

**CENTERS FOR DISEASE CONTROL AND PREVENTION AND THE AMERICAN
SOCIETY OF LAW, MEDICINE & ETHICS**

THE PUBLIC'S HEALTH AND THE LAW IN THE 21ST CENTURY

THE FUTURE OF PUBLIC HEALTH PREPAREDNESS

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ATLANTA, GA

MR. GENE MATTHEWS: Would someone tap on the glass out in the lobby, let's get it going. Anybody who wants to come on, let's go.

Is anybody using PowerPoint? You're not using it. We don't use PowerPoint. We don't like it. Senator, you're not using PowerPoint are you? Okay. I don't believe we're gonna be using the -- we won't need PowerPoint.

Well, did everybody have fun? Yeah. Thank you.

There seems to be a great deal of acclamation that we do this again. I'm not quite sure who's gonna do it, all of us have day jobs. But if anybody wants to step forward and be the hero, see us after class for next year. So I think we have a lot of good interest and intent regarding this matter, and so we'll be quite interested to see where this goes.

I'll also call to your attention that tomorrow the Turning Point Initiatives Session will take place here also regarding revision of state laws. So I encourage you, if you hadn't already thought about it, that that will be taking place as well.

All right, this is the closing plenary, "The Future of Public Health Preparedness."

We're very honored here to have Senator Nunn from Georgia, as well as a panel of discussants including John Agwunobi, State Secretary of Health from Florida, Larry Gostin, who I think many of you know by now, who is our academic leader regarding public health law and collaborated with CDC, and state Senator Peter Mills from Maine, who has done a lot of work in the health area, also a lawyer, member of the Maine Trial Lawyers Association.

So we will have comments by Senator Nunn and responses by the three members of the panel, and then we will be prepared, if time permitting, there should be ample time, to take questions from the floor, so write them on the back of your hand and step up to the floor microphones, as you have been willing to do thus far.

Senator Sam Nunn is Co-Chairman and Chief Executive Officer of the Nuclear Threat Initiative, and is Senior Partner of the Law Firm of King and Spaulding, where he focuses on international and corporate matters.

During his U.S. Senate terms, he was Chairman of Senate Arms Services Committee and Permanent Sub-Committee on Investigations. He did landmark legislative achievements in the Department of Defense Reorganization Act, and drafted what became the Nunn-Lugar program to provide incentives for the former Soviet Republics to dismantle and safely handle their nuclear arsenals. Senator Nunn and Richard Lugar were nominated for the 2000 and 2001 Nobel Peace Prize for their efforts in this legislative area.

In addition to his work with the Nuclear Threat Initiative, Senator Nunn is a distinguished professor at the Sam Nunn School of International Affairs at Georgia Tech, and he serves as Chairman and Board of Directors of the Center for Strategic and International Studies in Washington, D.C., directed by John Hamre, who's also provided a good deal of vision and leadership in this same area.

So, Senator Nunn, come right up.

SENATOR SAM NUNN: Thank you very much. Thank you.

Thank you very much, Gene, for your kind introduction. And thanks to Gene and all the folks here who have been engaged in the application of our laws and our legal system to the public health arena, because I know you come from a diversified background with state and local officials here, state legislators, government attorneys, academicians, and people who are engaged in the public health service. So I'm grateful to have a chance to be with you, and I think your subject is not only timely, but is one that is crucial for our nation.

I have with me Dr. Asha George (sp) who is -- also brings a little more diversity here. Asha works in our Foundation, the Nuclear Threat Initiative Foundation, but we spend just as much time and money on the biological side and the chemical side as we have on the nuclear side. So we have a little bit of a misnomer, but Asha not only is a doctor in public health, but she also was a -- went through Green Beret training and was a paratrooper in the Persian Gulf War. So we've got a little more diversity here.

Then we have Tina Loo (sp) who is a summer associate at King and Spaulding law firm. And I happened to be speaking with some associates this morning and Tina came up afterwards and told me that she not only was in law school, but she has a Master's Degree in public health and is trying to decide whether to be a public health specialist when she gets through law school, with a heck of a legal training, or a lawyer with a tremendous background in public health. So I'm delighted that both of them could come with us.

The CDC has been outstanding in our state and, indeed, the nation and the world for a long time, and has been a blessing to our citizens and to the world with a remarkable fight against infectious disease.

And I know that, Gene, you and others in the legal profession who have been advising them, have played a key roll in this, so I thank you for making CDC more effective and protecting the lives of our citizens.

Today you are discussing laws and application to public policy. I'm gonna cast a rather broad net and discuss some of the security background and some of the international and global developments.

I'm no longer in government as you know. I retired from the Senate about five years ago, but I have remained involved, engaged and very interested in public policy. For many years I have believed that keeping weapons of mass destruction, nuclear, chemical and biological, out of the hands of terrorists groups, dangerous people who would not hesitate to use them, was our number one security challenge.

I concluded that in the early 1990s. That's why I introduced the Nunn-Lugar legislation in 1991, joined by Dick Lugar. And that's why I worked not only for it's passage in that year, but also for a successful implementation for the last ten years.

That's also why I introduced the Nunn-Lugar/Domenici legislation in 1996, and I worked for its passage and implementation with Senator Lugar, Senator Domenici, and others.

The latter legislation basically was an effort, and continues to be an effort, to help our local and state governments prepare for what I felt was inevitably something we had to prepare for, and that is nuclear, chemical or biological attacks on our domestic citizens.

That is also why now I'm dedicating about 50 percent of my time to a foundation that is generously funded by Ted Turner, which deals with all of these issues, nuclear, chemical and biological proliferation, and the public policy issues associated with that. We know that government has to do the heavy lifting, but we're trying to fill the gap between a huge threat and the governmental response, not only in this country, but across the globe.

We have an outstanding group of directors, trustees, that come from not only America, but India and Pakistan, as well as China and Japan, and several from Russia and Europe. So we have a real effort going on here.

I'm no expert in public health and, when I see the expertise represented here, I'm reminded of the story some of you may have heard about the fellow who had so much expertise and had studied most of his life the Johnstown Flood. He was a real specialist in it.

But he had a mishap and he went up to the Pearly Gates after passing away, and he saw St. Peter. And St. Peter told him that one of the things that he would have the privilege of doing is addressing the whole group of heavenly hosts the next week on any subject he chose. And he said, "St. Peter, I am the world's greatest expert on the Johnstown Flood. I know all about it. I've been working on it for 25 years. I've written several books on it. Do you think that would be an appropriate subject?" And St. Peter looked back and said, "I think the heavenly body would enjoy it, but remember that Noah will be

in the audience." So, I'm no expert on public health and I don't pretend to be, and I know that the Noah's are in the audience.

