



**T1D**  
*Exchange*

# Clinical Leadership Strategy

May 15, 2023

# Recording of Main Session

[https://us02web.zoom.us/rec/share/gPDD5T07xLFGGNht3gTk-zaM8jDRYWn4wIS5rq7QC\\_V7iCwAZKZbrnBqBs9uOOI5.-6vQNmXkVLNuP5Zq?startTime=1684162905000](https://us02web.zoom.us/rec/share/gPDD5T07xLFGGNht3gTk-zaM8jDRYWn4wIS5rq7QC_V7iCwAZKZbrnBqBs9uOOI5.-6vQNmXkVLNuP5Zq?startTime=1684162905000)

Passcode: #w&G8qTp



# Welcome, Agenda, and Logistics

# LOGISTICS

1. Mute yourself when you're not talking. Everyone will default as muted.
2. When appropriate, keep your camera on. If you need to do anything personal, stop video, leave and come back.
3. Presenters will have the ability to display and advance their own slides. Today's presentations are posted on TIDX-QI Internal member website.
4. We encourage everyone to please introduce themselves by name and affiliation, using the chat feature.
5. We encourage questions, comments, reflections throughout the conference using the chat feature.
6. Please change you name in Zoom to display your first name, last name + affiliation by clicking the three dots to the right of your camera.
7. Time is set aside for personal breaks. You can also stay in Zoom and chat with colleagues.
8. TID Exchange staff can be identified as XXX\_TID and they can help with any technical difficulties.

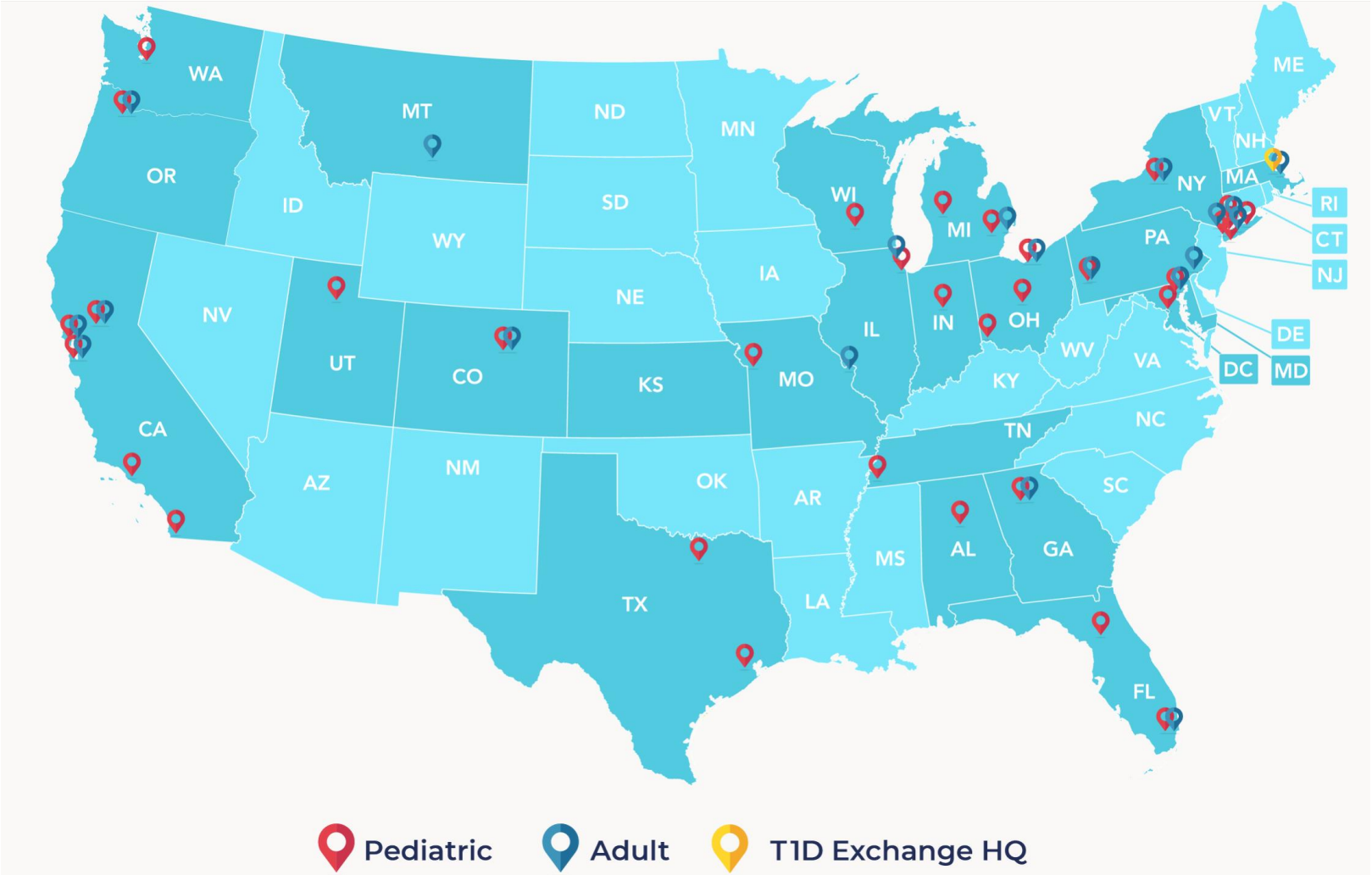
# May 15, 2023

(all times reflect Eastern Standard)

|   |   |
|---|---|
| 11:05-11:15 AM<br>Co-Chair's Welcome, Logistics and Overview                    | Devin Steenkamp & Todd Alonso   |
| 11:15-11:30 PM T1DX-QI Update   | Osagie Ebekozen   |
| 11:30-12:40 PM (15 minutes each, Q&A)<br>Review of 2020 - 2022 Quality Measures | Ori Odugbesan (Pediatric Measures)<br>Ann Mungmode (Adult Measures)<br>Don Buckingham (New Centers Overview)<br>Siham Accacha (Quality Improvement Culture)   |
| 12:40-1:00 PM Break   |   |
| 1:00-1:10 PM T2DX-QI Program update   | Nicole Rioles   |
| 1:10-2:10 PM<br>Committees Report Out (10 mins each, Q&A)                       | Daniel DeSalvo & Carol Levy (Data Governance)<br>Shivani Agarwal & Shideh Majidi (Publication)<br>Amy Ohmer & Jeff Hitchcock (Patient/Parent)<br>Ori Odugbesan & Trevon Wright (QI Champions)<br>Joyce Lee & Marina Basina (Data Science) |
| 2:10-2:25 PM Instructions for Break Out/Break                                   |   |
| 2:25-3:25 PM Working Groups Discussions   | Everybody across four Breakout rooms  |
| 3:25-3:50 PM Report Out/Closing   | Devin Steenkamp & Todd Alonso   |

# T1D Exchange Quality Improvement Collaborative: Accelerating Change through Benchmarking and Improvement

T1D Exchange Quality Improvement Collaborative: Accelerating Change through Benchmarking and Improvement Science for People with Type 1 Diabetes. Journal of Diabetes. November 2021



# 20 adult clinics – caring for 28,000 patients with T1D

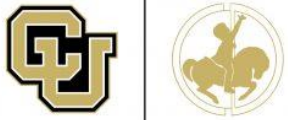


# 20 participating adult clinics

|   |  |
|---|--|
| Albert Einstein<br>Shivani Agarwal MD MPH                         | NYU Langone<br>Lauren Golden MD                        |
| Boston Medical Center<br>Devin Steenkamp MD                       | Oregon Health & Science University<br>Andrew Ahmann MD |
| Grady Memorial Hospital<br>Sonya Haw MD                           | Stanford University<br>Marina Basina MD                |
| Northwestern Medicine<br>Grazia Aleppo MD                         | SUNY<br>Ruth Weinstock MD PhD                          |
| Penn Medicine<br>Ilona Lorincz MD                                 | UC Davis<br>Prasanth Surampudi MD                      |
| Washington University<br>Alexis McKee MD                          | UC San Diego<br>Kristen Kulasa MD                      |
| Barbara Davis Center<br>Halis Akturk MD                           | UCSF<br>Umesh Masharani MD                             |
| Cleveland Clinic,<br>Pratibha Rao, MD, MPH & Mary Vouyiouklis, MD | UPMC<br>Jason Ng MD                                    |
| Johns Hopkins<br>Nestoras Mathioudakis MD MHS                     | University of Miami<br>Francesco Vendrame, MD PhD      |
| Mount Sinai<br>Carol Levy MD                                      |  |



# 34 pediatric clinics – caring for 54,000 patients with T1D



## 34 participating pediatric clinics

|  |   |  |  |
|--|---|--|--|
| Barbara Davis Center<br>Todd Alonso MD   | Helen Devos Children's<br>Donna Eng MD        | Rady Children's<br>Carla Demeterco Berggren MD PhD   | University of Florida<br>Laura Jacobsen, MD                      |
| Children's Mercy Hospital<br>Mark Clements MD PhD  | Indiana University Health<br>Anna Neyman MD   | Seattle Children's Hospital, Faisal<br>Malik MD, MSHS and Alissa Roberts<br>MD             | UPMC<br>Alissa Guarneri, MD, MBOE                                |
| Children's Hospital Los Angeles<br>Brian Miyazaki, MD  | Johns Hopkins, Risa Wolf MD                   | Stanford University<br>Priya Prahalad MD   | University of Miami<br>Janine Sanchez MD                         |
| Cincinnati Children's Hospital<br>Sarah Corathers MD   | Le Bonheur Children's, U TN<br>Grace Bazan MD | SUNY<br>Roberto Izquierdo MD   | UC Davis<br>Stephanie Crossen MD & Caroline<br>Schulmeister, MD  |
| CHOA<br>Kristina Cossen MD   | Lurie Children's<br>Naomi Fogel MD            | Texas Children's,<br>Daniel DeSalvo MD   | UCSF<br>Jenise Wong MD   |
| Cleveland Clinic,<br>Andrea Mucci MD MASc  | Mott Children's<br>Joyce Lee MD               | NYU Langone: Accacha MD.<br>Hassenfeld Children's Hospital at<br>NYU Mary Pat Gallagher MD | University of Utah, Intermountain<br>Healthcare Vandana Raman MD |
| Cohen Children's Medical Center,<br>Northwell Health, Jennifer Sarhis MD<br>& Allison Mekhoubad MD | Mount Sinai<br>Robert Rapaport MD             | Oregon Health & Science University<br>Ines Guttmann-Bauman MD                              | University of Wisconsin, Madison<br>Liz Mann MD                  |
| Cook Children's<br>Paul Thornton MD & Susan Hsieh  | Nationwide Children's<br>Manu Kamboj MD       | University of Alabama<br>Mary Lauren Scott MD  | Weill Cornell<br>Alexis Feuer MD                                 |

# Welcome UC San Diego!



Kristen Kulasa MD



# Reminders

# RSVP for T1DX-QI Breakfast at Sci Sessions

We are excited to host the ADA Faculty Breakfast Sunday June 25th 6:30-8am PST, in partnership with Rady Children's Hospital.

Everyone is welcome. Please use this [link](#) to RSVP



# November Learning Session

Tues Nov 14, 7am-5pm (EST) and Wed Nov 15, 7am-3pm (EST. Please share your information on attendance using this link: [RSVP form](#)

The learning session will be hosted at a hotel in midtown NYC and virtually.

- T1DX will cover hotel costs for two attendees per clinical center.
- T1DX will also cover costs for breakfast, lunch and dinner on Tuesday November 14th and breakfast and lunch on Wednesday November 15th
- T1D Exchange is not covering flights, taxis, gas milage, parking, or meals/food outside of the meals provided at the conference sessions
- T1DX-QI will also not cover hotel rooms for 3rd, 4th, or 5th+ team members attending or hotel rooms in addition to the two nights for two team member's limit

RSVP through the Qualtrics link so that we know who is attending. For those not covered under T1DX-QI, we will hold the room in the block for you and you will be responsible for payment when checking out.

More FAQ can be found on the member website.



# Abstracts for the November Learning Session

The 2023 November Learning Session call for abstracts is now open through Friday June 16th.

Please use this [link](#) to view the guidelines, sample abstract, and submit.

All members are encouraged to submit abstracts. Please use this [link](#) to view the 2023 Learning Session FAQ with more information on abstract submission and session details.

2023 will mark the third year that T1D Exchange has partnered with the Journal of Diabetes to publish T1DX-QI Learning Session abstracts. Previous years' abstracts can be found on Wiley's website for the [2022](#) and [2021](#) conference publications.



# Invoicing Deadlines

Invoices related to work deliverables of Jan-Mar 2023 are now due. We will accept invoices for this work period through June 30<sup>th</sup> 2023. 6/30/2023 is the deadline. **Payments will not be issued for invoices received after 7/1/2023.**

Please invoice for payment following the deliverables schedule in SOW section 1.D. Include deliverable number and date. All payments will be made through electronic funds transfer (EFT). Include your banking information on invoice.

1. Bank account name & address
2. Bank account number
3. Bank account routing number

Invoices should be sent via email attachment

To: [t1dxap@t1dexchange.org](mailto:t1dxap@t1dexchange.org)

CC: [nrioles@t1dexchange.org](mailto:nrioles@t1dexchange.org)

[linda.crasco@t1dexchange.org](mailto:linda.crasco@t1dexchange.org)

[rweathers@t1dexchange.org](mailto:rweathers@t1dexchange.org)

Invoices are always due within 90 days of work performed.

Kindly forward this information to your finance contacts so that they are aware of the deadlines.





# Annual Survey

We will be releasing the T1DX-QI Annual Survey in June.

- Links to the survey will be sent to PI and QI champion
- Only one submission per center.
- Please answer questions on behalf of your clinic
- We will send pdf version so that you can review before completing
- Timeline to respond: June-August

# Aim Statement for Adults

## Aim Statement for 2022-2025

Among people ages 18-75 with T1D, increase proportion of patients achieving glycemic targets in an equitable manner

1. Optimize glycemic outcomes as measured by A1c
  - a. Increase % of patients with A1c <8 by 5%
  - b. Decrease % of patients with A1c >9 by 5%
2. Optimize glycemic outcomes as measured by TIR
  - a. Increase % of patients with Time in Range >70% by 5%
  - b. Increase % population with Time in Range >50% by 10%
  - c. Decrease % population with Time Below Range (<70mg/dL) by 5%

## Global Aim

Among people ages 18-75 with T1D, increase proportion of patients achieving glycemic targets from baseline in 2 years in an equitable manner

\*Duration > 1 year, ages 18-75, with at least one in-person or telemedicine visit in the last 12 months

## Primary Drivers

Use of Data

Health Equity

Diabetes Comorbidities and Complications

Medication Management and Device use

Access to Care

Shared Decision Making

Whole Person Health

## Secondary Drivers

- Map Data
- EMR templates, flowsheets, registries

- Culturally Competent Care
- Social Determinants of HealthTrack data for equitable

- Glucose Monitoring and Testing
- Hybrid Closed Loop Adopting
- Shared Decision Making
- Insulin and Medication Therapy

- Patient Centered Care
- Identifying Patient Priorities and Goals

- Quality of Life Measures
- Mental Health Screening and Referrals
- Diabetes Distress Screening
- Track co-morbidities and needs

# Aim Statement for Pediatrics

## Aim Statement for 2023-2025

Among people ages 1-25 with T1D, increase proportion of patients achieving glycemic targets in an equitable manner

1. Optimize glycemic outcomes as measured by A1C
  - a. Increase % of patients with A1c <7 by 5%
  - b. Decrease % of patients with A1c >9 by 5%
2. Optimize glycemic outcomes as measured by TIR
  - a) Increase % of patients with Time in Range >70% by 5%
  - b) Increase % of patients with Time in Range >50% by 10%
  - c) Decrease % of patients with Time below Range (<70 mmol/dL) <4% by 5%

# Key Driver Diagram

## Global Aim

## Primary Drivers

## Secondary Drivers

Among people ages 1-25 with T1D\*, increase proportion of patients achieving glycemic targets in an equitable manner

Diabetes Devices

- Glucose monitoring
- Insulin therapy
- Hybrid closed looped systems

Access to care

- Clinic appointments
- Transition to adult care
- Health literacy

Psychosocial Support

- Psychosocial support
- Depression Screening
- Diabetes Distress

Health Equity

- Social Determinants of Health
- Data stratification
- Develop equity-based interventions

\*Duration > 1 year, ages 1-25, with at least one in-person or telemedicine visit in the last 12 months.

# NEW: QI Work-Groups

Move beyond individual QI at each site to **group QI** that maintains alignment with our current KDDs

## Four workgroups:

### 1. Glucose monitoring

This group will collaborate to optimize CGM usage by focusing on early initiation, maintenance of use, and success in diabetes management driven by CGM.

### 2. Hybrid closed loop

This group will collaborate to address the common challenges that stymie widespread increased HCL adoption

### 3. Transition from pediatric to adult care

This group will collaborate to implement scalable and sustainable processes to prepare pediatric patients with type 1 diabetes to graduate to adult care.

### 4. Diabetes distress

This group will collaborate to develop a structured implementation program and model to address diabetes distress in routine clinical practice

# Workgroup Structure

| <b>Common Structure For All Workgroups</b>  | <b>Outputs For All Workgroups</b>  |
|---|--|
| <b>Charge:</b> Focus on the intervention topic of the work group to inspire others, improve outcomes, and expand generalizable knowledge. | <b>Aim:</b> Workgroups will follow common Aim of the Collaborative.  |
| <b>Structure:</b> Workgroups will be self-led by PIs interested in these topic areas.   | <b>Outputs &amp; Deliverables:</b> Workgroup members will meet regularly, share best practices and intervention experiences with each other. There is an expectation that outputs (eg, manuscripts, flow sheets, and change packages) will derive from these groups. |
| <b>Timelines:</b> Workgroups will run from July 1, 2023- June 30, 2024.   | <b>Measures:</b> Workgroups will follow the existing measures of T1DX-QI.  |
|   | <b>Data:</b> Workgroups will follow the existing Data Spec of T1DX-QI.   |
|   | <b>Schedule:</b> Workgroup members will agree to a meeting schedule. T1DX-QI recommends no more than 1 meeting per month and at least 1 meeting per quarter.   |

# EXPECTATIONS

Intent is to work together to deliver meaningful improvement, share best practices AND outcomes, testing ideas through the course of the workgroup time together.

Next steps:

1. Start with open discussion of interested PIs
2. Each group to select 2 volunteer leads (one adult and one ped)
3. Choose deliverables, SMART aims, and timelines, each group can decide
4. Plan interventions that tie to the KDD
5. Plan for organization and visualization of data (e.g. run charts)
6. Progress report due by the November meeting



# Theoretical Example

## Diabetes Distress Work-Group

1. **Leaders:** TBD and TBD
2. **Deliverables:**
  - A. Improve implementation of the Diabetes Distress Scale (DDS) in clinical practice
  - B. Publish manuscript describing the improvement.
3. **Plan interventions:** Transition from PHQ-9 to DDS implementation over 4 months.  
Meet monthly
4. **Data visualization:** Run-chart
5. **November Progress Report:**
  - A. Team leaders, structure of the group, meeting frequency etc
  - B. Initial description of collective learnings from PDSA implementation

# Workgroup FAQ

Q: Is joining a work group mandatory?

A: No, joining is elective. We encourage joining if your clinic has interest & capacity.

Q: Can my team join more than one group?

A: Yes. If you wish to do this, we recommend you delegate representation from different members of your team so that one point person is responsible for joining only one group.

Q: What aims/deliverables should these groups use?

A: Groups should follow the existing KDD aim, primary drivers and measures

Q: What is the timeline of the group and how “time consuming” will they be?

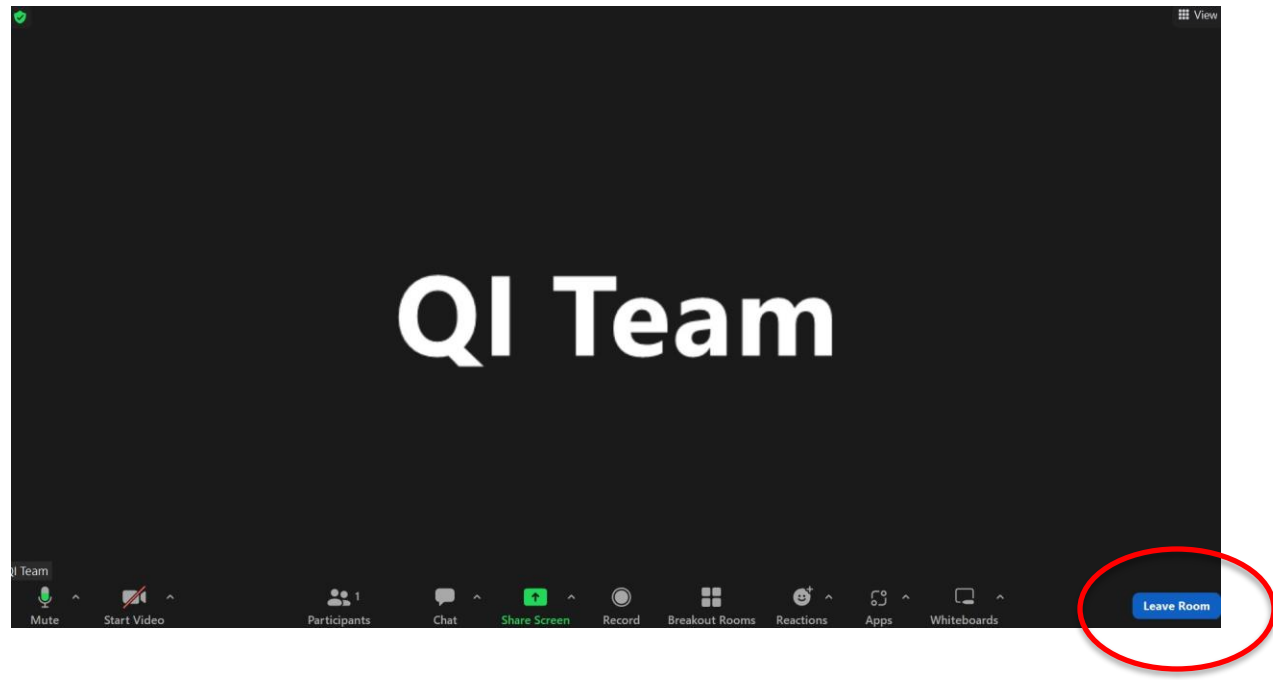
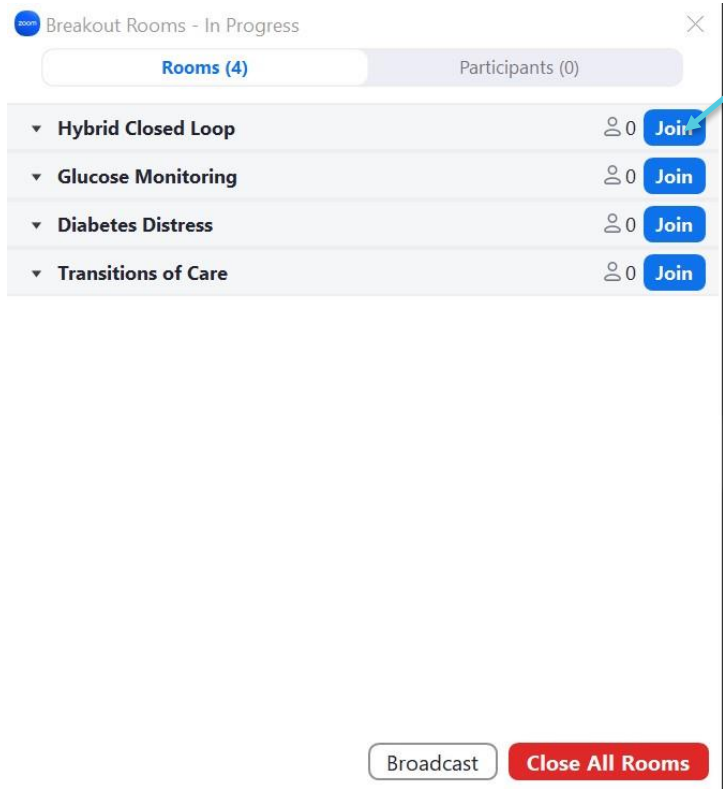
A: We are setting these up as 12-month projects. Participation in these groups will translate to approximately 1 hour per month, but this will be decided by the group.

Q: Who will be responsible for organizing meetings and sharing slides and meeting minutes?

A: These groups will be self-organized and the group will be responsible for sharing meeting information and agendas, etc.

# How to Join a Breakout Room

Click on the room you would like to join. If you would like to switch groups, click leave room to return to main session then click join on the new room.





