

Preparing for Pandemic Events U.S. Planning for Avian Flu Case Study of the Financial Sector

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The Threat

- Pandemic flu is virulent human flu that causes a global outbreak, or pandemic, of serious illness. Because there is little natural immunity, the disease can spread easily from person to person. Currently, there is no efficient human to human transmission.
- Avian or bird flu is caused by influenza viruses that occur naturally among wild birds. The H5N1 virus is highly pathogenic, deadly to domestic fowl, and can be transmitted from birds to humans. There is no immunity and there is no vaccine available.
- In a normal flu season, annual deaths range from an estimated 200,000 to perhaps 1.5 million worldwide. There are no exact figures.
- The outbreak of Spanish Flu of 1918-19 was the worst pandemic in modern times. An estimated 17 million died in India, about 5% of India's population at the time. In the Indian Army, almost 22% of troops who caught the disease died of it. It is estimated that somewhere between 2 and 5 percent of the global population at the time died.
 - It came in three waves, and fatality rates varied significantly
 - Actions, or in many cases inaction, by public health authorities directly corresponded to the mortality rates

Uncertainty

- Current estimates for a Spanish Flu-like virus suggest human deaths worldwide could range from 1 in 40, 71 million people, to perhaps 180-260 million. The virus could infect up to 35 percent of the world's population, according to the World Health Organization (WHO), and spread throughout the world in 180 days.
 - During an outbreak of a milder influenza in 1957, an estimated 2 million deaths above normal influenza mortality expectations occurred worldwide, roughly 60,000 in the United States.
 - An even milder influenza in 1968 resulted in an estimated 1 million deaths worldwide over what might have been expected normally from a flu, about 34,000 in the U.S.
- Communication, preparation, and better medical services also helped to suppress mortality in the latter cases of milder viruses, but this wide range of outcomes also illustrates the uncertainty we face and the many variables involved.

The Reality

- It is difficult to know if or when an H5N1 virus might become efficiently transmissible among humans and impossible to say when another pandemic may arise.
- From 2003 to the February 15, 2007 there were 273 laboratory-reported cases resulting in 166 deaths – a 61 percent mortality rate. Eight of 10 deaths in 2007 were fatal.
- Indonesia has been affected the worst with 81 reported cases since 2003 and 63 deaths. In Viet Nam 93 cases resulted in 42 fatalities. The H5N1 virus in humans also has been reported in Azerbaijan, Cambodia, China, Djibouti, Egypt, Iraq, Nigeria, Thailand, and Turkey.
- Advances in medical technology coupled with public awareness could mitigate to some degree the severity of an outbreak

Estimating the Economic Costs

- Economic costs beyond the terrifying human costs will be widespread but are equally unpredictable. Various simulations show differing results.
- A mild flu might result in a drop in world GDP of 0.7 percent; whereas a severe, 1918 Spanish Flu-type virus might result in a 4.8 percent loss in GDP in the first year.
- The impact may span months or even years because the flu may come in waves and is not confined to time or place. Initial survivors may become ill or die during a later surge.
- There will be complex secondary costs as people adapt their behavior by moving about and consuming less; trade between countries declines.
- Economic costs may vary considerably depending on the degree of international specialization and cost structures, population density, the quality of healthcare, and poverty.
 - One simulation of the spread of such a severe flu showed more than a 5 percent decrease in GDP in the first year for developing countries and roughly a 10 percent drop in Europe and Central Asia.
- There are too many uncertainties for accurate predictions.

The Response?

Immunize

- With low margins generally from the sale of flu vaccine, financial incentives may need to be created to stimulate new production methods.
- Egg-based vaccine production can be vulnerable to the loss of birds from the flu and is a slow production method. People with egg or egg product hypersensitivity cannot be vaccinated.
- New cell-based vaccine production promises faster, more reliable supplies and work is underway to develop this method and implement it.
- Building stockpiles remains the immediate short-term aim.
- However, the United States alone would need 600 million doses of vaccine to meet a flu pandemic, two doses for every American.
 - During the 2004-5 flu season we fell short of producing 100 million doses of regular flu vaccine.
- It is unrealistic to rely on the availability of enough vaccine anywhere, even if we could calculate what enough is.
- In the meantime, we still need to rely on the current method -- egg-based vaccine production -- and to improve its yield and delivery methods, and to stretch supplies.

