

**Testimony of Dr. Tom Frieden, President and Chief Executive Officer of Resolve to Save Lives, an initiative of Vital Strategies**

Good morning, Chairwoman DeLauro, Ranking Member Cole, and distinguished Members of the Subcommittee. Thank you for the opportunity to testify today. I'm Dr. Tom Frieden. I was CDC Director from 2009 to 2017 and New York City Health Commissioner from 2002 until my appointment to lead the CDC. I received my MD and MPH degrees from Columbia University in my home town of New York City, with advanced training in internal medicine, infectious disease, public health, and epidemiology. I am President and CEO of Resolve to Save Lives, an initiative of the global public health organization Vital Strategies, and Senior Fellow for Global Health at the Council on Foreign Relations. Resolve to Save Lives partners with countries to prevent 100 million deaths from heart disease and stroke and make the world safer from epidemics.

In the next few minutes, I will provide a perspective, based on 30 years fighting epidemics – including leading the CDC's response to Ebola – of where we are and what we need to do, together, to protect Americans. I'll also propose a new approach to bring stability and security to our efforts to keep Americans safer from epidemics. The bottom line is that our war against COVID-19 will be long and difficult, and, until we have a vaccine, we must have a comprehensive strategy and use data to drive our policies and programs in order to save lives and restore the economy. We must also adopt a new strategy to make sure nothing like this ever happens again if it can possibly be prevented.

It has been more than 100 years since there has been a pandemic this devastating. The toll on human lives and livelihoods of this pandemic has been shocking. Families are experiencing

tremendous loss. Health care workers have died in the line of duty. Parents are making the tough decision of whether to shelter in place or go to work so they can support their family. The number of deaths and severe illnesses are staggering, and every number represents a mother, father, neighbor, colleague, or friend. We need to work together to reduce the toll of this pandemic and do everything in our power to make sure nothing like this ever happens again.

Since late January, Resolve to Save Lives has pivoted to working on COVID-19. We have offered to assist any government in any part of the world that is fighting this pandemic, in any way we can. We advise organizations, governments, health systems, doctors, nurses, and other health care workers. We partner with more than 60 countries, learning from them and sharing lessons from the front lines of this pandemic. Among other efforts, we support:

- Rapid response funds;
- Protection of health care workers; and
- Tracking systems to improve the ability of communities, health care systems, and countries to base actions on data.

We have published more than 40 articles on the pandemic, post a weekly summary of the most important new and emerging scientific evidence, and advance core concepts: **Adaptive Response**, recognizing that there will be different approaches to reducing COVID-19 infections that fit best at different times in different areas; the **Box It In** approach – to test, isolate infected people, warn, and quarantine people who have come in contact with infected people, and thereby reduce spread so we can resume activities as soon and safely as possible; and **Finding the Balance** – recognizing that the way forward is to control the virus and protect livelihoods.

This is an unprecedented pandemic, and requires an unprecedented response. My testimony is forward-looking. At the appropriate time, we can assess what went well and what

didn't. I don't work in government now, and I'm acutely aware that hindsight is 20/20 and it's far too easy to second-guess decisions others have made. We're just at the beginning of this pandemic, and we must focus on the future. How can we prevent the largest number of infections? How can we save the most lives? How can we restart our economy without rekindling explosive spread of disease? There is only one enemy here: a dangerous microbe. We're all in this together. It's us against them – humans against the virus. We will get through it best if we work together, learn from each other, and support one another. Here are 10 plain truths about COVID-19.

First, it's really bad. In New York City, it's on the order of the influenza pandemic of 1918-1919. More than 20,000 people have been killed in less than 2 months. Even now, with deaths decreasing, there are *twice as many* deaths from COVID-19 every day as there would be on a normal day from *all causes combined*. From my home in Brooklyn, I have listened as ambulance sirens have wailed, night and day. There are cases in many cities as well as in an increasing number of rural areas. Sadly, just projecting from the number of people already infected and being infected now, the virus will have killed at least 100,000 people in the U.S. within a month.

Second, as bad as this has been so far, we're just at the beginning. Until we have an effective vaccine, unless something unexpected happens, our viral enemy will be with us for many months or years. No one can predict with certainty how this new virus will behave in warmer weather and what will happen in the coming months in this country and around the world. There is no magic bullet. Not travel restrictions. Not staying at home. Not testing. Not Remdesivir. All of those can help, but until and unless we have a safe and effective vaccine, there's no single weapon that will deliver a knock-out punch.

