

Center for American Progress



SPECIAL PRESENTATION:

**“COUNTERING THE TWIN THREATS OF PANDEMIC
FLU AND BIOLOGICAL TERRORISM”**

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MR. ANDREW GROTTTO: Let's go ahead and begin please. Welcome to the Center for American Progress. Thanks for joining us. My name is Andrew Grotto. I'm the senior national security analyst here at the Center. We're here today to discuss the twin threats of biological weapons and natural emerging infections and to mark the release of a new report, *Biosecurity: A Comprehensive Action Plan*, authored by Jonathan Tucker and myself.

Dr. Tucker is a senior fellow at the Center for Nonproliferation Studies here in Washington. Before joining CNS in March 1996 he was an arms control specialist with the U.S. government. Dr. Tucker also served on a United Nations biological weapons inspection team in Iraq in February of 1995. He's a prolific writer. Earlier this year he released *The War of Nerves: Chemical Warfare from World War I to al Qaeda*, which received very favorable reviews from both the *New York Times* and *The Washington Post*. I learned a lot from it and I recommend it highly.

Also joining us today is Laura Segal. She's the director of public affairs at the Trust for America's Health, or TFAH for short. At TFAH, Laura oversees public affairs, communications and policy research. TFAH produces an excellent annual study called *Ready or Not* that Jonathan and I used a great deal in our report. It's a state by state study of public health preparedness and you can find an executive summary on the back table outside the lobby there.

David Heyman joins us from the Center for Strategic and International Studies, or CSIS, where he is director of homeland security and a senior fellow. David leads CSIS' homeland security programs on strategy, policy, and research and education. He's a leading expert on bioterrorism, critical infrastructure protection, and risk-based security. David is also the author of *Model Operational Guidelines for Disease Exposure Control*, a very important and influential study that outlines how to protect public health in a pandemic when no medical countermeasures are available. You can find an executive summary of that in the back as well.

The report that we released today should be here in a moment. We had some printing difficulties. Someone will be around shortly to distribute down the rows. Before I turn it over to Jonathan to introduce today's release in detail, let me briefly say a thing or two about why we produced this report. For many years now, experts in nonproliferation and public health communities have agreed that that an all-hazards approach the biological terrorism and natural emerging infections would both save more lives than a stovepipe approach and more money as well. Yet as far as we could tell, there's never been a real systematic attempt to comprehensively outline what such a strategy should look like and then connect the dots between that strategy and the capabilities needed to implement it. Now, that's what Jonathan and I set out to do in our report.

I'm now going to turn over to Jonathan who will elaborate on this all hazards approach and outline the main conclusions of our study. He'll focus in particular on nonproliferation and biodefense.

MR. JONATHAN B. TUCKER: Thank you, Andy, and thank you all for coming today. As Andy said, the goal of this report is to provide a comprehensive soup-to-nuts approach to the biological threats facing the nation and in so doing the report takes an integrated view of the dual threats of natural infectious diseases and biological warfare, both by states and terrorist organizations, together with the multiple dimensions of prevention and response. And the report argues that natural infectious diseases and bioterrorism share several fundamental characteristics that the U.S. can leverage to combat both threats more effectively.

First, the report identifies multiple gaps and weaknesses in existing national and international systems for preventing and mitigating outbreaks of infectious disease, both natural and deliberate. It then lays out an integrated comprehensive strategy for prevention and response to biological threats in contrast to the current fragmented stovepiped approach. We argue that an integrated biosecurity strategy must be both national and international in scope and encompass a variety of tools including biological arms control, global biosecurity standards, epidemiological surveillance, public health preparedness, and rapid countermeasure development.

Overall, the best defense against both emerging infections and bioterrorism is a strong and effective public health infrastructure, both national and global. So this morning I'm going to focus more on the prevention side and then Andy will briefly discuss the response side. The part of the report that I hope will be here imminently – this is a bit down to the wire – we have a section called “Preventing Bio-Catastrophes” that examines various strategies of prevention such as securing dangerous pathogens, overseeing dual-use research in the life sciences, and preventing the brain-drain of dangerous expertise from former state level biological warfare programs such as those of the Soviet Union, South Africa, and Iraq.

The report argues that the United States must devote greater political, diplomatic, and financial attention to international efforts to prevent the misuse of biotechnology by states and terrorists and to strengthen the international treaty regime banning biological weapons. And this is particularly timely because the Biological Weapons Convention is up for review this fall.

The report also notes that certain types of basic research in the life sciences are dual-use, meaning that they can be used either for military or civilian purposes. For example, scientists are now able to make dangerous viruses from scratch, including the polio virus, which was synthesized in the laboratory in 2002; and just last year scientists of the CDC resurrected an extinct pathogen, the Spanish influenza virus which was responsible for the 1918 pandemic that claimed an estimated 50 million lives worldwide. There was obviously a legitimate reason for CDC to do that work, but this work is dual-

use because it can be applied either for good or for ill and it must therefore be subjected to special security oversight procedures and in rare cases constraints on publication.

At the same time, the rapid pace of innovation in the life sciences depends on the pre and open exchange of ideas among researchers in many countries, so finding the right balance between security and scientific freedom is a challenging problem that deserves urgent, high-level attention.

A related consideration is that the U.S. and other advanced industrial countries no longer have a monopoly on cutting edge research in the life sciences. And just to give a few examples of developing countries with advanced biotech capabilities, they include China, Cuba, India, Malaysia, Singapore, South Africa, and South Korea. So any effective biosecurity regime will have to be global in scope.

The report also calls for restructuring the nation's biodefense program to reduce some of the downside risks associated with the very rapid expansion of biodefense research and development since 9/11. And we point out that one negative consequence of the biodefense boom – the twelvefold increase in funding for biodefense research and development – has been to spread dangerous pathogens and related know-how to hundreds of laboratories across the United States. About 16,500 scientists in 400 institutions across the country are now authorized to study select agents of bioterrorism concern, such as anthrax and plague bacteria; and this is a dramatic increase from before 9/11.

Unfortunately, many of these individuals who have been drawn by the availability of funding in to the biodefense field lack previous experience with bio-hazardous research with the predictable result of a sharp increase in laboratory accidents. And the proliferation of dangerous pathogens and know-how across the country has also increased the risk that dangerous pathogens could be diverted, stolen, or misused, perhaps by a sociopathic researcher or an al Qaeda sympathizer working within the newly expanded biodefense community. So I think we need to think about some of the downsides – the negative consequences of this very rapid buildup in biodefense.

Another downside of the biodefense boom is the excessive secrecy surrounding certain aspects of the U.S. biodefense program. Although some secrecy is clearly warranted to prevent an adversary from circumventing U.S. biodefenses, too much secrecy risks weakening the global norm against the development and possession of biological weapons. Since 9/11, for example the Bush administration has placed a new emphasis on laboratory threat characterization research, including a new facility under construction at Ft. Detrick called NBAC. And this work includes examining how states or terrorist organizations might use genetic engineering to develop more deadly biological weapons.

