



T1D
Exchange

T1D-QI Collaborative Call with Adult Centers

September 17, 2024

Agenda

- Welcome & introductions, Nicole Riales, MA and Osagie Ebekozen, MD, MPH, CPHQ
- Clinical center presentations
 - University of Miami, Francesco Vendrame, MD, PhD
 - University of California San Diego, Kristen Kulasa, MD
- Collaborative Updates, Nicole Riales, MA
 - November 2024 Learning Session Registration
 - ADEPT Registration
 - Medtronic AID Project



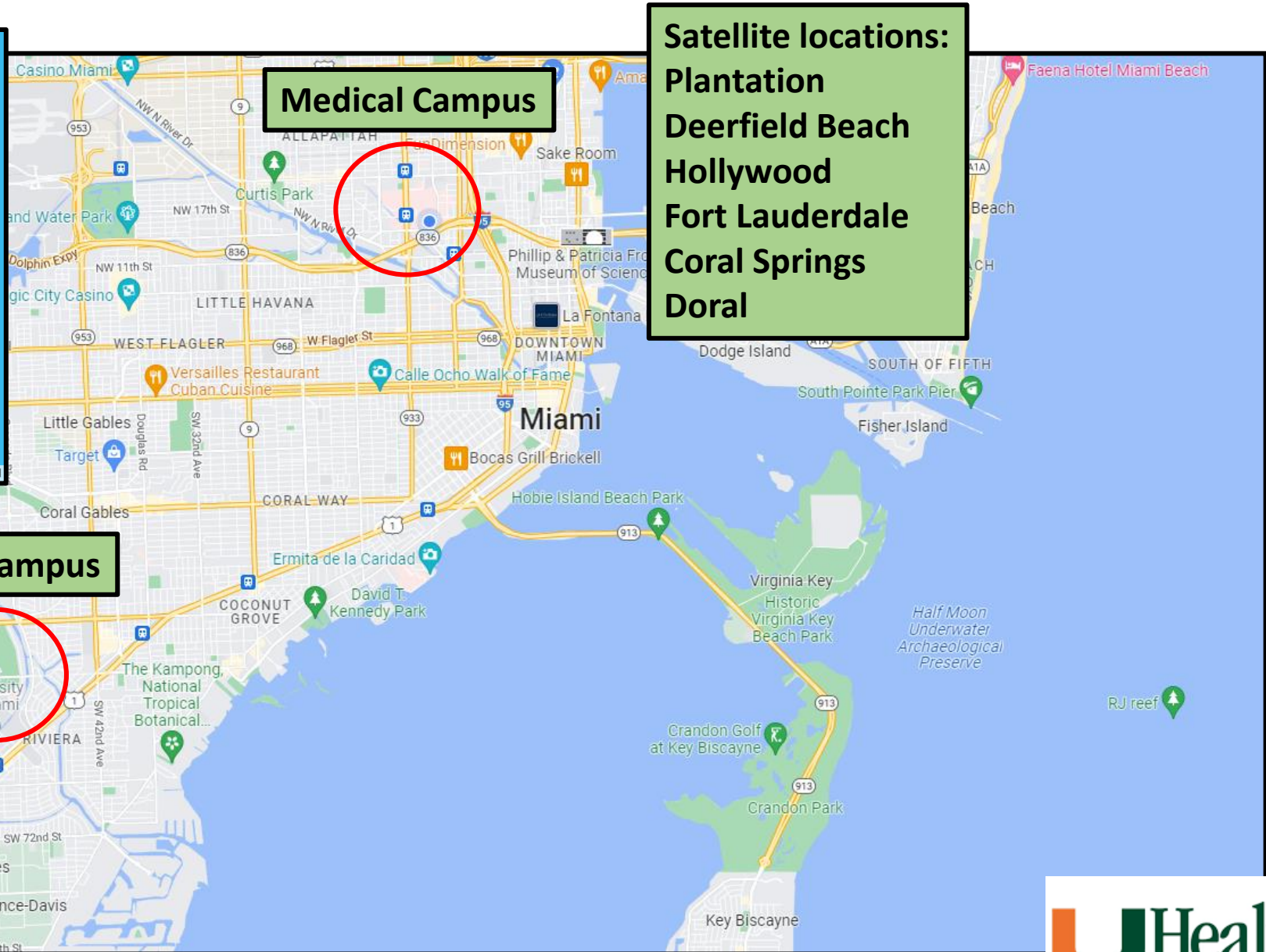
Center Presentations

2024 September Adult Collaborative Call

University of Miami – Division of Endocrinology, Diabetes, and Metabolism

Francesco Vendrame, MD PhD

University of Miami Adult Clinics

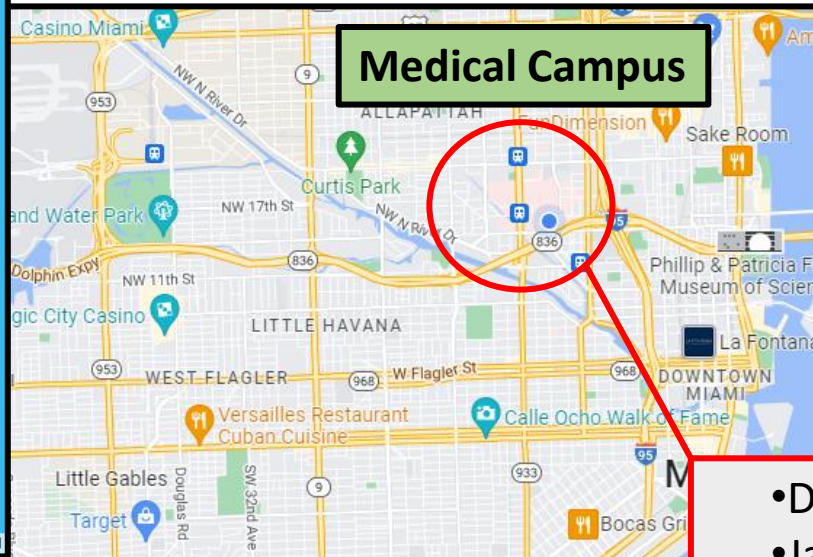


Satellite locations:
Plantation
Deerfield Beach
Hollywood
Fort Lauderdale
Coral Springs
Doral

