Telemedicine and continuous glucose monitoring mitigated effects of pandemic on children with diabetes, finds study

May 31 2022

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The rapid adoption of telemedicine and increased use of continuous

glucose monitoring helped to attenuate the impacts of the COVID-19 pandemic on children with Type 1 diabetes, according to a new study from UT Southwestern researchers.

The pandemic had profound effects on disease management when shutdowns occurred in 2020, creating barriers for those who lost jobs and insurance, and aggravating existing health disparities. Several studies have shown that the pandemic worsened glucose control in patients with diabetes and made it more difficult to access care.

"Our diabetes team implemented telemedicine visits within weeks of the shutdown, allowing us to provide care to our patients in an efficient and timely manner," said Abha Choudhary, M.D., Assistant Professor of Pediatrics at UT Southwestern and a pediatric endocrinologist at Children's Health. "Our team was also able to utilize continuous glucose monitoring for a growing number of patients, which may have helped to mitigate some of the challenges brought on by the pandemic."

For the study published in *BMC Pediatrics*, Dr. Choudhary and colleagues used data from Children's Medical Center Dallas to determine how the management of patients with Type 1 diabetes was affected by the pandemic in a large urban setting. They analyzed patient characteristics including insurance status, race, ethnicity, gender, glucose control, office visits, and hospitalizations, and compared the use of continuous glucose monitoring in the year prior to the start of the pandemic to the first year of the pandemic.

The study found that while the number of office visits among patients decreased during the pandemic, there was no effect on disease management in this group—both glucose control and hospitalization rates were unchanged.

However, the results highlighted existing disparities among patients in

minority and low-income demographics. Both before and during the pandemic, Black and Hispanic patients and those without commercial insurance had worse glucose control and higher hospitalization rates than their white, non-Hispanic, insured counterparts.

While the use of continuous glucose monitoring was higher among insured patients overall, there was a dramatic increase in use by patients without commercial insurance during the pandemic. This is likely due to the increased availability of glucose monitoring systems offered to Medicaid recipients in Texas that took effect during the pandemic, Dr. Choudhary explained.

The researchers believe the increased use of continuous glucose monitoring along with the successful implementation of telemedicine greatly contributed to preventing worse outcomes in this patient population.

"For all the progress we have made, significant disparities remain with regard to access to some of the tools we think made the biggest differences during the early months of the pandemic," said Dr. Choudhary. "From broadband access to the hardware and software that's so central to diabetes care these days, we've only begun to scratch the surface when it comes to addressing disparities in technology and remote-patient monitoring."

More information: Abha Choudhary et al, Impact of the COVID-19 pandemic on management of children and adolescents with Type 1 diabetes, *BMC Pediatrics* (2022). DOI: 10.1186/s12887-022-03189-2

Provided by UT Southwestern Medical Center