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Response to Letter by Seibold regarding "Glycemic Variability and Hypoglycemic Excursions With Continuous Glucose Monitoring Compared to Intermittently Scanned Continuous Glucose Monitoring in Adults With Highest Risk Type 1 Diabetes"

Nick Oliver, MBBS, FRCP[1], Parizad Avari, MBBS, BSc, MRCP[1], and Monika Reddy, MBChB, MRCP, PhD[1]

We thank Seibold for again pointing out their concerns regarding the I HART CGM study.[1] We have addressed this issue in the original paper[2] and have responded in detail previously.[3] In brief, this can be looked at in two ways. If the outcomes from the two monitoring technologies are not comparable, this suggests differing accuracy. Data suggest superior accuracy with Dexcom G5 than with FreeStyleLibre, especially in the critical hypoglycemic range,[4] which, along with the results of the I HART continuous glucose monitoring (CGM) and HypoDE studies, suggest that the findings that CGM is the monitoring methodology of choice in people at high risk of hypoglycemia are robust. This view is reflected in national guidance.[5]

Alternatively, the accuracies of Libre and G5 are comparable, in which case, the analyses from the I HART CGM study are robust and clinically important.

We discuss the finding that mean absolute glucose change per unit time and glycemic variability percentage differ from other measures of variability in the discussion section of the manuscript and acknowledge Seibold's potential explanation for the coefficient of variation and standard deviation signal. This does not, however, explain the differences in M-value, glycemic risk assessment diabetes equation, personal glycemic score, and index of glycemic control in favor of real-time CGM.

With regard to the data analysis, the use of medians and interquartile range is appropriate for the current sample size, and in view of the data departing from normality. Medians are less affected by outliers and skewed data.[6]

Seibold helpfully offers their own view of the I HART dataset but has omitted the significant difference in hypoglycemia fear in favor of CGM in the study and, if we are to accept the equivalence of accuracy between intermittently scanned CGM and real-time CGM, we must also accept the primary outcome of clinically important hypoglycemia.

Declaration of Conflicting Interests

The author(s) declared the following potential conflicts of interest with respect to the research, authorship, and/or publication of this article: NO has received honoraria for speaking and advisory board participation from Abbott Diabetes, Dexcom, Medtronic Diabetes, and Roche Diabetes. MR has received honoraria for advisory board participation from Roche Diabetes and Dexcom. NO and MR have received research support from Dexcom and Roche Diabetes.

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ORCID iD

Parizad Avari https://orcid.org/0000-0001-9047-3589

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[1]Department of Metabolism, Digestion and Reproduction, Imperial College London, London, UK

Corresponding Author:
Nick Oliver, MBBS, FRCP, Department of Metabolism, Digestion and Reproduction, Ground Floor Medical School Building, Norfolk Place, London W2 1PG, UK.
Email: nick.oliver@imperial.ac.uk

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