

Avian Flu Experts Sound the Alarm

by Christine Craig

At a Sept. 19 forum in Washington, D.C., two experts on infectious diseases sounded the alarm. The ultimate biological disaster is looming on the horizon: pandemic avian influenza. Epidemiologists overwhelmingly agree that a flu pandemic is inevitable, and that the most likely agent will be the highly pathogenic A/H5N1 avian influenza virus, which has already killed at least 65 people and wiped out poultry flocks in several Southeast Asian countries. The main questions on the table wherever these experts gather are: How much time do we have, and what can we do to minimize the catastrophe?

It's the Economy, Stupid

The speakers at the Washington forum, however, took the debate to a higher level. Speaking at the Woodrow Wilson International Center for Scholars, Michael Osterholm, director of the Center for Infectious Disease Research and Policy; and Helen Branswell, medical writer for the Canadian Press Agency, presented the alarming statistics about the confluence of circumstances which will lead to, not just a global pandemic, but a global economic meltdown as well.

Osterholm laid the blame at the door of the global, "just-in-time delivery" economic system, which has rendered nations incapable of amassing even the bare necessities to avert catastrophe—vaccines, surgical masks, food, clean water, fuel. When the flu strikes, countries will panic and close borders, hoarding resources; but almost no countries have all the necessary resources within their borders, due to the globalized free-trade economy, which has made stockpiling supplies obsolete. Parts for products may be made on different continents, assembled on yet another continent, and delivered "just in time" by Fed-Ex.

Often, only one or a few companies manufacture supplies for the *whole world*. Only two companies, for instance, manufacture 80% of all surgical masks. Just a handful of companies in nine countries, make flu vaccines. Tamiflu, the leading antiviral agent effective against the flu, is currently made by a single company, Roche, in a single plant in Switzerland. During a pandemic, these necessities would be unavailable for most of the world. Grain and other foodstuffs which used to be warehoused for months, are now delivered "just in time," often from other countries. National economies would slam to a halt during a flu pandemic.

Health-care systems and emergency services, Branswell emphasized, no longer have built-in surge capacity for disasters, even in well-off countries. This was made clear in the tragedy which followed Hurricane Katrina. Resources are taxed by a normal flu season. Osterholm stated recently that the supply of ventilators, which are necessary for severe respiratory infections, is fully used even during a normal flu season. Need would outstrip availability by hundreds of thousands of units in a pandemic.

These views resonate with a forecast made over 30 years ago by statesman and economist Lyndon LaRouche, when he warned of the development and spread of pandemic diseases as a result of the looting policies directed against Third World nations by the International Monetary Fund and World Bank. A global biological holocaust would be inevitable, LaRouche argued, as national physical economies and cultures devolved and collapsed.

Why Bird Flu Is Such a Threat

Influenza A/H5N1, like all influenza A viruses, naturally resides in wild birds. These viruses have a very flexible genetic system, consisting of eight strands of RNA. Not only is RNA inherently much more unstable than DNA, allowing a high rate of mutation and recombination, but the existence of the eight strands allows different genetic types of viruses to swap strands during replication of the viruses in the host, a maneuver termed reassortment. The existence of homologous RNA strands from human-adapted and bird-adapted viruses in one host, for instance, could lead to a reassortment resulting in a virus better able to infect humans. These mechanisms make possible the well-established predilection of the virus to jump species, to adapt to these new species, to change virulence within the new host species, and to dodge host defenses once entrenched.

As an example, the Spanish flu, the influenza A/H1N1 virus which swept the globe in 1918, is hypothesized to have begun as a bird virus, which, in several phases, adapted to humans. In its pandemic phase, it killed 50 to 100 million people worldwide within a year.

Bird Flu on the Move

Influenza A/H5N1 first moved from wild birds to poultry in Hong Kong in 1997, and proved a very efficient killer of chickens. It jumped almost immediately to humans, causing 18 cases and 6 deaths. Eradication of all of Hong Kong's poultry flocks brought a reprieve, but the virus re-emerged in 2003, in South Korea, and then, by 2004, began wiping out poultry all over Southeast Asia, as well as Japan.

In the Spring of 2005, a slightly changed A/H5N1 moved back into wild birds, causing a die-out of thousands of waterfowl near Lake Qinghai in China, an important stopping-point on the migratory routes of Asian birds, as they move north to Summer breeding grounds. As the survivors moved north, they apparently spread the virus to domestic birds

in their path, and the virus has turned up in Kazakstan, Uzbekistan, Russia (Siberia), Tibet, and Mongolia, sparking concern in these countries, though no human cases have been reported.

