
Dexcom and Beyond Type 1 survey on CGM: awareness, cost, mental effort still major issues in T1D - November 15, 2018

Executive Highlights

- **Dexcom and Beyond Type 1 [commissioned](#) a nationwide survey of adults (18+ years) with type 1 diabetes (n=1,002) to evaluate adoption and awareness of diabetes technology, focused on CGM.** The survey population was predominately female (75%) and white (83%), the panel was provided by Lucid (who does not specialize in diabetes), and the data was collected in September-October.
- **Awareness of CGM is still a problem in type 1 diabetes** - a shocking 34% of respondents reported that they had either "never" heard of CGM (7.6%) or "know very little about it" (26.8%). In line with market estimates we've heard, 27% of respondents said they "currently" use a CGM. Over 30% indicated that their doctor "seldom" or "never" brings up diabetes technology. More than half of respondents were not aware that there were CGMs on the market that eliminated fingersticks.
- **Lack of insurance coverage is still the most commonly cited reason (34%) for why participants do not use CGM.** On the plus side, significantly more CGM users reported being satisfied with their health-related quality of life than non-CGM users (53% vs. 34%). However, 41% of all survey-takers reported being hospitalized for health issues related to type 1 diabetes ≥ 1 time(s) in the last 18 months, and a full 13% had been hospitalized ≥ 3 times. T1D remains dangerous to live with!
- **Participants reported spending a substantial amount of time worrying about their diabetes:** 64% and 69% agreed or strongly agreed that they frequently worry about hypoglycemia and hyperglycemia, respectively. A meaningful 81% of participants agreed or strongly agreed that they frequently worry about long-term diabetes-related complications. We'd be very interested to see if and how these results differ by CGM and non-CGM users, as well as for those on automated insulin delivery.

Dexcom and Beyond Type 1 [commissioned](#) a nationwide survey of people with type 1 diabetes (n=1,002) to assess adoption and awareness of diabetes technology, including CGM. Download [the full PDF file here](#).

Adults with type 1 diabetes over the age of 18 were surveyed between September and October 2018 in a panel sourced from Lucid (a market research firm that does not specialize in diabetes). The survey population was predominantly female (75%) and white (83%); the response rate and compensation were not given.

See below for our top takeaways from the results. There's clearly a tremendous amount of work that needs to be done in terms of raising awareness of CGM - both within people with type 1 and their healthcare providers! Dexcom/BT1 also have a one-page website up: NoMoreFingerpricks.com

Table of Contents

[Awareness of Diabetes Technology](#)

[Patient Access and Attitudes Surrounding CGM](#)

[Patient Perspectives on Diabetes Burden](#)

Awareness of Diabetes Technology

- 8% of respondents indicated that they had "never" heard of CGM, while another 27% said they "know a little about it, but have never used it."** That leaves one-third of the market where awareness/education could drive more uptake alone! Only 27% said they currently use CGM - depending on how representative this sample is (completely unclear), that could over- or under-represent CGM penetration in type 1 diabetes. Interestingly, the numbers looked pretty similar for Bluetooth-enabled BGMs.

Question	I've never seen or heard of it before today	I know a little about it, but have never used it	I know a lot about it, but have never used it	I've used one in the past, but not currently	I currently use one	Total
Glucometer/Blood Glucose Meter without Bluetooth	3.7%	6.6%	6.8%	19.9%	63.1%	1002
Glucometer/Blood Glucose Meter with Bluetooth	13.9%	29.7%	18.3%	11.3%	26.8%	1002
Continuous Glucose Monitor (CGM)	7.6%	26.8%	20.8%	17.8%	27.0%	1002

- 54% of respondents were not aware that there CGMs that eliminated the need for fingersticks.** Clearly there is a lot of potential for both Abbott's FreeStyle Libre and Dexcom's G6 to market no-fingerstick sensors! A notable 80% of respondents also indicated that they still prick their finger at least three times daily.
- Awareness of specific CGM options on the market was fairly even between Abbott, Dexcom, and Medtronic.** Given that Senseonics' Eversense just launched in the US [in July](#), we're not surprised that the vast majority of participants (74%) indicated never having heard of the device. It was interesting to see that a greater proportion of participants reported knowing a "little" about Abbott's FreeStyle Libre but had never used one as compared to Dexcom (41% vs. 26%). This is not surprising either, as FreeStyle Libre only launched in the US last fall. The greatest proportion of patients (16%) reported using Dexcom currently, with Medtronic's Guardian Connect surprisingly not far behind at 10%. We'd note that answers to "I currently use one" don't quite line up with the above - the below suggests 31% CGM usage in the survey, while the above suggests 27%. Are some users utilizing multiple devices?

