

INTRODUCTION

Both the ADA¹ and AACE² recommend the use of continuous glucose monitoring (CGM) for people with diabetes (PwD) who are using insulin. As CGM access and use within this population grows, Bigfoot and Seagrove Partners sought to find out if people living with type 1 or type 2 insulin requiring diabetes demonstrate confidence and aptitude in using CGM alone. Understanding the challenges of technology, numeracy, and diabetes distress, this study looked to address the following questions:

- How do people with type 2 diabetes (T2D) respond to CGM trends?
- Do people with T2D know what actions to take when presented with rising or falling glucose levels?
- Do people with T2D want additional guidance and support as compared those with T1D when presented with various CGM readings?
- How effectively do people with T2D respond to alerts and alarms? How does this compare to the actions taken by people with type 1 diabetes (T1D) under the same circumstances?

METHODS | SURVEY

Participants were asked about personal demographics, history of diabetes, diabetes therapies, and preferences for accessing insulin and CGM data. Survey participants were presented with the following questions about confidence and actions they would take for specific CGM readings. Participants were compensated with an Amazon gift card.

Respondents were shown the images below and provided with the instructions listed below before answering the questions.

For the next set of questions, we are going to ask you about what steps you would take (if any) when you see different readings on your CGM. We will show the CGM data in a standard format since the CGM sensor screens are slightly different depending on the brand. Below we show some examples of the screens and how we will show those values in the upcoming section.



RESULTS | SUMMARY

81% of PwT2D said they were **extremely/very confident** about what to do when they see an upward trend

210 mg/dL ↗

Over 50% of PwT2D selected an incorrect action with **26%** choosing to take a glucose tablet

70% of PwT2D said they were **extremely/very confident** about what to do when they see an upward trend

280 mg/dL ↗

59% of PwT2D would not act but would instead contact an HCP, and **23%** of them would take a glucose tablet

DEMOGRAPHICS | PWDS USING MDI WITH CGM (N=87)

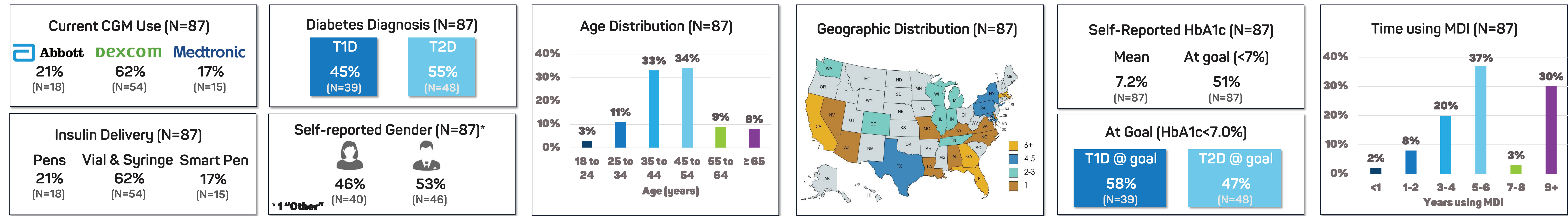


Figure 1a: How confident are you in knowing what to do when you see the following CGM reading?