But I do know a little bit about security, and I know that we have to recognize today something we have not recognized in the past. And I say "we." I mean those of you in the public health field and those in the national security arena, that public health must become an indispensable pillar of our national security framework. It can no longer be separate and apart. We have to link public health and national security as we've never done before.

In the event of a biological attack, millions of lives may depend on how quickly we diagnose the effects, report the findings, disseminate information to the healthcare communities and to state and local governments, and bring forth a fast and an effective response at both the local, as well as the state and federal level. This means that public health and medical professions must be part of our national security team.

The good news from the biological terrorism front, and there's not much here in the way of good news, and it's not news at all to you in this audience, but it is news to most of the American people and, indeed, most in government. And that is, in our global society, most things we now must do because of the threat of biological terrorism, should have already been done in years past to prevent and respond to infectious diseases, which now take the lives of millions of people per year.

I can imagine going out to Asia or Africa and telling people we want their cooperation in dealing with the serious threat of biological terrorism, as witnessed by the Anthrax attacks in America last year, and they're looking back and say, "We lost several million people last year to infectious disease. How about helping us a little bit."

So I think these two subjects are joined together now, and perhaps -- and this will not be the subject of my remarks today -- but perhaps we can find an arena in the foreign policy area in terms of helping people in distressed nations that will ring a bell with the American people, and connect benevolence and our moral obligation to help on infectious disease with our own security concerns here at home, because the two are, indeed, linked.

I believe that as we develop a national strategy to respond to these challenges, we must think in the broader context and think in terms of how the public health and the biological challenges fit into the overall context in terms of not just immediate symptoms and immediate concerns, but also the underlying causes.

As Gene mentioned, I had the Chair of the Center for the Strategic International Studies. John Hamre actually runs it. I Chair the Board. And we have developed over a period of time a presentation that our folks at CSIS call the "Seven Revolutions."

The Seven Revolutions is a challenge to leaders. A challenge to think seriously about events that are over the horizon, and a challenge to formulate near term policies that take into account longer range

consequences -- something we're not very good at in the public arena. Not just in America, but in other places.

Let me describe just a few of these earthshaking developments that are taking place in the world as a way to put our own challenges in context. And I'll do this in very abbreviated form.

First, we're having a revolution in population in the world. The world population, which is currently at 6.18 billion, will grow by almost 2 billion by the year 2025. By then, 80 percent of the world's population will be in developing countries. In other words, in countries that are least capable of supporting further population growth.

This population growth will also present the challenge of what is being termed in this Seven Revolution presentation as "hyper-urbanization." By 2025, the portion of the world's population living in urban areas will increase sharply to nearly 60 percent. And that 60 percent will be dominated in large part by young people, and those young people will be primarily unemployed young people with a rather bleak future.

Already, up to one-half of the populations in the larger cities in the developing world are living in unplanned, squatter colonies, highly susceptible to disease and, indeed, disaster.

Paradoxically, on the other hand, the developed world population is contracting, shrinking. At least 39 countries across the globe, such as Germany, Japan and Italy, are suspected to be substantially smaller in the next 25 years than they are today. Populations in these developed countries are getting older, very old indeed, which presents serious challenges to our healthcare system, as well as our fiscal policy. It's good news that we're getting older, but we've gotta start thinking through the implications.

We also are having a revolution in resources, which will become more intense as the years go by. This population growth that I have referred to, will also have revolutionary effects on our resource allocation and distribution, including, but not limited to water, energy and food, as well as the environment.

The most serious resource scarcity in 25 years, CSIS believes, is water. Populations are growing quickly in a number of geographical areas incapable of providing water to support these growing populations. Now, this has profound geopolitical implications.

On the food front, despite dire predictions, starvation has declined drastically since the end of World War II. And we can be grateful for that, and America has played a very large role in that. The issue now is whether increases in productivity can keep up with the rises in population.

Biotechnology is a wildcard in light of diminishing land and water resources. Stunning technological advances may be possible, probably are possible, but shifts in public attitudes and a great effort in public education will be necessary to avert serious political problems that bring about severe dislocations.

We're also having, as all of you know, a revolution in technology. CSIS believes that there will be several major and simultaneous drivers of revolutionary technological change during the next 25 years, including computation, genomics, nanotechnology and, of course, the information explosion and the knowledge diffusion that has taken place and continues to take place at unprecedented speeds.

Today we have the technological tools of great power that can be used to clean up our waste dumps, protect our fragile environment, improve our health and longevity, feed, clothe and house our people, and spread our knowledge to every American and, indeed, to the entire world. But, and this is a big but, these same technological tools can be used by the bad guys to disrupt our society, terrify our citizens, and kill millions of our people.

We're also having a revolution in information. Advances in technology have expanded information flows, spanned geographies as never before, reduced time lags in communication, and opened unprecedented opportunities, but also considerable dangers.

In the past, economists have pointed to three factors of production: land, labor and capital. Those have been in the ingredients of productivity for many, many years. In the information economy, all of these, while they will continue to be imported, are runner-ups to the new primary factor, and that is knowledge.

We're also having a revolution in time and distance. Advances in technology have not only increased the scope, speed and efficiency of business operations world-wide, but they have brought down the cost of distance by gradually eliminating the burdens of communication, geography transportation, language and even time. The result has been a staggering increase in the cross-boarder flow of goods and services, which has large economic benefits, and particularly for the underdeveloped world, but also large security challenges.

The benefits of increased integration apply to developed, as well as developing nations alike. The United Nations Development Program maintains that developing countries have achieved in the last 30 years what the industrialized nations took 100 years to accomplish. Yet the obstacles to continue economic development are tremendous. A staggering 2.8 billion people live on less than \$2.00 per day in the world; 1.2 billion live on less than \$1.00 per day. The evidence suggests that these income gaps are widening, not closing.

We're also having a revolution in war and conflict, and I'm gonna talk a little bit more about that. Patterns of conflict are changing and are nearer where nation states no longer have a monopoly over super-violence, or what I call, catastrophic violence. Moderate militaries must rebuild their capacities to adapt to new threats and handle a wide range of threats that they did not think about five years ago or ten years ago.

History will remember September 11, 2002, as the date the world recognized the arrival of what is now known as asymmetrical warfare. The insidious attacks on September 11th represent a quantum leap in the scale of modern terrorism, and brought to our nation and the world the realization that groups and

organizations with a determination to cause great destruction, are willing to use weapons of mass affect, including nuclear, radiological, biological, and chemical weapons if they have them.

