COMMENT ON SEIDU ET AL.

Efficacy and Safety of Continuous Glucose Monitoring and Intermittently Scanned Continuous Glucose Monitoring in Patients With Type 2 Diabetes: A Systematic Review and Meta-analysis of Interventional Evidence. Diabetes Care 2024;47:169–179

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We found interesting the meta-analysis by Seidu et al. (1) that evaluated the benefits and harms of continuous glucose monitoring (CGM) versus intermittent scanning continuous glucose monitoring (isCGM) in type 2 diabetes and whether CGM and isCGM are more effective in managing type 2 diabetes than blood glucose monitoring (BGM). We applaud the effort to assess the evidence for these comparisons (CGM vs. isCGM and CGM/isCGM vs. BGM); however, we are concerned that the overall conclusion the authors reach is not supported by the data. One of the limitations to the conclusions is the methodology used, in which professional CGM studies and real-time continuous glucose monitoring (rtCGM) studies are combined in a single category of "CGM" and are compared with isCGM studies. Professional or diagnostic CGM is a specific category of CGM, usually owned by clinical practices, and it is used for short-term evaluations of glucose trends and patterns. Most importantly, professional CGM is retrospective, and the data are usually blinded to the user until later review with the provider. Furthermore, it does not allow the person with diabetes to receive immediate feedback, which is one of the most powerful advantages of CGM, whether real-time or intermittent scanning. This feedback allows users to review glucose levels and their predicted direction, provided by trend arrows, and allows them to receive alerts and alarms. Therefore, the comparison between the CGM (professional and rtCGM) and isCGM studies as reported by the authors in their article can be misleading, as the two groups are in fact three groups of interventions, professional CGM (regardless of brand), rtCGM, and isCGM, and should be analyzed as such. Of note, the authors do not clarify that the Ajjian et al. study (2) used in the isCGM analysis used the professional CGM version of isCGM. Combining professional CGM with rtCGM in a CGM category while including the professional CGM version of isCGM within the isCGM group rather than its own category, regardless of brand, gives the impression that manufacturers rather than studies are being compared, which affects the objectivity of this analysis.

Furthermore, incongruences were found in the selection and description of the trials included in the analysis. The Ajjan et al. study from 2016 (3) included individuals with either type 1 or type 2 diabetes and was not a retrospective CGM study, because the intervention group used unmasked rtCGM with alerts and alarms off. Other studies included in the analysis had a mixed population of individuals with type 1 or type 2 diabetes (4), and this confounding factor was not included in the study limitations.

Finally, the conclusions the authors make regarding the superiority of isCGM for user satisfaction could be construed as biased, as the studies included in the CGM group used both professional CGM and rtCGM, obsolete or no longer commercially available CGM systems (4,5), CGM systems with duration of wear as short as 48 h (4), and systems with higher inaccuracy and suboptimal wearability (5), and this group was compared with an isCGM group that was derived from the most recent literature.

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