

# Study finds racial gaps in renal complications persist for children with lupus

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New research presented this week at ACR Convergence, the American College of Rheumatology's annual meeting, found that while hospitalized children with juvenile lupus have fewer adverse kidney outcomes overall, significant racial gaps for developing these complications persist and do not seem to be narrowing.

Systemic lupus erythematosus (SLE or lupus), is a chronic disease that causes systemic inflammation that can affect multiple organs. Most often, lupus starts in young females during their childbearing years, but it sometimes starts in childhood. The disease is not only more common in Black, Hispanic, or Asian people, but outcomes also tend to be worse in these groups.

While there are ongoing advances in treatment of pediatric SLE, we do not know how racial gaps in renal (kidney disease) outcomes are changing for these [young patients](#). This new study looked at changes in renal outcomes over time for hospitalized children with SLE grouped by race/ethnicity, and whether these trends were different depending on the minority makeup of patients admitted to each hospital.

"We need to know whether advances in pediatric lupus care are reaching all of our patients equitably. In order to close the gap, newer treatments or care models actually need to benefit disadvantaged groups even more than those who are not disadvantaged," says Joyce Chang, MD, Assistant Professor of Pediatrics at Children's Hospital of Philadelphia and the study's co-author. "Healthcare providers and health systems need to focus extra energy and resources on identifying disadvantaged groups who are at high risk for poor renal outcomes and tailoring efforts to improve outcomes in those populations."

Researchers used a large health database to identify patients who were ages 21 or under and discharged from the hospital with an SLE diagnosis from 2006 to 2019. They defined adverse renal outcomes as anyone receiving codes for end-stage renal disease (ESRD) diagnosis, dialysis or a renal transplant. They used various factors to estimate a patient's odds of having an adverse renal outcome at any single hospital visit or the odds of a first-time hospitalization for an adverse renal outcome, and also noted the hospitals where half or more SLE patients were Black or Hispanic to see if there were any connections between a hospital's

minority composition, patients' race or ethnicity, and changes in renal outcomes over time.

The study included 7,434 SLE patients with a total of 20,893 admissions at 50 children's hospitals. Over a 13-year period, the proportion of SLE patients hospitalized with any adverse renal outcome, ESRD or dialysis decreased. However, Black children with lupus remained significantly more likely to have an adverse renal outcome while in the [hospital](#) compared to white children. Black and Asian children were also more likely to be hospitalized for their first occurrence of an adverse renal outcome.

On average, the magnitude of these disparities did not significantly change over time, but there were important differences in these trends between hospitals in which a larger proportion of patients are minorities compared to those with a lower percentage of minority patients. At hospitals where more than half of pediatric SLE patients were Hispanic, renal outcomes failed to improve at the same rate among Black and Hispanic white patients compared to non-Hispanic white patients. At hospitals where more than half of pediatric SLE patients were Black, rates of renal outcomes improved less quickly over time among Black children compared to whites, and outcomes also worsened among Hispanic white children compared to non-Hispanic whites.

This new study's concerning findings highlight the need to address persistent racial gaps in these potentially serious, life-threatening kidney complications among children with SLE.

"From a glass half full perspective, it's encouraging that there have been significant improvements in renal outcomes of pediatric lupus over the last decade. We must be doing something right. From a glass half empty perspective, contemporary care models have not been successful at narrowing racial disparities," says Dr. Chang. "Population averages

sometimes mask groups who may be severely marginalized in certain local contexts. Our future work involves taking a deeper dive into drivers of these differences in racial disparities at the local level."

**More information:** Joyce Chang et al, Racial Disparities in Renal Outcomes over Time Among Hospitalized Children with SLE and Effects of Hospital Minority Composition [abstract]. *Arthritis Rheumatology* (2021). Available at [acrabstracts.org/abstract/raci ... inority-composition/](https://acrabstracts.org/abstract/racial-disparities-in-renal-outcomes-over-time-among-hospitalized-children-with-sle-and-effects-of-hospital-minority-composition/)

Provided by American College of Rheumatology

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