The Lipman Report®

Confidential and private intelligence from exclusive sources.

Exclusively for Management

May 15, 2007

Bird flu is a continuing threat to the global economy

Preparedness is still key to minimizing effects on business continuity

Almost two years ago, an outbreak of avian flu in various parts of the world caused a spread of the disease among humans, setting off a clarion call to prepare for the next pandemic. This outbreak was initially identified in 1997. Since that time, public health scientists have monitored the outbreak and maintain the belief that the recent outbreaks of the H5N1 influenza in birds in Asia, Europe and Africa, with occasional human infections, were precursors to the next pandemic. However, some of the leading health scientists specifically concerned about the possibility feel that, to date, we have failed to learn enough about this disease to prevent its spread, and to cure those afflicted when infected. Additionally there is not sufficient awareness and resources to prepare the first responders, the business community and individuals for an influenza epidemic. History has shown that like hurricanes, tsunamis and earthquakes, influenza pandemics are also recurring natural disasters. A well-planned security and business continuity program should reflect upon "what would happen if" scenarios. It is important to stop and consider an "outside risk" that might really impact the security and business continuity of an enterprise. The odds are that an avian flu pandemic, with all its disastrous consequences, will not happen anytime soon, but it could. Investing in security and creating a preparedness plan is a long-term process. A potential flu pandemic could pose a significant "outside risk" not only to the population and to individual businesses, but also the global economy. There is great uncertainty about the likelihood of a pandemic occurring, but it is a serious risk. A pandemic ranks at the top of a list of threats to the global economy, along with terrorism.

Simply put, experts, including the World Health Organization (WHO), fear an outbreak of a lethal pandemic of flu. This would be the first truly dangerous pandemic since 1918, well before East Asia became integrated into the global economy. Pandemics materialized in 1957 and 1968 but were far less devastating than the 1918 pandemic. A new globalism that has become one of the greatest sources of strength for the world's financial and commodity markets would become the greatest vulnerability. This issue of *The Lipman Report* explains current information and prudent recommendations to minimize damage and secure business continuity. This report should also encourage people in the business community to be proactive in trying to convince governments, health care systems and the community at large to accept the inevitability of pandemics, to plan properly for the response and to invest the resources necessary to bring beneficial programs to reality. The experience with the SARS epidemic in Asia should have been a lesson about the existing vulnerabilities to infectious diseases, but regrettably the world relapsed quickly into complacency, and is almost as collectively unprepared now as it was when a new kind of flu ravaged the world in 1918.

From birds to humans

Recent surveillance of the H5N1 virus has shown another increase in the incidence of infection. According to the WHO, since 2003 H5N1 has been confirmed to have infected 291 people, killing 172, mostly in Asia. Cases of human infection are increasing and spreading. Incidents of human infection have occurred in Cambodia, China, Djibouti, Egypt, Indonesia, Iraq, Nigeria, Thailand, Turkey and Vietnam. Seventy-nine fatalities were confirmed in 2006, compared to 42 in 2005, 32 in 2004 and four in 2003. As the number of cases has risen, the mortality rate has also risen from roughly 60 percent in 2003 to nearly 70 percent today. Experts believe these numbers may not reflect the true picture because some nations lack adequate resources to detect and monitor the disease. Some countries, for political or economic reasons (as in the SARS epidemic), may elect to publicly downgrade the seriousness of the threat. Again the infestation among wild birds and poultry is spreading **westward** to Africa, Central Asia and Europe. H5N1 is believed to spread geographically through the movement of domestic poultry and wild migratory birds. Wild birds are thought to be the principal transporters of H5N1 from infected areas to new geographic locations. As of 2007, over 500 million birds either had been killed by H5N1 or culled to prevent its spread. Although wild migratory birds introduce the disease, the virus is dis-

(continued on next page)

The Lipman Report®

Bird flu is a continuing threat to the global economy

Preparedness is still key to minimizing effects on business continuity

seminated more widely by poultry, especially domestic ducks and geese. According to the World Health Organization mallard ducks are the champion vectors of its spread.

