable torture of hearing yourself be introduced." So, with that, I've been thinking about that as I thought about this introduction. Bill always told me that he used to smoke in the shower and you could only do that if you were very tall and very addicted.

Dr. Foege was Chief of the Smallpox Eradication Program and led the development of surveillance and containment strategy that really changed our approach worldwide and reminds all of us that we have to not just be content with implementing the proven strategies but constantly thinking about what's wrong with them, how could they be better, questioning them, and trying to improve them and his contributions in this and in so many other areas have been legendary. He has written that, "It's interesting, about thoughts at the time of eradication, for me," said Dr. Foege, "the high point was when I saw, in my mind, that this could happen. It

seemed inevitable. Indeed, it always seemed to me that surprise was inappropriate because it indicated a lack of faith in the idea."

And Dr. Foege has been very important to many of us in the development of our careers and certainly the same, I have the privilege of saying, and when I was in India for more than five years, I contacted Bill on occasion. We conspired to help start a global facility to get cheaper TB drugs to people, and in my time in India, one of the—if I had to summarize in a single line what I learned there, it was that irrational optimism is a prerequisite for success. That just going from obviously you are to obviously where you should be is one thing but to really make a difference you have to believe that the impossible is possible and I think that's what Bill has done in so many different areas, whether it's smallpox, river blindness, HIV, his work with the Gates Foundation in formulating their approach.

As you know, Bill joined the Carter Center in 1986 as Executive Director. He also was Executive Director of the Task Force for Child Survival and Development, and really has been behind a lot of the greatest achievements in global health and health in the U.S. for several decades. I'm reminded of the thing that Harry Truman used to always say, "It's amazing how much you can accomplish if you don't care who gets the credit," and that's always been Bill's approach. I'm not going to read through the pages and pages of introduction, remembering that cringe moment at the Rockefeller University, but the examples of the Mectizan donation program where a new breed of philanthropy, using the common interest and the ideals that people in industry have, to create a program that has protected the sight of millions of people, is an example of the kind of creative, thoughtful, practical approach that Bill has taken.

In my work in India, I often consulted Bill about how to work on global health issues and one statement he made reverberated in my mind for over a decade, which is that in global health, we have to work with the World Health Organization, and if we're going to work with the World Health Organization, we have to strengthen the World Health Organization. And I think this very practical approach and very focused approach of what's essential, what can be important, what can make a huge difference in people's lives, thinking, not just about what's needed today and tomorrow, but what's going to make a difference this year, next year, and in ten or twenty years, has been a hallmark of Bill's career. Bill has been a mentor and a guide and an inspiration for many of us. I can say, also that when I was an EIS officer in the Langmuir lecture of 1990 Bill gave, and I assessed potential supervisors by asking them what they thought of Bill's lecture.

Bill, thank you very much for your leadership and we look forward to learning from you now and in the future.

[Dr. Bill Foege] Thank you very much, Tom, for that nice introduction. Leon Trotsky, 1935, said, "Old age is the most unexpected thing that happens to people." As unexpected as old age is to find out that there's still some enjoyment in old age, and pleasure in returning to a place of work that I always found so absolutely pleasant. And when I reminisce with former CDC employees, we always end up talking about how hard we worked and how much fun it was, the jokes and the camaraderie that we had, so thanks for having me back.

This is my second talk at CDC in a month, and that's more than they allowed when I worked here. And once again, I will repeat what I said last time. I'll use the word 'we' because no one ever leaves CDC. They simply become CDC in another location.

It happened two years ago. I got on a plane in Seattle and I sat down on an aisle seat and began reading the newspaper, and a man tapped me on the shoulder and said he was sitting next to me. I got up, let him in. I did a cursory look. I said he's about 85 years of age, he has white hair, a white beard, and the thing that crossed my mind that I didn't like at all, I said to myself, "He's not very attractive, even for an old man." We exchanged a few words, I sat back down, I got immersed in the newspaper and a few minutes later a woman tapped me on the shoulder. She was standing in the aisle, waiting to get to her seat and she said, "Excuse me. Are you guys twins?"

Stephen Smith was the health commissioner of New York City before Dave Sencer, before Tom Frieden. He was 49 years of age when he helped to form the American Public Health Association. For their fiftieth anniversary, they invited him back to give the keynote address. At age 99, he went up to the lectern for what they expected would be a review of the history of A-P-H-A, and he talked about the future of public health, and so I would like to talk about the future of public health, the future of CDC, but I will do it at the end and try to give some context before I get to that future.