**T1D**  
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# Pediatric Centers

# % Improvement Across Measures

Pediatric Clinics Improvement Scorecard May 2023 [Data from Jul 2020-December 2022]

| Metric         | A1c <7%                 | CGM Use                 | Pump Use                | Depression Screening | DKA Events               | Time in Range             | Documented Transition | SDOH Screening       |
|----------------|-------------------------|-------------------------|-------------------------|----------------------|--------------------------|---------------------------|-----------------------|----------------------|
| T1DX-QI Goal   | >25%                    | >70%                    | >65%                    | >80%                 | >6.3%                    | >50%                      | >10%                  | >10%                 |
| T1DX- QI Statu | 29%                     | 78%                     | 50%                     | 63%                  | 2.50%                    | 22%                       | 65%                   | 69%                  |
| 1              | Children's National 50% | Children's National 97% | NYU Langone 79.2%       | Le Bonheur 97%       | Nationwide 0%            | NYU Langone 52.34%        | NYU Mineola 100%      | SUNY Upstate 80.7%   |
| 2              | Hassenfeld 47.6%        | Rady Children's 91%     | Helen DeVos 79%         | Helen DeVos 90%      | Michigan 0.3%            | Children's Mercy 36%      | Hassenfeld 96.83%     | Hassenfeld 69.94%    |
| 3              | Weill Cornell 24.5%     | Indiana 89.8%           | NYU Mineola 77.3%       | Mt. Sinai 85.6%      | NYU Mineola 0.3%         | Weill Cornell 19.4%       | Helen DeVos 69%       | Texas Children's 68% |
| 4              | Rady Children's 24.5%   | NYU Langone 88%         | Weill Cornell 72.6%     | Texas Children's 80% | Lurie Children's 0.6%    | Lurie Children's 11.9%    | Children's Mercy 51%  | Weill Cornell 9.4%   |
| 5              | U Florida 24%           | Seattle Children's 88%  | Barbara D Center 71.67% | UMiami 79.31%        | Hassenfeld 1%            | NYU Mineola 11.7%         | Weill Cornell 32.2%   | Cohen QA             |
| 6              | Texas Children's 23%    | Nationwide 87.4%        | Children's Mercy 69%    | SUNY Upstate 66.21%  | U Florida 1.4%           | Children's National 10.1% |                       |                      |
| 7              | Helen DeVos 23%         | SUNY Upstate 86.6%      | Indiana 68.7%           | NYU Langone 61.2%    | Texas Children's 1.85%   | Nationwide QA             |                       |                      |
| 8              | CHLA 23%                | U Florida 84%           | Michigan 68%            | Children's Mercy 59% | Barbara D Center 2%      |                           |                       |                      |
| 9              | Lurie Children's 22%    | CHOA 84%                | Seattle Children's 60%  | Michigan 59%         | Seattle Children's 2.06% |                           |                       |                      |
| 10             | NYU Mineola 20.4%       | NYU Mineola 81.5%       | SUNY Upstate 59.5%      | Weill Cornell 39.3%  | Weill Cornell 2.1%       |                           |                       |                      |
| 11             | Cohen 19.87%            | Barbara D Center 80%    | UWisconsin 54.7%        | U Florida 39%        | Rady Children's 2.4%     |                           |                       |                      |
| 12             | UWisconsin 18.8%        | Children's Mercy 78.2%  | Rady Children's 53%     | UWisconsin 34.7%     | Cook Children's 3%       |                           |                       |                      |
| 13             | Nationwide 18.35%       | Michigan 77%            | Texas Children's 50%    | NYU Mineola 24.1%    | Children's Mercy 4.4%    |                           |                       |                      |

**QA: Not shown for Quality Assurance**



# % Improvement Across Measures

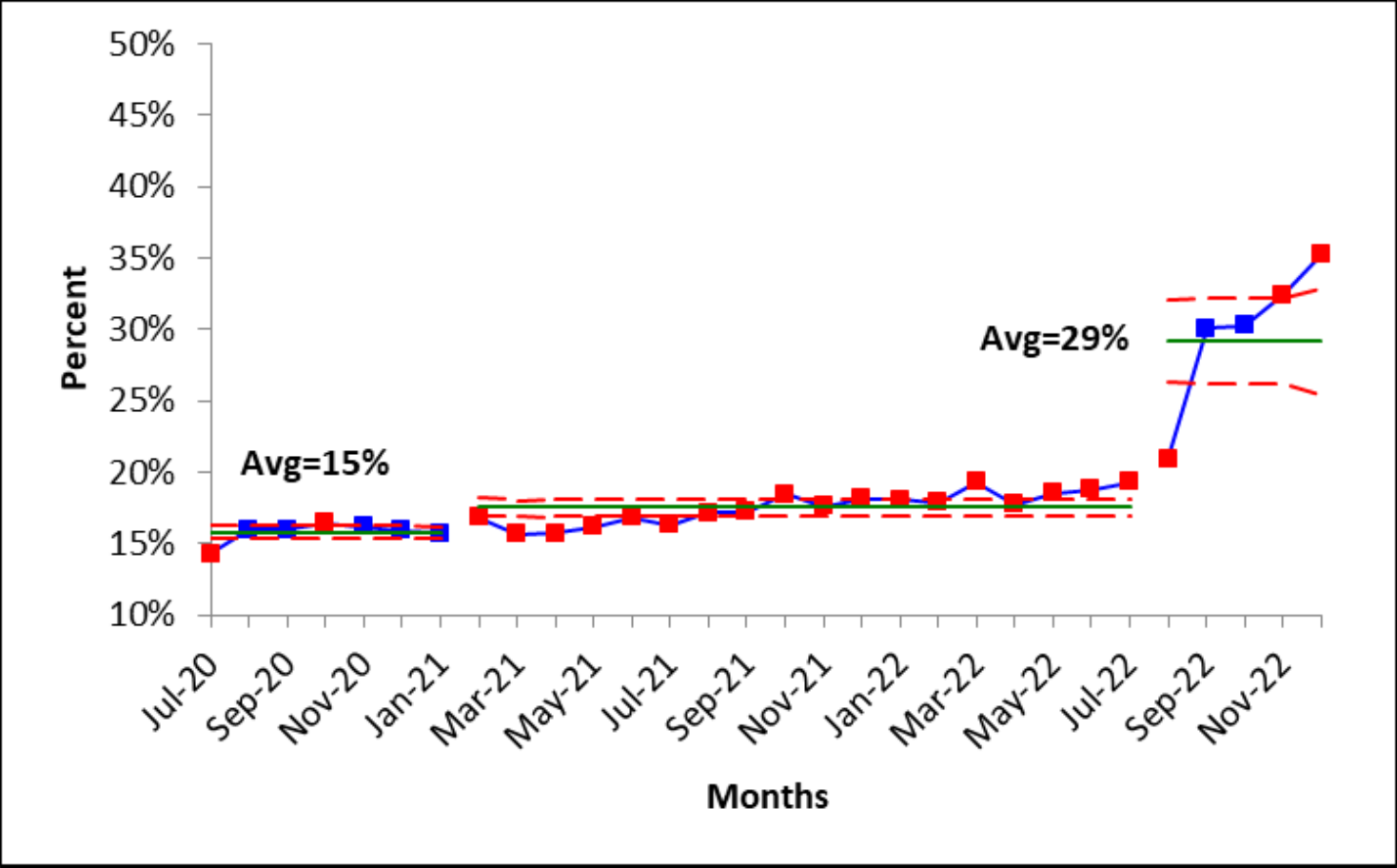
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|-----------------|--------------------------|--------------------------|---------------------------|------------------------|---------------|---------------|-----------------------|----------------|
| T1DX-QI Goal    | >25%                     | >70%                     | >65%                      | >80%                   | >6.3%         | >50%          | >10%                  | >10%           |
| T1DX- QI Status | 29%                      | 78%                      | 50%                       | 63%                    | 2.50%         | 22%           | 65%                   | 69%            |
| 13              | Barbara D Center 18%     | Texas Children's 77%     | CHLA 48%                  | Lurie Children's 10.9% | Alabama 6.26% |               |                       |                |
| 14              | Cook Children's 18%      | Weill Cornell 75.8%      | U Florida 47%             | Cook Children's QA     | Cohen QA      |               |                       |                |
| 15              | Seattle Children's 18%   | UWisconsin 74.1%         | Children's National 46.6% | Seattle Children's QA  |               |               |                       |                |
| 16              | CHOA 18%                 | Cook Children's 73%      | Alabama 44%               | CHLA QA                |               |               |                       |                |
| 17              | Children's Mercy 17.92%  | Helen DeVos 66%          | CHOA 44%                  | Cohen QA               |               |               |                       |                |
| 18              | Michigan 17%             | Le Bonheur 62%           | Lurie Children's 43.5%    | Nationwide QA          |               |               |                       |                |
| 19              | Indiana 16.3%            | CHLA 60%                 | Nationwide 42%            |                        |               |               |                       |                |
| 20              | Le Bonheur 13%           | Alabama 39%              | Cook Children's 37%       |                        |               |               |                       |                |
| 21              | Alabama 12.6%            | Cohen QA                 | Le Bonheur 37%            |                        |               |               |                       |                |
| 22              | SUNY Upstate 10.60%      | Cincinnati Children's QA | Cincinnati Children's QA  |                        |               |               |                       |                |
| 23              | Mt. Sinai QA             | Mt Sinai QA              | Cohen QA                  |                        |               |               |                       |                |
| 24              | Cincinnati Children's QA | Lurie Children's QA      | Mt. Sinai QA              |                        |               |               |                       |                |
| 25              | Stanford Peds QA         | Stanford Peds QA         | Stanford Peds QA          |                        |               |               |                       |                |

**QA: Not shown for Quality Assurance**



# HbA1c < 7% increased by 14%



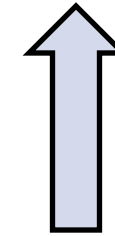
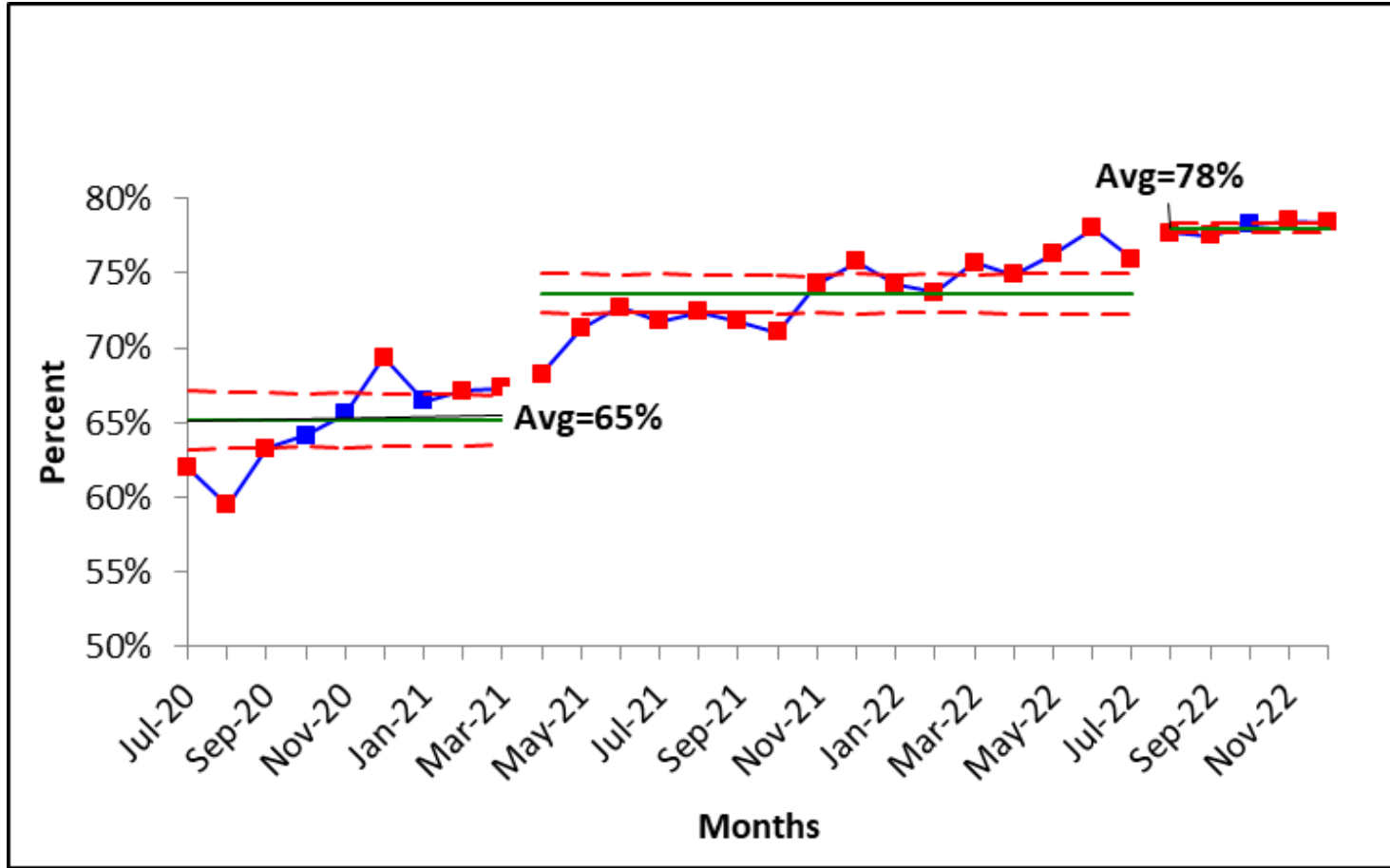
- QI Collaborative Goal: 25%
- QI Collaborative Average: 29%

Improvement Range: 10.6%-50%

| Jul-20 | Aug-20 | Sep-20 | Oct-20 | Nov-20 | Dec-20 | Jan-21 | Feb-21 | Mar-21 | Apr-21 | May-21 | Jun-21 | Jul-21 | Aug-21 | Sep-21 | Oct-21 | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-22 | Oct-22 | Nov-22 | Dec-22 |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 5154   | 5652   | 5735   | 6227   | 5768   | 6198   | 6499   | 6314   | 7612   | 7062   | 6593   | 7226   | 7204   | 7734   | 7467   | 7253   | 7561   | 6800   | 7383   | 7050   | 7595   | 6990   | 6971   | 7014   | 6971   | 7897   | 7063   | 7404   | 7146   | 4671   |
| 737    | 903    | 918    | 1025   | 934    | 988    | 1022   | 1064   | 1191   | 1113   | 1069   | 1217   | 1175   | 1326   | 1289   | 1340   | 1333   | 1236   | 1338   | 1263   | 1466   | 1243   | 1291   | 1317   | 1349   | 1654   | 2123   | 2241   | 2316   | 1645   |



# CGM Use increased by 13%



Lahey-P chart favorable direction

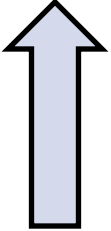
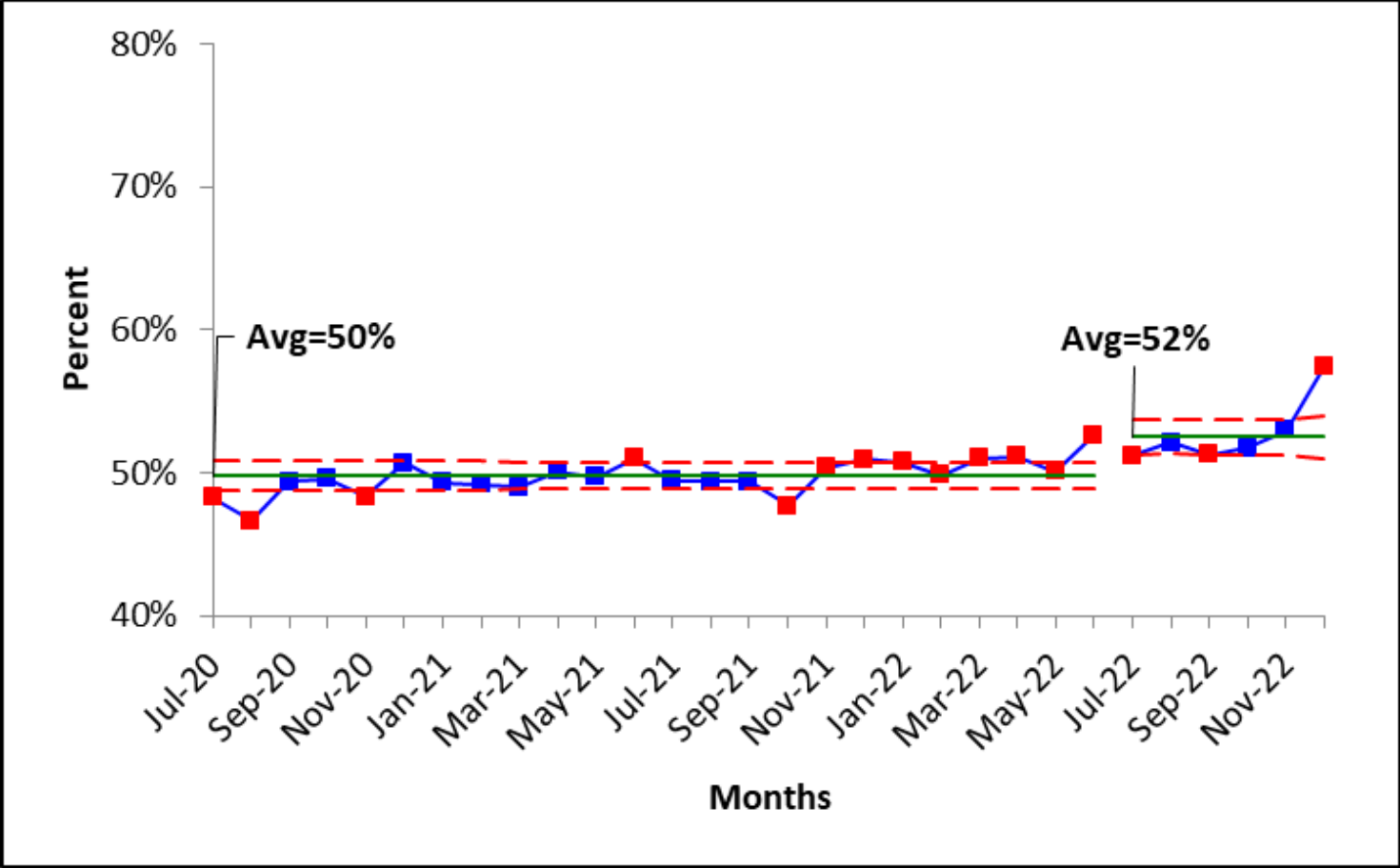
- **QI Collaborative Goal: 70%**
- **QI Collaborative Average: 78%**

**Improvement Range: 39%-97%**

| Jul-20 | Aug-20 | Sep-20 | Oct-20 | Nov-20 | Dec-20 | Jan-21 | Feb-21 | Mar-21 | Apr-21 | May-21 | Jun-21 | Jul-21 | Aug-21 | Sep-21 | Oct-21 | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-22 | Oct-22 | Nov-22 | Dec-22 |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 5154   | 5652   | 5735   | 6227   | 5768   | 6198   | 6499   | 6314   | 7612   | 7062   | 6593   | 7226   | 7204   | 7734   | 7467   | 7253   | 7561   | 6800   | 7383   | 7050   | 7595   | 6990   | 6971   | 7014   | 6971   | 7897   | 7063   | 7404   | 7146   | 4671   |
| 3193   | 3363   | 3629   | 3994   | 3781   | 4301   | 4320   | 4238   | 5122   | 4819   | 4700   | 5256   | 5171   | 5599   | 5360   | 5154   | 5618   | 5154   | 5483   | 5199   | 5751   | 5237   | 5315   | 5473   | 5295   | 6135   | 5475   | 5793   | 5608   | 3662   |



# Pump Use increased by 2%



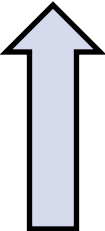
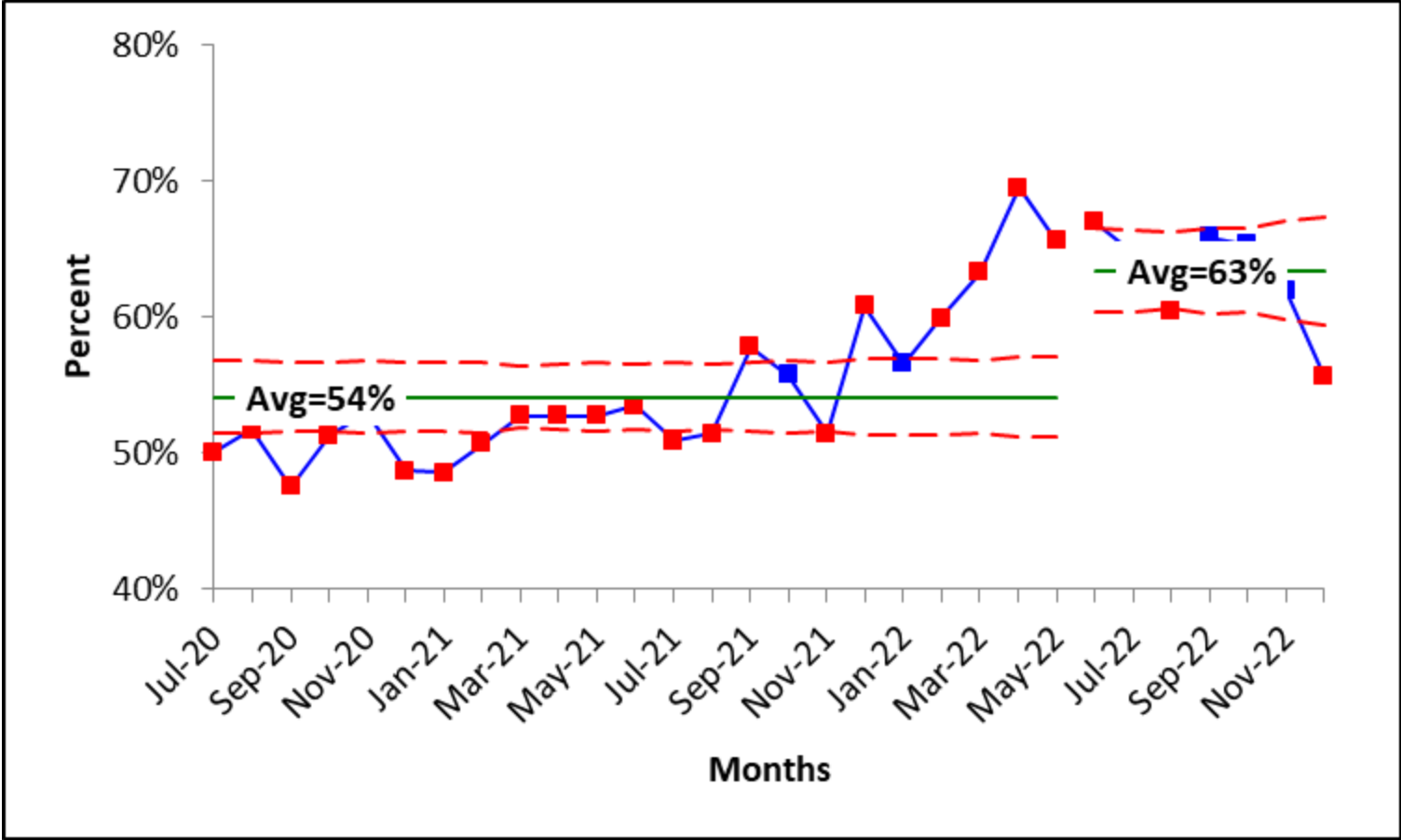
Lahey-P chart  
favorable  
direction

- QI Collaborative Goal: 65%
  - QI Collaborative Average: 50%
- Improvement Range: 37%-79.2%**

| Jul-20 | Aug-20 | Sep-20 | Oct-20 | Nov-20 | Dec-20 | Jan-21 | Feb-21 | Mar-21 | Apr-21 | May-21 | Jun-21 | Jul-21 | Aug-21 | Sep-21 | Oct-21 | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-22 | Oct-22 | Nov-22 | Dec-22 |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 5154   | 5652   | 5735   | 6227   | 5768   | 6198   | 6499   | 6314   | 7612   | 7062   | 6593   | 7226   | 7204   | 7734   | 7467   | 7253   | 7561   | 6800   | 7383   | 7050   | 7595   | 6990   | 6971   | 7014   | 6971   | 7897   | 7063   | 7404   | 7146   | 4671   |
| 2487   | 2638   | 2833   | 3089   | 2788   | 3144   | 3208   | 3106   | 3732   | 3539   | 3280   | 3686   | 3561   | 3819   | 3686   | 3461   | 3809   | 3467   | 3750   | 3516   | 3875   | 3576   | 3491   | 3693   | 3570   | 4119   | 3620   | 3831   | 3787   | 2682   |



# Depression Screening increased by 9%



Lahey-P  
chart favorable  
direction

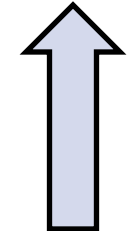
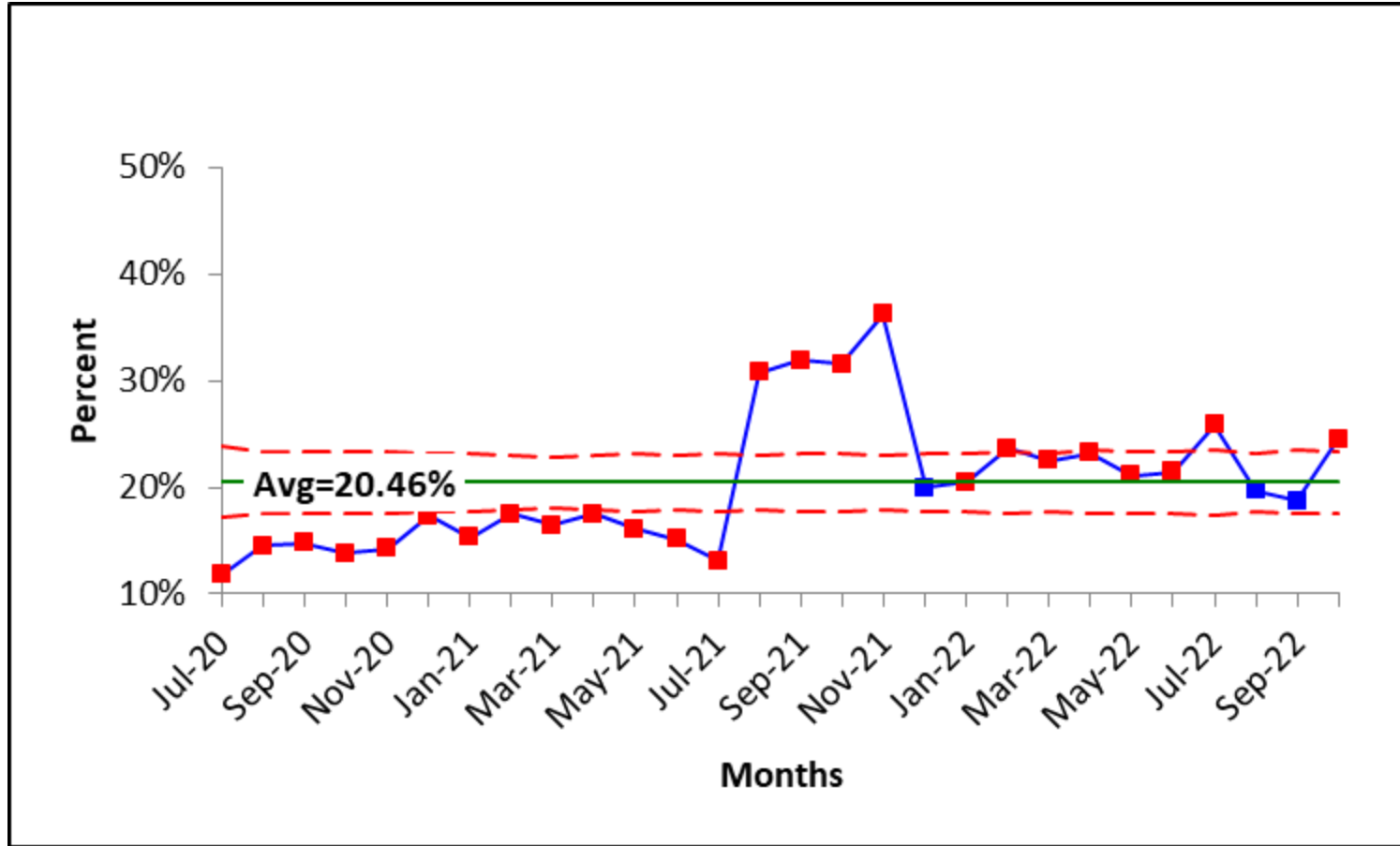
- QI Collaborative Goal: 80%
- QI Collaborative Average: 63%