Main Campus

Medical Campus

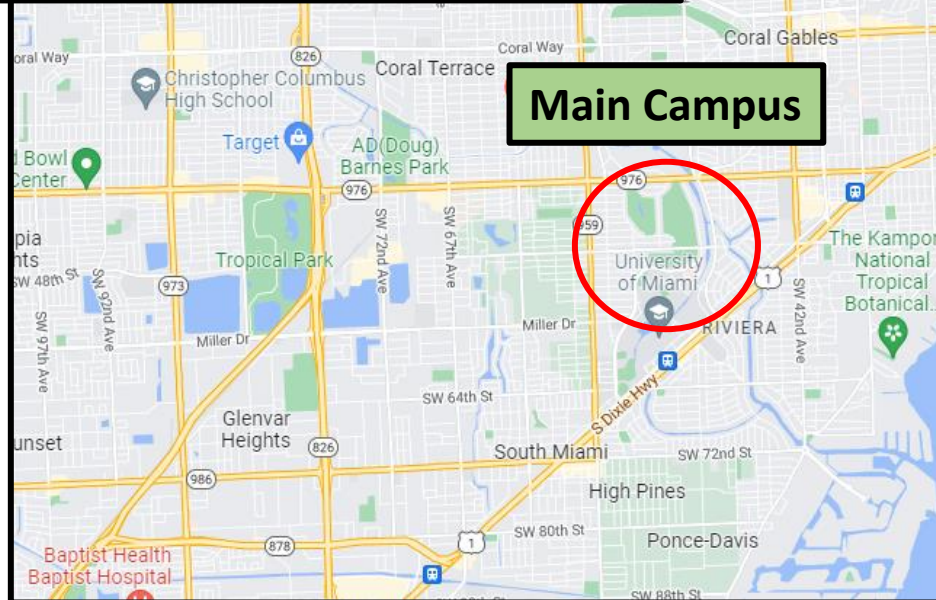
University of Miami Adult Clinics



Medical Campus

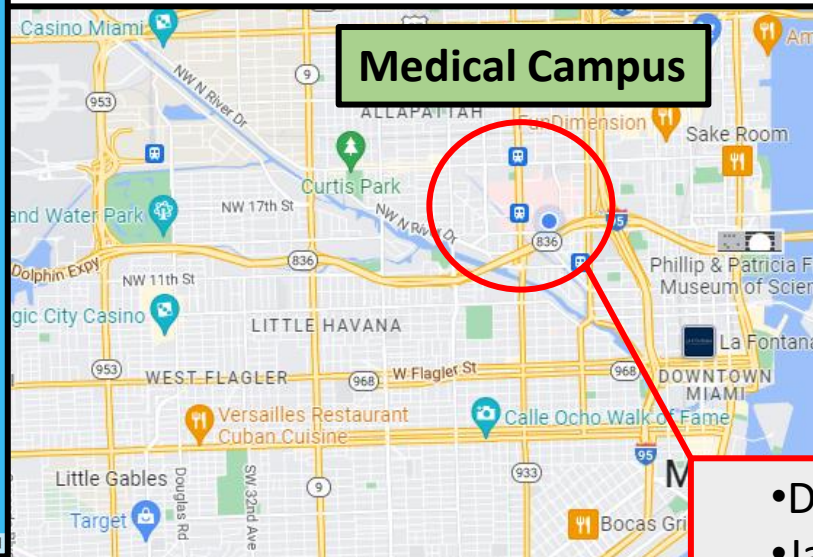
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- Diabetes Research Institute
- Jackson Memorial Hospital
- Sylvester Cancer Center
- Bascom Palmer
- University of Miami Hospital
- Veterans Affairs Hospital and Clinic



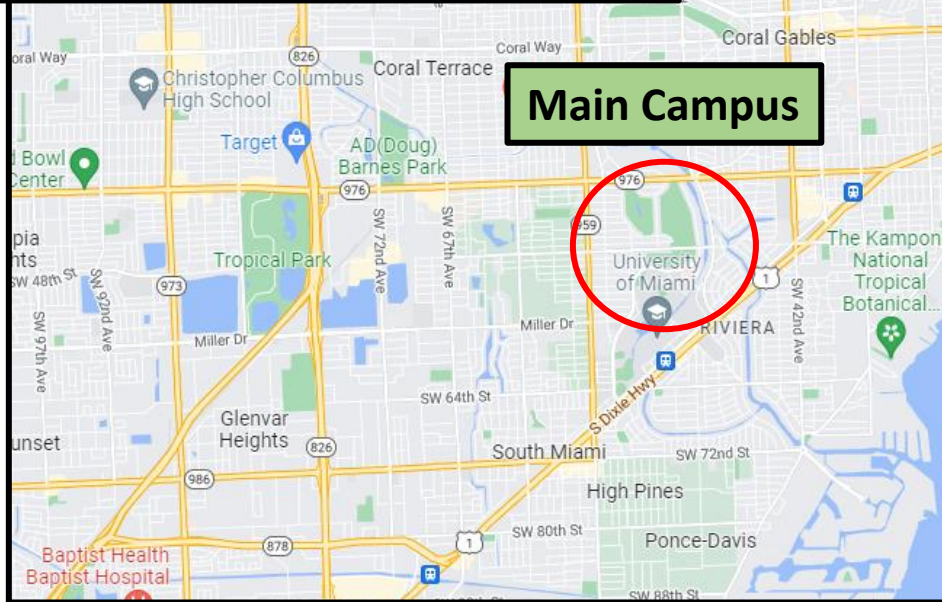
Main Campus

University of Miami Adult Clinics



Medical Campus

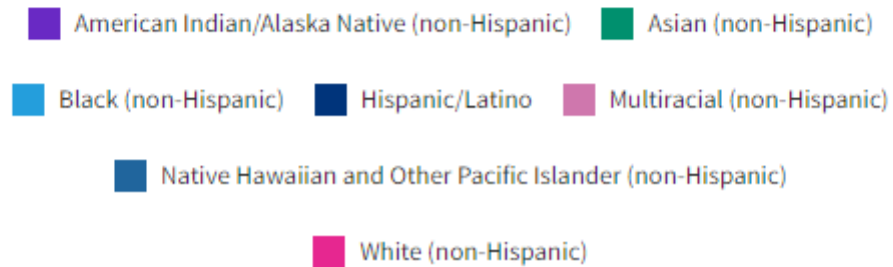
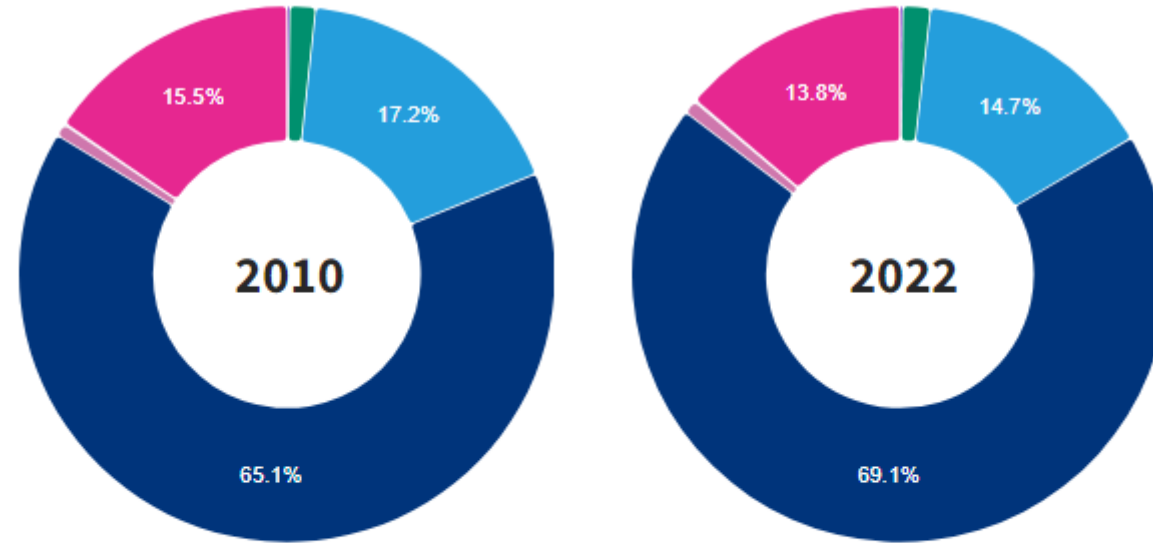
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Main Campus

- Diabetes Research Institute
- Jackson Memorial Hospital
- Sylvester Cancer Center
- Bascom Palmer
- University of Miami Hospital
- Veterans Affairs Hospital and Clinic
- Pediatric Clinic – Dr Janine Sanchez*

Miami-Dade as a minority-majority county



Adult clinic

Clinic	Multidisciplinary team	Volume & Medicaid	Contact names
Division of Endocrinology, Diabetes and Metabolism Adult Locations: -Medical campus <ul style="list-style-type: none"> •DRI •JMH •SCC •BP •UMH •VA -Main Campus -6 satellite locations	19 Attending physicians -6 staff physician -12 clinical faculty 4 APRN/PA 1 RDN/CDCES Additional staff available through DRI: 1 APRN CDCES 1 RDN CDCES <i>Overall, 17 diabetes care providers</i> 1 DPM 3 endocrinology fellows/year	1248 established T1D patients 3795 established T2D patients ~20-25 new onset T1D per year (mostly referrals) T1D: Medicare 9.6% Medicaid 3.9%	Site PI: Francesco Vendrame, MD PhD fvendrame@med.miami.edu Site Coordinator: Maddison Sallinger, MS RD CDCES m.saalinger@umiami.edu

How we operate

➤ FLUID TEAM

Diabetes Research Institute

Weekly meeting

- Core group:

- Site PI

- Site Coordinator

- Others:

- Faculty/staff Physicians, currently 1

- APRN/PA, currently 3

- Fellows, currently 1

- Students, currently 1

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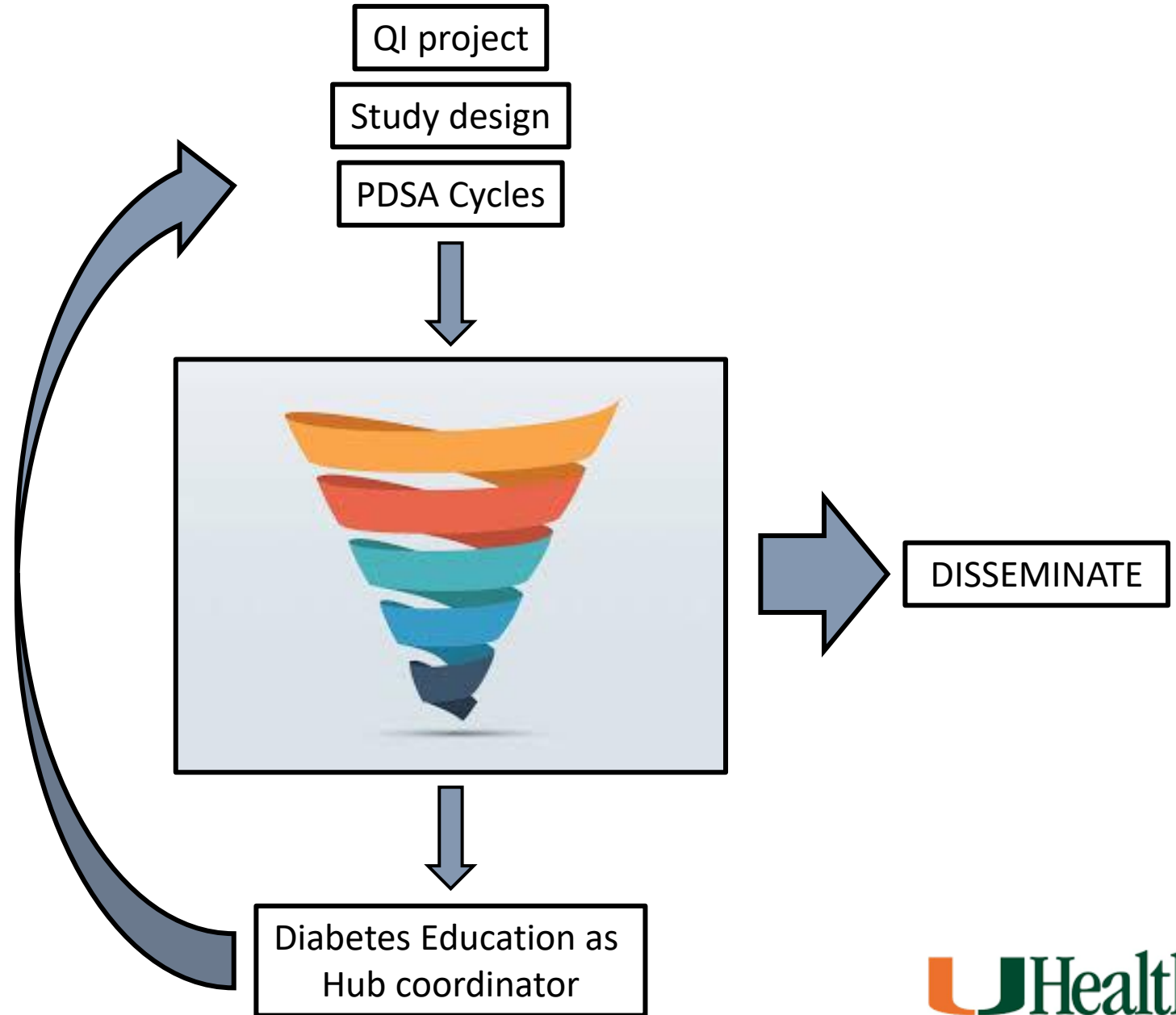
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- **Reducing inequities in the diabetes technology device use among PWT1D**
- **IMPACT T1D pathway**
- **Mental health screening in a selected population**

Reducing inequities in the diabetes technology device use among PWT1D

AIM:

Increase the utilization of continuous glucose monitors (CGM) by 10% for people with T1D by 12/31/24. Demonstrate reduction in CGM disparities by 3%

Increase the utilization of Insulin Pump by 10% for people with T1D by 12/31/24. Demonstrate reduction in Insulin Pump disparities by 3%

Increase the utilization of Smartpen by 5% for people with T1D by 12/31/24. Demonstrate reduction in Smartpen disparities by 3%

Barrier Assessment Survey

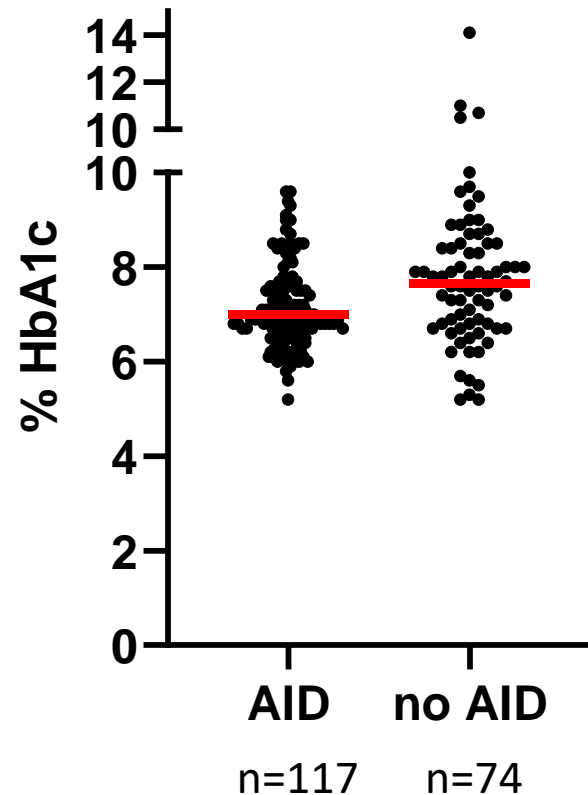
Barrier
Nonmodifiable
Cost of supplies
Cost of device
Insurance coverage
Modifiable
Hassle of wearing devices all of the time
Do not like having diabetes devices on my body
Do not like how diabetes devices look on my body
Nervous that the device might not work
Do not want to take more time from my day to manage diabetes
Nervous to rely on technology
Worries about what others will think of me
I do not like diabetes devices because people notice them and ask questions about them
Too busy to learn how to use a new technology or device
My diabetes care team has never talked with me about diabetes technology options
Do not understand what to do with the information or features of the devices
Not able to get my diabetes care team to write me a prescription
Not enough support from my family
Not enough support from my diabetes care team in using devices
Do not want to have more information about my diabetes
My family does not think diabetes devices are important for taking care of my diabetes

- 221 established PWT1D attending the DRI clinic (211 required using CI 95% and 5% margin error)
- Age 41.1 ± 15.2 years
- 40% F
- 26.5% White non-Hispanic
62.3% White-Hispanic
11.2% Black
Overall 73.5% of PWT1D belonged to a minority
- 78% had private insurance
- 90.6% had T1D duration >5 years
- HbA1c 7.4 ± 1.1%