Third, we need to be guided by the data. We need accurate and real-time monitoring to track trends in symptoms, emergency department visits, tests, cases, hospitalizations, deaths, community mobility, and more. We must work to find cases before they become clusters, clusters before they become outbreaks, and outbreaks before they become explosive epidemics that risk the lives of health care workers and others. We need clear goals and a clear understanding of what success looks like, so everyone is focused and working off the same plan. Examples of states that are taking this type of approach include Utah and New York. Utah officials provided a clear plan to use a phased approach to reopening – the dimmer dial concept – with transparent criteria so everyone is aware of where they are, what sectors can open when and under what conditions, and a plan to reach a new normal. New York officials have managed a horrific situation with unique complexities, including high population density, large numbers of incoming travelers, and a crowded subway system, and outlined a sensible and careful way to reopen.

Fourth, we will be able to begin to re-open as soon and safely as possible by basing decisions on data and creating a new normal. We are all impatient to restart our activities. If we do so as safely as possible, we will avoid a large resurgence of cases. Sheltering in place is a blunt but effective weapon: it suppresses spread of the virus but inflicts severe hardship on individuals and the economy. To shorten the time of sheltering and to reduce the risk we will have to retreat again into our homes, we need to deploy all of the effective weapons in our arsenal. These other weapons are more precise than lockdowns, but not as effective against the virus – so we have to apply many of them at the same time. Important ways to fight the virus include: handwashing, including hand sanitizers at all building entrances; face masks in areas where the virus is spreading widely to reduce risk that people without symptoms will spread

infection to others; reducing contamination of commonly touched surfaces both through frequent, thorough cleaning as well as re-design; and our “Box It In” approach, to stop chains of transmission by widespread testing, isolation of cases, contact tracing, and quarantine of contacts.

We’re trapped in our homes, wrapped in our fears, isolated in our stressed hospitals—and in order to go back out, we need to box the virus in. After flattening the curve, the next step is to box the virus in by implementing four essential actions – test, isolate, contact trace, and quarantine. All are crucial; if any one is weak, the virus can escape and spread explosively again.

- Expand and prioritize testing. We need to test widely and strategically.
- Isolate infected people to prevent disease spread. We must support every infected person so the virus stops with them, including in hospitals, nursing homes, correctional facilities, and homeless shelters. Those who do not require hospitalization but cannot safely be cared for in their homes will need safe and appealing housing until they are no longer infectious.
- Identify contacts who have been exposed. To get ahead of the pandemic, we must warn people of their exposure. This is a time- and labor-intensive process, but it’s one of the best tools we have to find and stop chains of disease transmission.
- Quarantine contacts. People who came into contact with infected people and may have been infected themselves are the leading edge of the pandemic. We must provide them with wraparound services so they can safely quarantine at home and keep the virus from spreading to others. The fact that they can spread the infection even if they feel perfectly healthy adds to both the complexity and the importance of this effort.

If we do all of these four things well, even if we don't have a vaccine, we can begin to return our society and economy to a more normal footing. These measures, when deployed together by public health departments and supported by all of society, can reduce spread to a simmer rather than a boil and avoid having to close again. Right now, it's primarily the pandemic, and not our response to it, that is disrupting our economy with such disastrous consequences.

Fifth, we need to find the balance between restarting our economy and letting the virus run rampant. We're conditioned to think in dichotomies of A vs. B – but open vs. closed isn't a true dichotomy. We need to think of this more like a dimmer dial than an on-off switch, with different gradations of open based on what we can do without undue risk. Even when closed, many activities continue. When we re-open, our new normal will be different. With care and creativity, we can open sooner and safer. Our new normal will mean changes in the ways we travel, work, learn, and go about our lives, including in ways we can't foresee today. The new normal will require redesigning processes – how we do things – as well as redesigning our physical environment. This is the design and engineering challenge for our society, and I'm excited to learn about innovations that will keep us safer. Many measures we're seeing now – floor markings to denote safe distancing, requirements to use hand sanitizer before entering a building, capacity restrictions in restaurants and stores – may be with us for some time. Plastic dividers, touchless door and elevator controls, teleworking, no more shared desks, and other changes are here to stay, at least for a while.

The virus that causes COVID-19 outnumbers us, so we have to outsmart it. But we're not hard wired to understand viral speed. Although virus particles can create a new generation in minutes, the impact on human populations takes weeks to develop. There's a lag. If there's massive spread today, we won't see deaths for 3 weeks and won't see the deaths from the

secondary cases that the first wave will have already infected for another few weeks after that. Therefore, when we start to reopen, if there's a rekindling of spread, we may not see the impact for 3-6 weeks or more. And, if there's another wave of explosive spread, it will take another 1-2 months or more of extreme distancing for cases to come back down. If we make informed decisions, we can prevent disruptive course corrections in the future.

