T1DX-QI Collaborative Call with Adult Centers

January 24, 2024

Agenda

- Welcome & introductions, Osagie Ebekozien, MD, MPH, CPHQ
- Clinical center presentations
  - NYU Langone, Ede Cohen, MD, RD, CDN, CDCES
  - UPMC, Jason Ng, MD
- Collaborative Updates, Nicole Rioles, MA
  - Connected pen use
  - Invoicing reminders and deadline for 2023 work
  - Committee Chair opportunities and transition timelines
  - Evaluation feedback from the November 2023 Learning Session

T1DX-QI network of 60 centers, caring for 100,000+ PWD across 22 states and Washington D.C.
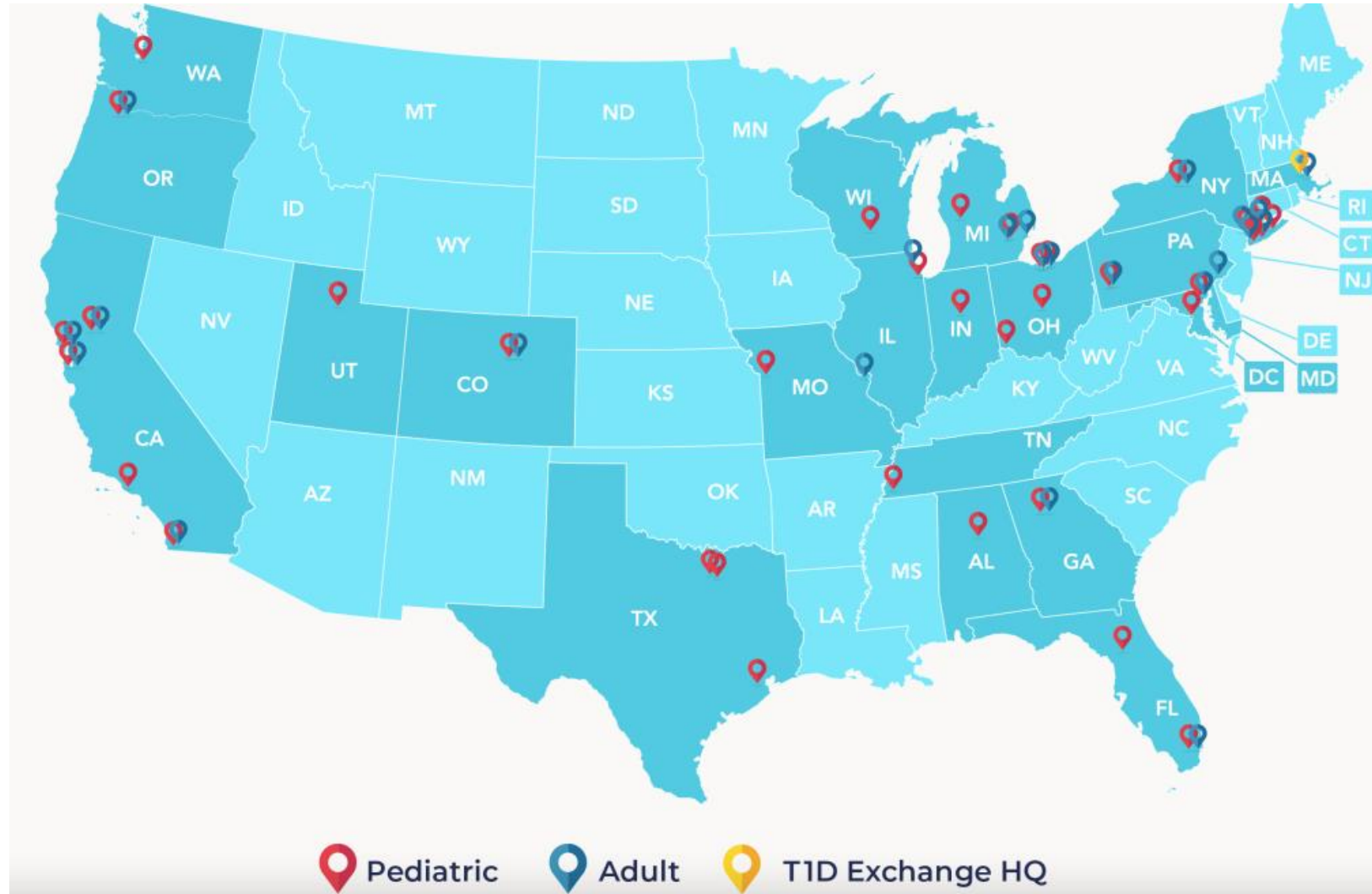
Pediatric   Adult   T1D Exchange HQ

Welcome new clinical centers!

