

The Accuracy of a New Real-Time Continuous Glucose Monitoring Algorithm: An Analysis

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Abstract

In this issue of *Journal of Diabetes Science and Technology*, Keenan and colleagues used archival data from the STAR 1 clinical trial (Medtronic Diabetes) to support the claim that the new Veo™ calibration algorithm improves the accuracy of continuous glucose monitoring, particularly in the critical hypoglycemic range. Extensive data analyses are presented to support this claim; the results are convincing, and the estimated improvement in hypoglycemic detection from 55% for the standard calibration to 82% for the Veo is particularly impressive. We can therefore conclude that the Veo algorithm has the potential to improve the accuracy of hypoglycemia alarms and ultimately contribute to closed-loop control. However, the presented results should be interpreted cautiously because they are based on retrospective analysis and are heavily dependent on the distribution of blood glucose levels observed in a particular data set.

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Abbreviations: (BG) blood glucose, (CGEGA) continuous glucose error grid analysis, (CGM) continuous glucose monitoring, (CLSI) Clinical and Laboratory Standards Institute, (IG) interstitial glucose, (MARD) mean absolute relative difference, (PRT) Paradigm REAL-Time, (SMBG) self-monitoring of blood glucose

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