Sixth, it's crucially important to protect the health care workers and other essential staff who are the front-line heroes of this war. They shouldn't have to put their lives at risk to care for us.

Seventh, we must protect our most vulnerable people. Nursing homes and other vulnerable congregate settings house approximately 4 million people in the United States. Unless we take urgent action, at least 100,000 residents of America's nursing homes will die in the next year, and there could potentially be hundreds of thousands of deaths in all congregate facilities, including among those who work in these locations. These facilities have always been at higher risk for disease outbreaks, and, as we're seeing with spread of COVID-19, can result in disastrous outcomes. And because this is an infectious disease, outbreaks in these settings readily fuel community-wide spread. We must also act now to reduce the higher rates of infection and death among African American, Native American, and Hispanic people.

Eighth, vaccine and therapeutics. As is currently being done, governments and private companies must join forces to make massive, continued investments in testing and distributing a vaccine as soon as possible, ensuring rapid and equitable access in this country and around the world. Nothing else will enable life to get back to a pre-COVID normalcy. Treatments can help and should be available sooner, but are unlikely to be the game-changer that a safe and effective vaccine would be.

Ninth, we must heighten, not neglect, our focus on non-COVID health issues in order to increase personal and community resilience. Underlying conditions greatly increase the risk of severe illness. This is bad for patients who get infected and also increases the burden on health care facilities. We need to preserve health care services despite the pandemic. We must take steps to avoid people postponing care for strokes and heart attacks, delaying cancer diagnosis, or deferring essential preventive care because of fear of COVID-19. And there has never been a better time to quit smoking, get your blood pressure under control, make sure that if you have diabetes it's well controlled, and get regular physical activity. We'll also need to improve our influenza vaccination campaign starting in fall 2020, because having both flu and COVID spreading widely would be particularly challenging.

Tenth, never again. It is inevitable that there will be future outbreaks. What's not inevitable is that we continue to be so underprepared. The simple truth is that in our increasingly interconnected world, disease spread anywhere is a risk everywhere. If the world is safer, we will be safer here at home. As CDC Director, I made approximately 300 trips from our headquarters in Atlanta to Washington. My top goal was to advocate for Global Health Security. It was difficult to secure federal funding for these initiatives, and when we finally managed to do so it was a single, temporary appropriation, and only after the West Africa Ebola epidemic had begun.

I'm encouraged that Congress and the Administration quickly worked to pass comprehensive, bi-partisan legislation that provided billions of dollars in supplemental funding for all aspects of our COVID-19 response. These supplemental appropriations provided critical funding for federal, state, local and global response efforts, are expanding laboratory capacity, and will start modernizing data systems that often still use pen, paper, and fax machines. But supplemental funding is a temporary fix. Without sustained support, our health will be avoidably



at risk. Without stable funding, it is impossible to hire and retain top staff, hold funded organizations and contractors to full accountability, and be effective partners with countries and organizations. As our experience with this pandemic has shown, being prepared is far cheaper and more costs our economy far less than what happens when we are unprepared. Good public health is good business.

You have a unique opportunity to protect Americans from future pandemics. If you take strategic action now, you can protect our country from another inevitable microbial sneak attack. If we as a society fail to do this, we will remain unprepared both domestically and abroad, shortchanging our health and economic security and costing American lives.

Future health and economic security can best be protected by changing the way we allocate funds to protect us all from health threats. We have seen the limitations that caps and sequestrations cause for discretionary funding. And we have seen that even mandatory funding doesn't ensure stable support. We propose a new approach for specific public health programs that are critical to prevent, detect, and respond to health threats. We call this the Health Defense Operations (HDO) budget designation, and it would exempt critical health protection funding from the Budget Control Act spending caps so our public health agencies can protect us. I was proud to co-sign a letter of support for this proposal that was sent to Congressional leaders yesterday with leading voices in health policy, including former Senate Majority Leaders Frist and Daschle, former CDC Directors Bill Foege, Jeff Koplan and David Satcher, an organization representing every public health school and program in our country, Director of the Center for Health Security at Johns Hopkins School of Public Health Dr. Tom Inglesby, and others.