1. The Berrie Center, New York, NY
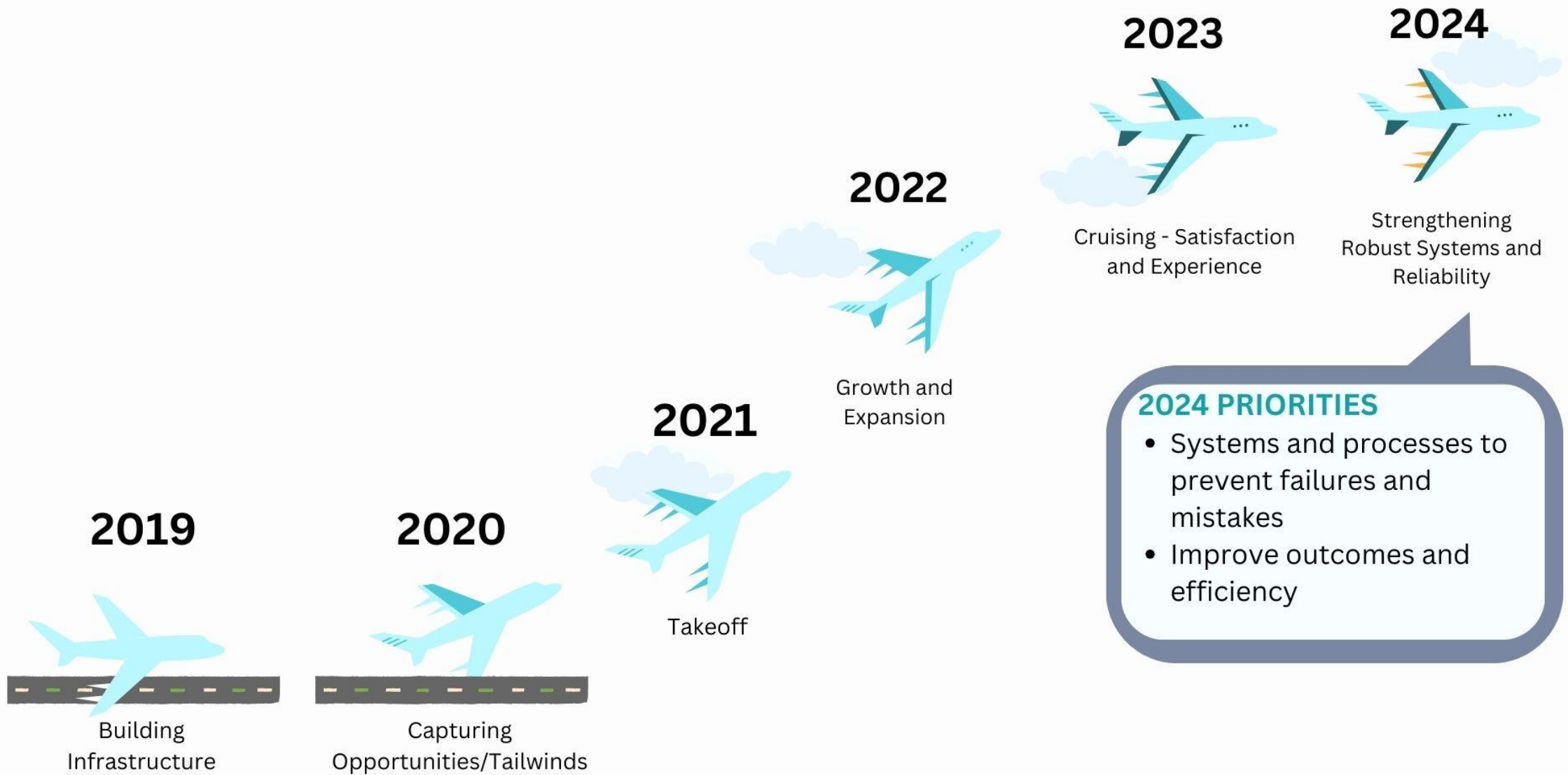
2. University Hospitals, Cleveland, OH

3. University of Michigan, Ann Arbor, MI

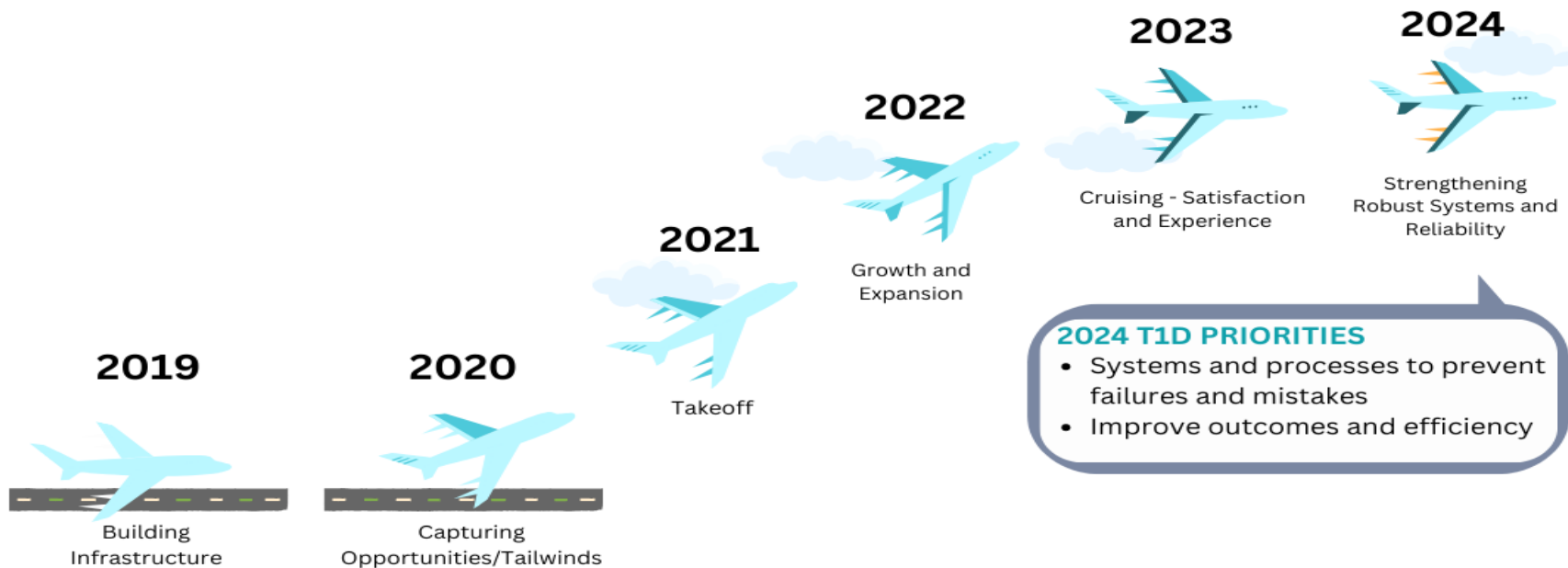# Type 1 Diabetes Exchange – University of Michigan Adult Collaborative

Clinic	Team Members	Volume	Insurance	Demographics	Contacts
University of Michigan Adult Endocrinology	• 73 Primary Faculty: 40 providers who see Diabetes • Comprehensive diabetes education program	• Currently, 3348 current patients with Type 1 Diabetes in the last 3 years	• 2,428 private insurance (69.5%) • 988 publicly insured (28.1%) • 83 Other (other government insurance, worker's compensation, military insurance coverage) (2.4%)	~85.8% White ~7.5% Black/African American ~1.4% Multiracial ~1.5% Asian ~2.4% Other 3.4% Hispanic	Site Principal Investigator: David T. Broome, MD broomeda@med.umich.edu Site Co-investigator: Jennifer Iyengar, MD jmacd@med.umich.edu Faculty Adviser: Jennifer Wyckoff, MD jwyckoff@med.umich.edu Site Coordinator: Spring Stonebraker sprstone@med.umich.edu

QI and Population Health Team Priorities

2019 — Building Infrastructure

2020 — Capturing Opportunities/Tailwinds

2021 — Takeoff

2022 — Growth and Expansion

2023 — Cruising - Satisfaction and Experience

2024 — Strengthening Robust Systems and Reliability

2024 PRIORITIES
- Systems and processes to prevent failures and mistakes
- Improve outcomes and efficiency

Type 1 Diabetes Program

2019 — Building Infrastructure
2020 — Capturing Opportunities/Tailwinds
2021 — Takeoff
2022 — Growth and Expansion
2023 — Cruising - Satisfaction and Experience
2024 — Strengthening Robust Systems and Reliability