There have been no known incidents of the disease spreading from casual human to human contact, only bird to human. However, a number of suspicious clusters in Asia, where the virus has spread among family members who live together, have worried public health officials. Although the virus has not yet shown an ability to transmit efficiently between humans, as is seen with the milder annual influenza virus, there is concern that it will acquire this capability through genetic mutation (adaptation) or exchange of genetic material with a human influenza virus (reassortment). Each year the United States faces a burden of influenza, despite annual vaccinations, which results in approximately 36,000 deaths and more than 200,000 hospitalizations. In addition to this human toll, influenza is responsible for a total cost of over $10 billion annually in the U.S. alone. Though the avian flu H5N1 strain has caused only 172 deaths since 2003, the potential consequences of a modern pandemic, or worldwide outbreak of an influenza virus, could dwarf the usual yearly impact of influenza. Such a pandemic would overwhelm our health and medical capabilities, potentially resulting in hundreds of thousands of deaths, millions of hospitalizations, and hundreds of billions of dollars in direct and indirect costs.

Pandemics, which have historically originated in East Asia, spread across the world in a process that, in the past, took years. Starting in 1349, the Black Death is thought to have killed one-third of Europe's population before retreating, only to recur, with diminishing impact, several times over the course of a few years. Seven centuries later, modernized international cargo and passenger traffic will accelerate the spread of a virus. For an influenza virus to cause a pandemic, it must meet three major criteria: (1) possess a new protein to which there is little pre-existing immunity in the human population; (2) be able to cause illness in humans; and (3) have the ability of sustained transmission from person to person. So far the H5N1 virus has shown the first two of these three criteria, but it has not yet exhibited the third.

Scientists believe that three times in the past century influenza viruses have undergone major genetic changes, resulting in pandemics: 1918, 1967 and possibly now. The 1918 pandemic was a "bird flu," with an estimated 100 million human deaths, taking more lives than the Black Death. American deaths from the 1918 pandemic were an estimated 675,000, ten times as many as those killed in action in World War I. Of the American soldiers who died in Europe, roughly half died from the flu. It was known as the "Spanish Flu" because of how hard it hit Spain (8 million deaths). At that time, the population of the world was just one-third of what it is today. The victims expired by a form of drowning as their lungs filled with fluid in an immune system response to the disease. In 1968 when the last influenza occurred, the virus emerged in a China that had a human population of 790 million and a poultry population of 12.3 million. Today these populations number 1.3 billion and 13 billion, respectively. Similar changes have occurred in the human and animal populations of other Asian countries, creating an incredible mixing vessel for viruses. Given this reality, as well as the exponential growth in foreign travel during the past 50 years, some scientists accept that a pandemic is coming, whether it is caused by H5N1 or another strain. Samples compared over time indicate that the virus has become progressively more pathogenic for poultry. The current strain of the virus can survive in the environment days longer than could earlier strains and its range of mammalian hosts appears to be expanding. It has been found in more and more migratory birds, which supports the conclusion that it is becoming more virulent. Should the virus improve in transmissibility as a wholly avian flu, as occurred in the 1918 strain,

then the present high rate of lethality could be maintained during a pandemic. Certainly the conditions now favor a pandemic.

Globalization

The expansion of free trade in the past two decades both facilitated and drove the creation of global supply chains. The very strength of this global phenomenon integrating China and East Asia, and the widespread exchange of goods, services and capital makes the economy and financial markets more vulnerable should a pandemic kill a large number of people across East Asia and subsequently force quarantines and stock market closures. The interconnectedness of the world economy today could make the next influenza pandemic more devastating than the ones before it. The current situation has been described as a "global just-in-time economy." In most sectors, virtually no capacity for a surge in production exists. The slightest disruption in the availability of workers, electricity, water, petroleum-based products, and other products or parts could bring many aspects of contemporary life to a halt. The bottom line is that a pandemic would have a hugely disruptive effect, depending on its length and severity comparable, at least for a short time to the Great Depression of the 1930s. Consideration of such disturbances is absent from emergency planning and business continuity planning because during familiar disasters, such as earthquakes and hurricanes, relief supplies can be diverted from non-affected areas. Also such disasters are limited in time allowing rescue and recovery to commence soon after the event. A pandemic, on the other hand, would affect the whole world for months and relief efforts would put a strain on vital resources everywhere. Our medical facilities are already over-extended with a shortage of medical personnel and emergency facilities. Consequently, in this global just-in-time economy, the stockpiling of critical emergency products is difficult.

In addition to the destruction from the natural spread of avian flu, there is also a possibility of worldwide damage due to the use of biological weapons of mass destruction. Experts believe that avian flu is too infectious and therefore too dangerous and unpredictable to develop for bioterrorism purposes. Although there is currently no evidence that the avian flu could be utilized as a biological weapon, other viruses and infectious diseases such as smallpox have been used as biological weapons sporadically for centuries. The proliferation of biological weapons is a serious problem that is increasing the probability of a serious bioterrorism incident. Of the seven countries listed by the United States Department of State as sponsors of international terrorism, at least five are suspected of having biological warfare programs and having viruses that could be used as biological weapons.

