



The Branch-Hillsdale-St. Joseph Community Health Agency answers the question...

What in the world is a Flu Pandemic?

A **flu pandemic** is a global flu outbreak that occurs when a new flu virus appears in the human population, causes serious illness, and then spreads easily from person to person worldwide. Pandemics are different from seasonal outbreaks or “epidemics” of the flu. Seasonal outbreaks are caused by flu viruses that already circulate among people, whereas pandemic outbreaks are caused by **new subtypes** that have either never circulated among people, or have not circulated among people for a long period of time.

I’m not Bill Nye, Science Guy, so simply put, how does this happen?

There are many different subtypes of “flu” viruses. Pandemic viruses emerge as a result of a process called “antigenic shift,” which causes a sudden, major change in flu type A viruses causing a new “subtype”. The appearance of a new flu subtype is the first step toward a pandemic; however, to cause a pandemic, the new virus subtype also must have **the ability to spread easily from person to person**. Once a new pandemic flu virus emerges and spreads, it usually becomes established among people and moves around for many years as seasonal epidemics of flu.

I’m only 45, would I remember any of these Pandemics from the past?

No, probably not, but talk with your parents and grandparents (oh the stories they will tell). During the 20th century, the emergence of several new flu virus subtypes caused three pandemics, all of which spread around the world within a year of being detected.

- 1918-19, “Spanish flu,” caused the highest number of known flu deaths. More than 500,000 people died in the United States, and up to 50 million people may have died worldwide. Many people died within the first few days after infection, and others died of secondary complications. Nearly half of those who died were young, healthy adults.
- 1957-58, “Asian flu”, caused about 70,000 deaths in the United States. First identified in China in late February 1957, the Asian flu spread to the United States by June 1957.
- 1968-69, “Hong Kong flu,” caused about 34,000 deaths in the United States. This virus was first detected in Hong Kong in early 1968 and spread to the United States later that year. Both the 1957-58 and 1968-69 pandemics were caused by viruses containing a combination of genes from a human flu virus and an avian (bird) flu virus. The 1918-19 pandemic viruses appear to have an avian origin.

Is there a Pandemic flu shot?

No, and a vaccine probably would not be available in the early stages of a pandemic. Once a potential pandemic strain of flu is identified, it takes several months before a vaccine will be widely available. If a pandemic occurs, the U.S. government will work with many partner groups to make recommendations guiding the early use of available vaccine.

Are there Antiviral Medications to Prevent and Treat Pandemic flu?

Four different flu antiviral medications are approved by the U.S. Food and Drug Administration (FDA) for the treatment and/or prevention of flu. All four usually work against flu viruses. However, the

drugs may not always work, because flu virus strains can become resistant to one or more of these medications due to changes or “mutations” in the virus. For example, the new “bird” flu (H5N1) viruses identified in humans in Asia in 2004 and 2005 have been resistant to some antivirals. Monitoring of avian viruses for resistance to antiviral medications continues.

Ok, so the “bird flu” becomes a pandemic. What will happen then?

Many scientists believe it is only a matter of time until the next flu pandemic occurs. The severity of the next pandemic cannot be predicted, but studies suggest that the impact of a pandemic on the United States could be enormous. In the absence of any vaccine or drugs, it has been estimated that in the United States a “medium-level” pandemic could cause 89,000 to 207,000 deaths, 314,000 and 734,000 hospitalizations, 18 to 42 million outpatient visits, and another 20 to 47 million people being sick. Between 15% and 35% of the U.S. population could be affected by a flu pandemic, and the economic impact could range between \$71.3 and \$166.5 billion. Flu pandemics are different from many of the threats for which public health and health-care systems are currently planning:

- A pandemic will last much longer than most public health emergencies and may include “waves” of flu activity separated by months (in 20th century pandemics, a second wave of flu activity occurred 3 to 12 months after the first wave (this wave may be helped by the development of a vaccine).
- The numbers of health-care workers and first responders available to work can be expected to be reduced. They will be at high risk of illness through exposure in the community and in health-care settings, and in many areas resources could be limited, depending on the severity and spread of a flu pandemic.

Because of these differences and the expected size of a flu pandemic, it is important to plan have national and local preparedness activities that will permit a prompt and effective public health response. The U.S. Department of Health and Human Services (HHS) supports pandemic flu activities in the areas of detection, vaccine development and production, strategic stockpiling of antiviral medications, research, and risk communications.

What is happening locally (all responses are local)?

In addition to our consistent monitoring of the situation world wide we also keep a close eye on what’s happening here. We have formed close partnerships with our local hospitals to provide us with information regarding “unusual” activity both in quantity and type so that we can better assist them in the event of a “novel” strain of the flu virus showing itself.

On November 30 we had a drill with Community Health Center Branch County on a “pandemic flu”. Using both a tabletop exercise (November 15, 2005) and the “full scale” activity on November 30th we were able to better map out each disciplines responses to the problems raised. As a result of this our own planning will be modified to reflect the lessons learned. Future exercises and training will be taking place so that we continue to prepare for dealing with the large number of effected citizens such an event would bring to our communities.

To find out more about pandemic flu, you can call your local Health Department office at:

Coldwater
279-9561 x 143

Hillsdale
437-7395 x 110

Sturgis
659-4013 x 109

Three Rivers
273-2161 x 241

Or...,visit us on the web at www.bhsj.org