

Flu Commentary

Flu Vaccine – Hard Choices

Yogi Berra, baseball great and master of the malapropism, is famously credited with saying “When you come to a fork in the road, take it.” The CDC and the U.S. plan for fighting influenza have come to a fork in the road.

The facts are these. The World Health Organization (WHO) met on 14 May week to examine its influenza plan. The U.S. National Flu Vaccine Summit followed on May18-20. The approximately six month cycle to produce flu vaccine has begun, but the annual trivalent immunization does not include the current strain; the eventual vaccine will largely be an either/or product. Worldwide seasonal flu vaccine production capacity is approximately 900 million doses. Health officials project this can be expanded to 1 to 2 billion doses for an H1N1 pandemic, to serve a global population of 6.8 billion people. Of this, the United States has contractual commitments for 600 million of those doses. Moreover, the expansion of vaccine production for H1N1 would come at the expense of the seasonal vaccine.

Herein lies the dilemma. Where should the focus of prevention be applied? At home to prevent what comes, or elsewhere to prevent it from coming? This challenge is complicated by the lack of specificity in knowing where the disease will emerge next, or if it even will. Still, outbreaks in the developing world can have far more serious impacts, as perhaps has been evidenced by the death toll in Mexico over the past month. Increased vulnerabilities arise due to the general state of health, poor diet, war, HIV infections, and other factors. Yet to be determined is how the virus might mutate.

Similarly, the use of antivirals must be addressed. How should they be distributed? And how will their use further fuel viral mutation – perhaps to the stage of resistance? These unanswered questions demand frank and prompt discussion, first among the scientific and medical communities then with the world’s nations. The fact that influenza is communicable before symptoms appear and this particular strain has an apparent, relatively long incubation period – five to seven days before people notice symptoms – means that a reemergence of the disease can spread across the globe before detection. The WHO estimates as many as 2 billion people could be infected.

While selective closings of schools and other public venues appears to have helped stem the current spread, that may be prohibitively complicated come Autumn. Flu outbreaks can last for months; the 1918-9 pandemic lasted for 18 months. There is a limit to how long people can stay home.

Unknowns abound. Will a vaccine developed now for H1N1 be effective in the regular flu season, or will the virus have mutated? Will it take one dose or two to achieve protection? Would adjuvants – compounds that stimulate the immune system and help make vaccines more effective – be useful; bearing in mind that there is a considerable movement and associated legal cases that contend these substances have long term health implications, including autism?

The convergence of a rapidly moving contagion, a necessarily slow development cycle, restricted production capacity, limited availability of vaccines, and the specter of resistance to antivirals point to the need for effective, advance coordination. World public health coordination worked this time; we may not be as fortunate later this year. Unprecedented prior planning and cooperation are indicated. If

and when the influenza wildfire ignites, a coordinated, global plan will be required to stem its spread. Outlining that plan must begin today.