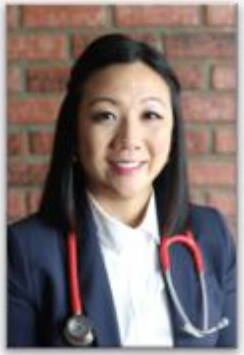
Improving Prescribing Rates of GLP1 Receptor Agonists (GLP1-RA) in Youth with Type 2 Diabetes

Alyssa Huang, MD, Alissa Roberts, MD, Grace Kim, MD, Yasi Mohsenian, MPH

Nov 11, 2024

Seattle Children's

GLP1-RA Project Team



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Lead Author, T2D Clinic Co-Director

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QI Co-Director

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T2D Clinic Co-Director

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About our Clinic

Patient Information

Overall:

- Total diabetes visits per year: 8,000
- Patients living with diabetes: ~2850
- Total new onsets per year: ~425

Type 1:

- Patients living with type 1 diabetes: ~2400
- New onsets per year: ~375

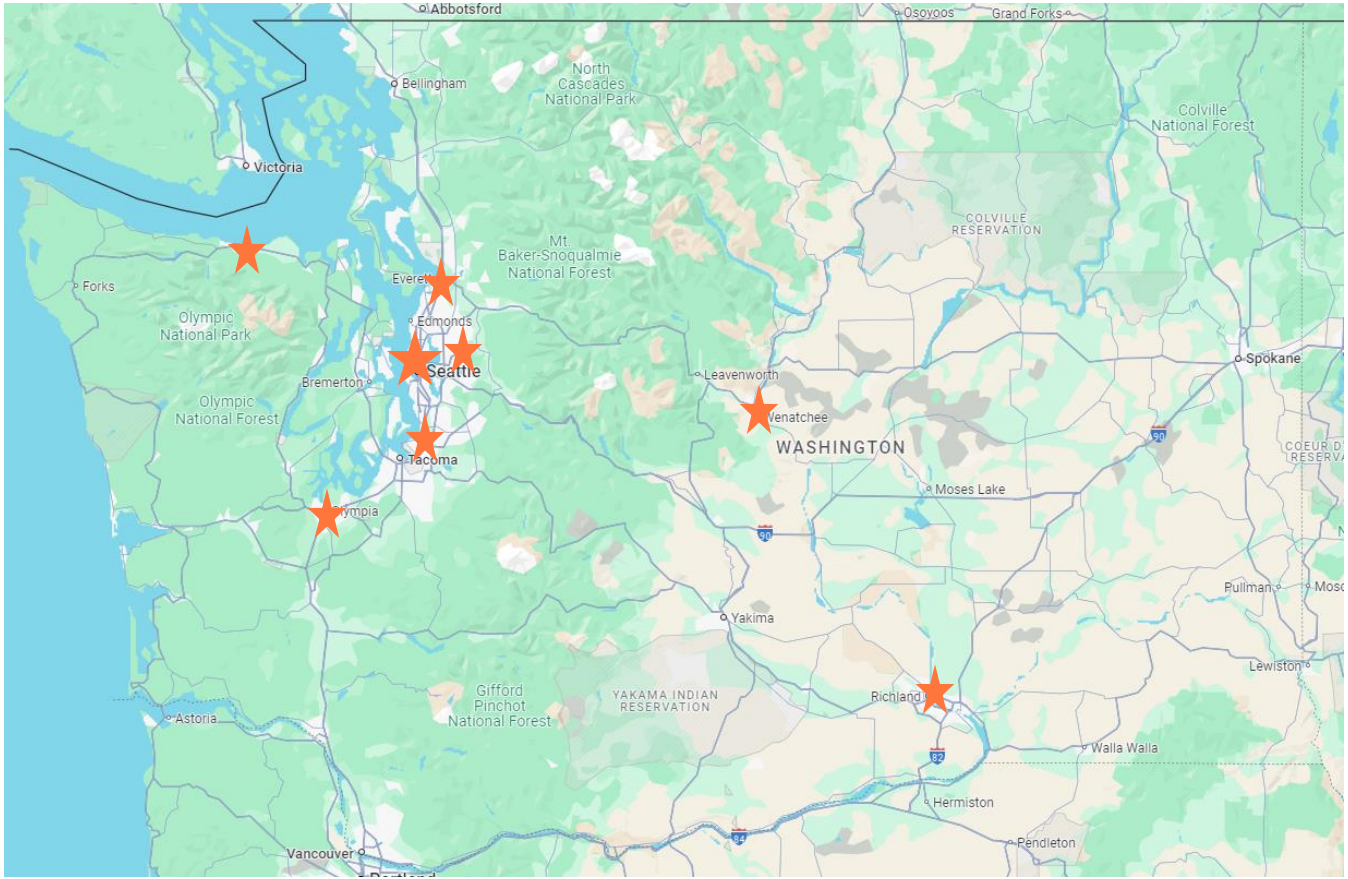
Type 2:

- **Patients living with type 2 diabetes (T2D): ~450**
- **T2D new onsets per year: ~50**

Staff

21 Physicians
12 Advanced Practice Providers
20 Nurses
8 Dieticians
2 Social Workers
4 Medical Assistants
2 Certified Nursing Assistants
1 Clinical Psychologist

Locations



- In-Person Clinics
- Provide care to patients from Washington, Alaska, Idaho and Montana
- Telehealth offered to patients living anywhere in WA, MT or AK

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Background

- Youth onset T2D is becoming increasingly prevalent and is an aggressive disease leading to early failure requiring insulin therapy and early comorbidities compared to adult onset T2D
- Thus, youth with T2D should pursue aggressive therapy and aim to achieve a lower A1C target to prevent diabetes related complications
- GLP1 receptor agonists (GLP1-RA) were FDA approved in June 2019 for the treatment of youth T2D; however, prescribing rate of GLP-1RA was low in our clinic (7.4%)

