Neuraminidase (N). The 1997 Hong Kong virus was of type H5N1, and was the first recorded incident of an avian virus passing directly to humans, without first recombining with another flu virus in a mammal that would be more likely to infect humans.

This particular 1997 influenza had a mortality of 30% in people, which is much higher than a typical human flu strain that usually has a mortality rate of only a few percent. One reason for the increased mortality with a new avian flu is that the human population has very little immunity to it.

Hong Kong was able to contain the epidemic by a mass slaughter of all the poultry in the province, combined with quarantine measures. This avian flu virus was not easily spread from person to person, which probably prevented its spread outside of Hong Kong. Since there was no vaccine available to protect against this avian flu outbreak, it served as the first warning that the world was in danger of a new global pandemic.

Starting in January of this year in Thailand and Vietnam, a new, more virulent avian flu began to infect people who were in direct contact with chickens and ducks. To date, there have been 44 cases, and an alarming 32 deaths, or nearly 75% mortality. The virus was isolated, and it is a new variant of the H5N1 first seen in Hong Kong in 1997, but with increased lethality.

Then in October, Thai health officials announced the first probable case of person-to-person transmission of this new and deadly H5N1 influenza virus, prompting quick action from the WHO to isolate and examine it, in preparation for

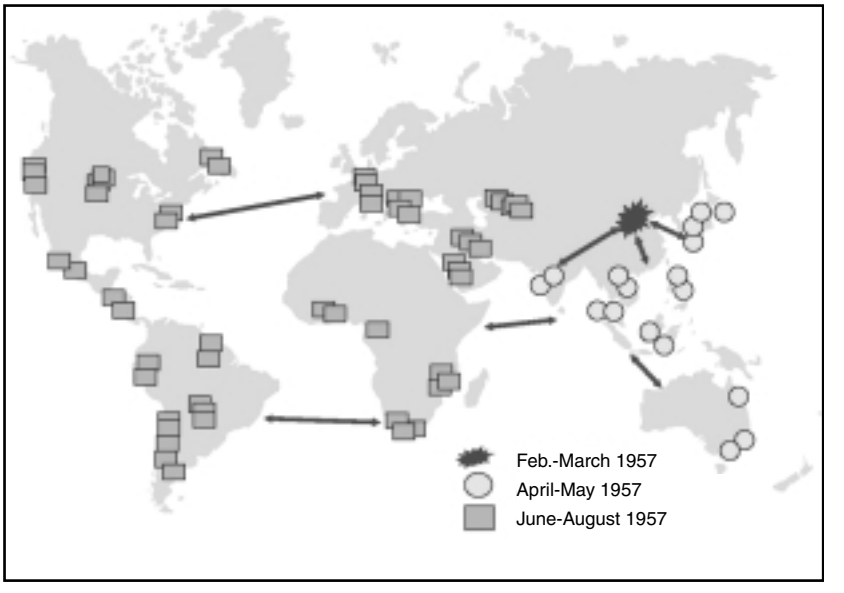
Three Flu Pandemics Hit in 20th Century

1918-1919 "Spanish" Flu: Worldwide, 20-30 millions died—more than were killed in World War I. In the United States, over 500,000 died.

1957-1958 "Asian" Flu: This pandemic affected between 10% and 35% of the world's population, with at least 100,000 deaths.

1968-1969 "Hong Kong" Flu: In the world as a whole, this pandemic killed an estimated 700,000 people. In the United States, at least 34,000 deaths were attributable to it.

FIGURE 1
Spread of H2N2 Influenza 'Asian Flu' in 1957



Source: WHO Global Influenza Programme.

PAHO Warns of New Strain

The Pan-American Health Organization (PAHO) called for an action plan to deal with a potential "new influenza strain" on Sept. 25, 2004 at its meeting of hemispheric health ministers, who came to Washington, D.C. for PAHO's 44th Directing Council. A report was presented to the group, saying that the "sudden and marked change in Influenza virus A should be considered one of the greatest public health concerns" in the Americas. The report warned of "novel, distinct sub-types, in a process known as antigenic shift." Thus, the danger comes from the prospect of an abrupt, new virus strain, to which populations have no resistance, and for which no existing vaccine may provide protection.

The report said, "Recent episodes of animal strains causing disease in humans support experts' views that a new pandemic is inevitable. . . . Epidemiological studies project that another pandemic is most likely to result in . . . 280,000 to 650,000 deaths in less than two years—in industrialized countries alone."

PAHO, founded in 1902, is the world's oldest public health organization. It serves as the regional office for WHO in the Americas.

Only eight nations in the Americas give flu vaccinations to the elderly: Canada, U.S.A., Mexico, Cuba, Brazil, Uruguay, and Chile.

—Marcia Merry Baker