HDO programs should be required to submit a bypass professional judgment budget to Congress annually. The NIH submits three bypass budgets to Congress every year that explain

the true resource needs for cancer, HIV/AIDS, and Alzheimer’s research. Likewise, Congress and the American people must understand exactly what is needed for our public health defense so that Congress can then appropriate the resources required to sustain the public health system we need to keep us safe. This investment can save millions of lives and potentially trillions of dollars, and sustained, baseline funding is the only way we will ensure we are prepared for the next pandemic. Responsible funding means protecting America, and we must also ensure accountability in our spending so that every dollar is used wisely, and nothing is wasted or diverted inappropriately.

What each of us does matters to all of us. Every one of us has a role to play reducing infections, protecting health care, and preserving society. I’ve referred to this new battle as “World War C” – but our enemy now is a microbe, not another country. This is a war we must win, and to do that we must wage it strategically and with all the resources we can muster.

Thank you. I look forward to answering your questions.

**Annexes attached:**

1. Best practice examples from around the world
2. Box it in infographic
3. Adaptive response infographic

## ANNEXES

### Best practice examples from around the world

Although there is no place that has done everything perfectly, progress in some areas can be used to better guide our efforts.

- Germany has reduced the number of infections while keeping a low mortality rate. They did this in part by testing widely and meticulously tracing transmission chains, in one instance down to identifying a single salt shaker in a company cafeteria as being a critical part of the earliest transmission chain.
- Countries across Africa implemented physical distancing early, some more than 2 months before they had their first case, and although it may yet come, we have not seen explosive growth. The African Union agreement to facilitate cross-border testing will greatly expand capacity in countries where it is most needed. PEPFAR assets have been successfully deployed to meet the needs of COVID-19 response. Several countries have rapidly scaled up contact tracing and community outreach.
- Singapore officials have had clear communication, using an alert system the public understands which includes different levels of pandemic control measures. The country's initial containment strategy worked and response adapted rapidly as new cases, primarily among migrant workers, were identified. Singapore has also recorded a remarkably low death rate.
- New York officials managed a horrific situation with unique complexities, including high population density, large numbers of incoming travelers, and a crowded subway system and charted a path to re-open carefully.
- Ohio officials provided clear leadership that generated strong public support for the way the state is managing COVID-19. The state reacted rapidly to its first case with strong, comprehensive interventions.
- Utah officials provided a clear plan to use a phased approach to reopening – the dimmer switch concept – with transparent criteria so everyone is aware of where they are, what sectors can open when and under what conditions, and a plan to reach a new normal.
- Washington State – Having recorded the first case in the United States on January 21, the state's public health department took the lead in the response. They conducted early research to inform our understanding (e.g., spread in nursing homes), and created public-private partnerships to support the response.



## 1. TEST

Widely



## 4. QUARANTINE

All contacts self-isolate  
for 14 days



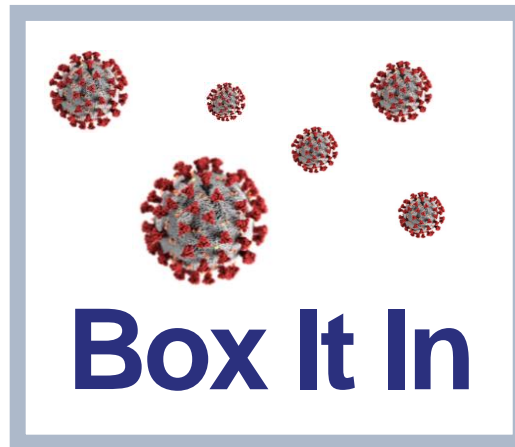
## 2. ISOLATE

All infected people



## 3. FIND

Everyone who has been in  
contact with infected people



To get us all working again



# Adaptive Response

Cases Over Time

**Disease Control**

Early detection (lab testing, alert clinical systems) and case isolation (home, hospital, other facilities)

Extensive testing

Contact tracing

Health care infection prevention and control

Appropriate clinical care including staff surge when needed

**Non-Pharmaceutical Interventions (NPI)**

Community engagement with clear communication, assessment of community acceptance leading to adjustment of approach

Everyday personal NPIs (wash hands, cover coughs, stay home if ill)

Environmental NPIs (clean surfaces, increase ventilation)

Personal NPIs (household quarantine, mask in community if ill)

Community NPIs (high-risk group social distancing and closing schools)

Community NPIs (general social distancing [SD] and closing schools [CS])

Community NPIs (general SD and CS)

Community NPIs (general SD and CS)

**Supporting society**

Address ongoing health care needs including supply chain management and increased telemedicine

Support continued social and economic activity including learning, emergency services, essential activities

Protect vulnerable populations

**Pharmaceutical interventions**

Treatments

Vaccines

Containment      Mitigation      Suppression      Prevention