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Health Equity and Diabetes Technology: A Study of Access to Continuous Glucose Monitors by Payer and Race Executive Summary

Background

Approximately [122 million](#) Americans live with diabetes or prediabetes. [One and a half million](#) Americans are newly diagnosed with diabetes each year, and in the past 20 years, the number of adults diagnosed with diabetes has [more than doubled](#). Diabetes increases adult risk of premature death by [60 percent](#). These figures, especially the risk of diabetes-related complications and morbidity, are even more pronounced among medically underserved communities, low-income communities, and people of color. Today, [38 million](#) Americans live in poverty, and [76 percent of Americans](#) living in poverty are people of color. [Diabetes prevalence is inversely related](#) to household income level, with the poorest communities seeing the highest rates of the condition. For example, [according to the NIH](#), those who earn less than \$30,000 per year are three times as likely to have diabetes than those who make more than \$80,000 per year.

For all people living with diabetes, continuous glucose monitors (CGM) provide significant, potentially life-changing benefits for diabetes management and in turn for avoidance or delay of serious co-morbidities, hospitalizations and even death. A CGM provides much greater detail to patients and their health care providers than traditional blood glucose meters do regarding an individual's blood glucose levels, offering opportunities to analyze patient data more granularly than was previously possible and providing additional information to aid in achieving glycemic targets. CGMs also provide biofeedback in real time, allowing individuals with diabetes to modify their diet and insulin dose as needed in consultation with their health care provider. As a result, individuals with Type 1 and Type 2 diabetes who use a CGM are shown to have less [hypoglycemia](#), and they experience a reduction in their [average blood glucose \(A1C\)](#).

According to the American Diabetes Association's (ADA) [Standards of Care](#):

CGM is essential for creating the ambulatory glucose profile (AGP) and providing data on time in range, percentage of time spent above and below range, and variability. Access to CGM devices should be considered from the outset of the diagnosis of diabetes that requires insulin management. This allows for close tracking of glucose levels with adjustments of insulin dosing



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and lifestyle modifications and removes the burden of frequent [self-monitoring of blood glucose]. Interruption of access to CGM is associated with a worsening of outcomes; therefore, it is important for individuals on CGM to have consistent access to the devices.

Access to CGM technology is extremely important given its clear benefits, especially for those communities experiencing an outsized impact of diabetes. Prior studies have shown that access to health insurance is the [strongest single predictor](#) of whether adults with diabetes are likely to receive high quality diabetes care. Compared with insured adults with diabetes, the uninsured have [60 percent fewer office visits](#) with a physician, are prescribed 52 percent fewer medications, and have 168 percent more emergency department visits. Not surprisingly, as the data show, access to health insurance is also a strong predictor of whether people with diabetes have access to and use a CGM as well.

Study Questions

The research is robust when it comes to the relationship between health insurance coverage and high-quality diabetes care. The same is true about the interaction among income, race, and incidence of diabetes. The ADA commissioned new data from Health Management Associates to determine whether access to CGMs is a health disparity issue by asking two questions:

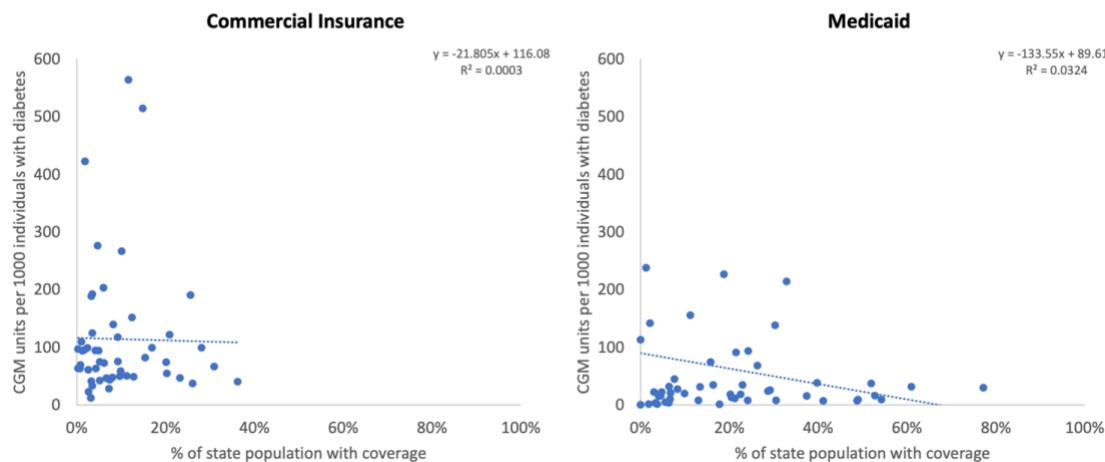
1. Which types of health insurance coverage make a person with diabetes more or less likely to access a CGM?
2. Is a person with diabetes more or less likely to be prescribed a CGM based on their age, race or where they live?