**Improvement Range: 10%-97%**

| Jul-20 | Aug-20 | Sep-20 | Oct-20 | Nov-20 | Dec-20 | Jan-21 | Feb-21 | Mar-21 | Apr-21 | May-21 | Jun-21 | Jul-21 | Aug-21 | Sep-21 | Oct-21 | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-22 | Oct-22 | Nov-22 | Dec-22 |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1675   | 1579   | 1758   | 1795   | 1659   | 1908   | 1805   | 1737   | 2224   | 2026   | 1770   | 1977   | 1880   | 2086   | 1828   | 1663   | 1910   | 1453   | 1490   | 1550   | 1643   | 1328   | 1341   | 1423   | 1453   | 1631   | 1332   | 1404   | 989    | 842    |
| 839    | 816    | 836    | 921    | 878    | 929    | 876    | 880    | 1172   | 1068   | 933    | 1057   | 956    | 1073   | 1056   | 927    | 982    | 883    | 843    | 929    | 1040   | 923    | 880    | 953    | 940    | 986    | 877    | 917    | 613    | 468    |



# Time in Range



Lahey-  
P chart favorable  
direction

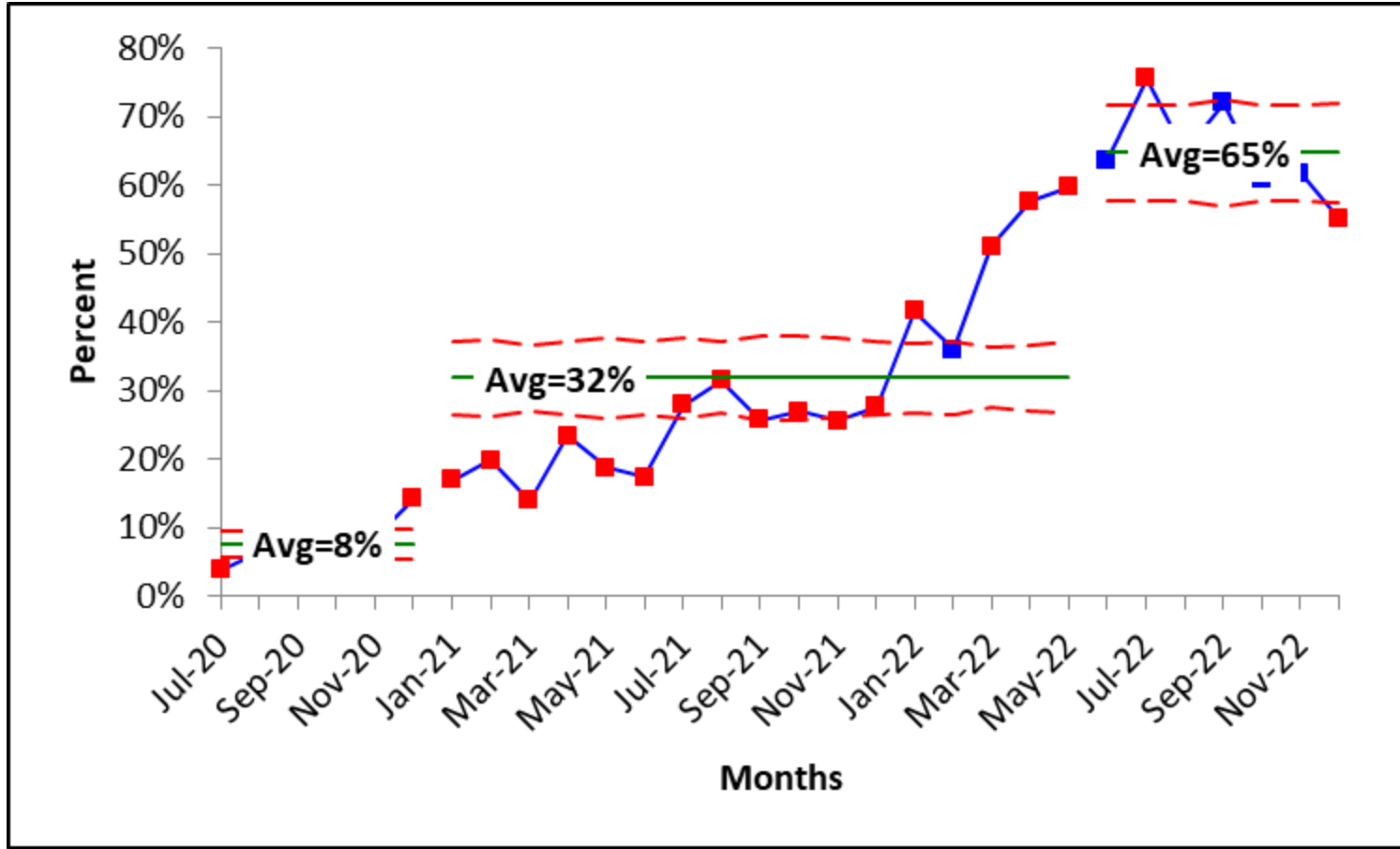
- QI Collaborative Goal: 70%
- QI Collaborative Average: 20%

**Improvement Range: 5%-50%**

| Jul-20 | Aug-20 | Sep-20 | Oct-20 | Nov-20 | Dec-20 | Jan-21 | Feb-21 | Mar-21 | Apr-21 | May-21 | Jun-21 | Jul-21 | Aug-21 | Sep-21 | Oct-21 | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-22 | Oct-22 |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 970    | 1235   | 1301   | 1302   | 1242   | 1454   | 1513   | 1565   | 1803   | 1619   | 1476   | 1643   | 1515   | 1675   | 1497   | 1393   | 1585   | 1390   | 1452   | 1248   | 1431   | 1202   | 1267   | 1322   | 1149   | 1431   | 1188   | 1325   |
| 114    | 179    | 192    | 180    | 177    | 252    | 232    | 274    | 296    | 283    | 238    | 249    | 198    | 515    | 478    | 440    | 574    | 277    | 298    | 295    | 322    | 279    | 267    | 284    | 297    | 282    | 222    | 325    |



# Documented Transition increased by 57%



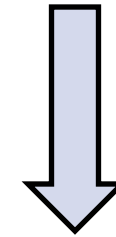
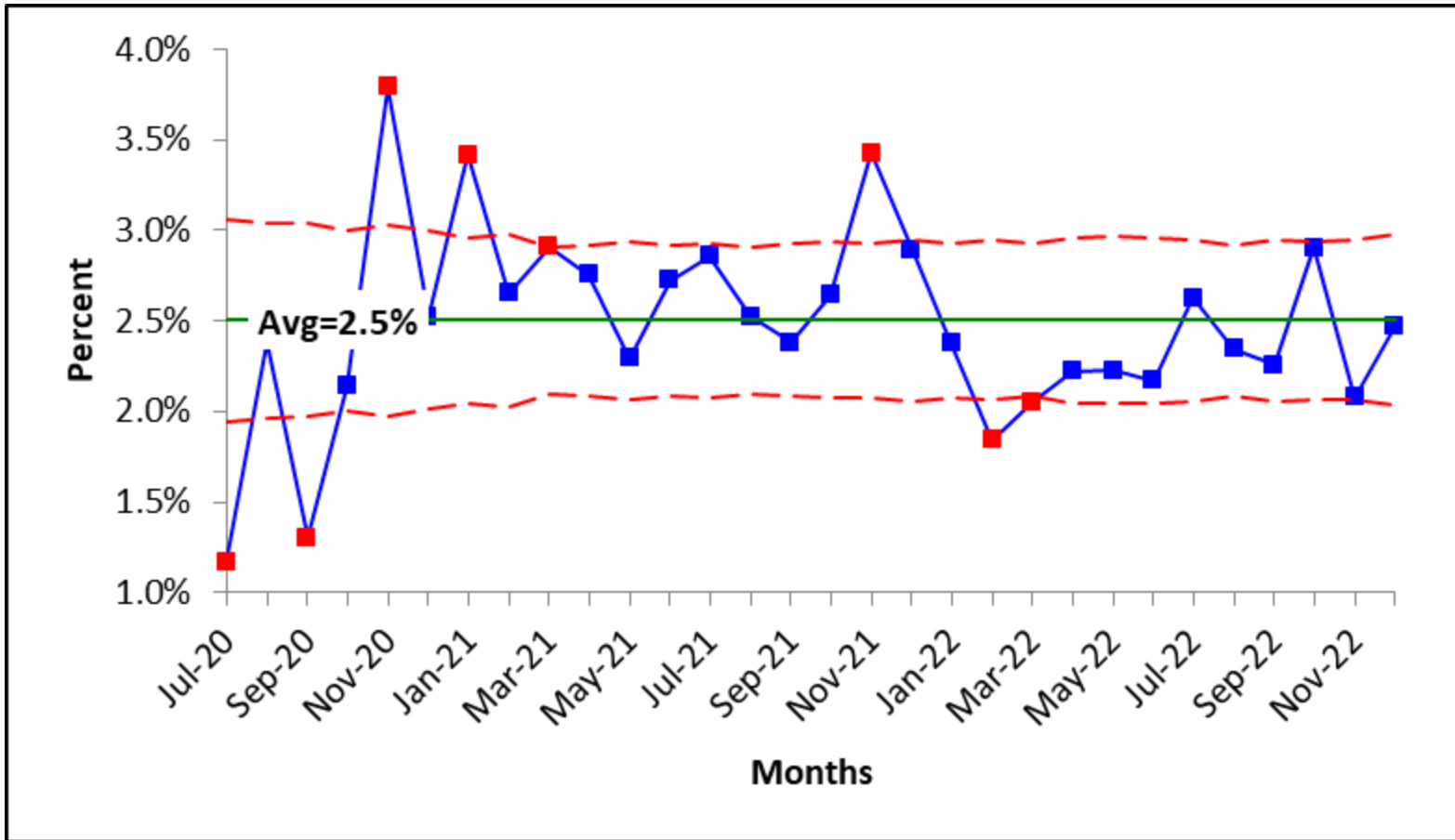
Collaborative Goal: 10%

Collaborative Average: 65%

Improvement Range: 30%-100%

| Jul-20 | Aug-20 | Sep-20 | Oct-20 | Nov-20 | Dec-20 | Jan-21 | Feb-21 | Mar-21 | Apr-21 | May-21 | Jun-21 | Jul-21 | Aug-21 | Sep-21 | Oct-21 | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-22 | Oct-22 | Nov-22 | Dec-22 |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 262    | 273    | 222    | 202    | 199    | 233    | 218    | 202    | 258    | 210    | 182    | 225    | 179    | 229    | 159    | 167    | 188    | 221    | 231    | 222    | 323    | 262    | 226    | 283    | 283    | 269    | 218    | 271    | 285    | 265    |
| 10     | 18     | 13     | 15     | 17     | 33     | 37     | 40     | 36     | 49     | 34     | 39     | 50     | 72     | 41     | 45     | 48     | 61     | 96     | 80     | 165    | 151    | 135    | 180    | 214    | 174    | 157    | 165    | 176    | 146    |

# DKA Events remained stable



Lahey-  
P chart favorable  
direction

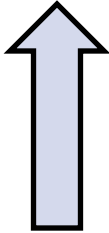
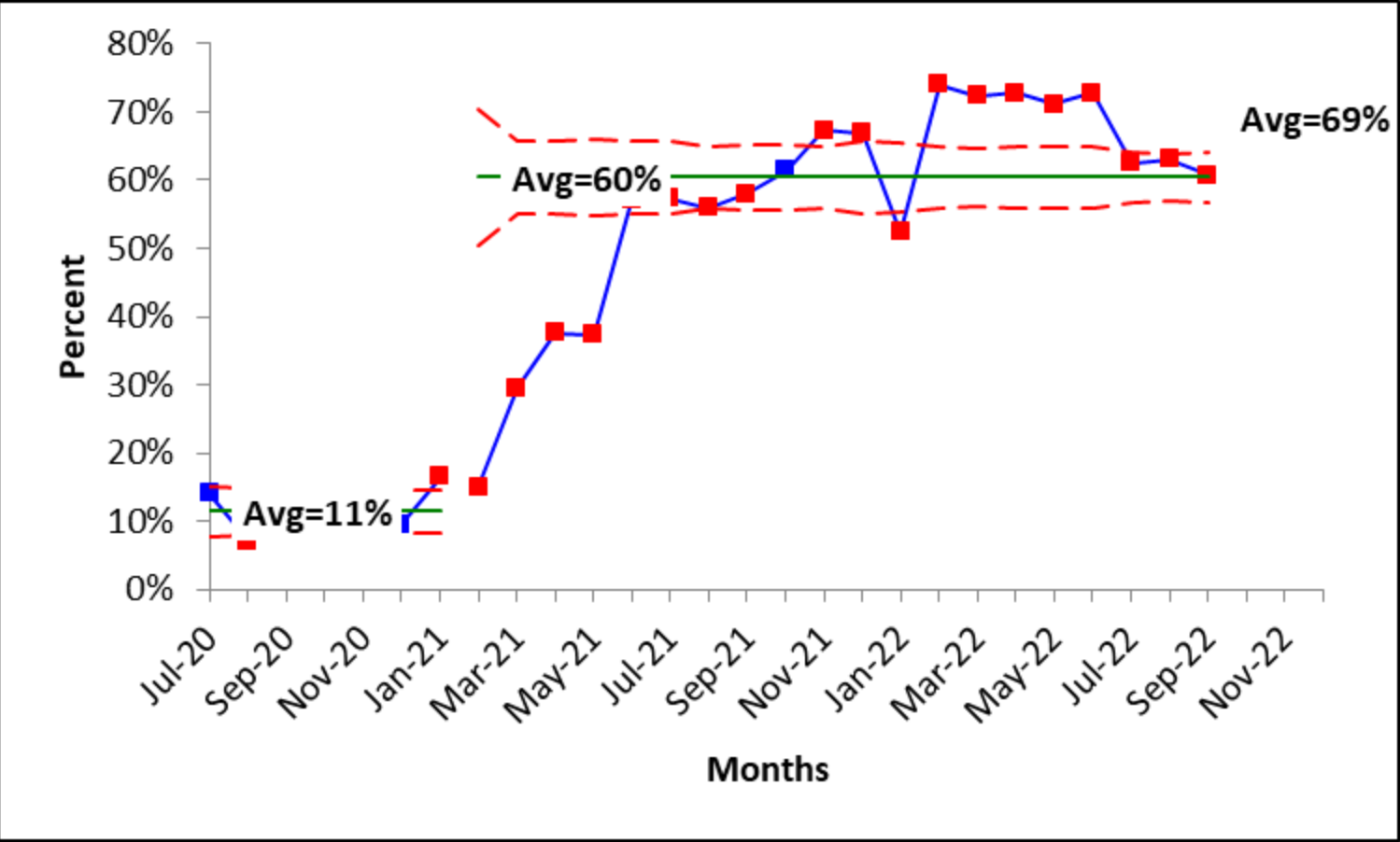
• QI Collaborative Goal: 6.3%

• QI Collaborative Average: 2.5 %

Improvement Range: 0.2-11%

| Jul-20 | Aug-20 | Sep-20 | Oct-20 | Nov-20 | Dec-20 | Jan-21 | Feb-21 | Mar-21 | Apr-21 | May-21 | Jun-21 | Jul-21 | Aug-21 | Sep-21 | Oct-21 | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-22 | Oct-22 | Nov-22 | Dec-22 |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1892   | 2056   | 2077   | 2433   | 2136   | 2454   | 2868   | 2640   | 3644   | 3451   | 3142   | 3416   | 3252   | 3648   | 3358   | 3216   | 3297   | 3005   | 3329   | 3039   | 3365   | 2879   | 2786   | 2854   | 3009   | 3496   | 2969   | 3135   | 3035   | 2669   |
| 22     | 49     | 27     | 52     | 81     | 62     | 98     | 70     | 106    | 95     | 72     | 93     | 93     | 92     | 80     | 85     | 113    | 87     | 79     | 56     | 69     | 64     | 62     | 62     | 79     | 82     | 67     | 91     | 63     | 66     |

# SDOH Screening increased by 58%



Lahey-  
P chart favorabl  
e direction

- **QI Collaborative Goal: 10%**
- **QI Collaborative Average: 69%**
- **Improvement Range: 5%-80%**

| Jul-20 | Aug-20 | Sep-20 | Oct-20 | Nov-20 | Dec-20 | Jan-21 | Feb-21 | Mar-21 | Apr-21 | May-21 | Jun-21 | Jul-21 | Aug-21 | Sep-21 | Oct-21 | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-22 | Oct-22 | Nov-22 | Dec-22 |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 185    | 213    | 248    | 249    | 218    | 263    | 235    | 239    | 869    | 852    | 763    | 860    | 837    | 1146   | 1083   | 1081   | 1133   | 865    | 1036   | 1118   | 1311   | 1123   | 1123   | 1193   | 1669   | 1976   | 1754   | 1792   | 996    | 919    |
| 26     | 15     | 26     | 31     | 22     | 25     | 39     | 36     | 257    | 321    | 285    | 491    | 480    | 641    | 629    | 664    | 762    | 579    | 453    | 828    | 949    | 817    | 799    | 869    | 1043   | 1246   | 1066   | 1200   | 708    | 651    |

# Pediatric Center Spotlight – Texas Children's

**Team-based clinic sessions** to help improve coordinated care.

Implementation of **Extra Care Program**. This program supports patients with elevated glucose levels improve their health outcomes:

- Reduced DKA events
- Increased A1c >7%





**T1D**  
*Exchange*

# Adult Centers

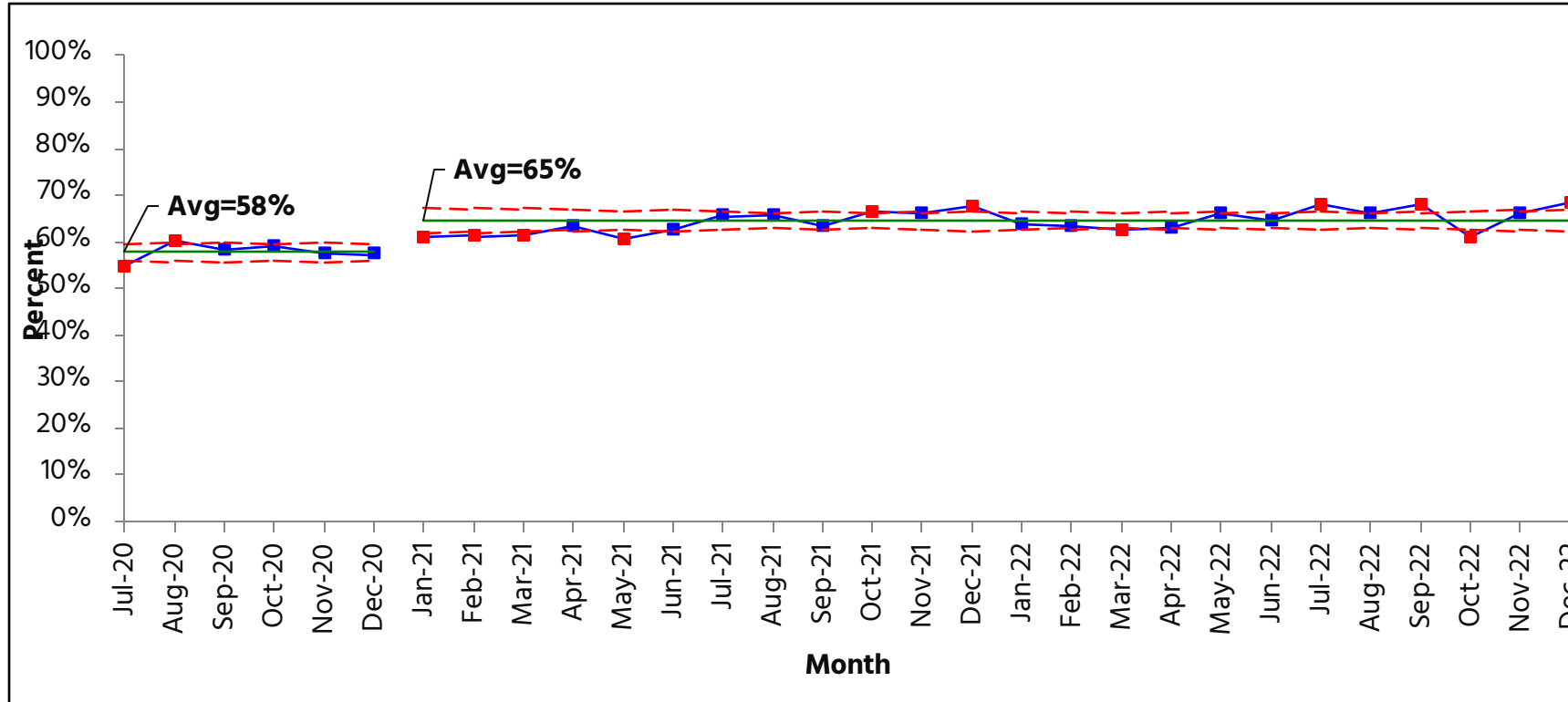


# % Improvement Across Measures

Adult Centers Improvement Scorecard May 2023 (data from Jul 2020 - Dec 2022)

| Metric       | A1c < 8%                                   | CGM use                   | Pump use                 | Dep Scrn  | DKA Events     | SDOH                      |
|--------------|--|---------------------------|--------------------------|---|----------------|---------------------------|
| T1DX-QI Goal | Greater than 50%                           | Greater than 70%          | Greater than 65%         | Greater than 80%                                | Less than 6.3% | Greater than 10%          |
| T1DX-QI Rank | <b>65% [10% increase]</b>                  | <b>70% [16% increase]</b> | <b>50% [5% increase]</b> | <b>62% [12% increase]</b>                       | <b>2.7%</b>    | <b>58% [30% increase]</b> |
| 1            | BDC - 78% [+7%]                            | SUNY - 82% [+37%]         | BDC - 68% [+18%]         | SUNY - 79%                                      | BDC - 1.2%     | SUNY - 67% [+50%]         |
| 2            | Northwestern - 74%                         | BMC - 79%                 | Wayne State - 56%        | Penn - 62% [+12%]                               | Penn - 3.9%    | BMC - 46%                 |
| 3            | Penn - 65%                                 | Penn - 73% [-12%]         | Penn - 52%               | Grady - 23%                                     | Grady - 11.0%  | Grady - 24% [-4%]         |
| 4            | SUNY - 55%                                 | BDC - 70% [+8%]           | SUNY - 50% [+29%]        | BDC - 0%  |                |                           |
| 5            | BMC - 47%                                  | Montefiore - 69% [+15%]   | BMC - 26% [+9%]          | BMC - 0%  |                |                           |
| 6            | Wayne State - 38% [+11%]                   | Grady - 44% [+23%]        | Montefiore - 19% [+5%]   |   |                |                           |
| 7            | Grady - 27% [+9%]                          | Wayne - 40% [+20%]        |                          |   |                |                           |
| Legend       | Favorable Change and/or Above T1DX-QI Goal |                           |                          | Unfavorable/No Change and/or Below T1DX-QI Goal |                |                           |

# Adult Centers – HbA1c < 8% increased by 7 %

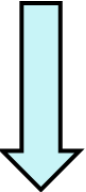
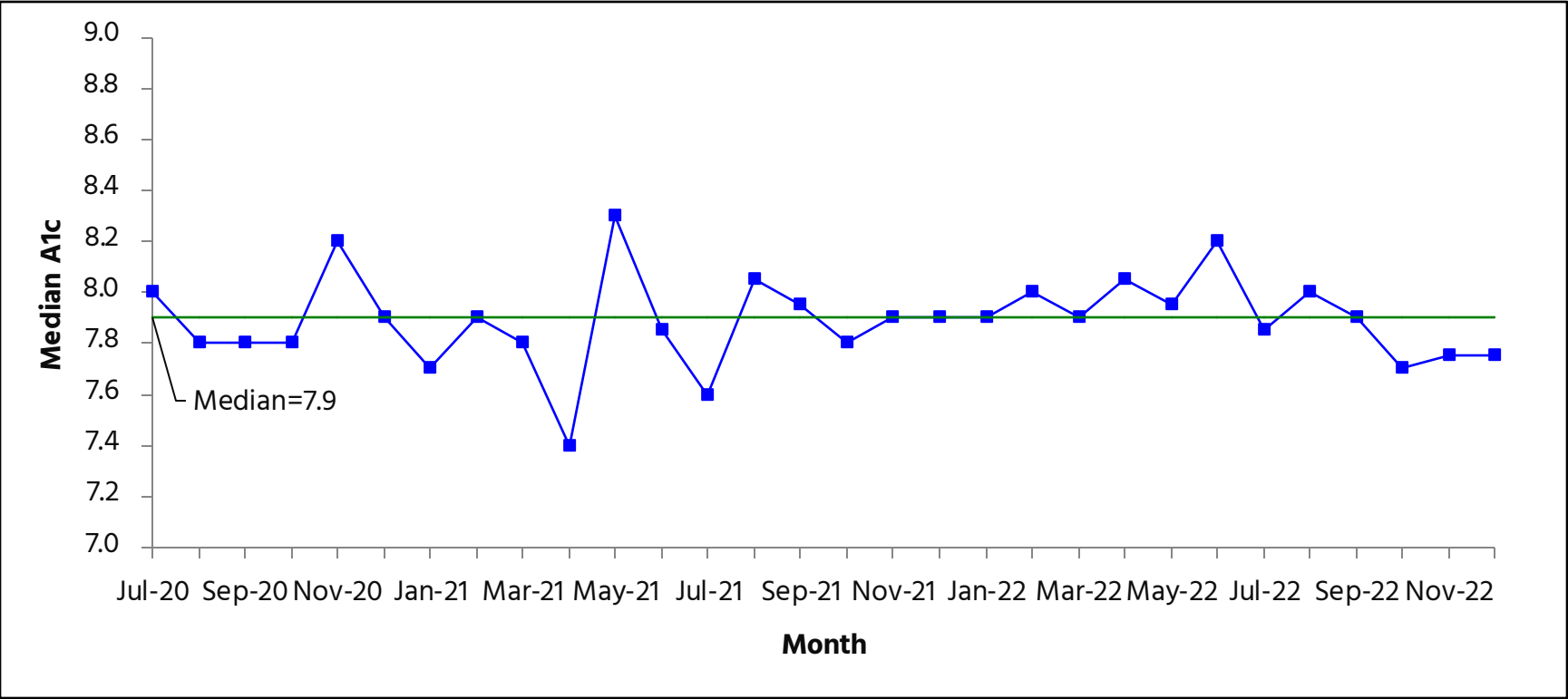


