Increasing Continuous Glucose Monitor Use in Patients with Type 1 Diabetes

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Introduction/ Background

Continuous glucose monitoring (CGM) can help address many challenges faced by children and adolescents with diabetes by reducing the need for multiple daily finger sticks for blood glucose monitoring. CGM use has also been associated with improved glycemic control and lower HbA1c levels. However, barriers such as cost, insurance coverage, prior authorization process, device burden, and patient/family concerns may limit CGM use. As a result, despite the known benefits CGM remains underutilized among pediatric patients with diabetes.

Goal

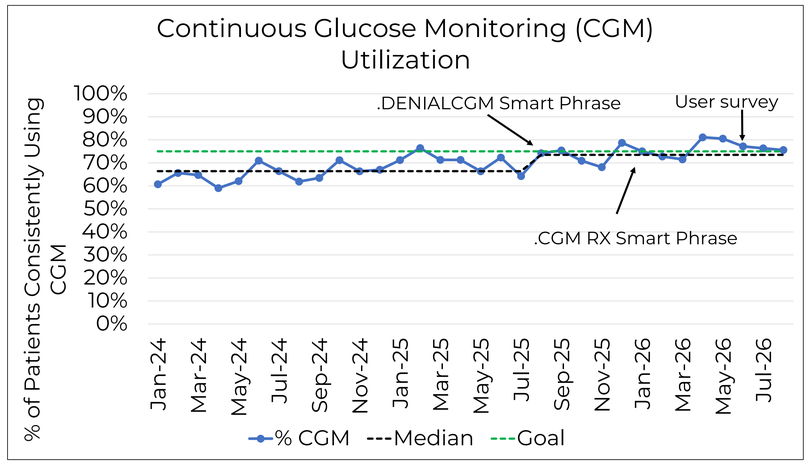
Increase CGM utilization for patients with Type 1 Diabetes in outpatient Endocrinology clinics from a baseline of 66% to 75% in 1 year.

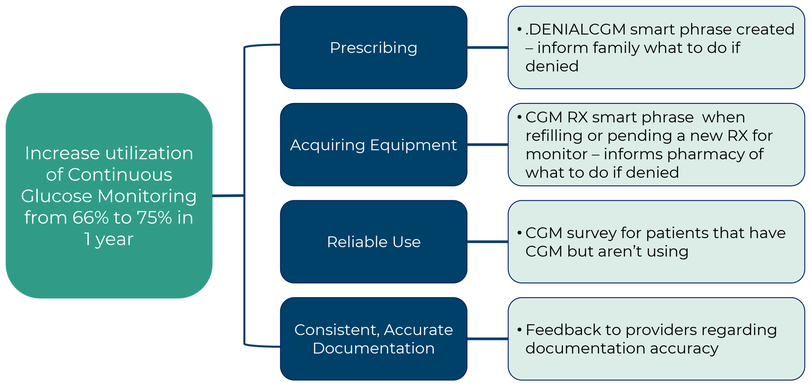
Methods

A multidisciplinary team including physicians, APRNs, CDCES, psychologists, and QI specialist mapped out the current state process and conducted a cause-and-effect analysis to identify barriers to successful adoption and consistent use. These findings were organized into themes in a key driver diagram, and Plan-Do-Study-Act (PDSA) cycles were developed based on the drivers. The PDSA cycles focused on communication through EPIC with patient/family and with partnering pharmacies to decrease barriers to acquiring the equipment.

Results

Median CGM utilization increased from 66% at baseline to 74% following two PDSA cycles, resulting in a centerline shift and approaching the project goal of 75%. Monthly CGM utilization was calculated as the proportion of eligible patients seen during the measurement period who were documented as consistent CGM users, representing an 8-percentage-point improvement from baseline.





Discussion/Conclusion

This Quality Improvement initiative focused on barriers related to acquiring prescribed therapy due to insurance prior authorization process and lack of awareness by families. In our first PDSA cycle, we were able to utilize EPIC communication to provide families with specific steps on how to follow up with the pharmacy after a CGM prescription was sent. For our second PDSA cycle, we utilized similar EPIC functions to communicate directly with pharmacies as well. Barriers that were encountered included reliance on provider documentation to be able to accurately assess CGM usage along with families not consistently utilizing EPIC communication to notify the clinic of issues with acquiring prescriptions in a timely manner. Despite these barriers, the interventions lead to increased CGM utilization in our patient population.

Next Steps/Sustainment Plan

- Beginning in June 2026, a survey was provided to patients/caregivers to share feedback on their experience with the CGM technology to identify barriers to consistent use.
- The early analysis of responses shows that concerns of others seeing a device being worn was a reason for why a patient was not utilizing CGM
- Additional PDSA cycles will be informed by the feedback shared.