

Are kids key vectors in the spread of COVID-19 or not? U of C scientists want to know ^[1]

Doctors at the University of Calgary lead North American study involving 1,600 kids

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EXCERPTS

University of Calgary researchers are leading a North American study that aims to unlock some of the mysteries around how kids spread the virus that causes COVID-19 — information that could inform policy decisions around school re-openings or operations down the line.

The study will involve 1,600 children who show up at 20 emergency departments — for other reasons — around Canada and the United States.

Four hundred kids who test positive for SARS-CoV-2 — but have no symptoms — will be followed and compared to a group of 1,200 children who test negative.

According to University of Calgary pediatrics and emergency medicine professor Dr. Stephen Freedman, children with the virus often have mild symptoms or none at all.

"The challenge is these children can transmit infection and we're trying to understand how likely they are to transmit it," he said.

Freedman also works at Alberta Children's Hospital, which is the lead site for the study.

One of the big questions is how likely children are to spread the virus to grandparents or those with weakened immune systems. Those are the groups at highest risk for hospitalization and death.

Children in the study will be followed to see whether they go on to develop symptoms, who else in their household and group of close contacts becomes sick, and what role the amount of virus detected in that initial test plays in all of it.

"Finding that asymptomatic infection does or does not impose a significant risk to household members in terms of transmission will really clarify the importance and concern that we should have regarding children as vectors — or a means to transmit the disease," Freedman said. "And that will then play into the policy determinants related to school, et cetera."

According to Freedman, if children are passing the virus to others at school but none of them transmit it to other family members in their household, that would be reassuring.

"[In that scenario] the transmission is likely not going from child to home but more likely from home to child. And that also implies that even if that transmission does happen within the school it's not too concerning for the caregivers, for the household and for the broader population," he said.

If, on the other hand, children spread the virus to other kids in the school who in turn transmit it to their family members at home, that would be concerning, according to Freedman.

"Now we have a propagation of the disease process that is very different. That would be very worrisome for the context of school opening and how we're managing the potential risks at school," he said.

Alberta Health watching research

The Alberta government is expected to make a decision by August 1 about whether schools will re-open in fall.

Earlier this month, education minister Adriana LaGrange said the province is aiming to return to "near normal" operations for classrooms. But school boards have been warned to be ready to pivot depending on what happens with Alberta's COVID-19 rates.

A spokesperson for the education minister deferred questions about what role this kind of research would ultimately play in that decision to the department of health.

For its part, Alberta Health says it's aware of this study and supports its objectives.

"There is still much we do not know about COVID-19 and new evidence is emerging daily. This includes the impact of the virus and how it is transmitted by children," an Alberta Health spokesperson said in an email to CBC News.

The spokesperson noted the ministry announced funding for four serology studies last week — including two designed to track the spread of antibodies among groups of children in Calgary and Edmonton over the next two years.

"We are closely monitoring all emerging evidence, including the spread of COVID-19 in Alberta, academic research and the experience in other jurisdictions. All evidence and information will be considered before any final decisions are made on school re-openings," the spokesperson said.

The University of Calgary study is funded by the Canadian Institutes of Health Research and is expected to start within the next two weeks.

Freedman said some early data will likely be available prior to the start of the school year.

The researchers will share their findings with governments as well as a World Health Organization working group.

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