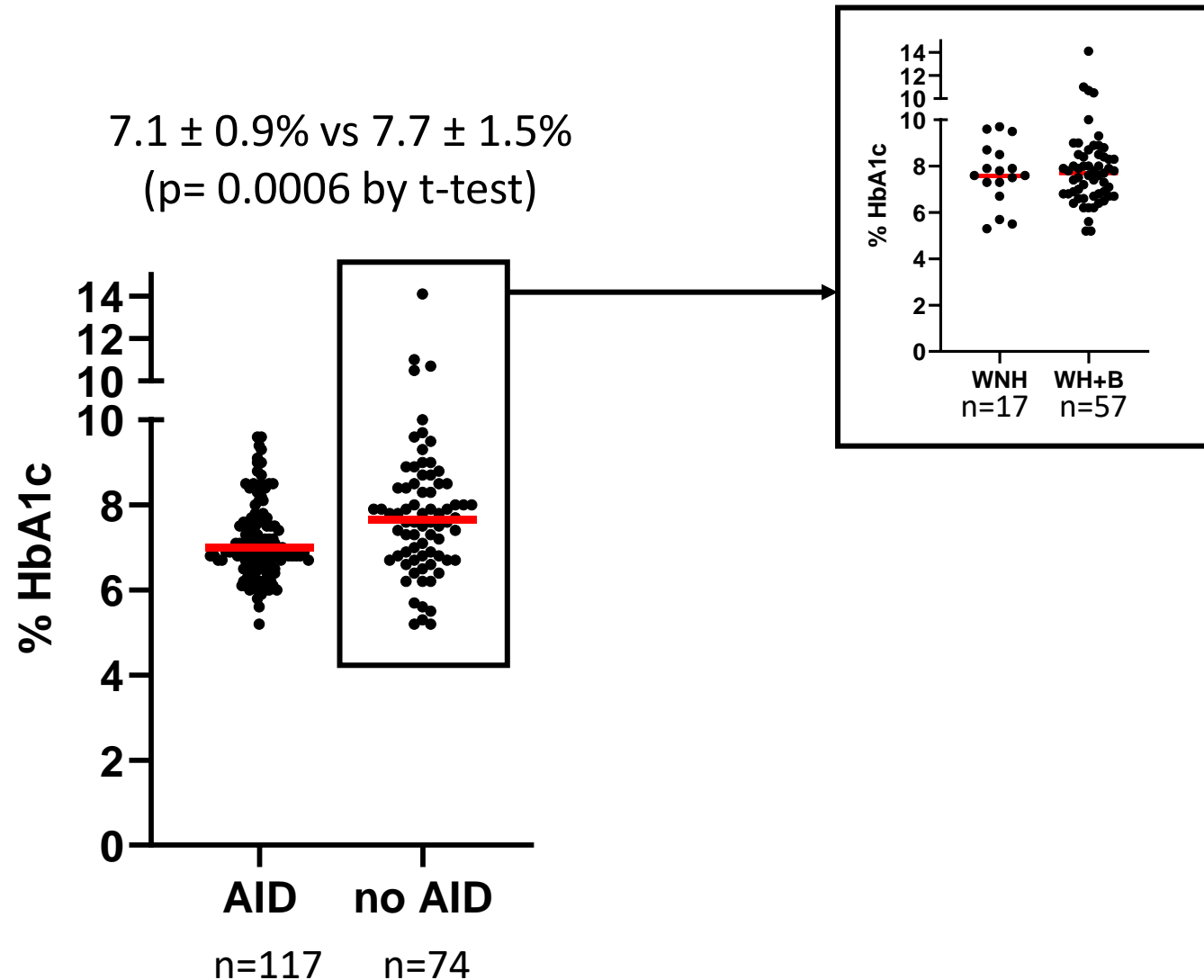
Tanenbaum, Diabetes Care, 2017

The use of automated insulin delivery (AID) devices is associated with better glycemic control compared to not using it (mostly CGM alone)

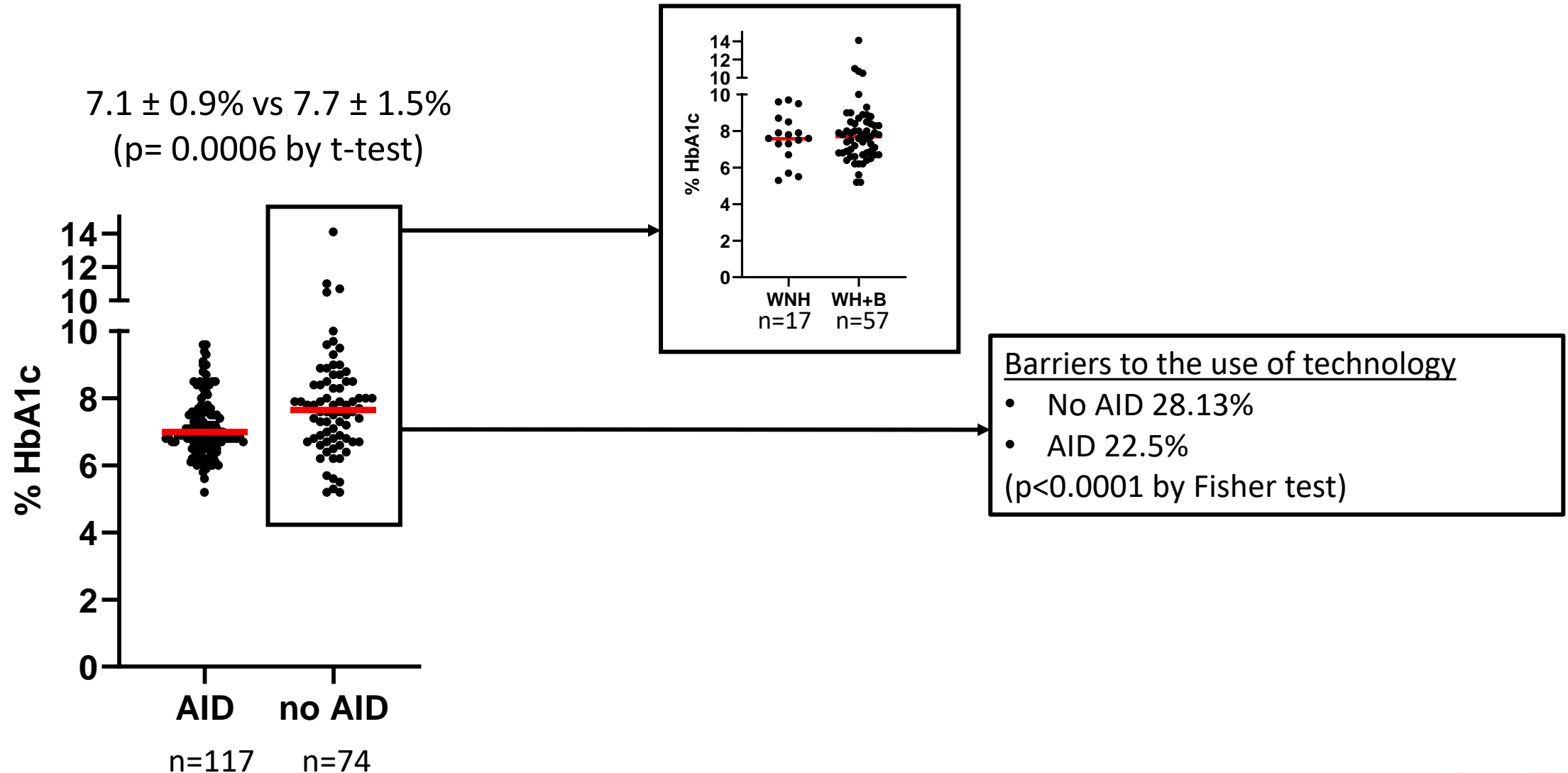
7.1 ± 0.9% vs 7.7 ± 1.5%
(p= 0.0006 by t-test)



