

Retrospective Review of Attrition in Continuous Glucose Monitoring Use Among Youth with  
Type 1 Diabetes

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NR.210.889 Project Evaluation

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April 9, 2023

*On my honor, I pledge that I have neither given nor received any unauthorized assistance on this paper. April 9, 2023*

## Abstract

**Background and Purpose:** Use of continuous glucose monitors (CGM) is associated with improved glycemic control in children with Type 1 diabetes (T1D), yet there are patients who choose to discontinue use. The purpose of this paper was to identify the most common reasons for CGM discontinuation and to identify the time to attrition for patients who discontinued CGM.

**Methods:** A retrospective chart review was conducted utilizing electronic medical record data at the Children's Hospital of Philadelphia. Patients with T1D who had at least one office visit between November 1, 2021 and November 1, 2022 were included for review. Information regarding CGM wear time was gathered using start date from chart review and data from cloud-based software. Reasons for discontinuation were gathered from documentation in the chart.

**Results:** 315 CGM non-wearers had a mean age of 15.1 (4.0) years, 59.3% were male, and 29% were Black. Non-wearers were predominantly privately insured (67%). Patients who discontinued did so in the first 45 days after starting CGM. The most common reasons for CGM attrition were problems with the device sticking to the body (18.4%), dislike on the body (10.8%), insurance problems (9.5%), and inaccurate readings (8.2%).

**Conclusions:** To prevent CGM attrition, intervention and support should happen soon after starting. Initial educational programs on CGM should address most common reasons for discontinuation. Future studies should incorporate findings into educational programming.

*Keywords:* Type 1 diabetes, children, continuous glucose monitor, discontinuation