We argue in the report that this type of research does more harm than good. Given the vast genetic diversity of microorganisms, it's extremely unlikely that the U.S. could anticipate specific organisms that an enemy might develop so that any novel

pathogens that are developed in such a program would simply be potential offensive weapons in their own right. Now, we state clearly that the intent of the U.S. program is defensive, but that other countries might not take us at our word and they may perceive some of these experiments as a possible cover for offensive research, in part because many of these biodefense activities are shrouded in secrecy. So there is a potential here for a negative dynamic that could lead to a new offensive biological arms race or at the very least undermine the credibility of the Biological Weapons Convention.

Given these concerns, we recommend that the United States renounce laboratory threat characterization research involving the creation and study of novel pathogens. And also for safety and security reasons we suggest it would be wiser to consolidate biodefense research with dangerous pathogens at a smaller number of secure facilities. And to this end the report recommends that the U.S. government conduct a net assessment of how many high-containment biodefense research facilities the nation really needs to combat both natural and deliberate infections and imposing a moratorium on new construction of such facilities until the study has been completed. I know that recommendation may be controversial, but we really feel that the risk of proliferating these pathogens and technologies outweigh the benefits and that biodefense research really should be limited to a small number of secure facilities and with people who have experience and expertise in working with these extremely dangerous materials.

Thank you.

MR. GROTTO: Thanks, Jonathan. Before I open the discussion to our panelists and get their views on this I want to briefly discuss two additional elements of response that we address in our study and that's public health infrastructure and medical countermeasures.

Of these elements I want to leave you with two overarching points. Point number one, as we prepared our study, it became increasingly clear to us that the United States lacks a real strategic vision for how to spend biodefense R&D money. In fact, HHS does not have to plan and won't even have a draft plan until the end of this year at the earliest according to recent news reports.

We believe that with the current focus on "one bug one drug" in which the United States focuses on developing vaccines and countermeasures for known threats like anthrax is all misguided. On the one hand, there's of course a clear need to have countermeasures for known threats like anthrax. On the other hand, it's just as important that the United States develop broad-spectrum antibiotics, antivirals, and rapid diagnostic tools. We believe these capabilities could give the United States greater flexibility to respond to a much broader array of contingencies from a contagious strain of avian influenza or other emerging infectious diseases to a genetically modified biological threat agent.

These measures could also enable the United States and the world to better counter more common disease threats such as antibiotic resistant tuberculosis. This

means that in theory such an approach could also be more cost-effective by helping doctors cure the more mundane, day-to-day, but nevertheless very serious diseases that are out there. This is of course easier said than done, so we offer recommendations in our report that we believe could put the country on the right track. You can find these on pages 41 and 42 of the draft document you guys have. There were some on the table; you should be getting them soon. I'll repeat those page numbers for you guys.

The second main point I want to leave you with is that there's a fundamental disconnect between the federal government's plan for managing a major biological incident and the capabilities needed to actually get the job done. The National Response Plan, or NRP for short, echoes much of what Jonathan and I say in our paper in terms of preparedness. In particular, it recognizes that an all-hazards approach is the way to go.

The problem, however, is that the NRP is premised on the assumption that local and state officials have the public health assets and capabilities to take lead responsibility for managing a major biological crisis. The reality, though, is they cannot. For instance, according to the CDC only 15 states or cities have the capabilities to administer stockpiled vaccines in a large-scale emergency. Obviously, stockpiling drugs does not get you very far if you don't have any means for delivering them. On page I of our report – that's the first page of the executive summary – we summarize some other statistics on this point drawing in part on TFAH's excellent work on this.

We also offer a variety of recommendations on how to fix this state of affairs. We focus in particular on building local and state capacities to respond and on positioning the federal government to take a real leadership role in coordinating the national dimension of the response. These recommendations are on pages 30 through 32 and 35 and 36 in our report. And, again, I'll repeat these page numbers for you once you get our reports.

Let's now turn to our guests and get their reactions to all of this. David, let's start with you. Do you agree with the report's conclusion that state and local authorities lack the capabilities to respond effectively to a major incident? Do you also agree with the proposed remedy of building local capacity? More broadly, what's the proper allocation of responsibilities between the local and federal authorities and the federal government – local and state authorities and the federal government?

MR. DAVID HEYMAN: Well let me first compliment you guys on issuing this report and thank you for inviting me here to discuss it. I did get an advance copy, so I did have a chance to read it and I hope all of the good things in there are because of my suggestions and all of the bad things in there are your own but, no, this is a very good report.

And I'll tell you, before I get to the specific question, what's really lacking I think in the world today – and obviously the U.S. is part of that – is the notion of how to address biothreats in a comprehensive way. And there's three elements that I think need to be pulled together and I think this report really does try to help do this. Our ability to

address biothreats have to be comprehensive in nature. They cannot be stovepipe. We have looked at this for the last 20 years and we have really isolated communities, isolated disciplines, and frankly isolated national plans.

It has to be multidisciplinary. Looking at for example the relationship between a naturally occurring outbreak and a delivered outbreak, one would want to know what the source is. If you don't know up-front and it's suspicious, you have to bring both the FBI or law enforcement in as well as the epidemiologist. They both want to know the answer – where did that come from? They have different terminology and perhaps different methodology and if it's a criminal act they need to preserve evidence as much as possible, but those communities, except starting really with the anthrax attacks in 2001, haven't worked together. So we need to be multidisciplinary.

And the third level is that it needs to be global in nature. Everyone always says this. I'll say it again just because it's worth repeating, and that is that bugs don't know political boundaries. They also don't know disciplines and things like that and they will cross boundaries. And so any approach as we start looking at, for example, pandemic flu, has to be we're all in this together and we have to take care of ourselves together, so this report tries to get at that.

As I approach the specific question, let me also – because one of the projects we've been working on at CSIS is something called Bio Threat Reduction Project, and, Jonathan, we've talked about that. And Gerald Epstein is in the back there, he is co-leading that – is you have to understand what sort of a threat's pathway is. We call it the four Ds. The four Ds is basically how do you – and looking really at deliberate attacks, you've got, let's say, a terrorist or a state actor and they're going to have – you know they're going to want to first have an idea about using a bioweapon for harm and then they're going to probably try to get the materials and the technology, and then they're ultimately going to build something and then deploy it. So all along the way, your comprehensive approach requires four D's: it's denying them; it's starting with dissuasion, you know, sort of normative standards to stop people. And this report talks a lot about international conventions and looking at questions of do no harm, biologists of course out helping the world, intending to save lives and the notion that perhaps there's a dual-use of the technology and knowledge and that there may be harm, but do no harm principle has not really come forward until recent years.

So dissuasion is really important and normative standards, and then you really kind of – how do you look at the technology or the tools that are needed for building weapons and the report goes in to questions about export controls and things like that. So that's how – then the third is detect. How do you detect malicious or suspicious or unusual activity? That's really hard to do, particularly on the deliberate side. And if you do that – well, very few people are done thinking about the intelligence and sort of side of the equation. We've done it on the monitoring, surveillance, detection of an outbreak or an attack or something like that. We haven't done in on the sort of suspicious activity except for models of self-governance and things like that, and the report does touch on that a little bit.

