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SARS: HOW EFFECTIVE IS THE STATE AND LOCAL RESPONSE?

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HEARING

before the

PERMANENT SUBCOMMITTEE ON INVESTIGATIONS

of the

COMMITTEE ON
GOVERNMENTAL AFFAIRS
UNITED STATES SENATE

ONE HUNDRED EIGHTH CONGRESS

FIRST SESSION

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C O N T E N T S

WITNESSES
Wednesday, May 21, 2003

Alphabetical List of Witnesses

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SARS: HOW EFFECTIVE IS THE STATE AND LOCAL RESPONSE?

WEDNESDAY, MAY 21, 2003

U.S. Senate,
Permanent Subcommittee on Investigations,
of the Committee on Governmental Affairs,
Washington, DC.

The Subcommittee met, pursuant to notice, at 9:04 a.m., in room SD-342, Dirksen Senate Office Building, Hon. Norm Coleman, Chairman of the Subcommittee, presiding.

Present: Senators Coleman, Collins, Levin, Carper, and Lautenberg.

Staff Present: Joseph V. Kennedy, General Counsel; Elise J. Bean, Democratic Staff Director/Chief Counsel; Mary D. Robertson, Chief Clerk; Laura Stuber, Democratic Counsel; Priscilla Hanley (Senator Collins); John Myers (Senator Specter); Marianne Upton and Rianna Brown (Senator Durbin); Bob Hall (Senator Dayton); Tate Heuer (Senator Pryor); Kate Eklund, Jason Hill, Dan Mullkoff, and Ahmed Khalil (Senator Levin); Rebecca Mandell (Senator Lautenberg); and Josh Handler (Senator Akaka).

OPENING STATEMENT OF CHAIRMAN COLEMAN

Senator Coleman. Good morning. We are going to call this hearing of the Permanent Subcommittee on Investigations to order. I want to thank everybody for attending my first hearing as Chairman of the Permanent Subcommittee on Investigations in our Nation's capital.

Today, we address the issue of SARS. We address it from the vantage point of the ability of our Nation to address this, and future threats, at a local and State level. We address it from my stated position that it is my hope that this Subcommittee can find ways to improve and reform areas of American life, to improve our lives, and to make us safer and more secure.

And today, against the backdrop of a Nation at war--with the national terror warning raised to its second-highest level--let us be clear that the stakes facing our Nation, and our world, could not be higher. Our ability as a Nation, to defend ourselves, against all enemies--foreign or domestic--or even Mother Nature--depends on our commitment to preparedness.

The front lines of our Nation's war against nature's terror of communicable disease are, and will be, local governments. As a former mayor, I understand that. I will never forget that. The ability of our Nation to defend itself from the terror inflicted by man through the use of chemical or biological weapons of mass destruction will be through the efforts of local government officials.

My friends, while there has been and remains great tragedy across the world as a result of SARS, and as Secretary of Health and Human Services Tommy Thompson warns us, America is not yet safe from SARS, let me say this. I believe we got lucky this time.

While preparations on the war on terror have better positioned us to respond to threats and potential threats such as SARS, a confluence of events spared our Nation from the tragedy that has visited others such as Canada, Taiwan, and China, a tragedy that not only takes people's lives but is also halting their lives.

For example, since SARS has emerged as a disease to be reckoned with, adoptions of Chinese children by Americans have been halted. In Toronto, untold economic damage has been sustained because of potentially unnecessary reactions to SARS on the part of organizations responsible for addressing the disease. We need to remember that SARS was not the worst disease that has ever plagued civilization, either in terms of ability to spread or its mortality. Even as we dealt with SARS, the World Health Organization was battling cases of Ebola and avian flu elsewhere in the world.

As I am sure our panel of distinguished experts will attest, the evolution and transmission of the next disease is not a question of ``if,'' it is simply a matter of ``when,'' and I believe they will tell you that SARS is not yet done. It may mutate. It may become worse. It is not yet done killing.

Nor are new diseases that will appear in our future, and when they do, our ability to contain them and survive them will largely depend on local responders who treat the first cases. It is vital that we continue our investments in making sure that these responders have the resources, training, and support necessary to protect us. In an era when even a few hundred non-lethal cases imposed significant social and economic costs, we should regard these investments as prudent insurance against both intentional and naturally-occurring threats to our health.

When a new disease such as SARS or the West Nile virus hits local communities, several things have to happen. First, local doctors need to know how to recognize that something new is happening and need to know who to turn to for information and support.

Second, at the national and international levels, agencies must quickly develop information about the characteristics of the disease in order to treat patients and prevent its spread. The World Health Organization, the National Institutes for Health, and the Centers for Disease Control and Prevention perform this role well.

Third, and this is most important, in my opinion, the information these agencies develop must be transmitted back to mayors, hospital administrators, and airport officials so that doctors, airline attendants, researchers, and average citizens know what to do in order to protect themselves.

In the end, our goal ought to be to develop a national response, predicated on the understanding that the bulwark of that response is going to be at the local level--and by local government and elected officials.

And that they must have the resources and the cooperation of the Federal Government to do so.

This hearing will focus on the synergy that is necessary for an effective national response, driven by the talent and know-how at the local level. There are questions we must ask

and solutions we must seek. There may be laws that must be changed and behaviors that must be modified.

In the end, there can be no mistake that the issues we address today may very well shape and form our response to the next natural or man-made disease that violates our sense of safety as a human race.

Recently, I sent a letter to the Commissioner of the Minnesota Department of Health. The questions I asked her are relevant today . . . and remain questions we must address locally on a national basis.

What are States doing to prevent further outbreaks of SARS?

Have we identified potential risk factors or are there segments of our population who are at particular risk?

What are States and local governments doing to educate citizens about SARS and other potentially devastating diseases?

Are there changes that must be made to our local, State, and national quarantine laws?

Do local officials know where to turn to for information and support?

What should local officials do in the first days and weeks when faced with a new disease with unknown characteristics?

What are the resources available and what are the resources needed for local governments to be more effective?

Are hospitals equipped to treat small numbers of cases and do they have the proper isolation facilities to accomplish this task?

What are the plans and strategies of hospitals to handle new SARS cases or other potential diseases in the short- and long-term?

Do local and State health departments have the personnel and resources they need to respond to potential disease threats?

Today's witnesses will tell us that SARS was a wake-up call, and I suspect they also support my belief that, so far, we have been lucky.

On the whole, our response to the outbreak was very good. Many of our cases came after the first case in Toronto so that local officials were already alert. It is also possible that Toronto received a more virulent strain than any of our cities experienced.

We will also see that our responses were aided by the effort and resources expended since September 11 and the anthrax attacks. Over the past year, cities, States, and hospitals have begun preparing for a sudden outbreak of infectious disease.

A recent GAO report indicates that we still have some way to go, however. The report found that gaps exist in the disease surveillance system and laboratory facilities and that there are workforce shortages. It also found that planning for regional coordination is still lacking between States, even as they develop plans of receiving and distributing medical supplies for emergencies. Finally, it found that most hospitals around the country lack the capacity to respond to large-scale infectious disease outbreaks.

Our systems did a good job of protecting us this time, but we can always do better. In order to improve, we must first listen. Today's witnesses represent different parts of the national response to infectious disease. They each have a different perspective on how the system works.

In the final analysis, our work is at its initial stages.

It is my hope that we emerge from this hearing today with a sense of hope and confidence that the investments we have made in preparation and response are making a difference and that those areas that are preventing us from being more responsive and effective can be changed.

As a former mayor, I am well aware of the power of local officials to confront and manage the dangers of this new era. I also know that those who are here today are eager to offer us more than just anxiety, they also offer us hope that we can, as a Nation, bear the burden of this new era in a positive and results-oriented manner that has been the hallmark of Americans for generations.

With that, I will turn to my distinguished Ranking Member and former Chairman of this Subcommittee for his comments. Senator Levin.

OPENING STATEMENT OF SENATOR LEVIN

Senator Levin. Thank you very much, Mr. Chairman. I commend you for convening this hearing. I know that you have had a very successful hearing in Minnesota, but this is your first as Chairman here in the Nation's Capitol and I congratulate you on that and commend you for calling this hearing today on such a critical subject.

The front lines of the SARS battle, as the Chairman has mentioned, are drawn at our airports and our home communities, at border crossings and hospitals, and at local doctors' offices. Local health care providers need training and resources if we are going to protect our country from SARS. We have been relatively lucky so far, but we need more than luck to keep this public health threat under control. We need resources and planning.

Right now, our knowledge of SARS is limited. We don't know where the disease comes from. We don't know how to rapidly and reliably test its presence. We don't have a cure. But we have learned that if we identify SARS patients quickly and isolate probable cases, that we can prevent the disease from spreading. That means our first and most important line of defense is having first responders who are trained to spot SARS symptoms, who have adequate resources, and who have workable, sensible plans to safeguard the public.

We know that some countries have done a better job than others at preventing the spread of SARS. We know that China was not at first up front with its citizens about the disease, and as a result, both confusion and the disease have spread. In contrast, Vietnam successfully contained a possible SARS outbreak through swift action. To protect our own country, we need to learn from the experiences of others as well as to devise ways to support other countries' efforts to stem their SARS infections.

When we look here at home, the facts paint a complex picture of our readiness to fight SARS. On the one hand, we have a public health system that is engaged in this battle and taking many of the steps that are needed. A few cases are being found, and there are no fatalities to date. But on the other hand, we have inadequate resources to support the good intentions and planning of our health care system.

In my home State of Michigan, the SARS readiness picture is a promising one, but one that requires further support and development. Out of a total of 43 persons evaluated in Michigan

for SARS to date, only four suspected cases have been identified. Those cases are being treated with no fatalities to date.

My State of Michigan has taken a number of steps to mount an effective response to the SARS threat. It has determined that it has legal authority to quarantine individuals posing an imminent public threat. The Michigan Department of Community Health has assigned responsibility for combating SARS to a specific State office, the Public Health Preparedness Office. The State has issued guidelines to Michigan hospitals on how to identify and treat suspected SARS patients and sends out regular E-mail updates to hospitals in all 64 local county health departments.

The University of Michigan Medical School has also taken a proactive role. It has created a SARS working group that meets weekly and includes representatives from local community health departments. The working group has set up a communications line called Telecare that takes calls from people with questions about SARS.

These precautions are essential for the reason that they are essential everywhere, but also particularly because Michigan is the largest single area for border crossings between the United States and Canada. To limit SARS risks at its border crossings, Michigan is working actively with the CDC, Customs, border, and port personnel to screen persons entering the United States. If persons crossing the border show symptoms of SARS, Michigan and the CDC have designated three local health departments to evaluate and care for suspected patients, including possible hospitalization and quarantine.

Many of these steps represent new and important improvements, and the near absence of SARS in Michigan shows that they seem to be working. But our officials have also uncovered major shortcomings that need to be addressed.

For instance, when the City of Detroit drew up an action plan for homeland security, one of the first such plans for a major city in the United States, by the way, it determined that the city does not currently have a computerized database that can detect emerging public health problems. Health care workers and family members must have adequate supplies of masks as well as other key health care equipment, such as respirators.

Another issue of importance is that, right now, Michigan doctors have to send their SARS diagnostic tests to CDC labs in Atlanta for analysis. Michigan laboratories want to set up an in-State testing service to speed up the results and to reduce the burden on CDC labs.

Resource needs on the local level show how far we still need to go to protect this country against SARS. They are more than matched by questions on the international and national level. How do we assist China in getting its SARS outbreak under control to reduce SARS risks worldwide? Should the World Health Organization be given additional authority to monitor in-country disease outbreaks and quarantine procedures?

We can isolate patients, but we cannot isolate our Nation. We need to work with the world community. We need the world community to work together to reduce the threat of SARS and other diseases which know no boundary, just as we need the world community to pull together in our war on terrorism.

Recent press coverage indicates that the SARS threat is perhaps coming under control worldwide. I hope that is true. But responsible government calls for taking steps today to

prevent the SARS problem from becoming a public health care nightmare tomorrow. We need the political will to take those steps. We need to invest in public health. A number of those programs have been cut in the proposed budget. That is a short-sighted decision.

Finally, we cannot rely on private philanthropy to deal with this kind of a public need. We have seen some wonderful examples of private philanthropy. The co-founder of Home Depot, Bernard Marcus, took a tour of the CDC's laboratory facilities in Atlanta and was so disturbed by their dilapidated state that he personally pledged $2 million to help the CDC equip a state-of-the-art emergency response center that has played a very critical role in the battle against SARS. But it is just not the way to go, to rely on private citizens to step in to make up for the inadequate resources that the Federal Government has provided in such a vital area. We applaud his generosity. It has made a difference. But we cannot rely on that and we have to do what is necessary ourselves in devoting the resources that are essential.

Mr. Chairman, because I am managing the defense bill on the floor in the Senate this morning, I am unable to stay to hear the testimony. I will surely be briefed on these important proceedings by my staff, but again, I commend you and I ask that the balance of my statement be placed in the record at this time.

Senator Coleman. It will be placed in the record. Thank you very much, Senator Levin.

[The prepared statement of Senator Levin follows:]

PREPARED OPENING STATEMENT OF SENATOR LEVIN

Today, the front lines of the SARS battle in the United States are drawn at our airports, our border crossings, our hospitals, and the local doctor's office. Our local health care providers need resources and training to protect our country from a SARS outbreak. We've been relatively lucky so far, but we need more than luck to keep this public health threat under control. We need resources and planning.

Right now, our knowledge of SARS is limited. We don't know where the disease came from, we don't know how to rapidly and reliably test its presence, and we don't have a cure. But we have learned that if we identify SARS patients quickly and isolate probable cases, that we can prevent the disease from spreading. That means our first and most important line of defense is having first-responders who are trained to spot SARS symptoms, have adequate resources, and workable, sensible plans to safeguard the public.

