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Alarming Rise Of Diabetes in Several US States, Study Shows

by [Brian Bossetta](#)

A study of diabetes rates across the US over four years reveals significant increases in the disease in many states. Tobias Oerum, diabetes advocate and cofounder of the company that conducted the study, discussed the data and some of the factors contributing to this troubling trend with *Medtech Insight*.

South Dakota and Connecticut do not have a lot in common.

One is deep red, steeped in Native American culture and known for its breathtaking western landscapes. The other is bright blue, quintessentially New England and the home of Yale.

However, what they do share is a staggering rise in diabetes between 2018 and 2021, a study by [Diabetes Strong](#) found after analyzing data on the disease from the Centers for Disease Control and Prevention for those years.

The study found that South Dakota had the highest increase in adults diagnosed with diabetes between 2018 and 2021, with 11,378 more cases in that span, an over 18% increase. Connecticut ranked second with 36,484 additional diagnoses, or a 13% increase.

California was third, with 369,512 new cases, or 11.5%; Nevada fourth, with 29,137, or 11.4%; and Virginia fifth with 78,594, or 11.2%.

Oerum said that while the study evaluated both type 1 and type 2 diabetes, as well as prediabetes, the study only looked at adults, which means the data may be misrepresentative of the totality of the disease because around half of those with type 1 diabetes are diagnosed before they turn 18.

“The consistent rise in diagnoses across states demands a comprehensive approach to address the underlying factors contributing to this trend.” – Christel Oerum

However, most people who live with type 1, such as Oerum’s wife Christel, who is the founder and CEO of Diabetes Strong, are older than 18. Oerum also noted that type 1 cases represent around 5% to 10% of the total diabetes population.

And with the diabetes care industry growing, with some estimates it will reach \$30bn by 2030 from \$18bn in 2022 — it’s crucial that manufacturers continue to create innovative devices and products to treat and manage the disease.

And the industry is responding.

For example, after a successful 2023, DexCom announced a major milestone at the J.P. Morgan Healthcare conference – \$1.030bn in fourth-quarter revenues, marking the diabetes company’s first billion-dollar quarter. The company also laid out plans for a new continuous glucose monitor (CGM) called Stelo, specifically for type 2 diabetes patients who do not need insulin. (Also see [“Dexcom COO On Stelo CGM Plans, Apple Watch Developments, And Why Non-Invasive Glucose Monitoring Still Leaves Much To Desire”](#) - Medtech Insight, 26 Jan, 2024.)

Medtronic has also enjoyed a long-awaited turnaround in its diabetes sector, with solid reviews so far on the MiniMed 780G insulin pump, which the Food and Drug Administration finally approved in April 2023 after delays stemming from an agency warning letter in 2021.

Regardless, Diabetes Strong’s study, Oerum said, underscores an “urgent need” for increased diabetes awareness and prevention, especially in the states with the most significant jump in new cases.

Christel Oerum also commented on the study:

“South Dakota’s staggering increase in diagnoses, followed closely by Connecticut and California, highlights the significant burden of this chronic condition on public health,” she said. “The consistent rise in diagnoses across states demands a comprehensive approach to address the underlying factors contributing to this trend.”

Last year, the FDA’s Center for Devices and Radiological Health opened a public comment period

on the potential use of digital health technologies to detect early warning signs of diabetes and prediabetes.

In response to the agency's call for comments, the Juvenile Diabetes Research Foundation (JDRF), said all forms of diabetes would benefit from sharing in the advancement of digital health technologies and that the best way to improve health outcomes is employing screening for all diabetes types with the primary goal of ensuring the proper diagnosis and intervention are given for the specific type of diabetes identified.

If a wrong diagnosis is made, JDRF noted, health outcomes tend to be worse and could lead to devastating consequences.

Oerum said misdiagnosis is a serious problem with diabetes care because many doctors assume if a patient is under 18, they have type 1 diabetes, and if the patient is older, it's type 2.

"But that's not how it works," he said, adding that more teens are developing type 2 diabetes — mainly because of diet and lifestyle, while adults are developing type 1 much later in life.

And not getting the diagnosis correct, especially with type 1, could be a fatal mistake for the patient.

Contributing Factors

While a number of factors play into diabetes, such as genetics and environment for type 1 and diet and lifestyle for type 2, one of the potential reasons for the significant increase in cases, Oerum said, is how thorough individual states are in diagnosing and tracking diabetes.

Many living with diabetes — particularly prediabetes and early type 2 — are unaware of it and it goes undiagnosed, he said.

