

# Health disparities in type 1 diabetes and COVID-19 infection

17 March 2021

Non-Hispanic black patients with Type 1 diabetes and COVID-19 were almost four times as likely to present to the hospital with diabetic ketoacidosis (DKA) compared to non-Hispanic whites, according to an article published in *The Journal of Clinical Endocrinology & Metabolism* by Le Bonheur Pediatric Endocrinologist Kathryn Sumpter, MD.

The study examined 180 patients with Type 1 [diabetes](#) and laboratory-confirmed COVID-19 from 52 clinical sites, including Le Bonheur Children's. The objective of the study was to evaluate instances of DKA, a serious complication of Type 1 diabetes, in patients with Type 1 diabetes and COVID-19 and determine if minorities had increased risk when controlled for sex, age, insurance and last hemoglobin A1c (HbA1c) level.

"We know that Type 2 diabetes is a risk factor for worse COVID-19 outcomes, but less is known about Type 1 diabetes and COVID," said Sumpter. "This study allowed us to examine the intersection of Type 1 diabetes and COVID while also determining the racial inequities in DKA for these patients."

Previous studies have shown that COVID-19 disproportionately affects racial and ethnic [minority groups](#) with higher rates of infection and death. The same [minority](#) groups with Type 1 diabetes have also been shown to have increased risk of DKA and associated mortality. Because of these existing [risk factors](#), it is critical to understand how COVID-19 and Type 1 diabetes interact and affect outcomes. The results of this study show that non-Hispanic black patients with COVID-19 and Type 1 diabetes have an additional risk of DKA beyond the risk of having diabetes or being of [minority status](#).

The results of the study show that non-Hispanic blacks were more likely to present with DKA and COVID-19 (55%) compared with non-Hispanic whites (13%). Hispanics had almost two times

greater odds of presenting with DKA compared to non-Hispanic whites, which researchers found to not be statistically significant.

"A combination of factors lead to higher rates of DKA among minority Type 1 diabetes patients with COVID-19 that relate to social and structural risks," said Sumpter. "Social determinants of health, including income level, education, [racial discrimination](#) and inadequate health care access, impact these populations with devastating complications for Type 1 diabetes and COVID-19."

According to the study, intervention in these areas is essential to prevent these poor outcomes that unequally affect minority populations.

**More information:** Osagie Ebekeozien et al, Inequities in Diabetic Ketoacidosis Among Patients With Type 1 Diabetes and COVID-19: Data From 52 US Clinical Centers, *The Journal of Clinical Endocrinology & Metabolism* (2021). [DOI: 10.1210/clinem/dgaa920](#)

Provided by Le Bonheur Children's Hospital

APA citation: Health disparities in type 1 diabetes and COVID-19 infection (2021, March 17) retrieved 30 October 2022 from <https://medicalxpress.com/news/2021-03-health-disparities-diabetes-covid-infection.html>

*This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.*