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My brief remarks today are focused on trying to outline some of the key policy issues that surround the management of any future episode of pandemic influenza. As I am sure all of you are aware the nation has only had to face a pandemic influenza disease outbreak, one that has global magnitude, three times in the past century. Although concerns in recent years about SARS, and even possible bioterrorist threats like smallpox, mean that there is a fairly significant underpinning for considering our plans, policies, and procedures for dealing with a new outbreak of pandemic influenza.

So why is it important right now, in the midst of heightened concerns about terrorist threats, to consider this somewhat rare event? One of the most compelling reason was given by Secretary Leavitt at the WHO conference last month when he said that – Quote: **‘I believe that the world is closer to a potential influenza pandemic now than at any time in decades’**. Secretary Leavitt’s remarks are echoed by any number of infectious disease experts and are now routinely found in all forms of the media – the public is becoming increasingly aware of a ‘problem’ and will be looking to you ladies and gentlemen to manage that problem if it emerges in the homeland. While it will have a public health component a threat of this magnitude goes beyond health and medicine and is a threat to both national and homeland security.

So what is the nature of this threat?

The focus for the current concerns is the recurrent incidents of transmission of avian flu (a type A influenza designated H5N1) from birds to humans, and increasingly the transmission from birds to other animal species that can act as viral reservoirs for multiplication of the virus and possible onward transmission to man. Adaptation by mutation and natural selection of this virus that leads to effective transmission from human-to-human could provide the trigger for rapid movement of the virus around the globe and initiate the next pandemic influenza episode.

The threat from a pandemic influenza sounds innocuous enough, after all we experience influenza every year and it has limited periodic impact. But the seasonal influenza is as different to a pandemic influenza as a tidal surge is to a tsunami – And make no mistake,

this impending pandemic influenza could impact the nation with the lethality of the most recent tsunami in South East Asia.

The most recent Institute of Medicine report in 2004 indicated that in the United States there could be:

- 100 million people infected requiring,
- 750 thousand hospitalizations and leading to,
- Over 200 thousand deaths.
- They also suggested an economic impact of over 150 billion dollars
- And this would occur in a period of just 3 to 4 months.

But even these figures are surrounded by considerable uncertainty and may represent either an under-estimate or over-estimate of the possible magnitude of a pandemic episode.

In fact, the characteristic clinical features of the next influenza pandemic cannot be predicted. It is reasonable to assume that the typical features of influenza, such as fever, respiratory symptoms, myalgia, and malaise, will be present in the majority of affected individuals. However, almost by definition, an influenza pandemic results in an increased rate of severe disease and increased mortality. It is also important to note that the three pandemics of the past century demonstrated significant variability in terms of morbidity. The 1918-19 pandemic was particularly notable in affecting young healthy adults with sudden and dramatic illness. A significant proportion developed fulminant disease leading to death within the first few days. In the United States it killed over half a million people. Subsequent pandemics that occurred in 1957 and 1968 had much less impact but at this stage we cannot know the nature of the threat. Moreover, if it targets young adults it will prove devastating to our first responders, our medical teams and, of particular note in these difficult times, our armed forces.

Even as the next pandemic begins and spreads, the characteristic features may change, particularly if successive waves occur over several months. Given this potential for a dynamic clinical picture, it will be important to have flexible and adaptable plans, policies, procedures, and communication packages that can be changed to accommodate shifts in the outbreak characteristics.

So what is to be done?

Currently significant efforts are being made to improve surveillance and to take direct action in SE Asia. This includes significant culling of domestic bird populations where and when the disease is detected – hundreds of millions of birds have already been slaughtered but the virus shows no signs of stopping its spread or slowing its pattern of adaptation to a strain capable of infecting humans. Scientists around the world are working diligently to develop vaccines and to conduct studies to assess the use of antiviral compounds that are targeted at the influenza virus. These are very important efforts and may yet yield important products but in this talk I want to go beyond these efforts and talk about what needs to be done by policy makers and incident managers –

by people like yourselves. I believe that you and your staff have a critical role to play in preparing for, and fighting the pandemic influenza. I also believe that your efforts will be of equal importance to the work of the scientists in combating a pandemic influenza and that the work must begin now. In fact, some of you have already begun to develop the measures that I want to outline and I would encourage you to share that work with your colleagues from other states – the virus, once it enters the homeland, will not remain in any one state or be confined to a specific region for very long. It is not called a pandemic or global disease threat for nothing.

My first recommendation is that you convene in your state a ‘Pandemic Influenza Task Force’ with a suitable diverse membership that can assess the threat and vulnerability for your state (or region) to a future outbreak. I would suggest that the task force be used to prioritize the actions needed to prepare for a pandemic episode and to act as a focus for:

- Identifying opportunities to leverage existing plans, policies, procedures,
- Develop workshops, exercises, and simulations to help guide future actions,
- Develop ‘just in time’ training packages for critical functions and personnel that focus on the important features of the pandemic influenza threat,
- Develop risk communication and public outreach capabilities for the diverse populations that will be impacted by the disease.

Examples of the products from a task force would include specific infection control plans (including examination of options for quarantine and movement and activity restrictions), and risk communication plans for informing and guiding public actions before, during, and after any future episode.

