

Non-COVID-19 deaths among people with diabetes jumped during pandemic, global study reveals

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DIABETES



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Non-COVID-19-related deaths among people with diabetes increased during the pandemic, as did the diabetes complication of sight loss, according to a global study review led by a University of Massachusetts Amherst public health researcher that examined the impacts of

pandemic-related disruptions on this vulnerable population.

The review, commissioned by the World Health Organization (WHO) and published Jan. 23 in [The Lancet Diabetes and Endocrinology](#), looked at 138 studies comparing pre-pandemic to during pandemic periods in North America (39), Western Europe (39), Asia (17), Eastern Europe (14), South America (four), Egypt (one), Australia (one) and multiple regions (33).

"What we found overall was a fairly negative impact on diabetes outcomes," says co-lead author Jamie Hartmann-Boyce, an assistant professor of health policy and promotion in the UMass Amherst School of Public Health and Health Sciences.

The review also found a startling increase in diabetes-related admissions to pediatric ICUs, as well as a rise in cases of diabetic ketoacidosis (DKA) among children and adolescents. Some of the cases were due to new-onset diabetes, meaning DKA—a serious, potentially life-threatening complication of diabetes—coincided with the diabetes diagnosis. There was no rise in the frequency or severity of DKA among adults.

In addition to an increase in deaths, "the data on pediatric ICU admissions and pediatric diabetes ketoacidosis is probably the most striking thing that comes out of this review," Hartmann-Boyce says. "It was very consistent across countries, and a pediatric ICU admission is a major event for kids and their families."

Hartmann-Boyce, who herself has lived with type 1 diabetes since she was diagnosed at age 10, had initially conducted another WHO-commissioned [study review](#) on the direct impacts of the pandemic on people with diabetes. "We set out to answer the question, are you more at risk of dying from COVID and having serious disease if you have

diabetes? And the data were clear—yes, you are," she says.

After seeing clear evidence that diabetes was a risk factor for death from COVID-19, the United Kingdom-based team (Hartmann-Boyce joined UMass Amherst last year from her previous post at Oxford University in England) then became interested in looking at the pandemic's indirect impacts on diabetes management.

"We know that not getting your eyes screened regularly if you have diabetes is a problem and leads to more sight loss," Hartmann-Boyce says. "And we saw diabetes-related mortality and all-cause mortality increasing in England during the first wave that wasn't attributed to COVID but was probably related to reduced access to health care and reduced [health care](#) utilization."

The researchers note that there were more new cases of type 1 diabetes than would have been expected, and children newly diagnosed with type 1 diabetes were much sicker than during non-pandemic periods. Much less common than type 2 diabetes, type 1 diabetes is an autoimmune disease that is usually diagnosed in childhood but can occur at any age.

Often type 1 diabetes is detected at routine primary care visits, as was the case for Hartmann-Boyce, whose diabetes was discovered from a urine test during her annual well child visit to the pediatrician. "If that had been me during the pandemic, I wouldn't have had that visit, I wouldn't have had that test and I would have had to get really sick before anyone knew there was something wrong," she says.

Regardless of the type of diabetes a person has, the disease requires self-management with diet, physical activity and consistent routines. People with type 1 diabetes also require insulin to manage their [blood sugar](#).

"People had so much to say about the ways in which the pandemic had

impacted their diabetes management," says Hartmann-Boyce, whose team interviewed people with diabetes as part of their examination. "That really inspired us to do this research."

She would like to update the review in the next decade or so, when more indirect pandemic impacts might become evident. "One of the interesting things about diabetes is, if you're blood sugars run higher, there can be immediate impacts but also the impacts might not be seen for five or 10 years down the line," Hartmann-Boyce says.

The negative impacts were most pronounced for females, [younger people](#) and racial and ethnic minority groups, according to the review, whose co-lead author is Patrick Highton, a research associate at the Diabetes Research Center at the University of Leicester, U.K.

"One would hope that the people who do pandemic planning would take this information into account when thinking about the messaging and the care provided to people living with diabetes, should we have another pandemic," Hartmann-Boyce says.

"The review also points to the importance of ensuring all people with diabetes, but particularly those from less advantaged groups, have consistent access to [diabetes](#) medication and care."

More information: Jamie Hartmann-Boyce et al, The impact of the COVID-19 pandemic and associated disruptions in health-care provision on clinical outcomes in people with diabetes: a systematic review, *The Lancet Diabetes & Endocrinology* (2024). [DOI: 10.1016/S2213-8587\(23\)00351-0](#)

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