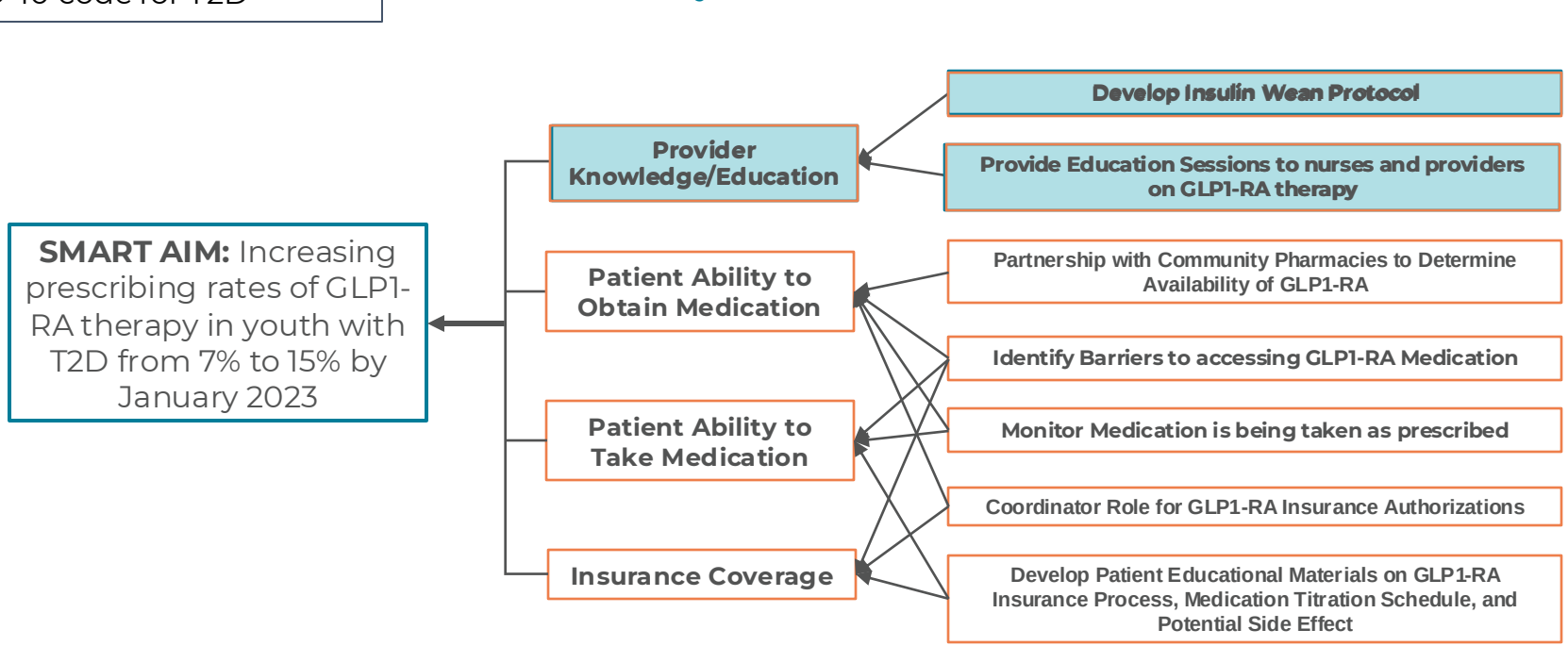
SMART Aim

- Increasing prescribing rates of GLP1-RA therapy in youth with type 2 diabetes from 7% to 15% by January 2023

Inclusion criteria:

- Age <18y
- ICD-10 code for T2D

KEY DRIVER DIAGRAM



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Intervention

Educational Session for Providers

- A small team (consisting of diabetes providers and nurses) developed GLP1-RA education material and completed an educational series with medical staff in January 2022
    - Educational material included the most up-to-date information on GLP1-RA and the new ADA guidelines
- The education goal was to increase GLP1-RA prescribing rates in 2 groups of patients living with T2D and A1c ≥ 6.5%:
    1. Metformin only
    2. Metformin + insulin