We hold this talk, as we heard, to remember Joe Mountin who made this institution go from a malaria program to a communicable disease program. We hold it on the twenty sixth of October, or thereabouts, to remember the last case. Maybe a little confusing. The last case was actually 32 years ago today, but because W-H-O said an area had to be two years free of smallpox before you could declare it smallpox free, we celebrate the thirtieth year of the declaration.

It was a curious case, that last Somalian case. A couple with two small children, they both had smallpox, came to a hospital in Somalia, and at the entrance they met a man who was a cook in the hospital and they asked for directions to the infectious disease ward. He didn't just direct them, he took them to the infectious disease ward. He had been vaccinated so he was confident that he was immune, but he had not gotten a take. Two weeks later, on the twenty sixth of October, he came down with the first symptoms of smallpox. No one got it from him, therefore he was the last case of smallpox in a continuous chain of transmission that went back thousands of years, a chain of transmission broken, thanks to CDC.

Dave Sencer was director of CDC at that time, and ahead of his time he understood the difference between international health and global health. International health immediately brings up a dichotomy of 'international versus national'. With global health, smallpox in Africa or Brazil or India becomes a U.S. domestic problem, and so Dave provided W-H-O with the needed support, including scores of people, in the lab, in Atlanta, and eventually several hundred around the world. The effort not only protected the world against smallpox, but strengthened W-H-O and CDC, and Dave is here today to enjoy the harvest and to launch the website on smallpox that will eventually go beyond smallpox to all of global health.

Well, 25 years ago, I gave the Joe Mountin lecture; the beginning of what I hope will be a tradition every quarter century. And I talked about Ghandi and what we know about him. We're separated by six decades and 10,000 miles but the things we know about Ghandi - he was obsessed with the idea of liberation from bondage of all kinds. He wanted social change without violence. He demanded, by example, self-sacrifice. He was driven by the idea that the world could be better, and he lauded the beauty of menial jobs which were well done. He emphasized the worth of individuals. But I also talked, that day, about people in our midst who were Ghandis and we didn't recognize them. And I ended up by saying that it's possible for institutions to take on the characteristics of individuals. And my point was that CDC had become a Ghandian institution.

As with Ghandi, it's an honor that must be earned every day. Ten days ago, I was filming a tribute to the Nobel laureate, Norman Borlaug who died about six weeks ago, and the person interviewing me, when he realized I had been at CDC, told me about friends who had taken a sailboat to Haiti. They both got very sick; the husband died. And the person telling me this told about his frantic efforts to get hold of CDC, and someone here made a diagnosis of malaria over the phone, and CDC got the right medication at the right time to save that woman's life. That was part of the Ghandian tradition, earning the Ghandian label every day by the science we develop and dispense, by the way we treat the public, by the way we treat each other.

Mentors are both individual and institutional. I'm attuned to mentors. At one time I had seven mentors in their 90s. I've lost four of them in the last two years. There was Tom Weller, a Nobel laureate because he was able to isolate polio and grow it in the lab and therefore the basis for a vaccine. Julie Richmond who was a surgeon general when I was at CDC. Charlie Houston who had a chance in 1953 to make it to the top of K2, and he gave up that chance to help rescue a person who had deep vein thrombosis. And Norman Borlaug, a Nobel laureate for the green revolution.

But institutions are also mentors, and CDC molded the thousands who've gone through this institution into public health people, yes, but global people and, even more than that, civilized people, imbued with the idea that the bottom line is not fame or even science, or brilliance, or money, or publications, but how we treat other people.

The world gets confused. Joshua Bell, a great musician, gave a concert in Boston, 100 dollars a seat, three and a half million dollar violin, and a standing ovation. Two days later, as part of an experiment, he gave a one hour concert in a Metro station, with some of the most beautiful music you can imagine, and no one paid attention. So, we're easily confused and even fooled regarding what is important, true, and right in life.

Kierkegaard, the Danish theologian, once told a story of a man who broke into a jewelry store and didn't take anything. All he did was switch the price tags around. We live in a world where the price tags have been switched, and we pay a premium for athletes and financial crooks and health insurance executives and guardians of the marketplace, and we put the lowest price tags on teachers, social workers, mental health workers, and public health workers. What would it take to change the price tags so that we're paying for those who provide a quality life and a quality future?

Three months ago I attended the centennial celebration of the National Institute of Communicable Diseases in India. The speakers spoke throughout the day about CDC Atlanta, and they had CDC Atlanta people on the program and at the end of the day the minister came in to declare they were now changing their name to the National Center for Disease Control. And my mind went back to 25 years earlier, when I gave the Mountin lecture, and I realized it's possible for CDC to not only be Ghandian and a mentor, but even a mentor in the country that produced Ghandi. Wow.