And finally the fourth D is defend and how you defend against it. Society really needs to have the countermeasures in the public health infrastructure. We're getting back to your original question about state and locals. And the reason I lay that out is because I think it's really important as we look at the twin threats, natural versus deliberate, that we recognize that the intersection is really in the detect and the defense side; the deny and dissuade – mother nature is not going to listen, that's all I'm going to say. But on the detect and defend, you really do have an opportunity for dual benefit and for bringing people together to solve a problem.

And specifically on the defense side, if we don't do countermeasures, we really do need public health infrastructure – and I know Laura can talk more about that, but now getting specifically in the United States, we are in deep trouble here in America. We do not have the public health infrastructure, the capacity to surge, we do not have the new ways of thinking about medicine in the absence of – sorry, new ways of delivering care in the absence of medicine. In the last 20 years, we've seen 20-some-odd new emerging infectious diseases, we're seeing deliberate attacks with anthrax, we're seeing catastrophic events – 9/11, we're seeing catastrophic potential with pandemics. How do you deliver health care when you don't have medicine? And that's something that's critical that we think about. It was certainly an opportunity to look at that with pandemics and substantively we need to transform that.

This report goes in to some very specific recommendations about the nature of the state and local governments' relationship to the federal government; we had some lessons from Katrina there. Fundamentally, I think, and we had some discussion on that – I think that I'm not completely in concert with the report, but fundamentally this disease has to be fought on a local level in my opinion, but we have to have the ability to surge. We have to be able to bring communities together to support each other, states, nation-states, and the world, depending upon the scale of the outbreak. And we can go from a localized Ebola outbreak to a pandemic flu. Maybe the Ebola is deliberate, I don't know, but local communities can be the first ones there and building up on that is the way to go. Let me leave it at that. There's a lot of things I know you want to have questions and answers and so – but I commend you for a comprehensive approach in your report.

MR. GROTTO: Well, let's pose the same question to you that I posed to David: did you agree with the report's main conclusion that state and local authorities lack capabilities to respond effectively to major incident? And let me also come back to this notion of the proper allocation of responsibilities between state and local authorities. You guys have done a lot of work on measuring state readiness. Is there more – is the focus on state readiness the way to go or is there more to say on the federal side?

MS. LAURA SEGAL: I guess I'd like to start off by thanking you all for having us here and I think one of the most interesting and remarkable parts about the paper to me is the emphasis on the public health infrastructure where you often go to a lot of things on national security and homeland security that public health is an afterthought, or you go to public health events and national security and homeland security is an afterthought. So

it's kind of taking too different views of the world and trying to bring them together and break down some of the silo approach that's been really going on and think that that's a real important take-away from the paper.

We have been evaluating for the last three years state preparedness for bioterrorism, disasters, diseases. We've kind of taken an all-hazards approach view of are states able to respond to different emergencies that could come up? And what we have found is that while there's some significant progress since 9/11, we're just incrementally more prepared than we were post-9/11 and we have so much further to go if we're going to meet just basic preparedness guidelines or measures. And it's baby steps instead of huge leaps that need to happen to just be ready for such an attack.

And we grade each state or evaluate them on ten different criteria each year and last year over half the states scored a five or less out of the ten. And we weren't using optimal standards; we were using some pretty rudimentary kind of standards to evaluate. And as Andy was saying, it's on really basic things like once the stockpile is delivered to a state – first, that kind of grants that the stockpile will have the right medicine, which as David points out is often not the case for a lot of the threats.

Secondly, it's also granting that the stockpile has the other kind of equipment that would be in it, like syringes, masks, gloves, and that's not a given. And once it arrives what will the states do and we've looked at that as well and 15 states at this point have what's called green status from CDC, as Andy mentioned, but even those states – they aren't sure between the federal and state role who has what, what's responsible for who, what's going to be dropped on their doorstep. And even the best prepared states have a lot of things that they would just throw their hands up at and a lot of questions about underserved communities or hard-to-reach communities like you saw with Hurricane Katrina where there's just kind of a hope-and-pray attitude, which is a little bit disconcerting.

And in trying to figure out balancing the roles and responsibilities, we started at a state level because under constitutional law that's who has the primary jurisdiction for dealing with public health, so that was our baseline for responding. It's also where the different grants are given from CDC and the Hospital Resources Administration – HRSA – to states.

So that was our basis for starting at states, but there's clearly different rules and responsibilities that the state, local and federal level, and they're all important. And as David points out, the kind of mantra in public health is that all response is local and it starts at the beginning: if something were happen today, we'd all want to go to a hospital. You know, where do you start? It's your local community. And then there are different things that the state has that work to be in surge support of that, and then federal roles and responsibilities, such as the stockpile or other technical assistance that they could give to states and localities. And so we've evaluated states and last year we also looked at the federal role and did a survey of some leading public health professionals and they gave the federal government a generous D plus in its response.

And so kind of at all levels we would say we're pretty unprepared. We are far away from the goal line. We've made some progress, but we also want to point out that if you look at the grants to states that the public health community, who's been asked to do this post-9/11 – when it's not been a traditional public health acknowledged role, they've been asked to develop overnight on \$7.40 per person per year this massive infrastructure that's able to leap up at a moment's notice and protect us all from bioterrorism. So we have a long way to go, but I found the report encouraging that we're looking at how to break down silos and potentially take best lessons and apply them across different sectors.

MR. TUCKER: Andy, can I also please add? Because if anyone hasn't seen the IOM report that came out last week, it gets exactly to what Laura is talking about. IOM issued the report on emergency departments and, as she said, not only does it start locally – not only do we have to worry about these things locally, it's going to start in the emergency departments, whether it's a pandemic or naturally occurring, whatever health care crisis it is.

Emergency departments are in crisis across America. This is the Institute of Medicine's report. If you look at some of the statistics out there, we have a supply and demand crunch: the supply of hospital beds has decreased 188,000; the demand for emergency care has gone up 26 percent. You've got that curve crossing right now; we just don't have beds for people to take care of. Every minute of every day, an ambulance is turned away from an emergency department: 500,000 times a year ambulances have to go away because there's no room for them. People are being boarded in emergency rooms because there are no beds, so they have to go upstairs.

The system is fragmented, so if you call 911 you may have to go to one hospital but there's another one free and available but because they're not on the same 911 system. We don't have the capacity even locally to coordinate so you have horrific difficulty on surge and ability to handle major disasters. And I think that speaks exactly to what you were saying.

MR. GROTTO: Is this problem, though, is it a matter of funding or is there more to it than just insufficient funding?