Intervention

Insulin Wean Protocol

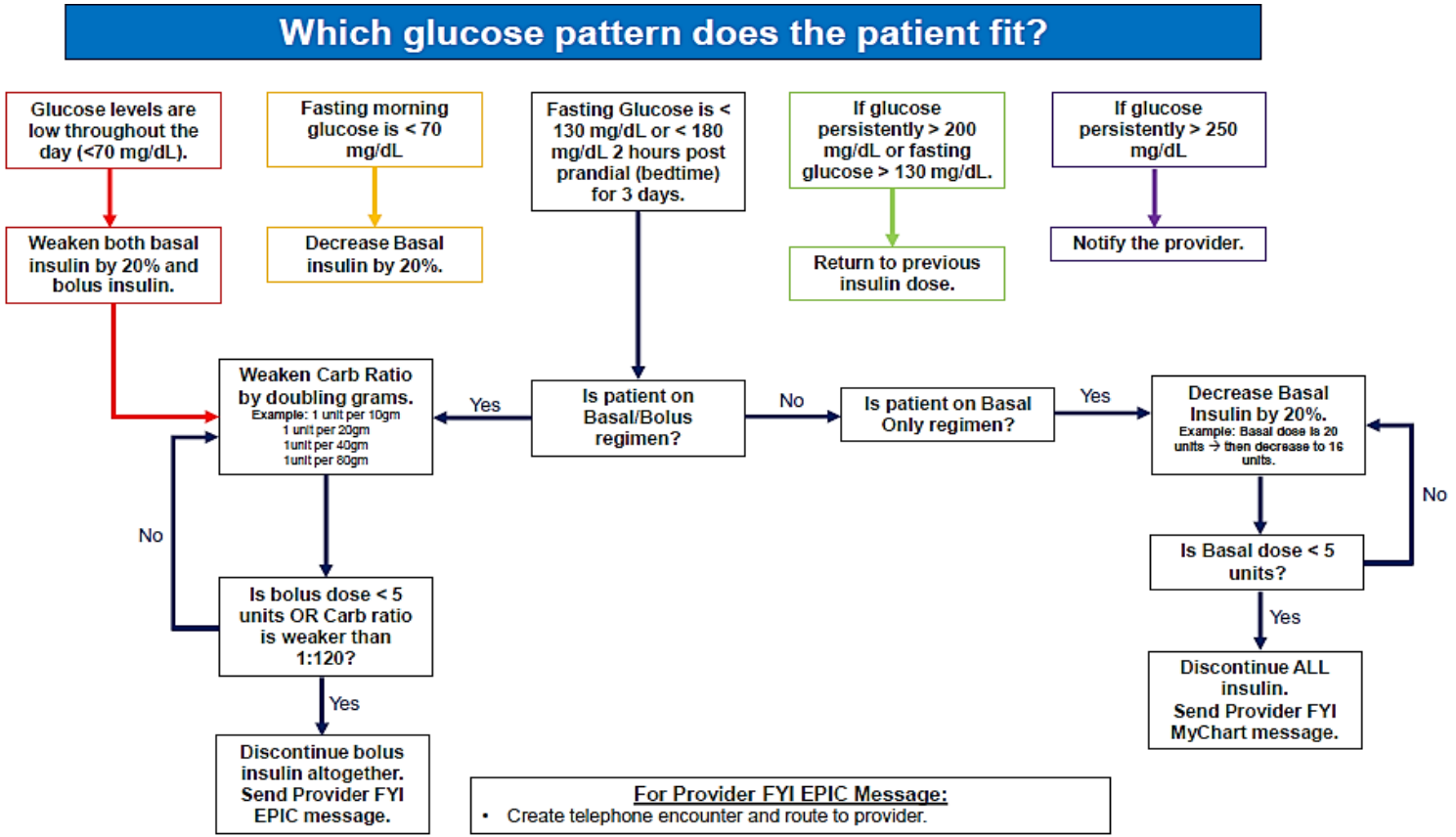
Pediatric Type 2 Diabetes: Insulin Wean Protocol for Starting GLP1RA

Objective:

- Once patients start GLP1-RA, they should be able to wean down on their insulin.
- The goal is to wean off all insulin by ~ **6 weeks**.
- Patients should continue metformin or GLP1-RA [Victoza (liraglutide), Ozempic (semaglutide) or Bydureon (exenatide)].
- Insulin changes can be made if the pattern is noted for about 3 days.
- Goal is to get discontinue short acting insulin first and then long acting.
- Correction factor is not relevant when weaning short acting insulin.

Intervention

Insulin Wean Protocol



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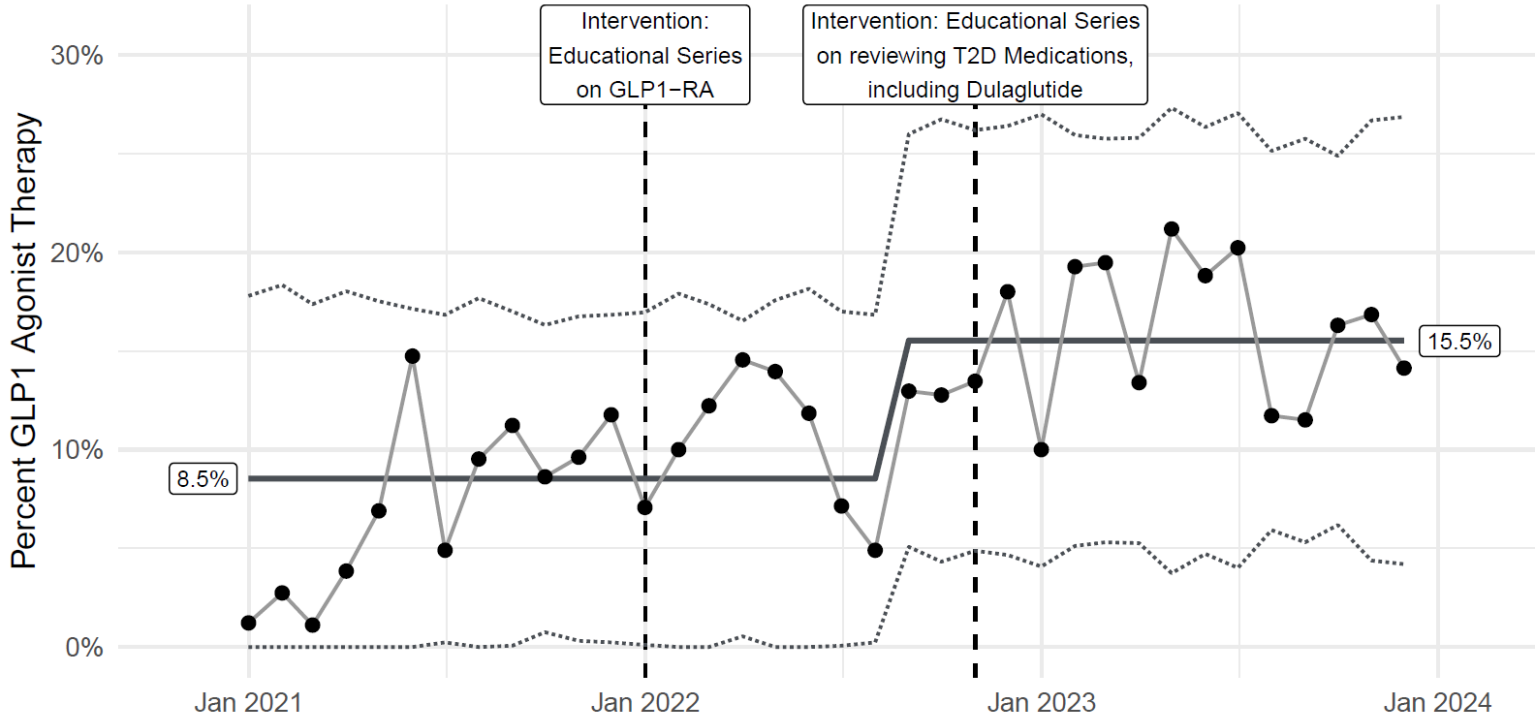
Results

