

## **SARS-CoV-2 induced Covid 19 and Influenza: The Dual overwhelming infection: Rising Attentions for Similarities**

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### **ABSTRACT**

The multiple mutations of the Covid 19 virus worry people around the world, and the reason for this is very clear, as the last century witnessed four pandemics of influenza viruses, which are: H1N1 in 1918, H2N2 in 1957, H3N2 in 1968, and H1N1 in 2009 - which came in a second deadly wave In the fall and the beginning of winter. Covid-19 may behave in the same way, and the dangerous mutants of Covid have already seemed to sweep the world like the Indian strain. The worry that we might get a double overwhelming infection from the flu and the coronavirus is justified and could be very dangerous to humanity.

That the effect of this double overwhelming infection may be dangerous is more closely related to human behavior than to virology: as there are many similar characteristics common to the two viruses in virus transmission, spread, symptoms, and so on. Where both Covid-19 and influenza are transmitted - in most cases - through respiratory droplets, so the same prevention strategies used to limit the spread of the first will also work to limit the spread of the second and the speed of dealing with the first for sure from the second and so on. The aim of this descriptive minireview, generally, is to shed light on the SARS-CoV-2 induced Covid 19 and Influenza Dual overwhelming infection and the Rising attention to Similarities between them.

**KEYWORDS:** dual infection, clinical characteristics, symptoms, coronavirus, SARS-CoV-2, influenza virus, Covid-19.

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### **ARTICLE DETAILS**

**Published On:**  
**25 August 2022**

**Available on:**  
<https://ijmscr.org/>

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### **INTRODUCTION**

Both the COVID-19 virus and the flu virus cause similar symptoms. Both cause respiratory diseases with manifestations ranging from asymptomatic disease, mild illness to severe illness, even death. The initial stages of colds, flu, and coronavirus can be very similar, and some cases of coronavirus and flu can be so mild that they don't cause alarm bells. Corona viruses are the second leading cause of colds after rhinoviruses, and in fact, the Corona virus or coronavirus is named after this because of the visible protrusions. On the surface of the virus when 'it is viewed using an electron microscope, and it must be said that there are many types of corona virus corona virus was first identified after being isolated from animals. Birds became ill with bronchitis in 1937, it was later discovered that the virus could infect many animals such as cattle, pigs, horses, and turkeys. , cats, dogs, rats, and mice, and it should be noted that these viruses differ from other viruses in their large

amounts of genetic material, in addition to their different modes of reproduction. A novel coronavirus (CoV) is when it comes from a new strain of coronavirus, as happened with the new epidemic with the new virus SARS-CoV-2. The disease caused by the novel coronavirus that first appeared in Wuhan, China, is known as Coronavirus Disease 2019 (COVID-19) - and its English name is derived as follows: "CO" is all letters the first letter of the word corona, and "VI" is the first two letters of the word virus, and "D" is the first letter of the word disease. The "Covid-19" virus is a new virus related to the same family of viruses as the virus that causes "Severe Acute Respiratory Syndrome - SARS" and some types of cold. There are several types of Corona viruses that cause illness such as Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS), and one has been identified. The coronavirus that causes COVID-19 in 2019 is known as SARS-CoV-2 or SARS-CoV-2 for short. The first difference between COVID-19 and the flu is the

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virus that causes them. While both illnesses are caused by viruses, the flu is caused by different types and strains of the flu virus. There are 3 main types of influenza viruses: types A, B, and C. Mutations occur in these viruses, giving rise to different strains. The World Health Organization conducts research each year to predict which strains of influenza virus are most likely to circulate each year.

Influenza is a fast-spreading infection that affects the body in the winter season, and the disease affects different age groups, and is caused by a group of viruses that infect birds and mammals, and there are five types of the virus: A, B, and C influenza virus. Influenza is one of the most common infectious diseases. It is a highly contagious seasonal disease, especially in the winter season. The peak of infection is in January and February. It affects 5-15% of people annually, causing 5 million people to be hospitalized throughout the year and leading to 650 deaths. A thousand cases a year. Patients with chest allergies are the most vulnerable to influenza complications, which necessitates the need to adhere to the treatment of these allergies, especially during influenza seasons.

### Transmission and Symptoms

Novel coronavirus and influenza viruses can cause some similar symptoms, such as fever, cough, and fatigue, but these similarities are often superficial. Pathogens use different receptors on cells to reach our bodies. As a result, SARS-CoV-2 enters through one route and the influenza virus enters through another route. In a study of nearly 1,200 patients in Northern California, one in five of them diagnosed with COVID-19 had another respiratory virus at the same time. Transmission speed is also an important difference between the two viruses. Both the average incubation period (time from infection to onset of symptoms) and serial interval (interval between successive infections) of the influenza virus are shorter than those of the novel coronavirus. The Covid-19 virus has an estimated interval of 5-6 days, while that of the influenza virus is 3 days. This means the flu could spread faster than his Covid-19. Mild symptoms from infection with the emerging coronavirus, Covid-19, are not themselves dangerous, but in some cases they can occur in older people and people with underlying medical conditions, especially in emergency rooms and emergency rooms. Some caution is required. Emergency Centers When this happens, hospitals are overwhelmed with acute patients. Incubation period The spread of the coronavirus in the body before detection is 14 days from the time of contamination, either by inhalation or by touching a contaminated surface and then touching the face. The virus first infects the cells lining the throat, windpipe and lungs, then turns them into "coronavirus factories" to produce large numbers of other viruses that infect more cells. The incubation period (the time from exposure to the virus to the onset of symptoms) varies greatly from person to person, but averages up to 5 days. Coronavirus patients have a fever of 37.8°C (100°F), a persistent dry

cough, and loss of taste and smell. Occasionally, patients may also suffer from fatigue, pain, sore throat, headache, shortness of breath, rarely diarrhea, runny nose and nasal congestion, with symptoms ranging from mild to severe, according to the NHS. Flu symptoms include fever, fatigue, dry cough, aches and pains, and patients may experience a runny or stuffy nose and sore throat. Diarrhea can occur occasionally in children, sneezing and shortness of breath are not present in flu and the NHS notes that symptoms often appear quickly. The new coronavirus infection is a disease that causes the loss of taste and smell due to influenza, colds, allergies, etc.

### CONCLUSION

The same prevention strategies used to limit the spread of SARS-CoV-2 will also work to limit the spread of influenza virus, and quickly deal with the first, certainly from the second, and so on. In a study published in *The Lancet* last April, Cowling showed that the public health measures that were implemented in Hong Kong to contain the Corona virus, such as border restrictions, quarantine, isolation, social distancing, face mask wearing and hand washing, led to a rapid decrease in influenza activity. In the United States, new influenza cases declined a few weeks after COVID-19 was declared a pandemic. The 2019-20 flu season, which was on the verge of being among the worst in decades, ended six weeks early.

It is important to take advantage of influenza vaccination to reduce the risks in the event of a fourth wave, especially since the vaccination of the targeted with influenza blocks the way for the progress of Corona and its spread in societies, and on the contrary, if vaccination is not done, Covid 19 allows them to be stormed, put them in intensive care units and lose more lives.

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