But back to smallpox eradication. I was invited to India to talk about the lessons of smallpox for other health programs and the greatest lesson? Getting rid of a bad disease was nice, but, the greatest lesson was, it didn't happen by chance. It happened because of a vision, a plan, a coalition, lots of hard work. It is possible to plan a more rational future. It's not destiny for the world to have smallpox or polio or measles or Guinea worm. It's not destiny for 49 million Americans to lack health insurance. It's not essential for the world to have wars and domestic violence, bank failures, ponzi schemes, poverty. It's possible for us to provide leadership and organize for a future that makes more sense.

Steven Hawking said that the history of science is the gradual realization that things do not happen in an arbitrary fashion, and Jonas Salk told us that evolution will be what *we* want it to be because this is not a fatalistic world. You wouldn't be working at CDC if you were a fatalist. You became educated in order to change *your* future and the future of the world and you can. CDC was not built by fatalists nor the faint-hearted. We remember the trials in 1976 with swine flu, and I recall a problem with one of our best moments—Legionnaire's—and the ridicule of a congressman who continued to say that it was so clear that it was a toxin involved and that CDC had missed the clues. And then Joe McDade isolated the Legionnaire's organism, and CDC confirmed this before releasing the information. When confirmed, Dave Sencer called the congressman to tell him of the finding, and I suspect Dave did it with some satisfaction. The congressman knew something about toxic situations, and how easy it is to miss clues, when he accepted a bribe from an undercover FBI agent and went to jail.

I mean, CDC history is great, and ask Dave about that later. And sometimes, fortune has shined on us unexpectedly. For those of you not familiar with the budget process, CDC proposes things to the Public Health Service, they knock things out, then they send that up to the Department, they knock things out, they send it up to OMB and they knock things out. People don't add things, they always take away things. But then it comes back down to the Department, the Public Health Service, to CDC, and we get a final chance at appeals, things we think are so important we want one more chance to put them back in. The Public Health Service appeal during my last round was on a Monday morning. We had been gone for the weekend, came back on Sunday night to find someone had broken into the house. By the time we were done with the police and everything, it was long after midnight. I had to get up early to catch the early bird, and I did not feel good on that flight to Washington. I felt violated. I was angry. Then, I get to Washington and we go to the Public Health Service offices and to my boss, Ed Brandt. And we now get our marching orders for when we go to see the Secretary, and the marching orders are, "CDC will get three appeals, but you won't say a word. This will all be presented by the budget people and the directors are there in case the Secretary has a question. Furthermore, you will not get any

capital improvements, and if anyone tries an end run for a capital improvement, not only will you lose it, but you will lose an equal amount of money from your regular budget." So we go to see the Secretary, and the first agency was NIH and, sure enough, the director of NIH never said a word. Then came CDC, and within one minute, the budget people became confused on two numbers that didn't add up. The Secretary, Secretary Schweiker, looked bemused and he said, "You know, Bill is sitting right here. Couldn't we ask him?" And without waiting for an answer, he turned to me and said, "Would you present CDC's appeals?" I presented the first two in as businesslike a way as I could. The third one, OMB had taken out part of our immunization program, and I said to the Secretary, "I was burglarized this weekend and I feel very violated, but I'll get over that, but here we have OMB trying to steal health from the American people and no one in this department has the courage to stand up and tell them they're wrong." Without a word, he turned to his budget people and said, "Give him all three appeals," and then he turned back to me and he asked, "Did you know it would be that easy?" And I said, "No," and he said, "Because I wonder, if you had known it would be that easy, what's the fourth thing you would have asked for?" I looked at my boss, Ed Brandt, and he had his hand on his forehead because he could detect an end run. And I said to the Secretary, "My fourth one would've been my first one." And I told him about Class-4 labs, and how many Class-4 agents we now had with no vaccine, no treatment, and that we were working out of a quarantine station that allowed us to work on one agent at a time. And this was shortly after the Tylenol poisoning in drug stores, and so I said, "If we would have a virological Tylenol problem in this country, it wouldn't take two hours for everyone to know we have no way to meet the challenge." And he turned to his budget people and he said, "We have to at least try." One week later, he called me at home, at night, from the White House, and he was like a little kid. He said, "I've just gone head-to-head with David Stockman, and CDC will get their Class-4 lab." And he said, "To speed up the process, we're going to put it in this year's budget so you don't have to come up and defend it next year."