Monthly Prescribing Rates for GLP1- RA in Patients with T2D (results as of end of 2023)



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Conclusions

- Providing education on GLP1-RA and partnering with nursing staff to titrate GLP1-RA through an insulin wean protocol helped modestly increase the prescription rates of GLP-RA in our youth with T2D

Next Steps

- Continue yearly review of pharmacotherapy for type 2 diabetes for our medical providers and staff so that all are aware of the indications to initiate GLP1-RA therapy
- Dedicated nurse monitoring patients receiving GLP1-RA therapy
- Identify barriers that may prohibit youth with T2D from accessing these medications (e.g. low supply, insurance coverage)
- Assess adherence to GLP1-RA medication to better understand if patients are taking the medication as prescribed

Thank You

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DEPARTMENT OF PEDIATRICS

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Use of Non-Insulin Medications in Youth with T2D

Mili Vakharia, FNP-C, CDCES, Maria Diaz, RD, LD, CDCES, Siripoom McKay, MD, Don Buckingham, MBOE, CPHQ, Sarah Lyons, MD, Rona Sonabend, MD, Grace Kim, MD

Division of Pediatric Diabetes and Endocrinology, Department of Pediatrics, Baylor College of Medicine/Texas Children's Hospital, Houston, Texas, USA, *vakharia@bcm.edu*

8th Annual 2024 T1D Exchange QI Learning Session

Date: November 11, 2024

Texas Children's Hospital

Patients	Providers	Ambulatory staff & leadership	Diabetes clinics
•Yearly average 150 newly diagnosed T2D •Total 1400 patients with T2D	•35 Endocrinologists •10 APPs •5 psychologists	•3 CDE/RD leadership •Practice administrator •CDCES/RD: ~30 •2 Patient navigators •SW: ~4 •MAs & Nurses	•4 major hospital campuses •6 satellite clinics

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Background

- **Youth onset T2D –** complex, heterogeneous disease with increasing prevalence that requires comprehensive care.
- **TODAY Study –**
  - Youth onset T2D has higher risk of long-term complication risk.
  - Higher prevalence of HTN, albuminuria, dyslipidemia, and early nerve damage in adulthood.
- **Lifestyle modifications and Metformin alone is not enough** to achieve glucose control.

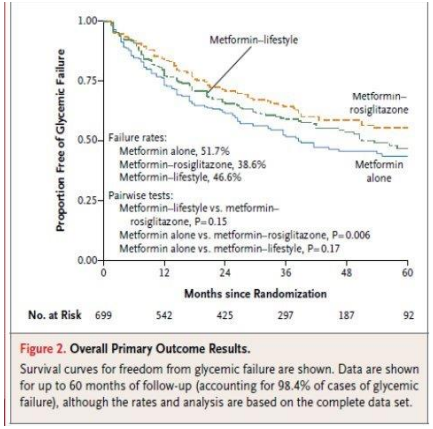
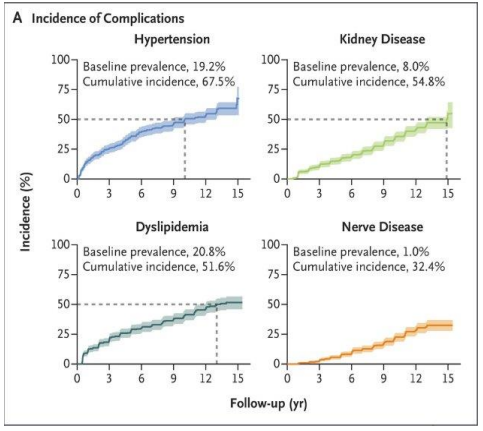


Figure 2. **Overall Primary Outcome Results.**
Survival curves for freedom from glycemic failure are shown. Data are shown for up to 60 months of follow-up (accounting for 98.4% of cases of glycemic failure), although the rates and analysis are based on the complete data set.




