

Q&A: Why are children most affected by this year's cold and flu season?

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The 2023 flu season is shaping up to be like the influenza season of 2019—the largest on record in Australia.

The difference is this year children have accounted for almost 80% of those admitted to hospital.

Dr. Daniel Layton is an expert immunologist working at our Australian Center for Disease Preparedness. We spoke to him to get answers to some common questions about this year's flu and COVID-19 numbers.

What are the main respiratory infections this year?

Every year, around this time, we start to see a sharp rise in respiratory infections. It is often called the cold and flu season.

The [common cold](#) can be from one of 200 different viruses. One virus, called rhinovirus, accounts for between 10% and 40% of infections. Other common infections are from coronaviruses (other than COVID-19) and [respiratory syncytial virus](#) (RSV).

More serious infections come from the [influenza virus](#) and SARS-CoV2 (the virus that causes COVID-19).

So far this year, influenza is the most reported infection. Of the group tested, about 33% (33.1%) of people had the flu, followed by almost 30% (29.6%) having rhinovirus. COVID-19 accounted for about 18% (17.5%) of cases and about 9% (8.9%) were positive for RSV.

What are the flu numbers this year?

There are two things to consider in the flu season. These are the number of cases and the severity of infections.

From 1 January to 25 June this year, there were 116,473 laboratory confirmed cases of influenza. A quarter of these were diagnosed in the

last two weeks. This is early in the flu season to see such high numbers, and they are well above the five-year average.

The peak of the [flu season](#) is usually in late-July to early-October. With the high numbers already seen, there is a possibility we will see flu numbers like those seen in 2019. This was the largest number of cases of flu on record in Australia.

It is still too early in the year to comment on the severity of this season's flu. However, there is no sign of worsened disease so far.

Why are children particularly vulnerable?

Most often, children are the largest group of patients requiring care for respiratory viruses. The highest number of hospitalizations are in children aged 5 years or younger.

The reason for this is differences in their immune systems. A child's immune system is still developing, leaving them more vulnerable to worsened infection.

Adult immune systems have experienced influenza more often. Our immune system remembers the virus and can react quickly to protect us.

Why are children's hospitalization rates so high this year?

The most likely explanation is a drop in [vaccination rates](#). This year childhood vaccination rates are much lower than in previous years.

Currently, only about 23% (22.7%) of children aged 6 months to 5 years are vaccinated for influenza. And only about 13% (13.3%) of children

aged 5 to 15 years are vaccinated.

These numbers are much lower than in previous years. In the years before the COVID-19 pandemic, about 41% (41.3%) of children aged 6 months to 5 years were vaccinated and about 26% (26.2%) for the 5- to 15-year-old age group.

Why are vaccination rates so much lower this year?

It's very difficult to say why vaccination rates have dropped. However, given a lot of our behaviors and how we interact, including with GPs, has changed post COVID-19, this may be a flow on effect from the pandemic.

What figures are we seeing for respiratory syncytial virus?

Respiratory syncytial virus (RSV) is one of the 200 viruses we call a cold. But it can cause severe disease in children. Because of this, and it being quite common, more research on solutions for RSV has been done recently.

This year, to 3 July, we've seen 69,997 reported cases of RSV. This is a higher figure than last year. This is likely due to increased testing for RSV. In 2021, RSV became a notifiable disease in Australia. This means we now record the number of cases each year to help understand and control disease outbreaks.

Does RSV affect children more than adults?

Much like other respiratory diseases, RSV can have a greater impact on both children and the elderly. Most children will have been infected with

RSV by the age of two. In most cases, the symptoms are like the common cold. In about 3% of cases, RSV infection can result in hospitalization. This is often due to the development of bronchiolitis or pneumonia.

What are the COVID-19 numbers?

During May we saw a rise in the number of COVID-19 cases. At its peak, we were seeing more than 5,000 cases per day. The number of infections dropped off during June to less than 2,000 cases per day.

What is causing the increase in respiratory disease numbers?

A lot of what we are seeing this year is consistent with previous cold and flu seasons. However, the lower vaccination rates are having an impact in higher numbers of hospitalizations. This is a good reminder to get yourself and the kids vaccinated for influenza each year.

Will there be a combined COVID and flu vaccine?

While it is now common to receive the influenza and COVID vaccines at the same time, we haven't yet seen a combined vaccine hit the market. These combination vaccines are currently undergoing clinical testing to ensure they are both safe and effective.

Why can some of these infections result in serious illness?

Some infections like influenza and COVID-19 can spread quickly in our bodies. They can also mutate to avoid our immune system defenses. This

leaves us more vulnerable and might result in needing medical support. Infection in some people with pre-existing conditions can lead to further complications as well.

In general, it is important to wash our hands often. Stay home if we're feeling unwell. And remember to get vaccinated when vaccines are available. This will help to stop the spread of viruses and reduce the impact on friends and family.

Provided by CSIRO

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