Major Findings

In this study, we find that poorer, older, Black and Brown Americans have less access to CGMs than their counterparts. In particular, three troubling trends emerge from the new data:

- **Individuals with Medicaid are the least likely to use a CGM, especially people of color with Medicaid.** Individuals enrolled in Medicaid who take insulin are two to five times less likely to use a CGM than those who have a commercial health insurance plan. This coverage gap is less pronounced when only white individuals with Medicaid coverage are considered. States with higher rates of white Americans enrolled in Medicaid have a higher CGM use than states with higher rates of Black Americans, where Medicaid coverage of CGMs is abysmally low. Hispanic individuals are also less likely to get a CGM if they are covered by Medicaid than a commercial health insurance plan.

Age 19-44 Black Population with Diabetes



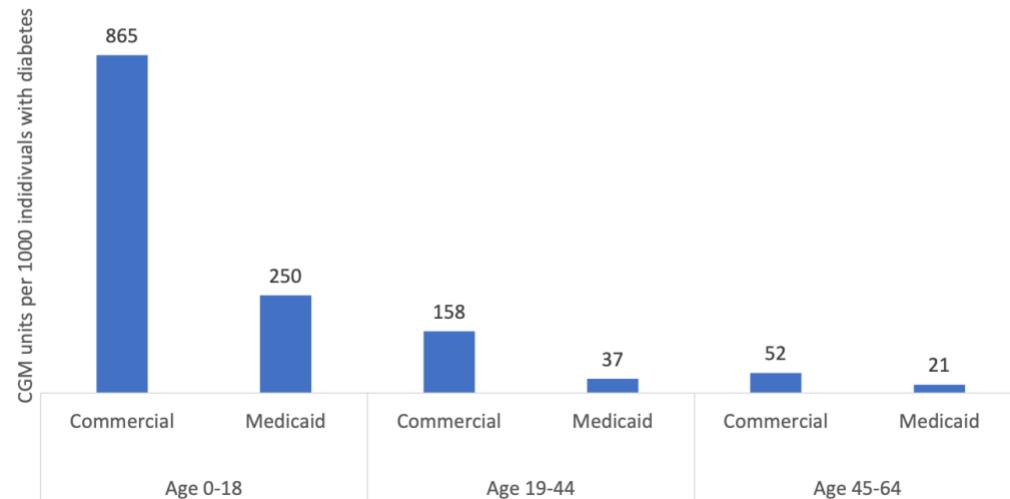


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- **Young people are more likely to get CGMs than older Americans are.**

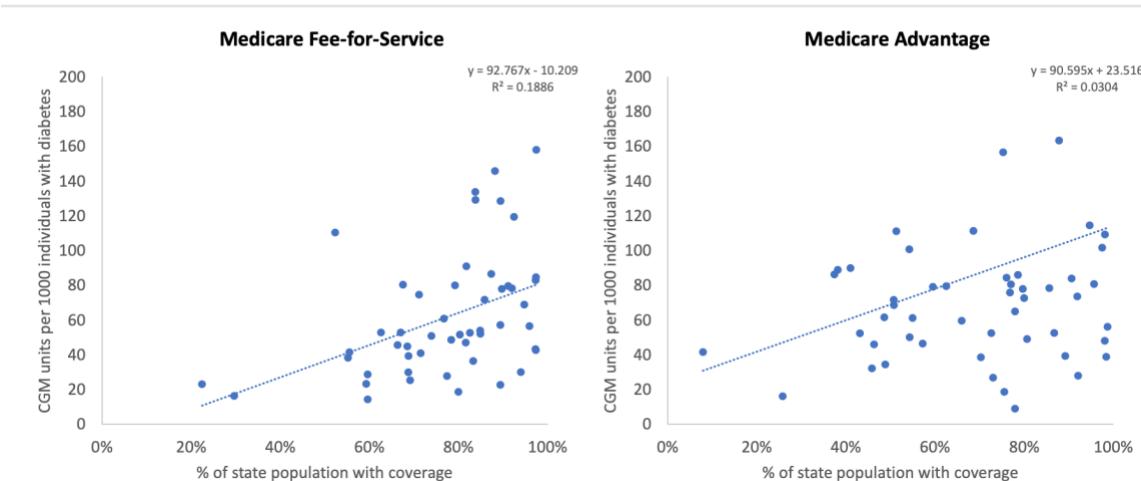
Insulin-dependent children younger than 18 who have diabetes are significantly more likely to use a CGM than pre-Medicare age individuals between the ages of 45 and 64. This gap is reduced when only individuals with commercial insurance plans are considered, highlighting Medicaid's barriers to CGM access across populations.