The NEW ENGLAND JOURNAL of MEDICINE

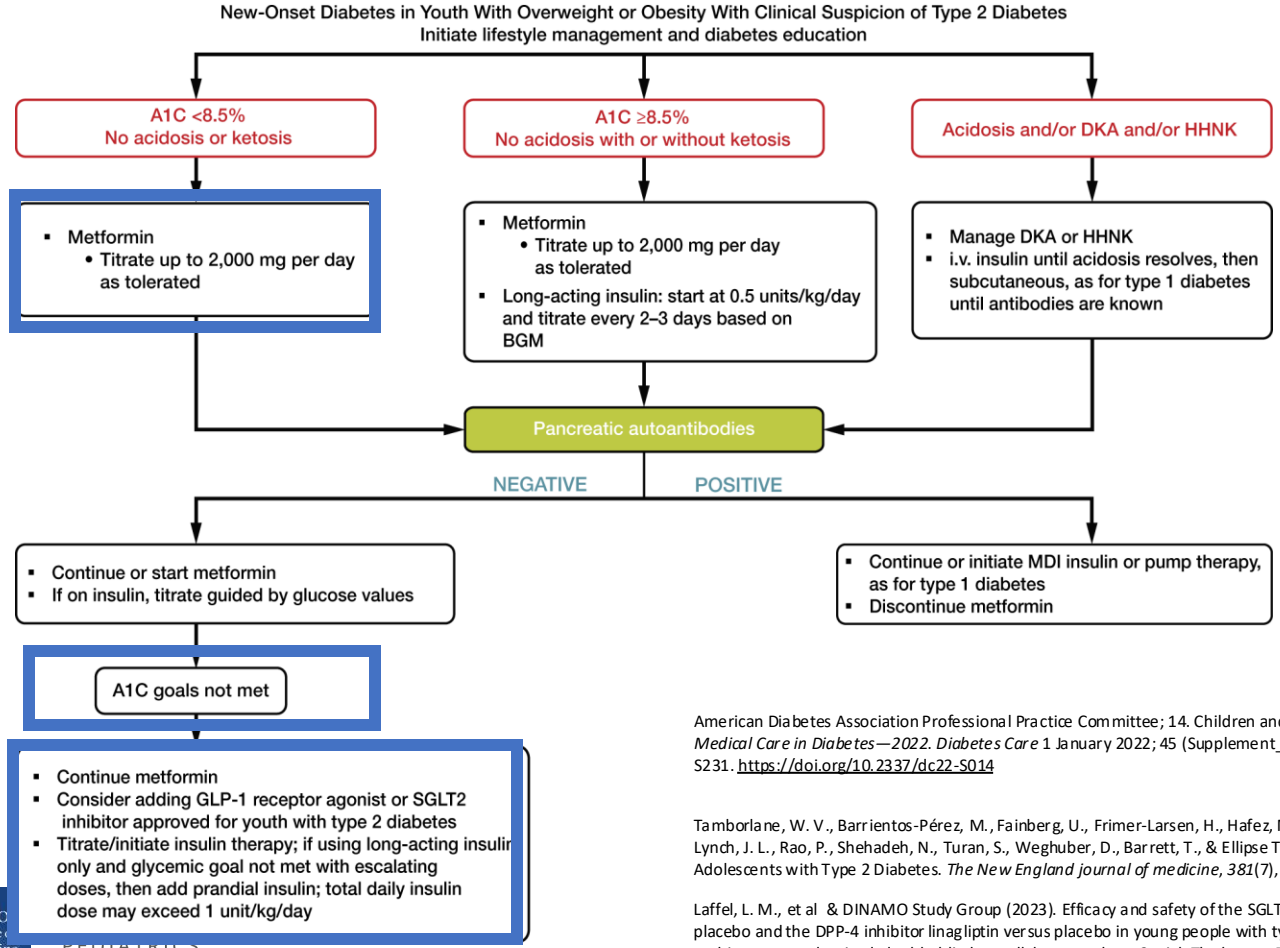
ESTABLISHED IN 1812 JUNE 14, 2012 VOL. 366 NO. 24

A Clinical Trial to Maintain Glycemic Control in Youth with Type 2 Diabetes

TODAY Study Group*

Silva Arslanian, Fida Bacha, Margaret Grey, Marsha D. Marcus, Neil H. White, Philip Zeitler; Evaluation and Management of Youth-Onset Type 2 Diabetes: A Position Statement by the American Diabetes Association. *Diabetes Care* 1 December 2018; 41 (12): 2648–2668. https://doi.org/10.2337/dci18-0052

ADA 2024 Guidelines



American Diabetes Association Professional Practice Committee; 14. Children and Adolescents: *Standards of Medical Care in Diabetes—2022. Diabetes Care* 1 January 2022; 45 (Supplement_1): S208–S231. https://doi.org/10.2337/dc22-S014

Tamborlane, W. V., Barrientos-Pérez, M., Fainberg, U., Frimer-Larsen, H., Hafez, M., Hale, P. M., Jalaludin, M. Y., Kovarenko, M., Libman, I., Lynch, J. L., Rao, P., Shehadeh, N., Turan, S., Weghuber, D., Barrett, T., & Ellipse Trial Investigators (2019). Liraglutide in Children and Adolescents with Type 2 Diabetes. *The New England journal of medicine*, *381*(7), 637–646. https://doi.org/10.1056/NEJMoa1903822

Laffel, L. M., et al & DINAMO Study Group (2023). Efficacy and safety of the SGLT2 inhibitor empagliflozin versus placebo and the DPP-4 inhibitor linagliptin versus placebo in young people with type 2 diabetes (DINAMO): a multicentre, randomised, double-blind, parallel group, phase 3 trial. *The lancet. Diabetes & endocrinology*, *11*(3), 169–181. https://doi.org/10.1016/S2213-8587(22)00387-4

