Evaluating Acceptance of a Continuous Blood Glucose Monitor for People with Insulin Requiring Diabetes



Background:

Continuous Glucose Monitors (CGM) represent a significant advancement in diabetes management, offering real-time glucose monitoring without the frequent finger sticks required by traditional methods. Despite these benefits, there are opportunities to improve everyday user experience. A potential alternative to current CGM systems is a long-term implantable Continuous Blood Glucose Monitor (CBGM) that offers no on-body wearable components, minimal calibration requirements, and real-time continuous blood glucose readings.

Objective:

This study assessed likely acceptance of a new CBGM concept among people living with diabetes, together with the relative appeal of specific product features, and the potential barriers to adoption.

Methods:

An online survey was conducted with 757 respondents currently treated with intensive insulin therapy (49% T1D and 51% T2D).

The respondents included current CGM users (67%), non-users (25%), and ex-users (8%).

Respondents used various insulin delivery methods: Multiple Daily Injections (60%) and insulin pump (40%: automated insulin delivery (AID) 21%, non-AID 19%).

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Results:

Reported drawbacks of current CGMs

Likelihood to Acquire | By CGM Status

(n=757)

Current CGM users

CGM non-users

CGM ex-users

system under development, not to scale

"Hassle of wearing device"

47% CGM non-users

32% CGM ex-users

"Doesn't last full sensor life"

34% current CGM users

26% CGM ex-users

Over 50% of the total respondents are open to the new CBGM concept.

Survey question: Assume that this new implantable CBGM were approved by the FDA, recommended by your doctor, and covered by your insurance

*Adjusted likelihood accounts for the gap between intent and behavior, taking 50% of those responding 'definitely' plus 25% of those

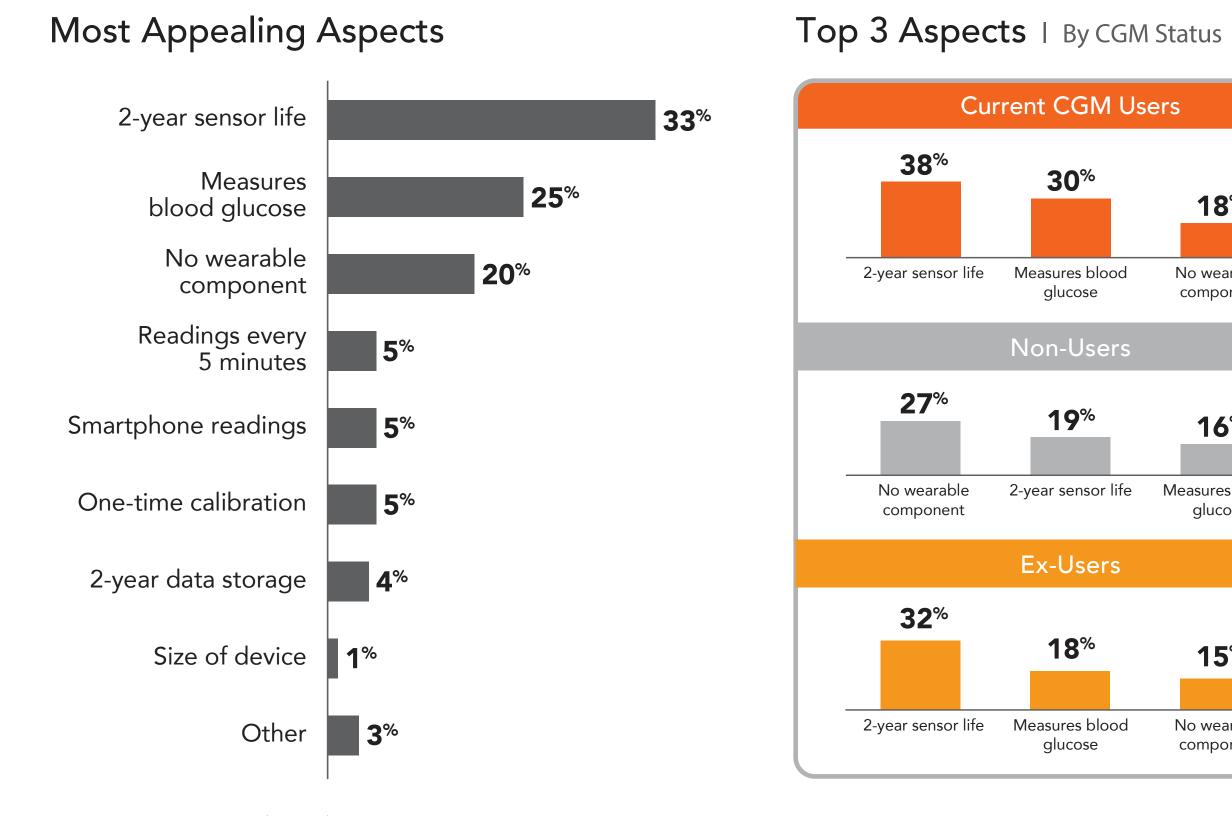
Current CGM users and ex-users are most likely to acquire.