Public Sector Strategies for Reducing the Impact on the Financial Services Sector

- Focus on People
- Build new and leverage existing relationships –
 - Within critical infrastructure protection framework to develop and disseminate useful information covering all aspects of preparation – personal, family, business, economic
 - Finance and Banking Information Infrastructure Committee (FBIIIC, regulators)
 - Financial Services Sector Coordinating Council (FSSCC, private sector associations)
 - With State and local governmental agencies, first responders, and between them and the private sector to spread good information to appropriate recipients
 - With other governmental agencies to collaborate in development of sound information and recommendations; to share timely information; and to reach out to private sector entities and citizens to educate them

Also appropriate for the private sector

Private Sector Strategies for Reducing the Impact on the Financial Services Industry

- Focus on People – recognize that absenteeism is likely to be high
- Think differently about how to prepare for a pandemic crisis that is different from other natural or man-made disasters we have confronted recently because the threat is not confined to a limited area or time, is not a single or closely related event(s), wreaks systemic disruption quickly
- Identify, prioritize and coordinate protection of critical infrastructure and key resources
- Risk-based assessments of critical infrastructure and resources and of vulnerabilities help to set priorities for action
- Establish single points of contacts within critical agencies, financial institutions, and interdependencies like communication and power utilities
- Develop protocols for reaching out to other financial institutions, and consider sharing resources as a contingency
- Test accessibility, reliability of communication systems within the government and with key financial sector players

Also appropriate for the public sector

Contingency Planning and Continuity

- Moving personnel to a back-up site, or transferring workload to a remote site may not work; people will be ill there too.
- Cross train employees to fill in for others, arrange for parking and child care to avoid employee use of public transport, identify those who can work from home.
- Identify critical workers, essential workers, others and develop work scenarios for their differing situations.
- Develop infrastructure to support necessary work-from-home programs now before the pandemic. Telecommunications, power, IT resources may not be adequate.
- Consider workplace preparation by stockpiling mask and anti-viral agents; providing additional hand washing stations and isolation areas for the ill; training all employees; and spreading information about personal and family hygiene to employee, for example.
- Know your supply chain, partners, and contractors, have mutual responsibilities delineated ahead of time.

Priorities and Contingencies for the Regulators

- Flexible authority to permit closures of financial institutions and markets.
- Flexible authority to permit regulatory forbearance of trading rules, reporting requirements, transaction timetables, etc.
- Must maintain integrity, transparency and efficiency of the markets.
- Availability of cash through ATMs to avoid panic in case of unusual demand and confidence issues.
- Important to ensure that retail payments sector continues to function.
- Open emergency communication lines to permit quick transmission of information and requests, and quick responses.

Positive Steps

- Homeland Security Council's Implementation Plan for the National Strategy for Pandemic Influenza cites over 300 critical actions to address the threat.
- At the end of 2005, U.S. Congress appropriated \$3.8 billion for pandemic planning and \$2.3 billion for pandemic flu.
- U.S. Treasury Department convenes joint medical briefings by government medical experts for financial sector regulators and for representatives of the financial sector.
- U.S. Treasury Department sponsors table top exercises with regional private sector groups of financial entities and first responders.
- U.S. Treasury Department participates and encourages scenario testing, locally as well as federally.
- U.S. Treasury Bureau of the Mint and Bureau of Engraving and Printing works with Federal Reserve to ensure banknote and coin inventories are adequate.
- U.S. Treasury Department maintains conversations with foreign counterparts to share information and best practices.

Final Thoughts

- Extremely difficult to predict human and economic costs
- Focus on people -- preference is to protect from infection
- Prepare by building new and leveraging existing partnerships and channels of communication to deal with a crisis that is not limited to an area or time
- Identify critical infrastructure and resources, assess vulnerabilities and risks, set priorities, encourage and promote private sector preparations
- Provide private sector and citizens with sound information and recommendations
- Awareness, communication, and quick action are important after the flue appears as well
 - Viet Nam was the first to report cases in 2003 and saw a steady rise through 2005 to a total of 93. With culling of birds there were no cases reported in 2006 and none through February 7 this year.

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