We also know that some countries have done a better job than others at preventing the spread of SARS. We know that China was not, at first, up front with its citizens about the disease and as a result, both confusion and the disease have spread. In contrast, Vietnam successfully contained a possible SARS outbreak through swift action. To protect our own country, we need to learn from the experiences of others, as well as devise ways to support other countries' efforts to stem their SARS infections.

When we look here at home, the facts paint a complex picture of our readiness to fight SARS. The good news is that we have a public health system that is engaged in this battle and taking many of the steps needed. Few cases are being found, and no fatalities to date. But on the other hand, we have inadequate resources to support the good intentions and planning of our health care system.

In my home State of Michigan, the SARS readiness picture is a

promising one, but one that requires further support and development. Out of a total of 43 persons evaluated in Michigan for SARS to date, only 4 suspected cases have been identified. All four cases are being treated, with no fatalities to date.

Michigan has also taken a number of steps to mount an effective response to the SARS threat. It has determined that it has legal authority to quarantine individuals posing an imminent public health threat. The Michigan Department of Community Health has assigned responsibility for combating SARS to a specific state office, the Public Health Preparedness Office. The state has issued guidelines to Michigan hospitals on how to identify and treat suspected SARS patients, and sends out regular E-mail updates to hospitals in all 64 local county health departments.

The University of Michigan Medical School has also taken a proactive role. For example, it has created a SARS working group that meets weekly and includes representatives from local community health departments. The working group has set up a communications line called Telecare that takes calls from people with questions about SARS. They have developed a questionnaire for health care providers to screen emergency room patients by asking about their travel history, exposure to potential SARS patients, and symptoms. They are also working on locating a facility that could be used to quarantine a large number of SARS patients, were that to become necessary.

These precautions are essential, in part because Michigan is the largest single area for border crossings between the United States and Canada. Canada is the United States' top trading partner with over $1 billion worth of goods and services crossing the border every day, and more than 40 percent of that trade moving between Michigan and Ontario. To give you some idea of the potential impact SARS could have on Michigan, every day over 36,000 vehicles--trucks, cars, and buses--depart Canada and travel to Michigan. Furthermore, every day the number of people coming into Michigan from Canada on trains, cars, and buses exceeds 70,000. In addition, Great Lakes marine traffic and the Detroit international airport bring in cargos and passengers from all over the world. Together, these border crossings make Michigan a key gateway that must be protected to keep the United States safe from SARS.

To limit SARS risks at its border crossings, Michigan is working actively with CDC, Customs, Border, and port personnel to screen persons entering the United States. If persons crossing the border show symptoms of SARS, for example, Michigan and the CDC have designated three local health departments in Chippewa County, St. Clair County, and Detroit to evaluate and care for suspected patients, including possible hospitalization and quarantine.

Many of these steps represent new and important improvements, and the near absence of SARS in Michigan shows they seem to be working. But our officials have also uncovered major shortcomings that need to be addressed. For instance, when the City of Detroit drew up an Action Plan for Homeland Security, one of the first such plans for a major city in the United States, it determined that the city does not currently have a computerized database system that can detect emerging public health problems. Detroit Mayor Kwame Kilpatrick has now called for establishing a citywide disease surveillance system that, consistent with privacy protections, can track both infectious diseases and bioterrorism incidents, and communicate directly with health care professionals, state officials, and the CDC.

Another ongoing issue is training and protections for local health care providers. In some countries, hospital workers such as nurses have suffered SARS infections despite using recommended safeguards. More work needs to be done to understand how they became sick and to protect them. One part of the problem may be that only certain types of

surgical masks provide adequate protection from SARS droplets, and these masks need to be fitted carefully and changed daily. An even more basic issue is to ensure that health care workers and family members have adequate supplies of masks as well as other key health care equipment such as respirators.

Another issue of importance is that, right now, Michigan doctors have to send their SARS diagnostic tests to CDC labs in Atlanta for analysis. Michigan laboratories want to set up an in-state testing service to speed up the results and to reduce the burden on CDC labs. Another open issue is who will pay for significant testing and quarantine costs, should those become necessary.

Resource needs on the local level show how far we still need to go to protect this country against SARS. They are more than matched by questions on the international and national level. How do we assist China in getting its SARS outbreak under control to reduce SARS risks worldwide? Should the World Health Organization be given additional authority to monitor in-country disease outbreaks and quarantine procedures? How do we encourage rapid development of a SARS vaccine?

We can isolate patients, but we can't isolate our country. We need to work with the world community, and we need the world community to work together to reduce the threat of SARS and other diseases which know no boundaries, just as we need the world community to pull together in our war on terrorism.

Recent press coverage indicates that the SARS threat may be coming under control worldwide, and I hope that is true. But responsible government calls for taking steps today to prevent the SARS problem from becoming a public health care nightmare tomorrow.

We need the political will to take those preventative steps. Last week, the Senate voted for more than $350 billion in tax cuts over the next 10 years. To help pay for its proposed tax cuts, the Administration has proposed cutting spending on a number of important programs, including for public health care. That is a short-sighted mistake.

We can't rely on private philanthropy to deal with the public's need. One example shows why. After the 9-11 and anthrax incidents in 2001, a U.S. citizen who is also a co-founder of Home Depot, Bernard Marcus, took a tour of the CDC's laboratory facilities in Atlanta. He was so disturbed by their dilapidated state that he personally pledged $2 million to enable the CDC to equip a state-of-the-art emergency response center, which has played a key role in the battle against SARS. It is incredible that a private citizen had to step in to make up for the inadequate resources of the Federal Government in such a vital area. While the generosity of Mr. Marcus has made a real difference, we can't rely on that approach to construct a workable disease surveillance system that can identify, monitor, and evaluate the severity of infectious disease outbreaks in the United States.

I was a member of the Detroit City Council during the 1970's. I know that if a contagious disease were to have broken out in my city during those days, my phone would have started ringing and not stopped. The experiences of local health care professionals can tell us a lot about what is and is not working, and I commend Senator Coleman for holding this hearing today--his first, by the way, in Washington as Chairman of the Permanent Subcommittee on Investigations. I look forward to hearing today's testimony.

Senator Coleman. Let me turn to the distinguished Chairman of the Committee on Governmental Affairs, Senator Collins.

OPENING STATEMENT OF SENATOR COLLINS

Senator Collins. Thank you very much, Mr. Chairman. Let me start by thanking you for holding this important hearing to evaluate the government's response to the outbreak of Severe Acute Respiratory Syndrome, or SARS.

I have a very eloquent opening statement---- [Laughter.]

But I know that you are eager to get to the witnesses today, so I would ask unanimous consent that it be submitted for the record.

Senator Coleman. Without objection, Senator. Thank you very much, Senator Collins.

[The prepared statement of Senator Collins follows:]

PREPARED OPENING STATEMENT OF SENATOR COLLINS

Mr. Chairman, thank you for calling this morning's hearing to examine how effective the State and local response has been to the outbreak of severe acute respiratory syndrome--or SARS--in the United States, and to take a look at how well the Federal Government has worked to support and coordinate these efforts.

Severe acute respiratory syndrome, or SARS, is proving itself to be a formidable global threat. There is neither a treatment nor a cure for this deadly, highly contagious virus that is spreading throughout Asia, and into parts of Europe, Canada and the United States. To date, there have been almost 8,000 probable cases of SARS reported in more than 30 countries worldwide and more than 660 people have died.

It is true that the worldwide toll for SARS is relatively small compared with, say, the three million people who died last year of AIDS. If SARS continues to spread, however, its death toll could skyrocket. Moreover, while we should be reassured that quick action on the part of the CDC and our State and local health officials has resulted in a relatively low number of probable SARS cases in the United States with no deaths, we should not rest easy. Given that the virus can go wherever a jetliner can travel, it is a very real possibility that we have not yet seen the full extent of this epidemic in our country.

In the wake of recent terrorist attacks and increasing fears about the spread of highly contagious diseases like SARS, our Federal, State and local governments have become increasingly sensitive to the need for an effective, coordinated response to such events. While there is absolutely no evidence that the spread of SARS is part of a planned attack, our institutional capability to deal with such an epidemic is the same whether it is the consequence of a terrorist act or a naturally-occurring event. In fact, a major side benefit of all of our efforts to strengthen our homeland defense capabilities should be an improved ability to respond to all kinds of emergencies.

Over the past 2 years, the Congress has appropriated significant amounts of funding for public health activities at the Federal, State and local levels as part of our bioterrorism preparedness effort. Moreover, the supplemental appropriations bill passed earlier this year contains an additional $16 billion for CDC specifically to address the SARS outbreak. I therefore look forward to hearing whether these additional resources have improved our ability to respond to public health emergencies like SARS.

In addition, since physicians, nurses, and other health care workers on the front lines are likely to be the first individuals to encounter cases of an emerging infectious disease like SARS, it is critical that they have the support and information that they need from Federal agencies like the CDC to identify and effectively contain such an outbreak.

Mr. Chairman, I look forward to examining these and other issues

this morning, and once again, I thank you for convening this hearing.]

Senator Coleman. We will turn to Senator Lautenberg.

OPENING STATEMENT OF SEANTOR LAUTENBERG

Senator Lautenberg. Thanks very much, Mr. Chairman. I, like the Chairperson, will withhold my eloquent statement. It has yet to be written, and---- [Laughter.]

But I do want to say, this is such an important topic and the consideration of how we deal with it is a major question, its effects not only on the individual, but the economy, the circulation of people and taking care of normal obligations raises a very serious problem for us.

My question, and I will end with this, is will it depend on a given State's income capacity to deal with the problem? We know that all the States, with almost no exception, have difficult times meeting their normal obligations right now. Deficits are significant and very few States can just continue as they were before.

Now the question is, if there is an outbreak of SARS, whose responsibility is it, not just to deal with it. We know that we have to have the health professionals and some facility particularly suited to treating SARS patients and whether or not they will be able to be isolated sufficiently. But then the question comes in about the capacity to afford. Now, if a given State is poverty-stricken--let me use that term--will the problem then become one of its neighboring States or the neighboring region, or will it be unintentionally exporting the disease?

So the question is, how do we deal with this? Does it become primarily a Federal concern? I know the Chairman, I listened to your statement and it was very good and apparently Minnesota and you have gotten a great deal of attention paid to this. I don't know whether it has to do with your proximity to Canada and some of the problems that have erupted there, but this is a good opportunity to hear from our distinguished panel, Mr. Chairman. I look forward to hearing from them.

Once again, the focus at the moment for me is how do we respond to this plague that we are dealing with in the best fashion and is it a responsibility for all the States, shared in equal terms, if the disease presents itself in their boundaries?

Senator Coleman. Thank you very much, Senator Lautenberg, and I am sure the panel will be addressing the question and the way you have framed it.

I would like now to welcome the first panel of witnesses to today's hearing, Dr. Julie L. Gerberding, Director of the Centers for Disease Control and Prevention in Atlanta, Georgia; Dr. Anthony S. Fauci, the Director of the National Institute of Allergy and Infectious Diseases at the National Institutes for Health in Bethesda, Maryland; and finally, Dr. Michael T. Osterholm, the Director of the Center for Infectious Disease Research and Policy at the University of Minnesota, Minneapolis, Minnesota.

I thank all of you for your attendance at today's important hearing and look forward to hearing your perspective on what the broader health care community is doing to provide local officials with the information they need to deal with sudden outbreaks such as SARS.

Before we begin, pursuant to Rule 6, all witnesses who testify before the Subcommittee are required to be sworn. At this time, I would ask you to please stand and raise your right hand.

Do you swear the testimony you will give before this Subcommittee will be the truth, the whole truth, and nothing but the truth, so help you, God?

Dr. Gerberding. I do.

Dr. Fauci. I do.

Dr. Osterholm. I do.

Senator Coleman. Thank you. We will be using a timing system today. Please be aware that approximately 1 minute before the red light comes on, you will see the lights change from red to yellow, giving you an opportunity to conclude your remarks. While your written testimony will be printed in the record in its entirety, we ask that you limit your oral testimony to no more than 5 minutes.

Dr. Gerberding, you have the opportunity to go first with your testimony. We will then hear from Dr. Fauci, and finally, we will finish up with Dr. Osterholm. After we have heard all the testimony, we will turn to questions.

Dr. Gerberding.

TESTIMONY OF JULIE L. GERBERDING, M.D., M.P.H.,\1\ DIRECTOR, CENTERS FOR DISEASE CONTROL AND PREVENTION, DEPARTMENT OF HEALTH AND HUMAN SERVICES, ATLANTA, GEORGIA

Dr. Gerberding. Good morning, Mr. Chairman and Senators. It is really a pleasure to be here to focus in on the local response to SARS because, as we say at CDC, ultimately, all public health is local and I think it is a timely opportunity to address the issue from that perspective.

\1\ The prepared statement of Dr. Gerberding appears in the Appendix on page 47.

The macroscopic view right now is that we have over 7,700 cases of SARS globally with 643 deaths. In the United States, we have 67 probable cases of SARS, and I think I have a graphic here that shows the distribution of both the probable as well as the suspected cases of SARS across the United States. I illustrate it only to indicate that almost all States have been involved in the development of containment protocols for the isolated patients, and certainly this represents an enormous amount of work on the part of clinicians as well as local health officials across our country.

There are many SARS stars and I would like to formally acknowledge the efforts that have been made by the CDC team, but I think in this effort, it is the front-line clinician and the front-line local health officials that really deserve the credit for the fact that, so far, we have been able to contain the epidemic in this country. We have been doing that not using the usual modern interventions, such as vaccines or antiviral treatment, but the old fashioned methods of isolation and quarantine.

