Pandemic Influenza (Flu)



What is a pandemic?

Merriam-Webster's on-line dictionary defines a pandemic as "occurring over a wide geographic area and affecting an exceptionally high proportion of the population". In terms of illness, it is an outbreak of any disease such as typhoid or influenza (the "flu"). In comparison, an epidemic is similar but the disease affects a large number of people within a population, community, or region at the same time where as a pandemic is the same disease on a much larger more global scale.

When were the last flu pandemics?

Pandemic influenzas are caused by a new strain of the influenza virus. Because the virus is new, humans do not have an immunity to it and the illness is usually more severe. There is also no vaccine available. Historically a new strain appears 3 or 4 times a century or about every 30 or 40 years. The last outbreaks were:

- "Spanish Flu" in 1918-1919
- "Asian Flu" in 1957-1958
- "Hong Kong Flu" in 1968-1969
- "Swine Flu" (H1N1) in 2009-2010

Note: A pandemic outbreak caused by a non-flu virus, the coronavirus SARS-CoV-2, began in 2020. Pease see the OSH Answers Document Coronavirus for more information.

How does a flu become a pandemic flu?

There are four types of viruses called influenza A, B, C, and D. Influenza types A and B are responsible for the seasonal disease that occurs almost every winter. Influenza type C usually causes a very mild disease, often without symptoms. Influenza type D viruses affect cattle and are not known to cause illness in people.

Only type A influenza causes pandemics in humans. Certain conditions have to be met for a pandemic to occur:

- A new influenza A virus (that is the result of a major change to the virus) is present. With a new virus, people will have little or no immunity.
- A virus that is easily passed from human to human.
- The virus is able to cause serious illness or death.

What will be the impact of a pandemic?

It is impossible to predict the impact or death rate of a new influenza virus. The 2009-2010 (Swine) flu has been estimated to have caused between 100,000 to 400,000 deaths worldwide. In comparison, the Spanish flu was considered “exceptional” and caused the highest number of known deaths (40 to 50 million) worldwide and was likely to have been only avian virus in origin. The Asian (2 million deaths) and Hong Kong (1 million deaths) flus were milder when compared to the Spanish flu, and caused by a combination of human and avian viruses.

Historically, previous influenzas were able to spread around the world in 6 to 9 months but these events occurred when most travel was by boat. With international air flights, a “modern” pandemic is expected to spread to all parts of the world in less than 3 months.

A pandemic is not a “one time” event and periods of illnesses may come in 2 or 3 “waves” anywhere from 3 to 12 months apart. The total duration of a pandemic is likely to be 12 to 18 months.

What steps can I take to avoid getting the flu?

The most important step you can take to reduce the chance of infection is to wash your hands regularly – always wash regularly with soap and warm water.

Other steps you can take for personal hygiene are listed in Good Hygiene Practices – Reducing the Spread of Infections and Viruses.

Regulators also recommends that all Canadians over the age of 6 months get the seasonal flu shot every year.

Individuals can also help reduce the spread of the virus by:

- Keeping your hands away from your face.
- Coughing and sneezing into your arm, not your hand.
- Keeping common surface areas clean and disinfected.
- If you get sick, stay home.

Should a business plan for a pandemic flu?

Yes. Workplaces should prepare a plan that allows for normal business operations to continue when many people will be sick or absent. Estimates of how many people may be sick range from 25 to 45% (called the “population clinical attack rates”) and workplace absenteeism may be higher than this estimate due to caregiving duties or concern about personal safety.

When planning for a pandemic flu, remember a pandemic is not like the regular flu season, nor is it like a natural disaster (such as a hurricane or serious ice or snow storm). Remember, a pandemic will last much longer than a “one time” event and periods of illnesses may come in 2 or 3 “waves” anywhere from 3 to 12 months apart, and last overall between 12 and 18 months.

What should the business plan include?

While impossible to predict, a business should plan for approximately one quarter to one third of employees being absent during a pandemic. Some workplaces may need to close or be forced to close by order of a Medical or Public Health Office depending on the seriousness of the pandemic. Other measures may be enacted by governments or

recommended by public health officials, such as physical distancing, hand hygiene, travel restrictions, limits to the number of people who can gather at a single location, use of non-medical masks, etc.

When creating a business plan, remember that:

- Health care resources will be less available as there will be more patients to care for and many health care employees may be sick themselves or have to care for family members.
- Other business will be similarly affected (less resources, sick employees, etc.). Supplies/ resources, and customers may not be available.
- Employees who are not sick themselves may have to stay home and care for family members. Alternatively, schools may be closed forcing parents to stay home*:*

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