MS. SEGAL: I think it's a combination of a lot of factors. Funding is clearly essential: you can't make these kinds of dramatic improvements without some really serious influx of money. But there are a lot of basic coordination issues that are going on as well. If you look at the guidance from HRSA – the federal Hospital Resources Administration – to hospitals, it's focused on dealing with the issue at a state level. And then you go to the ground level and you're talking to hospital administrators that say we're getting this much of a drop in the bucket and the plans call for how are you building a set-up in a Superdome or some other sort of stadium where the hospitals are focused on their emergency rooms. And it's a complete culture clash. So there's a lot of that kind of element. There's a lot of just basic coordination and understanding of who

has what roles, and then even defining what the vulnerabilities are that need to be plugged in.

MR. TUCKER: Also I'd echo that and say this funding – I think the IOM report talks about 4 percent of healthcare emergency capacity-building funding went to the EMS system. I don't know if that's the right number, but it sound small, but that's what they talk about. But beyond that, we don't have our national preparedness standard out yet. There's no standard across systems, so that's – in addition to fragmentation you have a diversity of capacity, capability, and effectiveness. As I said, there's no standards. I think the fragmentation is huge: people don't realize that the healthcare delivery system is a combination of federal government hospitals, state or city, local government, private sector, for-profit, not-for-profit – it's a whole conglomeration of soup to nuts and when you put that all together, they don't all work together.

The debate and discussion we've had for the last five years about communication in crisis during a terrorist attack or something like that – we talk about interoperability, that's worse probably today in the healthcare system than it is in communications for first responders.

MR. GROTTO: One of you mentioned the Superdome. I'm curious, what impact has Katrina had on public health debates in this country?

MR. TUCKER: I didn't mention it but I can talk to it. Did you mention that?

MS. SEGAL: I think I did. I think in coming out of Katrina, sitting there watching it on TV unfolding, I think most people were horrified to watch it but if you have been working on this for any period of time it's not surprising. And it really provided a visceral experience for Americans of what would likely happen, and then if you think about something like a pandemic, where it's in 50 states, same time, every local community, it's just going to be unfathomable and that there are just all these different ripple effects that could happen or might happen in such an event. You saw the hospital breakdown; you saw even the closure of some of the hospitals.

If a pandemic hit even in the more modest models that are coming out, it would bankrupt the U.S. medical system. There is just no question about it, and we're not preparing for the during and after effects of such a thing. But I think post Katrina – I've been sounding like a pessimist, but to sound like an optimist, it helped really show what a crisis could be like and to get people moving somewhat on the pandemic, and we've had some real serious progress. The National Pandemic Plan on paper is really interesting and far reaching in depth and breadth, and \$7 billion has been passed Congress, so it's some real serious movement that I don't think would have happened without Katrina.

MR. GROTTO: Let's pause for one moment. We have – our reports just arrived, so people will come down the aisles and pass them down the rows.

MR. TUCKER: Do we have music for this?

MR. GROTTTO: Can you sing?

MR. HEYMAN(?): So there should be about 30 seconds of collective, “ooh, aah.” (Laughter.)

MR. GROTTTO: Obviously this event was planned with clockwork precision because we got them here. We got the report right from the printers just in the middle of the event.

Let’s now turn to audience questions. I ask that you please keep your questions crisp and that you, as in Jeopardy, keep them in question form: no extended monologues please. I also ask that we give journalists a first crack at questions.

Q: This is Stew Magnuson, *National Defense* magazine. For Mr. Tucker, can you give us a rundown of what are the issues with the Biological Defense Convention that you said will be up for renewal this fall I believe you said. What are the issues? What does the U.S. want to get out of that and so on?

MR. TUCKER: Okay, in the report we provide a fair amount of history of efforts to strengthen the Biological Weapons Convention. This is a treaty that was negotiated during the Cold War in the early ‘70s. And at the time neither the U.S. nor the Soviet Union were willing to accept very intrusive, on-site inspection, so it is basically a gentleman’s agreement that prohibits the development, production, stockpiling, and transfer of biological and toxin agents for hostile purposes. It does permit use – research and development work – with pathogens for peaceful purposes. And because of the fact that one cannot ban living organisms, they are obviously inherently dual use. So the treaty itself is sort of inherently problematic because it’s purpose based. It’s trying to prohibit certain activities that one can engage in with living organisms; that is, hostile purposes.

Because of the reluctance both of the Soviet Union and the U.S. to accept on-site inspection when the treaty was negotiated, it entered into force with no formal verification measures. And so from the very beginning it was considered a weak treaty, more of a normative statement than actually an enforceable regime, and over the years that weakness has become increasingly problematic. At the time the treaty was negotiated, it was not realized that the Soviet Union had a huge biological warfare program. That has only emerged since the end of the Cold War. And also there is a growing concern, of course, about bioterrorism which is not an explicit focus of the treaty but is obviously related to the prohibition.

So there has been growing concern about the weakness of this centerpiece of the biological nonproliferation regime and a number of efforts over the years to strengthen it. There were five-year review conferences of the treaty, and at these review conferences there have been a number of efforts to strengthen the regime. In the review conferences of 1986 and 1991, a number of confidence-building measures were approved, and these

include exchanges of data on activities and events and publications relevant to the convention such as unusual outbreaks of disease, biodefense programs, and that type of thing. The problem is that they are not mandatory. They are voluntary and a minority of states parties have actually engaged in the confidence-building process.

Then during the – beginning in 1995, there was a six and half year effort to negotiate a formal verification protocol that would have supplemented the Biological Weapons Convention with provisions for mandatory declarations, on-site inspections and investigations of alleged use.

When the Bush administration came in, they inherited a draft treaty that had been completed toward the end of the Clinton administration. They did a policy review and decided it was not in U.S. interest to participate in this regime so they simply walked away from those negotiations. And since then, the administration has been quite adamant of rejecting any legally binding, multilateral approach to strengthening the Biological Weapons Convention. Instead, the administration has endorsed a number of voluntary national measures such as strengthening laboratory security and penal legislation – measures of that type.

So in the report I take issue with some of the thinking that went into the Bush administration's rejection of the multilateral approach. I think it's essential to engage in multilateral measures to strengthen this regime. Now, I think realistically the BWC protocol is dead. It's very unlikely to be revived, but I think there are other types of multilateral measures that one could pursue such as, for example, developing uniform minimal standards for biosecurity (measures?) to ensure the safety, security, and accounting of dangerous pathogens around the world, because the U.S. and other Western countries are not the only countries that work with dangerous pathogens.

And there are other ways of strengthening the regime; for example, by providing some type of institutional support. At the moment – for example, the Chemical Weapons Convention, which banned chemical weapons, has a very large international organization that has played a fundamental, very important role in strengthening that treaty and implementing it effectively. And there is an institutional deficit in the case of the Biological Weapons Convention. There's not even a small secretariat or any support mechanism to help countries to pass, for example, implementing legislation or to participate in the confidence-building data exchanges. So that's one area where I think the U.S. could show some leadership.

And then there are some measures outside the Biological Weapons Convention; for example, a provision under which the U.N. secretary general can initiate investigations of alleged use of biological weapons. And this mechanism is on the books, but hasn't been used since 1992, and there is an urgent need to update it and revitalize it and provide adequate funding and support. So those are some of the recommendations in the report.

Q: (Off mike.)