These dominant trends have powerful implications for our lives and our future. Unfortunately, trends develop rather quickly, at least we notice them rather quickly, but institutions move very slowly.

Neither the United States nor the world is in a position now to meet the threats or capitalize on the opportunities now coming with the changes in our world. We have now wakened since September 11th and the Anthrax attacks that followed that, but we are not yet preparing for them, not at least as fast as we must.

Amidst all the changes in my mind, three key challenges converge to pose a major security challenge to our nation and, indeed, the world.

First, the persistent and growing gap between the developed and developing world, the haves and the have-nots. That continues to inflict humiliation, breed resentment, and spark conflicts in many parts of the world. The uneven integration of developing countries into the global economy, imbalances in population, growth between rich and poor nations, severe environmental degradation, water challenges as I mentioned, inadequate public health systems, and a shortage of jobs and educational opportunities in the developing world all form a part of this disparity, and the world must recognize it.

There is some debate over whether the disparities are growing, shrinking or stable, but there is no denying that in our globalized world, these disparities are easier to see and harder to accept by the millions who experience these disparities on the wrong end and, therefore, they breed great resentment, increasing resentment in our information age.

Second factor, a number of seemingly intractable conflicts continue to fester around the globe, inciting public outrage, a shared sense of grievance, and even sympathy and support for terrorists in some quarters, which we couldn't have imagined several years ago. Most notable among these conflicts are the Israeli-Palestinian conflict, and the dispute between India and Pakistan over Kashmir, two nuclear armed countries now.

But these ongoing conflicts have global effect, and we have to recognize they have global effect and begin to deal with them as we would anything else that threaten our security and the security of the world. And they create deep grievances, which terrorists are very eager and anxious and, indeed, are in everyday exploiting.

Third, nuclear, biological and chemical weapons, materials and know-how are becoming widely available to both rogue states and to terrorists. People have called this the "democratization of weapons of mass destruction."

Ordinarily, we in America at least, think democratization is a very good thing. But democratization in this sense is different. In the political sense, it means giving more people the right and power to vote and

choose their leaders. Democratization in the area of nuclear, biological and chemical weapons and materials, however, means giving more people the power to find them, build them, and use them for destruction. A very bad thing.

When we combine the growing availability of nuclear, biological and chemical weapons with the growing anger and hatred it would take to use them, we have a much higher probability of catastrophic terrorism with effects that would make September 11th look like a warning shot.

I always have to pause for a moment and explain, particularly to young people, that you should not despair. We've gone through 40 years with the looming threat of a global nuclear war between two super powers. That was something we lived with and handled for a long, long time. So you have to put things in perspective. For a long time, we had a world that was extremely dangerous, but because of that great danger, both super powers were restrained and we had relative stability.

Today, the risk is much less. We do not have that specter of a total annihilation of mankind between a war between the two superpowers looming over us. But we have a much less stable world because we do -- we have these factors that I've talked about. So we're not the first generation to face these dangers, and we should not feel sorry for ourselves in that regard. We need to do what our predecessors did, and we need to recognize the challenges and deal with them.

So, how do we respond? These dangers did not begin on September 11th. Indeed, because of our response since then, they may have receded, but the perception and apprehension of our citizens has grown enormously since September 11th and weekly warnings by our government add greatly to this anxiety, for better or worse.

We must view September 11th not just as a warning shot, but a wake up call, helping us realize that terrorist capacity for killing is limited only by the power of their weapons, and spurring us to take the sensible steps and the right steps to defend ourselves, our country, and our future, particularly the children's future.

The greatest danger in the world today is the threat from nuclear, biological and chemical weapons. The likeliest uses in terrorists hands, people who do not have a return address. We must do all we can to keep the most dangerous weapons and materials out of the hands of the most dangerous people who would not hesitate to use them. That is my top priority. It has been for a decade. And I hope it will become our nation and the world's top priority.

The bottom line, we're in a new arms race between terrorist efforts to acquire nuclear, biological and chemical weapons, and other weapons of mass destruction or disruption, and our efforts to stop them. To win the race, the United States needs a strategy to secure these weapons and materials immediately, or as soon as possible on a global bases. That must be our government's highest priority. So far, it is not. There is a huge gap between the threat and the response, and we must close that gap, and I think we must close it soon.

On the good news side, we now have an opportunity to make an enormous difference in reducing these threats, based on our new relationship with Russia and the warm Bush/Putin friendship, which is a very firm foundation if it is built upon. But it will wither away quickly if we do not add meat to the bones.

At the Nuclear Threat Initiative Foundation we have identified several urgent actions which we believe should command our nation's focus and shape our priorities. Let me share just four of those with you today.

We believe the President and the Congress, indeed, our entire nation, must, number one: lead along with Russia, and having Russia a part of it is absolutely crucial. I spent the first 20 years of my career -- 19 or 20 years -- doing everything I could to prepare to deter a war with Russia and the Warsaw Pact. I spent the last part of my Senate career and since then telling people that we have a lot more in common with Russia than we realize. And without Russia, we cannot control these weapons and materials, because that's where the huge stockpile is that is not well protected.

Unprotected nuclear, biological or chemical materials and weapons anywhere are a threat to people everywhere. Unfortunately, there are no global standards to prevent theft. Security varies widely from one country to the next, and America's security is only as strong as the link at the least well protected site.

This means our security depends on each country's safeguarding all of their dangerous materials, including biological, chemical and nuclear material used in the civilian sector, for instance in medicine, research, or other legitimate private endeavors. And that is what makes chemical and biological so hard and so challenging, is because so much of this material is dangerous, has dual uses, many of them for the benefit of mankind.

Number two: We must complete rapid security upgrades for all nuclear weapons and materials in the former Soviet Union within two years, and finish comprehensive upgrades within four years, and we're not on that course now.

It takes less than 20 pounds of plutonium and less than 10 pounds of highly enriched uranium to make a nuclear weapon that would wipe out Atlanta or any other major city, and I mean literally wipe it out. There are over 1000 tons of plutonium and highly enriched uranium spread across the former Soviet Union, much of it dangerously insecure.

Despite ongoing work for the last ten years U.S. and Russian governments to secure these materials, at the current pace, this material won't meet what we call minimal security standards for at least eight to ten years or longer, unless we make it a top priority and make it right at the top of our list of priorities.

Number three: We must insist on accurate accounting and adequate safeguards for United States and Russian tactical nuclear weapons, including reciprocal monitoring. We believe ours are secure now. These are battlefield weapons. They're much smaller than the strategic weapons, but they would still devastate a major city.