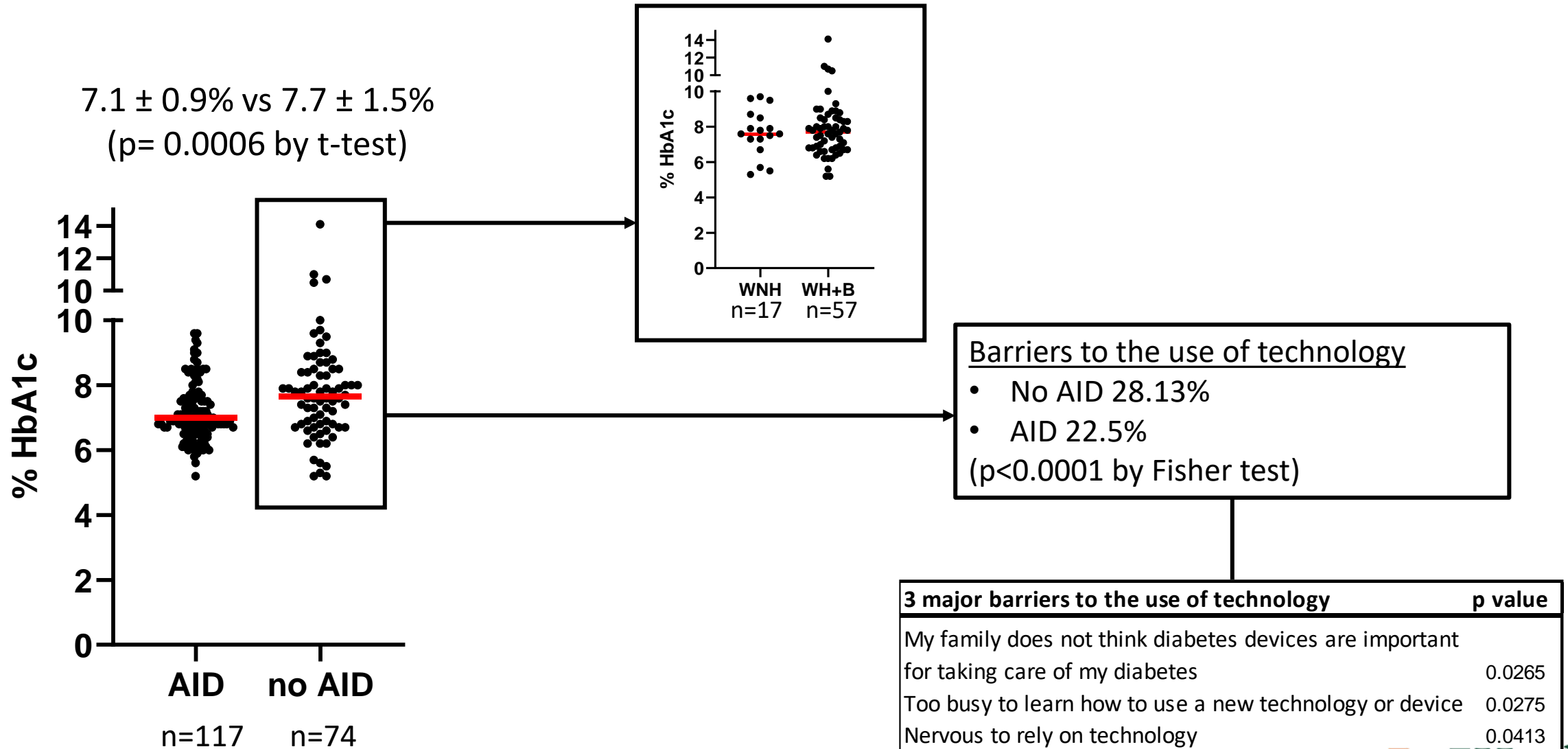
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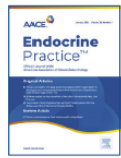


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Original Article

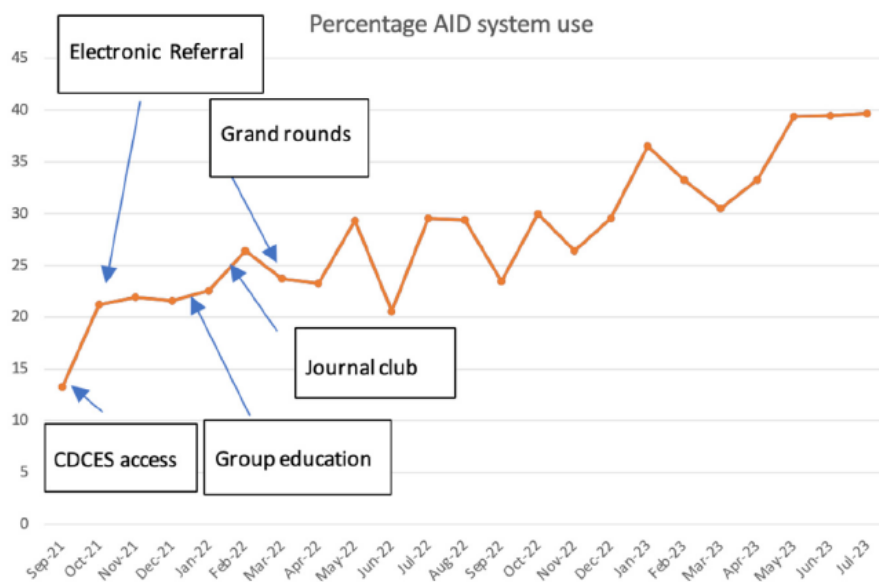
Reducing Inequity in the Use of Automated Insulin Delivery Systems by Adults With Type 1 Diabetes: Key Learnings From a Safety Net Diabetes Clinic Program

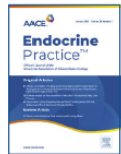


Devin Steenkamp, MD^{1,*}, Elizabeth Brouillard, RD, CDCES¹, Corinne Aia, RD, CDCES¹, Kathryn Fantasia, MD, MSc^{1,2}, Catherine Sullivan, MD¹, Astrid Atakov-Castillo, BA¹, Howard Wolpert, MD¹

¹ Section of Endocrinology, Diabetes and Nutrition, Department of Medicine, Boston University Chobanian & Avedisian School of Medicine, and Boston Medical Center, Boston, Massachusetts

² Evans Center for Implementation and Improvement Sciences, Boston University Chobanian & Avedisian School of Medicine, Boston, Massachusetts





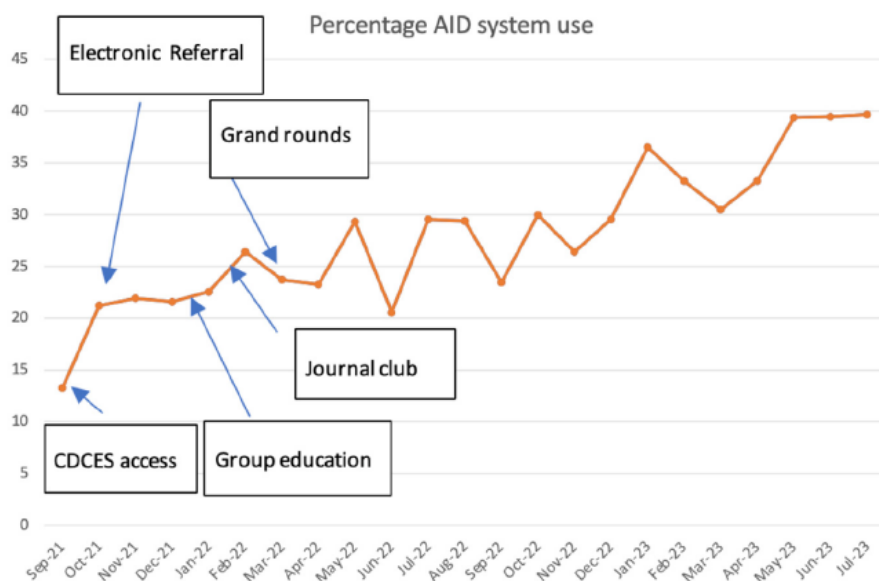
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REVIEW

Advantages and disadvantages of connected insulin pens in diabetes management

Kathryn Lingen¹, Talia Pikounis¹, Natalie Bellini² and Diana Isaacs^{1,3}

¹Close Concerns, San Francisco, California, USA

²University Hospitals, Cleveland, Ohio, USA

³Cleveland Clinic, Cleveland, Ohio, USA

Correspondence should be addressed to D Isaacs: ISAACSD@ccf.org

Endocrine Connections
(2023) 12, e230108

Connected pen systems are linked to:

- higher time in range
- reductions in A1c
- reductions in severe hypoglycemia
- reductions in missed insulin doses

Interventions to implement the use of Smart Insulin Pens (SIPs)