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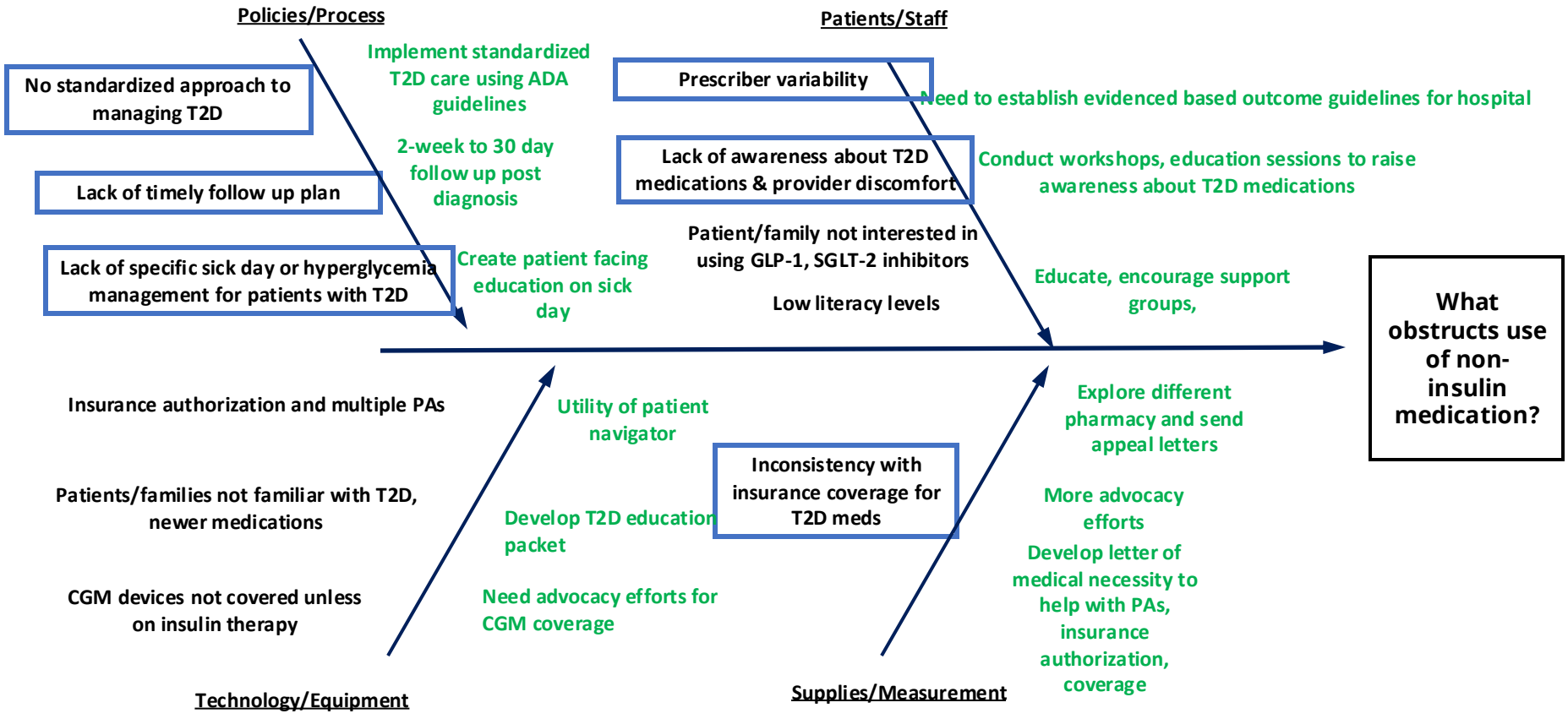
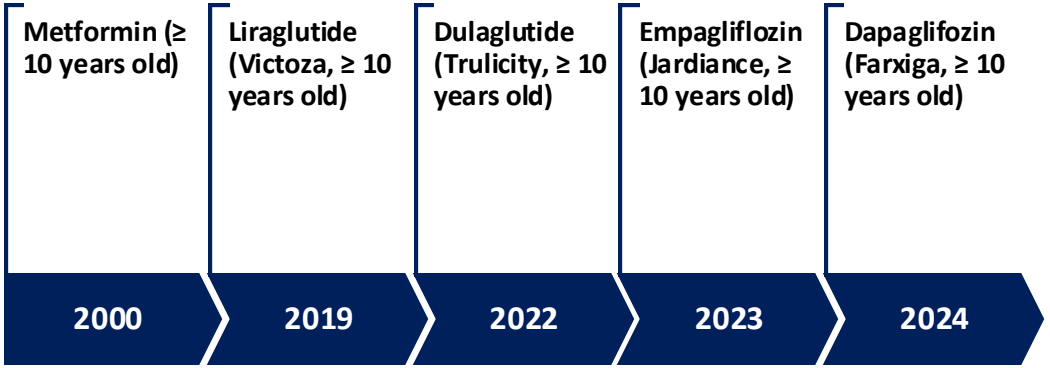
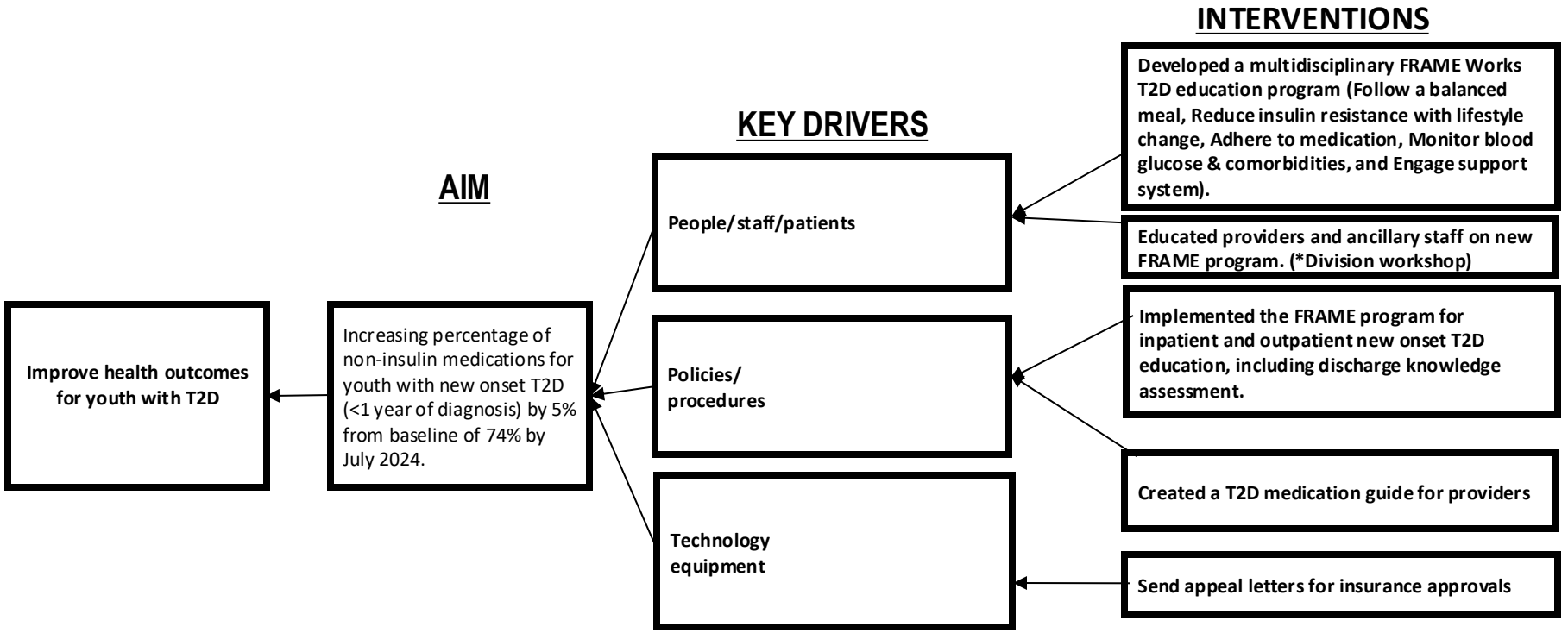

