

## Background

- In Type 1 Diabetes (T1D) the use of automated insulin delivery systems (AID) is associated with reduced HbA1c levels, improved time in range and reduced risk of hypoglycemia.
- Despite such benefits, some people remain on multiple daily insulin injections (MDI) with or without the use of a continuous glucose monitoring system (CGM).
- The objective of the present study was to assess the use of AID and the barriers to its use in our clinic which serves mostly a Hispanic population.

## Methods

- We administered a questionnaire to 196 established T1D patients capturing information about demographics, diabetes control and answers to 19 questions either in English or Spanish addressing barriers to the use of technology.
- Data are expressed as mean  $\pm$  SD. A two-sided  $p=0.05$  was considered statistically significant.

## Methods

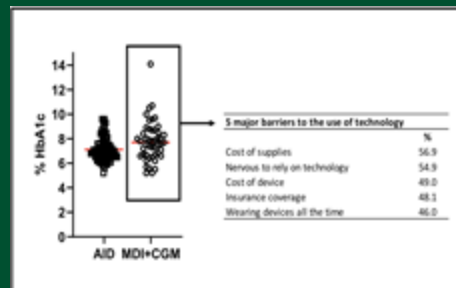
Barriers/Limitations	
1. Cost of supplies	11. I do not like diabetes devices because people notice them and ask
2. Cost of device	12. Too busy to learn how to use a new technology or device
3. Insurance coverage	13. My diabetes care team has never talked with me about diabetes
4. Hassle of wearing devices all of the time	14. Do not understand what to do with the information or features of
5. Do not like having diabetes devices on my body	15. Not able to get my diabetes care team to write me a prescription
6. Do not like how diabetes devices look on my body	16. Not enough support from my family
7. Nervous that the device might not work	17. Not enough support from my diabetes care team in using devices
8. Do not want to take more time from my day to manage diabetes	18. Do not want to have more information about my diabetes
9. Nervous to rely on technology	19. My family does not think diabetes devices are important for
10. Worries about what others will think of me	

Figure 1. Questionnaire Barriers to use of diabetes technology

## Results

- Patients' age was  $40.3 \pm 14.9$  years.
- 73.7% were Hispanic and 26.3% were non-Hispanic White.
- 89% had diabetes duration  $>5$  years.
- HbA1c was  $7.1 \pm 0.9\%$  in the AID group and  $7.8 \pm 1.6\%$  in the group on MDI+CGM ( $p=0.0020$ ) (Figure 2)
- This group presented more barriers in the use of technology compared to people with AID ( $p<0.0001$ ) with the top 5 barriers represented by 1) cost of supplies, 2) nervous to rely on technology, 3) cost of device, 4) insurance coverage, 5) wearing devices all the time (Figure 2).

Figure 2. Glycemic control and barriers to the use of technology in people with T1D using AID compared to MDI+CGM.



## Conclusion

- In a largely Hispanic population, the use of MDI+CGM is associated with worse glycemic control compared to AID.
- This group also presented a higher number of barriers in the use of technology despite being already on CGM.
- Strategies to address modifiable barriers such as the rely on technology are needed.