Waiting for the Other Shoe to Drop: Filling the Gaps in Asia's Preparedness for the Next Pandemic

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Asia is expected to be "ground zero" in the world's next big pandemic. Many believe the catalyst will be H5N1, a virus more commonly known as the bird flu. The 2002-03 SARS outbreak provided a small taste of what could come; within just five months, SARS infected 8,000 people in 26 countries and resulted in an estimated loss of $60 billion to East and Southeast Asian economies.[i] Unless the region does more to effectively coordinate and cooperate for prevention and early containment, a bird flu outbreak is almost certain to far surpass SARS in its human and economic lethality.

A necessary first step is a paradigmatic one: Asian governments must acknowledge that public health is no longer the exclusive purview of national-level bureaucracies, but rather a global public good (GPG) that requires deeper and more meaningful inter-state and inter-agency cooperation. And while *intra*-regional cooperation and coordination is essential, especially given that Southeast Asia or China will likely be the epicenter of a bird flu outbreak, Asia must also be proactive about engaging with international organizations and with developed countries outside the region.

The Nature of the Threat

Two trends are conspiring to permanently place the infectious disease threat near the top of Asian governments' priority lists: the emergence and re-emergence of contagious diseases, and the increasing prevalence of disease 'multipliers'. According to the World Health Organization (WHO), new diseases are emerging at an unprecedented rate of one per year. In addition, older diseases such as cholera and tuberculosis are re-emerging with more virulent strains that are resistant to available first-line antibiotics.

Diseases Outbreaks in Southeast Asia, July 2004-June 2005

Avian influenza	Dengue Fever
Measles	Cholera
Infectious Hepatitis	Mumps
Nipah Virus	Acute Neurological Syndrome
Meningococcal disease	Japanese Encephalities
Malaria	Poliomyelitis
Tetanus	Leptospirosis
Scrub typhus	Typhoid Fever

Source: *Combating Emerging Infectious Diseases in the South-East Asia Region*, World Health Organization Southeast Asia (2005).

What makes these diseases so menacing are the multiplier effects that magnify their spread. These include:

1) The misuse and overuse of antibiotics: In the event of a bird flu outbreak, antiviral medicines would be a critical tool in preventing or slowing the disease's spread, at least for the six months it would take to develop a vaccine. Yet their misuse and overuse has contributed to a process of "pathogenic natural selection" which is producing more resilient and powerful diseases.[ii]

*Increasing population density, especially in Asia's 'megacities': These overpopulated urban areas not only lack clean water, sanitation, and adequate hygiene, all of which favor a disease's spread, but they also pose access problems for public health services.

*Climate change: Rising average temperatures expand the geographic and temporal range favorable to some diseases. Moreover, a higher incidence of climate change-induced floods potentially exposes millions of people to yellow fever, dengue fever, malaria, and other insect-borne illnesses.

*New social and behavioral patterns: Frequent air travel, 'sex tourism', and the use of certain types of heating and ventilation systems are all conducive to infectious disease transmission.[iii]

The Bird Flu Threat

To date, bird flu has appeared primarily in the region's avian population. Experts are nonetheless deeply concerned about patterns of animal-to-human transmission, and more specifically about a possible genetic evolution that would permit human-to-human transmission. What stands between the possibility and reality of a pandemic is essentially coincidence: If a human infected with human influenza is exposed to bird flu, the two diseases could mix genetic codes within their human host and produce a 'novel' flu strain. Since humans will have had no previous exposure to this strain, they will have no natural immunities to defend against it.

The Human and Economic Costs: Of the confirmed cases of humans infected with bird flu, 80% of those cases have occurred in Southeast Asia and China. Two-thirds of these cases have resulted in death.[iv] According to the WHO, a full-fledged bird flu pandemic could result in 2 – 7 ½ million deaths worldwide. In the worst-case scenario, this number jumps to 20-40 million.[v]

In financial terms, if the pandemic were to persist longer than one year (as is predicted), the Asian Development Bank (ADB) estimates that even at a moderate infection level, a pandemic could cost the East Asian region at least $100 billion in just two quarters of economic contraction. A fall in consumer confidence would lower demand, and as workers became either infected or too afraid to leave their homes, the Asian economies' supply side would also take a hit. In the longer term, investment would suffer as investor confidence is shaken. [vi]

What Has the Asian Region Done?

To date, Asia's national-level and regional–level preparedness have been insufficient. This is especially true among ASEAN states. There are, however, some notable post-SARS initiatives that provide the frameworks and solid starting points for further cooperation.

*The ASEAN Highly Pathogenic Avian Influenza (HPAI) Task Force was formed in December 2004 to address the spread of avian flu. Responsibilities were divided among the five original ASEAN members: Indonesia was asked to harmonize vaccination and culling procedures; Malaysia was to draft action plans to contain the disease, boost emergency preparedness, and establish disease-free zones; the Philippines was tasked with raising the level of public awareness about the problem; Singapore established an information-sharing system; and Thailand was asked to create surveillance systems to detect the disease and to ensure rapid exchange and analysis of virus samples.[vii]

*The Emerging Infectious Diseases (EID) Programme was introduced at the ASEAN + 3 (APT) level, and focuses on strengthening disease surveillance and developing early response mechanisms.