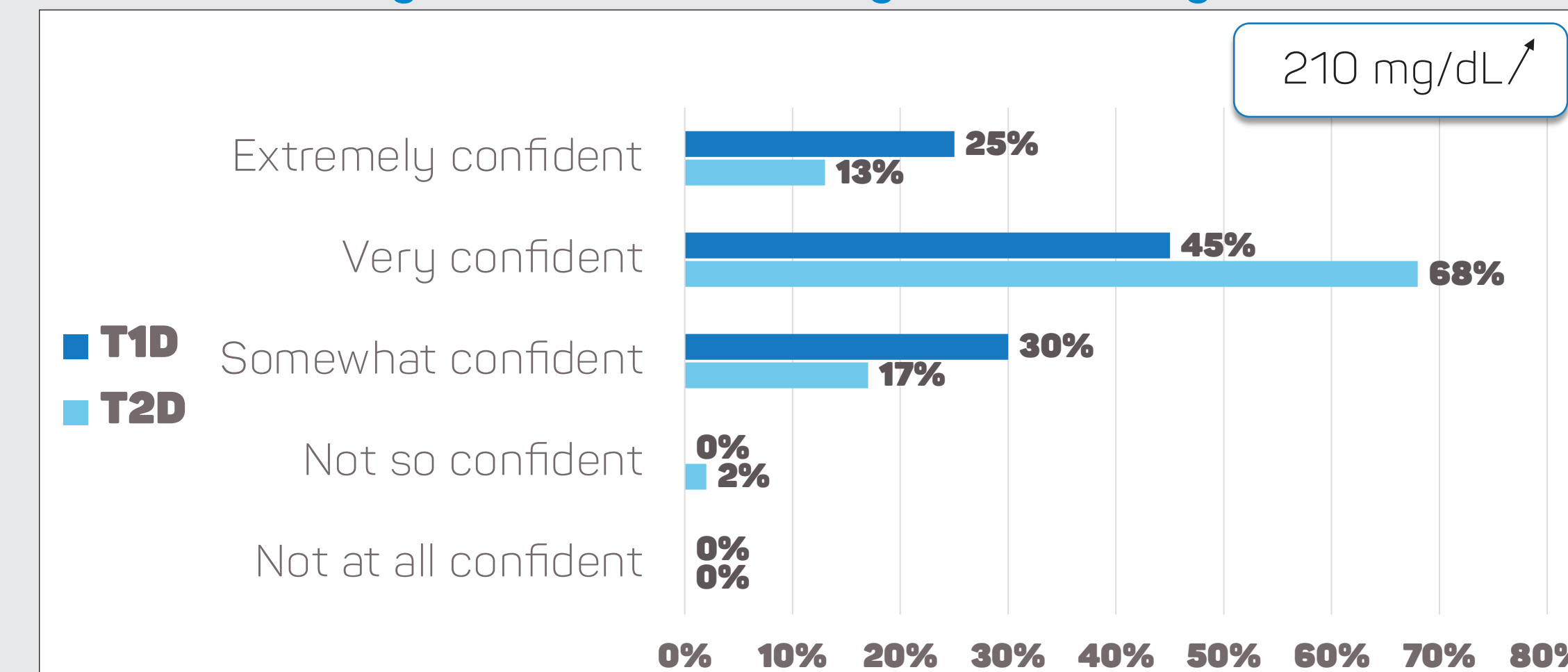


Figure 1b: If you choose to take insulin, how confident are you in knowing how much insulin to take when you see the following CGM reading?

