

Researchers review vaccine-preventable infections in pediatric transplant patients

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Children who receive solid organ transplants are hospitalized due to vaccine-preventable infections at rates that are significantly higher than the general population, according to a newly published study by University of Colorado School of Medicine researchers.

The study, published today in *JAMA Pediatrics*, reviewed nearly 7,000 [transplant recipients](#) nationally over a seven-year period beginning Jan. 1, 2004, to determine how often they are hospitalized with infections that are typically prevented with vaccines.

Of the 6,980 transplant recipients in the study, 1,092 patients, or 15.6 percent, were hospitalized with a total of 1,490 cases of vaccine-preventable infections within five years after transplant surgery. At that rate, hospitalization among the transplant [population](#) was up to 87 times higher than in the [general population](#).

"The huge burden of illness from vaccine-preventable infections that we show in this article should stress to all physicians the critical importance of ensuring that all transplant patients receive age-appropriate immunizations," said the study's lead author, Amy Feldman, MD, MSCS, assistant professor of pediatrics for the CU School of Medicine and program director for the liver transplant fellowship at Children's Hospital Colorado on the Anschutz Medical Campus.

While other studies have looked at morbidity from certain types of infections, this study is the first to explore the burden of illness from all

vaccine-preventable infections across the entire pediatric solid organ transplant population. The analysis included all patients younger than 18 years old who underwent a heart, lung, liver, kidney, intestine, or multivisceral transplant at any of the 45 U.S. not-for-profit tertiary care pediatric hospitals that report data to the Pediatric Health Information System of the Children's Hospital Association.

Based on the findings, Feldman and her co-authors recommend further study to identify ways to improve the likelihood of vaccination among children who need [transplant](#) surgery. The goal is to reduce the costs of hospitalization and the rates of sickness and death due to infections that could be prevented by vaccination.

More information: Amy G. Feldman et al, Incidence of Hospitalization for Vaccine-Preventable Infections in Children Following Solid Organ Transplant and Associated Morbidity, Mortality, and Costs, *JAMA Pediatrics* (2019). [DOI: 10.1001/jamapediatrics.2018.4954](#)

Provided by CU Anschutz Medical Campus

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