Question	I've never seen or heard of it before today	I know a little about it, but have never used it	I know a lot about it, but have never used it	I've used one in the past, but not currently	I currently use one	Total
Abbott FreeStyle Libre	32.3%	40.6%	17.7%	4.6%	4.8%	1002
Dexcom	30.2%	26.4%	16.3%	11.4%	15.7%	1002
Medtronic Guardian Connect	40.7%	30.8%	11.2%	7.5%	9.8%	1002
Eversense	74.1%	16.8%	6.2%	1.9%	1.1%	1002

- Over 30% of respondents reported that their doctor who manages their diabetes "seldom" or "never" brings up new diabetes management technology.** Given that 68% of participants indicated that they received information regarding the CGM they currently use from their healthcare provider, it's clearly very important that providers are recommending and remaining aware of new diabetes technology. Lots of work to do here too!

How often does your doctor who manages your diabetes bring up new diabetes management technology?	Percentage
Always	17.0%
Usually	25.1%
About half the time	26.7%
Seldom	26.4%
Never	4.7%
Total	1002

Patient Access and Attitudes Surrounding CGM

Why are you currently not using a Continuous Glucose Monitoring (CGM) system?	Percentage
My primary diabetes care doctor does not recommend it	4.5%
My insurance doesn't cover it	34.2%
My doctor has not prescribed me one	24.8%
It's uncomfortable to wear	14.5%
I don't need it, I have my diabetes under control	5.2%
I don't know enough about it / I am not familiar with CGM	10.8%
I am overwhelmed by the amount of information/data provided by CGM	2.5%
I already use too many diabetes devices	3.6%
Total	731

- The most commonly cited reason for why participants are not using CGM is lack of insurance coverage (34%!)**, followed by their providers not prescribing CGM (25%). Yikes, especially considering these are people with type 1 diabetes that were willing to take an online survey! Another 11% said they don't know enough, another clear opportunity. Reimbursement for CGM is often highlighted as "done" in type 1 diabetes, but that is clearly not in the case in this survey. Medicaid coverage of CGM also varies by state, and out-of-pocket costs can also be high even if insurance does cover it.
- CGM users reported being significantly more satisfied with their health-related quality of life than non-CGM users (53% vs. 34%), and 96% of CGM users would recommend CGM to other patients.** Still, nearly 80% of users didn't start CGM until more than three years following diagnosis - no surprise, considering this was a survey of adults (18+ years).
- When asked to indicate the top three benefits of CGM that they find most appealing, the most commonly cited features were:** (i) alerts and alarms (74%); (ii) continuous glucose readings sent automatically to receiver or smartphone (59%); and (iii) no fingerpricks for calibration or treatment decisions (50%). It's interesting that insulin automation prompted by CGM was not even listed!

Below are potential benefits of using a Continuous Glucose Monitor (CGM). Please indicate the top 3 benefits most appealing to you:	Percentage
Mobile phone/smart watch compatibility (to display glucose numbers)	27.3%
Alerts and alarms (to proactively warn of dangerous highs and lows)	73.8%
No fingerpricks for calibration or treatment decisions	49.6%
Share/follow feature (share real-time glucose information with loved ones via mobile app)	12.6%
Continuous glucose readings sent automatically to receiver or smartphone	59.0%
Easy/painless sensor application	40.6%
Small, discreet wearable	37.1%
Total	1002

Patient Perspectives on Diabetes Burden

- Notably, 41% of participants reported being hospitalized for health issues related to type 1 diabetes ≥ 1 time(s) in the last 18 months - over 400 people.** That sounds very high - unreasonably high. A full 13% or 130 people had been hospitalized ≥ 3 times. Yikes - that also sounds *far* too high. This could be a reality check on living with type 1 diabetes, which remains so dangerous or it could be that this sample is not representative. If it is representative, that would mean that 615,000 people with type 1 in the US were hospitalized over the last 18 months - that sounds too high - and that nearly 200,000 people with type 1 were hospitalized more than three times over the 18 months - this sounds possible but also very high. We wonder if there would be meaningful differences in hospitalization frequency for CGM vs. SMBG users or pump vs. MDI users.

How many times have you been hospitalized for health issues related to Type 1 diabetes in the last 18 months?	Percentage
None	58.9%
1 - 2	28.5%
3 - 4	7.4%
5 - 6	2.3%
7 or more	2.9%
Total	1002

- Type 1 diabetes continues to take up valuable headspace - 64% of participants agreed or strongly agreed that they frequently worry about hypoglycemia, and 69% agreed or strongly agreed that they frequently worry about hyperglycemia.** An even larger proportion of participants (81%) agreed or strongly agreed that they frequently worry about long-term diabetes-related complications - another worry on top of the daily highs and lows. When asked

to choose the top three burdens or issues associated with diabetes, participants most commonly selected fear of long-term complications (74%), fear of passing out/having a serious "low" event (54%), and multiple injections every day (38%).

Which of the following would you consider the biggest burdens/issues associated with diabetes? Please select the top 3 burdens or issues:	Percentage
Multiple insulin injections every day	38.3%
Counting carbs for every meal	35.5%
Limiting what you can eat	31.6%
Doing the "diabetes math" (correction factors, bolus calculations, etc.)	29.3%
Fingerpricks	29.1%
Fear of long-term complications	74.3%
Fear of passing out/having a serious "low" event	54.0%
Other	7.1%
None of the above	0.7%
Total	1002

--by Maeve Serino, Adam Brown, and Kelly Close