Tactical or battlefield nuclear weapons have never been covered in arms control agreements. We can only guess at the numbers in each other's inventories. In other words, we don't know how many the Russians have. We don't know where they are. Yet these are the weapons most attractive to terrorists, most valuable, more valuable than nuclear materials, and more portable and transportable than strategic weapons. Without an accurate inventory, it's impossible to know if one is missing. And if we want the Russians to cooperate on this, and that is essential, then we've got to reciprocate and cooperate with them and, indeed, the world.

Number four: We must strengthen efforts to prevent and respond to bioterrorism through an integrated public health, medical care and research agenda. This agenda should address critical gaps in the public health infrastructure for infectious disease, prevention and control. Prepare medical providers and hospitals to recognize and respond to biological terrorism, and develop new tools for diagnosis, treatment and prevention of potential disease threats, and explore new strategies for reducing inappropriate access to dangerous biological materials.

The threat of bioterrorism is, in my view, the threat we're least prepared to handle today.

Last summer, well before September 11th, I was given the dubious honor of playing the part of the President of the United States in an exercise called Dark Winter, which simulated a smallpox attack against this country. In my 24 years on the Senate and Arms Services Committee, I've seen scenarios, I've seen war games, and I've seen Pentagon plans for almost every type of horror or every type scenario you can imagine. But a biological weapons attack on the United States fits no existing category, particularly if it's an infectious disease attack.

To those of us who participated, the Dark Winter exercise taught us two unforgettable lessons; number one, public health, as I mentioned, is a national security issue; and number two, we were not, and still are not, prepared to prevent or respond to a biological attack on the United States.

During this exercise, as members of our simulated National Security Counsel, and a number of these people had actually served in high government posts, we came to realize our country had not ranked fighting biological terrorism or infectious disease as high national priorities, had not prepared governmental officials to cope with this new type of security crisis, had not invested enough in the planning and exercises that are absolutely essential for emergency response -- it's too late when an emergency happens to practice your plans, you gotta practice them in advance -- had not ensured that the public health infrastructure was adequate with built in surge capability, had not educated the American people to develop or developed strategies to constructively engage the media in educating the public about what was happening and what to do -- and that's what every family wants to know, what do I do and what is happening -- had not practiced what few plans were in place, and had not produced sufficient vaccine to protect Americans from the disease that we were dealing with.

Much has been done since last fall, and I congratulate President Bush and his Administration, as well as the Congress, both Republicans and Democrats, for moving out quickly. I also congratulate CDC and

NIH and those who are, indeed, on the front lines of this battle, and who had not been given the resources or the priority in the past that was absolutely essential.

But there's a great deal more that needs to be done. The exercise Dark Winter underscored the critical importance to our government of communicating, of being accessible, of providing credible information, about being honest about what our government knows and what it doesn't know, because, if you're not honest at the beginning, you will lose credibility very rapidly.

My personal education continued after the Dark Winter exercise in the summer of 2001. Weeks before September 11th, I wrote an opinion article describing the dangers of an attack, the urgent need for more public attention, and offered the piece to a major U.S. newspaper. They told us there really wasn't much interest in this subject and it was not timely, so they turned it down.

In October, Anthrax letters were mailed to the capital building and other places. Most of the lessons learned in our tragic war game became tragic reality a few months later with the Anthrax attacks.

With all of this, what about public health preparedness? And I will close with these remarks and a few suggestions.

Attention is engaged now and a large amount of money has been appropriated. We gotta make sure it's spent in the right places for the right priorities. We now have an opportunity to take a series of strong measures to prevent and also prepare for a bioterror attack -- bioterror attack and, just as well, we need to prepare for infectious disease, and those two go together.

Leadership must come from the government, but the private sector has an absolutely crucial and indispensable role in this arena. Specifically, we must have members of the public health, medical and scientific communities as members of the National Security Team. The Administration's top public health officials should not have to ask directions to the White House Situation Room if there is a biological attack. They ought to be there in advance, and they ought to be part of that planning and that exercise.

We must strengthen our surveillance systems and extend them world-wide which, again, requires a global alliance. Anyone who believes America can do this alone is smoking something that I do not have access to.

We must integrate medical life science's capabilities into our intelligence community, and that is not the case now. We have to have our intelligence community know a lot more about health, and we have to have our health officials know more about intelligence.

We must provide our public health laboratories with the equipment and training they need to quickly identify agents and diseases. We must take advantage of the strides being made to improve communications. That has already started, but we need to put a top priority on it so that we can quickly share crucial information at -- to the state and local level.

We must continue to make research a priority, even accelerate it, in developing new vaccines, new therapeutic drugs, and new rapid diagnostic tests. Here again is another place that we need to work with Russia, and why? Because, during the period of the Soviet Union, when we were supposed to not be building offensive biological weapons by treaty, they were cheating, and they were building those weapons in that capacity. I just toured some of those facilities last week. They don't readily admit it now, but one of the crucial priorities we have to have, is engage those biological scientists in something that will provide enough food so they can feed their families.

The last thing we want, notwithstanding past history, is for those scientists that not only know how to make smallpox and anthrax, but also know how to make smallpox and anthrax that is already resistant to our current capabilities with vaccines and drugs. We need 'em in the tent working with us, and that is absolutely essential. Some of it is being done, but not nearly enough. And when I say "we," not just the United States, but also our friends around the world. That is absolutely crucial.

We must increase surge capability in our healthcare system in general, and our hospitals specifically, which means again, careful planning in advance, and at least tabletop exercises to show that we are done it -- we've been able to do it.

We must keep the recent focus on building our national pharmaceutical stockpile, including rapid production capability for drugs and vaccines, with the highest standards of security to stockpile, storage and dispersal sites. We must not fall victim to a twin attack that releases a bio-agent and simultaneously destroys our drugs and our vaccines.

We must develop a clear plan for working with the media to provide timely and accurate information to help save lives and prevent panic. We must practice this and other plans before emergencies.

We must modernize our legal framework, and I know there are many here that have tremendous expertise in this regard, so that we are prepared to address issues such as epidemic control measures and the appropriate balance with civil liberties.

As this audience well knows, these laws vary from state to state. Many are antiquated. We need to make sure that they're up-to-date and consistent with our current social values, priorities and the threats. We need to reacquaint public health officials in all areas of response with the specific authorities these laws provide in advance, and how they can also implement them in advance.

