

Preface

A pandemic is a global disease outbreak. An influenza pandemic occurs when a new influenza A virus emerges for which there is little or no immunity in the human population, begins to cause serious illness, and then spreads easily person-to-person worldwide. Scientists are concerned that the bird flu virus — H5N1 — one day could be able to infect humans and spread easily from one person to another, because we have no existing immunity to the disease. If H5N1 virus were to gain the capacity to spread easily from person to person, an influenza pandemic — the worldwide outbreak of disease — could begin.

Experts vary widely on projections of the numbers of people who would become ill and the numbers who would die. Historically, we can refer to the 1918-1919 influenza pandemic, which is often referred to as "America's forgotten pandemic," as a frame of reference. Historians estimate that, at one point, over half of the 1.6 billion people in the world in 1918 were infected with the Spanish Flu. Millions of young, healthy adults fell ill to the disease and died from the suffocation it caused. Experts now estimate that approximately 80 to 100 million people perished worldwide, and at least 500,000 Americans died. Not only reducing the global population by one-sixteenth, the 1918 flu pandemic caused brain damage in many of its survivors. The 1918 flu pandemic caused the largest one-year decline in the average lifespan in the United States in modern history, slashing it by a full twelve years.

The worst-case scenario:

- Worldwide, the United Nations estimates that from **5 to 150 million** people may die should an H5N1 pandemic occur. The World Health Organization projects from **2 million to 7.4 million** deaths, which it concedes is a "relatively conservative estimate" for purposes of providing a plausible planning target. The World Bank cites sources suggesting that a more virulent form (similar to the 1918-1919 strain) of pandemic flu may kill as many as **180–260 million** in a worst-case scenario.
- In preparing its Implementation Plan for the National Strategy for Pandemic Influenza, the U.S. federal government assumes that 30% of the population — 100 million — would be infected, and that as many as **1.9 million** would die — greater than the total deaths caused in a single year by heart disease, cancers, strokes, chronic pulmonary disease, AIDS, and Alzheimer's Disease combined. One disease model projects that if the U.S. population (standing at 295 million at the time of the projection) is exposed to the H5N1 flu strain, 33% would be infected (97.3 million) with a resulting death rate of 0.58% (**5.6 million** deaths) — more than twice the number of deaths from all the ten leading causes of death combined. So far, however, H5N1 has been 57% lethal in humans, meaning that in the very-worst case, possibly **upwards of 50 million** Americans may die.

The best-case scenario: An H5N1 pandemic strikes but is no more lethal than seasonal influenza. Be mindful, however, that even this scenario has a sizeable death toll — 200,000 to 1.5 million deaths worldwide and 36,000 in the U.S. alone.

Death rates from pandemic are largely determined by four factors: the number of people who become infected, the virulence of the virus, the underlying characteristics and vulnerability of affected populations, and the effectiveness of preventive measures. Accurate predictions of mortality cannot be made before the pandemic virus emerges and begins to spread. Of course, all estimates of the number of deaths are purely speculative. But it is important to know the scenario endpoints so you can prepare and protect yourself appropriately.

Infectious disease experts agree that it's not "if" bird flu will enter the United States, but "when." The resulting H5N1 pandemic will cripple the US economy, halting most commerce for a period of 12 to 24 months and bankrupting the federal government and most American citizens. The pandemic will also cause grave panic among the nation's residents, as sources of food, medicine, and the necessities of daily living will ultimately become unavailable. Presently, there is little effective, unified worldwide or national leadership in the arena of discovering real prevention and/or treatment protocols for H5N1. Consequently, it is up to each of us as individuals, to mount our own personal preparedness and protection program. In *Infection Protection: Pandemic* we outline a set of Top Ten Preventive Strategies against a backdrop of information about bird flu and its current — and potentially fatal future — ramifications.

As physicians we also ask you to be mindful to the recent upward trend in deaths due to respiratory diseases. In the U.S., influenza and pneumonia are now the 7th leading cause of death (responsible for 2.7% of all deaths in the nation), and chronic lower respiratory diseases are now the 4th leading cause of death (5.1% of all U.S. deaths). All totaled these diseases kill more than 190,000 Americans each year.

A direct threat to how long and well you live, respiratory diseases are largely avoidable and preventable. In writing *Infection Protection: Pandemic*, we seek to achieve three goals. First, our "best case" scenario is to aim to help you protect and strengthen your immune system so it is better able to ward off infectious pathogens of all kinds. Secondly, our "worst case" scenario is for this book to provide essential strategies for you — and your loved ones — to deploy in the event of a potential bird flu pandemic. Lastly, *Infection Protection: Pandemic* is designed to serve as a personal survival handbook for the certain to-come influenza, cold, and respiratory infectious disease epidemics that are an annual inevitable and unavoidable part of our everyday lives.

Enjoy this book in good health.

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