Roles and Responsibilities

Federal government. Preparing for a pandemic requires coordinated action by all segments of government and society. The National Strategy for Pandemic Influenza, prepared in November 2005, guides the federal government response to an influenza pandemic with the intent of (1) stopping, slowing or otherwise limiting the spread of a pandemic to the United States; (2) limiting the domestic spread of a pandemic, and mitigating disease, suffering and death; and (3) sustaining infrastructure and mitigating impact to the economy and the functioning of society. The three pillars of the national strategy are: (1) Preparedness and Communication, (2) Surveillance and Detection and (3) Response and Containment.

Because 85 percent of the critical infrastructure of the United States is in the hands of the private sector it is essential that the private sector be engaged in all preparedness planning. Society as we know it is dependent on their collectively produced goods and services. Responsibilities of the United States private sector and critical infrastruc-

ture entities include establishing:

-A plan for infection control in the workplace, to be reinforced during the annual influenza season. This needs to include options for working offsite while ill, systems to reduce infection transmission and worker education.

-Contingency systems to maintain delivery of essential goods and services during times of significant and sustained worker absenteeism.

-Mechanisms to enable workers to provide services from home if public health officials advise against non-essential travel outside the home.

-Partnerships with other members of the sector to provide mutual support and maintenance of essential services during a pandemic.

Organizational preparedness is paramount. It is essential to develop a comprehensive plan *now* and to communicate and educate the company from top to bottom regarding the plan. It is also important to identify the chain of command and the identities of the mission critical staff allowing for operational flexibility and the continuity of operations. It is prudent to factor into the plan the following: expect 50 percent workforce reduction, the stockpiling of supplies, work from home strategies, limited travel, client withdrawals and complicated human resource issues.

Individuals and Families. The critical role of individuals and families in controlling the effects of a pandemic cannot be overstated. An infection carried by one person can be transmitted to tens or hundreds of others. Education on pandemic preparedness for the population should begin well before a pandemic. This activity should be handled in the context of preventing the transmission of any infection, such as the common cold or annual influenza. Individuals and families must:

-Take precautions to prevent the spread of the infection to others if an individual or family member has symptoms of influenza. This includes flu shots, diligent personal hygiene and special efforts to maintain fitness and health.

-Be prepared to follow public health guidance that may include limitation of attendance at public gatherings and non-essential travel for several days or weeks.

-Keep a stock of essential supplies in the home, as recommended by the authorities, to support essential needs of the household for several days. Make sure these supplies include cash and necessary medications.

Ideally, the risk of pandemic influenza could be eliminated today with a protective vaccine available to everyone that could be administered in advance of the pandemic, but that possibility is years away. Recently a vaccine against the avian flu won approval, but federal authorities conceded that its usefulness in a flu pandemic may be limited. The federal government has already stockpiled enough of the vaccine to treat 6.5 million people, but even this "solution" is expected to protect only 45 percent of the people who get it. The U.S. Food and Drug Administration conceded the new vaccine was an interim measure until better products could be developed. However the availability of an increasing amount of antiviral drugs, particularly Tamiflu®, represents welcome news for preparedness, but it is unclear whether the drug will be as effective against H5N1 as it is against seasonal influenza.

The Time for Urgency is Now®

Experts believe a pandemic is coming. Its makeup is still unknown and its dangerousness is uncertain at this time. We are not prepared yet and containment will be difficult while the cost could be staggering. In the event of an avian flu outbreak, we can assume that there will be accelerated spreading of the virus through global commerce and international travel. Contamination will impact life, and cause death, far faster than can be controlled with current capabilities. Avian flu could be used as a tool and as a threat by people who wish to do harm. The world has partially mobilized to meet the challenges of a pandemic, but more effort is required. This is a transitional time, and we must keep the seriousness of eventuality in perspective and there is time for planning and preparation. We are all in this together and the weaknesses in our global economy put us all at risk.

The Lipman Report Editors

Editorial Office, 22 S. SECOND ST., MEMPHIS, TN 38103-2695, U.S.A.
Subscription Service Center
P.O. Box 444, Memphis, TN 38101-0444, U.S.A.
Telex: GUARDSMARK MFS 533230; Telefax: (901) 522-7905
E-mail: lipmanreport@guardsmark.com