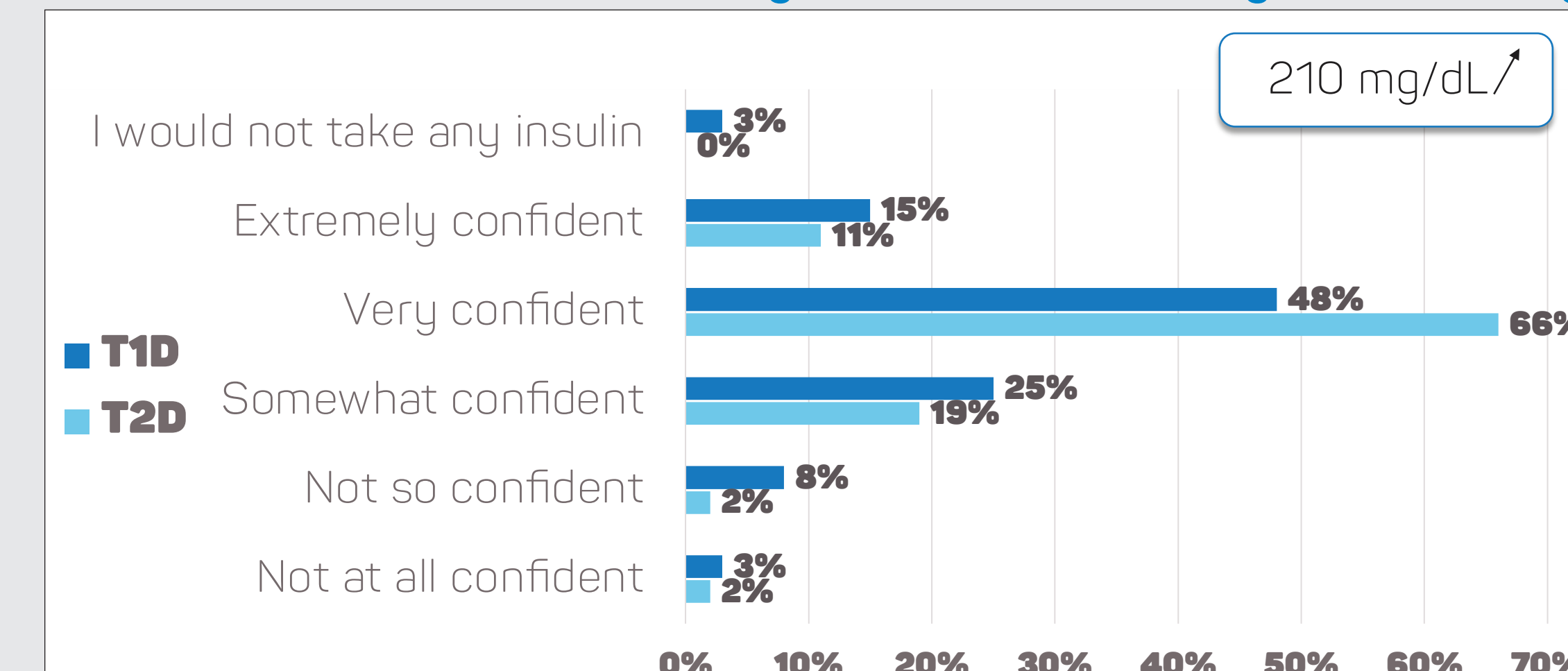


Figure 1c: What actions would you typically take in response to this CGM reading? (check all that apply)

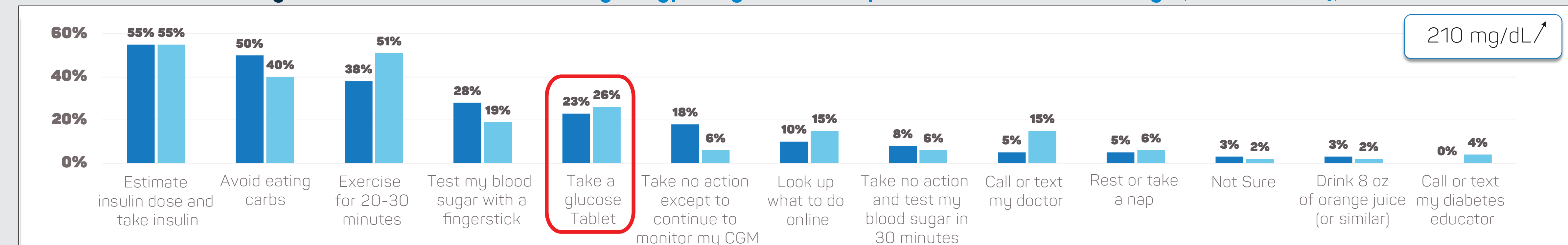


Figure 2a: How confident are you in knowing what to do when you see the following CGM reading?