Overall CGM Utilization by Age and Payer

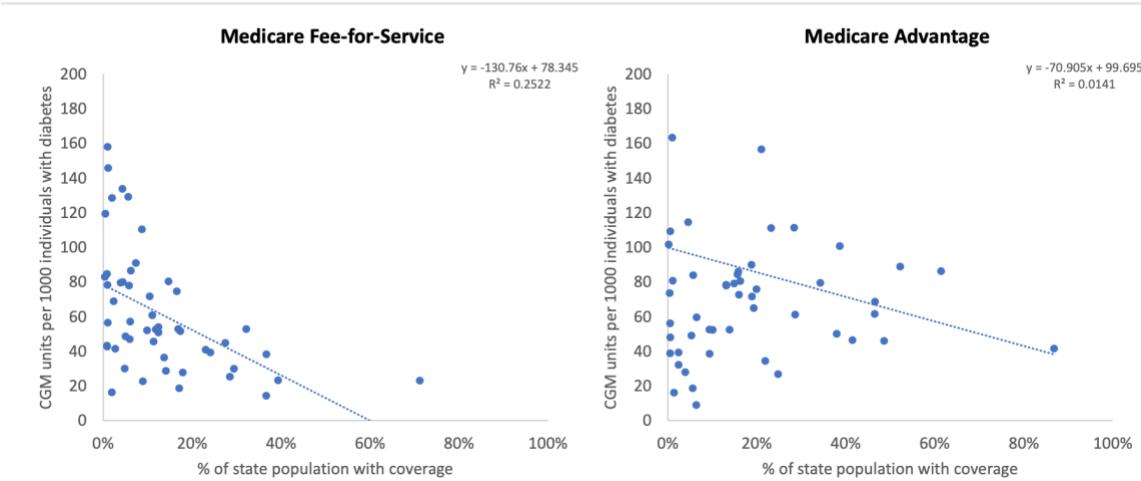


- Black Americans are at the most pronounced disadvantage when it comes to CGM access.*** Regardless of their age or what kind of health insurance coverage they have, states with higher rates of Black individuals who have diabetes have a lower rate of CGM access and utilization. The discrepancy is particularly stark among the Medicare population. States with a higher rate of white individuals on Medicare or Medicare Advantage have a significantly higher CGM utilization rate than states with a greater Black Medicare population.

White Medicare Population with Diabetes



Black Medicare Population with Diabetes





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Study Methodology

This study pulled 2019 and 2020 data from a wide variety of sources, ensuring as comprehensive a picture as possible of CGM access across types of health insurance, age, and geography. These sources include:

1. Insurance claims for CGM units with corresponding information on patient age, type of insurance coverage (Medicare fee-for-service, Medicare Advantage, commercial and Medicaid) and zip code.
2. The 2019 American Community Survey with information on the under-65 population, their state of residence, age, race, and type of coverage (commercial and Medicaid).
3. The 2019 Medicare Beneficiary Summary File with information on the 2019 Medicare population and their state of residence, race and whether they participated in traditional Medicare or Medicare Advantage; and
4. The National Health Interview Survey with information on diabetes diagnoses and prevalence by age, race, and type of coverage (commercial, Medicaid and Medicare).

Using this data, this study developed an estimated number of individuals with diabetes, calculated the age, coverage, and state of CGM utilization per 1000 individuals with diabetes, and compared state-level coverage rates by race with state-level CGM utilization to determine whether access to CGM technology is limited in communities of color relative to areas with a higher population of white Americans.

Conclusion

CGMs have transformed the diabetes management landscape, giving individuals with diabetes a vital tool to manage their blood glucose, quickly adjust behavior and avoid preventable complications. However, for many who stand to benefit most from these breakthroughs, access remains financially out of reach. While important progress has been made to expand access to medical technology for Medicare beneficiaries with diabetes—such as the recent, permanent removal by the Centers for Medicare and Medicaid Services of Medicare's four-times-a-day testing requirement that has long been a barrier to qualify for a CGM—far more action is necessary to increase access among currently underserved populations. Federal policymakers should take further action to reduce the burden of Medicare's CGM coverage requirements that limit access for low-income and minority people with diabetes.



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For low-income people with diabetes who rely on Medicaid, the diabetes management technology they need may not be covered adequately, or at all. Because Medicaid coverage is often determined on a state-by-state basis, there are wide discrepancies in diabetes technology access from one state to another. Given both the short- and long-term health benefits of using a CGM and insulin pump for those with poor glycemic control, federal and state government officials can and should take steps to drive improved and more uniform coverage policies for diabetes technology and supplies within Medicaid as a vital health equity measure. For example, states can promote CGM use by making them available through as many channels as possible, including both mail-order and local pharmacies, to increase access for the diverse populations that can benefit from CGMs.

As with prescription drugs, device manufacturers typically pay rebates to middlemen like PBMs to carry their products, and the rebates similarly have a market-distorting impact that inherently reduces access to lower-priced, more cost-effective devices. We note that individuals who access CGMs across insurance coverage types often pay more for their devices as a result of rebates negotiated by pharmacy benefit managers. Opportunities to expand PBM rebate reform in the diabetes technology and supplies categories are meaningful, in much the same way they offer the promise of less burdensome costs in the prescription drug market. Diabetes device focused PBM rebate reform can bring needed pricing transparency, reduce costs at the counter and improve patient access to this vital technology.