Policies/Process
No standardized approach to managing T2D
Lack of timely follow up plan
Lack of specific sick day or hyperglycemia management for patients with T2D
Implement standardized T2D care using ADA guidelines
2-week to 30 day follow up post diagnosis
Create patient facing education on sick day
Patients/Staff
Prescriber variability
Lack of awareness about T2D medications & provider discomfort
Patient/family not interested in using GLP-1, SGLT-2 inhibitors
Low literacy levels
Need to establish evidenced based outcome guidelines for hospital
Conduct workshops, education sessions to raise awareness about T2D medications
Educate, encourage support groups,
What obstructs use of non-insulin medication?
Technology/Equipment
Insurance authorization and multiple PAs
Patients/families not familiar with T2D, newer medications
CGM devices not covered unless on insulin therapy
Utility of patient navigator
Develop T2D education packet
Need advocacy efforts for CGM coverage
Supplies/Measurement
Inconsistency with insurance coverage for T2D meds
Explore different pharmacy and send appeal letters
More advocacy efforts
Develop letter of medical necessity to help with PAs, insurance authorization, coverage

SMART Aim

Increasing percentage of non-insulin medications for youth with new onset T2D (<1 year of diagnosis) by 5% from baseline of 74% by July 2024.



Key Driver Diagram (Closed loop technology)



T2D Patient Education Packet

Texas Children's F.R.A.M.E Works Program

Essential Habits for Successful Type 2 Diabetes Management

Type 2 diabetes is a long-term condition that can be effectively managed with a comprehensive approach that addresses both lifestyle and physical aspects of blood glucose management. The five health behaviors below are considered essential for managing this condition. We are here to provide you with the resources, skills, and support you need to master these habits!

Follow a Balanced Meal Pattern

- Initial Visit (Registered Dietitian): plate method, sugar sweetened beverages, snacking
- Future Visits:
  - Cholesterol Levels
  - Fiber
  - Label Reading
  - Vegetable Intake
  - Balanced Snacks
  - Eating Out
  - Budget Friendly Meal Ideas
  - Healthy Cooking Methods

Reduce Insulin Resistance with Lifestyle Change

- Initial Visit (Registered Dietitian): physical activity
- Future Visits:
  - Weight Management
  - Sleep Hygiene
  - Stress Management
  - Bariatric Surgery

Adhere to Medication Schedule

- Initial Visit (Registered Dietitian): metformin/GLP-1/insulin handout
- Future Visits:
  - Medication Adherence
  - Other Medication Options
  - Managing Side Effects

Monitor Blood Glucose and Comorbidities

- Initial Visit (Registered Dietitian): blood glucose monitoring, hyper/hypo handouts, sick day management, glucose monitoring at school (school packet)
- Future Visits:
  - Continuous Glucose Monitor
  - Blood Pressure
  - Understanding comorbidities & lab results

Engage Support System

- Initial Visit (Registered Dietitian): community resources, diabetes accommodations, 504 plan
- Future Visits:
  - Division of Responsibility
  - Addressing Barriers
  - Transition of Care

Letter of Medical Necessity & T2D Med Guide

To whom it may concern:

@name@ has a diagnosis of diabetes mellitus type 2 with hyperglycemia with the following co-morbidities and/or complications: ***severe obesity (BMI ≥120% of the 95th percentile), ***metabolic dysfunction-associated steatotic liver disease, *** ***diabetic nephropathy/chronic kidney disease, ***atherosclerotic vascular disease, ***heart failure, and ***. Despite treatment with metformin and lifestyle changes, @his@ A1c is above the ADA target of 7%. Of note, patient is currently covered by ***Medicaid insurance and meets the criteria for Glucagon-Like Peptide-1 (GLP-1) Receptor Agonists:

☐ Patient is 10 years of age or older AND requesting for ***Exenatide, Dulaglutide, OR Liraglutide

☐ Patient is 18 years of age or older AND requesting for Semaglutide

☐ Patient has taken oral medication for at least 14 days in the last 12 months to treat high blood glucose

☐ There is no record of health issues that would make this drug unsafe to include medullary thyroid carcinoma or multiple endocrine neoplasia syndrome type 2 (MEN 2), End-Stage Renal Disease (ESRD) in the last 24 months.

