The Long Arm of COVID…

How it is touching our Children

Dr Leong Ming Chern

The slightest sniffle or sneeze from our little ones today will have parents heading for the doctors, and for good measure. Also, the latest mutations of the SARS-CoV-2 virus appear have put the kids at a greater risk of infection, especially as many, specifically the youngest of them - have yet to be placed on any vaccination schedule.

So yes, children and COVID-19 is surely a spine-chilling scenario for any parent, fraught with fears and anxieties.

So, what is a parent to do?

Paediatric Cardiologist **Dr Leong Ming Chern** has some answers.

Let's first deal head on with what to do if your kid gets sick, and/or tests positive:

1. DON'T PANIC!

2. Take heart - most kids recover well, so keep a clear head, stay calm and ensure your child is treated supportively and is well-hydrated.

3. Make the child comfortable and constantly monitor symptoms - it's good to have a pulse oxymeter at home to take readings 4-6 hourly.

4. Monitor for 14 days. If the child becomes unwell, or symptoms escalate, head to the doctors.

5. Know that the admission threshold for children is low, and they will be attended to immediately at any hospital.

For us at IJN, children who come in would likely already be our patients, or those with heart-related medical histories. So, even if the child is asymptomatic, we tend to admit.

The best case scenarios that doctors the world over saw early on, was a complete recovery without incident. Thankfully this is still the case, in most instances.

Backtracking, initially, it seemed that children were largely spared from COVID-19 and the numbers that were coming out from every country did not appear to include many kids. Even those who did make up the statistics were not severe cases.

However - and unfortunately there always is a however - the game has changed, with the emergence of virus variants. As of end August 2021, Malaysia had recorded 310,074 cases in children, compared to 12,610 for the whole of 2020. And from 6 deaths in 2020, it jumped to 41. This is a mere 0.01% fatality rate, but no figure is acceptable when it comes to our children, is it?

COVID is now largely considered the "pandemic of the un-vaccinated" and unfortunately, children fall in this category, especially those younger than 12. While we are now actively vaccinating the adolescents, there is not enough evidence that the vaccines are safe for those below 12.

A lot of kids who are turning up positive are getting it from their parents. We also have an uncomfortable number who are less than a year old. These kids are at higher risks for complications as their immune systems are under-developed.

The good news is that while the below 12's cannot be vaccinated at the moment their immune system does a good enough job to prevent them from getting severe illness. This is basically why we thankfully have low numbers who are in Category 3, 4 and 5.

Nevertheless, we still monitor them carefully and if they present a clean bill of health upon recovery, they usually bounce back fine.

This said, we should still be vigilant. It is quite easy to pick up if they are not well, as the signs are very obvious to parents. Unfortunately, it still is possible, though quite uncommon, for inflammation to turn up 4-6 weeks later.

This severe inflammation of the whole body - Multisystem Inflammatory Syndrome in Children (MIS-C) - occurs when their own antibodies go on the attack, creating a cytokine reaction. It can lead to inflammation of the heart, lungs, blood vessels, kidneys, digestive system, brain, skin and/or eyes. Treatment is with steroids and other biologics to suppress inflammation, and most kids recover.

Complications can include arrhythmias, heart block, myocarditis and pericarditis. If we halt the inflammation, we can reverse it, but if is not picked up things can escalate.

So, we need to watch out for decreased activity, red eyes, rashes, lethargy, fever, rapid heart rate and breathing. Note here that the COVID vaccination appears to prevent MIS-C, and MIS-A, the adult form.

Meanwhile, children with congenital heart diseases who contact COVID would be more prone to cyanosis, (due to insufficient oxygen), sinus tachycardias (fast heart rates) and severe pulmonary hypertension.

Naturally, they are considered high-risk patients and we quarantine them at the hospital where we can monitor them closely. We need to know their baseline saturation levels so we can treat any incidence of happy hypoxia. If they are fairly asymptomatic, we treat them supportively for 14 days and discharge them once they are symptom-free.

All said, it is still difficult to predict which child will fall severely ill - the risk is the same as the general population. It remains a watch-and-see game of vigilance. I would not generalise that children who fall into Category 3,4,5 are immunocompromised or have poor immunity. There are a lot of things at play such as individual immune systems, antibodies, nutritional status, comorbidties and of course, virulence and variants of the virus.

This virus is like Swiss cheese, you stack all the factors up in a thick pile and it sometimes still manages to penetrate through the holes.

As for Long COVID - well, it appears that anyone can get it and there is no indication of susceptibility based on the severity of infection. The bad news is that anyone who tests positive can get Long COVID. Like adults, the symptoms in children can include insomnia, fatigue, lethargy and difficulty concentrating - recovery can take months.

The bottom line - let's protect our kids as much as we can. We cannot predict the future, what we need to do is to deal with the now. And the best option we have at the moment is to vaccinate the children who qualify.

This way we protect a larger population and shrink the environment for the virus to mutate.