Is Continuous Glucose Monitoring for Everyone with Diabetes?

STOCKHOLM, Sweden — Whether continuous glucose monitoring (CGM) is for "all" — and if not, for whom — was the topic of a lively debate at the recent European Association for the Study of Diabetes (EASD) 2022 Annual Meeting. In the debate, the two participants generally agreed that CGM is appropriate for all people with type 1 diabetes and those with type 2 diabetes on intensive insulin regimens.

Most of the discussion centered on people with type 2 diabetes on less intensive treatments and other subgroups.

The use of CGM Is Growing

Maciej T. Malecki, MD, PhD, of the department of Metabolic Diseases, Jagiellonian University Medical College, Krakow, Poland, argued the "yes" side. He observed: "CGM is not a tool for every patient with diabetes. However, large groups of patients with diabetes benefit from its use. The use of CGM will be growing rapidly as new technologies develop and prices go down."

He began by listing the advantages of CGM, including improved glycemic control, safety in the form of alarms for low glucose levels, avoidance of the inconvenience of fingerstick glucose monitoring, and the capacity of CGM to enable closed-loop insulin delivery, also known as artificial pancreas systems.

There's plenty of literature at this point on the advantages of CGM in type 1 diabetes. Just today, a new study has been <u>published</u> in the *New England Journal of Medicine* detailing results of the FLASH UK study. In the trial, among 156 participants with type 1 diabetes and mean baseline A1c around 8.6%, those randomized to the intermittently scanned FreeStyle Libre 2 (Abbott Diabetes Care) experienced a 0.5 percentage point greater drop in A1c at 24 weeks compared with usual fingerstick blood glucose testing (P < .001), and they spent 43 minutes less time in hypoglycemia per day.

In Stockholm, Malecki described a 7-year follow-up study <u>published</u> in January showing that CGM initiation within 1 year of type 1 diabetes diagnosis results in improved long-term A1c compared with starting later or not at all. And another trial <u>reported</u> in 2019 found that it is real-time (ie, not intermittently scanned) CGM, regardless of the method of insulin delivery (pumps or injections), that makes a therapeutic difference in people with type 1 diabetes.

Earlier this year, a <u>systematic review and meta-analysis</u> of randomized controlled trials confirmed the superiority of CGM to fingerstick monitoring in people with type 1 diabetes, especially for those with baseline A1c levels above 8% (64 mmol/mol). In pregnant women with type 1 diabetes, the randomized controlled <u>CONCEPT</u>

<u>trial</u> showed improved outcomes in terms of neonatal birthweight and infants' hospital length of stay with CGM use compared to fingerstick monitoring. As for people with type 2 diabetes, in the <u>DIAMOND trial</u>, adults aged 60 years and

older with type 1 (n = 34) or type 2 diabetes (n = 82) on multiple daily injections both saw A1c reductions with CGM.

Meanwhile, in a <u>single-arm study</u> of adults with type 2 diabetes treated with just basal insulin or non-insulin therapy, use of CGM for 6 months significantly improved time-inrange and A1c, regardless of the number of medications patients were taking. The authors of that study write that their and other data suggest "insurance eligibility criteria should be modified to expand real-time CGM use by type 2 diabetes patients treated with less intensive therapies."

And in real-world <u>German registry data</u>, which included 1440 adults with type 2 diabetes, in patients not on intensive insulin therapy (78%), initiation of CGM led to significant reductions in A1c, body mass index, and severe hypoglycemia. Those authors concluded that use of CGM "may be associated with improvement in treatment adherence, changes in diet, and increased physical activity through CGM readings."

Evidence also supports use of CGM in <u>hospitals</u>, including a recent <u>randomized trial</u> of general medical and surgical inpatients with type 1 or type 2 diabetes on insulin, which showed significant reductions in hypoglycemia using CGM to guide insulin adjustments compared with those on point-of-care resulting in significantly fewer hypoglycemia events.

Malecki also reviewed data showing the benefits of CGM on maternal and neonatal outcomes in <u>gestational diabetes</u>, <u>older people with memory problems</u>, transient neonatal diabetes, and diabetes secondary to total <u>pancreatectomy</u>.

He concluded: "There is a growing body of evidence that CGM also improves glycemic control in type 2 diabetes on less intensive hypoglycemic therapy. Further data, including cost-effectiveness and quality of life, are needed. However, one may expect that the use of CGM in this patient group will be growing."

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