*One of the key areas targeted by these collaborative programs is periodic simulation exercises at the national and regional levels to test countries' readiness to contain a possible pandemic. The first such exercise was "Panstop 2007", coordinated by the ASEAN Secretariat, with the assistance of the WHO, the Japanese government, and the Japan International Cooperation System.

Obstacles to a More Effective Response

*Limited Financial Resources: ASEAN officials themselves have acknowledged that regional pandemic preparedness is inadequately resourced. A fund of $2 million has been established, but ASEAN countries will also need their richer dialogue partners (Japan, South Korea, and China) to supplement this amount.

*Shortage of Expertise: In Southeast Asia, timely reporting on cases of infectious diseases is hampered by a lack of epidemiological expertise. This is especially true of new and mutating diseases for which scientists may not have had diagnostic training.

*Bureaucratic Lethargy and Resistance: The avian flu crisis is both a human and animal problem that will require close inter-agency collaboration. Government agencies, however, are often beset with a traditional mindset that makes them slow to adopt new operational

mandates that extend beyond their area of responsibility. Competing inter-bureaucratic claims can also be an unfortunate distraction from more pressing needs for cooperation.

*Resistance by Some Business Sectors: The region's many poultry producers have tended to see the bird flu problem through an economic lens rather than a health or security lens. As chickens are the core of their economic livelihood, some have resisted their government's culling efforts.

Looking Ahead

In the coming year(s), disease experts will be carefully monitoring the patterns of bird flu mutation, namely, its ability to jump the species barrier from birds to other animals, from birds to humans, and, most menacingly, from humans to other humans.

In terms of future regional cooperation, it remains to be seen whether the positive momentum from initiatives such as Panstop, which is slated to be an ongoing exercise, lead to more institutionalized regional cooperation in the area of health security.

Policy Implications:

*Make production and distribution mechanisms for vaccines and other medicines more effective and efficient. This may include setting up local production facilities rather than relying on supplies from developed countries. As developed countries also have high stakes in preventing a pandemic, they should assist in building up developing countries' stockpiles.

*Build credible and effective national and regional surveillance systems for monitoring infectious disease outbreaks. ASEAN's less developed countries, for example, will need targeted assistance in developing core capacities in their public health bureaucracies. National and regional surveillance networks should also build linkages with other networks outside the region and interface with the Global Outbreak Alert Response Network (GOARN).

*Bolster the region's early reporting and rapid response capabilities by committing the necessary financing and human resources. Where national-level resources fall short, international institutions such as the World Bank and ADB should be approached to assist in providing technical support and training for vaccinating and culling animals.

(Insert Anthony – Global Public Health Security; Source: World Health Organization, *World Health Report 2007 – A Safer Future: Global Public Health Security in the 21st Century*.)

*Provisions for compensating those who stand to lose most from aggressive culling measures must be included in any contingency plan. Otherwise, Asian governments cannot expect full societal cooperation.

*Develop a detailed framework for coordinating the distribution of funds from international organizations and donor countries. ASEAN, APT and the ARF should collaborate to identify critical gaps in existing preparedness, and based on this assessment, determine priority areas for distributing this assistance.

About the Author

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Want To Know More?

Ann Marie Kimball, "When the Flu Comes: Political and Economic Risks of Pandemic Disease in Asia," in *Strategic Asia 2006-07: Trade, Interdependence, and Security,* ed. Ashley J. Tellis and Michael Wills (Seattle: NBR, 2007): 365-89.

Michael T. Osterholm, "Preparing for the Next Pandemic," *Foreign Affairs* 84, Issue 4 (July/August 2005): 24-37.

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[i] This calculation is for gross expenditure and business losses, see World Health Organization, *World Health Report 2007 – A Safer Future: Global Public Health Security in the 21st Century*, 27, http://www.adb.org/Documents/Books/ADO/2003/update/sars.pdf.

[ii] Jennifer Brower and Peter Chalk, *The Global Health Threat of New and Re-emerging Infectious Diseases: Reconciling U.S. National Security and Public Health Policy* (Santa Monica: Rand, 2003): 17-18.

[iii] Ibid.

[iv] See World Health Organization, "Cumulative Number of Confirmed Cases of Avian Influenza A/(H5N1) Reported to WHO," updated October 17, 2007, http://www.who.int/csr/disease/avian_influenza/country/cases_table_2007_10_17/en/index.html.

[v] "Global Risks 2006," World Economic Forum, Davos, Switzerland, January 2006: 8, http://www.weforum.org/pdf/CSI/Global_Risk_Report.pdf.

[vi] Asian Development Bank, "Potential Economic Impact of an Avian Flu Pandemic on Asia," *Economics and Research Development, Series* No. 42 (November 2005): 2-6.

[vii] Luz Baguioro, "Fund Set Up to Fight Flu in S-E Asia," *The Straits Times*, October 1, 2005.