2024 T1D PRIORITIES
- Systems and processes to prevent failures and mistakes
- Improve outcomes and efficiency

Type 2 Diabetes Program

2022 — Building Infrastructure
2023 — Capturing Opportunities/Tailwinds
2024 — Takeoff

2024 T2D PRIORITIES
- Engage more teams in T2D program
- Start documenting early gains

Updated 1/4/24

Quality Improvement Collaborative Accomplishments

135,000+ People with diabetes served

Improved QI Portal Benchmarking Tool

42 Centers are data mapped

95+ active projects

60 T1D Centers

10 T2D Centers

Improvement in **A1c** trends

Year
2016/2017
2022/2023

Mean HbA1c, %

82 publications in top journals

190 presentations at international conferences

Expanded Health Equity Program

Center Presentations

INSULIN PUMP STARTS & UPGRADES TO VISIT WITH PROVIDER

Edelina Cohen, MS RD; Lauren Golden, MD
Center for Diabetes & Metabolic Health at NYU Langone Health New York, NY
edelina.bustamante @nyulangone.org

NYU Diabetes and Endocrine Associates – Faculty Practice

Location:

Midtown, east 41st Street, 2nd-3rd Ave

- Team within a Practice

Director: Dr. Lauren Golden

- **Physician cFTE:** 9.4

- **NP/PA/RD/CDCES**: 4

    APP per Physician cFTE: 0.43

- **MA's**: total 9 MA's including a lead MA

    MA per Physician/Mid-Level cFTE: 0.67

- **RNs**: 4

    RN per Physician/Mid-Level cFTE: 0.3

- **Administrative Support Staff** (Front Desk, Med Sec/Sr. Med Sec, Coordinators and Admin Ops Leaders): 10.5

    Administrative Staff/Physician or Mid-Level cFTE: 0.78

- **Managers/Supervisors**: 2

- **Average number of patients per day (3 month period):** 109

    14-17% of patients seen per month have T1DM

- **Daily Patients per Physician cFTE:** 12

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Learning Objectives

- Review
  - background- clinical indications for insulin pump
  - Review ideal attributes for insulin pump candidates
  - Review benefits (of an insulin pump) for the ideal candidate
  - Clinician's role in pump start or upgrade of a patient
- Share QI on insulin pump starts (and software upgrades) to post training/upgrade visit with DEA providers

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Pre/Post Learning

- According to the T1D Exchange registry, what % of patients with T1D in the United States use insulin pump therapy.

    a. 15

    b. 24

    c. 55

    d. 64

- **True or False**: Regular communication between the patient and the healthcare team is important for patients who are newly trained on an insulin pump and those who have completed an insulin pump upgrade.

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Background- clinical indications for insulin pump

- Inadequate glycemic control with MDI therapy

- Recurrent severe hypoglycemia

- Recurrent hyperglycemia

- Hypoglycemia unawareness

- Dawn phenomenon

- Preconception, Pregnancy

- Gastroparesis

- Early neuropathy or nephropathy, when improvement in glucose control can reduce acceleration of complications

- Renal transplantation

- Frequent DKA

- Uncontrolled diabetes

- Erratic blood glucose

- Prevent or delay complications

- Desire to improve lifestyle flexibility

- A1c greater than 6.5%

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Background- Ideal attributes for insulin pump candidates

- Motivated

- Realistic expectations

- Demonstrates independent diabetes management

- Practicing carbohydrate counting - understanding of insulin actions and pre meal bolus dosing calculations

- Has manual dexterity, good support system

- Must attend education sessions and complete tasks that require routine attention

- Must follow up regularly with their health care team
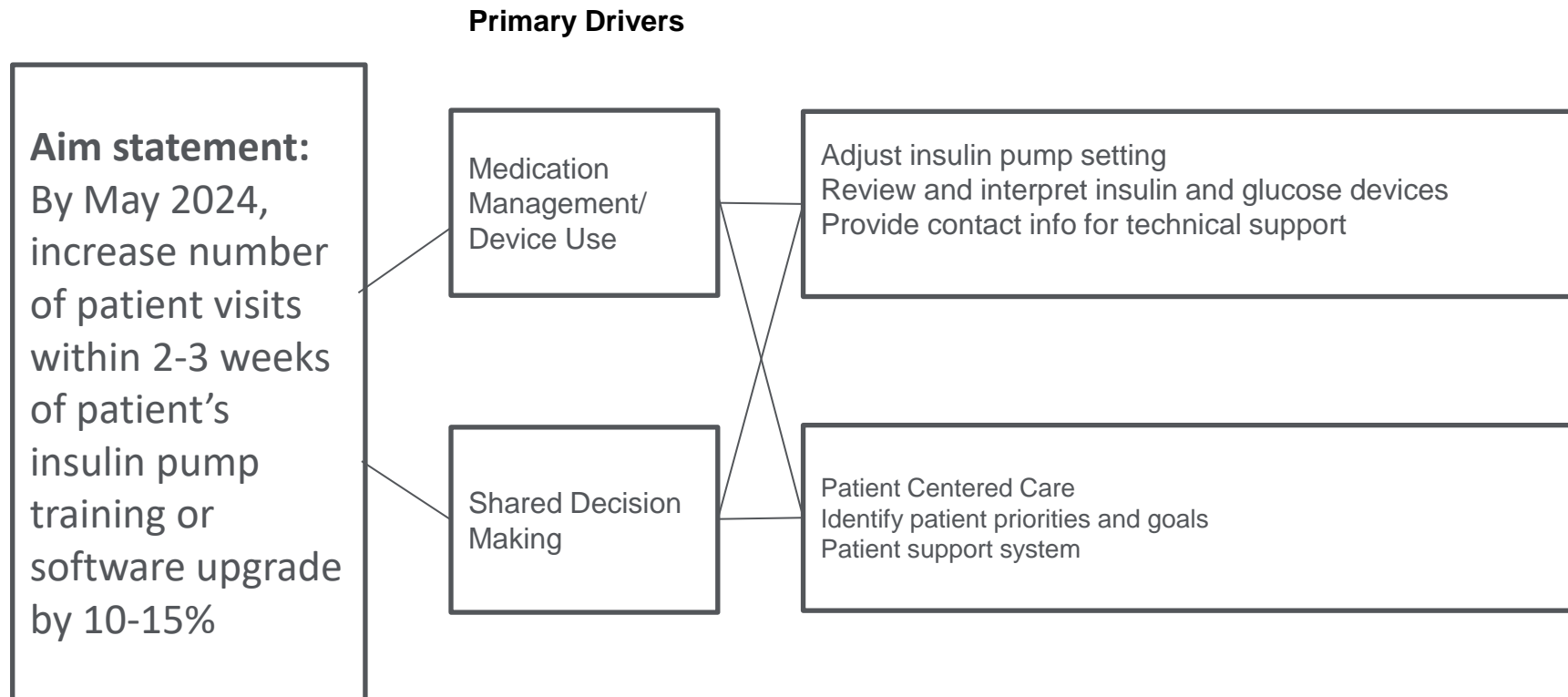
Benefits for the ideal candidate:
- Improved glycemic control
- Reduction of hypoglycemic events
- Increased flexibility in managing diabetes