Clearly, states with international points of entry into the country need to consider their vulnerability and possible initial focus as sites where the disease may enter with infected persons from overseas.

Likewise states with significant tourist attractions where the public gathers in large numbers need to consider how they may act during periods when the disease is being readily transmitted. Closure of some facilities may be a requirement.

Whatever the specifics are for your state or region it will be important to adapt existing plans or generate new plans to deal with a highly infectious, potentially deadly disease like pandemic influenza.

Secondly, it is important that states have their public health experts, incident management teams, and PIO’s consider what public policies may need to be used to control the disease. I would also encourage anyone engaging in the discussion of changes in public policy to include representatives of the media, community leaders, and even the general public in at least some of the discussions. The policies that will need to be considered will be wide-ranging and impact all communities in various ways – early discussion and involvement can obviate later claims of discrimination, bias, etc that are inherent when there are limited resources and hard choices need to be enforced.

Whatever is decided there will almost certainly include consideration of individual and community containment practices.

Containment measures applied to individuals may have limited impact in preventing the transmission of pandemic influenza. Nevertheless, these measures may contain or slow the spread of a pandemic, allowing time for targeted use of medical interventions when the scope of the outbreak is focal and limited. At later stages of a pandemic, when disease transmission in the community is significant and sustained, community-based containment measures may be effective disease control tools. It is therefore likely that federal interventions may include such action – in fact the path to federal involvement in public health issues such as quarantine were eased with Executive Order 13295 on April 1 2005 – this expanded the list of agents that could elicit federal interventions to include pandemic influenza.

Experience with quarantine during the 2003 SARS outbreak suggests that local officials will face enormous logistic, economic, ethical, and psychological challenges in implementing community-level containment measures during an influenza pandemic. For example, closure of schools may have to be considered, along with restrictions on public gatherings, revisions to policies on mass transit systems, and many more. State and local health agencies can anticipate and prepare for these challenges by working with community partners to review the steps involved in establishing and maintaining capabilities and meeting community and individual needs.

My third recommendation relates to your workforce and that of the state. It will be important to examine workforce and operational issues. During the pandemic period it will be essential to have plans to support a workforce that includes first responders, public health employees, hospital workers, school teachers, utility workers, and many more who provide critical infrastructure capabilities and who will be impacted by the disease. These folks will variously experience; grief, exhaustion, anger, fear, family and self-care issues, economic pressures, and even ethical dilemmas. As seen with SARS they and their families may even suffer stigmatization and discrimination. Past experience with relief efforts—related to earthquakes, hurricanes, epidemics, and other disasters—suggests that workforce support activities can help individuals remain resilient and effective during an influenza pandemic. But these must be planned for not developed *ad hoc* during the crisis.

On a related note: There will also be considerable loss of personnel, including key personnel, to illness and possibly death. A program designed to account for a reduced workforce or the loss of key personnel is an important consideration – such efforts may be enhanced by using the ‘just in time’ training packages suggested earlier.

My fourth and final recommendation for you too consider relates to what I going to call ‘Pandemic Panic’. It is clear that a pandemic influenza can rightly be called a challenge ‘like nothing we have seen this century’ – certainly it will attract more than its share of doom-mongers, sensationalists, and the usual bevy of ‘talking heads’ and that we will see their opinions in all forms of the media and on the Internet. The first mention of a possible outbreak of a ‘killer influenza’ in the United States will engender concern and

even fear in a population already sensitized to their own vulnerability and that of their families.

We need to begin examining policies that will help to mitigate the onset and escalation of 'pandemic panic.' In some of the key work that I have been a small part of, the role of psychosocial and behavioral measures as a component of the response to a pandemic episode have been richly explored. They provide an area where state and local representatives can be of critical importance. The communities affected by the disease will look to elected officials, local leaders, and others to provide guidance and to tell them how to act in order to help themselves and their families. If we act effectively this can be a great opportunity to help shape the response to 'accentuate the positive and minimize the negative' but it will take planning, cooperation and leadership. It will not happen by osmosis and if we do not address this aspect of a pandemic influenza plan we risk enormous social and community disruption. As with all of the previous recommendations – The earlier we begin the more time we have and the greater our chance of success.

In making these recommendations I am drawing on the considerable work of my colleagues with whom I have spent many hours in the past year contemplating the threat from pandemic influenza and our options for a response. It would be invidious to note any one person but they represent organizations that include:

- CDC
- National Center for Post Traumatic Stress Disorder
- Center for Technology and National Security Policy at the National Defense University
- National Center for Critical Incident Analysis and my own,
- National Security Health Policy Center.

The recommendations that I have briefly noted and many more that are of relevance to pandemic influenza can be found in their publications and at their web sites. I would be delighted to help you in any way I can to reach out to these folks – it is their work that deserves attention prior to any future incident. My role today is as a spokesperson and prompt for their great work.

It is my firm belief that the pandemic influenza threat is a 'clear and present danger' and must be acted on with all the effort that such a designation generates.

It is not yet too late but it will be soon -- As Secretary Leavitt said in his address to the World Health Organization last month

'There is a time in the life of every problem when it is big enough to see and small enough to solve. For influenza preparedness, the time is now'.

He is right -- and today is a good day to start preparing. Thank you for your attention I am happy to take any questions.