Lahey-P chart favorable direction

- **QI Collaborative Goal:** 50%
- **QI Collaborative Average:** 65%
- **Improvement Range:** +7% - 11%

|                | 2020 |     |      |      |     |     | 2021 |     |     |     |     |     | 2022 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |     |     |
|----------------|------|-----|------|------|-----|-----|------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|
|                | Jul  | Aug | Sept | Oct  | Nov | Dec | Jan  | Feb | Mar | Apr | May | Jun | Jul  | Aug  | Sept | Oct  | Nov  | Dec  | Jan  | Feb  | Mar  | Apr  | May  | Jun  | Jul  | Aug  | Sept | Oct  | Nov | Dec |
| T1D Population | 1012 | 935 | 925  | 1006 | 817 | 826 | 649  | 669 | 682 | 800 | 826 | 825 | 1125 | 1155 | 1129 | 1181 | 1016 | 1000 | 1092 | 1190 | 1280 | 1244 | 1196 | 1195 | 1078 | 1236 | 1176 | 1019 | 964 | 963 |
| A1c >8%        | 553  | 563 | 538  | 596  | 471 | 474 | 395  | 410 | 418 | 508 | 500 | 516 | 739  | 761  | 717  | 786  | 670  | 675  | 696  | 754  | 801  | 784  | 792  | 773  | 734  | 817  | 802  | 620  | 638 | 661 |

# Adult Centers – Median A1c remained steady and below goal

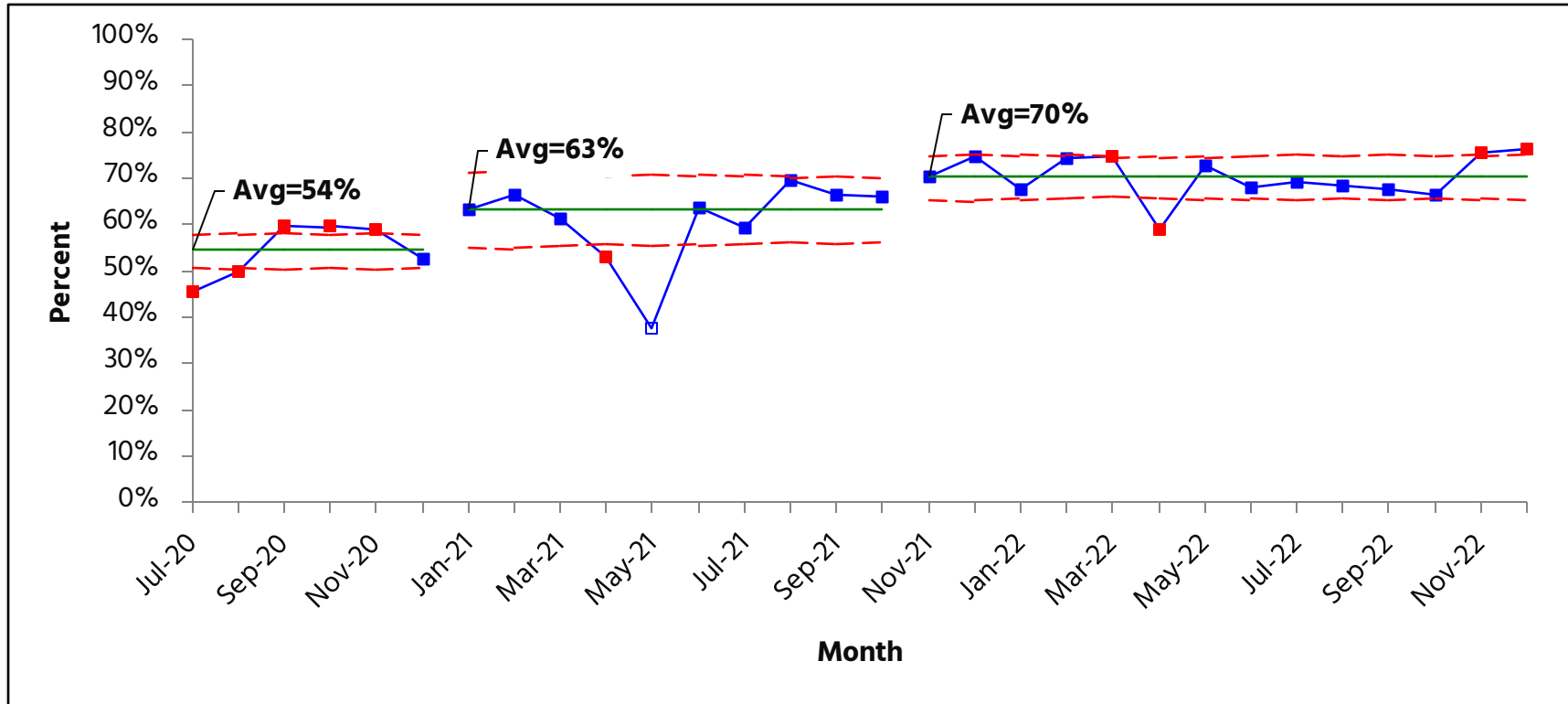


Lahey-P chart favorable direction

- **QI Collaborative Goal:** <8%
- **QI Collaborative Average:** 7.9%
- **Improvement Range:** -0.5%

|            | 2020 |     |      |     |     |     | 2021 |     |     |     |     |     |     |     |      |     |     |     | 2022 |     |     |     |     |     |     |     |      |     |     |     |
|------------|------|-----|------|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|
|            | Jul  | Aug | Sept | Oct | Nov | Dec | Jan  | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan  | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec |
| Median A1c | 8.0  | 7.8 | 7.8  | 7.8 | 8.2 | 7.9 | 7.7  | 7.9 | 7.8 | 7.4 | 8.3 | 7.9 | 7.6 | 8.1 | 8.0  | 7.8 | 7.9 | 7.9 | 7.9  | 8   | 7.9 | 8.1 | 8.0 | 8.2 | 7.9 | 8   | 7.9  | 7.7 | 7.8 | 7.8 |

# Adult Centers – CGM Use increased by 16%

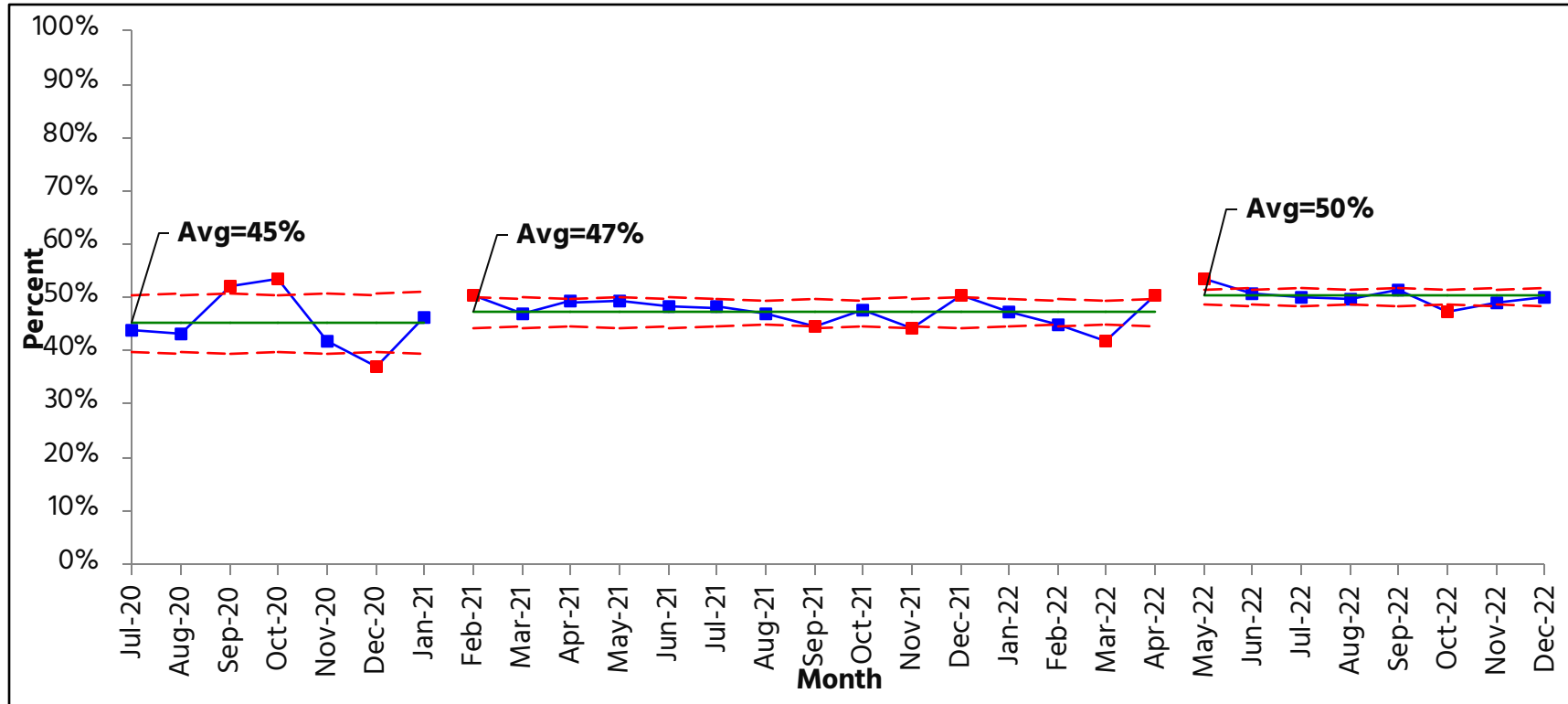


↑ Lahey-P chart favorable direction

- **QI Collaborative Goal:** 70%
- **QI Collaborative Average:** 70%
- **Improvement Range:** +8% - 37%

|                | 2020 |     |      |      |     |      | 2021 |     |     |      |     |      |      |      |      |      |      |     | 2022 |      |      |      |      |      |      |      |      |      |      |      |
|----------------|------|-----|------|------|-----|------|------|-----|-----|------|-----|------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|------|------|------|------|
|                | Jul  | Aug | Sept | Oct  | Nov | Dec  | Jan  | Feb | Mar | Apr  | May | Jun  | Jul  | Aug  | Sept | Oct  | Nov  | Dec | Jan  | Feb  | Mar  | Apr  | May  | Jun  | Jul  | Aug  | Sept | Oct  | Nov  | Dec  |
| T1D Population | 1012 | 935 | 925  | 1006 | 998 | 1010 | 841  | 824 | 889 | 1022 | 998 | 1010 | 1039 | 1136 | 1061 | 1094 | 1004 | 971 | 1037 | 1112 | 1263 | 1151 | 1144 | 1139 | 1001 | 1161 | 1127 | 1197 | 1130 | 1119 |
| CGM users      | 461  | 468 | 552  | 600  | 590 | 533  | 533  | 547 | 544 | 540  | 376 | 643  | 618  | 793  | 704  | 721  | 708  | 727 | 701  | 827  | 944  | 678  | 832  | 773  | 694  | 794  | 762  | 796  | 854  | 856  |

# Adult Centers – Pump Use increased by 5%

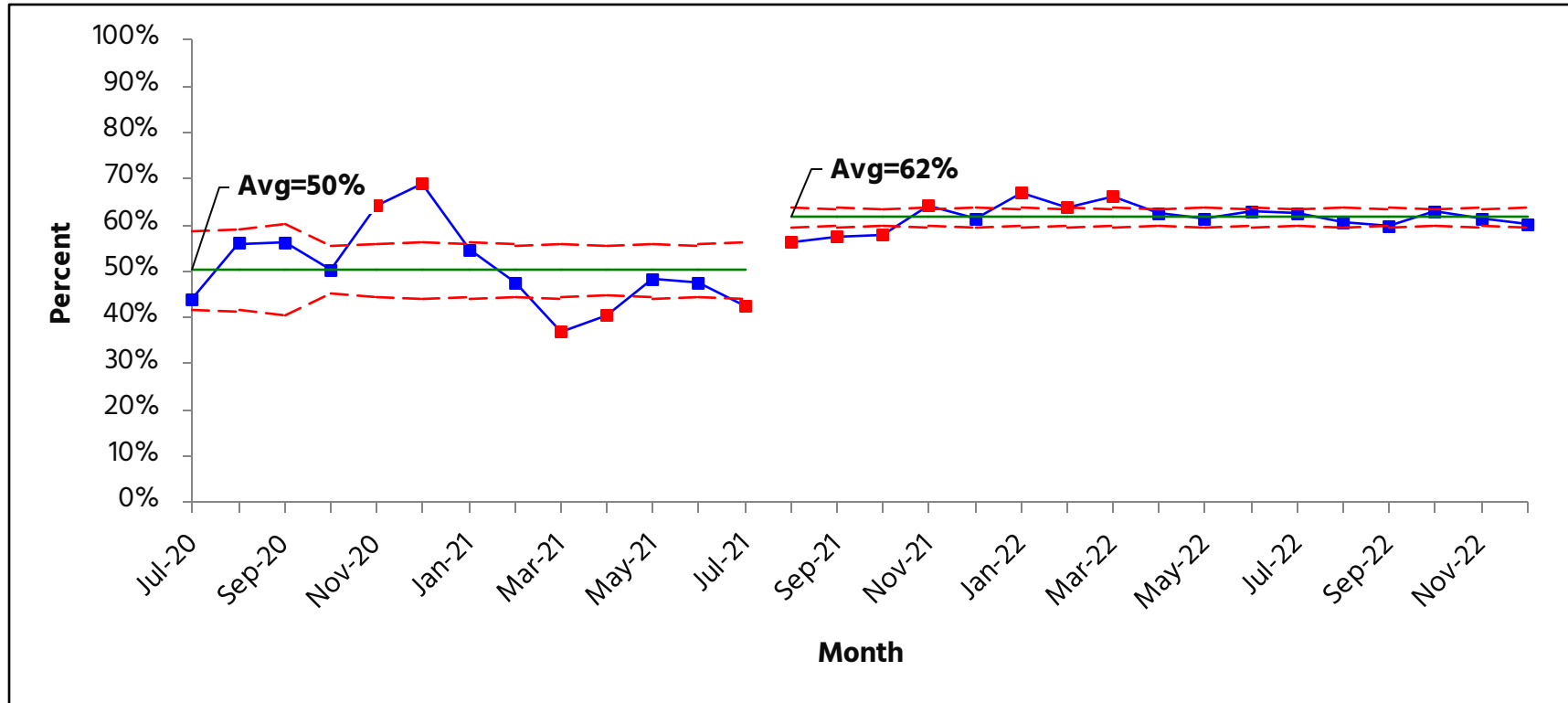


↑ Lahey-P chart favorable direction

- **QI Collaborative Goal:** 65%
- **QI Collaborative Average:** 50%
- **Improvement Range:** +5% - 29%

|                | 2020 |     |      |     |     |     | 2021 |     |     |     |     |     | 2022 |      |      |      |     |     |     |      |      |      |      |      |     |      |      |      |      |      |
|----------------|------|-----|------|-----|-----|-----|------|-----|-----|-----|-----|-----|------|------|------|------|-----|-----|-----|------|------|------|------|------|-----|------|------|------|------|------|
|                | Jul  | Aug | Sept | Oct | Nov | Dec | Jan  | Feb | Mar | Apr | May | Jun | Jul  | Aug  | Sept | Oct  | Nov | Dec | Jan | Feb  | Mar  | Apr  | May  | Jun  | Jul | Aug  | Sept | Oct  | Nov  | Dec  |
| T1D Population | 969  | 883 | 878  | 965 | 957 | 963 | 804  | 774 | 828 | 963 | 935 | 955 | 988  | 1079 | 1014 | 1036 | 950 | 926 | 983 | 1057 | 1199 | 1097 | 1092 | 1091 | 957 | 1115 | 1084 | 1144 | 1084 | 1075 |
| Pump users     | 424  | 381 | 456  | 515 | 399 | 355 | 372  | 391 | 388 | 475 | 462 | 462 | 477  | 505  | 451  | 495  | 421 | 466 | 464 | 473  | 503  | 552  | 583  | 555  | 479 | 555  | 556  | 542  | 533  | 537  |

# Adult Centers – Depression Screening increased by 12%

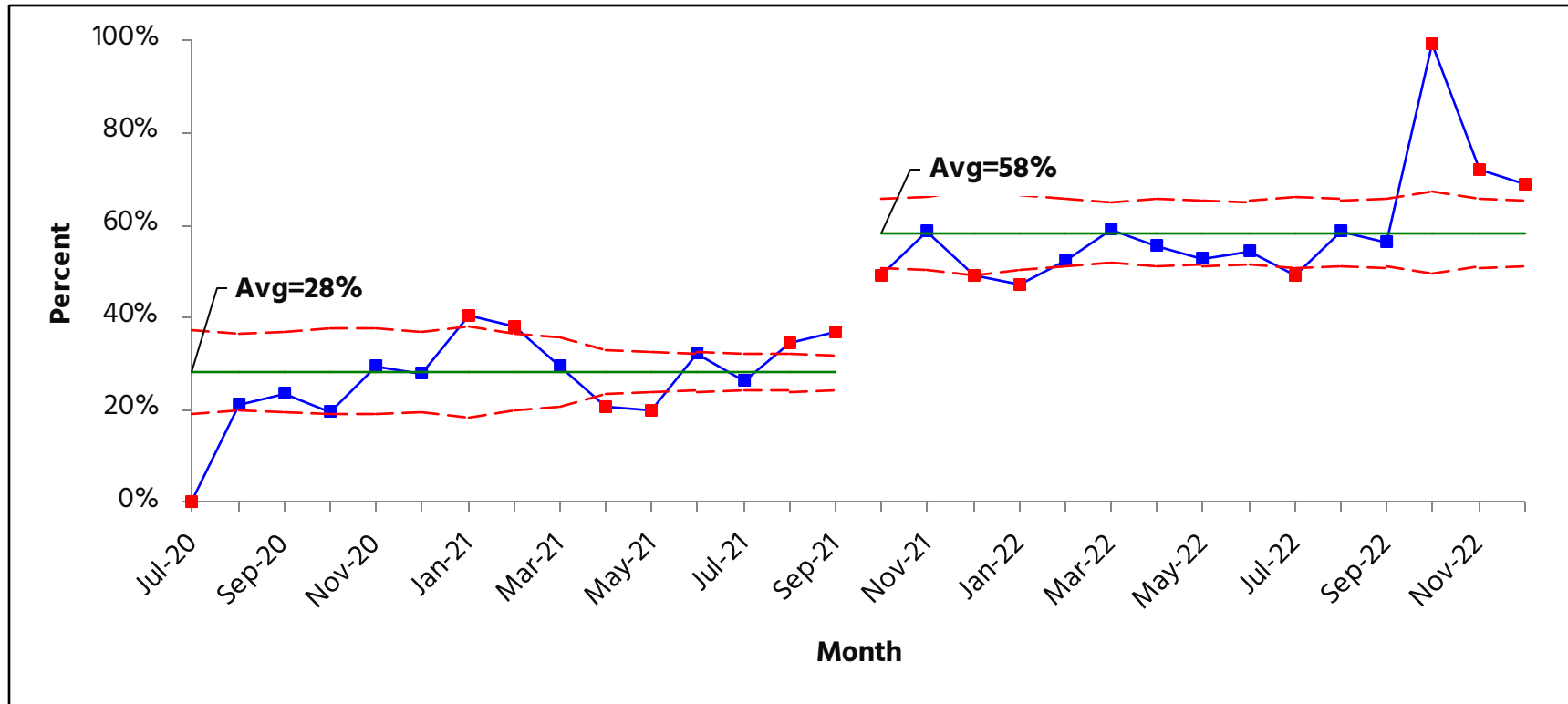


↑ Lahey-P chart favorable direction

- **QI Collaborative Goal:** 80%
- **QI Collaborative Average:** 62%
- **Improvement Range:** +12%

|                                  | 2020 |     |      |     |     |     | 2021 |     |     |     |     |     |     |     |      |     |     |     | 2022 |     |     |     |     |     |     |     |      |     |     |     |
|----------------------------------|------|-----|------|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|
|                                  | Jul  | Aug | Sept | Oct | Nov | Dec | Jan  | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan  | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec |
| Patients eligible for screening  | 100  | 98  | 78   | 292 | 224 | 209 | 215  | 235 | 230 | 244 | 221 | 222 | 198 | 255 | 278  | 303 | 283 | 244 | 274  | 297 | 316 | 322 | 250 | 251 | 296 | 261 | 262  | 320 | 303 | 288 |
| Patients screened for depression | 44   | 55  | 44   | 147 | 144 | 144 | 118  | 112 | 85  | 99  | 107 | 106 | 84  | 144 | 160  | 175 | 182 | 150 | 183  | 190 | 209 | 201 | 154 | 158 | 185 | 158 | 157  | 201 | 186 | 174 |

# Adult Centers - SDOH Screening increased by 30%



↑ Lahey-P chart favorable direction

- **QI Collaborative Goal:** 10%
- **QI Collaborative Average:** 58%
- **Improvement Range:** +50%

|                                 | 2020 |     |      |     |     |     | 2021 |     |     |     |     |     |     |     |      |     |     |     | 2022 |     |     |     |     |     |     |     |      |     |     |     |
|---------------------------------|------|-----|------|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|
|                                 | Jul  | Aug | Sept | Oct | Nov | Dec | Jan  | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan  | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec |
| Patients eligible for screening | 346  | 348 | 312  | 298 | 241 | 253 | 178  | 132 | 114 | 146 | 194 | 203 | 226 | 226 | 246  | 287 | 268 | 197 | 256  | 301 | 404 | 310 | 342 | 354 | 291 | 329 | 317  | 220 | 309 | 327 |
| Patients screened for SDOH      | 78   | 82  | 76   | 79  | 57  | 59  | 52   | 32  | 23  | 42  | 46  | 67  | 66  | 99  | 106  | 160 | 185 | 117 | 180  | 215 | 298 | 219 | 241 | 263 | 205 | 255 | 230  | 219 | 223 | 225 |

# Adult Center Spotlight – Grady

Advancement in the collection and utilization of PROs and clinical outcomes

Implementation of small cycle tests and scaling up successful PDSAs

CGM QI project has resulted in:

- Increased CGM use
- Increased % of patients with HbA1c <8% and decrease in median A1c





# What's next?

Browse resources and case studies in the QI Portal  
Continue coaching calls  
Continue to implement PDSAs toward a QI goal  
Make progress with data sharing

- Data mapping
- Smartsheet submissions

The screenshot displays a list of five resource cards from the QI Portal. Each card includes a title, a list of tags, view and download statistics, a date, and two buttons: 'View' and 'Download'.

| Resource Title  | Tags  | Views | Downloads | Date        | View Button | Download Button |
|---|---|-------|-----------|-------------|-------------|-----------------|
| PICK tool, Run and Control charts, and Overcoming Challenges as a QI Champion   | Quality Improvement, QI Tools, T1D Exchange                             | 6     | 0         | Apr 13 2023 | View        | Download        |
| Advancing Diabetes Quality Measurement in the Era of Continuous Glucose Monitoring                                    | CGM use, Equity, Quality Improvement                                    | 6     | 1         | Apr 05 2023 | View        | Download        |
| 2023 T1DX-QI Sick Day Guide   | General, T1D Exchange, Tools for Patients                               | 4     | 0         | Mar 29 2023 | View        | Download        |
| Connecting From Afar: Implementation of Remote Data-Sharing for Patients With Type 1 Diabetes on Insulin Pump Therapy | COVID-19, Pump use, Quality Improvement                                 | 4     | 1         | Mar 07 2023 | View        | Download        |
| SDOH Needs Spanish  | Non English Handouts, Social Determinants of Health, Tools for Patients | 2     | 0         | Feb 27 2023 | View        | Download        |



**T1D**  
*Exchange*

**New Centers**

# Six New T1D-QI Centers in 2022



# Overcoming Onboarding Inertia

- Organizational Readiness – Scarcity of Resources (time, staff, materials)
- Standardizing Quality Improvement Process Method (IHI Model)
- Staffing a Multidisciplinary QI Team
- Selecting a QI Project
- ***Gathering Data for QI Project ... Smart Sheet ... Data Mapping ... Oh My!!***
- **P**lanning: Aim statement; Fishbone Barriers; Change ideas
- **D**oing: Key Driver Diagram; Effort / Impact Matrix
- **S**tudying: IHI Open School/ Project Small Tests of Change
- **A**djusting: Rolling Action Item List (RAIL)
- Utilizing QI Portal for Benchmarking and Library of Best Practices
- Periodic Collaborative Calls and Check In Coaching

**Challenges \* Solutions \* Early Wins**

# Highlights – QI Projects

## QI Work Sheet

**Problem/Issue:** Children with T1D are at increased risk for depression, yet we are not consistently screening our patients for depression in our outpatient clinic.

**Aim statement:** By August 1, 2024, increase annual depression screening from 23.1% to 70% for patients between the ages of 13 and 18 years old with T1D seen at UC Davis for outpatient diabetes care.

