

The State of Our Children: Kids and COVID-19

April 5, 2021



Several of our Valley counties are moving into the red tier with progress on many fronts—declining cases, hospitalizations and deaths from COVID-19. Vaccines—and, more importantly, access to vaccines—have brought hope to all as the economy begins to re-open, kids return to school and the weather changes to spring! **This is the state of our children for the week of April 5, 2021.**

Multisystem Inflammatory Syndrome in Children: What You Should Know

Reshma Patel, MD - Pediatric Rheumatologist

Multisystem inflammatory syndrome in children (MIS-C) associated with COVID-19 was first identified in April 2020 and occurs in children under 21 years of age. The syndrome is the result of the body's immune response to the presence of the SARS-CoV-2 coronavirus and can present in children who may have had asymptomatic or symptomatic COVID-19 infection even weeks prior. It has also been seen during active COVID-19 pneumonia in children.

The syndrome causes severe inflammation of the blood vessels in the heart, kidneys, digestive system, brain, skin, eyes and other organs. It is also thought to affect the coagulation pathway leading to increased risk of blood clots. MIS-C has features in common with an illness called Kawasaki disease as well as sepsis, which also causes inflammation of the blood vessels throughout the body.

We continue to see a steady increase in the number of patients with MIS-C at Valley Children's Hospital, Madera. Approximately 100 cases have been identified since June 2020, many of which required admission to the intensive care unit.

In the U.S., more Black and Hispanic children have been diagnosed with MIS-C compared to other races and ethnic groups. This, in part, may explain the large number of cases in the Central Valley where there is a large Hispanic population. Studies are needed to help determine why MIS-C affects these children more often than others.

Symptoms of Multisystem Inflammatory Syndrome in Children

Patients have many of the below signs and symptoms that acutely present and then worsen rapidly.

- **Fever > 24 hours or longer, usually >101**
- **Vomiting, diarrhea, abdominal pain**
- **Skin rash**
- **Feeling unusually tired**
- **Tachycardia (rapid heart rate) and tachypnea (rapid breathing)**
- **Red eyes**
- **Redness or swelling of the lips and tongue or of the hands and feet**
- **Headache, dizziness or lightheadedness**
- **Enlarged lymph nodes**
- **Body aches and neck pain**

Early diagnosis and treatment of patients with MIS-C is critical to prevent long-term complications. If a child has signs of MIS-C, it is recommended that they contact their pediatrician, and depending on clinical status, they may be directed to the emergency department for further care. Our rheumatology and infectious disease specialists continue to be available to consult with healthcare providers with management of such cases.

As Children Return to School

The health and safety of our children, school staff and communities remain our top priorities. Below are some common questions and answers that will be useful for school staff and parents.

What is the treatment for MIS-C?

A patient with MIS-C can be categorized into mild, moderate or severe. If the child is moderate or severe, they will often require hospitalization and need treatments such as Intravenous Immunoglobulin (IVIG), systemic corticosteroids or even immunomodulatory drugs to calm the overactive immune system. Treatment usually lasts a few days to over a week.

Do children with MIS-C need to be in isolation?

MIS-C is a rare condition that is NOT contagious. It is a separate illness from active COVID-19 infection, but because it can occur in children that may still have the active COVID-19 virus, those children would need to be in isolation if they are in the hospital. It seems to be affecting children in a random way and we have not seen siblings in the same household have MIS-C. Children do not need to quarantine for MIS-C itself.

How do we distinguish a child with potential MIS-C case?

MIS-C is not subtle. Parents or school staff will notice the child behaving differently. While symptoms are similar to a common cold, a "stomach bug" or bacterial infections, they will feel much worse. With some viral infections, children still "look" healthy. But kids with MIS-C can be lethargic, just want to sleep and often don't want to eat. It is important to have a high level of suspicion for MIS-C in our area and recognize that patients with MIS-C are likely to clinically deteriorate fairly quickly.

How might we ease anxiety about this syndrome?

- MIS-C is still rare. While we have seen an increased number of children with this at Valley Children's and surrounding hospitals, the majority of children exposed to COVID-19 are not having this complication.
- Children are responding well to treatment.
- There is ongoing research throughout the country, including at Valley Children's, to follow-up with patients who experienced moderate-severe MIS-C within 6-12 months in order to determine if there are more long term complications that develop.

What else can help to prevent MIS-C or to identify it "early"?

- Awareness of previous COVID-19 infection, COVID-19 exposure or a positive test may help with higher level of suspicion of MIS-C, and in children that present the above symptoms should get evaluated sooner.
- Encourage good water and electrolyte intake to prevent shock, like low blood pressure.
- Continuing frequent hand washing as well as following masking and social distancing guidelines to help prevent asymptomatic spread of COVID-19.

Childhood vaccinations after treatment of MIS-C

Children who receive Intravenous Immunoglobulin (IVIG) will need modification in certain school-required vaccinations (specifically MMR and Varicella). Check with the child's pediatrician on adjustments to any vaccination schedules.