Provide education to providers

Send prescription directly to pharmacy

Discuss co-pay with coupon for commercial insurance

Refer to diabetes education for training

Ask vendors to provide training

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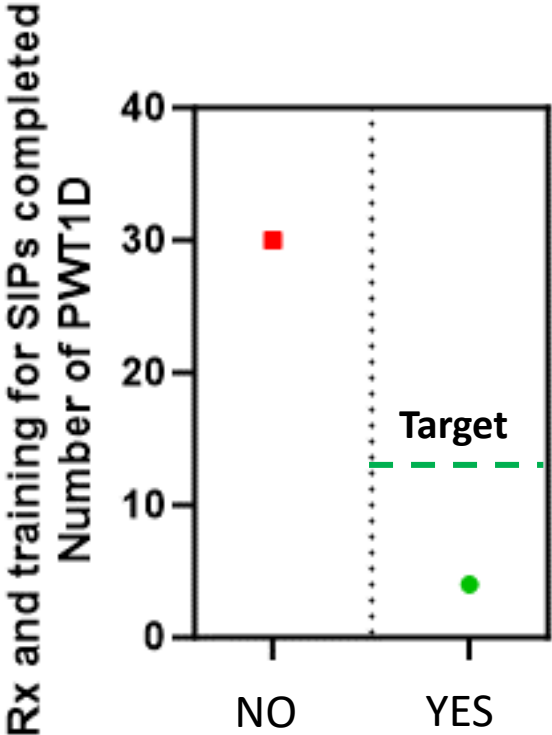
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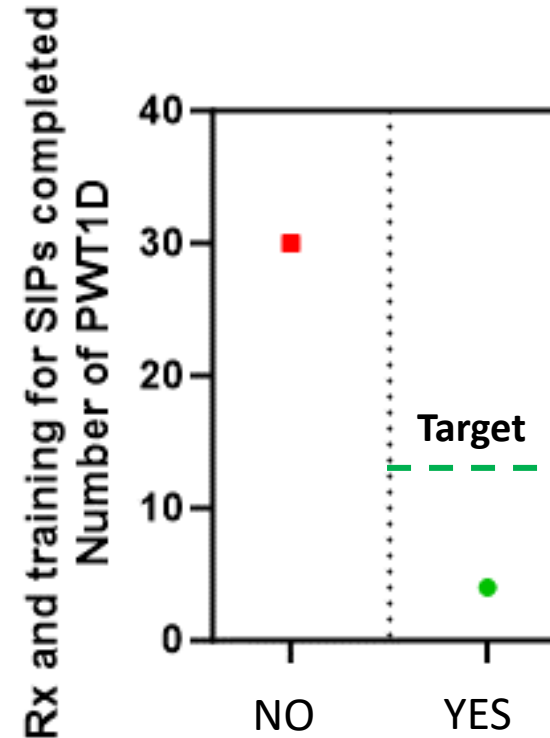
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Expand the number of providers involved

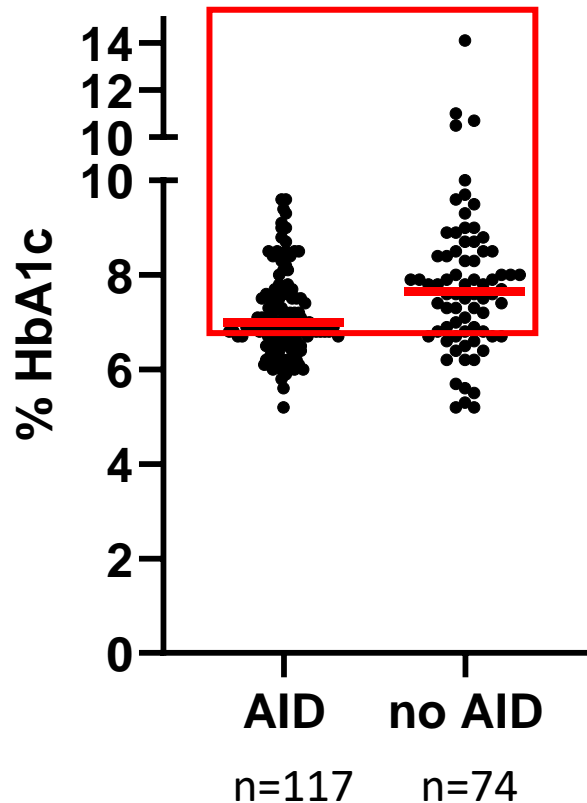
Use of smart phrases with guidance for the prescription of SIPs

Use of template letter for prior authorizations

Explore if the vendors can follow-up on the prescriptions

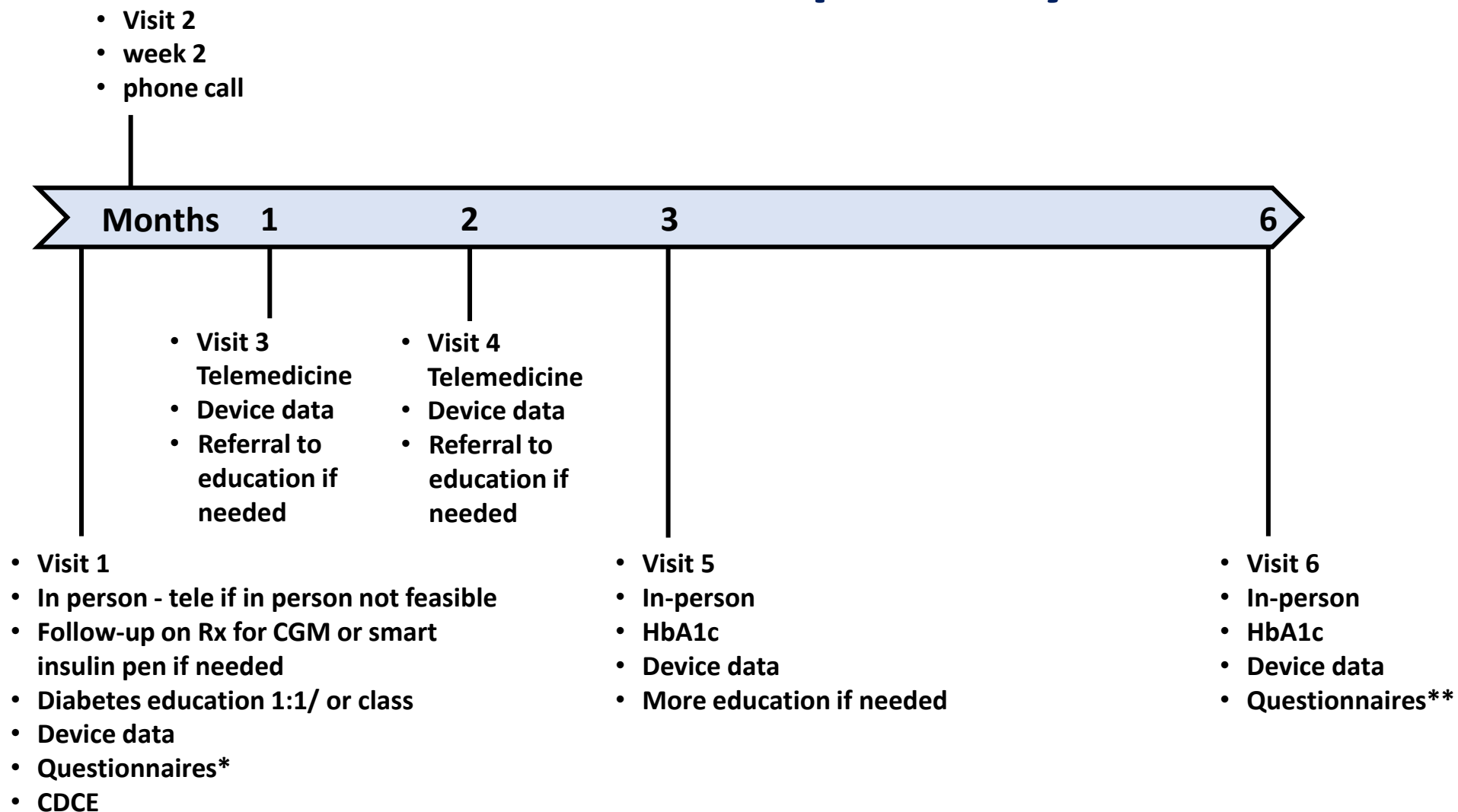
Intensive Management Program for Achieving Controlled Treatment in Type 1 Diabetes (IMPACT T1D)

7.1 ± 0.9% vs 7.7 ± 1.5%
(p= 0.0006 by t-test)



- Initiation or improvement in the use of diabetes technology (CGM, smart insulin pen, insulin pump)
- Education
- Review of glucose data at every visit
- Referral to psychology if needed
- 5 visits in 3 months and a follow-up visit at 6 months
 - 3 in person visits
 - 2 telemedicine visits
 - 1 phone call
- 4 questionnaires: Barriers, DNT-5, PHQ-8, DDST

IMPACT T1D pathway



*Barriers, Diabetes numeracy test (DNT-5), Diabetes distress, Depression (PHQ-8)