Finally, we must encourage members of the scientific community, as well as the private sector, to confront the sinister side of modern biological research and development, and design a system of self policing, best security practices, and safety peer reviews that assures that our technological advances, designed to improve and save lives, are not turned into mechanism for mass murder. Absolutely essential.

This responsibility of blocking the misuse of dangerous biological materials is a special responsibility of

the research community, and is based on the principal fundamental to the whole public health exercise, and that is prevention.

This audience knows that, notwithstanding all the brilliant medical interventions that treat and cure diseases, nothing is better or cheaper or more timely than prevention. The same is true with terrorism. No method of consequence management, no matter how brilliant -- and we must do a lot of it -- but no matter how brilliant, it is not preferable to prevention.

We must focus our efforts on preventing a terrorist strike from happening in the first place. This means keeping dangerous materials out of the hands of the world's most dangerous people. And will require, as I've mentioned, a world-wide effort by governments and the private sector.

Even if these efforts are not completely successful and a biological attack occurs, the focus of our preparation should still be on prevention, by early diagnosis by quick response, and by preventing it's spread, preventing it from taking one more life than it absolutely must.

Finally, I'll make one last point. You all know how difficult it is to fund new health initiatives. When budgets get tight, public health in the years past was often left behind. The threat of biological terrorism offers our government an unsought but unique opportunity to multiply the impact of federal dollars.

Funds for disease surveillance, building the pharmaceutical stockpile, and improving the capacity of our public healthcare system will benefit the United States in responding to biological weapons attack, but will also improve our responses to naturally occurring disease outbreaks, both at home and abroad.

We have a rare chance to defend our nation and improve public health for America and the world with the same dollars at the same time. We must take advantage of this opportunity and get others to join. This is a global threat. It will require a global response. The time to begin is now.

Thank you very much.

MR. MATTHEWS: Well, thank you very much, Senator Nunn. All your comments are very thoughtful and very sobering.

We have three people that will give some quick reactions to this. John Agwunobi, the Secretary of Health from Florida, went through his own trial by fire with the anthrax -- the Index Anthrax case in South Florida, the closure of the AMI building, etc.

I went out to my sidewalk and picked up the day after Christmas my New York Times, and there was the feature piece on what were the mistakes made in anthrax, and who did what and where did we all go wrong? And about three-fourths of the way through it were these ringing words from John Agwunobi: "It isn't over. We don't know who did it, we don't know how much anthrax they have left. We don't know how to clean it out of the postal system."

It got my attention.

Dr. Agwunobi?

DR. JOHN AGWUNOBI: Thank you, Gene.

It's indeed a great honor to stand here in front of all of these experts from all across the country. It's also a great privilege to stand here with these esteemed members of the panel that sit up here. You all recognize just how much of a privilege it must be. I mean, if you think about the expertise that sits here. And Senator Nunn's leadership clearly has come with him out of the Senate and will probably persist with him as he goes throughout the rest of his career.

Sir, I think America is a much stronger place because of individuals just like you, and because the work that you do everyday.

Another round of applause for Senator Nunn, please.

I'm not sure why I was chosen to head up the State Health Office in Florida. I do know that the very next day I encountered the first case of anthrax. And I must admit that it did highlight for me -- life is an education and this is one of the key lessons -- it did highlight for me the importance of relationships.

It highlighted the fact that, as much as any one of us might know as an individual, that when it really comes down to a crisis, it's not really what you know, it's who you know. It's having relationships across your fields into other fields. It's having the ability to speak up to your boss and down to your staff with the same candid approach, with the same honesty that you would speak to a peer.

It relies on -- your success relies on your ability to understand that you aren't the most important person in any given response; that it takes a team -- law enforcement, public health, agriculture.

At the state level, there were five or six different agencies that were critical to the response in Florida. At the local level, this was true, too. One of the key relationships that developed, perhaps a little slower than we would have liked, but eventually it was perfect, was the relationship between the federal, the state, and the local entities.

I won't dwell on this particular point, but I would urge us, as Senator Nunn indicated, to not forget the fact that this is a global threat. And there is that additional relationship that must exist where it doesn't, and must be strengthened where it does, and that is the relationship between us and individuals living in other countries around the world.

Senator Nunn highlighted a number of key areas that relate to this concept of a global threat, and I'd like to touch on that just a little bit more, if I may.

You know, I was up at Johns Hopkins yesterday and bumped into an old friend from public health who

currently is running a program in Vietnam. And I hadn't seen him for a number of months, and he said, "John, I saw you recently. I saw you on TV in Vietnam and you were talking in Vietnamese about some anthrax thing." And I don't speak Vietnamese, so apparently they had dubbed someone else's voice on top of mine.

But it did highlight the fact that, in real-time, I was here and I was there. The words that I was speaking here were being translated and delivered to communities around the world, simultaneously, real-time.

Let's talk about smallpox for just a quick second. You know, we tend to focus, as is our nature -- man is a very inward looking being -- we tend to focus on ourselves, on what we would do if we were attacked, if we suddenly found a smallpox case somewhere in the continental U.S.

I sometimes ask myself, would our response be any different if we found a smallpox case tomorrow in Yemen, or in Saudi Arabia, or in North Africa? I'll speak to panic in a second, but I put it to you now that the same series of wheels would start to turn. The same flurry of articles in newspapers, and talking heads and experts, and accusations and threats, and "Are we ready?", and "No, we're not," and all of that.

That same chaotic environment that followed anthrax in Boca Raton would probably follow a smallpox case in Bangladesh. As my very, very esteemed colleague, Georges Benjamin, the State Health Officer from Maryland, mentioned not too long ago today, the realities of most of these events are that it's not so much the disease itself that is the critical impact on our society, on our community, on my family -- I have three little children -- it's more the panic. It's more the fear.

Just to go back to smallpox in Africa. You know, we talk about the Dark Winter exercise and about other exercises that are proliferating across the country. And we talk about what would be the mortality rate here in the United States, and the use-formulas, like the 30 percent mortality rate if you haven't been vaccinated, and the fact that today there are more people who are non-immune than back in the early 1900s, when we had our last attacks.

But can you imagine what the effect of smallpox in Africa would be on top of the current HIV epidemic affecting millions of people in Africa? We would stand afar, looking across the ocean at a continent where millions of people are being afflicted by smallpox, and there's nothing they can do about it, and we would stand here and watch that happening. It would be a terrifying experience. Now why do I even bring this up?

I bring this up to highlight the fact that, inasmuch as it is important, it is critically important that we have the resources, that we have the leadership, that we have the time to plan and implement, and to practice, and to build our public health infrastructure, inasmuch as that is critically important, I believe there's something that's even more important, and that is that we need to educate people, the public.