The first and foremost component of this is, of course, the alerting and the advice to travelers to affected areas, reminding them of what the risks are and the steps they need to take. We delivered more than one million of these health alert cards, which have proven to be a very important aspect of our

response because they remind travelers returning from these areas that they could potentially have been exposed. And if they develop any illness in the next 10 days, they need to contact a clinician and seek medical care.

We know the health advisory notices are working because people are self-referring for care and they are reporting very early at the onset of fever. So I think that has been a very important component of our ability to contain spread in this country. Of course, it only takes one highly-infectious person to set off a cascade of transmission if they are not identified and isolated quickly.

A really critical component of containment at the local level is the front line, the hospital emergency rooms, clinics, and the clinicians who respond quickly to suspecting a case of SARS and implement the appropriate infection control precautions. We learned in Canada that you have to have a very high standard of infection control in the health care environment to prevent spread to other health care officials. This includes not just the containment in the room, but also the masks and the proper utilization of hand hygiene and the other measures to prevent spread. Isolation has been successful in the vast majority of situations where it has been properly introduced in health care settings, but as I said, you have to be highly compliant with those recommendations.

In this country, we have not had to implement quarantine or measures for exposed people other than the active monitoring that health officials have been doing of people exposed to SARS cases in hospitals or in their homes. That really represents the part of this graphic that you don't see. Because for every case here on this map, there are many exposed people that are involved in an ongoing monitoring process, for the 10 days of incubation, to be sure that we detect the earliest possible signs.

In this country, we have only two individuals who have been exposed to travelers and who are probable SARS cases. One of them is a health care worker and one of them was a household contact of a SARS patient. So we think our isolation and monitoring systems have been effective so far.

The last really critical component of this is, of course, communication. We need the communication systems to electronically track illness and information, but we also need the information exchange that goes out through our health alert notification, through our Internet, through our spokespersons at the local level as well as the national and international level.

I think what we have learned in SARS is that we can respond quickly, we can define the virus, develop tests, sequence it, and we can also get the communication and information about that out quickly enough. The question is, are we quick enough to really contain it if we are in the unfortunate situation to have a highly infectious person who sets off a cascade of transmission.

We have seen that it can be done. Containment has been successful, even in developing countries, but it takes a prepared public health system. The weakest link in the system is the link that could allow a leakage and spread to occur. So we have to strengthen the entire public health system from the front-line clinician all the way through the Federal and international health agencies. We can do it, but it is going to take a sustained effort, and I thank you for the opportunity to

present that perspective.
    Senator Coleman. Thank you, Dr. Gerberding. Dr. Fauci.

  TESTIMONY OF ANTHONY S. FAUCI, M.D.,\1\ DIRECTOR, NATIONAL
    INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES, NATIONAL
INSTITUTES OF HEALTH, DEPARTMENT OF HEALTH AND HUMAN SERVICES,
                      BETHESDA, MARYLAND

    Dr. Fauci. Thank you very much, Mr. Chairman. I appreciate the opportunity to present my testimony before you and Members of the Committee.

    \1\ The prepared statement of Dr. Fauci appears in the Appendix on page 58.

    As you can see from this slide, many versions of which I have presented before this Committee and similar committees regarding emerging and reemerging diseases, the SARS epidemic that we are facing really falls squarely within the spectrum of what mankind has been experiencing since the beginning of mankind and will experience throughout the evolution of our species to wherever it may go, and that is that interesting interaction between microbes that emerge and reemerge.
    Sometimes, these emergences are really minor blips in the radar screen that are curiosities, unfortunate for the people who get afflicted, but they do not have a major global health impact. And then occasionally, we get a disease that does.
    In the last century, the 1918 flu pandemic that killed 25 million people worldwide, and the AIDS epidemic that was first recognized in the early 1980's, which we are now in the middle of, is another example of a true global pandemic.
    SARS is an epidemic that is still in its evolutionary phase. It has extraordinary potential. The death rate is alarmingly high, and as you mentioned in your opening statement, Mr. Chairman, in many respects, despite the fact that we have had good public health and infection control methods, we have been somewhat lucky, and for that reason what we really need to do is to continue the vigilance that Dr. Gerberding has mentioned, but also pursue a robust research agenda, and I would like to spend just a couple of minutes on that.
    We know from very rapid detective work on the part of the CDC, the WHO, and others that the etiologic agent of SARS is a coronavirus. Now, you might recall historically that it took us at least 2\1/2\ years to identify the virus associated with HIV. This was done in a matter of weeks and the virus was sequenced so that we know the molecular makeup of it.
    It falls within a category of viruses that we have had extensive experience with, the first coronavirus being isolated in 1937 in animals, and then in the mid-1960's in humans. It is most known for the fact that one of the groups of coronaviruses is the cause of the common cold, a very benign disease that rarely, if ever, causes serious consequences.
    But also, the coronavirus is seen among domesticated animals, such as pigs, cows, dogs, cats, etc., and this is important when one thinks in terms of where this virus may have come from. And I must say right off that we don't know at this point, but also it shows the importance of developing animal models so that we can study it. As you know, there are no specific therapies or human vaccines, even though we have been

studying these types of diseases for a considerable period of time.

What about the research agenda, we have now? Because of the seriousness of the threat and because of the fact that although there are reports, as you mentioned, that things might be leveling off, there are two issues. One, we could just as easily have a rebound, and that is the reason for the vigilance that Dr. Gerberding mentioned, but also, there is the possibility, if not likelihood, that we will not be finished with this even when the cases no longer spread in this season or at this particular time. So we must be prepared for serious consequences in future years.

For that reason, there is a robust research agenda, including basic research and understanding of what we call the pathogenesis of disease. How does it make people sick? That is still somewhat of a mystery, because when one looks at the pathologic specimens of individuals, it is likely that not only the virus is causing direct damage, but the inflammatory response seen in the lungs of individuals with the Severe Acute Respiratory Syndrome is causing a considerable amount of damage.

We also need to think in terms of therapies. We are right now in collaboration with our colleagues at the CDC and at USAMRID screening a number of drugs that have already been developed for other reasons to see if, in fact, we could get what we call a hit or an indication that this particular drug or class of drug might have activity against the SARS virus. We have had some interesting preliminary hits, but they have only been at concentrations of the drug that would not make them at all feasible to use in a pharmacological sense. But it at least points us in the right direction of the class of drugs.

We are also, now that we have the sequence, doing targeted drug design against potential particularly vulnerable parts of the virus replication cycle.

And then there is the question of vaccine. Again, since this virus, lucky for us, grows very robustly in tissue culture using monkey tissue culture cells, the virus is now being grown in a number of institutions, including the National Institutes for Health, for the purpose of making the first generation of a vaccine, which is a killed vaccine. We will likely be successful in proving a concept in an animal model, but once we do that, it will take years, at least, to develop a safe and effective vaccine for humans.

So in summary, Mr. Chairman, the research agenda is robust and the challenge of emerging and reemerging infectious diseases will be with us forever and SARS is a dramatic example of that. Our most critical weapons against the threats are vigilance, public health and infection control capabilities, and the robust research agenda that I briefly summarized for you and which I have described.

With these factors working in synergy, we feel confident that they will provide the best hope of protecting the citizens of the world and of our Nation against the inevitable threats to public health that will follow. Thank you, Mr. Chairman.

Senator Coleman. Thank you very much, Dr. Fauci. Dr. Osterholm.

TESTIMONY OF MICHAEL T. OSTERHOLM, PH.D., M.P.H.,\1\ DIRECTOR, CENTER FOR INFECTIOUS DISEASE RESEARCH AND POLICY, UNIVERSITY OF MINNESOTA, MINNEAPOLIS, MINNESOTA

Dr. Osterholm. Thank you, Mr. Chairman. I want to applaud you and the Members of the Subcommittee for addressing this very timely and critical issue in terms of the effectiveness of our Nation's response to SARS. I believe that this international public health crisis is here to stay, as you so eloquently stated, and will pose an ever-increasing risk to the citizens of the United States. My comments reflect my professional experience in State and Federal public health programs, academia, as well as my participation in such groups as the National Academy of Sciences Institute of Medicine.

\1\ The prepared statement of Dr. Osterholm appears in the Appendix on page 68.

In that latter regard, I want to refer the Subcommittee to a very important report which was issued in March of this year, just as SARS became a public crisis. Ironically, our committee, which for the past 2 years detailed the reasons why emerging infectious diseases are of such importance, actually considered the very issue of a type of SARS-like agent becoming a critical public health problem. Our committee report also provides a series of recommendations for assuring that we have an effective and timely detection and response to these new agents in the future. I urge the Subcommittee to review this report.

I am here today to address the critical need for our country to continue in its beginning journey to prepare its homeland security against both human-made and Mother Nature-made biological agent attacks. In general, we must capitalize on the collaborative preparation to respond to the everyday growing threat of emerging infections, as well as the potential for the use of biologic agents as terrorism weapons.

Before I detail my concerns and suggestions for the Subcommittee, I want to take this opportunity to offer my highest compliments to the response to the SARS epidemic both abroad and at home. This response has involved a number of Federal agencies, particularly the Department of Health and Human Services and Department of Homeland Security, as well as State and local public health departments as well as front-line health care facilities and workers.

Specifically, I would like to acknowledge the leadership of my two co-witnesses, Dr. Gerberding and Dr. Fauci, who have continued to play critical roles in defining a proactive and well-articulated response on behalf of our Federal public health agencies. Both of these individuals have served as trusted and articulate voices in hundreds of media appearances and policy briefings. As a result, I believe that this time, the American public has received the facts in a meaningful and very thoughtful way.

In addition, State and local health agencies have put in countless hours investigating possible SARS cases, working with local health care delivery systems to accommodate the needed infection control security for individuals who might have contact with SARS patients, as well as serving as a credible public voice for the many questions that have arisen from the local community.

While our experience today with SARS can be interpreted as having been successful in our efforts to limit its impact in this country, like you, Mr. Chairman, I have to admit we have been lucky. As you have heard during the past several weeks,

the City of Toronto has known firsthand the devastating impact of the SARS epidemic. This impact includes not only the morbidity and mortality associated with the disease, but the economic and social implications of being labeled a community with SARS transmission.

We must never forget, what happened in Toronto could just as easily have happened in Buffalo, Cleveland, Detroit, or Minneapolis-St. Paul. Imagine what any one of these American cities would have experienced had an epidemic unfolded in their community and subsequently had an international advisory issued urging no travel to that community.

As an epidemiologist who has investigated hundreds of infectious disease outbreaks, including some caused by previously unrecognized infectious agents, both my learned opinion and my best bet is that we have not yet begun to see the worst of SARS. It is my belief that despite the heroic efforts made by countless professionals in the health care and medical care systems to control localized epidemics in locations such as Toronto, Hong Kong, Hanoi, and Singapore, the ongoing transmission of SARS in parts of China and Taiwan signals a very important message that this is a disease transmitted via respiratory route that has now seeded itself in a sufficant number of humans such as to make its elimination impossible.

If this is true and this disease follows the pattern of other similarly transmitted agents, we can expect to see increasing case numbers associated with seasonality, in other words, in the winter months in the Northern Hemisphere. In short, the reduction in new cases throughout the world is undoubtedly due in part to the heroic efforts just mentioned and also likely reflects the waning of cases during the summer months.

Believing this to be true, I am convinced with the advent of an early winter in the Northern Hemisphere in just 6 short months, we will see a resurgence of SARS that could far exceed our experience to date. If this projection is correct, we have every reason to believe that this disease may show up in multiple U.S. cities as we continue to travel around the world in unprecedented numbers and speed. Imagine now the possibility of simultaneous disease outbreaks in multiple U.S. cities.

You may ask, is this likely to occur? Honestly, no one knows, but as a student of the natural history of infectious diseases, I am convinced that, just as we saw in the early days of HIV, we are now in the early days of the SARS epidemic.

I have provided for the Subcommittee a series of points that I believe must be considered in response to the SARS epidemic. First, we are under-invested in our public health system. You will hear from other panels to the extent to which that has occurred.

Also, we must coordinate the roles of Federal, State, and local agencies in our response to this problem. I believe that you have sitting at this table in Dr. Gerberding and Dr. Fauci, two of the leaders for which their agencies must play prime roles and primary response roles to this particular problem.

Finally, it is going to be important for us to understand the resources and capabilities of our health care delivery systems and the private sector in responding to this problem and the need for the critical coordination and resource development in these areas.

In conclusion, let me just say I again want to thank you

for this very important and timely hearing. I only wish that this would be the last hearing necessary in terms of responding to the SARS crisis, but I fear that will not be the case. Nevertheless, your ongoing oversight of the resource needs and collaboration of Federal, State, and local public health agencies will provide a critical road map for helping us to assure our Nation's safety and security from all of the emerging infectious diseases of the future. Thank you.

Senator Coleman. Thank you very much, Dr. Osterholm.

I would be interested to know whether, Dr. Gerberding and Dr. Fauci, if you share Dr. Osterholm's perspective that we have not yet seen the worst of SARS? Clearly, he has raised the concern that when the winter months approach, and in Minnesota, we know about those winter months, that we can expect to see new cases. Do you share that perspective?

Dr. Gerberding. I hope he is wrong, but I fear that he is correct. Most of the respiratory viruses follow this pattern and I think we need to be vigilant and anticipate that could be the case.

Senator Coleman. Dr. Fauci.

Dr. Fauci. I share both Dr. Osterholm and Dr. Gerberding's concern. As Dr. Gerberding mentioned, it would be distinctly unusual for a respiratory disease that is spread the way this is spread to all of a sudden just disappear.

