Few things in medicine are as unpredictable as the flu season, which likely will be upon us soon. As usual, this year’s influenza vaccines contain two influenza A strains (2009 H1N1 California and H3N2 Victoria/361/2011) and one influenza B strain (B/Wisconsin/1/2012).

These vaccine components must be chosen many months prior to the onset of vaccination and are based upon experts’ predictions regarding which strains are most likely to predominate in the next season. Most of the time, these predictions are quite good.

A biomedical advance intended to reduce the lag time between the selection of strains to be included in flu vaccine and the availability of the vaccine, thus improving the ability to predict strains more accurately, is the replacement of the current (archaic) hen’s egg-based method of growing sufficient influenza virus by modern cell-culture methodology. This should result in more rapid viral growth, as well as reduce dependency on the availability of tens of millions of hen’s eggs.¹

PATIENT SAFETY AND THE FLU

As we all know, flu vaccine is recommended for almost everyone from 6 months of age and up. Immunization of healthcare workers, including those in long-term chronic care facilities, hospitals, clinics, and offices, is a major priority and really needs to be considered an important patient safety issue.

In past years, my hospital has, against my advice, allowed employees to receive a personal exemption from the requirement for seasonal flu vaccine, in addition to the more justified (and very limited) legitimate medical and religious exceptions. This season we are finally catching up to other hospitals that have mandated more stringent employee immunization requirements, accepting only legitimate and well-documented medical and religious — but not personal — exemptions.

Many health care systems have included termination of noncompliant employees. Wearing my hospital infection control hat, I support this, because having such a policy promotes patient safety by reducing the chance of health care worker-to-patient transmission of influenza.

STRAINS OF INFECTION

The influenza field has been dominated in recent years by the pandemic caused by 2009 H1N1 (which is included in this year’s vaccine), and by fears about various bird flu A strains (H5N1, H7N1, H5N2), which have caused a relatively small number of human infections but with very high mortality rates (~50%), especially in adults.

This summer in the US, transmission of a flu strain (H3N2v) by direct contact with swine on farms or at county or state fairs has gotten much attention. Fortunately, person-to-person spread of this strain has been very limited. There is always something interesting going on with influenza.

THIS MONTH’S STAMPS

Shown here, the pair of stamps with the masked, gowned, and gloved individual was issued in 2007 by the Democratic People’s Republic of Korea (North Korea). It portrays a medical van, a pig, a dog, a chicken, and a duck, with bars indicating “A (H5N1),” “A (H5N2),” and “A (H7N1),” all of which are avian flu strains. In 2005, North Korea became the twelfth Asian country to experience large poultry outbreaks of avian influenza. In other parts of Asia, influenza A (H5N1) strains were highly prevalent, but the North Korean outbreak involved an H7N1 strain of influenza A. More than 210,000 chickens were slaughtered to contain this epidemic. The animals on
this stamp highlight that the close proximity of pigs, fowl, and humans in Asia promotes the possibility of simultaneous infection with more than one type of flu virus, which enables gene exchange between viruses and emergence of new variants.

The large souvenir sheet from Guinea-Bissau in West Africa portrays a child with the late Mother Teresa (1910-1997), Princess Diana (1961-1997), and Pope John Paul II (1920-2005), along with a 1916 Ford Model A medical vehicle. “Luta contra a SIDA” translates from Portuguese into “Fight against AIDS.”

REFERENCE