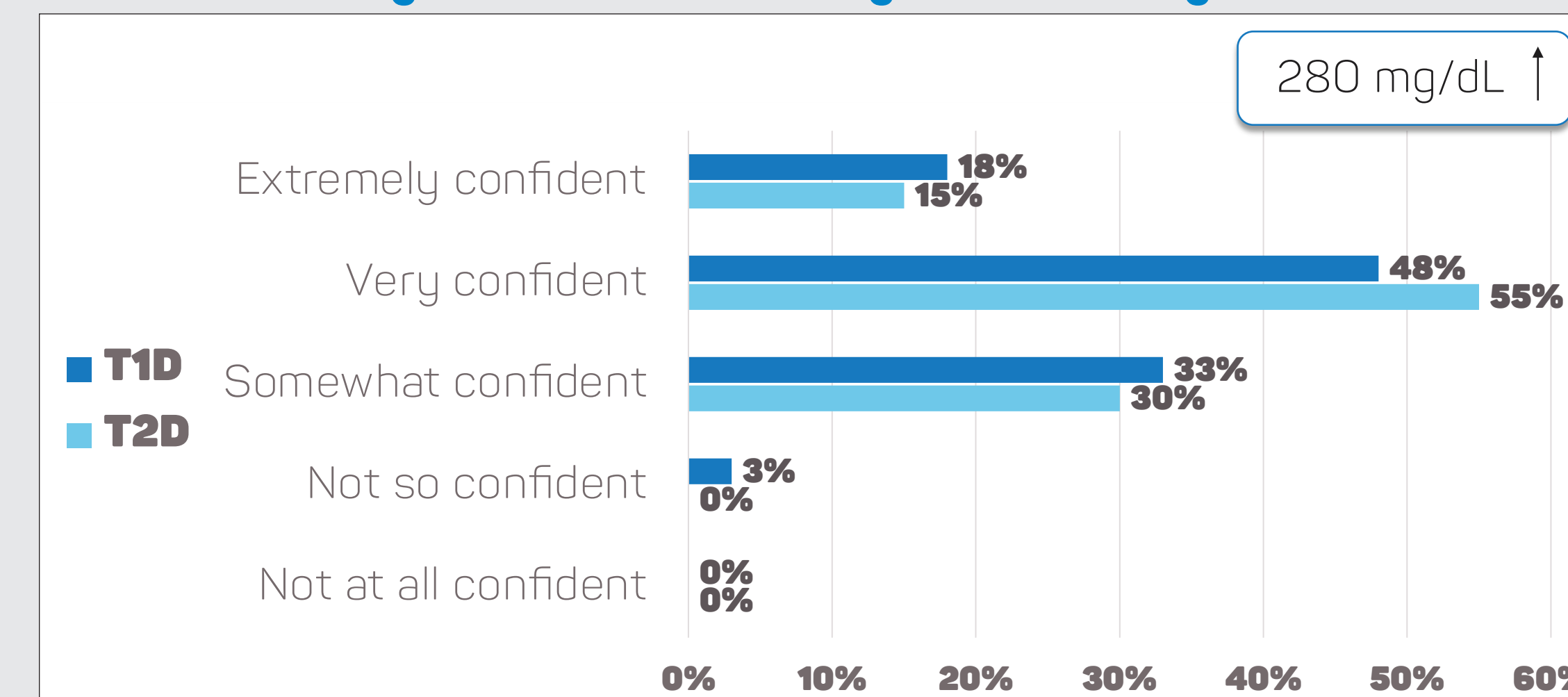


Figure 2b: If you choose to take insulin, how confident are you in knowing how much insulin to take when you see the following CGM reading?