**Write out your ideas after the fishbone activity:** work on getting an electronic version of PHQ9 that can be sent out to patients prior to visits, and obtaining iPad for clinic use

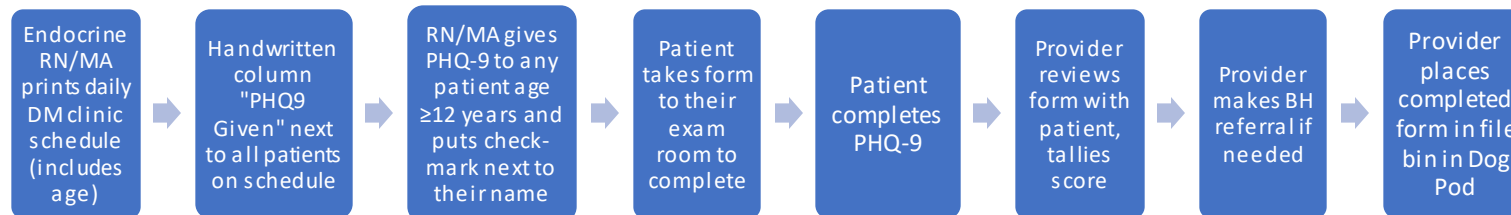
Selecting  
Opportunity!

- Depression Screening
- CGM Uptake
- Transition to Adult Care
- Pump Uptake
- Lipid Screening

# Highlights – Process Maps

Scoping  
the  
Process!

| Supplier (Who)                      | Input (Object/what)                   | Process (Activity)   | Output (Object)                                       | Customer (Who/Recipient)                |
|-------------------------------------|---------------------------------------|--|---|---|
| RN/MA                               | Daily DM clinic schedule              | Identify patients age $\geq 12$ years  | Provides PHQ-9 to eligible patients                   | Patient                                 |
| Patient                             | Receives PHQ-9                        | Completes PHQ-9  | Completed PHQ-9                                       | Provider                                |
| Provider                            | Completed PHQ-9                       | Reviews completed PHQ-9  | Normal score $< 9$ (use different term than 'normal') | Filing Bin for scanning if normal score |
| Provider<br><br><b>TEAM Members</b> | Completed PHQ-9<br><br><b>QUALITY</b> | $> 9$ – SW consult<br>$> 15$ – BH consult<br>Mark 'yes' for SI<br>Sends Cerner message to BH Pool about referral | BH appointment made<br><br><b>DELIVERY</b>            | Patient<br><br><b>TEAM Members</b>      |



# Highlights – Multidisciplinary Teams



**Utilizing  
Resources!**

# Highlights – Data Collection

## Data Mapping Process

## Facing Challenges!



T1D Exchange data files to map:



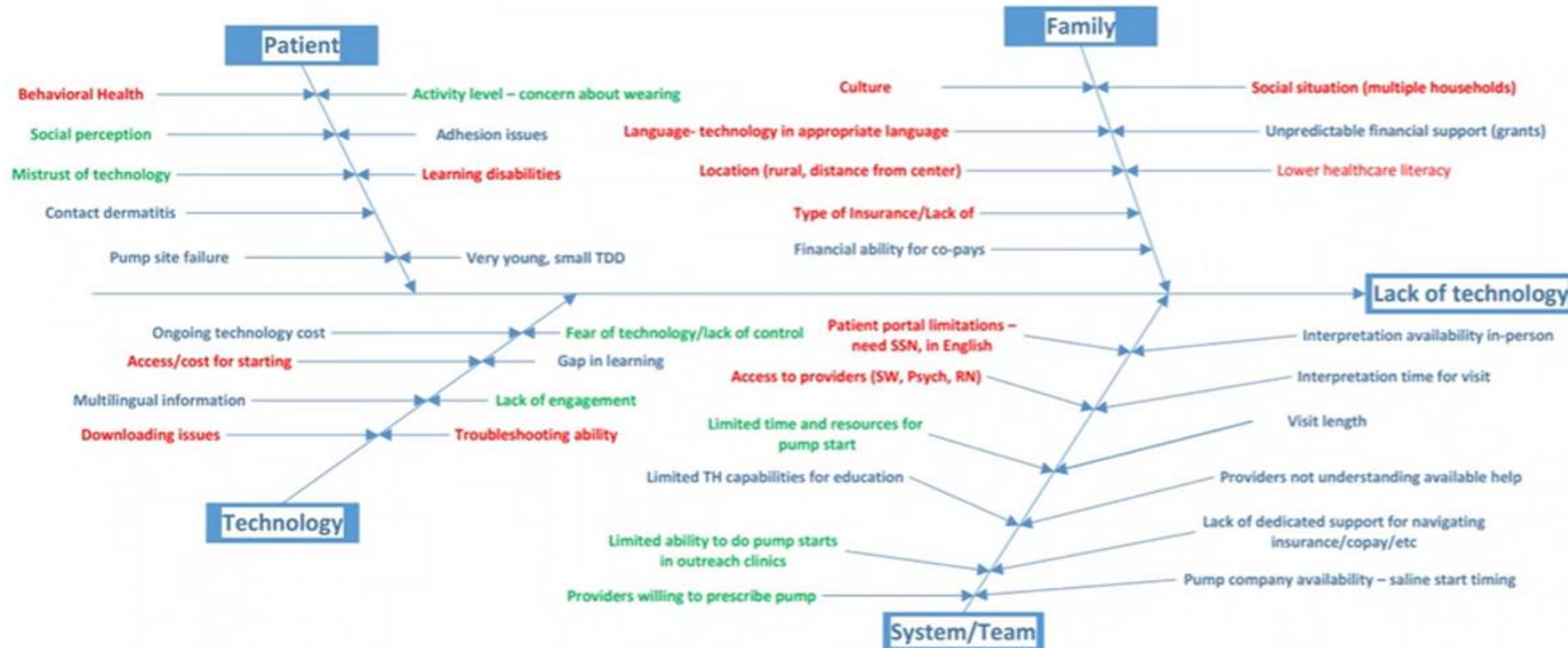
\*Indicates phases where provider input is requested.



# Highlights – Barriers/Change Ideas

Removing  
Obstacles!

Fishbone Diagram  
Barriers to Pump

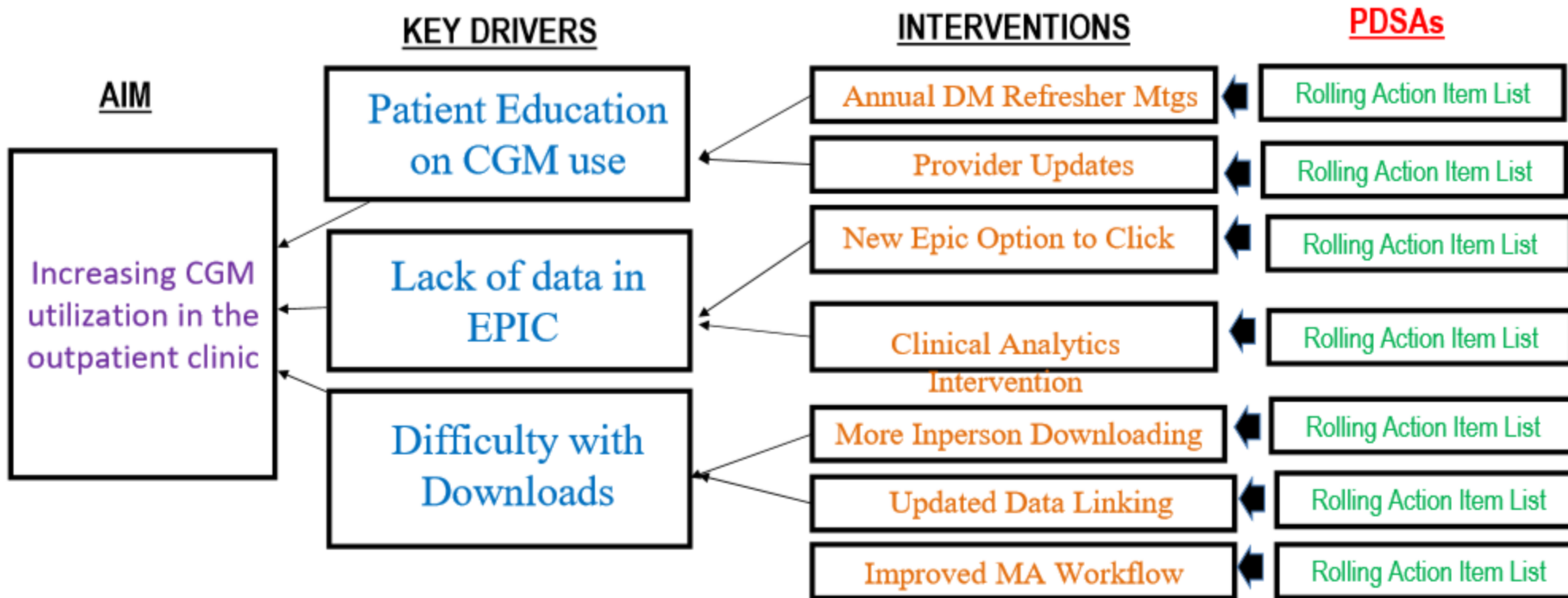


# Highlights – Key Driver Diagrams

UPMC

Implementing  
the Plan!

**Key Driver Diagram:** What changes can we make that will result in improvement (part three)?



# Highlights – Check-In Coaching Calls



JOHNS HOPKINS  
MEDICINE

Building  
Capacity!

| Agenda                              | Notes  | Next steps  |
|-------------------------------------|--|---|
| <b>Engagement Milestones</b>        | <ul style="list-style-type: none"> <li>• <i>Team</i>: contact list</li> <li>• <i>Guidance</i>: Project AIM, Fishbone, Key Driver Diagram, Effort-Impact matrix</li> <li>• <i>Progress</i>: PDSA rolling action item list (RAIL); time series chart with baseline/goal</li> <li>• <i>Feedback</i>: data collection plan, process, report, patient/family advisory</li> <li>• <i>Support</i>: IHI Open School; T1Dx QI Portal</li> <li>• <i>Other</i>: T1Dx LC committees; Lead a QI Project; Coauthor a Publication;</li> </ul> | <p>Will complete initial Baseline Quality Improvement Assessment<br/> <a href="https://t1d.iad1.qualtrics.com/jfe/form/SV_eQihYLCTn85ZLLL">https://t1d.iad1.qualtrics.com/jfe/form/SV_eQihYLCTn85ZLLL</a></p> <p>Request Don to send initial worksheets again</p> |
| <b>Project Update</b>               | <ul style="list-style-type: none"> <li>• Project selection pending data collection/report capability; PDSA – smart form for EMR to capture discrete use is going into production; train for standard documentation procedure</li> </ul>  | Project selection – provisional AIM and fishbone obstacles/interventions  |
| <b>Smart Sheet &amp; Mapping</b>    | IRB has been approved; using <u>Tegria</u> for data mapping  | Smart Sheet:<br><a href="https://app.smartsheet.com/sheets/86V9RfPQv4g657cf8JWWCHJRC2QHv4fQ7R8gRW61?view=grid">https://app.smartsheet.com/sheets/86V9RfPQv4g657cf8JWWCHJRC2QHv4fQ7R8gRW61?view=grid</a>   |
| <b>Dashboard</b>                    | QI Portal  | Don will support with control charts once data is available   |
| <b>Next Check-In online meeting</b> | May 19 <sup>th</sup> at 8:30a  | Don will send invitations   |



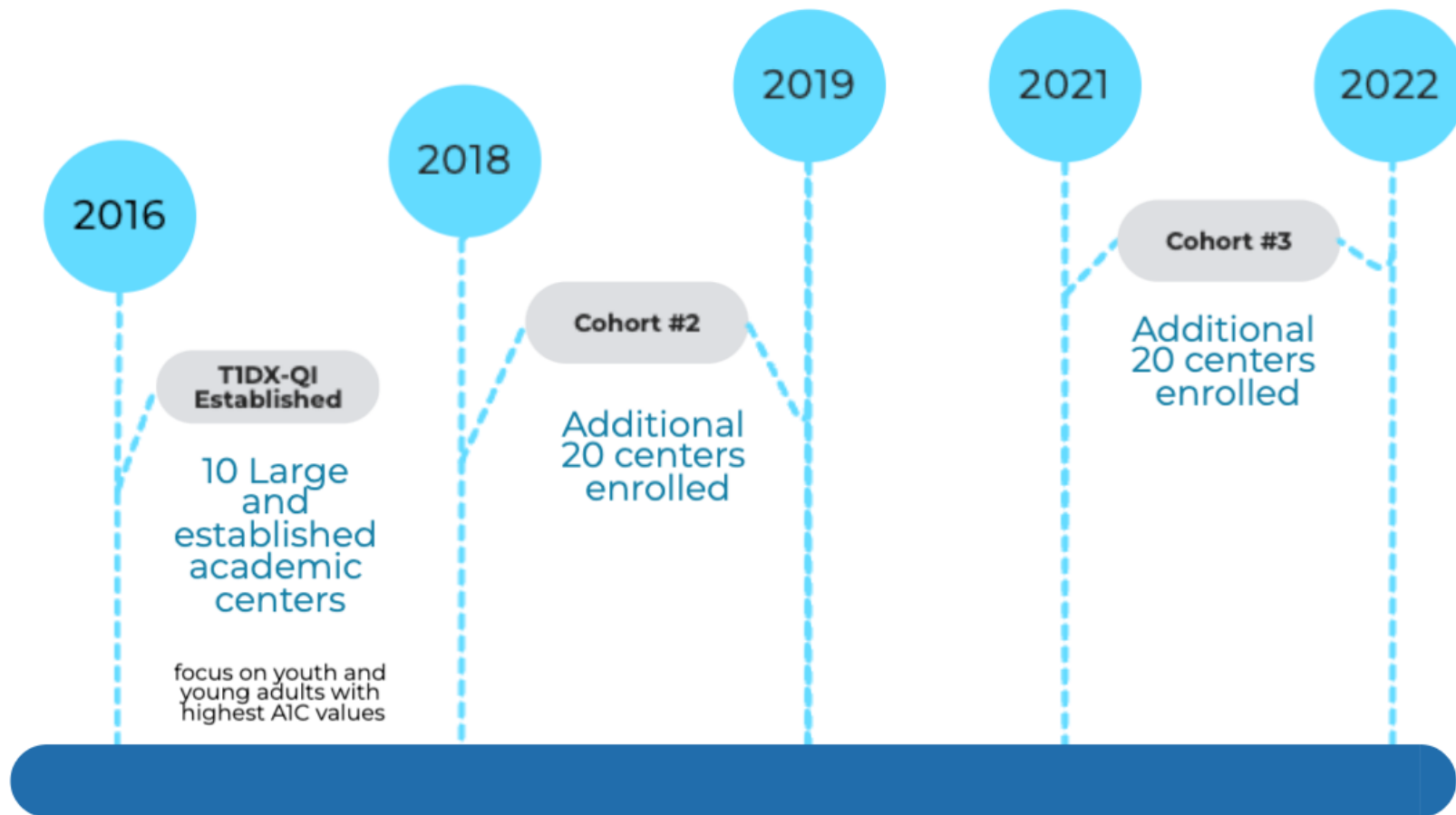
# **From Meh to Yeaaaaah! Endocrinology Centers Participating in T1dx Collaborative Go through a Change in QI Culture in Just 12 Months!**

Siham Accacha, MD, Ulka Kothari MD

Department of Pediatric Endocrinology, NYU Long Island School  
of Medicine, Mineola, NY

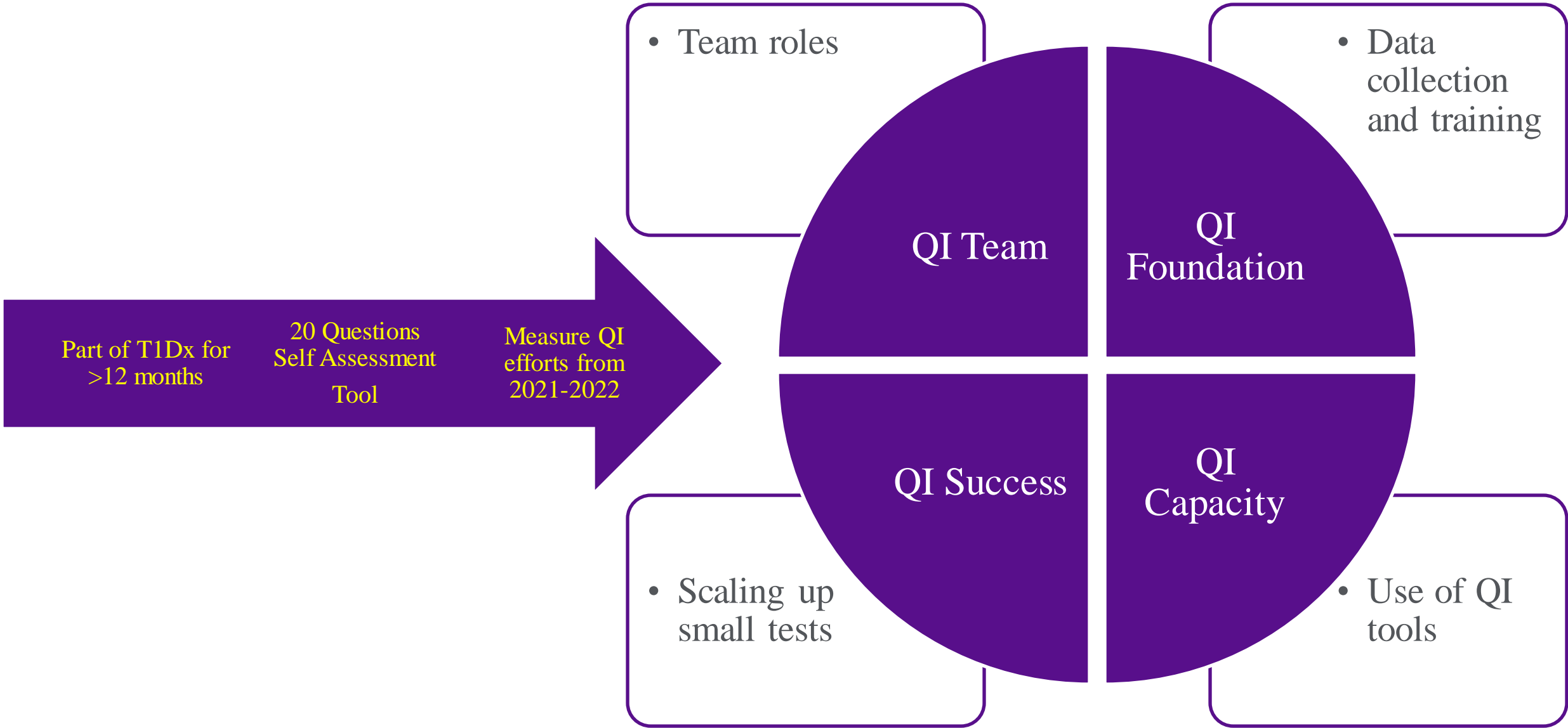
## Introduction

- To improve care for all individual with type 1 diabetes, it is important to increase the culture of patient safety and quality, associated with required rigorous assessment of outcomes overtime (1).
- The development and growth of a successful type 1 diabetes quality improvement (T1Dx-QI) program rely on promoting the development of practices with **autonomous skills to apply to new challenges over time** and **support practice transformation** (2).



**50+** Adult and Pediatric Sites

**85,000** + Patients



# T1DX-QI Capacity Self-Assessment Tool

|  |
|--|
| <b>1. QI Team Structure</b>  |
| - The Department Senior leader(s) is (are) engaged in the T1D improvement project.   |
| - The Physician Leader is engaged and participates in the T1D improvement project  |
| - The IT department is available and willing to implement technical changes.   |
| - T1D patient(s)/parent(s) are engaged in the improvement project.   |
| - T1D QI core team members have relevant job roles and meet frequently.  |
| <b>2. QI Foundation</b>  |
| - Improving T1D clinical outcomes are aligned with your organizational priorities.   |
| - The team has a pool of potential test ideas to improve T1D outcomes and process interventions (Shared Decision-making, Depression Screening, etc.) |
| - We collect T1D patient-reported outcomes (PROs) or patient-reported experiences (PREs).  |
| - The team has a system to facilitate the collection and capture of PROs and PREs  |
| - The team monitors quality T1D process and outcome measures.  |

|  |
|--|
| <b>3. QI Capacity</b>  |
| - The team is proficient in completing PDSA cycles aligned with improving T1D process or outcome measures.     |
| - The team is adept at updating run charts.  |
| - At least one of your team members is proficient in the QI model of improvement.                              |
| - The team can map current processes, analyze contributing factors, causes and use essential QI tools.         |
| - The team is comfortable scaling up successful improvement ideas.   |
| <b>4. QI Success</b>   |
| - The team shares T1D data/results with key stakeholders to improve quality.                                   |
| - The team has demonstrated successes in at least one intervention   |
| - The team has substantial improvement (at least 10%) in T1D clinical outcome measures (HbA1c, Time in Range). |
| - The team is collectively improving their QI proficiency.   |
| - Successful changes have been scaled up.  |



## QI Capacity



Knowledge & understanding of QI approaches

Data and feedback for QI



Commitment of practice leadership

Dedicate time and resources to QI activities

27

Endocrinology  
Centers

Improvement in  
QI Culture

Improvement in  
Health  
Outcomes

# Clinic Profiles of Participating Pediatric and Adult Centers that Completed pre- and post-QI Culture Assessment

| Characteristic  | T1DX-QI Centers (N = 27) |
|---|--------------------------|
| <b>Population served</b>                                      |                          |
| Adult   | 6 (22)                   |
| Pediatric   | 21 (78)                  |
| <b>Center size (# of patients seen monthly)</b>               |                          |
| Small (< 125)   | 8 (30)                   |
| Medium (125 – 249)  | 10 (37)                  |
| Large (>= 250)  | 9 (33)                   |
| <b>Percentage of patients on public insurance</b>             |                          |
| Small (< 30%)   | 8 (30)                   |
| Medium (30% - 49%)  | 12 (44)                  |
| Large (> 50%)   | 7 (26)                   |
| <b>Geographical region</b>                                    |                          |
| Northeast   | 10 (37)                  |
| Midwest   | 7 (26)                   |
| South   | 7 (26)                   |
| West  | 3 (11)                   |
| <b>T1DX-QI Cohort</b>   |                          |
| 1 (2016-2017)   | 5 (19)                   |
| 2 (2019-2020)   | 9 (33)                   |
| 3 (2021)  | 13 (48)                  |
| <b>Average Difference in pre- and post-QI Culture scores*</b> | +8%                      |
| <b>Pre- to Post-QI Culture score shifts</b>                   |                          |
| Improved (range: 1% - 40% increase)                           | 16 (59)                  |
| Unchanged (0% change)   | 6 (22)                   |
| Decreased (range: 3% - 5% decrease)                           | 5 (19)                   |

Data (except \*) are in n (%).

Data (except \*) are in n (%).

## Pre- and post-QI Culture scores by center size

Figure 5a. QI Culture 2021 versus 2022 - Small and Medium

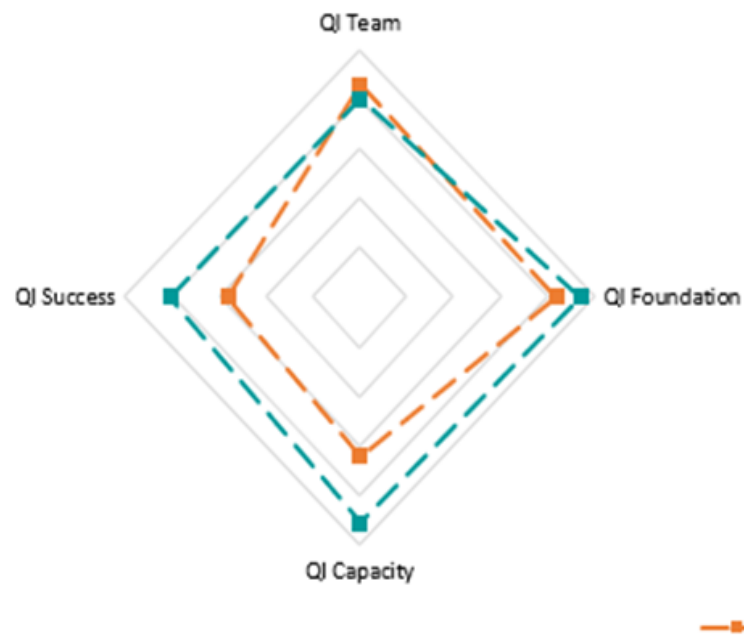
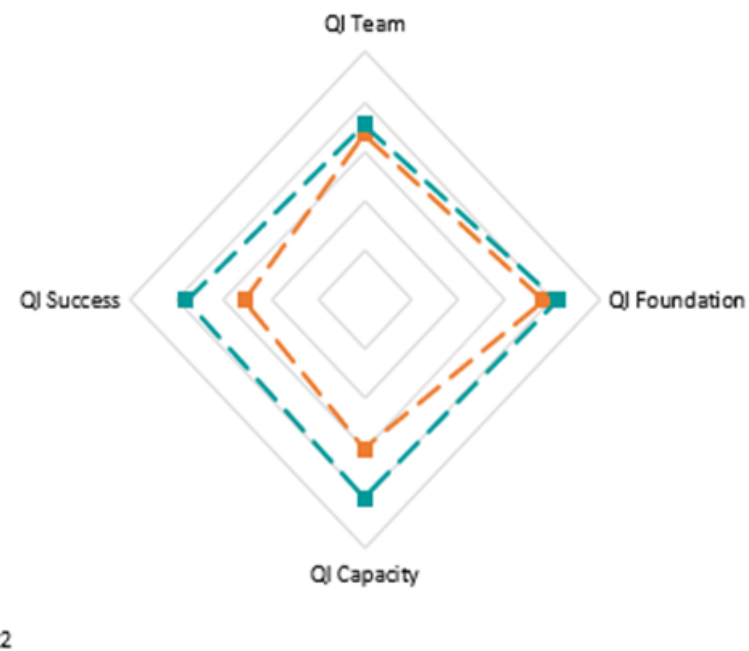


Figure 5b. QI Culture 2021 versus 2022 - Large



|                    | Small and Medium |      |                    | Large |      |                    |
|--------------------|------------------|------|--------------------|-------|------|--------------------|
|                    | 2021             | 2022 | Overall difference | 2021  | 2022 | Overall difference |
| QI Team            | 86               | 80   | -6                 | 67    | 71   | +4                 |
| QI Foundation      | 84               | 94   | +10*               | 76    | 82   | +6                 |
| QI Capacity        | 64               | 91   | +27*               | 60    | 80   | +20*               |
| QI Success         | 56               | 81   | +25*               | 51    | 76   | +25*               |
| Overall QI Culture | 73               | 87   | +14*               | 66    | 77   | +11*               |

Data are in %; \* indicates p-value < 0.05.

