We represent St. Charles Medical Group Ambulatory Care Clinical Pharmacy Department. We are in support of HB 2955 and expanding coverage for continuous glucose monitors to Medicaid patients and aligning coverage with CMS requirements.

In July of 2020, the Central Oregon Health Council (COHC) awarded St. Charles Medical Group's Population Health Department a mini grant to purchase several continuous glucose monitoring sensors and readers with the overall goal of optimizing patients' diabetes care in Central Oregon. Due to ease of use and ability to obtain the system from the local hospital pharmacy, the Freestyle Libre 14 Day continuous glucose monitor (CGM) was utilized for this pilot. The Freestyle Libre 14 Day CGM has the ability to connect to a patient's smartphone and thus a cloud-based system through our clinic, allowing providers to login and see patient's glycemic control in real-time. The system also allows patients to monitor their sensor glucose through a manual reader if their phone is incompatible with the app.

Methods

All patients in this pilot were managed by clinical pharmacists under a collaborative practice agreement with St. Charles Family Care/Internal Medicine providers, giving pharmacists the ability to optimize diabetes medication regimens and identify barriers to glycemic control. Clinical pharmacists identified patients that might benefit from CGM services and sensors were placed in office. Generally, each person was provided a single free sensor through the grant, which lasts 14 days. Examples of situations that might qualify a patient for a CGM trial include frequent hyperglycemia and/or hypoglycemia, infrequent fingerstick checks, inconsistent Hgb A1c with fingerstick glucoses, complex insulin regimens, etc. The CGMs allowed the clinical pharmacists to make medication adjustments in real time while the patient was wearing the monitor. Data was collected to assess the effect of a CGM on glycemic control. Data collected including starting and ending average glucose, percent of time in hypoglycemic range (defined as glucose of < 70 mg/dL), percent time in target range (defined as glucose of 70-180 mg/dL), as well as starting and ending Hgb A1c for those who continued the CGM for at least 90 days.

Some patients chose to remain on CGM after completing their trial through the grant, either paying cash for the monitors or pursuing through their insurance.

Results

By the end of May 2021, 55 patients had participated in the grant pilot. The results of this project showed patients that received CGM therapy had an increase in time in target range (70-180 mg/dL). The mean baseline time in target range prior to CGM was 50%, compared with 67% at the end of CGM use period. Those who continued the CGM for at least 90 days (n=22) saw an average Hgb A1c reduction of 1.1%. Additionally, there were 5 patients who had CGMs placed for frequent/severe hypoglycemia. CGM placement led to a decrease in mean time in hypoglycemia (< 70 mg/dL) from 14% to 10%.

Conclusion

CGM use led to clinically significant results with time in target range improving by 17%. Additionally, patients who chose to remain on CGM past the grant pilot saw an improvement in A1c by over 1%. A study from Sweden showed an A1c reduction of 7.8% to 7% reduced the risk of cardiovascular death by 45%, as well as a reduction in fatal and nonfatal coronary heart events of 37%.[1] Additionally, improvements in time in range have been shown to decrease risk of microvascular complications of type 2 diabetes, including albuminuria, retinopathy, peripheral neuropathy, and autonomic neuropathy.[2]

From the clinical pharmacists' perspectives, most patients became more engaged with their diabetes care while on a CGM and gained a better understanding of how lifestyle changes can impact their glycemic control. Many patients in Central Oregon live in remote areas that may limit their ability to see their healthcare providers in person due to access, travel, and cost. It is pertinent for patients with diabetes to be started on therapy quickly after diagnosis and monitored closely for potential complications. CGM services allow for remote monitoring of patient's blood sugars and can be used for therapy changes, which can quickly help to improve outcomes in this population. We would expect even more robust data supporting CGMs with long-term use of the system. By only providing 1-2 free sensors for patients through the pilot, medication titration was limited to 1-2 times weekly.

The results of this pilot support the use of continuous glucose monitors in clinic. Many high-risk OHP patients are not eligible for personal CGMs due to insurance restrictions, as coverage is limited to patients with type 1 diabetes diagnosis at this time. However, the vast majority of patients that wore CGMs during this pilot had a diagnosis of type 2 diabetes and saw clear benefit with CGM use. Expansion of CGM coverage through OHP would improve outcomes and impact how providers manage patients with type 2 diabetes as evidenced by this pilot.

Thank you for your time and for the opportunity to share,

St. Charles Medical Group Clinical Pharmacists

For questions, please contact:

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