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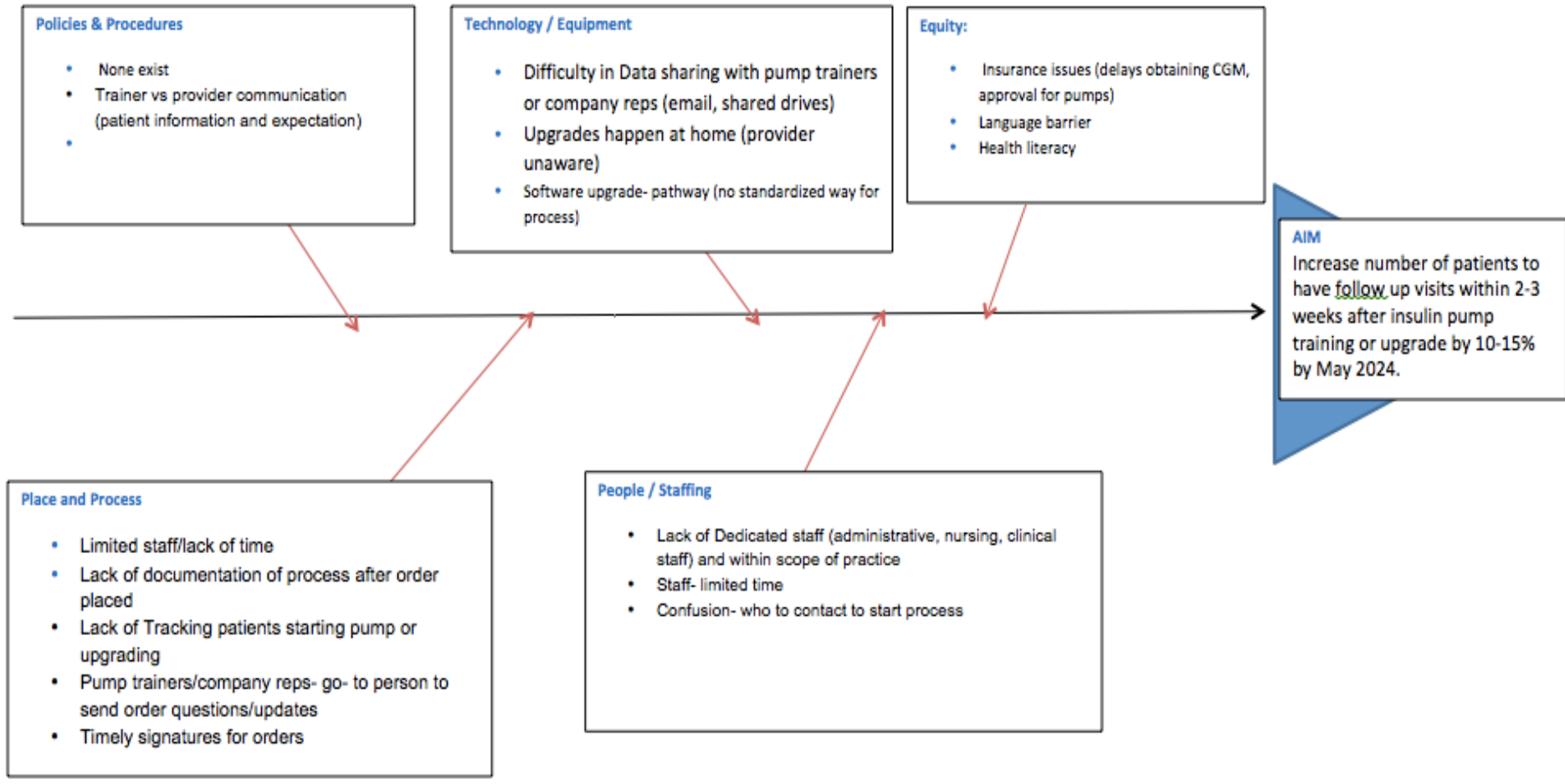
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Clinician's role

- Provide guidance on pump settings and other aspects of diabetes care

- Regular communication between the patient and the healthcare team

- Thorough evaluation and training of patient before initiating this therapy to ensure patient is a suitable candidate for insulin pump use and that he or she has the knowledge needed to manage the device safely and effectively

- Set appropriate expectations for the devices: why they desire to use a particular insulin pump, what they expect the system to be like, and what type of self-care they think is required of the user for the device to operate properly

- Discuss potential benefits and drawbacks of the preferred device

- Frequent contact with their health care team in the initial weeks to optimize basal and bolus insulin pump settings

