

Influenza (Flu) for the 2018/19 Season

As almost everyone is aware, the 2017-2018 Seasonal Flu was the worst season in over a decade, when considering an across-the-board “High” severity for all age groups, the number of weeks above the epidemic threshold, number of deaths, particularly pediatric deaths, etc. In fact, across all the age groups, the majority of deaths were in those that were not vaccinated for last season’s flu. So, in preparation for the upcoming season (2018/19), this document contains Influenza Basics.

ILI – Influenza-like-illness: anyone who presents with a fever at or greater than 100° F (37.8° C) and either/both cough or sore throat and, with no known cause other than influenza, as the likely cause. In cases when Flu is known to be in an area, the identification of ILI, in the absence of influenza testing, can result in a presumption of “Flu”. Antivirals may also be given, when appropriately prescribed by a health care provider (MD, DO, ARNP, PA), without a positive flu test.

Seasonal Flu – Influenza: a viral respiratory illness made up of Influenza A or B viruses (for humans) and may be diagnosed by a flu test. A list of signs and symptoms will be included in this document.

Influenza A viruses have subtypes of hemagglutinin (H1 – H18) and neuraminidase (N1-N11). Influenza A viruses can be further identified by Strain. The current strains that have been seen in the last flu seasons are H1N1 and H3N2. Influenza B viruses don’t have subtypes but do have strains and lineages. The current lineages circulating of Influenza B are B/Yamagata and B/Victoria.

Slight changes in influenza viruses can appear and, if previously not seen, will be called variants; very different influenza A viruses from those that have previously circulated will be called Novel viruses and may lead to a pandemic in which no one or very few will have any immunity to it. The 2009 (H1N1) was just such a novel virus and replaced the previously known H1N1. Novel viruses are risky for the entire world since spread may be rapid.

The naming of all influenza viruses, regardless of host, was made standard throughout the world by the WHO in 1979/80. For more information about types of flu viruses and nomenclature, see: <https://www.cdc.gov/flu/about/viruses/types.htm>

Flu Vital Statistics:

Transmission (Sharing): flu can be spread up to 6 feet in the air in the event of a sneeze, cough or by talking when tiny droplets fall/fly into mouths, noses, and perhaps eyes, although some references suggest that most transmission via the air are within a meter/3 ft. Droplets can also fall on or be introduced by contaminated hands onto surfaces or objects (fomites) such as tables, toys, light switches, phones, pens and pencils and then be picked up by someone that becomes exposed to the flu when they touch the contamination and then touch their face/eyes, nose, mouth.

People are most able to spread the virus in the first 3-4 days after developing symptoms. For healthy adults, they may be contagious starting the day before their symptoms begin and be able to pass it on for up to a week after getting sick. Kids and those that have compromised immune systems may continue to spread their germs for 7 to 10 days typically, but can be even longer.

Incubation: the time from exposure to the virus until signs and symptoms develop is variable but generally is between 1 to 4 days after the virus enters the body, with an average of 2 days before signs and symptoms appear. This means that you may get the virus before someone even knows they are sick or pass along the virus before you know you’re sick. Some people will be exposed and be infectious (have the ability to spread the germs to someone else) but have no symptoms at all for the entire time.

Signs and Symptoms: often have a sudden onset (some people can name the hour they began to feel awful). Most will have a few of these symptoms; some will have more or less. Children and elderly patients may have less signs and symptoms.

Fever $\geq 100^{\circ}$ F or 38.7° C, although some might not have a fever at all and many may not have one if they took anything that contains Tylenol, aspirin (not for kids/teens), ibuprofen or naproxen. Some fevers can be very high, particularly in children.

Chills

Sore throat

Cough (likely unproductive), chest fullness/tightness

Stuffy or Runny nose

Body or muscle aches

Headaches

Fatigue, tiredness, weakness

Some may have diarrhea or vomiting but it is most common in kids

Complications: most people will begin to feel better within a few days but may still feel bad for up to two weeks. Some will not feel better at all or will begin to feel better and then feel worse again. Recurrent flu symptoms (or new ones) for longer than 2 weeks or after starting to feel better are a sign of possible complications to flu. Some are just a nuisance; others may be dangerous.

Mild to moderate: ear or sinus infections, persistent cough for 2 weeks or longer

Serious: chest pain/pressure, shortness or breath or difficulty breathing, worsening cough, sweating without cause, wheezing, bronchitis, pulmonary edema (usually with history of CHF), pneumonia, rhabdomyolysis (muscles breaking down into large molecules which endanger the kidneys), full blown sepsis, feeling of impending doom. Those with chronic problems can get worse like asthma, COPD, MS, CF, etc.

Those at High Risk for Complications:

Children less than 5 years; especially risky if under 2years

Adults 65 years or older

Pregnant Women for the entire pregnancy and up to 2 weeks post-partum

Residents of nursing homes, rehab centers, or other long-term care facilities

American Indian and Alaskan Natives

Hx of Asthma or another Chronic Lung disease

Neurological or neuromuscular conditions

Heart Disease

Blood Disorders such as sickle cell

Endocrine Disorders such as diabetes

Liver or Kidney Disease

Metabolic disorders

Immunocompromised from disease or medication

Children or Teens receiving long-term aspirin

People with extreme obesity (BMI > 40)



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Preventing:

Flu shots are recommended for anyone greater than 6 months unless contraindicated.

Those listed in the complication list above, may want to check with their physician about flu vaccination but most will be encouraged to be vaccinated; some may need a different type of vaccination

Staying away from those that seem sick or who are coughing or sniffing, washing your hands often, using your own pen for signing, using hand sanitizer, avoid touching your face.

Diagnosing: it is sometimes difficult to differentiate between the flu and other respiratory or cold viral illnesses. Health care providers may do a Flu test or just assume you have the flu if it is in your area. For those that are high risk with Flu, doing a flu test is more likely.

Treating: most care is supportive such as rest, plenty of fluids, Tylenol or ibuprofen for fever or aches, avoid others, soft diet, flu or cold medicines to improve symptoms (check if you are taking more than one medication to make sure that both don't contain Tylenol, aspirin, or ibuprofen).

If you are at risk for flu complications, have a severe case of flu, or cannot avoid others to prevent spread, your health care provider may choose to prescribe an antiviral. These are particularly helpful if started within 48 hours of the onset of symptoms.

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