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

Boris Kovatchev, Ph.D., and Marc Breton, Ph.D.

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.