- Provide ongoing education, individualized to teach advanced skills over time

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QI

Problem/Issue: some patients newly trained on insulin pumps (or completed pump software upgrade) did not have any visits with a DEA provider after they were trained (upgraded) and started on their insulin pump
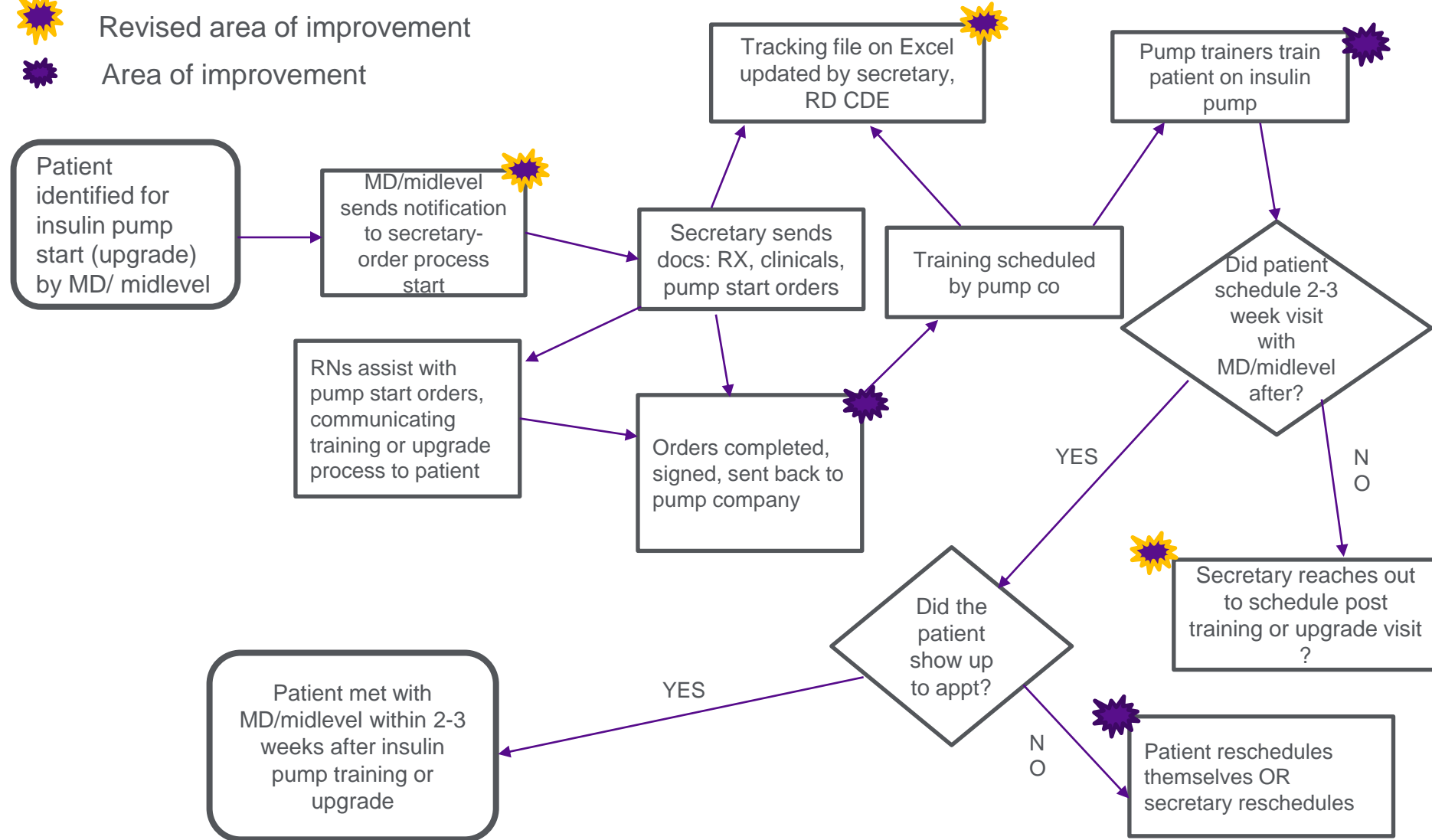
Primary Drivers

Aim statement:
By May 2024, increase number of patient visits within 2-3 weeks of patient's insulin pump training or software upgrade by 10-15%

Medication Management/ Device Use

Shared Decision Making

Adjust insulin pump setting
Review and interpret insulin and glucose devices
Provide contact info for technical support

Patient Centered Care
Identify patient priorities and goals
Patient support system

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Policies & Procedures

- None exist
- Trainer vs provider communication (patient information and expectation)
-

Technology / Equipment

- Difficulty in Data sharing with pump trainers or company reps (email, shared drives)
- Upgrades happen at home (provider unaware)
- Software upgrade- pathway (no standardized way for process)

Equity:

- Insurance issues (delays obtaining CGM, approval for pumps)
- Language barrier
- Health literacy

AIM

Increase number of patients to have follow up visits within 2-3 weeks after insulin pump training or upgrade by 10-15% by May 2024.

Place and Process

- Limited staff/lack of time
- Lack of documentation of process after order placed
- Lack of Tracking patients starting pump or upgrading
- Pump trainers/company reps- go- to person to send order questions/updates
- Timely signatures for orders

People / Staffing

- Lack of Dedicated staff (administrative, nursing, clinical staff) and within scope of practice
- Staff- limited time
- Confusion- who to contact to start process

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Process 1 (baseline)

Revised area of improvement

Area of improvement

Patient identified for insulin pump start (upgrade) by MD/ midlevel

MD/midlevel sends notification to secretary-order process start

Secretary sends docs: RX, clinicals, pump start orders

RNs assist with pump start orders, communicating training or upgrade process to patient

Tracking file on Excel updated by secretary, RD CDE

Training scheduled by pump co

Orders completed, signed, sent back to pump company

Pump trainers train patient on insulin pump

Did patient schedule 2-3 week visit with MD/midlevel after?

YES

NO

Secretary reaches out to schedule post training or upgrade visit?

Did the patient show up to appt?

YES

NO

Patient met with MD/midlevel within 2-3 weeks after insulin pump training or upgrade

Patient reschedules themselves OR secretary reschedules

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PDSA1

- Resume or refine tracking of new insulin pump patients or pump upgrades on shared drive (Excel)

  - Improve tracking process:

    - RD CDE: update tracker whenever patient identified for insulin pump start or upgrade (late July 2023)

    - RN, RD CDE: Work with insulin pump company trainer to track orders, training, post training DEA provider visit

      - Omnipod/Insulet (Aug 2023): shared drive, worksheet

      - Tandem (late Sep 2023): emailed NYULH patients

  - Review patients on the list during Monday staff meeting, as needed

-

Date Added	Last Name	First Name	MRN	Count	Endo	Mid-level	CDE	Pump type	Current therapy (MDI/pump)	Pump order date	Training Schedule/ completed	Pump start date	1-2 week follow up appointment date	cancelled / no show during appt?	additional notes red= latest update OR pending appt

- Data collected on shared drive spreadsheet: (only Omnipod)

New or Upgrade	Patient	DOB	Phone	Provider	Date Rx Sent	PA Faxed/ Completed (if needed)	Upload PA Approval ?	Registered Controller	Training date	Pump settings received	Training completed	Upload Docusign/ Pump Settings (Epic)	Note in Epic	2 week f/u scheduled	Date f/u completed	Registered Controller (upgrade)	Glooko Connected (upgrade)	OP Contact Patient (upgrade)	2 week f/u scheduled (upgrade)	Completed f/u (upgrade)	Notes red= new update OR pending appt

