

Real-Time Continuous Glucose Monitoring in the Clinical Setting: The Good, the Bad, and the Practical

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Abstract

Real-time continuous glucose monitoring (RT-CGM) is the latest technological breakthrough in diabetes care. Despite its limitations of lag time between sensor and blood glucose, the need for calibration, false detection of and failure to detect hypoglycemia, and mild discomfort or skin irritation reported in some users, RT-CGM is a highly beneficial tool that can be used to detect nocturnal or unrecognized hypoglycemia and glycemic variability. This, in turn, can lead to better treatment decisions, which may improve metabolic control and decrease the incidence and progression of diabetes complications. The RT-CGM devices are fairly accurate and easy to use. It is not difficult to establish a clinical RT-CGM program in the office. However, it requires persistence and an understanding of the patient's perspective of using RT-CGM so it can be presented and taught appropriately. This article discusses the benefits and limitations of RT-CGM and establishment of a RT-CGM program in the clinical setting.

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Abbreviations: (BG) blood glucose, (CGM) continuous glucose monitoring, (CPT) Current Procedural Terminology, (DCCT) DiabetesControl and Complications Trial, (DirecNet) Diabetes Research in Children Network, (EDIC) Epidemiology of Diabetes Interventions and Complications, (FDA) Food and Drug Administration, (HbA1c) hemoglobin A1c, (IF) interstitial fluid, (LMN) letter of medical necessity, (MM) Medtronic MiniMed, (RT-CGM) real-time continuous glucose monitoring, (SBGM) self-blood glucose monitoring

Keywords: continuous glucose monitoring, diabetes, glucose sensor, glycemic variability, hypoglycemia, technology

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