** Diabetes numeracy test (DNT-5), Diabetes distress, Depression (PHQ-8)

Mental health screening in veterans with T1D

- Opportunity to learn more about mental health by studying a challenging population and eventually developed specific interventions
- Questionnaires are administered to veterans with T1D
 - PHQ8
 - T1-DDAS
 - WHO5

Conclusions

- The use of automated insulin delivery (AID) devices is associated with better glycemic control in a minority population which is largely Hispanic and with private insurance
- Barriers to the use of technology are theoretically modifiable but difficult to overcome
- The use of SIPs in this population may represent a step toward the use of more sophisticated technology
- Further education about technology and psychological support may further improve outcomes

Conclusions

- The use of automated insulin delivery (AID) devices is associated with better glycemic control in a minority population which is largely Hispanic and with private insurance
- Barriers to the use of technology are theoretically modifiable but difficult to overcome
- The use of SIPs in this population may represent a step toward the use of more sophisticated technology
- Further education about technology and a psychological support may further improve outcomes
- If interested in studying mental health in veterans with T1D please contact me



Center Presentations

UC San Diego Health

UC San Diego Health T1D Diabetes Exchange Adult Collaborative

Kristen Kulasa MD

Clinical Professor of Medicine

Director, Inpatient Glycemic Control

UC San Diego Health Ambulatory Diabetes

Endocrinology Clinics

- 3 locations
- In person and tele-visits
- 1300 patients with T1D
- 900 patients with T2D

Diabetes Management and Education Clinic

- Run by PharmD + RD (overseen by Endo)
- In person and tele-visits
- Helps with complicated T2D from primary care, heme/onc referrals and pancreatic DM

UCSD Primary Care

- Almost 5000 patients with DM managed by PCP (an additional ~1600 shared with endo)



UC San Diego Health Inpatient At a Glance

- Tertiary/Quaternary Medical Care
 - Level I Trauma Center and Regional Burn Center
 - TJC Comprehensive Stroke Center
 - NCI Comprehensive Cancer Center
 - High Volume Transplant Center
 - Global leader in Pulmonary Thromboendarterectomy
- Inpatient Facilities
 - Jacobs Medical Center (373 beds)
 - Sulpizio Cardiovascular Center (54 beds)
 - Hillcrest Medical Center (422 beds)
 - *East Campus (302 beds)*





ADULT T1D DKA ED ADMISSIONS AT UCSD

KRISTI KULASA MD

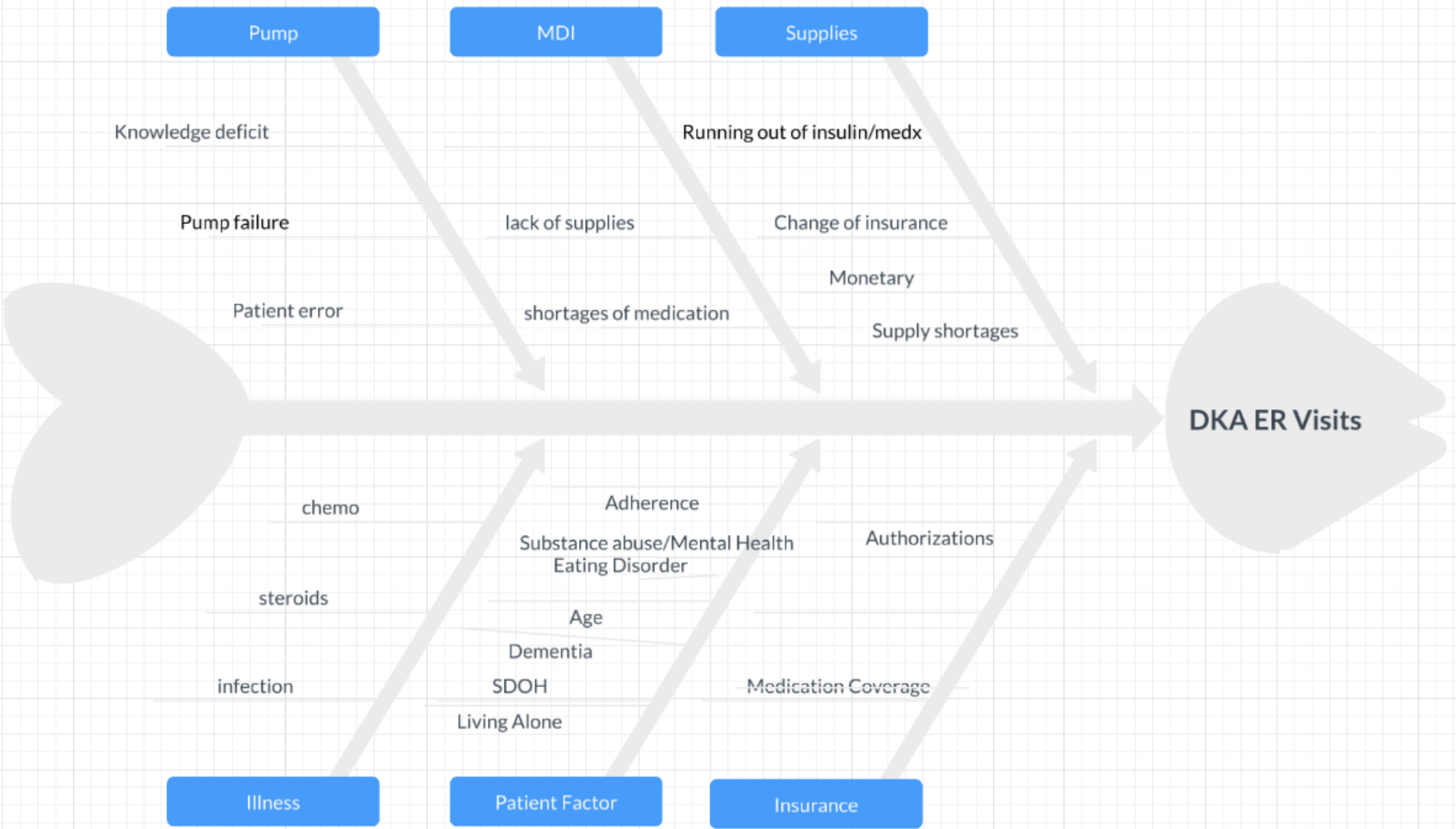
ALEXANDRIA YEO DNP

TAMMY O'RILEY FNP

LAURA BARBA FNP

INERTIA – GETTING STARTED WITH PROJECT

- Limitations
 - New to T1D Exchange – Data Merge not yet complete
 - Deciding to move forward with manual chart review
- Improvement Model
 - Identifying Aim Statement – What are we trying to accomplish
 - Understand DKA ED visits
 - How can we reduce DKA ED visits with our Endo/Diab Clinic Patients
 - Key Drivers/Fishbone



EXCEL DATA COLLECTION FROM EPIC

- Data Points – derived from Fishbone Chart
 - Age
 - Gender
 - Type of Diabetes: Type 1, Type 2, New onset Type 1, New onset Type 2, Pancreatic Diabetes, Cystic Fibrosis Related Diabetes
 - Who Manages Diabetes:
 - UCSD Endo/Diabetes
 - UCSD Primary Care
 - Other:
 - Outside Endo
 - Outside PCP
 - Family Health Centers/Logan Heights/Clinica del la Salud
 - Scripps Health/Sharp/Kaiser
 - Father Joe's Villages – Unhoused shelter

EXCEL DATA COLLECTION FROM EPIC

- Data Points

- History of Substance abuse – Yes/No
 - If Yes – Social Work Referral Yes/No
- History of Mental Health Issues – Yes/No
 - If Yes - Mental Health Professional Referral – Yes/No/NA
- On Chemotherapy/Cancer Treatment – Yes/No
 - If Yes Referred to DMEC
- History of Dementia – Yes/No
- Living Situation – Family/Partner/Single/SNF/Unhoused
- Pump Failure - Yes/No/NA
- Medications Not Taken – Yes/No
 - If Yes – Missed doses with available supply/Out of medication
- On SGLT2 – Yes/No
- Last A1C pre ED Visit - A1C at ED visit
- DKA ER Visit in previous year - Yes/No
 - If Yes – Number of DKA ED visits
- Number of Inpatient Admissions for DKA - LOS for DKA Admission