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Data

	Baseline	Current
N	10	10
% male	50	20
% female	50	80
% Diabetes Type 1	100	90
% Diabetes Type 2	0	10
Average days from pump training (or upgrade) to visit with provider	53.6	22.6

Data collection:
Pump training date OR pump upgrade date
Post pump training visit with MD/NP/PA/RD-CDE
Baseline (Feb-May2022)
Current (Aug to Nov 2023)

40% improvement, so far

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SHARED EXCEL SPREADSHEET (through SHAREPOINT—secure platform) WITH OMNIPOD/INSULET

- Identify candidate ->Patient to see mid-level provider (standard)
- Mid-level enters Omnipod 5 (OP5) pump order (for Intro kit, pods, and vials) in Epic to initiate process -> send to Alto (first choice) or patient preferred pharmacy. Mid level adds settings info in patient's clinical note – same day as when inputs pump rx.
- If patient declines visit with mid-level, MD places rx and documents pump settings orders in clinical note.
- Provider/Mid-level informs RN pool in Epic as staff message to add patient to the Excel spreadsheet.
    - =RN to write to patient smart-phrase with steps on how to activate controller (and enter Insulet's patients database) and reminding them to set up a visit two weeks after starts using pump.
    - =RN to send OP5 trainers (Dena/Jennifer) an email with patient's contact information so they can reach out (in case patient did not follow activation instructions).
    - =RN to add patient's name, provider, and contact information plus prescription sent to excel spreadsheet
- If PA is needed, Alto faxes notification requesting chart notes. Admin sends chart notes.
- Med sec documents a standardized phone encounter in Epic that PA process started. Route to PCC to document Excel spreadsheet.
- Once approval received from Alto, scan into Epic, route to PCC to document on Excel spreadsheet
- OP5 trainers to send Docusign to send to midlevel for settings. Midlevel can edit and sign settings.
- OP5 trainer to email PCC (and RN, CDE) confirmation of settings and PCC to upload into chart under media manager. OP5 trainer updates excel spreadsheet pump settings received. PCC to check to make sure patient has follow up appointment in Epic.
- OP5 trainer to send email to CDE of patient training date and update excel spreadsheet. OP5 trainer to update excel spreadsheet once training is completed.
- CDE chart note in Epic training completed on XX date.
- OP5 trainers to send post training documents/checklist to PCC to be uploaded into media manager. PCC to attach training completed to CDE chart note
- CDE notifies patient, if no appointment in 2 weeks, via MyChart that training has been completed and instructed to contact DEA office in 1-2 weeks if they don't hear back from pump company (check smartphrase, DEAPUMPORDERPLACED).
- PCC to check in chart if patient has 2 week visit. To inform secretary to make sure patient has an appointment two weeks after starts pump.
- PCC to provide update in weekly diabetes meeting regarding any patients we were unable to reach.

PDSA2

- Started July 2023

- Develop protocol for when patients start on Omnipod & Tandem insulin pumps

❖ led by RN

❖ Collaborate with leadership (directors, managers, coordinator), secretary, RD CDE, insulin pump reps/trainers

- standardize new insulin pump start process (or upgrades)

- identify each role involved and their responsibilities

- ongoing revision

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Next Steps/Future Directions

Ongoing: monitor and adjust data capture strategies, workflow

- Improve documentation:
  - Why/when the pump ordered? Training or upgrade date?
- Pump orders scanned in patient's chart (standardize process)
- Continue tracking to improve process and ensure newly trained or upgraded pump patient is followed closely
- Improve process for rescheduling cancelled appointments
- For now, tracking training date to post pump training/upgrade visit with provider→ track from pump order or pump upgrade order?
- Improve signing orders to expedite order and training/upgrade process
- Establish protocol: go- to- persons for staff and pump vendors (improve communication)
- Establish better process for tracking software updates or upgrades
- Reinforce among staff to update/mark diabetes device (s) on patient's sticky note in Epic
- RD CDE pump trainers?

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References

Lyons SK, Ebekozien O, Garrity A, Buckingham D, Odugbesan O, Thomas S, Rioles N, Gallagher K, Sonabend RY, Lorincz I, Alonso GT, Kamboj MK, Lee JM; T1D Exchange Quality Improvement Collaborative Study Group. Increasing Insulin Pump Use Among 12- to 26-Year-Olds With Type 1 Diabetes: Results From the T1D Exchange Quality Improvement Collaborative. Clin Diabetes. 2021 Jul;39(3):272-277.

Tanenbaum ML, Commissariat PV. Barriers and Facilitators to Diabetes Device Adoption for People with Type 1 Diabetes. Curr Diab Rep. 2022 Jul;22(7):291-299.

Berget C, Messer LH, Forlenza GP. A Clinical Overview of Insulin Pump Therapy for the Management of Diabetes: Past, Present, and Future of Intensive Therapy. Diabetes Spectr. 2019 Aug;32(3):194-204.

Nimri R, Nir J, Phillip M. Insulin Pump Therapy. *American Journal of Therapeutics.* 2020; 27 (1): e30-e41.

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THANK YOU

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HbA1c Improvements Among Patients with Type 1 Diabetes in a Vertical Integrated Health System: Pros/Cons
Jason Ng, MD

Margaret Zupa, MD

January 23, 2024

Conflicts of Interest

- No conflicts of interest reported

- Key Objectives:
  - To assess % of patients with HbA1c improvement of <8.0% from 2018-2019 to 2022-2023
  - To assess % of patient with HbA1c reduction to <9.0% from 2018-2019 to 2022-2023

2. True or false:

Adults with type 1 diabetes who received endocrinology care in our system were almost 10x more likely to receive diabetes self-management education and support, potentially resulting in greater HbA1c improvement over time than adults with type 1 diabetes who did not receive endocrinology care.