MR. TUCKER: Right. The Bush administration has a very clear policy that it is not interested in pursuing any legally binding, multilateral agreements to strengthen the Biological Weapons Convention. And it's been made clear to me in my informal discussion with administration officials that they are going to continue that policy in the review conference and that the best we can hope for is probably some strengthening of the confidence-building measure regime.

For the past three years there have been annual meetings, so-called intersessional process between the five year review conferences in which the member countries have addressed various national voluntary measures for strengthening the regime. And the U.S. is not enthusiastic about continuing that process, but may be persuaded by the Europeans, who are much more wedded to continuing the intersessional process. But it's definitely clear that the U.S. will not pursue – at least this administration will not pursue any multilateral measures to strengthen the convention, which I think is unfortunate and should be rethought.

MR. GROTTO: Other journalist questions? In the back there.

Q: Thank you. Matthew Berger of *Congressional Quarterly*. Two questions: first, you talk about this being a 50-state – the potential for this being a 50-state problem. I wonder when you talk about local and state resources, is there a clear guideline as to how federal stockpiles, federal resources will be distributed from state to state or throughout the country and beyond first responders and beyond medical personnel, and is it adequate?

And the second question is, is there a law and order component to the plans for if an epidemic were to occur, because I would imagine there would be similar problems that we saw during Katrina.

MS. SEGAL: Currently, there is not a stockpile of any sort of mass pharmaceutical response to a pandemic. There is no vaccine that's currently available. It would probably take six months minimum, if not more, to develop one. And then to produce it, it would take maybe two years and that would be granting that we would invest as a country in production capabilities, which we haven't.

And then within the stockpile itself, there is no residual leftover plan to even deliver basic equipment. States have basically been told – and Secretary Leavitt has been doing a 50-state tour where the first slide he begins with is, "You are on your own." So they mean it and they mean it to states and localities and that's currently the national strategy for dealing with the pandemic – that it starts local and state. They need to figure out their own plans. Each state is doing it independently with very little technical assistance from the feds, which that could be a strong federal role but has not been funded as such.

So some of the state plans say, if a vaccine arrives, we aren't sure where we'll get syringes. So it's pretty disconcerting at the moment, but the states – a lot of them are working really hard. Some are doing a much better job than others, and they are all supposed to have their plans to be turned in – I guess, lacking a better word – to the feds by the end of the summer, but there are no real accountability measures once they've turned them in.

MR. GROTTO: Quick moderators privilege one second – a quick question. It seems to me that given the state's traditional role of bearing primary responsibility for public health that there's a political risk for states to admit they need help. This requires them to admit that they are not prepared. Is this a real factor that you guys see in your work and your consultations?

MR. TUCKER: Let's talk specifically about the pandemic flu. The message that has gone out since the end of last summer with the president's strategy and the plan is we're going to have three primary legs to the strategy: a vaccine, antivirals – we can stockpile them, and some distribution coordination of the states. The \$7.1 billion plan, all but \$100 million of that goes to stockpiling antivirals and producing vaccine. The problem with that strategy and that plan – and this message needs to get out – is we're not going to have vaccine – six to nine months to produce it – we're not going to have antivirals. We don't know if it will work. Julie Gerberding says 25 percent will be available by 2008. So without the two legs of the strategy, what are we going to do? And what are we going to tell the public?

And the answer to that question – and it gets to the question of law and order and things like that – the answer to that question is what we learned in Katrina, but we've actually learned also hundreds and hundreds of years, and that's that there are non-pharmaceutical interventions that are effective and I don't want to go into too much detail about this. I did put a URL for the report that I wrote on this subject, which is disease exposure control. It's how do you protect the public without countermeasures, and there's a lot of great research going on right now. The answer is we're going to be able to take care of people with things like protective measures, infection control. We're going to be able to take care of people with self-isolation or self-quarantine or sheltering. And that's the lesson of Katrina.

The lesson of Katrina is you're on your own: do what you can to take care of yourself, your family, your community. That's not a bad thing. That's not a bad thing. That's an empowering thing. There are things we can do as individuals, as communities, to make sure that the vulnerable populations, like we saw in Katrina, are getting the help of the government. We can take care of ourselves. We can stay home for a couple of weeks maybe or we can wear the masks if we have to, whatever that is, and let the government try to help the vulnerable populations.

If we do that, we can put together a series – I like to call, a series of singles – baseball analogy – that gets us to the homerun. The homerun is the vaccine. We're not

going to have that, but you can put a number of strategies together that will ultimately lead us to getting the reproductive rate down and the pandemic flu taken care of.

MR. GROTTO: Any other questions? At the back.

Q: (Unintelligible) from the Danish embassy. I was wondering in your report – I haven't the agenda in the report yet, does it touch upon how the U.S. government or HHS under the (bio-fuel?) program evaluate a threat? How do they prioritize a threat?

MR. GROTTO: Well, HHS does not have a plan that sets out a clear, strategic vision for how to spend biodefense R&D. As I mentioned, according to news reports, HHS expects to have a draft plan by the end of this year. Meanwhile, we've spent billions and billions of dollars on this research. So at the present time, no, there is no plan as far as I can tell.

Q: Chuck Woolery (sp). I'm a blogger. Do the freaking math. I really am excited about the report and I look forward to reading it cover to cover and getting back with you. I was a little bit concerned about the four Ds that David mentioned. He thought that the first two of dissuasion, and what was the second one?

MR. HEYMAN: Denial.

Q: Denial. Doesn't apply to the natural spread of infectious diseases, but in fact the Copenhagen consensus report that came out just a few days ago about what would you do with \$50 billion on the ten worst global problems, the first thing they would do is promote global healthcare and the second was water and sanitation, the third was basic education, the fourth was nutrition. These four things do dissuade and deter the infectious diseases from entering the human body or from spreading among the population, and I hope you rethink your four Ds on that in terms of also the connection between our humanitarian efforts around the world and our link to terrorism issues – that there is a connection there. I hope you rethink that.

MR. HEYMAN: Thank you for that comment. In fact, actually Jonathan and I had a discussion because in his report he talks about the link to developing countries. And on the international level, that's a really important point because the defense side of the equation is really, if you look at the priorities out there, in a lot of the world terrorism isn't the number one concern; it's diarrhea, it's whooping cough, malaria and that's why it's really important that we look at where we can get the most benefit. Dual benefit where everyone shares common interest and goals, gets us to at least one step up that ladder towards a better biothreat regime. But I thank you for your comment. You guys can talk about that; they have talked also about the role of bringing all of the countries together to have different threat perceptions.

MR. GROTTO: Second row. Wait for the microphone for one second. The microphone is coming. And please identify yourself, for other questioners.

Q: I'm John McCormick. I'm with the Energy Policy Center. I have tried to skim the report and I can report to you that the ink is dry. (Laughter.) Just a comment to the two authors: it would seem to me that the insurance industry, both the health insurance and the life insurance industry, have a heck of a lot to lose in the case of a pandemic. And it would seem to me that they have a vested interest to making sure that there are ready stockpiles so that it can reduce their risk. I didn't see any mention of the insurance industry but it certainly is a victim, and is it ready to step up and fill the gap that evidently the federal government is having a difficult time filling?

