

Study to Determine Incidence of Novel Coronavirus Infection In U.S. Children Begins

National Jewish Health will sequence and analyze 60,000 samples from 6,000 people

MAY 13, 2020

DENVER — Researchers at National Jewish Health and across the nation have launched a study to determine the incidence of coronavirus infection among U.S. children. National Jewish Health, led by Max A. Seibold, PhD, associate professor of Pediatrics and the Center for Genes, Environment and Health, will serve as the experimental and computational analysis center for the study.



The study, known as Human Epidemiology and Response to SARS-CoV-2 (HEROS), funded by the National Institutes of Health, will identify new SARS-CoV-2 infections and COVID-19 illnesses among 2,000 children and their family members over a six-month period. It will help answer an important question about the role of children in the ongoing COVID-19 epidemic: Are children an important source for the spread of SARS-CoV-2 and COVID-19?

Many reports have indicated that children represent a distinct minority of COVID-19 patients. It is unknown, however, if children actually suffer fewer infections or if many of their infections go undetected because they produce no symptoms. Undocumented or asymptomatic COVID-19 patients have been proposed as a major source of SARS-CoV-2 infection.

“This study will help us understand the relationship between SARS-CoV-2 infections and COVID-19 illnesses among children,” said Dr. Seibold. “The genomic analysis of nasal samples from study subjects will allow us to understand viral and host airway mechanisms that distinguish asymptomatic SARS-CoV-2 infections from active COVID-19 illnesses.”

The study will also evaluate the role of allergic diseases, such as asthma and atopic dermatitis, in the incidence, symptoms and severity of COVID-19. Study subjects are being recruited from among families already participating in 13 NIH-funded pediatric studies of allergic disease. Researchers expect to enroll 2,000 children and their family members for a total of 6,000 participants. Each participant will undergo at least 10 nasal swabs over the course of six months.

Scientists in Dr. Seibold’s lab will conduct molecular viral testing on more than 60,000 samples to detect SARS-CoV-2 infection. They will also sequence genomic material from both the virus and study participants, which will provide insight into how airway cells and the immune system respond to SARS-CoV-2 infection. Those findings could help clarify why children develop less severe or asymptomatic COVID-19. The findings may also help scientists devise rational treatments targeted at critical pathways of infection and the “cytokine storm” that causes severe disease.

National Jewish Health is the leading respiratory hospital in the nation. Founded 121 years ago as a nonprofit hospital, National Jewish Health today is the only facility in the world dedicated exclusively to groundbreaking medical research and

treatment of patients with respiratory, cardiac, immune and related disorders. Patients and families come to National Jewish Health from around the world to receive cutting-edge, comprehensive, coordinated care. To learn more, visit the media resources page.

Media Contacts

Our team is available to arrange interviews, discuss events and story ideas.

William Allstetter

303.398.1002

allstetterw@njhealth.org

Adam Dormuth

303.398.1082

dormutha@njhealth.org