Senator Coleman. I want to get focused on the local level. I have some basic questions, but let me ask a broader question first. As I have listened to the testimony, what should Toronto have done differently? I would ask you all to--if you ruled the roost, what would you have told them to do or what should they have done that was different?

Dr. Gerberding. I think there is very little that they could have done differently because the patient who was infectious arrived there before information about the epidemic was available. So they didn't have that opportunity to put into place the kinds of systems that we now know are necessary for containment. That was bad luck.

Senator Coleman. Dr. Fauci.

Dr. Fauci. It could just have easily have happened to us. We often get asked that question. We really, in general, don't have better public health measures nor better experience, at the local level than other developed nations, particularly like Canada, have. They didn't know it was coming and it hit them. We knew it was coming just days before. We did a very good job, particularly under Dr. Gerberding's leadership at the CDC, but we could have been hit much worse. So I don't think that there is any reasonable criticism of how the Canadians handled it. They did a very good job.

Senator Coleman. Dr. Osterholm, any comment?

Dr. Osterholm. Yes.

Senator Coleman. And by the way, I am not looking to criticize. I am just trying to understand, is there something in that experience that now the message should go out to every other city, go down this path rather than another path. Dr. Osterholm.

Dr. Osterholm. Lest you think this was rehearsed, I happen to agree strongly with my colleagues here at the table, but let me add one additional point. Also being from the lakes of Minnesota, you understand well what it is like to have a leaky boat. If you have got one leak, you can bail for quite a while and do quite well. That was a single hit in one city.

What I am very concerned about is that if we see a greater pressure on a worldwide basis in terms of cases in the developing world, they are going to spin out many more new infections that will come into the developed world through travel. What do we do if we are experiencing four, five, six, seven, or eight of these outbreaks in 10 cities simultaneously? Resource allocation issues will end up to be very different.

So I would urge that we understand the Toronto experience, as much as it was a potential problem, imagine if that had been simultaneous in many different North American cities and what resources we would have been able to provide on a local, State, and Federal level. I think that is the concern that we must have for the future.

Senator Coleman. Do local responders today have a single point of contact to get information or to report concerns? Is there a hotline to one place that folks, by the way, not just in the Minneapolis, St. Paul, or Chicago, but in the St. Cloud, the Sleepy Eyes, the smaller communities, is there within our country today at the local level an awareness of a single point of contact, either to report information or get information?

Dr. Gerberding. I would like to think that the fact that CDC does serve as a broker of information is a useful tool at the local level. We certainly have a website that has been visited more than two million times over the SARS epidemic. We also operate a hotline for clinicians and a hotline for the general public so people can have access to that information, even in other languages, on a regular basis.

But we also recognize that we can't prescribe the details of the response or the measures at the local level and so that system has to include input up and down the entire public health system.

Senator Coleman. Dr. Osterholm, I know you have experience working at that local level----

Dr. Osterholm. There actually are--it's a variety of different systems that exist at State and local areas, but like Dr. Gerberding said, I agree that there are well-recognized points of contact.

The problem we have, however, is that as the number of problems continue to increase, I see nothing in our human biology to suggest that the number of new problems are not going to increase. Today, telephones are ringing off the hook at health departments throughout the United States. As a result of the BSE issue in Canada, is it safe to eat my hamburger?

The same people that often have to answer these questions are the same people that are responding to SARS, who are responding to trying to get people vaccinated for smallpox, and who are dealing with any number of infectious disease problems. And so it is like when your 911 system gets overloaded. What is happening is while those points of contact exist, they are all occurring simultaneously. So SARS has now been added onto the back of that point of contact.

Senator Coleman. Thank you. Senator Lautenberg.

Senator Lautenberg. Thanks, Mr. Chairman.

The hearing that we are holding here demonstrates its importance as we listen to the testimony. Frankly, I wish we had a more optimistic picture than we have seen.

The question for me is, when was the first evidence of SARS discovered? Do we know where?

Dr. Gerberding. In retrospect, we believe that the first cases of SARS, or at least the first outbreaks of SARS were

occurring in the Guangdong Province in November and December. We did not get reliable information from that area and that is one of the weaknesses in our global detection system, that we don't have the sentinels out there that we can trust or that we can get information from when it is happening.

It was recognized in February in Hong Kong because a traveler from Guangdong was involved in an outbreak that occurred in a hotel in Hong Kong and that really initiated the international cascade. So it was several weeks after the epidemic was initiated in China that it became known in the Western world, and then it was a couple of weeks after the outbreak in Hong Kong that we were able to isolate the virus and recognize that this was not influenza or not some common problem, that this was, in fact, a new coronavirus infection.

Senator Lautenberg. Is it assumed that we are dealing more capably with this because we have had, as Dr. Fauci said in his testimony, a chance to take a look right after the problem came up in Toronto and prepare ourselves a little better for it, because I am interested in the fact that this locale, this region seemed to have induced the quickest spread of the disease. Could something like this have resulted from an activity by people who were looking to manufacture something? You get an obvious connection here between the threats that we have been enduring. Mr. Chairman, it is really a terrible scenario that we look at.

Dr. Osterholm, the calls that I have been getting don't relate so much to SARS but to fear of a problem that is facing us. In this case, this Committee has significant jurisdiction over homeland security and I have had the kind of calls that say, well, should I not go to New York, from people in my State, in my region. Should I not plan my vacation with my kids to Florida? We are talking now about different kinds of dangers, but nevertheless, dangers.

The thing that concerns me is the tendency to try to isolate ourselves from the communities in which we live, work, travel, etc., because as I heard, isolation looks like, if I understood you right, Dr. Gerberding, isn't isolation the first step that you take when someone is suspected of having SARS?

Dr. Gerberding. Isolation is what we do when someone is infectious and we put them in the hospital and use the precautions for preventing spread. Quarantine is what we do with uninfected people who might have been exposed, and the quarantine can be anything from complete segregation to simply, you have been exposed, take your temperature every day and let us know if you have a fever. We haven't had to implement the more aggressive forms of quarantine in this country, we haven't recommended them here, but that is a step that was necessary in other parts of the world to control the problem.

With respect to your issue about is this terrorism--everything about this disease looks natural. Its mode of transmission, its pattern, everything is consistent with the natural evolution of a coronavirus. But we have had an open mind about this from the very beginning, and, of course, we were alert to that in the same way that you were.

Dr. Fauci. Senator, one point that I might make has to do with information and the kind of calls that you get and the kind of calls that we get and why it is so important to do what we have been trying to do, is to be very proactively up front in trying to educate the American people as to what a real risk is and how you should respond to the risk.

You might recall that back during the anthrax crisis, when the anthrax attacks were in Florida and in New York and in Washington, DC, we were getting calls from people in Los Angeles and in Pittsburgh saying, should we be taking ciprofloxacin, because they read this in the newspaper. Well, there is absolutely no reason for them to take ciprofloxacin if they are not exposed. And I think the point that Dr. Gerberding is making is very important.

We should be very vigilant, but we shouldn't have people now in our country be afraid to go anywhere in this country.

Senator Lautenberg. Exactly, and that is the kind of message that I am looking for, and that is if it is a natural phenomena, natural conditions often, if something goes awry, create a danger--street crossings, etc., airplane flying in normal course, car driving, all those things. I would like not to have a message that says, hey, we have to retreat to our homes. We can't function. We couldn't function.

One thing that Dr. Osterholm said that rings my bell, and that is we are not spending enough on the whole public health issue, and this brings it full forward to us. You heard Senator Levin's comment about the fact that the fellow from Home Depot decided to reach into his pocket to make the facility workable, that is part of the Federal Government.

It is a terrible thing, because I believe that security and strength has to be built from within the society as well as that which protects us externally beyond our boundaries. The demands today, there is an awareness that we never saw before that results from the instant access to communications, the awareness of people to things that I don't think were quite as they were before. We have not only got to work with the condition itself, but with the fallout that results from knowledge and--you said two million hits on the website. Is it thought that they were primarily from the professional community? I am talking about health care providers, first responders, etc., or is it John Q. Citizen who is looking for some information to protect themselves and their families?

Dr. Gerberding. I think we see both. Our website has information for clinicians. It also has information for the general public and we hope people do go there as a credible source of information.

But I really agree with your point about trying to balance, there is a problem. These are the sensible things that need to be done to control it. On the other hand, we don't want to overdo it and have people unnecessarily concerned or take steps that really are detrimental to the kind of balance that we want to have in our life, and that has been our challenge with this one.

Senator Lautenberg. Mr. Chairman, just 1 minute more. Dr. Fauci, did you suggest in your comments that this is a relatively low-lethality disease?

Dr. Fauci. No, not at all. In fact, to the contrary. If you look at influenza, which is spread much more readily than SARS, the mortality is less than 1 percent in a normal year of influenza. If you look at a very bad situation, like the pandemic of 1918, that was just a few percent, 3 or 4 percent. The mortality right now, if you look at it, is between 8 and 9 percent, and some may think as high as 14 or 15 percent.

Senator Lautenberg. Thanks, Mr. Chairman. Thank you very much.

Senator Coleman. Thank you, Senator Lautenberg.

I want to focus again now, in following up a little on some of the concerns that Senator Lautenberg just raised. At that local level, not the public side now, the private side, we have Northwest Airlines in Minneapolis-St. Paul, a direct connecting link to China. I know that they have been impacted by fear of flying.

Can you talk a little bit about, on the private side, the kind of information that a Northwest Airlines or someone else is getting? Who is telling them whether they have to sanitize planes? Who is providing information about whether it is safe to be on the same plane that flew to somewhere in China but is on another route? Who has that responsibility? Who has that information, and how do folks on the private side get the right information?

Dr. Gerberding. CDC has a large responsibility for the health conditions in our transit system and that particularly is handled by our Division of Quarantine and Global Migration. So our quarantine officers are at the borders and are responsible for any of the health measures that need to be taken on vessels or on airplanes or other means of transportation. So we have been working with the trade associations representing airlines as well as airline crews to get information out about what is necessary as well as what the concerns and issues are at the individual employee level.

Just last week, we prepared, at CDC, a videotape, a 2-minute video briefing that will be available to all the airlines to show on board the plane to help the passengers understand what is going on, why are they getting this card, and what does this all mean. So we do this in partnership and are very open to being responsive to additional needs.

Senator Coleman. Is there a greater need to communicate to the general public, those who are getting on one of those airplanes, to answer any concerns they have about infection passing on, and if there is, who has that responsibility?

Dr. Gerberding. Again, it is a partnership. I don't think there is ever enough communication in the setting of a health problem, at least enough reliable communication. But we work through the local health agencies as well as through the media to try to get information in the hands of travelers. We are also working with the associations of travel agents and people who are going to get the kinds of questions when someone is booking their reservation. So there are a lot of different channels of information and we are pushing it out there as fast as we can.

Senator Coleman. Dr. Osterholm, I know you again know in your experience in dealing with the local level with some of these issues of infectious diseases. Talk to me a little bit about the mechanism for the average citizen to have concerns dealt with.

Dr. Osterholm. Well, first of all you are really dealing with competing interests here. We have 24/7 television cameras today that are going to, in some cases, fuel the fire of fear. I am very afraid of that issue. But on a whole, I think that most of the media has been quite responsible reporting on the SARS issue and has tried to represent the facts. In particular, the print media has done a very good job of detailing that.

What we need to do is do a better job of driving the public to reliable information. For example, the CDC has on its web site right now, two very thoughtful documents about should people travel to this country for business purposes, if they

come from a SARS-infected area, or should they travel to those counties? We at the University of Minnesota, for example, have a number of foreign students coming to our campus from China very soon. We have used the CDC documents extensively to help us decide what to do. I think that has been very helpful.

So part of it is making people aware that information is there. Again, we are making great efforts that way.

Senator Coleman. And finally, Dr. Fauci, you talked about a robust research agenda. How is the funding for that agenda?

Dr. Fauci. Well, right now we are, as you well know, between budget cycles, so we are using our emerging infectious diseases resources to jump-start programs and we are now in the process of putting together a projection of what our resources will be needed for. In fact, at a hearing that Senator Specter held, our Appropriations Chair asked Dr. Gerberding and I to do that, and we are in the process of doing that and putting it through the clearance of our Department. So we are actually working on that right now.

Senator Coleman. Thank you. We are going to have a vote, I believe, at 10 o'clock, but I will turn to my distinguished colleague. Senator Lautenberg, do you have any additional questions, and if you do, after Senator Lautenberg's question, we will finish with this panel, have a 10-minute recess so that we will be able to go vote, and then continue the hearing. Senator Lautenberg.

Senator Lautenberg. Where does the responsibility lodge between CDC, NIH, etc? How do you bring the various departments together? How are they coordinated?

Dr. Gerberding. Secretary Thompson has made a very strong commitment to have all one HHS, and it actually is working that way. One of the ways we coordinate is through the Secretary's command center. So every morning, I get an update from our people all over the world on the state of SARS and then I sit down through a video terminal and speak directly to the Secretary's command center, where Dr. Fauci and Dr. McClellan and others from the various Federal agencies participate, as well as people from the Department of State, Department of Defense, and other areas, and I give a morning update on the status of the SARS epidemic. We identify any major strategic decisions that the Department or that the Federal Government needs to address, and then the Secretary and his team take it from there.

So the coordination of the response has been working beautifully through our operations center model. I think, in general, we have an extremely collaborative relationship with NIH. Dr. Fauci and I are in constant communication and I think we pass that baton back and forth with great enthusiasm and sometimes even a little fun.

Senator Lautenberg. How does the non-specific medical information, the demographics, and the geographic, where does that kind of data reside?

