

Cold and Flu Fact Sheet

The common cold, including chest colds, head colds, and the seasonal flu are caused by viruses that can put a damper on your holiday spirit. While Cold and Flu season can start as early as October and can last as late as May, activity peaks during Christmas time and will want to make you say Bah-Humbug!

General Information

Virology

Cold - The common cold is a viral infection of the upper respiratory tract. The most commonly implicated virus is a rhinovirus. Other commonly implicated viruses include human coronavirus, influenza viruses, and adenovirus. Frequently, more than one virus is present. The difficulty with pathogens associated with the common cold is that some viruses are enveloped, meaning they are easy to kill (such as influenza) while others are non-enveloped, meaning they are harder to kill (such as rhinovirus). This emphasizes the importance of choosing disinfectant products with the ability to kill both enveloped and non-enveloped viruses.

Flu - Influenza (commonly known as the flu) are influenza viruses which are enveloped, RNA viruses that make up three of five genera of the family Orthomyxoviridae:

- **Influenza Virus A** (cause seasonal flu). Influenza A viruses are divided into subtypes based on two proteins on the surface of the virus: the hemagglutinin (H) and the neuraminidase (N). There are 18 different hemagglutinin subtypes and 11 different neuraminidase subtypes.
- **Influenza Virus B** (cause seasonal flu epidemics). Influenza B are broken down into lineages and strains. Currently circulating influenza B viruses belong to one of two lineages: B/Yamagata and B/Victoria.
- **Influenza Virus C** (cause mild respiratory illness).

Epidemiology of transmission

Cold- The common cold virus is transmitted via airborne droplets, direct contact with infected nasal secretions, or fomites (contaminated objects). Which of these routes is of primary importance has not been determined; however, hand-to-hand and hand-to-surface contact seems of more importance than transmission via aerosols.

Flu- Influenza can be spread in three main ways: by direct transmission (e.g. sneezing directly into the eyes, nose or mouth of another person), the airborne route, and through hand-to-eye, hand-to-nose, or hand-to-mouth transmission, either from contaminated surfaces or from direct personal contact such as a hand-shake. As influenza has many routes of transmission, it can easily lead to an outbreak, emphasizing the importance of hand hygiene.

Clinical manifestations

Cold - Symptoms of a common cold usually appear about one to three days after exposure to a cold-causing virus. Signs and symptoms typically include a runny/stuffy nose, itchy/sore throat, cough, congestion, slight body aches and mild headache, sneezing, water eyes, and mild fatigue.

Flu - Symptoms of seasonal influenza are very similar to those of the common cold, except the flu can be distinguished by a high fever and more severe symptoms of the common cold.

Pandemics and Outbreaks

A pandemic is a global disease outbreak. It is determined by how the disease spreads, not by how many deaths it causes. When a new Influenza A Virus emerges, a flu pandemic can occur. Because the virus is new, the human population has little to no immunity against it. The virus can quickly spread from person-to-person worldwide.

Pandemic Flu vs. Seasonal Flu:

Pandemic Flu	Seasonal Flu
Rarely happens	Happens annually
Vaccine not available	Vaccine available
Symptoms more severe	Normal flu symptoms
Major impact	Manageable impact

Basic Prevention

The single best way to protect yourself and family against the flu is to get vaccinated each season. Yearly flu vaccination should begin soon after flu vaccination is available, ideally by October. Another effective way to prevent the Cold and Flu is to practice good hand hygiene, as hands play a major role in the transfer of infectious diseases in our public and private lives. In fact, our hands spread up to 80% of germs! The Centers for Disease Control and Prevention (CDC) recommends that people take everyday precautions to help prevent the spread of germs by washing hands with soap and water for at least 20 seconds. Additionally, an alcohol-based hand sanitizer should be used when soap and water are not available, or to improve efficacy. Be conscious to not touch your face, eyes or mouth to prevent transmission.



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Infection Prevention and Control Measures

Facility Prevention Measures

Routine/Standard Precautions are sufficient preventative measures to follow when providing care to patients during Cold and Flu season.

- Promote and administer influenza vaccine
- Practice respiratory hygiene by sneezing or coughing into a clean tissue or your sleeve
- Ensure all high-touch surfaces areas are cleaned and disinfected at the end of the day (preferably after each patient)
- Ensure staff is practicing good hand hygiene
- Use Personal Protective Equipment (PPE) barriers (such as gloves and/ or goggles) when anticipating contact with an ill patient
- Immediately wash hands and other skin surfaces after contact with high touch surfaces

Environmental control measures

Influenza is an enveloped virus (easy to kill), meaning it is very susceptible to hospital grade disinfectants with a virucidal claim. Disinfectants with a claim against Influenza A will also cover efficacy for Influenza B and C. Cold viruses on the other hand can be enveloped or non-enveloped (hard to kill) depending on the virus. Therefore, products being used for disinfection of the Cold and Flu, must have an appropriate virucidal claim and proven efficacy against enveloped and non-enveloped viruses. Many commonly used disinfectants do not have the ability to kill non-enveloped viruses which is why reading the label and ensuring germicidal efficacy is vital.

Routine cleaning and disinfection should be performed on frequently touched environmental surfaces, as contaminated surfaces are one of the primary routes of transmission. All patient care equipment should be cleaned and disinfected as per Routine/Standard Practices before reuse with another patient or a single use device should be used and discarded in a waste receptacle after use.

References:

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