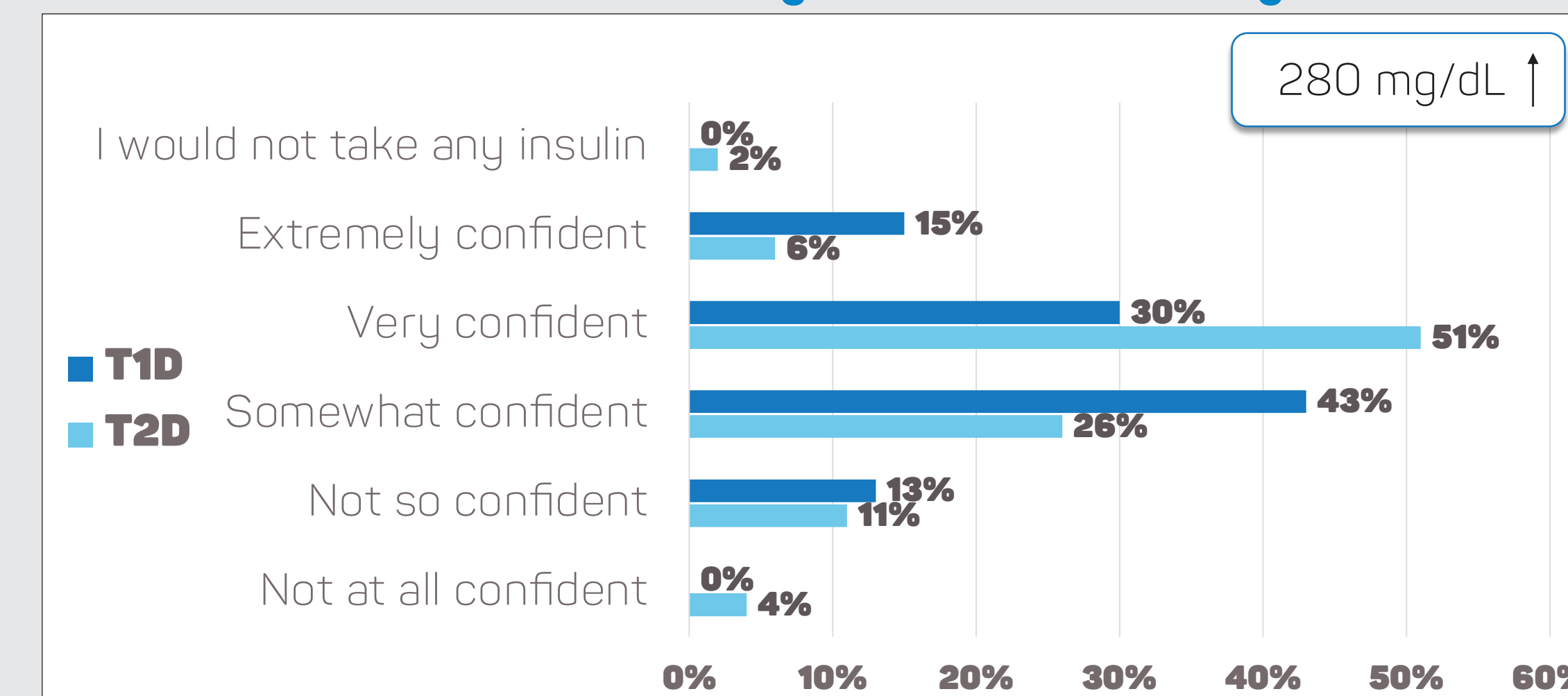
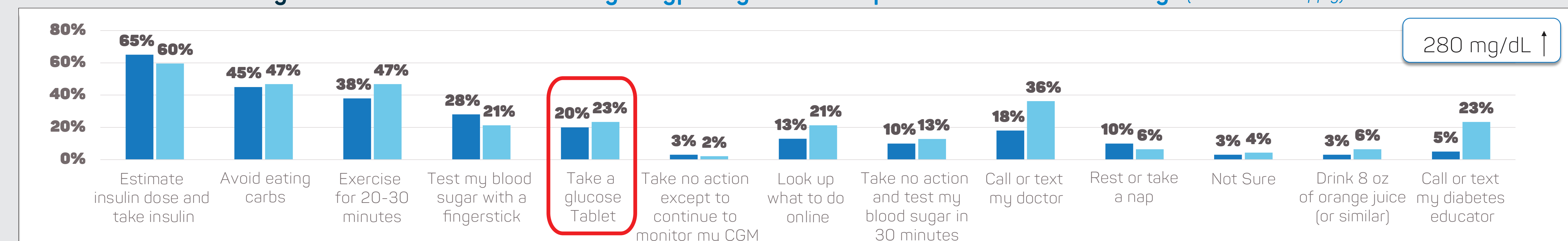


Figure 2c: What actions would you typically take in response to this CGM reading? (check all that apply)



CONCLUSION

In this population of people with diabetes who were experienced in using MDI and CGM, the results indicate that confidence and aptitude do not always align. Approximately a quarter of the participants chose actions that could result in serious hypo or hyperglycemia while maintaining high confidence in their choices.

One important role for the DCES is to be aware of and identify knowledge gaps and to aid in reducing the mental burdens of insulin dose decisioning. As a DCES, it is important to recognize how diabetes literacy, health literacy, numeracy and the possibility of diabetes distress can all impact understanding. Having methodologies that may be used to identify those patients who verbalize confidence, but have gaps in abilities and understanding, is critical to deter dangerous decisioning and increase self-efficacy.

DCESs should consider additional screening for all PwDs who are using CGM; regardless of the PwD's confidence and experience, to identify areas needing additional guidance and support. DCESs should recognize screening tools, like the visuals shared for the survey, to gauge numeracy or literacy gaps. Recognizing these findings, the DCES is encouraged to provide additional coaching and tools like the Bigfoot Unity Diabetes Management System to support their patients on MDI and CGM.

KEY TAKEAWAYS

- 1 Some people with diabetes may have a false sense of confidence in using their CGM values for insulin treatment.
- 2 Improper actions performed by people with diabetes based on their CGM readings may lead to unnecessary hypo or hyperglycemia.
- 3 Many people with diabetes require extra support and guidance, despite having high confidence in the actions to take in response to their CGM readings.
- 4 DCES can evaluate their patients with screening questions like these to identify gaps in understanding and provide extra support and education around using CGM.

References: 1. American Diabetes Association, Standards of Diabetes Care, 2023;46 (Suppl 1). 2. American Association of Clinical Endocrinology Consensus Statement: Comprehensive Type 2 Diabetes Management Algorithm – 2023 <https://doi.org/10.1016/j.eprac.2023.02.001>.
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