Dr. Gerberding. We publish each day a daily SARS report that gets distributed through the various people who are tracking the epidemic. This is also on our website. We make information available to the media through a similar mechanism.

Each week, at least once a week, we also have a televised briefing for the public and the press where we give the updated information or describe what is going on, and then through our health alert system, which is the way we communicate urgent information to State and local health officials and clinicians,

any time there is something new, like last night we changed the case definition for SARS, so we pushed that out through the system so that people on the front line know what is going on.

We also have regular phone calls, many with health officers, with clinicians, with various stakeholders in the effort. So it sounds like a lot of different things going on, and that is the case, but it is actually very well coordinated through our operations center.

Senator Lautenberg. Dr. Osterholm, you are free of any government restraints here. What do you think we, in government, could do besides just providing funds? Is there anything else that you would recommend to help us get a handle on this threat that we see from SARS?

Dr. Osterholm. I think the issue of funds is a very clear piece of it, particularly for the State and local level. We also have the issue of human resources, meaning do we have the trained individuals in this country we need to respond?

I think earlier, Senator, you asked a question that I think is right at the heart of the issue here today, what is the source of this epidemic? And from a perspective of humankind today, it is mind-boggling to think about, that there are actually 6.1 billion people on the face of the earth. One out of every nine people who has ever lived in the history of mankind is on the face of the earth today, and most of those people live in the developing world in conditions that Charles Darwin would have written about as the ideal microbial laboratory.

For example, the largest population of hogs in the world live in China, along with the largest population of people, and most of those pigs live in the backyards of these people, as well as the largest aquatic bird population of the world. Should we be surprised we are going to see all kinds of new infectious agents coming out of there as these factors mix and match in this kind of environment?

So I think that this government has to be prepared to understand that what has historically happened with new infectious agents should not be used as a measure of what will happen in the future. Travel, as well as all these other demographic factors I talked about will continue to change. I think that is a very important fact, and we can't plan on resources by biennium or budget cycles for a problem that we can't anticipate 2 and 3 years down the road. We are going to have more and more of these unexpected problems where we need the ability to move resources and get resources quickly.

Senator Lautenberg. Mr. Chairman, there is a message to remember.

Senator Coleman. Sobering.

Senator Lautenberg. Thank you all very much.

Senator Coleman. Thank you all very much.

This hearing will be recessed for 10 minutes.

[Recess.]

Senator Coleman. This hearing is called back to order.

I would like to introduce now our second panel of witnesses at this time. We welcome Dr. Rod Huebbers, the President and CEO of the Loudoun Hospital Center in Leesburg, Virginia; Dr. Thomas R. Frieden, Health Commissioner of the New York City Department of Health; and finally, Mary Selecky, the Secretary of Health of the Washington State Department of Health in Olympia, Washington, and President of the Association of State and Territorial Health Officials.

I thank all of you for your attendance at today's hearing. I look forward to hearing your testimony this morning and your unique perspective on how local and State officials have responded to the SARS outbreak and whether there are any lessons that we can use to improve our response to the next outbreak.

Pursuant to Rule 6, all witnesses who testify before the Subcommittee are required to be sworn. At this time, I would ask all of you to please stand and raise your right hand.

Do you swear the testimony you will give before this Subcommittee will be the truth, the whole truth, and nothing but the truth, so help you, God?

Mr. Huebbers. I do.

Dr. Frieden. I do.

Ms. Selecky. I do.

Senator Coleman. We will be using a timing system today, as I said for the first panel. Please be aware that approximately 1 minute before the red light comes on, you will see the lights change from green to yellow, giving you an opportunity to conclude your remarks. While your written testimony will be printed in the record in its entirety, we ask that you limit your oral testimony to no more than 5 minutes.

Mr. Huebbers, you will proceed first with your testimony. We will then hear from Dr. Frieden and finish up with Ms. Selecky. After we have heard all of your testimony, we will turn to questions. Mr. Huebbers.

TESTIMONY OF RODNEY N. HUEBBERS,\1\ PRESIDENT AND CHIEF EXECUTIVE OFFICER, LOUDOUN HOSPITAL CENTER, LOUDOUN HEALTHCARE, INC., LOUDOUN COUNTY, LEESBURG, VIRGINIA

Mr. Huebbers. Good morning, Mr. Chairman, and thank you for the opportunity to appear before this Subcommittee. My name is Rodney Huebbers and I am the President and CEO of Loudoun Healthcare, which is a community nonprofit health care organization serving Loudoun County, Virginia, as the principal health care provider, and we are the local first line of defense that we have been talking about this morning.

\1\ The prepared statement of Mr. Huebbers with additional testimony attached appears in the Appendix on page 73.

Loudoun County is the second fastest growing county in the United States. We are bordered on the east by Dulles Airport, which is a key factor for us, to the north by the Potomac River, and to the west by the Blue Ridge Mountains and the Shenandoah River, and we are also home to a diverse business and residential population. We are also home to the FAA's center for the National Capital Region and we are a major emergency evacuation route for the District of Columbia.

With respect to our size and experience, at the time of presentation in our emergency departments, Severe Acute Respiratory Syndrome had not been yet identified nor clinically defined with respect to symptoms of treatment. On February 17, 2003, a woman who had recently traveled to Guangdong Province in China presented in our ER with pneumonia-like symptoms. We obtained a personal history of the patient, including her recent travel itinerary, which included a report of unusual pneumonias being seen in Guangdong Province.

While symptoms did mirror pneumonia, a typical dry cough

and respiratory distress proved an unknown, prompting the patient's isolation in a negative-pressure room as a means of infection control. Subsequently, the hospital's infection control chief and the Loudoun County Health Department were notified as part of our infectious disease algorithm that we had established. In turn, the Virginia Department of Health and Centers for Disease Control and Prevention were also notified.

Prior to this SARS presentation, it is important to note that before September 11, our hospital had a specific disaster plan in place that included coordination with county, State, and Federal authorities, and following September 11, with the advent of all the biological and chemical terrorism threats, our protocols were further refined on paper as well as in practice.

Loudoun County has been confronted with a variety of communicable disease issues, including anthrax, Virginia's first human death from West Nile virus, as well as three locally acquired cases of malaria, and literally, Loudoun Hospital is the front-line provider and had been in all those cases. So, hence, we have practical experience from which to draw conclusions as to our own protocol evolution and the quality of assistance from regulatory offices.

As to the performance of Loudoun Hospital's ER triage training as well as our already heightened awareness in the development of infection protocols combined to serve us well on February 17. The documentation of symptoms, along with a predetermined history, including the travel inquiry volunteered by the patient's family, in consultation with the Loudoun County Health Department, proved critical in the initial decision to isolate and contact infection control authorities. From there, the notification algorithm worked very well as designed.

While the patient herself was of great concern, so, too, were the clinical and non-clinical staff who had either incidental or clinical contact with the patient. Again, SARS was not known at this time, but given the symptomatic issues identified, it was obvious that infection was a distinct possibility. Our emergency response team began the process of identifying those with whom the patient had contact with during the admission process, and within hours, we had a list of individuals and had begun contacting them for testing.

At the time of the SARS presentation, the hospital's most notable infection control protocol in place was for tuberculosis. Now, of course, we have a SARS protocol which, based upon information supplied by various authorities, has been amended in keeping with clinical findings.

As for staff reaction during and following our SARS presentation, I would characterize it as informed and collaborative. Given the unknown symptoms of SARS at the time, common sense, admission information, and proper infection protocols combined for an adequate medical response on behalf of the patient and staff alike. The hospital's existing emergency preparedness committee lecture series on emerging diseases and bioterrorism threats, evolving policies and algorithms related to infection control, and improved communication with Northern Virginia hospitals via dedicated rapid notification radio frequency, continue to provide threat mitigation.

There were some gaps identified during our review that, in this case, did not impact patient care. They include

insufficient testing materials pre-placed in Northern Virginia for all the individuals we needed to test. There were procedures in place to transport specimens quickly to the Virginia State Lab, but the procedures for quickly shipping these specimens to Atlanta during the weekend were lacking. Multiple agencies were involved, which at times pitted patient care against regulatory expectations. At times, the staff was torn between specimen collection and delivery, symptomatic consultation with multiple agencies, and actually caring for the patient and others.

In particular, our patient only spoke Chinese. Had it not been for a family member accompanying the patient, vital information impacting patient care may not have been communicated easily.

At our hospital, we have provided additional instruction in the taking of sample and chain of custody procedures to accelerate the diagnostic process, and a general concern of ours continues to be multiple isolation patients requiring negative pressure rooms.

Three elements, however, played a key role in the successful outcome of this case. Plans were in place in the emergency room to isolate the patient and notify key personnel. Effective communication patterns preestablished throughout the public health sector from hospital to Federal authorities worked well. And positive working relationships between the hospital and the local public health office proved critical in diagnosis and in containment.

In conclusion, the largest single gap experienced between our hospital and expectations of State and Federal health authorities as well as the public to whom we are dedicated is the additional cost associated with clinical education, supplies, and ultimately prevention on a local, regional, and national infectious disease issue. Local hospitals like Loudoun Hospital have spent considerable time, man hours, and capital in emergency preparedness for all levels of trauma and infection associated with accidental or hazardous situations. It has taxed us heavily, and while we carry the burden to meet expectations, assistance by way of appropriated dollars would certainly provide the means to assure a successful rapid response by your front-line provider.

Although all the links in the chain of defense must be strong, it is imperative that the strongest link be at the local level with the front-line provider.

I thank you very much again for the invitation to present here today.

Senator Coleman. Thank you very much, Mr. Huebbers. Dr. Frieden.

TESTIMONY OF THOMAS R. FRIEDEN, M.D., M.P.H.,\1\ COMMISSIONER, NEW YORK CITY DEPARTMENT OF HEALTH AND MENTAL HYGIENE, NEW YORK, NEW YORK

Dr. Frieden. Good morning, Chairman Coleman. I am Dr. Thomas Frieden, Commissioner of the New York City Department of Health. Thank you for the opportunity to discuss New York City's response to SARS.

\1\ The prepared statement of Dr. Frieden appears in the Appendix on page 86.

Every single day, New York City welcomes more than 100,000 incoming air travelers, of whom more than 30,000 are coming from international destinations. On Saturday morning, March 15, just 3 days after the World Health Organization first issued its SARS alert, we were notified of a traveler from Singapore with suspected SARS. The traveler was a physician himself, an infectious disease specialist, like myself actually, who cared for two index patients with SARS in Singapore. He had attended a large conference in New York City. He saw a New York City doctor for his illness, then flew home to Singapore. He was taken off the plane in Frankfurt, Germany, and hospitalized. His wife and mother-in-law, who were both traveling with him, both developed SARS.

That afternoon and evening, we faced a series of critical decisions and rapidly took the following actions. With facilitation from CDC, we spoke with the patient's doctor and determined that the patient met the case definition. We interviewed the patient by phone from his isolation room in Germany. We determined who he had been in contact with in New York City and we contacted them. We notified the conference he had attended. We found the doctor who treated him in New York City and monitored him and his staff for illness.

The same day, using blast fax and E-mail technology, we contacted health care workers throughout New York City, including every emergency department, every intensive care unit, and many others about SARS and the importance of rapid detection isolation. We heightened the index of suspicion in our state-of-the-art syndromic surveillance system. This system tracks every ambulance run, most emergency department visits, many pharmacy prescriptions, and absentee data.

We created a public communications strategy, including targeted outreach to Asian communities. We emphasized that this is a disease of travel, not ethnicity.

Our response illustrates that a detection and response to an infectious disease outbreak, whether natural or intentional, requires both a strong public health infrastructure and an effective working relationship with the medical community.

Today, we have a stronger system, thanks to Federal funding. We are able to be available 24/7 to evaluate potential SARS cases, ensure that appropriate lab specimens are obtained, provide guidance about patient isolation and care, and actively monitor all cases. We continue to prepare for a possible outbreak, and when needed, we have mandated the isolation of patients.

Partly due to early proactive response and partly due to our good fortune in not having had a super-spreader, SARS has not spread in New York City. However, given outbreaks around the world, New York City and the United States cannot afford to be complacent. A disease that spreads like the common cold, kills one out of six people it infects, and for which there is no rapid test, no vaccine, no cure, and no way to predict its future course is something we must all be extremely concerned about.

Federal funding is woefully inadequate for our city. For example, bioterrorism funding is not currently directed toward the extraordinary needs of places high on the list of potential targets. Cities like New York, already a target more than once, must be prioritized. More than 11 million people live or work in New York City every day, with a population density 300 times greater than the national average.

We appreciate the Federal funding that has already been provided, but it is not nearly enough. I request a chart that I will provide be read into the record.\1\ It shows that, incredibly, New York City ranks 45 out of 54 grant recipients in Federal per capita bioterrorism funding, 10 percent less even than the national average. New York City gets one-sixth as much per capita as Washington, DC, one-fourth as much as Wyoming, one-third as much as Vermont, Alaska, North and South Dakota.

\1\ The chart appears in the Appendix on page 136.

The spread of SARS could rapidly overwhelm our ability to respond. My department has immediate needs requiring at least $104 million additionally. Our most urgent unmet need is to upgrade our public health laboratory. Despite fiscal crisis, the city has dedicated more than $30 million to upgrading the lab, but this is only about half of what is needed. We must retrofit facilities for emergency use, plan and establish sites for mass preventive treatment, acquire equipment and technology for rapid response. New York City public hospitals need an additional $35 million to address their immediate emergency response needs.