Meanwhile, in Southeast Asia, where it all began, the toll of human infection and deaths began to rise through 2005, though almost all cases appeared to stem from contact with infected birds. Vietnam peaked at over 90 infections and 44 deaths, the largest outbreak to date.

As the wild birds moved north, spreading the virus into new areas, the march of human cases moved south, where the virus became endemic in poultry flocks from China to Indonesia, the newest hotspot. Indonesia has estimated that 48 people are infected, most in the last few weeks, and four have died so far. Several cases raise suspicions of human-to-human transmission.

The Asian media has focussed with fascination on the fiasco in Indonesia, where the impoverished government of a far-flung nation of islands and archipelagos, hard-hit by both last year's tsunami and the International Monetary Fund, has been unable to rein in the disease. A/H5N1 has become endemic in poultry in 22 out of 33 provinces to date. It is also present in the pig population.

Pre-Pandemic Preparations in Asia

The situation in Indonesia has been a wake-up call to surrounding nations, which are beginning to take steps to protect themselves: The Philippines is tightening its ban on imports of exotic birds, and has allocated \$4.5 million for preparing for an invasion of the bird flu. Malaysia is arranging with the pharmaceutical company, Roche, to buy Tamiflu to stockpile in case of an outbreak of bird flu. Australia is allocating \$5 million toward fast-tracking a vaccine, and another \$7.5 million to fund research into better preparations for a flu pandemic, including emergency planning. Indonesia, too, is beginning to fight back. A special team has been organized to prepare for the pandemic, and to coordinate with foreign agencies contributing supplies and funds. They are running a media campaign to raise the population's awareness of the risks.

Multinational organizations are also stepping up. The Association of South East Asian Nations (ASEAN) convened recently to map out strategies and arrange for funding to fight the bird flu pandemic in Asia. The Southeast Asian Red Cross and Red Crescent societies have met to create a regional disaster management committee to prepare for disasters such as avian flu, and have agreed to set up a regional disaster management training center in the Philippines. Japan has sent advisors to Indonesia to study the problem there and give advice.

Now, realizing that the disease cannot be left to fester as an "Asian problem," the European Union is finally getting serious. In conjunction with a number of international organizations, such as the World Health Organization, the Food and

Agriculture Organization, and the World Organization for Animal Health, it is planning a conference this year to map a strategy and arrange funding to combat the avian flu in Asia. The U.S. Department of Health and Human Services will spend \$419 million in pandemic planning this year, and the National Institutes of Health's research budget for flu has increased five-fold in the past five years.

The Bottom Line

Will the national and international efforts now ramping up throughout the world be enough to beat back the threat of pandemic from avian flu? That depends.

In Dr. Osterholm's view, not much could be done, technologically, if the flu struck today, or a year from now. As he wrote in the latest *Foreign Affairs* magazine, "What is needed is a detailed operational blueprint for how to get a population through one to three years of a pandemic. Such a plan must involve all the key components of society. In the private sector, the plan must coordinate the responses of the medical community, medical suppliers, food providers, and the transportation system. In the government sector, the plan should take into account officials from public health, law enforcement, and emergency management at the international, federal, state, and local levels."

In the longer term, a well-defined international effort should be initiated to research and produce enough vaccine for the entire world. Pursuing purely national goals for vaccine production is a fallacy of composition if the rest of the world is not so protected. Osterholm commented, "Even the vaccinated will be devastated when the global economy comes to an abrupt halt. Pandemic-influenza preparedness is by nature an international issue. No one can truly be isolated from a pandemic."

What no one has been talking about, including Osterholm, Branswell, and others who recognize the fragility of the world economy when challenged by disaster, is what we can do to make the global economy more resistant to devastation when disaster strikes. What kind of economy would it take to protect the general welfare of the 6 billion people now threatened with annihilation by a virus so small it takes an electron microscope to "see" it well, and so simple it barely qualifies as alive?

For the answer to that we must refer again to LaRouche, who has written powerfully and prolifically over many decades, about the measures needed to turn this nation, and the world, back from the economic collapse which is already playing out, even without a pandemic. The world must return to the economics of the sovereign nation-state, and the fair-trade policies of a New Bretton Woods. It must turn back from the free-trade, globalization paradigm which has brought us to the brink of a Dark Age, through war, famine, and pestilence waged against the poorest and most populous nations of the world by the global financial oligarchy, until we all face the Fourth Horseman, in the guise of a tiny virus.