Years later, I get an invitation to the opening of the Class-4 lab, the dedication. Jim Mason was the director at that time. I sat in the audience, and I listened to the speeches about what was possible with this Class-4 lab, and how this had all happened. And I said to myself, "I'm the only person in this audience who knows that knows CDC owes this Class-4 lab to an unknown burglar in Atlanta." And I can tell you, that's not the way the system should work.

But that's the past. Present, you're faced with huge problems, many expectations, but that's always been true and I see a great future. Over the years, as I read and see something I like, I put it in my computer, a list of quotes. The very first quote that I ever put into my computer said, "I am fully persuaded that when enlightened people will take the trouble to examine so minutely into the state of society as your inquiries seem to go, it must result in greatly ameliorating the condition of the people." George Washington, 1793, as he looked at the statistical account of Scotland. Langmuir used to say this was the secret of CDC. Because we were not in the political arena of Washington D.C., we could concentrate on the problems and greatly ameliorate the suffering of the people.

What's the future? Well, Lincoln Stephen said, 70 years ago, that 'the greatest song has not been sung and the greatest poem has not been written' and I can tell you, your greatest glory is yet to come. Be assured of your contributions, even if you can't see them. Ten years ago, I talked at the World Health Assembly, and I said to the Ministers of Health, and the world, that "What you are

doing, you're building cathedrals, and like the artisans 800, 900, 1000 years ago in Europe, who could not see what would happen with their work but did it anyway, you have to have faith that your cathedral will be great and you do your part now."

Several weeks ago, I talked about generic challenges, and I talked about seeing the world whole, thinking forward, planning for centuries ahead, thinking globally, and the challenge of health equity. Today, in closing, I want to mention four specific challenges, because the second lesson of smallpox eradication, for me, is "Know the truth." CDC has developed surveillance systems to know the truth, and to document the problems and to suggest solutions. It didn't come easily. The first national surveillance system for any disease was for malaria and it was developed when I was in high school. The second one was for polio because of the Cutter incident and it was developed when I was in college. And the third one was for flu, in 1957, and it was when I was in graduate school. CDC is now working in many, many areas and surveillance systems by the dozens. I'm going to mention four—CDC is already doing work in all four—but I want to say, this is worth concentrating on.

Number one, mental health. What if CDC, working with the National Institute of Mental Health developed surveillance systems that clearly map the problems, the risk factors, chronicled successes, and if we could identify the people with depression, improve treatment, and show the impact? What might happen to a society, to its happiness, to its productivity, if the majority of people with depression were being treated?

Number two, global warming. There are many programs aimed at global warming, temperature measurements, chemical measurements. How could CDC improve the dialogue and action if it led the global effort to do surveillance on the health effects on humans, on animals, on ecological systems, even before changes develop? What does W-H-O have to do? What should national health systems do? What should the health delivery system be monitoring, looking for changes?

Number three, social determinants of health. When William Wilberforce finally succeeded two centuries ago in making the slave trade illegal in England, he was as much a healer as Edward Jenner who was, at that time, working on smallpox vaccine. Public health should be understood in a broad context of all of the things leading to unnecessary suffering, premature death, and compromised quality. DuBois in 1903 said, "The problem of the twentieth century is race." Now our problem is a combination of race and poverty; both of them, public health problems because of what they do to health. CDC is not the solution to poverty, racism, lack of education, gender bias, unemployment, homelessness, but it could develop the surveillance systems on health outcomes and risk factors associated with these social conditions and keep society aware of where attention must be placed, because it's all public health.

And fourth, and last, healthcare in the United States. Now, some of you are going to disagree with me, and I would only ask that you hold your disagreement until I've outlined a solution. I may be wrong, but I don't think so.

In the 1950s, while I was in medical school, the A-M-A would tell us over and over to beware of socialism, and I bought into this. And they said, "Look over your shoulder and watch that socialism does not gain on us." And so we watched, and we never looked over the other shoulder

to see that capitalism was gaining on us. And it never occurred to me, at that time, that capitalism might be much more harmful than socialism. Our healthcare mess today is not due to healthcare workers; it's due to capitalism, making profit the bottom line. Some things don't lend themselves to the marketplace, such as solving the tobacco problem, improving water supplies or waste disposal; they require collective action. As the country debates the issue, there are many contenders for the most ridiculous statements. One senator spoke against equality, saying he did not need maternal health coverage. A colleague said, "But your mother did." Senator Grassley, when asked by a man, how he could get the same medical coverage that Grassley had, answered, "Get a federal job." Ron Paul says that healthcare is so complex that it can only be solved by the marketplace. Can you imagine, one year after the marketplace let us all down, destroyed lives, took homes, left millions unemployed, and reduced hope; he says the marketplace is the answer for health.

