

Clinic is detecting—and treating—hepatitis C virus in infants

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A pediatric infectious disease team led by University at Buffalo faculty is screening and treating hepatitis C virus (HCV)-exposed infants. The clinic's efforts are documented in a new paper based on an 11-year



retrospective chart review, published this month in *BMC Gastroenterology*.

"Before we started this program, we screened maybe one to two infants a year for HCV," said Oscar G. Gómez, MD, Ph.D., senior author and associate professor in the Department of Pediatrics in the Jacobs School of Medicine and Biomedical Sciences at UB. "Since 2019, we have screened hundreds every year.

"Vertical transmission of HCV—that is, from mother to fetus—is the leading cause of HCV infection in children," he explained. "Yet very few babies get screened."

Concerned about this gap in screening since he was a medical resident, Gómez, also a physician with UBMD Pediatrics, was determined to address it when he arrived at UB in 2016.

"In contrast to HIV or even <u>hepatitis</u> B, infections that can't be cured, hepatitis C is an infection that can be diagnosed and treated early in as few as eight weeks of treatment," he said, "so why not diagnose and treat early?"

"I believe that hepatitis C has been a neglected disease in the U.S., affecting a vulnerable population," he continued. "Many babies infected with HCV are born to mothers with opioid use disorder, who are frequently from low socioeconomic status, who have no health insurance, and some of them may be affected by incarceration and stigma. Hepatitis C is a significant health disparity in this particular population."

The Buffalo pediatric HCV program, established in 2019, includes an outpatient clinic with UBMD Pediatrics and inpatient consultation at John R. Oishei Children's Hospital. The program established close



collaborations with area providers including physicians in the Department of Obstetrics and Gynecology in the Jacobs School, Oishei Children's Hospital and other Kaleida Health hospitals, as well as the Catholic Health System and the Erie County Health Department

The sample included 133 HCV-exposed children, 5.2% of whom were infected; 96% were screened between 2011 and 2021.

The first step in screening infants for HCV is to screen pregnant people, now mandatory in some states, including New York.

"Thanks to this screening, we are able to detect mothers who are positive for HCV and then inform their obstetricians and pediatricians that we recommend the testing of their infants," Gómez said.

Hepatitis C and <u>chronic liver disease</u> are considered insidious infections, as <u>liver damage</u> can continue for decades without any symptoms.

If an infant becomes infected after exposure during childbirth, the child will likely not present with symptoms. However, at some point in adulthood, the infection can cause inflammation in the liver, tissue fibrosis and eventually hepatic cirrhosis, where too many liver cells are no longer active. HCV infection-associated cirrhosis may also manifest with <u>upper gastrointestinal bleeding</u>, lower GI bleeding and even liver cancer.

Gómez cited a 2021 study in Canada that showed that treating 10,000 children early prevented 330 cases of cirrhosis, 18 cases of hepatocellular carcinoma and 48 liver-related deaths; it was also considered cost-effective.

Said Gómez said, "It's clear that early screening and treatment is critical."



The team works closely with Andrew Talal, MD, and Anthony Martinez, MD, both Jacobs School faculty in the Department of Medicine and at UBMD Internal Medicine, who are national leaders in treating liver disease in adults. When <u>pregnant women</u> are found to be infected, the pediatric team refers them to Talal and Martinez for follow-up.

Their common goal? "We want to advocate for vulnerable families affected by hepatitis C and along the way contribute with efforts to eradicate HCV worldwide," said Gómez.

More information: Ndeye Licka Dieye et al, Retrospective analysis of vertical Hepatitis C exposure and infection in children in Western New York, *BMC Gastroenterology* (2023). DOI: 10.1186/s12876-023-02871-8

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