# Pre- and post-QI Culture scores by percentage of patients on public insurance

Figure 6a. QI Culture 2021 versus 2022 - Small and Medium

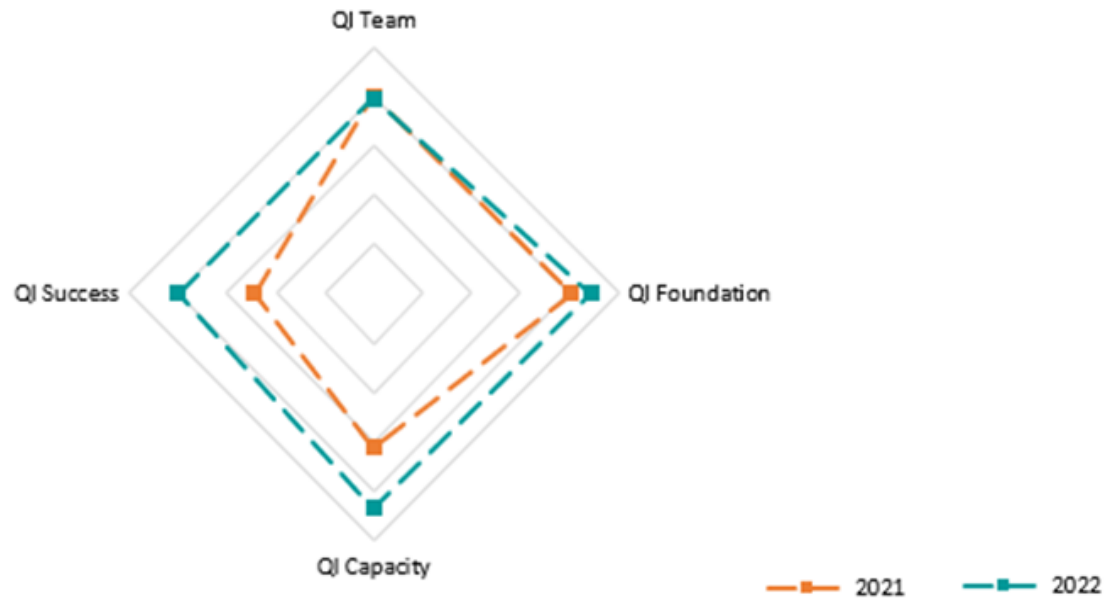
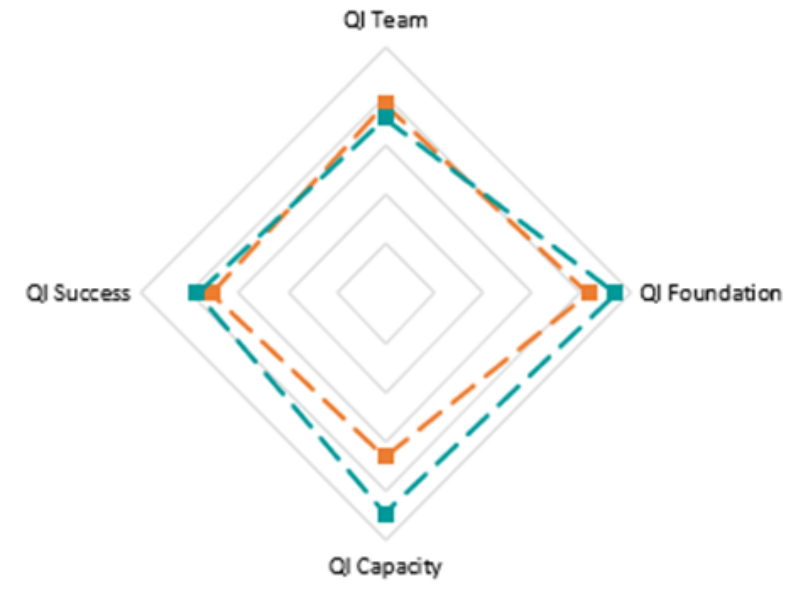


Figure 6b. QI Culture 2021 versus 2022 - Large



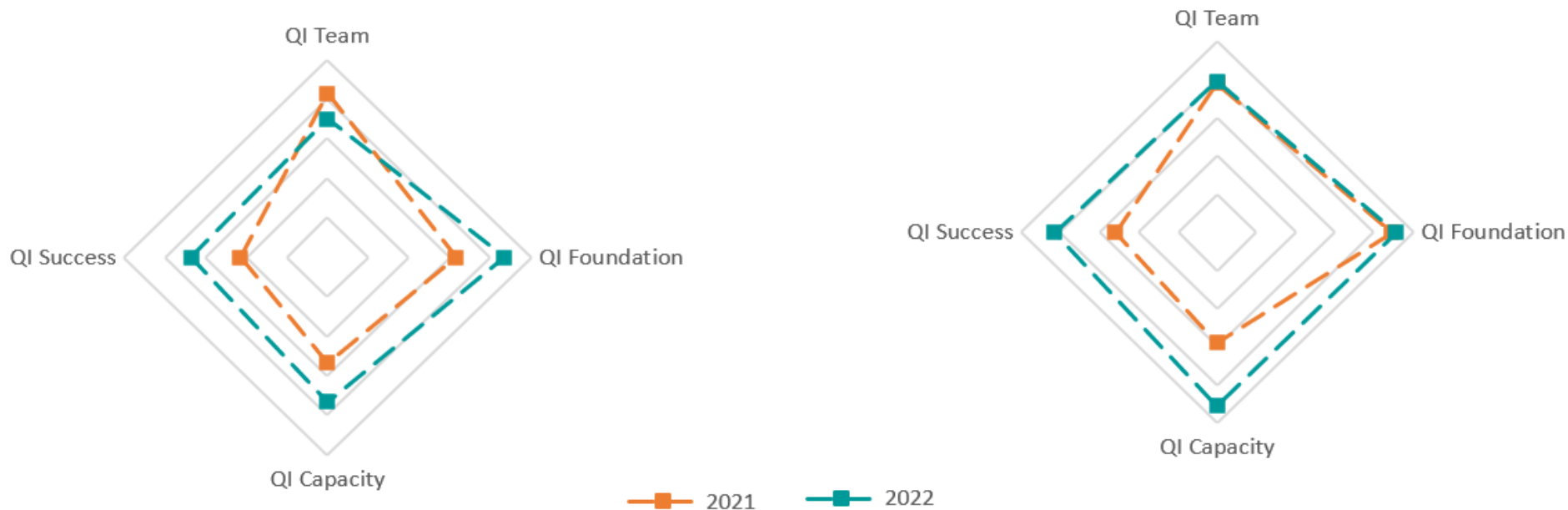
|                    | Small and Medium |      |                    | Large |      |                    |
|--------------------|------------------|------|--------------------|-------|------|--------------------|
|                    | 2021             | 2022 | Overall difference | 2021  | 2022 | Overall difference |
| QI Team            | 80               | 79   | -1                 | 77    | 71   | -6                 |
| QI Foundation      | 81               | 89   | +8                 | 83    | 94   | +11                |
| QI Capacity        | 62               | 87   | +25*               | 66    | 89   | +23*               |
| QI Success         | 49               | 80   | +31*               | 71    | 77   | +6                 |
| Overall QI Culture | 69               | 84   | +15*               | 74    | 83   | +9                 |

Data are in %; \* indicates p-value < 0.05.

# Pre- and post-QI Culture scores by population served

Figure 3a: T1DX-QI Center QI Culture 2021 versus 2022 – Adult Centers

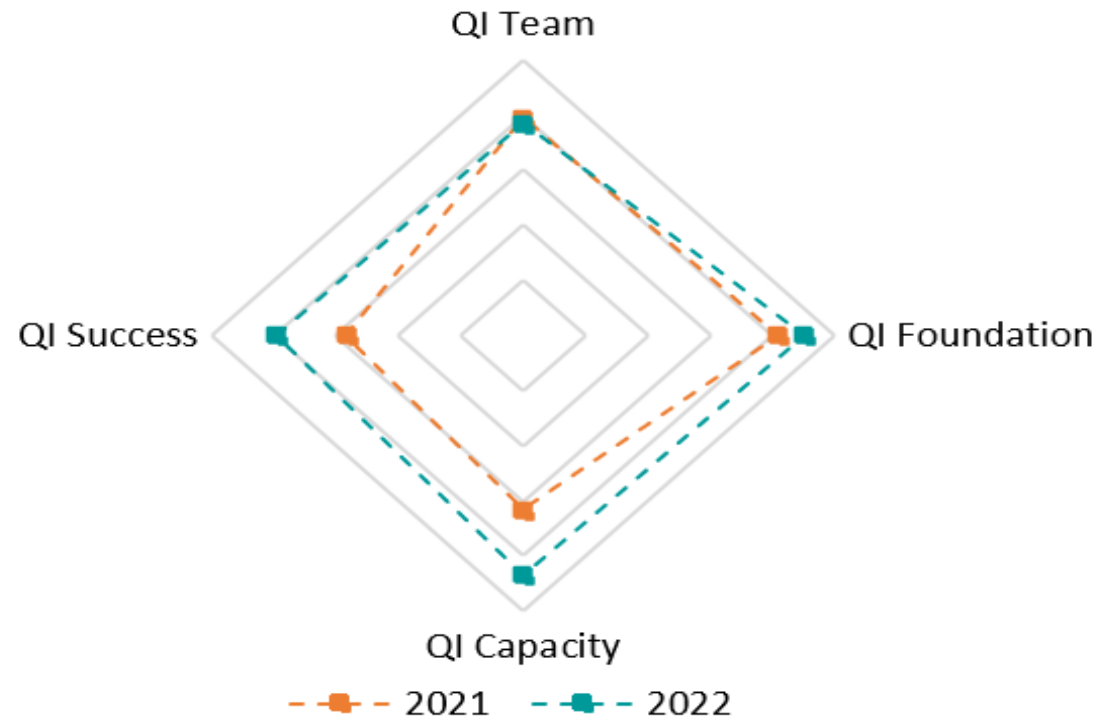
Figure 3b: T1DX-QI Center QI Culture 2021 versus 2022 – Pediatric Centers



|                    | Adult |      |                    | Pediatric |      |                    |
|--------------------|-------|------|--------------------|-----------|------|--------------------|
|                    | 2021  | 2022 | Overall difference | 2021      | 2022 | Overall difference |
| QI Team            | 83    | 70   | -13                | 78        | 79   | +1                 |
| QI Foundation      | 63    | 87   | +24                | 87        | 91   | +4                 |
| QI Capacity        | 53    | 73   | +20                | 66        | 91   | +25*               |
| QI Success         | 43    | 67   | +24                | 61        | 83   | +22                |
| Overall QI Culture | 61    | 74   | +13*               | 73        | 86   | +13*               |

Data are in %; \* indicates p-value ≤ 0.05.

## Overall pre- and post- QI Culture scores



|                    | 2021 | 2022 | Overall difference |
|--------------------|------|------|--------------------|
| QI Team            | 79   | 77   | -2                 |
| QI Foundation      | 82   | 90   | +8*                |
| QI Capacity        | 63   | 87   | +24*               |
| QI Success         | 57   | 79   | +22*               |
| Overall QI Culture | 70   | 84   | +14*               |

Data are in %; \* indicates p-value  $\leq 0.05$ .

# Conclusion

- Even with as little as one year of involvement with the T1D-QI, centers experience an improvement in their QI culture, suggesting that robust improvement in quality culture can occur in very short time periods when clinicians are motivated by a common goal, when quality is built into the encounter, and when regular audit and feedback are provided.
- To improve clinical care and outcomes for individual with type 1 diabetes, it is important to maintain a successful and ongoing learning health system (LHS) collaborative.
- The involvement of adult care centers, is a necessary step to decrease disparity and improve the care for all patients with type 1 diabetes.

## References

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2. Marks BE, Mungmode A, Neyman A, Levin L, Riales N, Eng D, Lee JM, Basina M, Hawah-Jones N, Mann E, O'Malley G, Wilkes M, Steenkamp D, Aleppo G, Accacha S, Ebekozi O. Baseline Quality Improvement Capacity of 33 Endocrinology Centers Participating in the T1D Exchange Quality Improvement Collaborative. *Clin Diabetes*. 2022 Winter;41(1):35-44. doi: 10.2337/cd22-0071. Epub 2022 Oct 19. PMID: 36714248; PMCID: PMC9845085.
3. McGrady ME, Laffel L, Drotar D, Repaske D, Hood KK. Depressive symptoms and glycemic control in adolescents with type 1 diabetes: mediational role of blood glucose monitoring. *Diabetes Care*. 2009;32(5):804–806
4. Corathers SD, Kichler J, Jones NH, Houchen A, Jolly M, Morwessel N, Crawford P, Dolan LM, Hood KK. Improving depression screening for adolescents with type 1 diabetes. *Pediatrics*. 2013 Nov;132(5):e1395-402. doi: 10.1542/peds.2013-0681. Epub 2013 Oct 14. PMID: 24127480.
5. Fries Taylor E, Genevro J, Peikes D, Geonnotti K, Wang W, Meeyers D. Building quality improvement capacity in primary care: supports and resources. Available from <https://www.ahrq.gov/ncepcr/tools/capacity/brief2.html>. Accessed 17 May 2022
6. Centers for Disease Control and Prevention. National Diabetes Statistics Report, 2020: Estimates of Diabetes and Its Burden in the United States. Atlanta, GA, Centers for Disease Control and Prevention, U.S. Department of Health and Human Services, 2020





# T1DX T2D Project Updates

May 15, 2023



**2023-2025**

# Participating Centers



Sonya Haw, MD



David Ziemer, MD



Jason Ng, MD



Margaret Zupa, MD



Kathryn Fantasia, MD

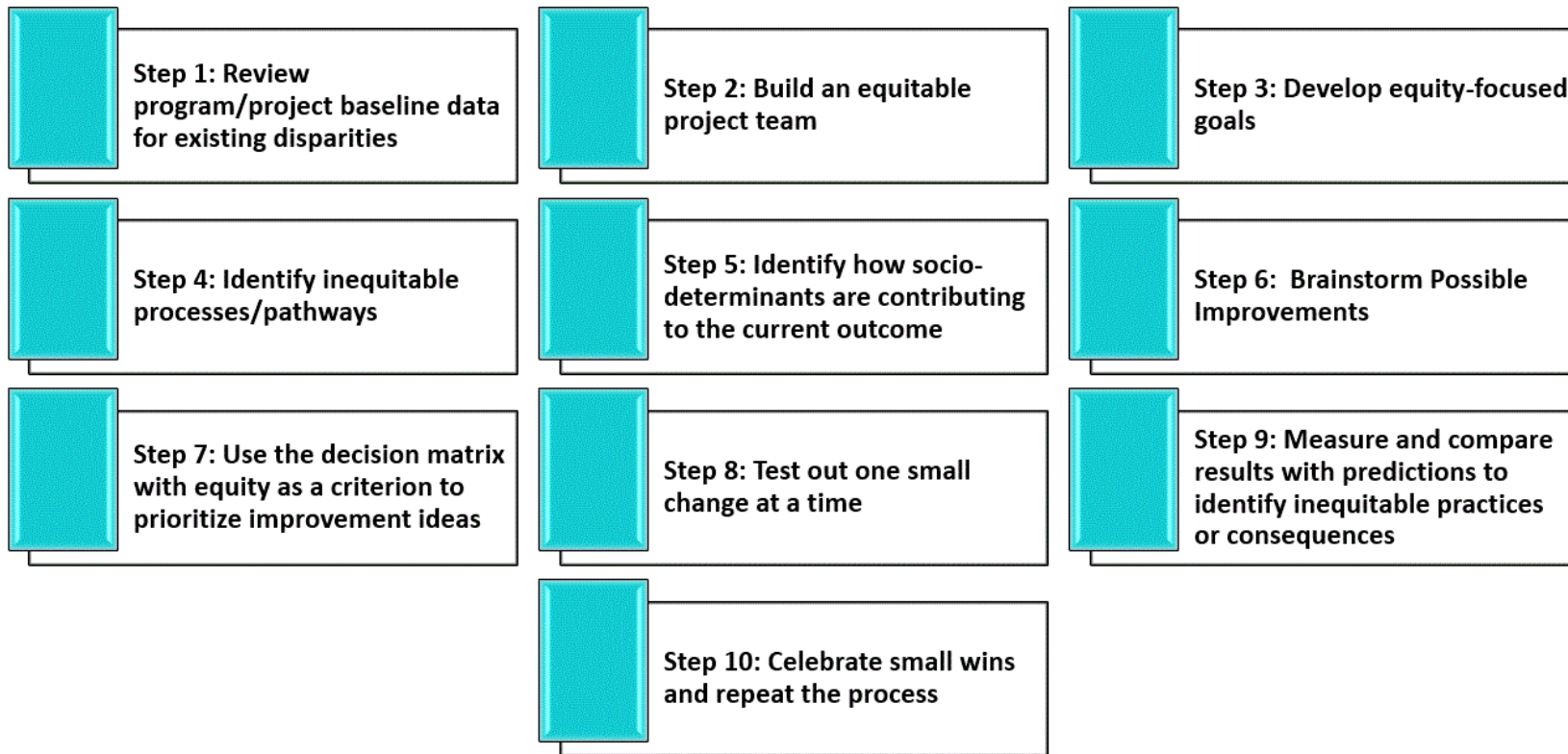


## Project Objectives

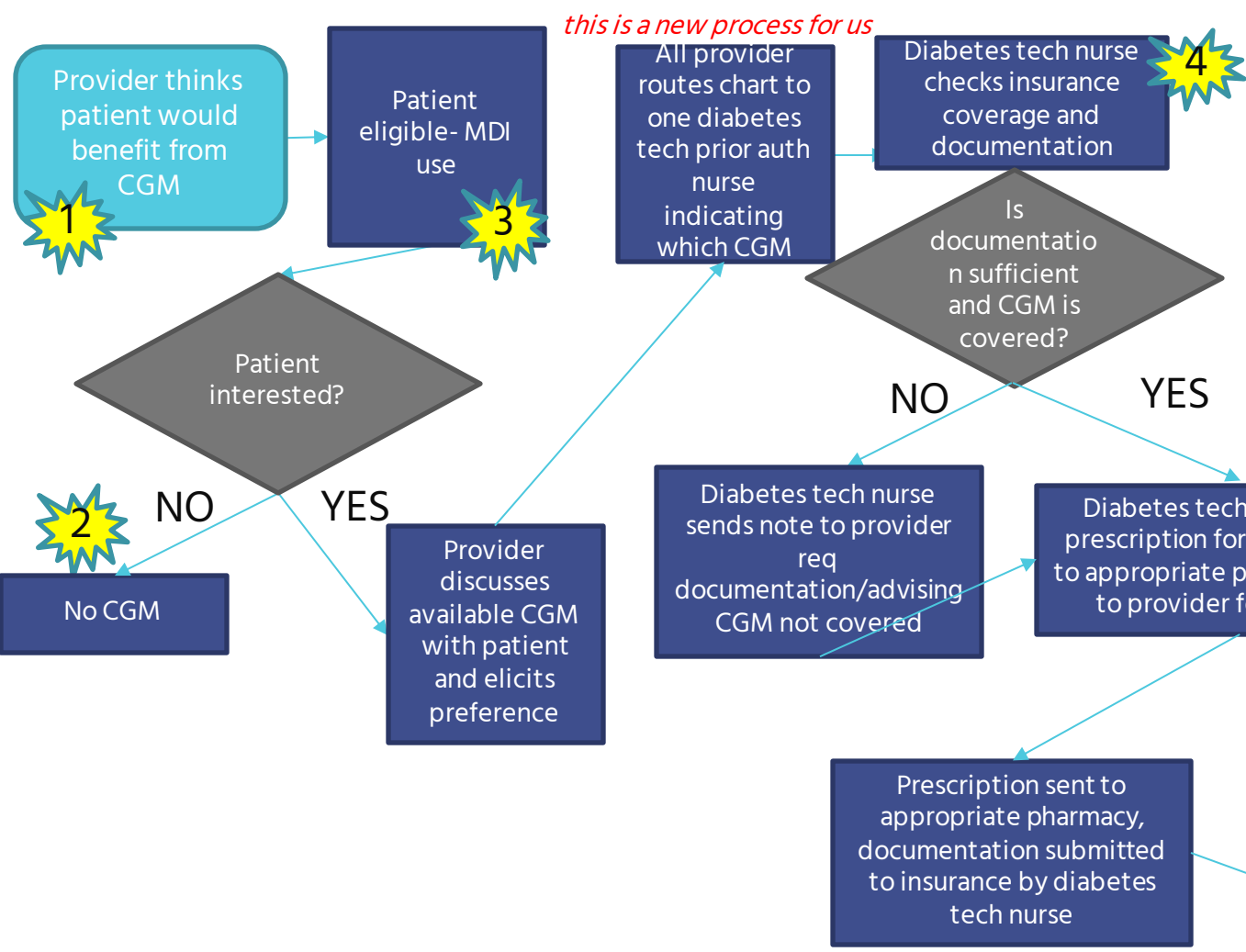
1. Establish a large dataset for adult T2D patients & evaluate the dataset for benchmarking and metrics for the purposes of supporting quality improvement activities
2. Initiate QI interventions aimed to increase CGM access for patients living with T2D, equitably, using the T1D Exchange 10 Step Equity Framework

# T1D Exchange Equity Framework:

Figure 3: Equity Framework



Ebekozien OA, Ori Odugbesan et al Equitable Post COVID-19 Care: A Practical Framework to integrate Health Equity in Diabetes Management. Journal of Clinical Outcomes and Management Nov 2020 <https://doi:10.12788/jcom.0025>

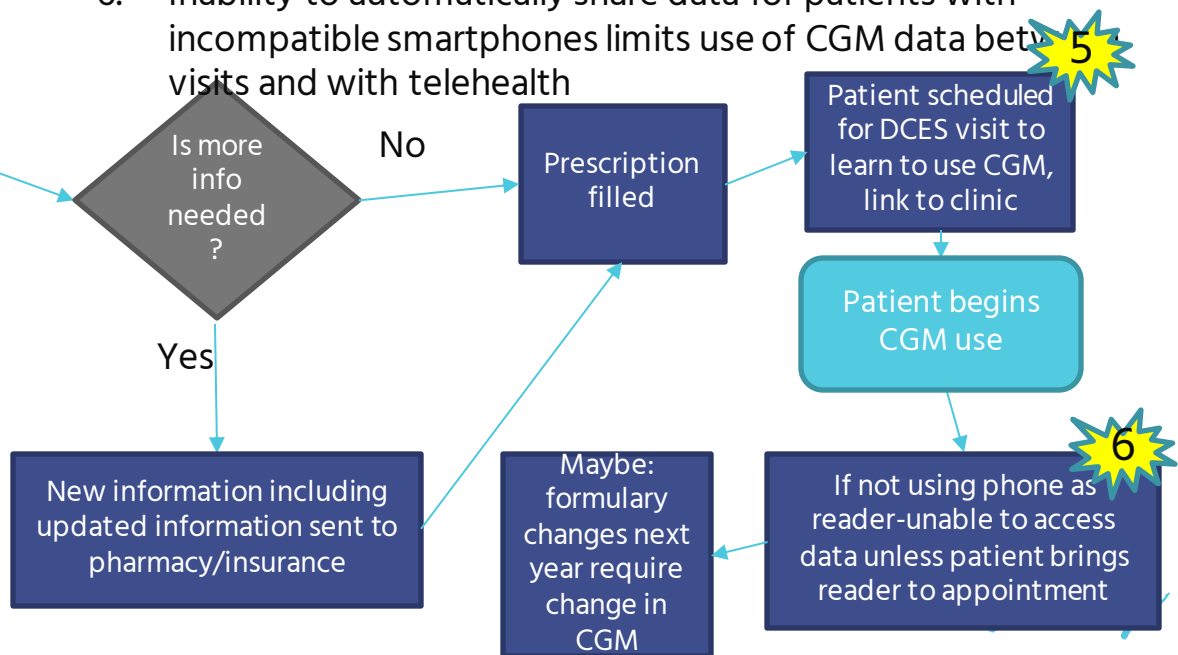


*this is a new process for us*

Pain points:

1. No standardized process for providers to identify patients who may benefit from CGM and offer in a structured manner
2. If patients are unfamiliar, uncomfortable, or do not want CGM for other reason-it is often not revisited and they do not have an opportunity to discuss again in future; can be barrier for non-English speaking patients; no standard resources to give patients to consider CGM after visit
3. Patient wants CGM and provider thinks would benefit, but not on MDI (soon less of an issue with basal-only covered by CMS)
4. No documentation that patient uses T1D insulin (soon less of an issue with basal-only covered by CMS)
5. For patients with transportation or geographic barriers, this second visit to learn to apply and use CGM can be a problem; telehealth visits help with this somewhat; can also be barrier for non-English speaking patients
6. Inability to automatically share data for patients with incompatible smartphones limits use of CGM data between visits and with telehealth