To ensure speed and effectiveness, it is critical that Federal funding continue to come directly to New York City. We must continue to strengthen the Nation's public health infrastructure. CDC's laboratory and infectious disease resources need to be greatly increased. Threats of terrorism and new and reemerging infectious diseases will remain a concern for the foreseeable future. Only a concerted, sustained Federal investment in public health will ensure our capacity to respond and protect our communities. Thank you.

Senator Coleman. Thank you very much, Dr. Frieden. Ms. Selecky.

TESTIMONY OF MARY C. SELECKY,\2\ SECRETARY, WASHINGTON STATE DEPARTMENT OF HEALTH, OLYMPIA, WASHINGTON, AND PRESIDENT, ASSOCIATION OF STATE AND TERRITORIAL HEALTH OFFICIALS

Ms. Selecky. Thank you, Mr. Chairman and Members of the Subcommittee. I am Mary Selecky, Secretary of Health in Washington State and President of the Association of State and Territorial Health Officials.

\2\ The prepared statement of Ms. Selecky appears in the Appendix on page 94.

In my remarks today, I would like to make four points. Substantial Congressional investments in preparedness funding have enabled States to respond more effectively to emerging infectious diseases, such as SARS.

Second, great progress has been made in enhancing public health capacity, but as you just heard, much more needs to be done and sustained support is essential.

Third, Federal, State, and local public health agencies in collaboration with their international counterparts and other key partners are working cooperatively to address this serious public health concern.

And fourth, as Dr. Osterholm said, the greatest obstacle to our efforts to combat SARS and future threats like this is the

serious workforce shortage facing health agencies at the local, State, and Federal levels, both public and private. That shortage must be addressed if we hope to quickly, efficiently, and effectively respond to emerging infectious diseases.

For the past 2 years, Congress has appropriated significant amounts of funding for public health preparedness activities at the Federal, State, and local levels. There is no doubt that these resources have improved our ability to respond to SARS. In Washington State, we have 29 suspect and probable cases. We have a double-digit number. Other States have single-digit numbers. We all have to have the same capacity.

With the investments that have been made in Washington State, public health preparedness funds have added four epidemiologists to our State communicable disease epidemiology unit, providing us with the additional capacity needed to respond to SARS questions and to assist local health agencies and local clinicians, including our hospital partners. These same funds have been used to organize 9 public health emergency preparedness regions among our State's 35 counties that are organized in local public health. We have added additional epidemiologists and we have provided leadership across the State, State and local together, in being able to deal with SARS.

Washington State, like most other States, is using the health alert network that Dr. Gerberding mentioned to disseminate official messages from CDC across the public health system and through local health agencies, as noted in New York, to clinicians and hospitals, and we are all using websites, borrowing, and sending around to each other.

Cooperation and collaboration among public health agencies and other key partners is critical to our SARS activity. Our colleagues at CDC have done a terrific job in identifying and tracking the epidemic. As you heard, through numerous conference calls, video conference broadcasts, international broadcasts, we have shared the information across a wide spectrum.

As a former local health official for 20 years in a very rural part of Washington State, the Fifth Congressional District, I know firsthand about the importance of the capabilities that must be in place so that all citizens are protected. In a local rural area, we rely clearly on our fellow local, our State, and our Federal health agencies, but we all have distinct roles to play.

We are a State that borders another country and we are next to British Columbia. We serve as a major port of entry and we, the State, as well as the locals, must work together with our international partners in order to address issues like this, and let me give you our example.

On March 22, a container ship was due to arrive in Tacoma, Washington, after visiting Singapore, Hong Kong, and Taiwan. Several of the 26 crew members had developed non-specific upper respiratory symptoms that fit the evolving case definition.

As the ship approached, my staff worked closely with the local health department, Tacoma, Pierce County, CDC's Division of Global Migration and Quarantine to plan a response. We had questions about the symptoms, who had the authority, would we isolate, would we quarantine, who is it that would address this issue? The Port of Tacoma was engaged, as well as the shipline owner. We were all working together, and this was new territory for all of us. Calls for assistance and questions quickly

overwhelmed CDC's Division of Global Migration and Quarantine. If there is anything singular that stands out, there has been underfunding of that particular part of CDC.

We boarded the ship together. We determined that we were not dealing with SARS at that moment. We were able to work together to alert the other ports in California and Hawaii as to what had gone on; it is that cooperative and collaborative relationship of which I speak.

For a moment, I will highlight some of our workforce concerns. The same public health workers who work on communicable diseases at the State and local level, and even most recently with smallpox vaccinations, upcoming summer West Nile virus, or should anthrax ever appear, are the same ones that are today answering the phone about BSE, beef in Canada, and have been dealing with SARS. They are public health nurses, disease investigators, environmental health specialists, and laboratorians. We need them all.

Clearly, the recent progress that has been made in strengthening our public health infrastructure has helped, but much more needs to be done. Questions will arise if we in this country could deal with what Toronto went through. I believe we could, but we would be stretched to the max. We, as you yourself said, have been lucky. Someone is smiling on us.

In closing, I wish to thank Congress for the preparedness funding that has come. It was a critical beginning, but it can't be a two-shot effort. It clearly must be sustained. Thank you.

Senator Coleman. Thank you very much, Ms. Selecky.

Thank you to the entire panel. Dr. Frieden, your chart will be entered into the record.

Let me first start with Mr. Huebbers, and again, with all the testimony, I am very impressed with the quickness with which we responded. You talked about an evolving definition of SARS. Mr. Huebbers, you mentioned when this first report came in, there were some unusual things happening in Guangdong Province. I think you indicated SARS has not yet been designated as what we were dealing with. Where did you get your information from? Was it official, unofficial? How did that work?

Mr. Huebbers. Actually, in reality, what occurred was we identified that it was unusual when the patient presented the symptoms and we contacted public health. We have a fairly fast-acting triage process, that when we deem something is highly unusual, it goes beyond--involves administrators and everybody else, and literally went on the Internet and went to a search engine, typed in ``Chinese pneumonia'' and came to a website that had indications or had information there about the disease. And at the same time I am doing that at home, people at the hospital were doing it, because this occurred at about 11 o'clock at night. So that is--we were able to get that information between public health and articles that were on the website.

Senator Coleman. I am not sure whether this is a question for you or Ms. Selecky, but the way in which you responded, is that a product of you being near Dulles, part of the kind of major Washington community? Do you have a level of sophistication that perhaps the rural area that Ms. Selecky worked in wouldn't have?

Mr. Huebbers. I would say most probably. It was a combination of we did get lucky. We have, because of our

proximity to Dulles, we have had experience in dealing with malaria, anthrax, and West Nile. But we are in a unique situation because of being near Dulles and the Washington area.

Senator Coleman. Talk to me about the capacity, and I am going to ask Dr. Frieden that same question. When we listened to the first panel, the concern is fall comes, increased capacity. Do you have the ability to handle multiple cases? Is there bed space available?

Mr. Huebbers. We agree, and actually had started planning several weeks back, because we agree with the hypothesis that come the fall or winter of next year, we are not going to see the end of SARS. Actually, we believe at Loudoun that this is just the beginning.

We have already met with both regional and State health officials. We have the capacity at what we would call our old hospital--we are in a new facility that is 5 years old. The old campus has been maintained. We can bring that campus online in a very quick fashion to handle upwards of 100 patients, and, in fact, that has been part of our planning process. Both regional and State officials agree, and its ability to handle surge capacity is critical.

Our issue is money. To do that, to bring it online and sustain it from here on in, which the community, being the second fastest growing county in the country, there is also the need for some capacity there, but we just don't have the funds to do it. I mean, in an emergency, we would figure it out, but----

Senator Coleman. I have to go vote again. Dr. Frieden, I am going to come back to this issue of surge capacity in an area like New York. We will adjourn this hearing for not more than 10 minutes to allow me to vote and come back.

[Recess.]

Senator Coleman. This hearing is called back to order.

Dr. Frieden, what we were talking about and Mr. Huebbers had talked about, surge capacity. Talk to me about New York, bed space available, how do you create capacity?

Dr. Frieden. Well, in New York City, we have the experience of West Nile virus. We have the tragic experience of the World Trade Centers. We have the experience of anthrax. And so we have dealt with surge capacity in the past, and I think our gaps in this area are primarily three.

The first and most urgent is laboratory capacity. This is true at the national, many State, and certainly our local and other local levels. In the health care system, the laboratory is often the poor relation in the landscape of medical care and public health, and that is the case here, as well. We would need to be able to test, presuming that we have a rapid and accurate test down the line that can definitely rule in or rule out infection within less than 3 weeks, which is what we are dealing with now. Presumably, if we have a test, we would need to be able to do it rapidly, 24/7, 7 days a week, and we don't have that capacity.

The second issue is surge capacity in terms of isolation beds, medical facilities, and, potentially, quarantine facilities. We have to consider what we would rather not have to do, but if we had large groups of people who needed to be separated from others, we would have to find places for those people to be.

Hospitals have been downsizing, but there is a difference between having space and having staff. And so the critical

distinction is between beds and staffed beds. We know that SARS affects hospitals directly. Today's paper talks about nurses and doctors resigning en masse in Taiwan. The challenge would be not just to find the physical space, but the staff to be able to attend to patients.

And, of course, personnel is also a critical issue, as Dr. Osterholm and Ms. Selecky mentioned. We have the same staff who are doing smallpox, the same staff who are responding to outbreaks of infectious diseases every day of the year, the same staff who are dealing with West Nile virus, and with our syndromic surveillance system. These are the staff who are answering calls on SARS or other things and it really is not a sustainable situation to be in, even without a major outbreak, and with a major outbreak, it strains the system to the breaking point.

Senator Coleman. Understanding that staff, it is hard to just kind of put together this is the SARS team and have them waiting for the fall, the next outbreak, but talk to me a little bit about the ability to investigate. I read somewhere an article, maybe in the New York Times this weekend, that talked about setting up teams and New York City having teams. Are those infectious disease teams or are they SARS teams or tell me a little bit about how you are doing that.

Dr. Frieden. We are very fortunate in New York City. We have many dozens of highly trained medical epidemiologists. We have disease investigators in a wide variety of programs relating to everything from typhoid to tuberculosis, West Nile virus, and so we are able to field teams to track individual patients or outbreaks and we do that all the time. That is the bread and butter work of public health. If we get a case, we have a cluster of pertussis or measles, we are able to rapidly respond and contain that before it becomes a major public health problem. Again, if the team is working on one thing, they can't be working on something else, so that limits our ability.

We also shouldn't forget that although we need to continue and strengthen our ability to respond to infectious diseases, the thing that is killing seven out of ten Americans now is non-communicable diseases and local public health departments, State health departments, and Federal agencies have not fully stepped up to the plate of that challenge. And so as we try to deal with the things that are killing people today, we need to not stop dealing with the things that are likely to be coming back as significant problems now and in the future.

Senator Coleman. That is very helpful, and I do want to note, Dr. Frieden, that I certainly support your call for bioterrorism funding that needs to be prioritized. I think that is important, and we are certainly having discussions about that in this body. But I do think that we have to be moving in that direction. The reality is, in New York or Washington, threat levels are different than in, as I said before, Sleepy Eye or Hibbing, Minnesota, and I think we should recognize that certainly in the funding stream, so that conversation is going on.

Ms. Selecky, I keep getting back to that rural perspective. I know you are not in that role now, but are you confident that folks at a rural level, hospital rural level, if faced with a patient that showed some SARS signs, that they would have the capacity to react in the appropriate manner?

Ms. Selecky. Mr. Chairman, we are much better prepared

today than we were in the past and it will get better. I think, clearly, our ability to do very quick communication, the investment we have done as a public and private system in how we communicate and getting real-time information back and forth has been important.

I still live in that rural area of Washington State. I have to stay in the State capital during the week, but I travel that 7 hours across the great State of Washington and I have responsibility for 39 counties, be they rural or urban, as do my counterparts across the country. Our ability to make sure that people are aware of what is emerging, what is happening--I will use West Nile as an example.

It could be in an urban area, or our first dead raven with West Nile virus was in Ponderey County, where I used to be the health officer. It was just as important for that person who picked up that dead bird to be able to take it to their local health department, who then sent it to us at the State level--we all have roles. But our level of sophistication at the State level was greater than at the local level. We share the information and we worked with our Federal partners. That is as good of an example as with SARS.

Our hospitals have been squeezed to such small margins, be they public hospital districts that rely on tax dollars to open the door, or larger hospitals in our urban area that are counting on great numbers of encounters to help them open the door. But they both need the same amount of information for identification. That is what is really important, is about understanding information through the system.

Senator Coleman. But they both don't have the same level of resources.

Ms. Selecky. No, they do not.

Senator Coleman. As I listened to Mr. Huebbers talk about the protocol that they followed in terms of backtracking, finding out where folks were, going through the whole process, I would suspect, in some of those rural hospitals, you wouldn't have the capacity.

Is this something that we should be looking at a regional approach to, to have certainly the investigatory capacity, or does it have to simply fall on the shoulders of those at the grassroots level?

Ms. Selecky. Quite frankly, the charge that Congress has given to us in the States is to look at how this would work within our States. The fact that you have said to States, you need to come up with a plan, it needs to include all of these partners, and you are responsible for making sure the system works inside your State, is absolutely essential.

We have somewhere in the neighborhood of 5,000 hospitals. To disperse the money from a central location at the Federal level to 5,000 doesn't build the system. To hold the States responsible for the coordination of that system is important.

Now, in Washington State and in the State of Nebraska, for example, a regional approach was used. In some other States, in New York, New York City clearly has its own needs that are very different than other parts of New York, whether it is up in Eire County or wherever the case is. And I think that is what has allowed the States to do is that flexibility. Mandating a regional approach, I am not sure that is a one-size-fits-all, but it is one that has been encouraged for us to share those resources across boundaries.