There really is only one mitigating intervention against panic, and that's knowledge. Only knowledge cures or prevents fear, even where that knowledge is of a frightening nature.

So, in Florida, under the very, very astute leadership of Governor Jeb Bush, I've had the pleasure of participating with groups of law enforcement officials, health officials, community members, education individuals, focused on what we think is one of the most important tasks ahead of us. The fact that we have to -- if we don't do it before an event, at least rapidly thereafter -- have a mechanism that accurately disseminates the truth to the community in a way that empowers them, in a way that provides them with, not only the scope of the threat itself, but also with things that they can do. Now, in some cases, those aren't too many things.

Once again, my colleague, Georges Benjamin, mentioned a little earlier that sometimes it's nothing more than stay home for a couple of days. So education is important.

You know, as I talk about the impact of fear, I frequently use a scenario, somewhat absurd, and you'll forgive me. We don't really need a disease or a bomb or a Geiger counter that starts ticking, "tick, tick, tick, tick, tick," when you pass over an area, for there to be fear.

I always think about the concept of what if you were to turn on your tap, the faucet in your kitchen, when you got home this evening or after you returned from this trip and the water were to come out bright purple? Clearly, someone would have to explain to us all, number one: Why is our water bright purple? And even if the answer was the water's purple because they put some purple stuff, some Kool-Aid in the reservoir, somebody tapped into the pipe that leads to your part of the city and they poured Kool-Aid powder in there. Even if that was the answer, the next question becomes how? And the bottom line -- and I put this to you as true -- we would all be just as scared of that purple stuff coming out of the tap as if someone had said, you know what? There's a horrible bacteria in there. There's a horrible chemical in there.

The reality of it is, it doesn't need to be a noxious substance or entity for us to feel fear. It therefore is incumbent upon us to not only focus on real health issues in terms of bacteria and radiological exposure and chemicals and the like, but also it's a focus on the fact that fear sometimes doesn't require any of those things. It sometimes doesn't even have to occur here in the United States.

And as much as we can control those parameters perhaps under ideal circumstances right here, we're going to be affected by fear if it occurs in another country. And we don't control that. So we have to focus on fear, on education, on knowledge, on training.

It's one of the reasons I am honored and privileged to be here today, and I thank you all for this opportunity.

MR. MATTHEWS: Thank you very much, John.

Larry Gostin is a dear friend, a long professional colleague at the CDC, well published, well read, and really a leader in this field and an inspiration to all of us. He's been on sabbatical getting well rested in Oxford, England, and he flew in to help us go through this conference.

Dr. Gostin, what say ye?

MR. LAWRENCE GOSTIN: Thank you very much, Gene.

I think I would begin by just expressing a sense of humbleness. Humbleness over the fear that we face in America and globally, the threat and also humbleness at the deep admiration that I have for people here, particularly Senator Nunn. Without them, I fear that we would be deeply troubled and without leadership. But I do feel confident that we can overcome this and will overcome it.

What I would like to do is look first at public health preparedness in the United States and globally. Second, to look at public health law preparedness, and particularly in relation to emergency health powers. And then finally, just to have some reflections on public health ethics and where we ought to be in the 21st century.

It is no secret, Senator Nunn and others have said, that the United States public health infrastructure is badly in need of repair. CDC have been quite eloquent about the importance of laboratory capacity, workforce development, surveillance. And I would add the key importance, as an article recently in Science pointed out, of the public health healthcare system, so that we have universal access to healthcare.

If bioterrorism were to arise and we wanted to detect it quickly, the last thing that we would want is somebody to have to show their insurance card before they got to a hospital or a doctor.

In 1988, the Institute of Medicine, in its report *The Future of Public Health*, indeed said the American public health infrastructure was in shambles. It called it "in disarray." I currently have the privilege of serving on the follow-up committee for the Institute of Medicine on public health in the 21st century. We are near the end of more than two years of deliberation. We expect to have a report fairly soon, perhaps late summer, maybe in the autumn. And I'm afraid that the report card for public health in America will not be greatly improved.

Certainly, there has been a silver lining to September 11th and to October 4th with Anthrax, in that there has been substantial increases in expenditure, but I fear it won't be enough.

Even the military is not immune from this lack of preparedness for biological incidents, both naturally occurring and possibly bioterror. I also serve on another Institute of Medicine Committee, reviewing the Department of Defense and NATO policy in relation to vaccines particularly. And again, the report card will not be pretty.

As bad as we feel that we are in terms of public health in the United States, consider for a moment as we've all been saying, about global preparedness. We were fearful about anthrax, but think about naturally occurring infectious diseases throughout the world.

Our Surgeon General in the United States not too long ago said it was time to close the book on infectious diseases. Saying that, when there is a crushing burden of tuberculosis, malaria, and HIV/AIDS in Africa, Russia, developing countries throughout the world. Twenty million people living with HIV/AIDS alone. And there, there is no capacity, literally no capacity to deal with naturally occurring infectious diseases, as well as the potential threat of bioterrorism.

These countries have crushing poverty, with almost no healthcare budget, no capacity for surveillance, and also crushing debt, without any prospect that they would be able to respond, detect infectious diseases.

And as Senator Nunn so eloquently pointed out, this isn't just their problem; it is the world's problem. In an age where international travel, migration, population changes, environmental changes are being transformed, it is pure folly to believe that what happens over there won't affect us here.

In addition to the problem of the lack of public health infrastructure, here and internationally, there is also the problem of the lack of public health law preparedness. Something that we've been talking about throughout this conference.

Much of what our conversation has been about is using law as a tool for public health, and there are various models for that like, taxing and spending for ensuring better behavior, more healthy behavior, including direct regulations, seat-belts, motorcycle helmets, infectious disease laws. Indirect regulations through the tort system, which we talked about last night and today. And in addition, the Institute of Medicine will talk about the importance of a better informational environment, and a better built environment, and physical environment to make our country healthy.

But in addition to that, there is public health law. That is the law that enables public health agencies to act effectively. At the moment, these laws are badly antiquated in many parts of the country. They don't have the mission, the functions, the duties, and the powers of federal, state and local public health agencies to be able to respond to a very serious naturally occurring threat of infectious disease, let alone to an intentional aspect of bioterrorism.

What we need is the legal capacity for prevention, detention, and effective and sure response. And as Dark Winter pointed out, and the top-off exercise pointed out, before September 11th, we had deep problems.