MS. SEGAL: There actually is a piece of legislation called the Terrorism Risk Insurance Act which the insurance industry has put together for bioterrorism attacks, but it's very focused on terrorism. It's not for infectious threats. And it's basically a certain level of stopgap for the insurance industry and then above that it's considered kind of in the realm of uninsured. And then on the pandemic, the Trust for America's Health has been working for a number of members of Congress on an emergency benefit for the uninsured that don't fall in the normal care categories. That could potentially at some point help alleviate some of the cost burden if there's some fund available to treat people that need it in an emergency. But, yes, there certainly is a lot of risk and I think people are scared to talk about the ramifications and the big dollar signs because no one wants to have that on their record until something happens.

MR. TUCKER: You're right, we don't mention the insurance industry per se in the report, but we do mention that the uninsured are a potential vulnerability with respect to public health because these people tend to be more susceptible to infectious disease. They will generally not go to see their physician until they're very sick and they could be a source of contagion. So from a public health standpoint, we need to address the problem of the uninsured because it does pose a real threat to our well-being.

MR. GROTTTO: We have a few minutes left. So what I propose is we take a few questions at once and then we'll kind of, you know, divvy them up as people as – whoa, a lot of questions.

In the front here, please. Please come around this way.

Q: Lawrence Shulman from the NIH. What's the current status of knowledge on the efficacy of antivirals for the pandemic flu?

MR. : We take questions upfront?

MR. GROTTTO: Yeah, let's take a few, yeah.

Q: Bob (Wallace?), Department of Interior, U.S. Geological Survey. Given the fact that 70 to 75 percent of emerging infectious diseases have their origin in wildlife, and you addressed this on pages 27 and 28 in zoonotic diseases. Table 2 or Box 2 on page 2: "Where Do Emerging Infections Come From?" you don't mention wildlife, and I was wondering if there was reason for not including that as one of your bullets.

MR. GROTTTO: Let's – well, we should – we should – because we only have a few minutes left. Other questions? Right behind you.

Q: Philip Murray from the Barbara Jordan Health Policy Program. Under the assumption that most of these measures are directed towards urban centers and areas with large populations, has there been any attention paid to rural areas or reservations or are they viewed as a non-factor because they are usually isolated?

MR. GROTTTO: Other – other questions? Way in the back there – the lady.

Q: Linda Robin (sp), U.S. Institute of Peace. This is not just a policy issue; it's also a political issue and potentially a very big one, particularly in reference to the criminal neglect in defunding of our public health system over many years. What are your organizations doing to make this more widely known so that it becomes a campaign issue in the coming elections?

MR. GROTTTO: Others? The lady back in the middle row.

Q: Sarah (unintelligible) from the George Washington University School of Public Health and Health Services. You mentioned at the beginning the need to exercise caution in publishing research on potentially terrorist agents or agents that could be used for – as weapons. Who do you think bears that responsibility? Is it the publishers, the scientists themselves? Should we exercise some sort of censorship on scientific journals and is that ethical?

MR. GROTTTO: We'll take one more. One more – right there.

Q: Hi, Jessica Coakley (sp) from DFI International. My question is – there's a lot of mention HHS and CDC, but it seems little mention of DHS, which is the primary executive department for countering, preparing for, and responding to terrorist attacks. I'm just wondering how you envision that relationship.

MR. GROTTTO: Okay. We're going to stop there, guys. Sorry, but we'll – we'll – let's see how we divvy this up.

Jonathan, do you want to start with the self-regulation – who bears responsibility?

(Cross talk.)

MR. HEYMAN: We're dividing up the questions up here. I'll do antivirals and DHS.

MR. GROTTTO: Sounds good, excellent. (Laughter.) What – you want to go and start, David?

MR. HEYMAN: Sure, happy to. On the antiviral question, the answer is it depends. There is research – first of all, it depends on which antiviral you’re looking at – they don’t have the same efficacy – which pathogen you’re looking at, which virus you’re looking at. If you’re talking about H5N1, it’s unclear at this point. It also depends upon when in the infection you give your antiviral treatment, but across the board things – I don’t want to generalize and I don’t want to market, but you know, Tamiflu, which is the one that everyone’s looking at primarily, looks like it’s 80 percent effective in most of the scenarios they’ve put together. So it depends upon what happens if it’s a genetic transformation of H5N1, and whether it will still be effective no one knows.

On the DHS question – it’s an excellent question. There’s – everyone knows there’s a new chief medical officer in town; the name’s Jeff Runge. He should have the lead on this in my opinion. I’ve talked to – I’ve talked to him, I’ve talked to Dave Paulison at FEMA. The answer is, I think it depends upon what the healthcare need is, and they clearly have a role. I think they have more of a Katrina-like role where they help deliver non-pharmaceutical, non-pharmacological support than pharmacological. There’s a debate now where the MMRS is supposed to go; maybe it’ll go back to HHS. They have to work together, but DHS does need a role. They are not playing a role right now in the pandemic flu planning.

There’s an interagency effort. I don’t know – some of the people from the interagency process – they’re coming online almost this week actually in terms of that – their role, but the CMO’s office just started up. They actually staffed up two weeks ago. They’re not there yet and the CMO has been pulled over to run the S&T directorate, so it’s – they are distracted right now. Anything you can do to help to move that forward would be great.

MR. TUCKER: Okay, on the zoonotic diseases, I think that may have been an oversight, though indirectly one of the bullets refers to human populations moving into new ecological niches where they might come into contact with animals that are infected with exotic infections, so that is clearly a mechanism by which zoonotic diseases can jump the species barrier from animals to humans. But you’re right, I probably should have an additional bullet making that explicit.

MR. GROTTO: And in that section, we also discuss the zoonotic issue in some detail and offer some very specific recommendations for how to get individuals and entities from the veterinary sector and the public health sector and the other related sectors to coordinate better with each other, talk to each other more, do a better job of sharing information.

Let’s see, I can take a stab at the public health politics question. You know, at the Center we don’t do campaigns. We’re a think-tank, but I think we all have an interest in trying to get our leaders to pay attention to this issue. I think events like this – hopefully the report that Jonathan and I prepared, Laura and David’s excellent work on this issue – these are all examples of the kinds of work that is needed to kind of educate the public

and members of Congress and opinion-leaders on where we are in terms of preparedness and what we need to do to do a better job, so –

I think I have to end there actually. We're –

MR. TUCKER: Let me address the censorship issue.

MR. GROTTTO: Oh, yeah, yeah, please.

MR. TUCKER: In the report, we talk about the Natural Scientific Advisory Board for Biosecurity, which was set up last year under the National Institutes of Health to address issues of dual-use research. And they are actually just in the process now – they have a number of subcommittees that are addressing issues such as what is dual-use research, coming up with some very precise criteria, and then trying to develop a system of scientific oversight that would – for a scientist who proposed to do research that would fall into one of these experiments of concern, one of these categories; for example, rendering a pathogen more virulent or transferring toxin genes into microorganisms in a way that could be misused. One of their tasks is to set up a system of scientific oversight and it's obviously preferable to do this before a research project is funded.