Senator Coleman. When you had the example of the cargo ship

coming in, who called the shots? Who was in charge? Who had ultimate authority?

Ms. Selecky. That was clearly an interesting sorting out, because at that time, SARS was not listed as one of those diseases over which CDC had authority to do quarantine and isolation. And because the ship would dock in a local community, what we had sorted out would be, as in Washington State, our rule, which we had already updated, the local health official has the first call. The State health official is there for back-up, and the Feds are in a tertiary, and that was appropriate--but the important part is us working together collaboratively.

We all went onto the ship. It was an incredibly learning moment, the thought of staff going up a Jacob's ladder from a tugboat to get on the ship to see what was going on before we would allow them to come to port, because we didn't want that one little crack through the wall, as it were, to happen. We were very fortunate, but indeed, as what followed was the President did declare that SARS would be one of those diseases for which you could quarantine and isolate, if that is what was needed.

Senator Coleman. Getting back to the question of who is in charge, and we are going to have a legal expert in the next panel, but I am kind of throwing it open to everyone here, are folks confident they have got the legal authority to take tough steps if that is called for? If we move to a quarantine situation, is there any question about your legal capacity to do the things that you believe as health professionals need to be done to ensure the safety of your community? I will start with Ms. Selecky.

Ms. Selecky. One comment I would make. I know in Washington State, we do, and it is written in certainly the law and the rule that we have the enforcement authority to ask our local law enforcement or our State patrol to assist us. But the actual enforcement of how you get that done, I think in a society that prides itself on individual freedoms and individual liberties, when we have to take collective action as government officials to protect the public's health, is going to be a very tough test in this country.

Senator Coleman. Dr. Frieden.

Dr. Frieden. There is reasonable Federal guidance on this, but it remains a State and local issue and a State and local jurisdiction. In New York City, actually 10 years ago, I helped to modify the statute for how we detain patients with infectious and potentially infectious tuberculosis, when I was in charge of tuberculosis for New York City, and we put into place a system that has been tried, tested, and, in fact, challenged in court and upheld in court, whereby we can both protect the public's health and also protect an individual's right to due process and to an individualized determination of whether they actually need to be detained.

We had to actually use those powers in two cases so far in the SARS outbreak, for individuals who did not wish to remain isolated. And so we do have the authority to do it. We have done it. We are also further modernizing that statute now to address a wide variety of potential public health threats--smallpox, contact to smallpox and other communicable diseases.

Senator Coleman. Is that an issue that you think there should be a single standard for the country, or do you----

Dr. Frieden. Absolutely not.

Senator Coleman. OK.

Dr. Frieden. Absolutely not. I think it is a very important question, Mr. Chairman. There are important differences between different States and different localities and the cookie-cutter approach can actually be very damaging because the statute here has to interact with a wide range of other statutes and resources. While a Federal guidance and a model statute is helpful, in fact, when you get around to implementing it in a local area, you have very specific local jurisdictional issues that may be different.

New York City, for example, is an independent vital registration area, independent even though it is within New York State, and so that has a whole host of other implications, which means that the State's statute really has to take that into cognizance. The City has its own Board of Health with legislative authorities.

Senator Coleman. Great. Thank you very much. Mr. Huebbers.

Mr. Huebbers. Because we have had the experience with malaria, anthrax, West Nile, and SARS now, we have tested the system and we think it works pretty well both locally and on the State level, so we are comfortable.

Senator Coleman. Great. Thank you.

I want to thank the panel. You have been very helpful.

I would like to call our final panel of witnesses at this time. We welcome Lawrence O. Gostin, the Director of the Georgetown University Center for Law and the Public's Health; Dr. Bruce R. Cords, Vice President for Environment, Food Safety and Public Health at Ecolab in St. Paul, Minnesota; and finally, Vicki Grunseth, Chairman of the Metropolitan Airports Commission in Minneapolis.

I thank all of you for your attendance at today's hearing. Welcome. Pursuant to Rule 6, all witnesses who testify before the Subcommittee are required to be sworn. At this time, I would ask you all to please stand and raise your right hand.

Do you swear that the testimony you give before this Subcommittee will be the truth, the whole truth, and nothing but the truth, so help you, God?

Mr. Gostin. I do.

Dr. Cords. I do.

Ms. Grunseth. I do.

Senator Coleman. Thank you very much.

As I have indicated before to the other panels, we will be using a timing system today. One minute before the red light comes on, you will see lights change from green to yellow, giving you an opportunity to conclude your remarks. While your written testimony will be printed in the record in its entirety, as I have indicated to the other panels, we ask you to limit your oral testimony to no more than 5 minutes.

Mr. Gostin, we will have you go first with your testimony. Then we will hear from Dr. Cords and finish up with Ms. Grunseth. As with our last panel, after we have heard all the testimony, we will proceed to questions. Mr. Gostin.

TESTIMONY OF LAWRENCE O. GOSTIN,\1\ DIRECTOR, CENTER FOR LAW AND THE PUBLIC'S HEALTH, GEORGETOWN UNIVERSITY LAW CENTER, WASHINGTON, DC

Mr. Gostin. Good morning, Mr. Chairman. I am Lawrence Gostin. I am a professor of law at Georgetown University and Johns Hopkins University and Director of the Center for Law and

the Public's Health, which is a CDC-collaborating center.

\1\ The prepared statement of Mr. Gostin appears in the Appendix on page 101.

I am going to talk about, first, antiquated laws in the United States; second, a model State emergency public health act that we wrote at the request of the Centers for Disease Control and Prevention; third, a new model law for non-emergencies, including potentially for SARS; and then fourth, if I have got time or during questions, I will talk about the public health infrastructure and the ethics and logistics of quarantine. It is a big agenda.

The CDC and the Department of Health and Human Services, as well as the Institute of Medicine, have all recommended reform of antiquated public health laws, and the reason why that is true is that most public health laws--actually, New York City is one of the exceptions--are very antiquated. They go back to the last 19th and early 20th Century, and as a result, they have a number of very serious problems.

First, they may have ineffective powers, particularly for novel infectious diseases. If you take the New York example, just in the middle of the tuberculosis epidemic, they had to change their laws, and we don't want that to happen with SARS. We want to be prepared. So many of these laws may be ineffective for basic public health powers like reporting, testing, physical examinations, medical treatment, isolation, and quarantine.

Second, these laws may be constitutionally suspect because most of them were passed before the Supreme Court's modern constitutional era. As a result, they don't have clear criteria for action, and also they don't have procedural due process or a fair hearing. This would have potentially very serious public health consequences because in the midst of an epidemic, you have to ask, is my law constitutional? It may result in indecision and delays. That is part of the reason why in some of the earlier modeling exercises, TOPOFF I and Dark Winter, there were problems with quarantine and one sees it with every new novel infectious disease.

And finally, these laws are inconsistent, although I do very much agree with testimony from New York City that we do not want a cookie-cutter approach. On the other hand, we don't want completely inconsistent rules, so that even within a single State, they will have different rules for different diseases, and then if you have adjoining States, like Maryland, Virginia, and the District of Columbia, or New York, Connecticut, and New Jersey, if you are dealing with an epidemic and you have completely different rules in those States, it doesn't make any sense because diseases, pathogens, cross State lines and you need some form of uniformity. But obviously, it has to fit in with the structure of the public health and legal system within a particular State.

I do agree that CDC, particularly Dr. Julie Gerberding, and State and local health departments have done an excellent job in relation to SARS, but there is a great deal of progress that needs to be done, particularly on legal powers.

After September 11 and the anthrax outbreak, the CDC asked the Center for Law and the Public's Health to draft an emergency powers act. It is called the Model State Emergency Health Powers Act. That act has been transformed by the

National Conference of State Legislators into a checklist and most of the States have used that checklist against their own laws. Twenty-two States and the District of Columbia have passed the model law or a version of the model law. That is great progress, but there are still significant problems.

One is that many States have not passed the model law, and the other is that the model law requires the governor to declare an emergency, and for an undeclared potential emergency, like SARS, you run into significant problems.

It is for that reason that the Center is currently working with the Robert Wood Johnson Foundation and its Turning Point Initiative, with a consortium of States and national experts throughout the public health sector to draft a model public health law that would apply to SARS and all emerging infectious diseases, basically getting our public health laws into the 21st Century. That statute has now been sent out to a wide variety of national organizations, attorneys general, public health commissioners, legislatures, and others across the country for comment. It has been ongoing for 2 years and it is expected to be ready for consideration by the States by the fall legislative sessions. Again, it is not intended as a cookie cutter. We don't want States to simply adopt it. But we want to make sure that they have model language they can use for a uniform approach.

And then, finally, I just wanted to reinforce what all your other panelists have told you about the public health infrastructure. I am a member of the Institute of Medicine and also a member of IOM's Board on Health Promotion and Disease Prevention and I served as a committee member for its report on ``The Future of the Public's Health in the 21st Century,'' which just came out recently. That report reiterated what CDC and others have said, which is that public health infrastructure is, in the words of the IOM, still in many respects, ``in disarray.'' They have insufficient laboratory structures, insufficient workforce development, insufficient surveillance capacity, and insufficient data systems.

And the reason for that is the United States spends more on health than any other country in the world, but we spend less than 5 percent of all health dollars on public health, that is, population health and prevention. We need to do better than that, and in fact, as a result, the richest, most powerful, most wonderful country in the world has health indicators that lag well behind most other leading economic powers.

I will just simply conclude with a brief examination of logistics of a mass quarantine, because one of the concerns I have is that we are prepared for a small quarantine, but most hospitals only have a couple of negative pressure rooms. If we have to have a mass quarantine, the logistics of providing care, treatment, sanitary facilities, infection control, clothing, methods of communication, hearings are not in place, and I think it is something that we need to do both legally and as a matter of ethics.

So thank you very much, Mr. Chairman.

Senator Coleman. Thank you very much, Mr. Gostin. Dr. Cords.

TESTIMONY OF BRUCE R. CORDS, PH.D.,\1\ VICE PRESIDENT, ENVIRONMENT, FOOD SAFETY AND PUBLIC HEALTH, ECOLAB INC., ST. PAUL, MINNESOTA

Dr. Cords. Thank you. Good morning, Mr. Chairman. Thank you for the opportunity to speak to you regarding our company's response and challenges relating to the global SARS crisis. My name is Bruce Cords. I am currently Vice President of Food Safety and Public Health for Ecolab, headquartered in St. Paul, Minnesota. I am responsible for food safety and public health technology strategies across all Ecolab divisions. In this role, I have the lead technical responsibility for the company's response to the SARS crisis.

\1\ The prepared statement of Mr. Cords appears in the Appendix on page 121.

Ecolab provides products and services in over 160 countries with global sales of $3.4 billion in 2002. Among other things, Ecolab's expertise is in the practical application of disinfection and cleaning technology to help manage and respond to exposures in the workplace and in a wide variety of community environments. These include health care facilities, schools, lodging, restaurants, food processing facilities, military installations, and public transportation.

Our customers, worldwide, depend on Ecolab to provide advice, products, and systems to address problems with infectious diseases such as SARS. As the outbreak of SARS was peaking in March and April, many international hotel chains asked for help to make sure that they had the latest training and information to deal with the virus. We continue to receive numerous information requests regarding SARS from both customers and industry officials.

We have been closely monitoring the situation via the World Health Organization and CDC. There is still much to be learned, and until many of the open questions have been answered, we can only make recommendations based on the best scientific information available from sources such as CDC and the World Health Organization.

As an aside, Dr. Gerberding and her staff at CDC have done an excellent job of regularly updating the public and health officials on the global status of outbreaks and any new information on the virus and its epidemiology.

Initially, experts believed that the virus would survive for only a few hours on environmental surfaces. More recent information from the Chinese University of Hong Kong suggests that the virus may survive for days on environmental surfaces. Some examples include plastered walls, 24 to 36 hours; plastic surface, 36 to 72 hours; on stainless steel for 36 to 72 hours; and even on a paper file cover for 24 to 36 hours. This possibility of extended survival, places more importance on cleaning and disinfection of potentially contaminated surfaces.

Some of the examples of questions we are receiving include: If we suspect the hotel room has been occupied by a SARS-infected person, what cleaning and disinfection procedures should be followed? What hand care products and procedures are effective against the SARS virus? How do you inactivate SARS on carpet and upholstery? What are recommended cleaning and disinfection procedures for an airplane that has arrived from a country with active SARS infections?

As you may know, the EPA has not approved any commercial products for claims against the SARS virus. Consequently, we and other companies have followed the general recommendations provided by the CDC to prevent the spread of the disease. The

CDC specifically recommends, (1) aggressive hand washing and the use of an alcohol gel hand sanitizer containing 60 to 95 percent denatured ethanol or isopropanol; (2) disinfection of environmental surfaces such as faucets, hand rails, restrooms, elevators, and other surfaces touched by multiple individuals with an EPA-registered hospital disinfectant; and (3) use of gloves and respirators for people in direct contact with potentially infected persons or environments.

We have provided our customers with this information through direct contact with our district sales managers, our technical support staff, and have also made the information available on our public website, ecolab.com. The information provided includes general information on how the virus may be spread, Ecolab hand care and disinfection products which are consistent with CDC recommendations, and specific decontamination procedures for institutional settings.

I want to emphasize that simply identifying products does not provide the user with the ``how to'' guidance they need. For example, in response to the earlier question, ``if we suspect a hotel room has been occupied by a SARS patient, how do I clean it?'', we give them specific information such as: (1) the personnel cleaning the room should wear a surgical mask and rubber gloves; and (2) cleaning personnel should clean frequently-touched surfaces, disinfect, such as light and air control switches, faucets, toilet flush levers, doorknobs, TV and radio controls. There are many items that may be missed without specific instruction. They also ask questions about laundry. We recommend that the laundry be segregated and heated to a temperature adequate for virus inactivation. So we basically give them specific procedures on the ``how to use.'' We do not simply sell them the product and say, ``Go to it.'' We give them the actual procedures.