"If a state has increased its focus on diagnosis and early detection, the numbers will actually jump up," Oerum said, "so it looks like more people having diabetes, but it's just more people being diagnosed correctly."

But this doesn't necessarily point to a positive development.

As Oerum noted, the rise in known cases is not just due to increased efforts by state governments.

"We know the instances of diabetes are increasing overall," he said. "We know that for a fact. It's not just more diagnoses. But if a state suddenly put in a program where they go out to underserved communities and look at getting people diagnosed early, that will make it look like

more people had diabetes, but [the state] just got better at spotting it.”

Type 1

Other factors outside of increased focus by state health officials also vary based on diabetes type.

Type 1 cases, Oerum said, are not just rising in the US but across the globe — and the reasons are not exactly clear. And because type 1 is genetic and not related to lifestyle, the reasons for the rise become murkier.

As explained by Diabetes Strong, type 1 diabetes is when the body’s immune system attacks itself and destroys the cells produced by the pancreas that make insulin.

Research has also shown that people with type 1 diabetes produce inadequate amounts of amylin — another critical hormone that helps to regulate blood sugar levels and appetite after eating.

People with type 1 are likely born with a predisposition to eventually develop the disease, and an everyday virus — or other stressful life event — is simply the catalyst for the onset. However, that does not mean the virus or event caused the disease.

“We basically have no idea at this point,” Oerum said. “We just know it's increasing.”

Type 2

Though type 2 diabetes — the more common type — affects how the body regulates and uses sugar as fuel, it is a fallacy, Oerum pointed out, that eating too much sugar causes it.

Long term, type 2 results in too much sugar circulating in the blood. Eventually, high blood sugar levels can lead to disorders of the circulatory, nervous, and immune systems.

Sedentary lifestyles, smoking, and poor diet can also increase the chances of developing type 2 diabetes or can worsen the condition.

On the Decline

At the other end of the spectrum, Hawaii saw the largest drop in diabetes cases with 20,000 less cases, or a more than 15% decrease during the study period. New Hampshire, Oregon, Arkansas, and Washington followed Hawaii’s downward trend.

But while an increase in cases in a state might be the result of that state’s due diligence in tracking the disease, a drop in cases doesn’t necessarily mean a lack of effort on a state’s part. In fact, Hawaii, Oerum said, has sharpened its focus on tackling diabetes, which has been a significant health concern among the state’s indigenous populations.

“There’s still this stigma that it’s something that could’ve been avoided by having a better lifestyle, or eating better, that it’s your fault. But it’s not. It’s not your fault.” – Tobias Oerum

According to the US Department of Health’s Office of Minority Health, Native Hawaiians were 2.5 times more likely to be diagnosed with diabetes compared to the non-Hispanic white population in 2018 and more than twice as likely to die from it.

“Hawaii has had a problem for generations with diabetes and they’ve made a big effort to get that under control,” Oerum said.

As with Hawaii, focusing on minority groups and underserved communities is essential in fighting diabetes.

Of the 38 million Americans with diabetes in 2021, the majority of those diagnosed, 13.6%, were among American Indians and Alaskan Natives, followed by Blacks, Hispanics, Asian Americans, and White adults.

Focusing on rural areas — where access to care may be nonexistent or difficult to get to — is also important in reducing diabetes. Rural counties have higher mortality rates than urban ones, according to the CDC.

This is why general practitioners must become better trained at early detection and prevention, Oerum said, because there’s simply not enough endocrinologists in the US to manage all the cases of diabetes.

Living with Diabetes

There are numerous treatments for diabetes, including daily injections and insulin pumps for type 1 — as well as medications, regular monitoring of glucose levels, and dietary and lifestyle changes. The bottom line, as Oerum pointed out, is that those with diabetes can live a full, long life.

For instance, in May 2023, the FDA cleared an automated insulin dosing (AID) system that uses an algorithm to determine insulin delivery for patients with type 1 diabetes. (Also see "[No More Carb Counting: FDA Clears Next Generation Insulin Pump](#)" - Medtech Insight, 22 May, 2023.)

But outside of early detection, a sharper focus on prevention, and broader awareness and

education about diabetes overall, Oerum said more than anything he would like to see an end to the stigma that too often still accompanies the disease.

“There are a lot of people with diabetes who do not want to tell their friends and family because it’s stigmatized,” he said. “There’s still this stigma that it’s something you could’ve been avoided by having a better lifestyle, or eating better, that it’s your fault. But it’s not. It’s not your fault.”