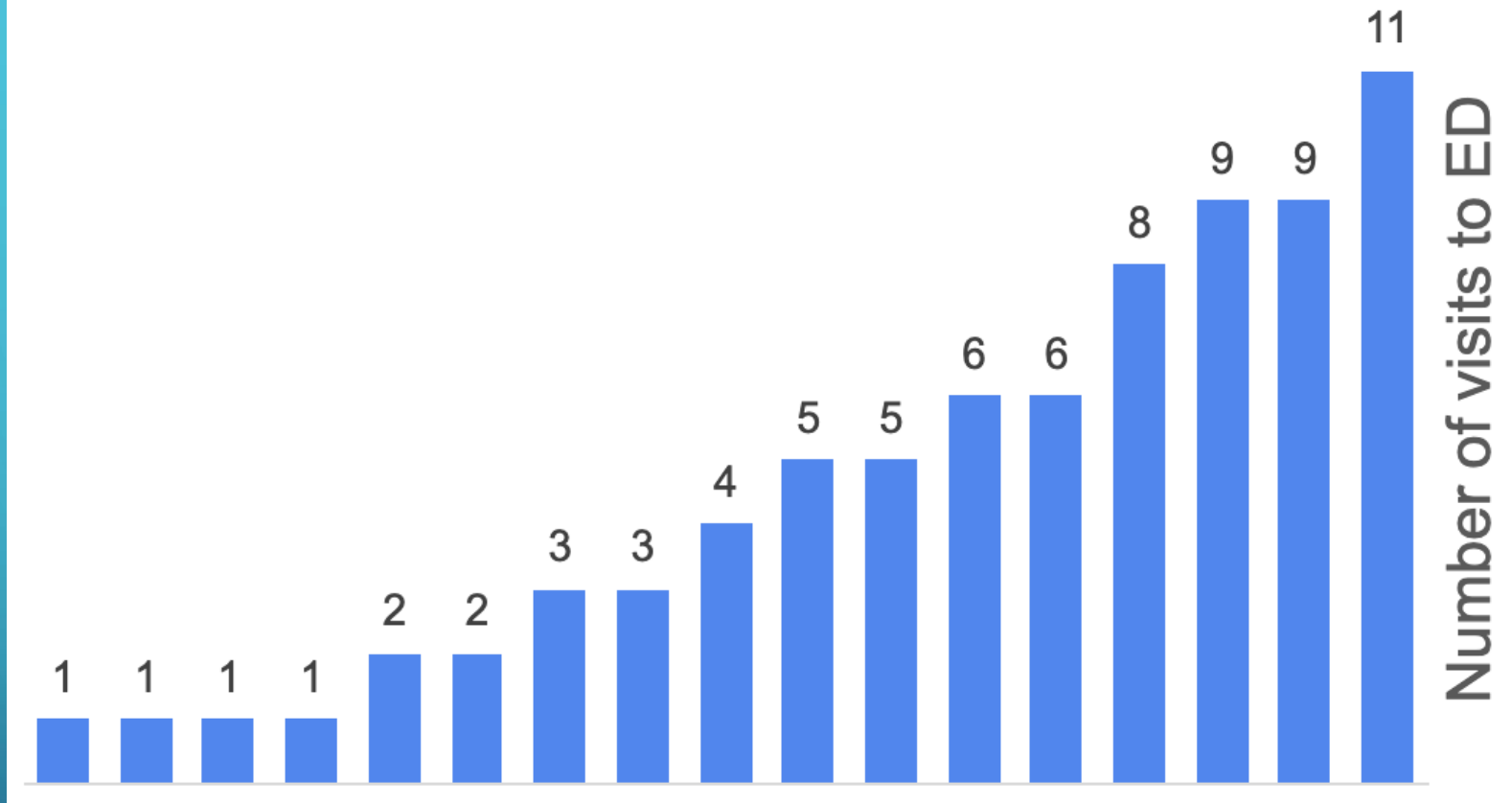
DATA FROM MEDICAL RECORD 4/27/2023-4/26/2024

- 73 Distinct patients Admitted to UCSD ED with DKA (some with multiple ED visits)
 - 46 Patients were not followed at UCSD for Primary Care and/or Endo/Diabetes
 - 27 Patients were UCSD Patients

DATA FROM MEDICAL RECORD 4/27/2023-4/26/2024

- Out of 27 UCSD Patients admitted for DKA,
 - 5 were followed only by UCSD Primary Care
 - 2 of the 5 were New onset – one T1D one T2D
 - 22 were followed by Endo
 - 17 were T1D
 - 4 were T2D
 - 1 Pancreatic Diabetes

Number of ED visits per each patient



- 17 T1D patients with DKA in ED were UCSD Endo/Diabetes Clinic patients
- These 17 patients accounted for 73 ED visits in 1 year.

FROM THE 17 T1D PATIENTS UCSD DIABETES,

- 53% Female
- Average age 40 years
- 41% had Substance abuse
- 41% used insulin pump
- Avg Pre-Admit A1C 10.2% - ER A1C 10.6%
- Re-Admit for DKA in a 1 year period:
 - 76% (n=13) had >1 visit to ED :
 - 64% had substance abuse
 - 56% mental health diagnoses
 - 65% had ≥ 3 ED visits for DKA in 1 year

PATIENTS WITH FREQUENT ED VISITS (≥ 3 /YEAR)

- Chart review of T1D patients with frequent ED visits (n=11) showed,
 - For patients established with UCSDH Endo prior to DKA episodes
 - 57% of had documentation of ketone monitoring at an outpatient visit prior to episode
 - 57% had an outpatient visit 6 weeks prior to episode
 - 55% documented omitting insulin
 - 2 related to major depression, 2 related to lack of follow up, 1 related to insulin affordability, and 1 due to SNF withholding insulin for 2 days.
 - 55% had illness (infection or gastroparesis) associated with DKA

Next Steps

- Finish data analysis of manually collected DKA data to see if opportunity to target intervention
 - Mental health services
 - Social work services
 - Access
- Complete data integration

Thank you!

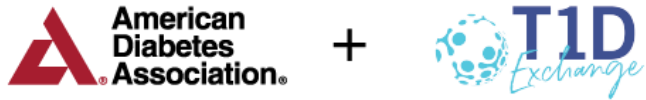
Upcoming Conferences



8th Annual T1D Exchange Learning Session 2024
November 11, 2024
Chicago, IL



Achieving Diabetes Equity in Practice Today
November 12-13, 2024
Chicago, IL



Learning Session and ADEPT Conferences

- Please use this [link](#) to register for the 2024 T1DX-QI 8th Annual Learning Session.
 - Nov 11: 8 am – 6:30 pm Learning Session
 - Nov 12-13 (with half-day session on the 13th) ADEPT
- We are offering ADEPT Registration for 2 Free Members from each center:
 - [Link](#) for free registration
 - [Link](#) for paid registration
- Hotel registration: use this [link](#) to register for your rooms for the Learning Session and ADEPT. When registering click on “I have an access code” and enter the code (T1DX-LS2024) to open the room block.
- T1DX-QI will cover the hotel costs for 2 team members for the nights of 11/10/2024 and 11/11/2024. Please confirm with your PI and mail qi@t1dexchange.org if your room should be covered.
- Use this [link](#) or scan the QR code to register.
 - Abstract notifications will be shared by end of September
 - Registration closes **October 31, 2024.**





Medtronic Improve AID Use at T1D Diagnosis (IMPROVAID)

Project Aims

- Aim 1: Accelerate AID data collection and conduct AID real world analysis.
- Aim 2: Analysis to understand factors that influence diabetes providers recommendations of AID systems.
- Aim 3: Reduce therapeutic inertia and enhance AID Prescription for newly diagnosed people with T1D.

Use this QR code to submit your center's interest.



Project Milestones June 2024 – December 2025

Month	Milestones
June 2024	<ul style="list-style-type: none">• Contract/Project Launch
July 2024	<ul style="list-style-type: none">• Aim 1 (Real World AID data analysis) Kick off• Aim 2 (Understanding barriers and facilitators) Kick off
August 2024	<ul style="list-style-type: none">• Aim 3 QI Centers recruitment and kick Off
September - December 2024	<ul style="list-style-type: none">• Ongoing analysis on Aim 1 and 2• QI engagement with centers on Aim 3• ADA 2025 Abstract submission