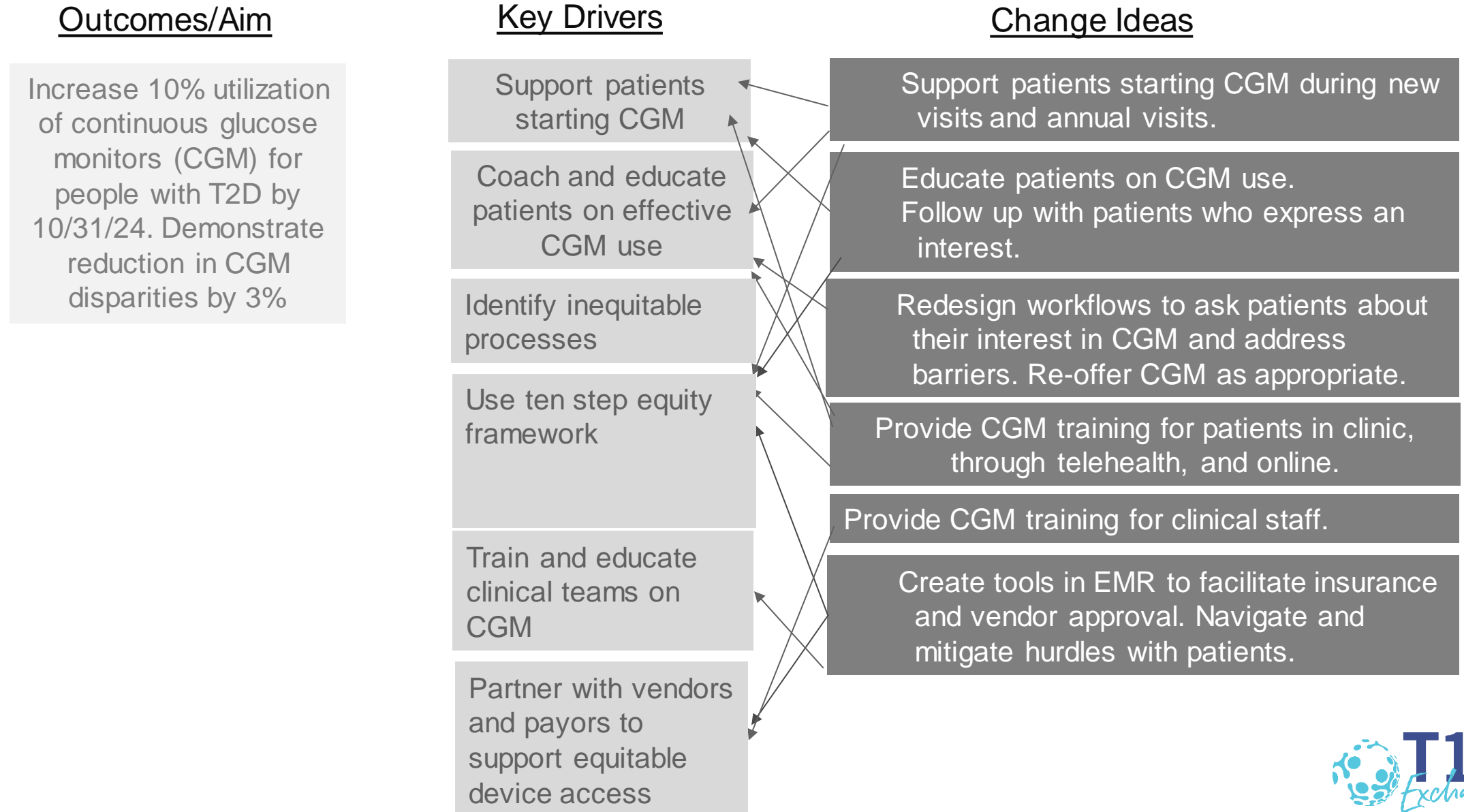
# UPMC Process and Pain Points for CGM



## Baseline data shared in Feb 2023 for reporting

| Clinic Name             | BMC           | UPMC          | SUNY          | Stanford      | Wash U        | U Miami        |
|-------------------------|---------------|---------------|---------------|---------------|---------------|----------------|
| <b>Denominator</b>      | 4350          | 9641          | 3193          | 3000          | 4437          | 3500           |
| <b>Public Insurance</b> | 3045<br>(70%) | 5396<br>(56%) | 2427<br>(76%) | 1000<br>(33%) | 2584<br>(58%) | 1950<br>(58%)  |
| <b>White pop</b>        | 2080<br>(48%) | 7915<br>(82%) | 2267<br>(70%) | 1200<br>(40%) | 3378<br>(76%) | 2450<br>(70%)* |
| <b>Hispanic pop</b>     | 780<br>(18%)  | 96<br>(<1%)   | 148<br>(<1%)  | 600<br>(20%)  | 84<br>(<1%)   | 2100<br>(60%)  |
| <b>CGM use</b>          | n/a*          | 3085<br>(32%) | 1013<br>(32%) | 1000<br>(33%) | 861<br>(19%)  | n/a            |
| <b>A1c</b>              | 3900<br>(90%) | 8574<br>(90%) | 2207<br>(69%) | 2600<br>(87%) | 2428<br>(58%) | 3500<br>(100%) |
| <b>Mean A1c</b>         | 8.7%          | 7.8%          | 7.9%          | 8.0%          | 8.7%          | 7.5%           |
| <b>A1c below 8%</b>     | n/a           | 6127<br>(71%) | 1351<br>(61%) | 1200<br>(46%) | 944<br>(38%)  | 2275<br>(65%)  |

# CGM Uptake Key Driver Diagram





# Measures

---

Denominators (A): The number of patients with a dx T2D (ages 18-75) at your center with at least one in person or telehealth visit in the last year

---

## Priority Measures to be completely reported by June 30, 2023

- (1a) Hemoglobin A1C (HbA1c) testing. The number from (A) who received an HbA1c test during the measurement year.
  - (1b) Hemoglobin A1c (HbA1c) management (<8.0%). The number of members in (A) whose most recent HbA1c level during the measurement year was less than 8.0% (goal)
  - (2) The number of patients in (A) who reported using a sensor/CGM during the month being reported on
  - (3) The number of patients from (A) with a diagnosis of hyperlipidemia or an LDL > 130 mg/dL
  - (3a) Patient is prescribed a statin for cholesterol.
  - (4) Total number of patients from (A) with hypertension diagnosis or Blood Pressure (>140/90 mm Hg)
  - (4a) Patient is prescribed ACE-I or ARBs in the measurement year (taken by any digital device).
  - Percentage prescribed an ACE
  - (5) Patient from (A) and a diagnosis of heart disease and CAD or heart failure or MI or PCI or PAD
  - (5a) Patient is prescribed an SGLT2 or GLP1
-

# ADA Know Diabetes By Heart (KDBH) 2023-2024

## ADA-T1D Exchange T2D QI Program Partnership

- T2D adult populations
- QI interventions in the primary care space
- 8 clinical partners will be selected for funding
  - 2-3 have already been selected by ADA
  - 5-6 will be identified from T1DX-QI network

## KDBH Objectives

### Awareness

- Increase the proportion of people living with T2D who are aware that cardiovascular disease is the leading cause of death.
- Increase the proportion of people living with T2D who are aware they are at an increased risk for heart attack, heart failure and/or stroke.



# ADA Know Diabetes By Heart (KDBH) Objectives

## CVD Risk Conversations

- Increase the proportion of health care providers who discuss the risk for heart disease with all their patients with T2D.
- Increase the proportion of people living with T2D who have discussed their risk for heart disease with their health care provider.

## Diabetes Self-Management Education and Support (DSMES)

- Increase the proportion of people living with T2D who report they have attended DSMES.
- Increase the proportion of health care providers who refer all patients with T2D to DSMES.

## Provider confidence in therapies with CVD Risk Benefit

- Increase the proportion of health care providers who are confident they can effectively prescribe and manage T2D using second-line anti-hyperglycemic agents that can also improve CVD risk.



**T1D**  
*Exchange*

# T1D Exchange Strategy Session

Data Governance Committee Report Out

# Purpose of the T1DX-QI/T2DX-QI Data Governance Committee

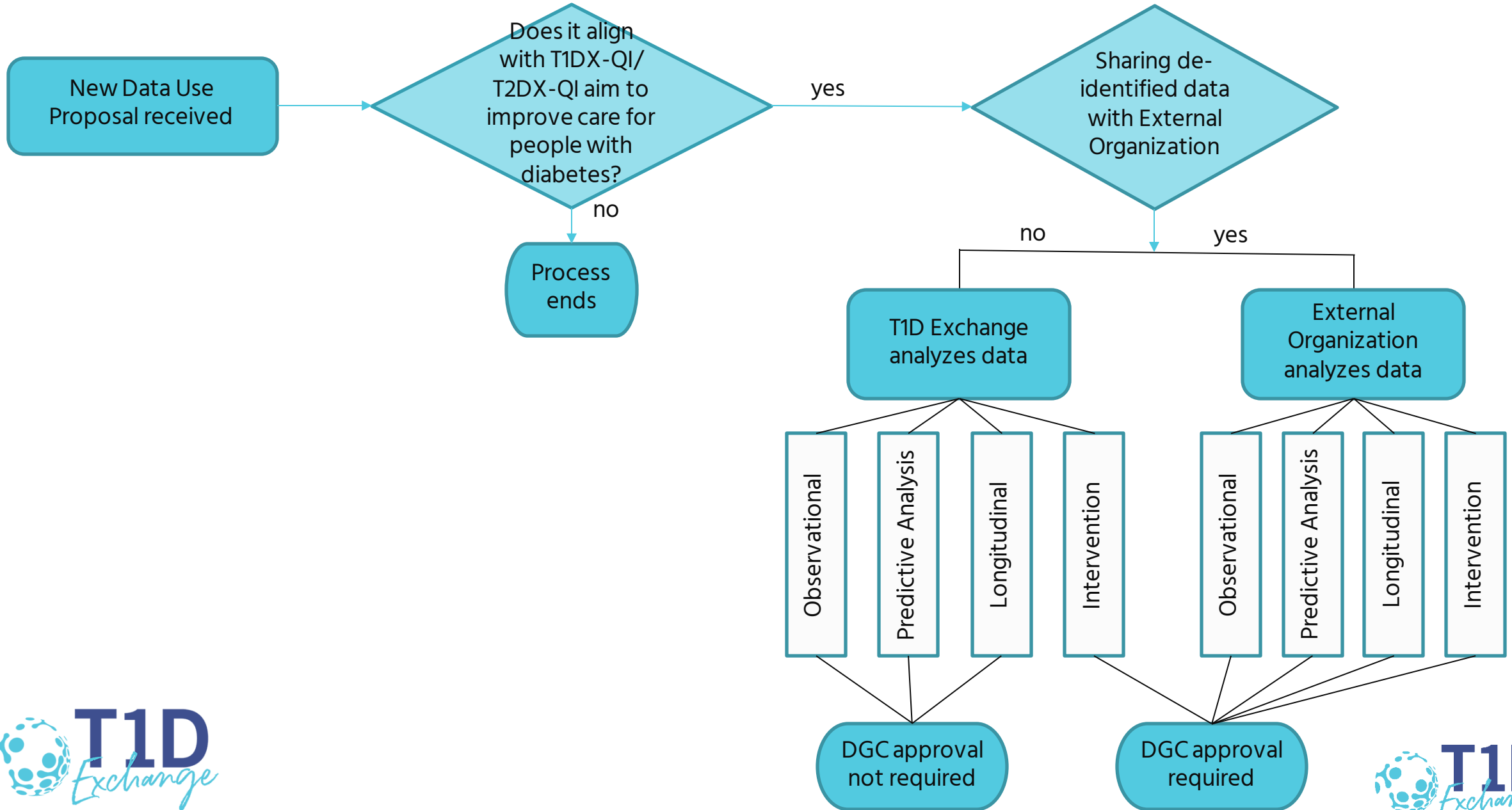
## To expand research focus through academic and industry support for projects:

- To have a better understanding of and improvement in patient care
- Reduction in health disparities
- Improvements in understanding impact of treatments

## To expand opportunities for QI team members:

- To serve as PI or Co-Investigators at their sites
- Provide patient opportunities to engage in QI research

# T1DX-QI/T2DX-QI Data Governance Committee (DGC) Process

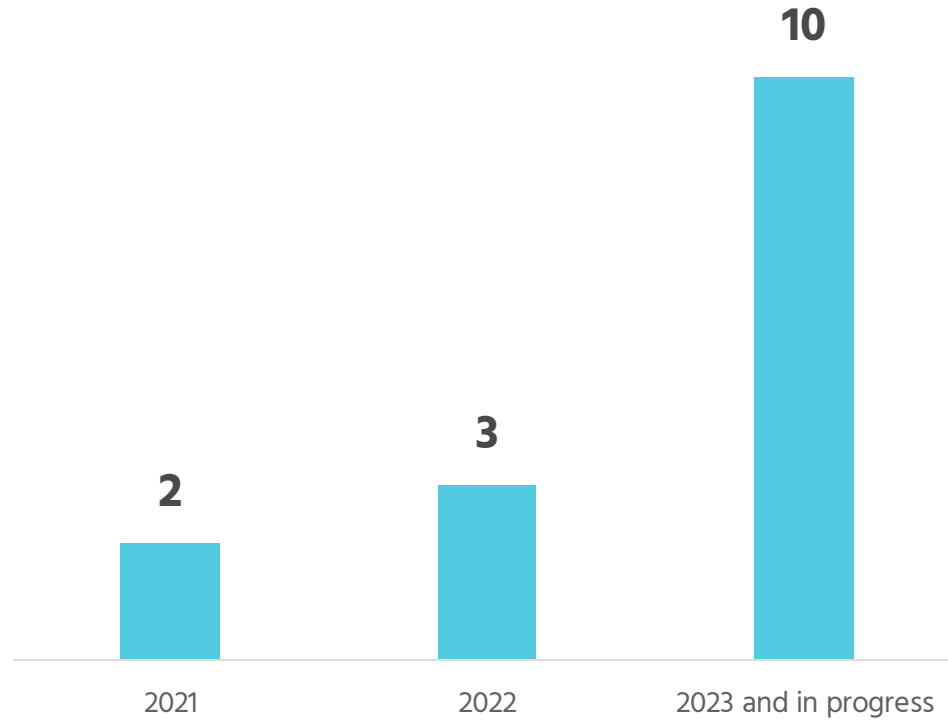


# T1DX-QI Project Updates

# Projects Summary

As of May 2023, T1DX-QI has collaborated with **8** partners on **15** sponsored projects

Projects by year





# Current Projects

## Quality Improvement

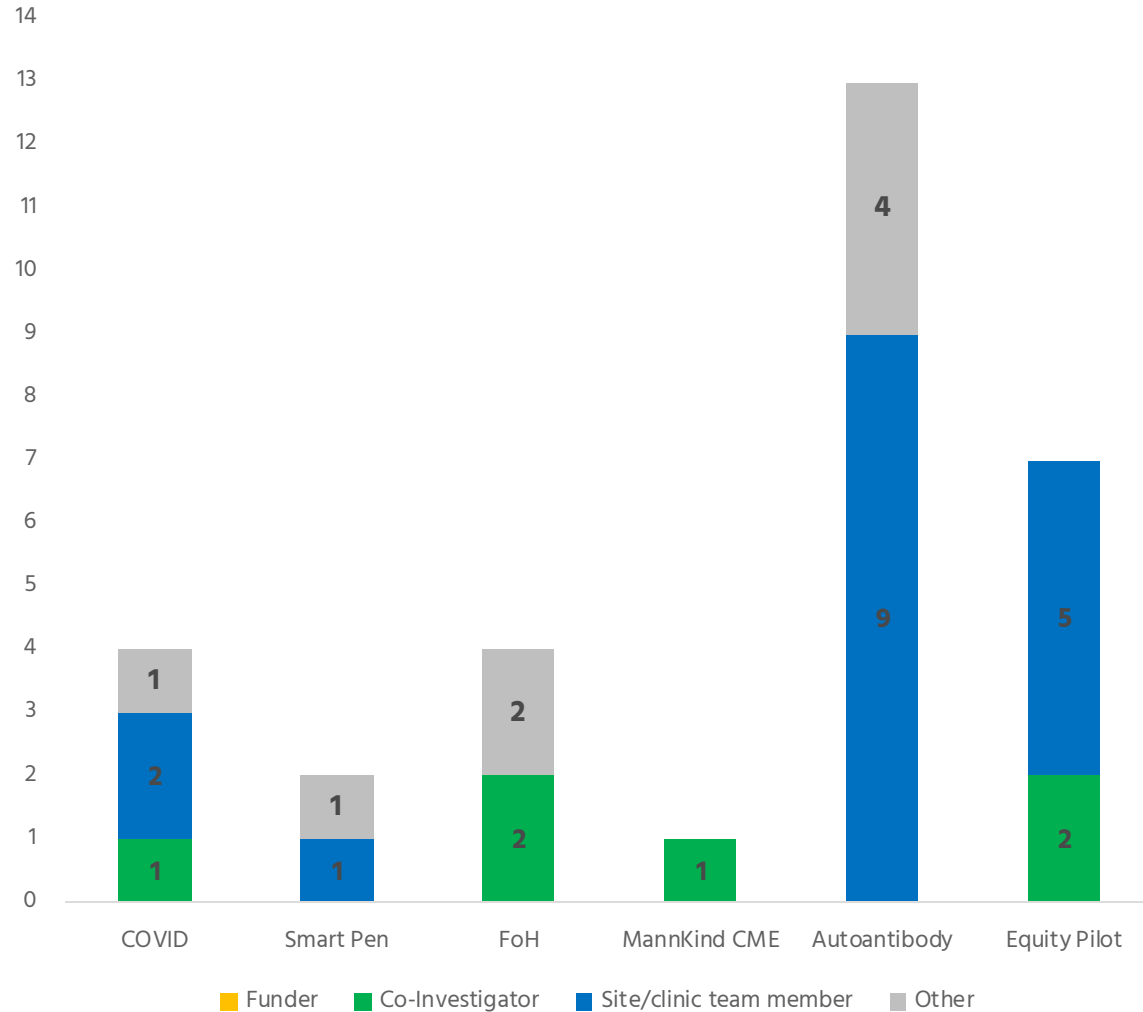
- Medtronic device equity
- Eli Lilly smart pen equity
- JDRF antibody screening and monitoring
- Abbot and ADA T2D

## Qualitative Analysis

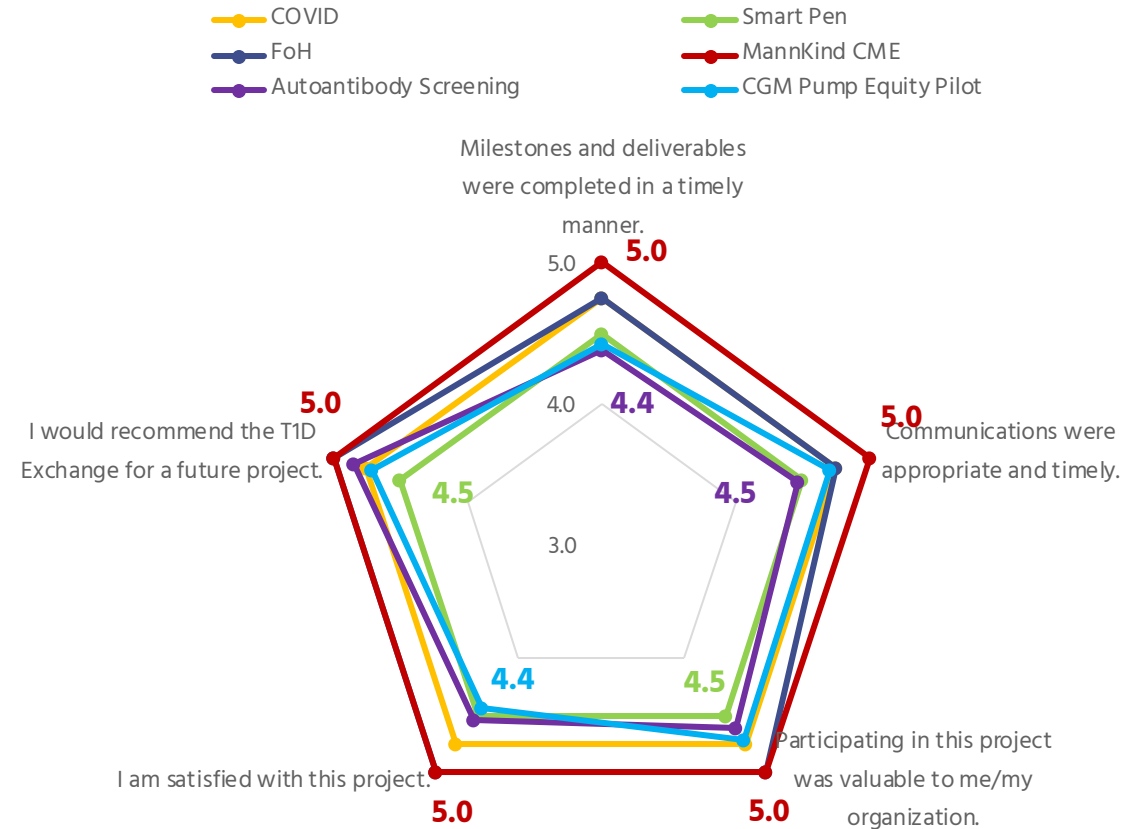
- Vertex total daily dose analysis
- Vertex severe hypoglycemia analysis

# Project Satisfaction

Project satisfaction survey results by role



Average responses on a scale of 1-5 agreement with below statements by project



# T2DX-QI

## **Pilot**

- Started with two centers
- Increased prescribing rates of SGLT2 and GLP-1s, increased depression screening, and initiated SDOH screening

## **Abbott**

- Expand pilot to five centers

## **ADA**

- Supporting KDBH centers with our QI expertise

## Amendment #2 to the Data Use Agreement

This Amendment is dated as of **MONTH, DAY, YEAR** (the "Effective Date"), by and between T1D Exchange Inc., located at 11 Avenue De Lafayette, Boston, Massachusetts 02111, and the **HOSPITAL/CONTRACTOR NAME** with a location at **HOSPITAL/CONTRACTOR'S ADDRESS** ("Contractor").

WHEREAS the Parties entered into Data Use Agreement on **MONTH, DAY, YEAR**.

WHEREAS the Parties executed an Amendment to the Agreement on **MONTH, DAY, YEAR** to include a type 2 diabetes project.

WHEREAS the Parties hereby agree to extend the term of the Agreement in accordance with them terms of the Agreement as well as the terms provided herein.

In consideration of the mutual covenants contained herein, each of T1D Exchange, Inc., and the contractor mutually covenant and agree as follows:

The Agreement, which is attached, continues from the effective data and automatically renews for additional one (1) year periods.

The parties agreed to the existing terms of the executed Data Use Agreement and all other terms and conditions of the Agreement remain unchanged.

The **MONTH, DAY, YEAR** Amendment added the following project work:

1. The Parties agree that a newly designated Principal Investigator, leading all work associated with type 2 diabetes, be assigned to the project.
2. The Parties agree that all existing terms of the DUA, related to Practice and Business Associate responsibilities, Data and Copyright Ownership, Privacy Laws, Security and the Parties acknowledge that beginning at the data of Amendment signature, the program's dataset will expand to include both type 1 and type 2 diabetes.

This Amendment shall be signed on behalf of T1D Exchange Inc., by **NAME**, its **ROLE**, and on behalf of the **CONTRACTOR NAME**.

# Proposed Amendment to T1DX-QI/T2DX-QI DUAs

## SUMMARY OF CHANGES

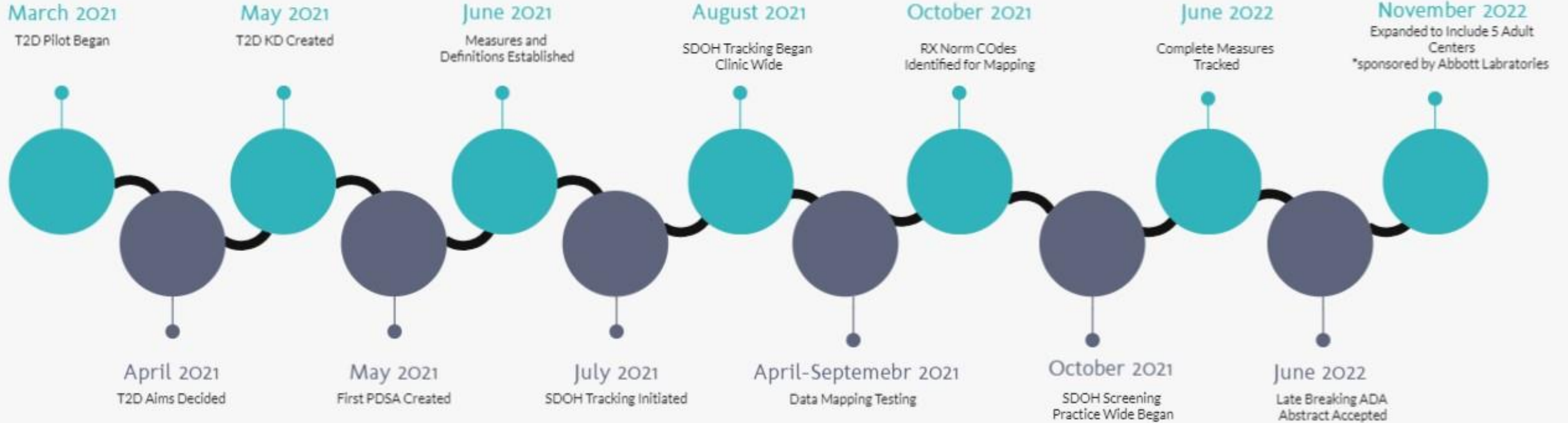
Opt-out during new dua conversations

Secured central IRB approval for T2D T2D data specification working groups summer 2023





## T2DX-QI Timeline





**T1D**  
*Exchange*

**QI Publications Committee**  
**May 2023**

# Publication Committee

T1D Exchange QI Collaborative (“T1DX-QI”) established a Publications Committee to execute decisions and sets priorities concerning all publications and makes final decisions concerning publications arising out of the T1DX-QI.

The Committee is responsible for conducting reviews of publication proposals as defined in the publication policy, providing advice on statistical methods, and contributing to discussions on best practices regarding T1DX-QI topic areas

# Members

- Shideh Majidi – Children’s National (Co-Chair)
- Shivani Agarwal – Montefiore, Albert Einstein (Co-Chair)
- Halis K Akturk – BDC Adult
- Corrine Aia – BMC
- Mark Clements – Children’s Mercy
- Ryan McDonough – Children’s Mercy
- Grace Nelson – Le Bonhuer
- Priya Pahalad – Lucile Packard
- Naomi Fogel – Lurie Children’s
- Laura Levin – Lurie Children’s
- Monica Bianco – Lurie Children’s
- Grenye O’Malley- Icaahn Mt Sinia Adult
- Manmohan Kamboj – Nationwide Children’s
- Jared Friedman – Northwestern
- Emily Briedbart – Hassenfeld Children’s at NYU
- Ines Guttmann Bauman – Oregon Health and Sciences University
- Ilona Lorincz – Upenn
- Margaret Zupa – Pittsburgh Adult
- Carla Demeterco-Berggren – Rady Children’s
- Alissa Roberts – Seattle Children’s
- Ruth Weinstock – SUNY Adult
- Roberto Izquierdo – SUNY Peds
- Sarah Lyons – Texas Children’s Hospital
- Laura Jacobsen – University of Florida
- Francesco Vendrame – University of Miami Adult
- Elizabeth Mann – University of Wisconsin
- Jane Dickinson
- Sean Delacey- Lurie Children’s
- Siham Accacha – NYU Long Island
- Nestoras Mathioudakis – Johns Hopkins Adult
- Meenal Gupta – Seattle Children’s
- Tossaporn Seeherungvong – University of Miami Peds





# Publication Request Form

- Please use this [link](#) or scan the QR code to access the publication request form.