As mentioned earlier, no commercial products carry a claim of efficacy against this virus. Today, the CDC recommendations are based on extrapolation of data to other related viruses. Ultimately, products must be tested against the virus and products which carry an efficacy claim against this virus would provide the highest degree of confidence and performance.

For this to occur, a reliable method for enumeration of the virus must be developed. It is my understanding the CDC is working in this area at the present time. The EPA must then approve a protocol for testing commercial products against the virus or a surrogate. During the recent foot-and-mouth disease threat and anthrax incident, Ecolab worked closely with EPA to expedite product approvals. Likewise, we look forward to EPA working to expedite approvals for products effective against SARS so that these products are available should the virus reappear in the United States.

In summary, based on the latest scientific information, and working with appropriate government authorities, Ecolab will continue to provide our global customers with information on products and best practices to prevent the spread of this disease. Thank you for your attention.

Senator Coleman. Thank you very much, Dr. Cords. Ms. Grunseth.

TESTIMONY OF VICKI GRUNSETH,\1\ CHAIR, METROPOLITAN AIRPORTS COMMISSION, MINNEAPOLIS, MINNESOTA

Ms. Grunseth. Thank you, Mr. Chairman. I am Vicki Grunseth,

Chair of the Metropolitan Airports Commission in Minneapolis. The Commission operates Minneapolis-St. Paul International Airport, MSP, and six reliever airports in the seven-county region of the Twin Cities.

\1\ The prepared statement of Ms. Grunseth appears in the Appendix on page 125.

MSP is the eighth busiest airport in the United States and the 12th busiest in the world. In the year 2000, 37 million passengers went through MSP. We annually have 500,000 operations. I want to thank you for the opportunity to appear today on behalf of the aviation industry.

SARS is obviously a major concern for airports. The airport is like an artery through which people and things pass into the heart of our country. Most of the things that flow through the artery are good. Many, in fact, are critical to our economic strength. But threatening things can flow into middle America through the airport artery, too, including potentially life-threatening viruses like SARS. If we don't act swiftly to stop them or contain them, they can wreak havoc in the heartland and throughout our Nation.

Stopping SARS is important to us first and foremost from a public health consideration, but it is also important to us from an economic standpoint. We need to ensure the traveling public has the information they need to feel safe while flying. I want to speak for a few minutes about the Metropolitan Airport Commission's role in responding to SARS. Next, I want to highlight the airlines' efforts to combat the spread of the disease. And finally, I want to address the assistance the collective aviation community has received from the Federal Government.

In many respects, MSP operates like a municipality. We have our own 911 communications department, and our own fire department, our own police department. Each of our fire fighters is a trained emergency medical technician. Typically, they are the first responders to an emergency at the airport.

Consider the population of people potentially threatened by SARS at our airport. On average, 100,000 passengers travel through Minneapolis-St. Paul every day. That doesn't count their colleagues, their friends, their family that drop them off or pick them up. There are thousands of people who work at the airport, 17,000 airline employees, 3,500 food and retail workers, 2,200 ground transportation providers, 1,400 Federal agency staff and 540 Airport Commission employees. Clearly, the potential for the spread of infection is enormous if we don't respond effectively to diseases like SARS.

We have a physician on contract to the Metropolitan Airports Commission who reviews airline plans for responding to SARS. Northwest Airlines, which accounts for 80 percent of the operations at MSP, includes service to Asia. Northwest screens passengers at ticketing and boarding areas in affected areas, such as Hong Kong, China, Singapore, and Taiwan, and I should add Toronto. Airline representatives ask passengers whether they have experienced SARS-like symptoms and whether they have been in contact with infected persons during the last 10 days. If travelers have, they are referred to a medical facility to be assessed for their suitability to fly.

If anyone exhibits SARS-like symptoms during the flight, they are isolated from other passengers as much as is possible.

It is important to note that not a single case of SARS has been transmitted on airline flights since the World Health Organization recommended in late March that passengers from affected nations be screened. The World Health Organization's leadership, together with swift Federal action and cooperation from the aviation community, has effectively minimized the potential transmission of SARS on aircraft.

Working with international health officials, the Federal Government provided valuable resources to airlines like Northwest and airports like MSP to prepare for and to respond to suspected SARS incidents. First, we benefit from the Centers for Disease Control and Prevention. Like most Americans, we first heard of SARS from the news media. Within days, though, we had access to reliable, science-based information from the CDC. The CDC website, in particular, serves as a clearinghouse for reliable SARS-related information. The site specifically addresses information regarding SARS and air travel. It advises travelers and provides information that enables airports to develop a higher awareness of the disease and its potential threat.

We also found very useful the information from the World Health Organization which was communicated to us through the Transportation Security Administration and through our trade association, Airports Council International-North America.

The second and perhaps most important resource is the Federal staff assigned to our airport to specifically respond to the SARS threat. On April 16, the CDC assigned a staff member to MSP as a central resource for SARS information and planning. The CDC has maintained staff at MSP on a rotating basis since that time, and our understanding is they will remain there for the duration of the crisis. Their presence has been pivotal to our SARS response. In addition, they provide round-the-clock phone support from a quarantine supervisor in Chicago.

The process has worked very well. As you may know, we had an infant arrive from Beijing at MSP who exhibited SARS symptoms and we were able to deal effectively with that child and passengers on the plan. We were prepared, we operated in a coordinated fashion, and we took the steps necessary to safeguard the traveling public.

The Metropolitan Airports Commission is very grateful to the assistance provided by the CDC. Federal interaction and coordination is the key to our ability to respond effectively. We don't know what is going to flow into the airport artery, but whenever possible, we want to stop harmful things from flowing out of it.

Thank you for the opportunity to address you today. I will be pleased to answer any questions.

Senator Coleman. Thank you, Ms. Grunseth.

I will kind of work in reverse order. I was going to ask a question about whether the Airport Commission has an epidemiologist as part of your staff. I take it that CDC helps fill that role?

Ms. Grunseth. We don't. We have a physician that we contract with to provide information, but the CDC is now providing that information on site.

Senator Coleman. Do you see a need for a specific agreed-upon protocol for handling these cases or is it sufficient simply to rely upon that relationship with CDC as to how best to proceed?

Ms. Grunseth. I think in this case, our first information came by some action taken by the Airports Council, which is our trade association, and they worked in conjunction with the CDC to get accurate information out to the airports.

Senator Coleman. Northwest is, in effect, a tenant of your community.

Ms. Grunseth. Right.

Senator Coleman. They, as I understand it, are doing the screening. Is that screening protocol something that is discussed with the Airports Commission? Do you have any input in that? How do you, again, assuming they have got a big stake in making sure that there is safety, but is that something that they work with you in terms of quality and the completeness?

Ms. Grunseth. They have their own direct relationship with the CDC and then, in addition, with Dr. Jetzer, who serves as our Airports Commission consultant liaison to the airlines. I think it is kind of a triumvirate that exists.

Senator Coleman. Great. Thank you.

I have to say generally, and I am going to say it again, I am actually very pleased to hear the very positive statements about CDC and what they are able to provide. Clearly, there are some resource issues, capacity issues, and a whole range of issues that a number of witnesses have talked about, but I must say, I began this hearing with some trepidation about our capacity to respond, where we were going in the future with this and other similar circumstances that we are bound to face, as Dr. Osterholm laid out. But I certainly leave with a much better sense of what the CDC is doing in coordination with folks at the local level. So I think that message has been delivered.

Dr. Cords, talk to me a little bit about the private sector-public sector interaction in terms of research. What is it that--you talked about the amount of time that this virus may be alive, may be active, and you indicated that is changing, that the perception of that is changing. How closely is the private side able to interact with CDC to get the information that you need?

Dr. Cords. Their website is fairly complete, plus we have contacts that we talk to on a regular basis. So we are up to date on everything that they are doing. One of the things before we can do a whole lot more research on disinfectants and which ones are more effective or less effective than others is an enumeration method. We have to be able to count the virus or to determine effectiveness of products.

One of the things we are doing now is recommending the use of hospital-level disinfectants, which have a little bit more strength than a general disinfectant you would have in your home. Some of those products have claims, and have been tested, against related viruses of the corona family. But none have ever been tested against this specific virus and I think that needs to be done. We know it is different than the common cold corona virus. We have seen that, in terms of its infectivity and its effect on humans. But does that mean that it could be a little bit different in terms of its resistance to disinfectants? We don't know that and I think we need to find that out pretty fast.

Senator Coleman. Who does the testing?

Dr. Cords. There aren't very many labs set up to do it now, and I would imagine the first screening tests for that would be done by CDC. Then there are a few labs that would have the

proper level of containment to handle this type of testing. I am not sure how widely we are going to distribute this kind of a virus. It may be better to compare it to a virus and then have a surrogate that is actually the test organism or the test virus.

Senator Coleman. Who would make that decision?

Dr. Cords. CDC and EPA.

Senator Coleman. Is there any role for universities in this?

Dr. Cords. There may be a role for universities. I doubt that very many would have that level of a containment facility.

Senator Coleman. You talk about, in your testimony, you talked about EPA approving a protocol and the importance of moving quickly, and this may be a question for Dr. Gostin, but how expeditious is the process today? Does there need to be some change, either statutorily or administratively, to accelerate the approval process?

Dr. Cords. I think if the EPA acts as they did during the anthrax threat we will have rapid crisis exemption to certain products that had been tested against either anthrax itself or had been tested against surrogates. Even though people didn't have them on their label, they basically gave us a crisis exemption. So in that case, they moved quite rapidly.

Senator Coleman. And Dr. Gostin, just from your knowledge of the EPA approval process, are we in good shape, structurally good shape today with the process that allows us to move very quickly to deal with the threats of SARS or SARS-like conditions?

Mr. Gostin. Yes. I think the Federal agencies, the regulatory agencies like EPA and FDA have done a lot better. They have learned their lessons from past epidemics and I think they are moving much more quickly.

Senator Coleman. You indicated that 22 States have model laws that certainly go beyond the antiquated systems we have before. By calculation, that leaves 28----

Mr. Gostin. That is right.

Senator Coleman [continuing] Way over half that don't. What has to be done to accelerate the pace at which those other 28 States deal with their quarantine and public health laws?

Mr. Gostin. It is highly controversial because you have--ideas of quarantine and compulsory testing and screening and the like raise a number of civil liberties issues. What we need to do is try to get the message across that actually these modern laws need to be and actually are, in terms of our model law, very attentive to constitutional rights, and so that you want to try to have it both ways. You want to have strong, decisive modern laws that are also protective of civil liberties. I think if we can start to get that leadership at the Federal and State level there, then we will do a better job in getting people to try to enact these statutes.

Senator Coleman. Who should be carrying the ball on that? Is it States' attorneys general or the National Attorneys General Association? Is there a role for Congress?

Mr. Gostin. Well, we are working certainly with the Federal Government, with CDC and the Department of Health and Human Services who have urged it, and at the State level, we are working with the National Association of Attorneys General, the Association of State and Territorial Health Officers, NASHO, National Conference of State Legislatures, all of the right people.

Certainly, leadership in Congress would be very helpful to underscore this, and it would even be possible, if one wanted to go this way, to have as a condition of funding for a number of public health activities to make sure that States do have modern, effective public health laws.

Senator Coleman. That is a very helpful suggestion.

Kind of concluding with one open to all three of you, do you think the public has a good sense of what the threat is and how we are handling it? Do you think the general average citizen out there is comfortable with what airports are doing, what the private side is doing, what the legal situation is? Ms. Grunseth.

Ms. Grunseth. I think the theme I heard this morning and that you hear all the time is information is a good thing and people, if they can inform themselves, they are not afraid of what they know. They are afraid of what they don't know, and contrast that with the situation in China, which was, I think, the exact opposite. If we can watch combat operation in Iraq 24 hours a day, we can probably handle more information about things like infectious diseases.

Senator Coleman. Dr. Cords, from the business community, the hotel patrons, etc., do you think they have a level of comfort in terms of the information that is out there and ability to deal with this?

Dr. Cords. I think they have a level of comfort with what is available to deal with it today. I don't think they appreciate, as Mike Osterholm said this morning, that we could be looking at a second wave. I think there is a bit of a relaxation going on right now and I am not sure that people are anticipating a second wave of the virus.

Senator Coleman. Thank you. Mr. Gostin, any final comments?

Mr. Gostin. I think that we have done a much better job than we did with anthrax, where we had problems of communication, and I think the Federal leadership and the State leadership is much better and people have a better idea of risk perception.

But my big worry, it is a worry about the public and also a worry about political leadership, is that we tend to look at silos. It is bioterrorism, it is SARS, it is the next disease. What we really need to do in America is to make sure that we have a generally strong public health infrastructure. We have neglected not only the law but the infrastructure of public health for more than a century and now what we have to do is stop the silo funding and more generalized funding and capacity level at the State and local level.

Senator Coleman. That message is certainly being heard here today.

Due to time constraints, the Subcommittee was unable to invite all of the parties affected by this issue to present oral testimony. This week, we have received written statements from the American Public Health Association and Discovery Labs, Inc. Without objection, these statements will be included in the record.

I want to thank all our panel members for being here today. I have a closing statement. I will simply enter that into the record. I will note that I am encouraged by what we have accomplished. I am still deeply concerned about what the future may hold.

This hearing is adjourned.

[Whereupon, at 11:51 a.m., the Subcommittee was adjourned.]

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