It reminds me of many years ago at a luncheon that Sheila and Alan Bleich put on. Someone asked the question, "Can anyone name one federal program that has done a better job than the private sector could have done?" Henry Falk from CDC said, in a quiet voice, "How about winning World War II?" The insurance industry argues that government is inefficient, despite Medicaid having lower overhead than the insurance industry. It says competition is essential and then they say they are against a public option because they can't compete with government. And they say the public plan would negotiate better prices, which sounds like an argument for, not against. And Ron Paul says the government should not be involved in H1N1 flu. Well I take comfort that flu is being addressed by CDC and not by congress or the marketplace.

A strong contender for the most ridiculous statement would be Senator John Ensign, who said, "Too much is made of the U.S. health indices not being as good as other countries." He said, "If you remove highway deaths and gunshot deaths from the total, our mortality figures are quite competitive." As Jon Stewart says, "That's like saying, 'if you remove my affair, I'm almost monogamous.'"

And we don't even get the facts right. The congressional budget office, non-partisan, gives figures used in debates. But our own Jim Marks from CDC, now working at the Robert Wood Johnson Foundation, has pointed out that, by law, the congressional budget office cannot count benefits more than ten years in the future. How much of your work on immunization, smoking, obesity, hypertension and so on has benefits ten, twenty, and more years in the future? That's one of our goals, but those benefits cannot be counted, by law, in the estimates. And how often do you hear anyone challenge those projections for that reason? It's a fine mess we have ourselves in.

Zimbardo in his book, *The Lucifer Effect*, recounts the 1971 Stanford prison experiment, which showed that arbitrarily making some students guards and some prisoners corrupted both groups almost immediately. He then looks at many disasters, such as Catholic priests abusing children, Enron, Mai Lai, our healthcare system, and he says, "We look for bad apples, and there are some, but the real problem is a bad barrel."

Practitioners taught to do no harm can't consul on prevention because they have time limits and no reimbursement. Most of the damage is done by average people in bad situations, but the

opposite is also true. By creating good barrels, average people perform even better than average. That, to me, is the secret of CDC.

Now, let's apply that to healthcare delivery. My conclusion is that healthcare can improve by one of two approaches: a single payer system that actually aims at equity for all of us, which might happen if Congress would be held to average healthcare for themselves. The corollary of Ghandi saying his idea of the Golden Rule is that he should not be able to enjoy what other people can't enjoy. Or, the other possibility is a system that actually uses the marketplace and rewards plans that improve health, not simply provide sickness care. This would require a metric to measure health outcomes and I think that is a role for CDC. We could still use the current insurance approach, but if additional rewards were paid to the plans with the best outcomes, you can bet that attention would change from process to outcomes. It would be using the marketplace for the kind of competition that it advertises. If, in addition, there would be even more rewards—financial rewards—for improving the health outcomes for a designated high-risk group, which would include poor people, obese people, smokers, diabetics, and so forth, suddenly, insurance plans would seek out high-risk people rather than well people. That's where the profit would be. And they would incorporate every preventive program that can be devised: smoke ender's programs, exercise programs, nutrition programs, diabetes best practices, blood pressure best practices. In a word, prevention would become part of healthcare delivery. Altruism, like evil, is readily responsive to situational forces. The marketplace could then provide the best outcomes in the world.

CDC is already working on this, and my plea is to give it high priority. This is a service to the country and the future with high, high value. Last time, I mentioned the Greek philosopher Democritus who said, 2400 years ago, "The wise person belongs to all countries, for the home of a great soul is the whole world." And let me add, the wise person also belongs to all ages, learning from the past and affecting everything that happens in the future.

So what's the summary? This is the finest time I've seen in over fifty years to be in public health and global health. Tools, resources, interest, ability to have outcomes, global health education tracks, ease of communication, travel, and access to information make it a special time. Savor the moment. And to end with Ghandi, he once said that people often become what they believe themselves to be, and if CDC sees itself as the guardian, not only of public health, but of all health, it could become the deciding factor in healthcare delivery, global warming, social determinants of health, and mental health. So return to work today and continue to write inspirational history. Thank you.

[Applause]

Thank you. Tell people to sit down. That's even more embarrassing introductions. I'm going to go sit down. Thank you.

[Dr. Thomas Frieden] Bill, it's always a pleasure and an inspiration to hear you and learn from you. This is a small token of our appreciation, and we look forward to that lecture in 25 years and to the lots of interactions between now and then, so thank you very much.

[Announcer] For the most accurate health information, visit www.cdc.gov or call 1-800-CDC-INFO, 24/7.