

Real-Life Utilization of Real-Time Continuous Glucose Monitoring: The Complete Picture

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Abstract

Background:

Very few studies to date have analyzed the reasons why some people do not use real-time continuous glucose monitoring (RT-CGM) continuously, especially given its positive glycemic outcomes, or choose not to wear it at all, even after learning about its benefits.

Methods:

A questionnaire was designed to assess real-life use of and issues surrounding RT-CGM. Hemoglobin A1c (HbA1c) and duration of sensor use were also obtained from the patients' charts.

Results:

Fifty-eight subjects with type 1 diabetes (T1DM), average age 15.0 ± 4.8 years, T1DM duration 5.7 ± 3.8 years, HbA1c $8.8 \pm 2.1\%$, 50% with RT-CGM, were included in the analysis. Hemoglobin A1c was lower with increased RT-CGM use. Real-time continuous glucose monitoring was ordered to improve control. Users liked the continuous data. The most disliked part was pain and discomfort. Occasional users described RT-CGM as annoying, a hassle, and interfering with their lives. Reasons for discontinuing RT-CGM included problematic equipment and inaccuracy (64%), intrusion in life (36%), and insurance issues (29%). Twenty-one percent of nonusers reported RT-CGM to be inconvenient or a hassle or just did not want it. Fifty-two percent of subjects continue to use RT-CGM despite reported problems.

Conclusion:

Real-time continuous glucose monitoring is a beneficial tool for improving glycemic control, and many use it despite reported problems and hassles with current devices. However, this technology has not been wholeheartedly embraced by many individuals with T1DM, especially in youngsters, because of issues mentioned here. Based on the findings of this study, it is hoped that improvements will be made to RT-CGM technology so that more people with diabetes will embrace this beneficial tool.

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Abbreviations: (BG) blood glucose, (HbA1c) hemoglobin A1c, (RT-CGM) real-time continuous glucose monitoring, (T1DM) type 1 diabetes mellitus

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