



The CBCSF Newsletter

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A Publication of Community Blood Centers of South Florida, Inc.

Call for directions

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Community Blood Centers of South Florida
a non-profit organization
Serving Donors & Patients in Monroe,
Miami-Dade, Broward & Palm Beach Counties
(800) 357-4483 • Email: webmaster@cbsf.org
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Influenza and the Blood Supply

What is "Bird Flu" Anyway?

Few if any Americans have lived through a genuine pandemic in which millions of people become ill at the same time and

Even the Aids epidemic of the 1980's did not cause failures of public services or close schools. Modern public health practices and medical advances have made the catastrophically rapid spread of most infectious disease unlikely except for one - influenza.

The last great influenza pandemic started in late 1917 when a new strain of influenza suddenly appeared in Kansas and spread around the world in a few short months. Hundreds of millions of people including President

Woodrow Wilson who was attending the Versailles Peace Conference in 1919 were infected. By the time it was over in 1920 at least forty million people had died worldwide. Medical facilities were overwhelmed. Schools closed. Factory production fell due to absenteeism. The whole fabric of society was strained to the utmost trying to cope with the number of patients. The young were more seriously affected than the old.

Modern Science is getting closer to solving the mystery of the so called "Spanish Flu" of 1917, a name given the illness by the French who wrongfully thought the illness spread from Spain to France in 1918. Scientists have gone so far as to

disinter Spanish Flu victims from frozen graves on the island of Spitzbergen and from the permafrost in Alaska in an attempt to study the virus.

Ominously enough, recent evidence points to an association between the Spanish Flu of 1917 and a

related form of avian or bird influenza spreading around the world today

The Devil Is Always in the Details

There are two general classes of influenza viruses. Influenza A causes almost all human disease. Influenza B can sometimes cause human illness but its symptoms are usually mild and of short duration.

Influenza A viruses are able to infect a wide range of vertebrate species - pigs, cows, chickens, horses, humans, and domestic pets to name just a few. This is an unusual viral trait. Smallpox, for example, can only infect humans and cannot infect any other species. West Nile virus, another virus in the news lately, primarily infects birds, but only

rarely is spread by a mosquito bite to humans. Influenza A, however spreads from one human to another by inhalation of infectious mucous droplets or by hand/oral contact. It is therefore highly infectious. West Nile Virus is spread only by a mosquito bite, and not by inhaling mucous droplets.

Influenza A viruses are characterized scientifically by the presence of two powerful chemicals which are associated with infectivity. The first is "hemagglutinin" abbreviated as "H", of which there are 15 molecular variants. The second is called "neuraminidase", or "N", of which there are 9 molecular variants. The influenza A viruses currently circulating in the human population are H1N1 and H2N2. All current vaccines used to prevent influenza are aimed at these two variants.

There are additional unknown factors besides "H" and "N" which cause some influenza viruses to be more deadly than others. Each year there are slight changes

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in the makeup of the virus called "genetic drift" and a new protective vaccine has to be produced before each flu season to counter the gradual genetic drift of the virus. Sometimes there is a dramatic shift in the makeup of the circulating human viruses, and that is when there is a chance for a pandemic.

Important Information!

Reminder!! Blood donors will now be notified via e-mail when their cholesterol results are available for viewing on our website. If we have your email address you will receive a notice that your cholesterol results are available at www.cbcsf.org.

Blood donors who join our email list will receive four or five newsletters annually, so be sure to give the registrar your email address when you visit us to give blood. MSN or AOL users should add webmaster@cbcsf.org to their list of safe contacts.

Confidentiality Statement: Community Blood Centers of South Florida is committed to respecting your privacy. We will not share, rent, or sell personal information provided by you, including your email address, to other parties. The information you provide will only be used to support your relationship with us as a blood donor or potential donor.

In February, 2003, much to the horror of health officials worldwide, an H5N1 avian virus which normally just infects chickens (a so-called "Bird Flu") spread to humans in Hong Kong killing several people. In March, 2003, another Bird Flu, but this time an H7N7 strain, spread from chickens to humans in the Netherlands. In both cases massive culling of chicken flocks and complete isolation of infected people prevented further spread of the disease. There was

no immunity in the human population to either of these Bird Flu viruses and currently available vaccines were completely ineffective in preventing illness. The H5N1 influenza A virus has recently spread throughout southeast Asia's bird population. The good news is that for the most part it is still confined to the bird population but the fear is that the Avian virus will share genetic information with a human influenza A virus and achieve the ability to spread rapidly from human to human and not just from bird to human. Recently discovered evidence indicates that this is what happened to make the Spanish Flu of 1917 so dangerous.

Should an easily spread and virulent strain of influenza A successfully make the jump from birds to humans its effects would be felt by every human being on the planet. As many as a hundred million people might be infected in the United States alone in the first year of such an outbreak. Schools would be closed. All public gatherings curtailed. Medical facilities would be filled with patients.

The time needed using currently licensed technologies to produce a new influenza vaccine is 6 to 8 months which is more than enough time for such a virus to spread around the world.

In such a situation it's likely that many blood drives would have to be cancelled. Complex medical care of all kinds would be curtailed to permit treatment of the pandemic's victims. The demand for blood products would be reduced as elective surgery of all kinds would be postponed or simply cancelled.

What are the chances of such a scenario occurring? No one can predict if or when a bird flu virus might develop the ability to spread from human to human. It may already have happened or it could never happen at all. But if it does, the consequences will be dramatic. And there likely will be no vaccines available to protect anyone. In the meantime, chicken flocks throughout Asia are being culled of infected birds. Flocks of domestic birds are being monitored carefully. And the world waits.