1. A vertically integrated healthcare system has which of the following potential benefits:

   a. Ability to integrate electronic medical record and claims data for robust patient-level data

   b. Efficient pooling of clinical resources to improve access to diabetes care

   c. Opportunity to target diabetes care resources to high-risk patients based on electronic medical record data

   d. All of the above

UPMC LIFE CHANGING MEDICINE

Goals/Objectives

- Primary Drivers
  - Access to Care
  - Use of Data
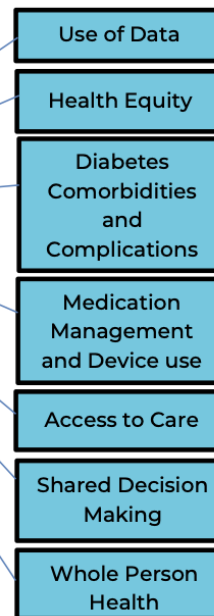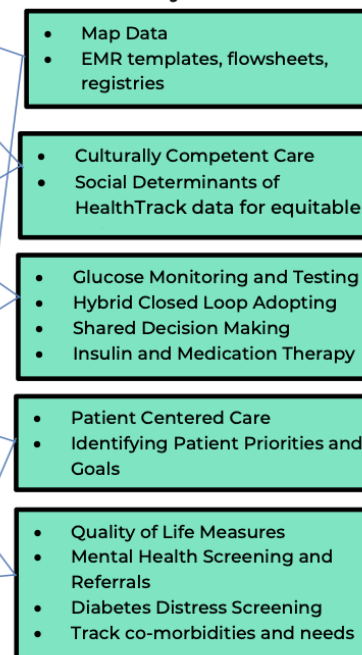
UPMC at a Glance

- $26 billion health care provider and insurer health system with ~95,000 employees worldwide
- UPMC Hospital Division
  - 40 academic, community, and specialty hospitals
  - 800 outpatient sites
  - Multiple rehab, retirement, and long term care facilities
- UPMC Insurance Division
  - Insures ~4.5 million members in various health plans
- UPMC International
  - Facilities partnerships in Italy, Ireland, Kazakhstan, Croatia
- UPMC Enterprises
  - Innovation, venture capital, investments

- UPMC Analytics (Diabetes Dashboard)
  - Department of Internal Medicine
  - Draws upon EMR Data and Billing/Coding Data
  - Partnership with UPMC Insurance Division
- UPMC Diabetes Educator Initiative
  - 2019 DCES and Embedded Chronic Disease Navigator
  - HbA1c >9.0% in Diabetes Patients
- Promote Endocrine intervention in High Risk Diabetes Patients
- Improve Access to Care using EMR data

UPMC LIFE CHANGING MEDICINE

T1DM Patient Statistics- UPMC Adult Endocrine

	January 2018 – December 2019	January 2022 – December 2023
T1DM patients	932	1,317
HbA1c	8.0%	7.5%
HbA1c >9.0%	280 (30%)	254 (19%)
HbA1c <8.0%	593 (64%)	849 (64%)
CGM	70.3%	76.1%
Insulin Pump Use	18.3%	15.0%

T1DM Patient Statistics- UPMC Adult Endocrine

	January 2018 – December 2019	January 2022 – December 2023
T1DM patients	932	1,317
New Diabetes Visits	12.1%	5.8%
HbA1c	8.0%	7.5%
DCES Appointment	93.5%	92.8%
Encounters (HbA1c >9.0%)	527 (1.9 per member)	483(1.9 per member)
Encounters (HbA1c <8.0%)	1,461 (2.5 per member)	2,073 (2.4 per member)

HbA1c Comparisons
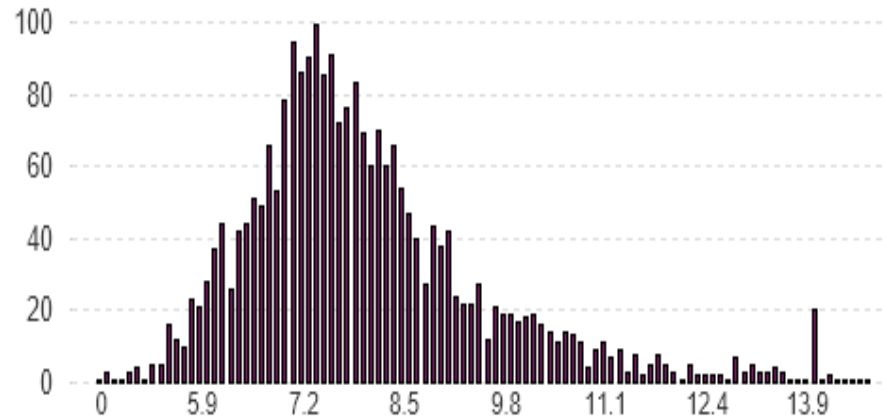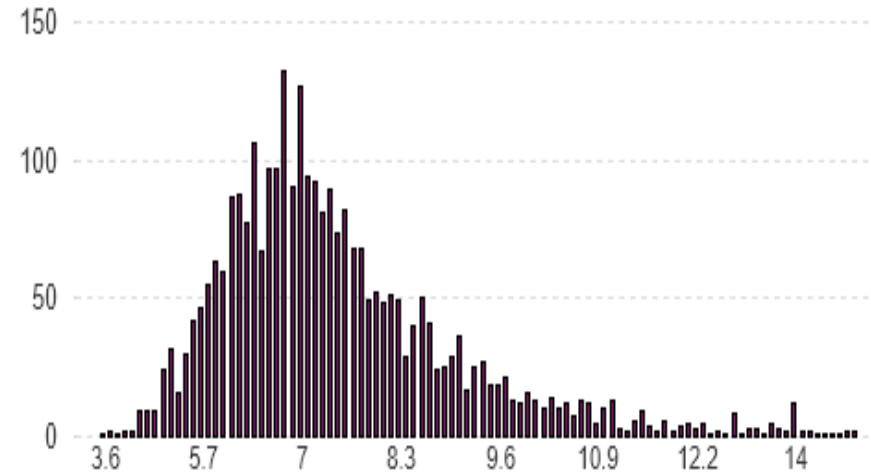
T1DM Patient Statistics- No Endocrine Care

	January 2018 – December 2019	January 2022 – December 2023
T1DM patients	3,207	3,835
HbA1c	8.5%	8.3%
DCES Appointment	9.5%	10.2%
CGM	7.6%	9.7%
Insulin Pump Use	10.5%	9.9%

UPMC LIFE CHANGING MEDICINE

Pros & Cons of Vertical Integration

- Strengths
  - Depth of data from EMR when done correctly
    - Example: CGM use
  - Potential to aggregate resources to improve access to care efficiently

- Weaknesses
  - Inertia and layers of bureaucracy
  - Data can be difficult to acquire
    - Example: Insulin pump use
    - Statistics on DCES and embedded navigator program

UPMC LIFE CHANGING MEDICINE

Summary

- Vertical Integrated Systems may offer unique opportunities to streamline care using EMR data
- HbA1c improvements in our clinic suggest some improvement in significantly uncontrolled hyperglycemia
  - Not necessarily from more endocrinologist support
  - Potentially from DCES support
- Access to Care from PCP to Endocrinologist remains a challenging issue for our health system

UPMC LIFE CHANGING MEDICINE

Updates from the Coordinating Center

Connected Pen Use

The Coordinating center would like to invite you (and your clinical team members) to join qualitative interviews so that we learn more about barriers and opportunities to make connected pens more accessible for people with diabetes.