As a result, in close collaboration with Gene Matthews's leadership and the CDC, we worked on an Emergency Health Powers Act. That Emergency Health Powers Act was one that enabled the states to have a tool, a checklist, to go through each of their powers and to say, "Are we ready?"

The Emergency Health Powers Checklist had discussions of planning, for surveillance, for property, for access to vaccines, pharmaceuticals, hospitals, and also to help protect people. All of these things were absolutely necessary.

And one of the things that Gene, Tony Molten and others and I had been talking about is the silver lining of September 11th and October 4th is that everybody got together to try to work together cooperatively.

Let me just end with just a brief reflection on bio-ethics and public health ethics. And that is simply to say that the last part of the 20th century, America has been deeply immersed in a sense of individualism, autonomy, privacy, liberty. These are very important American values. We should never lose them, and we should certainly never lose our essential quality of justice and toleration for all groups.

But at the same time we lost the classic Republican tradition in the United States, that tradition of the common good of shared responsibilities. In the late 20th century, we asked a particular kind of question. "What entitlements do I have as a rights bearing individual?" I pray, and hope, and believe that, after September 11th, that there will be a new kind of question that is being asked, and that is, what can we do collectively, owing duties one to another, to ensure the conditions for people to be healthy?

We all owe a debt of gratitude to the CDC, to the public health collaboration that all of you bring that give us hope in that regard for new values, new policy, and renewed effort to ensure health and well being of our people.

MR. MATTHEWS: Thank you, Larry. It is a new question that we're facing.

Peter Mills is the state Senator from Maine. He is also a trial lawyer. He has been very active with the reforming state groups and the Milbank Memorial Fund to provide us leadership on how to deal with these issues, and helped us a great deal as we looked during the shake out period of how to deal with emergency health powers in the states.

Peter?

MR. PETER MILLS: I'm just a country lawyer from a very small region in central Maine. I've been term limited out of the state Senate this year and I took umbrage at that and decided to do the perverse thing and run for the State House of Representatives.

I found myself about 45 days ago confronting an attack from a primary opponent, and so I have spent the last -- about the last 45 days -- traveling over an area of about 200 square miles, attempting to find the 800 people who might turn out to vote in a Republican primary. And I must say to you, I succeeded in finding most of them.

I had two major goals during that sojourn. One of them was to avoid getting stuck. The roads in this section of Maine are a challenge at any time of the year. And the other challenge related to canines. People in my region tend to avoid buying homeowners insurance and they buy big dogs instead. And I'm knocking on wood, but I have something of a way with dogs and I can handle it. I can handle usually any one dog. I back down when there are two or three.

I was talking in the driveway with a fellow named Chuck Griffith, who makes his living by operating a chainsaw in the Maine woods and pulling wood out with what's called a skidder tractor. And he was expressing some concerns about healthcare for his family and access to health insurance and the like. And he had an unusually friendly mid-size spaniel who was meandering around and making a general pest of himself. And as I was about to give an answer to his concerns, I looked down and this dog had his right leg raised and he was peeing on my left foot.

My response to Mr. Griffith was, "How did he know I was a politician?" And the response should have been, "How do you -- how did he know that I don't have an answer to your question at the state level?"

We in state government have remarkably little power over cost and access to health insurance issues. We can't -- we don't have a prayer of gaining access to the first dollar that comes out of the Medicare system. It's all controlled federally. The Medicaid system, although we manage it, it is -- we are highly constrained in how we spend that money, how we appropriate to it.

The ERISA laws make it impossible, practically impossible, for us to regulate how larger companies spend their healthcare dollars. We have some control over the individual and group health markets, but it's pretty fleeting. We usually get involved in those markets and screw them up more than we help them.

And -- but we had this -- so we have this odd situation in America that it is local politicians like me to whom people complain about their greatest fear. And yet the response must, to solve those problems, the largest response, the most (inaudible) response comes and must come from Washington.

I'm getting -- I'm mentioning all of this because this topic this last hour and a half has been about terrorism. And the terrorism that I've been witness to in the last 45 days is the terror of losing access to healthcare -- the American healthcare system and its costs. And, in my mind, and I'm a Republican, in my mind there's no doubt that the biggest single political issue in this nation is access to healthcare and its attendant costs. There isn't any other issue that even comes close, including bioterrorism and the threats from abroad.

Now, the interesting thing about bioterrorism, and the events since September 11 and October 4, is that it's called what then is created, what Dan Foster (sp) referred to the other night as, "Oh, another renaissance in public health." It has opened up a flow of dollars into public health that I think many people in this room can't remember there being any precedent for.

And the other interesting thing about that flow of dollars is that the money, by and large, would be spent and administered, not at the federal level, but at the local, regional, county and municipal levels.

One of the things that I found in state politics is that the -- probably the best answer that I and others have ever been able to come up with to address cost and access to healthcare, is not by tinkering with the single payer notion or the insurance system, or even the medical system, the sick-care system

generally, but it's public health. And that's not a politically appealing answer to most people on the street.

But the things that the states do best and, in fact, the things that the states must do because the feds are so distant from those people on the street, is to reduce the cost of healthcare in America by implementing the commonly acknowledged tools of public health initiatives: Smoking bans, seatbelt and helmet laws, school-based health clinics, regional and mobile dental clinics, tougher drunk driving laws, universal well baby visits, immunization of children and vulnerable adults, lead poisoning screening and inspection of housing stocks, domestic violence training and interventions, home health networks for the elderly and disabled, fluoridation laws, establishment of drug courts, getting caffeinated soda pop and junk food out of our schools, requiring daily exercise for kids -- all kids, not just the soccer team, creating exercise opportunities for everyone, planning cities to avoid the car dependent designs of Los Angeles, Denver and, yes, Atlanta -- I'm sorry -- mandating sidewalks and bike paths, health screenings at work, churches, schools and shopping centers for blood pressure, pulse, diabetes and cholesterol and obesity, nutrition education and prescription drug cost assistance.

These are about 20 ideas that I jotted down over the past -- just because I heard them, not for the first time, but because I heard them in the last two days. And every single one of these is a state initiated remedy. The front line -- the front line of healthcare cost control is at the state and the local level. And we as legislators are not educated to that concept. We don't understand that. We come into office thinking that there are larger global solutions that we have control over, and we are universally wrong.

We need you folks, desperately, to help us make these mundane and somewhat boring initiatives politically acceptable, sexy even. Give us what it takes to sell these things to our constituents. Help us overcome these barriers, because it's hard when someone stands in his driveway, smoking a cigarette, drinking a beer, and with his potbelly hanging out over his belt, and he wants to know what you're gonna do about his access to healthcare, and your answer is, "Get off the couch, stop drinking and stop smoking." You don't get his vote. And his dog pees on your pants.