And the current sort of working proposal is that the institutional biosafety committees, which currently have oversight over recombinant DNA research, would be expanded and their authority would be broadened to cover so-called dual-use research as well and to do security reviews. Whether this is feasible is a matter of some debate because the IBCs are already overworked, underpaid. They're basically volunteers and they don't have security expertise, so they would have to be augmented appropriately. So it's unclear whether that will be the final mechanism that is selected.

The only time that one would consider censorship of scientific research is when an unexpected result emerges in the course of a study that has not been anticipated and either the IBC or the journal editor goes through some kind of process, for which I assume the NSABB will establish guidelines, determines that the risks of publishing this research outweigh the benefits, and then it will have to be probably classified or somehow sequestered – not made publicly available. But the devil is in the details and it's very unclear how that would be done.

MR. GROTTTO: Actually, I'm told I have more time. So let's – let's keep going. You had a question on whether there are measures in place to kind of address, reach out to rural and tribal communities, so I'll take a stab at answering that and then we can take some more questions after that.

As we mentioned in our report, public health measures have to extend to all Americans, including people in rural and tribal communities. That said, there's a kind of raging debate in the United States on how to allocate bioterrorism grants in particular. For example, should a rural community receive more per capita than New York City? There is no easy answer because it has to do with the particular capabilities in place in a

particular community, so it's not necessarily fair to say that one jurisdiction deserves more funding. You have look at sort of what they have on the ground, what the particular health characteristics of the population are. For example, in some parts of the country there are more elderly people and you'd want to have a different response there than you would, say, in New York City.

So let's go ahead and take some more questions. You had a question?

Q: Good afternoon. Karen Wilcox, Prince George's County Health Department, Emergency Preparedness and Response. Can you tell me where in your report you speak to issues, concerns, and your recommendations regarding special needs populations?

MR. GROTTTO: In the report, we take a – as I said, we – these measures in order to be effective have to reach out to all Americans and there are certainly special needs populations that require tailored measures. We don't offer any specifics in the report. That was a level of detail that we felt would have required us to speculate a little more than we're comfortable. Every state, every community has its own sets of circumstances and to go through and identify these measures specifically, which is beyond the scope of our study – but Laura, you may have – do you have any ideas on – any specific thoughts on this?

MS. SEGAL: I think that's one of the hardest to deal with question in the public health response to emergencies, and I think it's something that has – you know, with a lot of the best friends in the field thinking about it, there's not really very clear answers than really at each level trying in advance to reach out and, as Katrina showed, that if you don't have those kinds of relationships established and communication channels ahead of time, you know, through community groups, through churches, through schools, through any sort of mechanism possible to try to learn that lesson and take that as a take-away if nothing else, to eliminate some of the fear that is often their distrust of the government, which is built on years of experience. But to try to bridge them some of those gaps and at least opening up communication is step one.

There's a lot of effort in the pandemic for some special needs groups of making sure information is available in multiple languages, that there is information available for folks that are deaf or blind or have other sort of considerations, but it's clearly the elephant in the room and often doesn't get talked about.

MR. HEYMAN: Okay, this elephant talked about it. (Laughter.) Chapter 5 of the report I wrote – “Disease Exposure Control” – has a chapter called “Meeting Essential Needs” and it talks about all the things you need to think through from a city and county official level and it goes into questions about vulnerable populations.

MR. GROTTTO: Okay. Other questions? Way in the back.

Q: Hi, Jonathan Kathrin (ph), Battelle Memorial Institute, emergency management. Anyone in this field has always had that emphasis, now especially post-

Katrina, that local communities need to be prepared for these occurrences – these events. And I agree with the international partnership: we need sort of a broad spectrum, comprehensive plan for dealing with these events. However, at what point or do you – does the report lay out priorities for what international agreements or planning needs to take precedence over preparing local populations for dealing with these events? At what point do we say, you're on your own and start looking out for our own communities?

MR. GROTTTO: Well, in many areas there's not quite a clear tradeoff, as you implied. For example, you know, taking stronger measures to prevent terrorist access and acquisition of select agents by improving lab security standards. You know, that's something that we can and should be doing both in the United States and domestically. In terms of sort of broader public health measures, there's no simple, straightforward answer. I will say that the United States does very well by, to the extent it can, preventing infectious diseases from reaching our shores – before they reach here – either by slowing them down in the case of perhaps of pandemic flu, or stopping them altogether in the case of some more exotic diseases.

I think in general the international dimension to this is much less expensive than the domestic dimension and so there's an argument to be made that we can get a lot of bang for our buck by strengthening global public health infrastructure, particularly WHO capabilities. Next June, the new international health regulations come out that WHO has put together and this is a really important development from a public health standpoint and a very innovative one as well. These new regulations require countries that experience any public health incident that has potential to cross borders into a neighboring country or anywhere in the world – it could be a biological weapons attack, it could be a nuclear power plant accident, anything – to report to WHO within 24 hours that this has happened.

The reality is many states lack this capability. China, for example, just – there's little confidence out there that China has the capability to do this. So one area where the United States could really make a (unintelligible) expand it to have a very large impact is by helping countries implement the international health regulations. That's, I think, a pretty cost effective way to sort of leverage the advantages that come from strengthening international public health.

Q: Just a follow-up on your thing about money. It's real clear we have threats – serious threats, inevitable threats. It's also clear that we don't have enough money right now to fund these programs in the existing budget. What is the possibility of the Center for American Progress or one of the other institutions actually creating a new source of funding, something like the Tobin tax or an airline tax that Europe has now come up with, to fund these kind of prevention measures?

MR. GROTTTO: Hmm. I mean, it's – I mean, I will say in general it's not – it's hard to think of something you would tax. For example, if you were to tax healthcare – I mean, healthcare is already expensive. You would essentially impose that cost on populations that are already beleaguered economically, so there's a difficult sort of

technical and ethical question about what particular sectors or activities would you tax and then how do you make sure that tax is allocated in a responsible, ethical way?

Increasingly the estate taxes is one idea (laughter) but I don't have any particular – you know, it's certainly worth exploring, but I see some pretty significant obstacles just for something like that.

Right there?

Q: Hi, Xanthia James (sp) and I am with the NIEHS National Clearinghouse for Worker Safety and Training, and I would like to know if your report addressed the need for recommending universal guidelines for preparing healthcare workers and other workers that would be dealing with a situation with biological agents such as avian flu – universal guidelines for preparing these workers, because right now there doesn't exist such guidelines.

MR. GROTTO: One of the things we saw in Katrina was that many individuals with very important kind of public policy or rather public responsibilities – police officers, some healthcare workers – it was very hard to get them to, in some cases, show up for their jobs because they were justifiably scared. They wanted to make sure their families were okay. So coming up with a set of guidelines to address this problem is very important. We addressed this in our report.