- Everyone who participates will receive a $200 honorarium gift card for time spent on the one-hour interview, which we can schedule when convenient.

- Our questions will be related to the following areas:
- Training & Education (provider and patient): Prescribing; Reimbursement; Data integration and reporting; Ease of use; and PWD feedback to providers

- If interested, please respond in the chat. Thank you!

T1D Exchange

Invoicing reminder

Invoices for work performed in 2023 are due now. Deadline for submitting invoice is March 31, 2024. <mark>*Payments will not be made for invoices received after 3/31/2024.*</mark>

- Communicate invoicing request to your finance/contracting/grants office
- Consult/reference Statement of Work for details
- Invoices should be sent via email attachment Invoices should be sent via email attachment
  To: Nicole Rioles- nrioles@t1dexchange.org

  CC: Rene Weathers- rweathers@t1dexchange.org

  Linda Crasco- linda.crasco@t1dexchange.org

  qi@t1dexchange.org

Co-Chair Nominations

- New Co-Chair terms will begin June 1st

- To learn more about the committees and view the charters please use the following links:

  - [Clinical Leadership Committee](#)
    [Data Science Committee](#)
    [Data Governance Committee](#)
    [Publication Committee](#)
    [Advisory Committee](#)
    [QI Champions](#)
    [HEAL](#)

- Use this [link](#) or scan the QR code to submit nomination

  - Please review the committee charter before nominating

T1DX-QI 2023 November Learning Session Evaluation

Claim Your CME Credit

Reminder, if you have not yet claimed your CME credit from the November Learning Session, use this <u>link</u>!

Evaluation Results

Learning Objectives
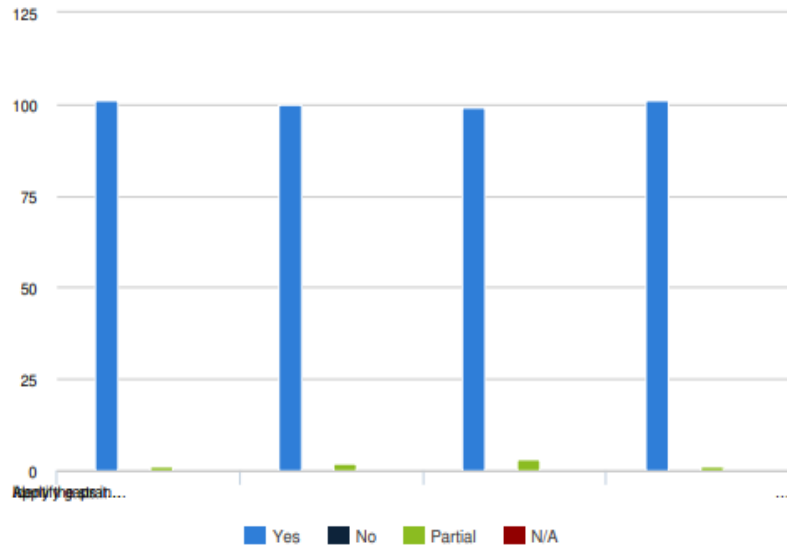
	Yes	No	Partial	N/A
Describe the future of novel therapies, interventions, quality improvements, and solutions to today's diabetes care challenges.	101	0	1	0
Identify gaps in population health needs and state 3 ways that they can provide more equitable care over the next 2 years.	100	0	2	0
Apply the strategies of the T1DX-QI Equity Framework which can help to improve diabetes health outcomes and increase diabetes device access for BIPOC T1D and T2D patients.	99	0	3	0
Discuss expectations for patient care and patient engagement and describe ways to co-design care with patients and family members.	101	0	1	0

After this activity, I am better able to
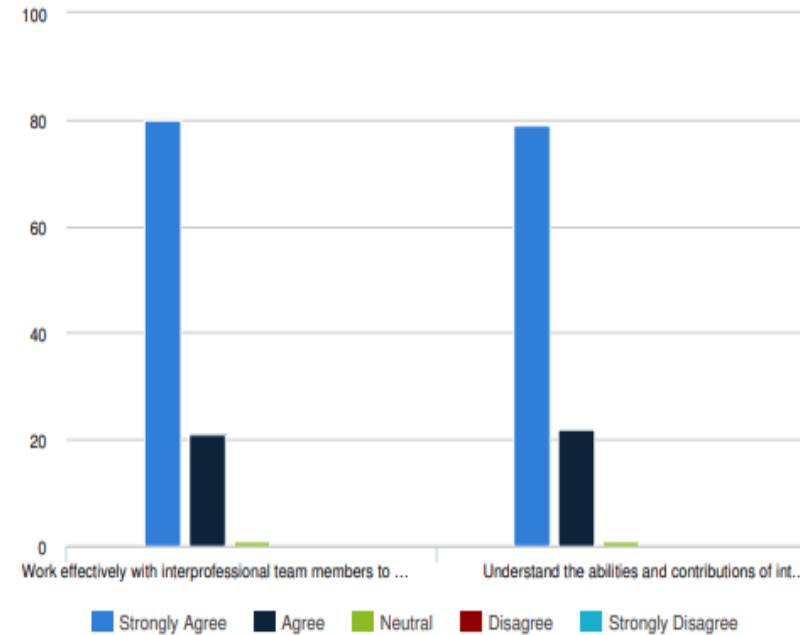
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Work effectively with interprofessional team members to enhance care	80	21	1	0	0
Understand the abilities and contributions of interprofessional team members	79	22	1	0	0

What You Liked Most

- Breakout Sessions
- Wide Range of Topics
- Collaboration with Other Centers
- In Person and Virtual Options
- Emphasis of Sharing
- Networking
- Shared Success
- Panel Discussions
- PWD Talk and Perspective
- Partnering with Other Who Share the Same Passions
- EVERYTHING!

What You Want to See in the Future

- Future Technologies Coming Down the Pipeline
- Global Outreach to Middle Income Countries
- Diabetes Education
- EMR Integration
- More Time for Group Discussions
- T2D Presentations and Learning
- History of Diabetes
- AID
- Psychosocial and SDOH
- Including Voice of PWD