# ATTD 2023 Accepted Abstracts

1. Practical Strategies to Increase Continuous Glucose Monitors (CGM) Use for Underserved Patients: Results from the T1D Exchange Multicenter Study
2. Multi-Center Provider Perspective on Barriers to Smart Insulin Pen
3. Patient reported Diabetic Ketoacidosis among Hybrid Close Loop System (HCLS) users: Real world evidence form a multi-center study for people with Type 1 Diabetes
4. Hemoglobin A1c levels among people with Type 1 Diabetes switching from self-monitoring of blood glucose to real-time CGM use: A retrospective longitudinal study
5. Distribution of Continuous Glucose Monitoring (CGM) derived glycemic outcomes among real-time CGM vs. isCGM users in a large multi-center EMR database for people with T1D
6. \*Patient reported Severe Hypoglycemia among Hybrid Closed Loop System (HCLS) users: Real world evidence from a multi-center study for people with Type 1 Diabetes

# ADA 2023 Accepted Abstracts

## Invited Oral Presentations

1. ADA Standards of Care and Quality Improvement
2. What Can Diabetes Quality Teams Learn from Engineers and Designers?

## Oral Presentation

1. CGM initiation within 6 months of T1D diagnosis associated with lower HbA1c at 3 years

## Poster Presentations

1. Health Care Transition Practices in the T1D Exchange Quality Improvement Collaborative
2. Reproductive health counseling in the T1D Exchange Quality Improvement Collaborative (T1DX-QI)
3. 2022 State of Type 1 Diabetes in the US: Real World T1D Exchange Multicenter Data from over 60,000 people
4. Incorporating Shared Decision Making (SDM) to improve adoption of Connected Insulin Pens (CIP)
5. Current Practices in Racial Equity—Findings from the T1D Exchange Quality Improvement Collaborative (T1DX-QI)
6. Multi-Center Quality Improvement Project: Increasing Social Determinants of Health (SDOH) Screening Across Six Diabetes Centers in the United States
7. Provider Perceptions of Barriers and Benefits to Type 1 Diabetes Autoantibody Testing Among Patients and Relatives
8. Food Insecurity in People with Type 1 Diabetes and Glycemic Outcomes
9. Qualitative Study: Provider Awareness and Attitudes towards Type 1 Diabetes Antibody Screening
10. LGBTQ+ Supportive and Inclusive Care Practices in the T1D Exchange Quality Improvement Collaborative (T1DX-QI)
11. Advancing Quality Improvement Culture among 27 Pediatric and Adult Diabetes Centers
12. Walking the Talk—Improving Use of the T1D Exchange Quality Improvement Portal Using QI Methodology



# Q2 2023 Manuscript Scorecard – May 2023

- Phase 1 (New Idea): **5**
- Phase 2 (Internal group) **9**
- Phase 3 (Publication committee review) **5**
- Phase 4 (Journal Review ): **10**
- Phase 5 (Manuscript Accepted/Published): **7**

# Phase 5 published Manuscript Q1 2023

ClinicalDIABETES

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QUALITY IMPROVEMENT SUCCESS STORY | FEBRUARY 15 2023

## Connecting From Afar: Implementation of Remote Data-Sharing for Patients With Type 1 Diabetes on Insulin Pump Therapy

Monica Grimaldi; Lisania Cardenas; Aleida Maria Saenz; Maddison Saalinger; Ori Odugbesan; Nicole Riales ; Osagie Ebekozien ; Ernesto Bernal-Mizrachi ; Francesco Vendrame 

 Check for updates

Corresponding author: Francesco Vendrame, [fvendrame@med.miami.edu](mailto:fvendrame@med.miami.edu)

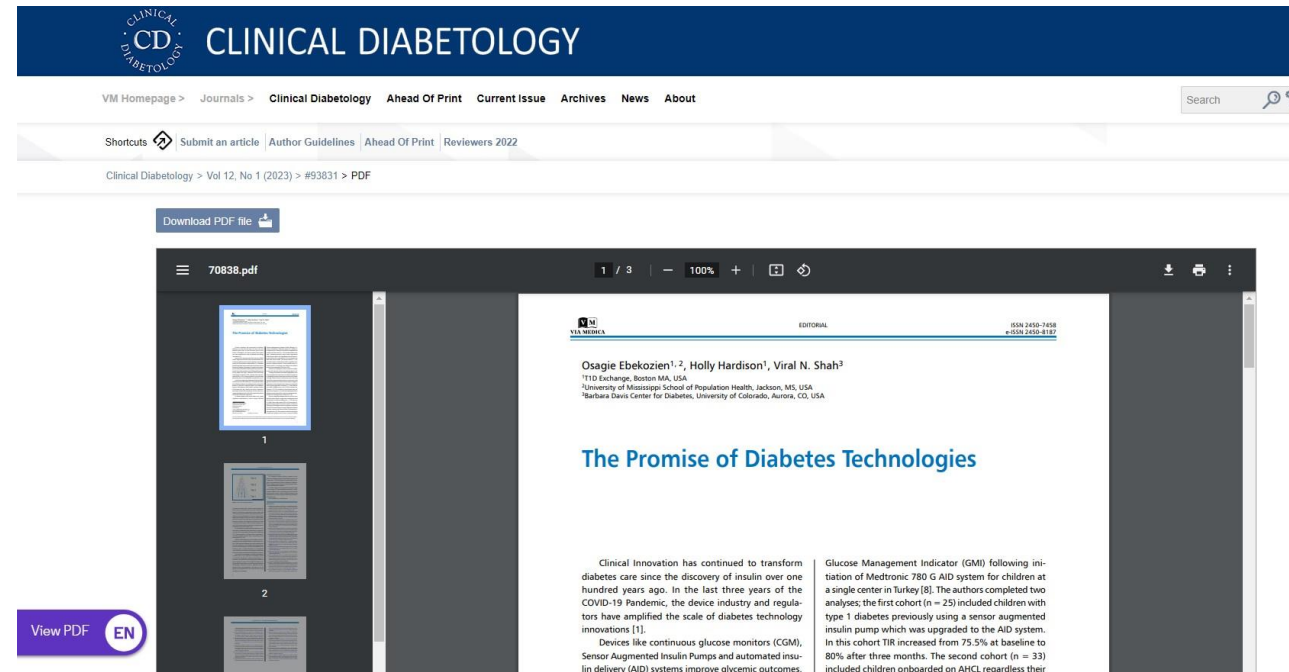
*Clin Diabetes* cd220084

<https://doi.org/10.2337/cd22-0084>

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The screenshot displays the journal's website interface. At the top, the journal title 'CLINICAL DIABETOLOGY' is prominent. Below it, navigation links include 'VM Homepage', 'Journals', 'Clinical Diabetology', 'Ahead Of Print', 'Current Issue', 'Archives', 'News', and 'About'. A search bar is located on the right. The main content area shows the article 'The Promise of Diabetes Technologies' by Osagie Ebekozien, Holly Hardison, and Viral N. Shah. The article title is in large blue font. Below the title, there is a 'Download PDF file' button and a 'View PDF' button with an 'EN' language indicator. The article abstract is visible, discussing clinical innovation in diabetes care and the implementation of the Medtronic 780 G AID system for children. The page number '70838.pdf' and '1 / 3' are also visible.



# Phase 5 published Manuscript Q1 2023



[Home](#) > [Current Diabetes Reports](#) > [Article](#)


Psychosocial Aspects (J Pierce, Section Editor) | [Published: 20 December 2022](#)


## Implementation of Psychosocial Screening into Diabetes Clinics: Experience from the Type 1 Diabetes Exchange Quality Improvement Network

[Sarah Corathers](#) , [Desireé N. Williford](#), [Jessica Kichler](#), [Laura Smith](#), [Emma Ospelt](#), [Saketh Rompicherla](#), [Alissa Roberts](#), [Priya Prahalad](#), [Marina Basina](#), [Cynthia Muñoz](#) & [Osagie Ebeozien](#)

[Current Diabetes Reports](#) **23**, 19–28 (2023) | [Cite this article](#)

**1374** Accesses | **1** Citations | **2** Altmetric | [Metrics](#)

 A [Correction](#) to this article was published on 28 January 2023

 This article has been [updated](#)

Abstract



# Phase 5 published Manuscript Q2 2023

Journal of Diabetes Science and Technology

## Journal of Diabetes Science and Technology

**Title: An Observational Crossover Study of people using Real-Time Continuous Glucose Monitors (CGMs) vs. Self Monitoring of Blood Glucose (SMBG): Real-World Evidence using EMR Data from over 12,000 people with Type 1 Diabetes**

|                               |   |
|-------------------------------|---|
| Journal:                      | <i>Journal of Diabetes Science and Technology</i>   |
| Manuscript ID                 | DST-23-0109.R1  |
| Manuscript Type:              | Original Article  |
| Date Submitted by the Author: | n/a   |
| Complete List of Authors:     | Noor, Nudrat; T1D Exchange, QI and Population Health Norman, Gregory; Dexcom Inc. ; UCSD, Sonabend, Rona; Texas Children's Hospital Chao, Lily; Children's Hospital Los Angeles Kamboj, Manmohan; Nationwide Children's Hospital Golden, Lauren; NYU Langone Health Bekx, M Tracy; University of Wisconsin Madison School of Medicine Public Health, Pediatrics Hsieh, Susan; Cook Children's Medical Center Levy, Carol; Icahn School of Medicine at Mount Sinai, Medicine Sanchez, Janine; University of Miami, Pediatric Endocrinology Rapaport, Robert; Mount Sinai |

The screenshot displays the SAGE Journals website interface. At the top, there is a navigation bar with the SAGE Journals logo, a search bar, and links for 'Access/Profile' and 'Cart'. Below the navigation bar, a teal banner reads 'The Science of Diabetes Self-Management and Care'. The article title is 'Advancing Diabetes Quality Measurement in the Era of Continuous Glucose Monitoring'. The authors listed are Maliha Khan, BSPH, Naila Wahid, MS, et al., and Christel Aprigliano, MSc. The article is published in Volume 49, Issue 2. The page includes a 'Restricted access' notice, a 'Get access' button, and a 'Cite article' button. The abstract text is visible, starting with 'The purpose of this research is to develop a set of continuous glucose monitoring (CGM)-related measure concepts to be tested in a health care system. Existing measures assessing the quality of diabetes care do not include modern approaches to diabetes management, such as CGM. Continuous glucose monitors rival traditional methods of measuring diabetes management by providing real-time, longitudinal data and demonstrating glucose variability over time. The Improving Diabetes Quality Initiative seeks to address this gap in diabetes quality measurement.'



# November Learning Session Call for Abstracts

- The 2023 November Learning Session Call for Abstracts is open until June 16<sup>th</sup>
  - Please use this [link](#) or scan the QR code to access the abstract upload platform







# QI Champions Committee Updates



May 2023

## QI Champions Committee

- The QI Champions Committee is a group of QI Coordinators from all 55 participating centers in the T1DX-QI.
- The committee meets bi-monthly to share and learn about QI initiatives happening locally.
- QI Coordinators share updates about QI projects using Quality Improvement methodologies.
- QI Projects align closely with the T1DX-QI quality metrics.

# Agenda

|  |  | Facilitator  | Time  |
|--|--|--|---|
| <b>Introduction</b>                    | <ul style="list-style-type: none"> <li>Ice Breaker</li> <li>Attendance</li> </ul>  | <ul style="list-style-type: none"> <li>Michelle Coulter</li> </ul>   | 1:00 - 1:10   |
| <b>Site QI Update</b>                  | <ul style="list-style-type: none"> <li><b>School Education Program Hassenfeld Children's Hospital at NYU Langone</b><br/>QI project Rationale, result, learnings, and challenges</li> <li><b>Cook Children's Medical Center</b><br/>QI project Rationale, result, learnings, and challenges</li> <li><b>Rady Children's Hospital QI Project</b><br/>CGM, Pump, and <del>open</del> initiation process.</li> </ul> <p>Q&amp;A</p> | <ul style="list-style-type: none"> <li>Jeniece Ilkowitz</li> <li>Stephanie Ogburn</li> <li>Christy Byer-Mendoza</li> </ul> | <p>1:10 - 1:25 pm</p> <p>1:25- 1:40 pm</p> <p>1:40- 1:50 pm</p> |
| <b>Questions &amp; Closing Remarks</b> | <ul style="list-style-type: none"> <li>Wrap Up</li> <li>Share who is scheduled to present at the next meeting.</li> </ul>  | <ul style="list-style-type: none"> <li>Ashley Garrity</li> <li>Trevon Wright</li> </ul>                                    | <p>1:50 – 1:55 pm</p> <p>1:55- 2:00 pm</p>                      |

## Previous Presentations

- School Education Program Hassenfeld Children's Hospital at NYU Langone
- CGM, PUMP, In Pen Process Maps- Rady Children's
- Extra Care+ Program (Handout)- BDC Peds
- Boston Medical Center- Increasing Hybrid-Closed Loop Pump Usage
- Children's Mercy- Addressing Social Determinants of Health to Improve Health Outcomes for Patients with Diabetes

## Expectations for T1DX-QI Centers/ QI Champions

- All centers should have at least one QI coordinator in the committee
- At least each coordinator will present at the committee meeting once every year
- Each presentation should include at least a QI tool e.g fish bone, Key Driver Diagram, Process map, Run charts, PDSA worksheet e.t.c
- Coordinators should be involved in abstracts and manuscripts both locally and with other co-authors in the T1DX-QI

# Sites that have presented

- SUNY Adult
- Boston Medical Center
- Barbara Davis Center Pediatrics
- SUNY Peds
- University of Alabama
- Children's Mercy
- Rady Children's Hospital
- Cook Children's Medical Center
- Hassenfeld Children's Hospital

# Engaged Sites

| Participating sites              | QI Coordinators                     | 5/9/23 |
|----------------------------------|-------------------------------------|--------|
| BDC Adult                        | Darya Wodetzki, Emma                |        |
| Cornell Children's               | Isabel Reckson                      |        |
| Lurie Children's, IL             | Naomi Sullivan                      |        |
| NYU Langone Mineola              | Lori Benzoni, Sheila Dennehy        |        |
| University of Wisconsin          | Whitney Beaton                      |        |
| Cincinnati Children's (CCHMC)    | Amy Grant                           |        |
| Barbara Davis Center (BDC) Ped   | Becca Campbell, Claire              |        |
| University of Michigan           | Ashley G                            |        |
| Texas Children's                 | Curtis                              |        |
| Nationwide (NCH)                 | Malak                               |        |
| SUNY Upstate (Ped)               | Emilie Hess, Joseph Eradu           |        |
| SUNY Upstate (Adult)             | Emilie Hess, Joseph Eradu           |        |
| Stanford( Adult)                 | Deene                               |        |
| University of Pennsylvania(Penn) | Carly Morrison                      |        |
| Rady                             | Christine, Kim                      |        |
| NYU Lagone(peds)                 | Jeniece Ilkowitz                    |        |
| Seattle Children Hospital        | Yasi, Samantha                      |        |
| CHLA                             | Jose Aceves                         |        |
| Cook Children's                  | Stephanie Ogburn, Christin, Candice |        |
| Alabama                          | Michelle Coulter                    |        |
| Cleveland Adult                  | Kelle Brake/ Maya Boyd              |        |
| Cleveland Peds                   | Andrea Mucci, Cheryl Switzer        |        |
| OHSU Peds                        | Brittany Caswell                    |        |
| Spectrum Health(Helen Devos)     | Britni Schipper                     |        |
| Univ Utah Peds                   | LeAnn Gubler                        |        |

# Engaged Sites

| Participating sites        | QI Coordinators       | 5/9/23 |
|----------------------------|-----------------------|--------|
| Indiana University         | Katie Haberlin        |        |
| UCSF adults                | Kaven Bal             |        |
| Boston Medical Center      | Elizabeth Brouillard  |        |
| Children's National        | Jennifer Reilly       |        |
| Mt. Sinai adults           | Selassie Ogyaadu      |        |
| Mt. Sinai peds             | Julie Samuels         |        |
| Northwestern Medicine      | Stephanie Hermann     |        |
| Children's Mercy(CMH)      | Emily Dewit           |        |
| Miami Adult                | Maddison              |        |
| NYU Adult                  | Camila Calistru       |        |
| Tennessee                  | Blake Adams           |        |
| Cohen Children's           | Rasida Talib          |        |
| WASHU                      | Lindsay               |        |
| Atlanta                    | Lynette               |        |
| Johns Hopkins Adult        | Nestoras Mathioudakis |        |
| OHSU Adult                 | Brianna Morales       |        |
| Pittsburgh Peds            | Janet Lueng           |        |
| University of Florida Peds | Sarah Peeling         |        |



# Sites without QI Coordinators

| <b>Participating sites</b> | <b>QI Coordinators</b> | <b>5/9/23</b> |
|----------------------------|------------------------|---------------|
| Albert Einstein            | N/A                    |               |
| UCSF peds                  | N/A                    |               |
| Miami Peds                 | N/A                    |               |
| Johns Hopkins Peds         | N/A                    |               |
| Pittsburgh Adult           | N/A                    |               |
| UC Davis (2023)            | N/A                    |               |
| Stanford (Ped)             | N/A                    |               |
| Wayne State                | N/A                    |               |
| Grady Memorial Hospital    | N/A                    |               |

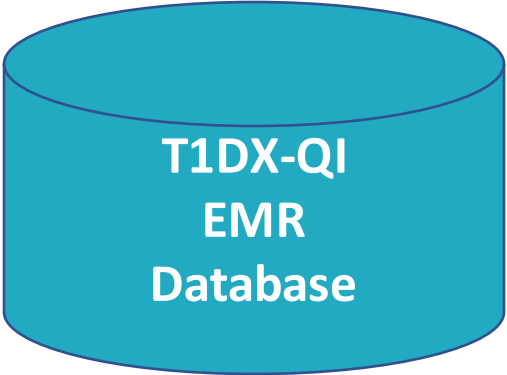


**T1D**  
*Exchange*

# T1D Exchange Strategy Session

Data Science Committee Report Out

# Overview of T1DX-QI EMR Database



Metrics on  
QI Portal  
(Mapped sites)



+  
Population Health Research

- Data files:**
- Patient
  - Observations
  - Encounter
  - Provider
  - Conditions
  - Medications
  - Diabetes related



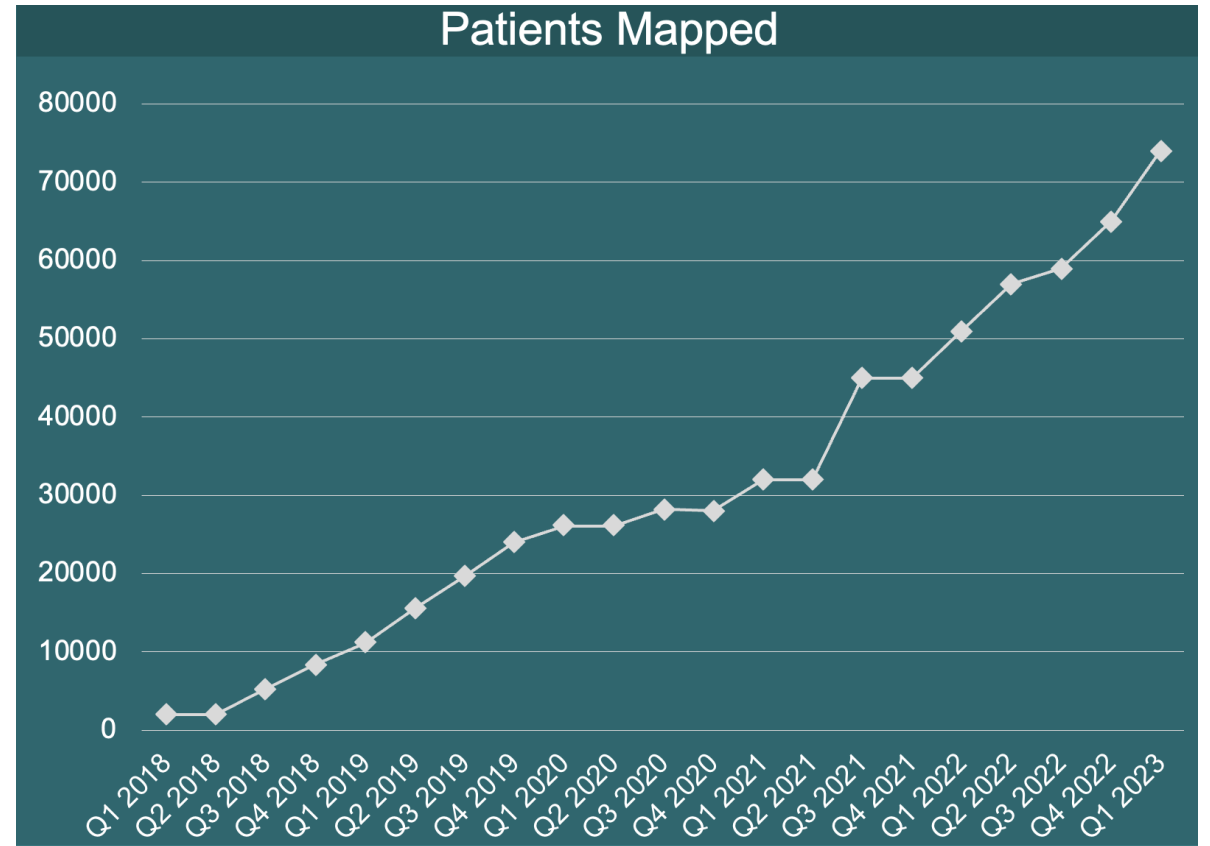
# Mapped Sites in T1DX-QI EMR database

- 28 Sites fully mapped
- 3 in (Internal and External) validation phase
- Data completeness scorecards for core QI measures shared with sites biannually

# Data Points trending in the QI Collaborative Database

- Features over **70,000+** patients
- Over **130 data elements**

| Clinic Type        | Number of Patients (N%) |
|--------------------|-------------------------|
| 21 Pediatric Sites | 55,185                  |
| 7 Adult Sites      | 20,536                  |



# Mapped Data Files

| Patient Information              | Encounter      | Provider      | Observations                             | Diabetes related Information                         | Conditions | Medication          |
|----------------------------------|----------------|---------------|--|--|------------|---------------------|
| Zip code<br>Age<br>Gender<br>... | Encounter type | Provider type | Vital signs<br>-Surveys<br>-HbA1c<br>... | -Date of diagnosis<br>-Insulin regimen<br>-CGM<br>.. | ICD10      | Rxnorm<br>NDC<br>.. |

# Sample Scorecard

- Scorecards are sent out twice a year to fully mapped sites assessing data availability for variables
- On average of all mapped sites, we have about 90% of a1c data available
- T1d\_dx\_dt, ~80% of sites are sharing this information. We see a range from 18%- 100% availability
- Of mapped sites, about 50% are sharing TIR with us, and of those sites we data availability ranging from 7% to 92%
- For CGM use, about 60% of mapped sites are sharing cgm\_binary with us, and of those sites we have about 76% available data

| T1Dx Phase 1 Measures            | Codes from T1DX data spec | Data availability | Meets Mapping Expectations |
|----------------------------------|---------------------------|-------------------|----------------------------|
| Demographic data                 | birth_date                | 100%              |                            |
|                                  | t1d_dx_dt                 | 100%              |                            |
|                                  | Race                      | 100%              |                            |
|                                  | Ethnicity                 | 100%              |                            |
|                                  | primary_insurance_type    | 100%              |                            |
| A1c data                         | 39156-5 (BMI)             | 99%               |                            |
|                                  | 4548-4, 17856-6           | 99%               |                            |
| CGM Use data                     | cgm_binary=1              | 91%               |                            |
|                                  | cgm_st_dt                 | 92%               |                            |
|                                  | cgm_company               | 75%               |                            |
|                                  | cgm_model                 | 83%               |                            |
| BG check data                    | bgm_test_freq             | 8%                |                            |
| Pump Use data                    | ins_regimen=1             | 71%               |                            |
|                                  | pump_st_dt                | 94%               |                            |
|                                  | pump_company              | 16%               |                            |
|                                  | pump_model                | 53%               |                            |
| HCLS                             | ins_pump_delivery==4      | 40%               |                            |
| MDI Use data                     | ins_regimen !=1           | 29%               |                            |
| Depression screening data        | 55758-7, 44261-6          | Not available     |                            |
| <b>T1Dx Phase 2 Measures</b>     |                           |                   |                            |
| Time in Range                    | time_in_range             | 52%               |                            |
| Time in Hypoglycemia             | cgm_below_70              | 47%               |                            |
| Time in Severe Hypoglycemia      | cgm_below_54              | 47%               |                            |
| DKA events                       | dka_events_inp            | 8%                |                            |
|                                  | dka_events_amb            | Not available     |                            |
|                                  | dka_events_inp_pro        | Not available     |                            |
|                                  | dka_events_amb_pro        | Not available     |                            |
| Bolus 3X among Pump users        | bolus_ins_daily_inj       | Not available     |                            |
| SDOH                             | 88124-3, 88122-7, 88123-5 | Not available     |                            |
| Change in medication file format | drug_name                 | Available         |                            |
|                                  | drug_name_generic         | Not available     |                            |
|                                  | drug_sub_class            | Not available     |                            |

| Mapping Expectations         |
|------------------------------|
| No Action Needed             |
| Needs Confirmation           |
| Site not collecting          |
| Collecting but not providing |



# Data specification upgrades

- Data specification is upgraded annually
- Upgrades include new, updated variable lists
- New variables
  - Variable additions are made after reaching consensus within the Data Science Committee (DSC)
  - PIs requesting for new data present their study proposal to DSC, explaining its significance to the field and quality improvement processes



# EHR Manuscript

**Goal of paper:** to describe EHR tools used in T1DX-QI

- Capture EHR tools and workflows for documenting core data elements
- Describe variability in how sites are entering and classifying these data elements to arrive at the core metrics for the collaborative
- June submission
- Link to google sheet will be shared in chat
- If you would like to participate, please schedule a zoom meeting with Dr. Lee or Dr. Eng no later than **Friday May 26<sup>th</sup>**