The difficulty, of course, is there's a major moral, ethical question here. You know, do you – particularly in the case of, say, a pandemic flu where there's really no – there's no cure, so people are going to get sick, do you – you know, is it ethical to require health workers to show up for work when the chances are good that they could get sick and there's no – you know, if there's a shortage of masks, for example, which there've been a lot of news reports citing this problem? I mean, there is certainly a need for them.

My view is that it has to be done locally; that perhaps national guidelines are necessary (to kind of?) set a baseline, but at the end of the day communities have to take responsibility because the needs are different, the populations are different. And I would add that – well, I'll leave it at that. It's a very good question. It's certainly not an easy one.

David?

MR. HEYMAN: Cities and states are asking right now. It's unusual that – for the pandemic flu – it's really an unusual dynamic, but cities and states are asking the federal government for guidelines right now and the federal government's going to come up with them, particularly for the non-pharmaceutical interventions. That has to be national because you can't rely on random combinations of communities that are interspersed with rapid transportation and population mingling to have a non-pharmaceutical intervention, which involves things like social distancing and it won't work unless you have everyone

sort of working on the same playbook. How they implement it can be different and – but the actual guidelines need to be national and perhaps even larger than that.

MS. SEGAL: A lot of the medical worker unions are also working on their – on different guidelines and recommendations and there are some studies going on; like the IOM has issued and looked at the idea of reuse of masks and when are they reusable or not. They didn't come up with a firm conclusion, but – but they're I think –

MR. HEYMAN: I was going to take issue with the IOM study because the IOM study based upon NIOSH standards, which are basically ensuring, guaranteeing that you get 95 percent effectiveness or whatever it is. We're talking about everybody's going to get sick or be exposed to sickness or something like that. We don't need that kind of certainty; we need basically something to help reduce the spread of the disease. So IOM was basing their analysis on some very strict interpretations of law and things like that and we need to take a step back. There is a lot of interesting studies right now in terms of the use of masks and I think you're going to see sometime this fall some recommendations coming out. I personally support them, so –

MR. GROTTTO: Go ahead.

Q: Hi, Tom McGowan (sp), Microtech (ph) Systems. In light of the Posse Comitatus Act, do you think that logistical support is all that we should plan for from the U.S. military in the public health crisis?

MR. GROTTTO: The threshold question is, what sort of capabilities do we have currently? We have the large deployments in Iraq right now, so there's sort of an upward limit on the number of people we have available. That said, I get nervous when I hear people talking about revising – I mean, Posse Comitatus prevents the military from exercising a law enforcement function. Law enforcement – I have a hard time envisioning a situation where you'd need to have the military engaged in law enforcement.

Now, logistics? I see – you know, as we say in our report that that is an area where – the military excels at logistics. The U.S. military is the best in the world at this and so for me I don't get – we need to stick with Posse Comitatus.

I will say, though, that this issue has not really been debated publicly in the United States and I would like to see Congress take this issue up and sort of have a real debate on this issue because last December – I guess it was – President Bush said that – you know, he mentioned a quarantine in a speech on avian flu and a lot of ears went up on that. What does that mean and how are you going to enforce it? And so I think, you know, there needs to be a public debate, but this stage of the game, I don't see a role for the National Guard or Reserves beyond logistics.

MR. TUCKER: Now, let's be clear between National Guard, Reserves, and the active military. The National Guard – states are going to go out, they're going to use their National Guards.

MR. GROTTO: Right.

MR. TUCKER: There's no problem using them for law enforcement. There's no problem. And I think since we're all looking at this as a community base, you're going to have the National Guards playing the role, whether it's delivering blankets and food or whatever, but they are going to be playing a role. They're also going to be protecting themselves as well. But on the active military, I think the president got way out ahead of his advisors on this and the Posse Comitatus was a red herring at the time. That's the – sort of the last thing – looking at active military (in?) quarantines that we need to look at. There's a whole bunch of other things we can do in advance to that.

Q: (Off mike.)

MR. GROTTO: Right there.

Q: Thanks. Not to drag this back into the snake-pit of politics, but you brought up Congress and I've been working there for the last eight years and I got to tell you, refurbishing any kind of public sector infrastructure is not a priority. I'm wondering, do you see any kind of – not usual suspects kinds of alliances forming out there that could create kind of the political constituency that would bring a new sort of pressure for political will to change the situation? I mean, we're in a budget train wreck on this in general anyway, and this seems to be a national security issue that most Americans can identify with.

And just to pile onto that, I was talking to a medical professional the other day who said that some of these mandates coming from Homeland Security – the money is not new; it's being diverted from basic healthcare research about cold and flu prevention and going into this stockpiles that when you look at the statistics don't have nearly as much bang for the buck.

MS. SEGAL: Well, there's currently a legislative vehicle – the reauthorization of the Public Health and Bioterrorism Preparedness Act of 2002, which has expired, and there are discussions right now that are informing how to make changes. It's not talking about exponentially increasing the amount of money coming into this, but it's looking at how do you start making these improvements within the preparedness kind of elements of creating guidelines? Is it changing leadership?

So there's at least discussions going on and the legislation is getting a fair amount of attention from a lot of key leaders up on the hill on both sides of the aisle, mostly, though, on the Senate side and it hasn't really been addressed on the House yet, but as – from the kind of on-the-ground public health world as opposed to the Bioshield and if

that morphs to BARDA (ph) or whatever it ends up becoming, which is another kind of investment in R&D kind of act that is looking at modeling DARPA for public health.

So there is interest. I think bioterrorism really raises a lot of ears. People get questions when they got – members get questions when they go home, so I don't think it's a nonpolitical issue at all in terms of off people's radar screens. It's just how much and how far.

MR. HEYMAN: I don't think anything is going to happen before 2008. You're going to have two events that really drive the recapitalization of public health infrastructure. Another attack, an anthrax attack, a pandemic flu – some sort of outbreak that's going to say, oh – you know, a Katrina-like, not able to respond, or Mitt Romney's going to get the nomination of the Republicans and the state of Massachusetts' healthcare system is going to be put up there as a contender against all others and you're going to have people talking about healthcare and public health preparedness.

MR. GROTTTO: We have a few minutes left. We want to give our panelists a chance here to make any closing remarks if they'd like.

MR. HEYMAN: Thank you.

MR. GROTTTO: Thank you.

Laura?

MS. SEGAL: I just, again – what I started with is it's really interesting and reassuring from the public health perspective to come talk about the topic with national security and homeland security folks and find more meeting of the minds and hopefully that could help push the ball forward for both sides.

MR. TUCKER: It's just been great listening to the questions from the audience and I've learned a lot from you, so I really appreciate that.

MR. GROTTTO: Yeah. Well, thank you very much.

Before we break up, I want to thank Antoine and our events folks for putting this together. It's a great event. I'd acknowledge all of the reviewers that we sent this paper to. A few are in the room. We really appreciated your comments and criticisms on the report. It's a better report for it. I thank you all for being here and take care.

(Applause.)

(END)