So I would like to see us use this new awareness of public health that has come to us in America through our concerns over bioterrorism, which are very real concerns, very troubling, but we need to remember the basics. We need to remember what we're all here for. And you need to help us dumb legislators, and the public, understand how truly significant, how truly significant is the work that you folks do everyday.

Thank you.

MR. MATTHEWS: Okay. Well, from the global issues from Senator Nunn to Senator Mills's dog whizzing on his leg in Maine, we got a pretty wide terrain for questions. We've got time -- we've got time for a couple, and this is not a crowd known as shrinking violets. So first come, first served.

Identify yourself and swing away.

MS. MAXINE HAYES: I'm Ms. Maxine Hayes (sp), the State House Office of the Washington State. And I was very moved by Senator Mills's talk. And one of the things that I couldn't help but come up and ask you is how are we gonna resolve the fact that we can't even immunize our children in this country? We do not have adequate vaccines. And I just think that that is a national disgrace.

I'm a pediatrician and I have never seen it in a country this wealthy that we now have to turn down the opportunity to immunize our kids because we don't have adequate vaccine supply. So, getting back to basics, I don't know what basics is, if it's not this.

So, could you please respond to what Congress hopefully will do, because this is something we will have to solve from the national level.

MR. MATTHEWS: Senator?

DR. AGWUNOBI: We're assuming that was a question for Senator Mills?

MS. HAYES: Anybody who wants to answer it.

SENATOR NUNN: I would certainly agree with you. I think we need to make that a top priority, and it fits right into the overall effort to control infectious disease, which has to be strengthened in the public health system.

One of your citizens in Washington State, Bill Gates, is doing that all over the globe now. God bless him for what he's doing. We need to also do it at home.

MR. GOSTIN: I would only add that, in one of the IOM reports that are coming out, there's going to be a systematic analysis as to why we have problems with a stable supply of vaccines. And it has to do with, not only the lack of financing, but also the lack of planning and finally, and most importantly, a good collaboration between the public and the private sector. And right now, there simply isn't one. And so necessary vaccines aren't being produced reliably, either by the government or by the private sector, which fears financial problems, liability, and the rest.

DR. AGWUNOBI: Just to add to that. One of the obvious, but not too often stated problems with bioterrorism, is that it does distract us from the real work that we have in front of us, which Senator Mills alluded to. And that list of 20 is 20 of a list of perhaps 200 real initiatives that will be with us forever, long after bioterrorism goes away.

I think it's our jobs as a community of public health experts and people that speak on behalf of the public health community, it's our jobs to continually put our hands up and say, bioterrorism is important, but let's not forget the anti-smoking message. Let's not forget the immunization problems that we face. And, I am a little worried that perhaps they're not quite as high on the list of priorities as they once were.

MR. MILLS: Part of the answer is publicizing all the good things that you do so well. I took Dean's

advice and I wandered down to Piedmont Park last night and sat down in the grass in my suit, and watched Blackboard Jungle, a movie about juvenile delinquency in the mid 1950s, and all the violence and the irrational behavior that kids were then capable of, and still are to some extent.

But you know, you people know more about this than I do, but I have read responsible articles that suggest that the reason that murder rates among young males and that violence in cities is down so significantly in the last couple of decades, is for several reasons.

We got lead out of gasoline, and we got it out of the air. Then we got lead out of the paint supply and a lot of the housing stocks are being -- the lead is being reduced, exposures are being reduced. And we are now for the first time seeing young adults come to maturity who have not been exposed to lead poisoning, which takes away part of the frontal lobe and causes irrational and bizarre behavior.

That rather extraordinary health initiative that took place over several decades may well be the reason, a big reason, why Mayor Giuliani has had such success in the streets of New York. It's not -- I don't know if it's responsible to say that, but it does -- there are people -- I've got articles where that's been suggested.

And I think that people -- when you have these successes in the public health arena, you need to beat your chests, make sure that the public understands what you've achieved and done, and that the legislature, most significantly, has a full report of those achievements.

MR. MATTHEWS: We'll take one more quick question.

MR. JIM JENSEN: Thank you, Jim Jensen, Senator, State of Nebraska.

Senator Nunn, certainly a couple of weeks ago when we heard of an individual in the O'Hare Airport being arrested, and the talk about a dirty bomb, and how are we as a nation dealing with moving low level and higher level nuclear waste across this nation to safety where it can't be used for those purposes?

SENATOR NUNN: We've been transporting dangerous nuclear materials for a long, long time. But I think there's added danger now because there are people out there who would like to cause mass destruction.

We have to certainly keep the movements as confidential as we possibly can. I was a little surprised that there was an announcement of when the movement might start to Savannah River. That's been the subject of controversy.

But, beyond that, I think we have to make sure that we secure all nuclear materials everywhere in the world. "We" being the public sector, "we" being the United States, "we" being the United States and Russia, "we" being the United States and the 58 other countries that have research reactors with highly enriched uraniums that, in many cases, is not properly protected. And "we" being also the power plants

with spent fuel, the hospitals with nuclear medicine. All of that has to take place.

With nuclear, we do have a finite kind of fix on where it is. There are multiple places, it'll take a lot of resources. With biological and chemical, it will take much more effort because of the dual nature -- dual use nature of them, with the private sector being heavily involved.

But this is an essential priority and President Bush made a speech a week or two ago about preemption. And I think that was taken primarily as a preemption militarily. My view, military preemption in circumstances is required, I don't disagree on that. But preemption from my point-of-view, and I hope he means this, is getting out in front and keeping dangerous materials out of the hands of dangerous people. That is the ultimate form of preemption and prevention.

Once materials have gone outside the Soviet Union that are weapon grade, found their way into this country, every step of the way from their original source makes it harder for us to basically intercept it and prevent it. The easiest place to secure materials is at the source. And we've got to spend money and put priority on that. And we have to have other nations involved with us.

MR. MATTHEWS: Thank you, very much.

It is our goal to stay on time and under budget at all times.

Dr. Curran is going to give us a summation and a view for the future. Jim Curran is a long-time CDC colleague. He did heavy lifting on the AIDS epidemic, prevention, very experienced.

He is now Dean of the Rowland School of Public Health at Emory. He flew all night to get back here from going out to Washington to meet with the Gates Foundation and our first CDC Director when we were there, William Foege.

Precognition is a term in the Spider-Man movie that I picked up last week. And two years ago --.

END

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