"Inaccurate glucose readings"

37% current CGM users

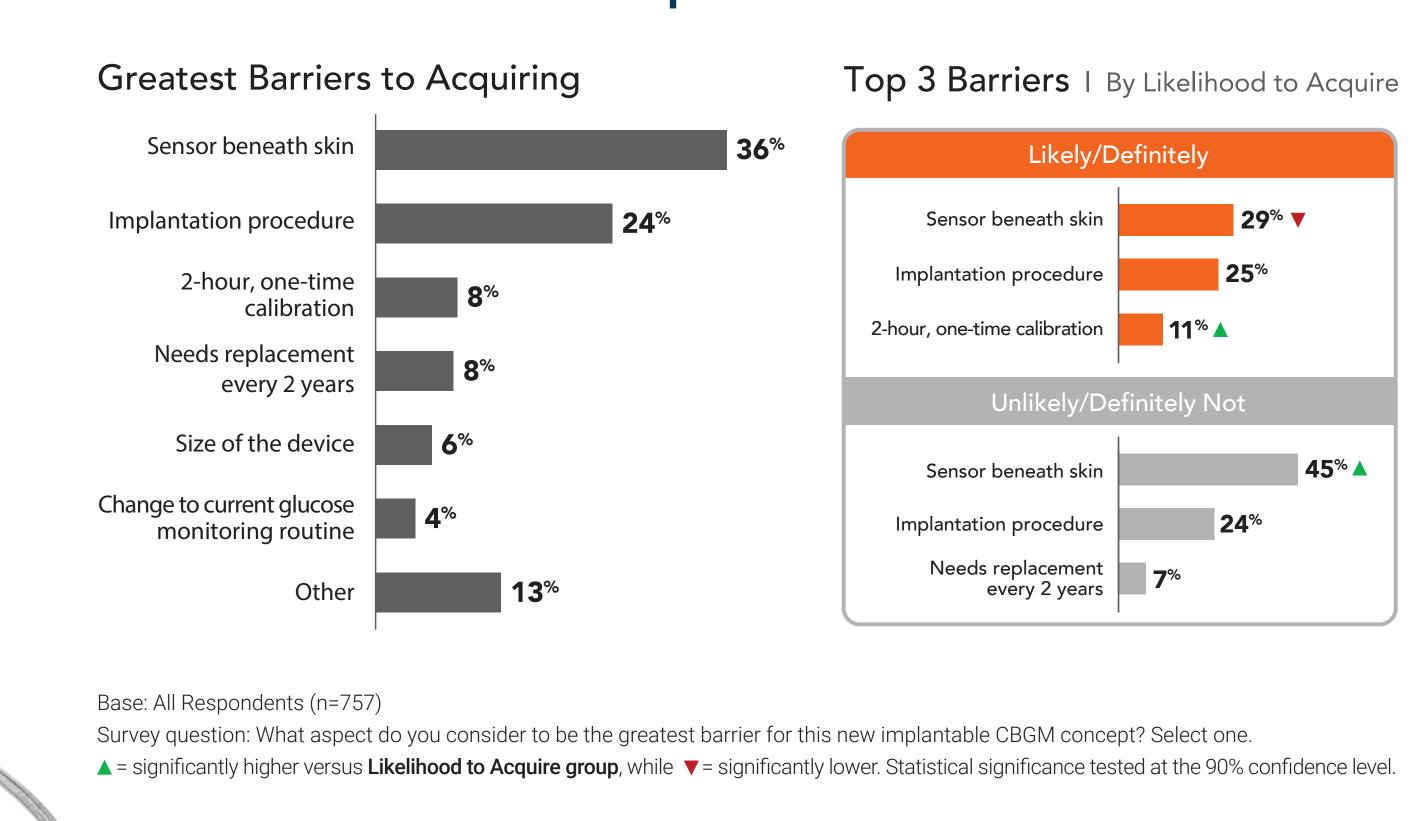
32% CGM ex-users

The top 3 most appealing aspects are consistent across all segments, with current CGM users and CGM ex-users finding the 2-year life of the sensor most appealing.



The greatest barrier to acquiring the new CBGM is having a sensor beneath the skin, especially among those unlikely to use the new CBGM concept.

Survey question: What aspect do you like most about this new implantable CBGM concept? Select one.



Conclusions:

The findings indicate a positive sentiment toward the CBGM concept among a significant portion of potential users. These results also suggest that the CBGM concept offers a viable alternative CGM option for people with diabetes who use insulin, potentially expanding the user base, while addressing challenges associated with wearing glucose sensors.





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