☐ There is a documented Hemoglobin A1c in the last 6 months which measures long term diabetes mellitus control. Last A1c was *** on ***(date).

☐ Patient has been on GLP-1 agonist for at least 14 days in the last 365 days and as such, metformin trial is not required.

☐ Patient has atherosclerotic vascular disease, chronic kidney disease, or heart failure and as such, metformin trial is not required.

☐ Patient is not on concurrent therapy with GLP-1 agonist containing agent.

The GLP-1 receptor agonist liraglutide was approved by the FDA for use in kids ages 10 and older with type 2 diabetes after the Ellipse trial demonstrated an improvement in glycemic control with 0.6% HbA1c reduction when used at a dose of 1.8 mg per day (Tamborlane et al., 2019). Medications like insulin will contribute to increased weight gain. Literature also shows that GLP-1 agonists facilitate improvement in glycemic control, weight loss and address co-morbidities. As such, I request approval to give GLP-1 agonist a trial which is FDA approved, safe and effective in pediatric patients.

Sincerely,

References:

Tamborlane, W. V., Barrientos-Pérez, M., Fainberg, U., Frimer-Larsen, H., Hafez, M., Hale, P. M., Jalaludin, M. Y., Kovarenko, M., Libman, I., Lynch, J. L., Rao, P., Shehadeh, N., Turan, S., Weghuber, D., Barrett, T., & Ellipse Trial Investigators (2019). Liraglutide in Children and Adolescents with Type 2 Diabetes. *The New England journal of medicine*, *381*(7), 637–646. https://doi.org/10.1056/NEJMoa1903822

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TYPE 2 DIABETES MEDICATION REFERENCE GUIDE

Name	Age	Dose	Route	Main Side Effects	Contraindications
Biguanide					
Metformin hydrochloride (Glucophage or Riomet*) *liquid formulation	10 y	Week 1: 500 mg daily Week 2: 1000 mg daily Week 3: 1500 mg daily Week 4: 2000 mg daily	PO	Diarrhea, nausea, vomiting, flatulence, upset stomach *Warning: lactic acidosis, renal impairment, hypoxic states, excessive alcohol intake hepatic impairment, low vit D B12 levels, hypoglycemia	Severe renal impairment Hypersensitivity Acute or chronic metabolic acidosis, DKA
GLP-1 Agonists					
Liraglutide (Victoza)	10 y	Week 1: 0.6 mg daily Week 2: 1.2 mg daily Week 3: 1.8 mg daily	SQ	Nausea, diarrhea, vomiting, constipation, decreased appetite, dyspepsia, constipation, immunogenicity (urticaria), headache *Warning: Thyroid c-cell tumor, pancreatitis, renal impairment, acute kidney injury, gall bladder disease, hypersensitivity, hypoglycemia	Personal or family history of medullary thyroid carcinoma or Multiple Endocrine Neoplasia Hypersensitivity reaction Pregnancy
Exenatide (Bydureon)	10 y	2 mg weekly	SQ	As above	As above
Dulaglutide (Trulicity)	10 y	Month 1: 0.75 weekly Month 2: 1.5 mg weekly *If >=18 y, can increase to 3mg weekly x 1 mo, then 4.5 mg weekly*	SQ	As above Also warning diabetic retinopathy complications	As above
SGLT-2 Inhibitors					
Empaglifozin (Jardiance)	≥ 10 y	10 mg daily 25 mg daily	PO	UTI and female genital mycotic infections *Warning: Euglycemic ketoacidosis, volume depletion, urosepsis and pyelonephritis, hypoglycemia, necrotizing fasciitis of perineum	Hypersensitivity reaction Dialysis/Renal failure
Dapagliflozin (Forxiga)	≥ 10 y	5 mg daily 10 mg daily	PO	As above, also nasopharyngitis	As above
SGLT-2 inhibitor + metformin					
Empaglifozin and metformin hydrochloride (Synjardy)	≥ 10 y	5 mg empagliflozin/500 mg metformin BID 5 mg empagliflozin/1000 mg metformin BID 12.5 mg empagliflozin/500 mg metformin BID 12.5 mg empagliflozin/1000 mg metformin BID	PO	UTI and female genital mycotic infections with empagliflozin Diarrhea, nausea, vomiting, flatulence, abdominal discomfort, indigestion, asthenia, headache with metformin hydrochloride	Renal impairment/failure, dialysis Metabolic acidosis, diabetic ketoacidosis Hypersensitivity reaction
GLP-1 Agonists for Obesity (not type 2 diabetes)					
*Liraglutide (Saxenda)**** ****FDA approved for Weight Loss*	*≥ 12 y*	*Week 1: 0.6 mg daily* *Week 2: 1.2 mg daily* *Week 3: 1.8 mg daily* *Week 4: 2.4 mg daily* *Week 5: 3.0 mg daily*	SQ	*As above* *Also warning suicidal behavior and ideation*	*As above*
*Semaglutide (Wegovy)**** ****FDA approved for Weight Loss*	*≥ 12 y*	*Month 1: 0.25 mg weekly* *Month 2: 0.5 mg weekly* *Month 3: 1 mg weekly* *Month 4: 1.7 mg weekly* *Month 5: 2.4mg weekly*	SQ	*As above* *Also warning diabetic retinopathy complications, suicidal behavior and ideation*	*As above*

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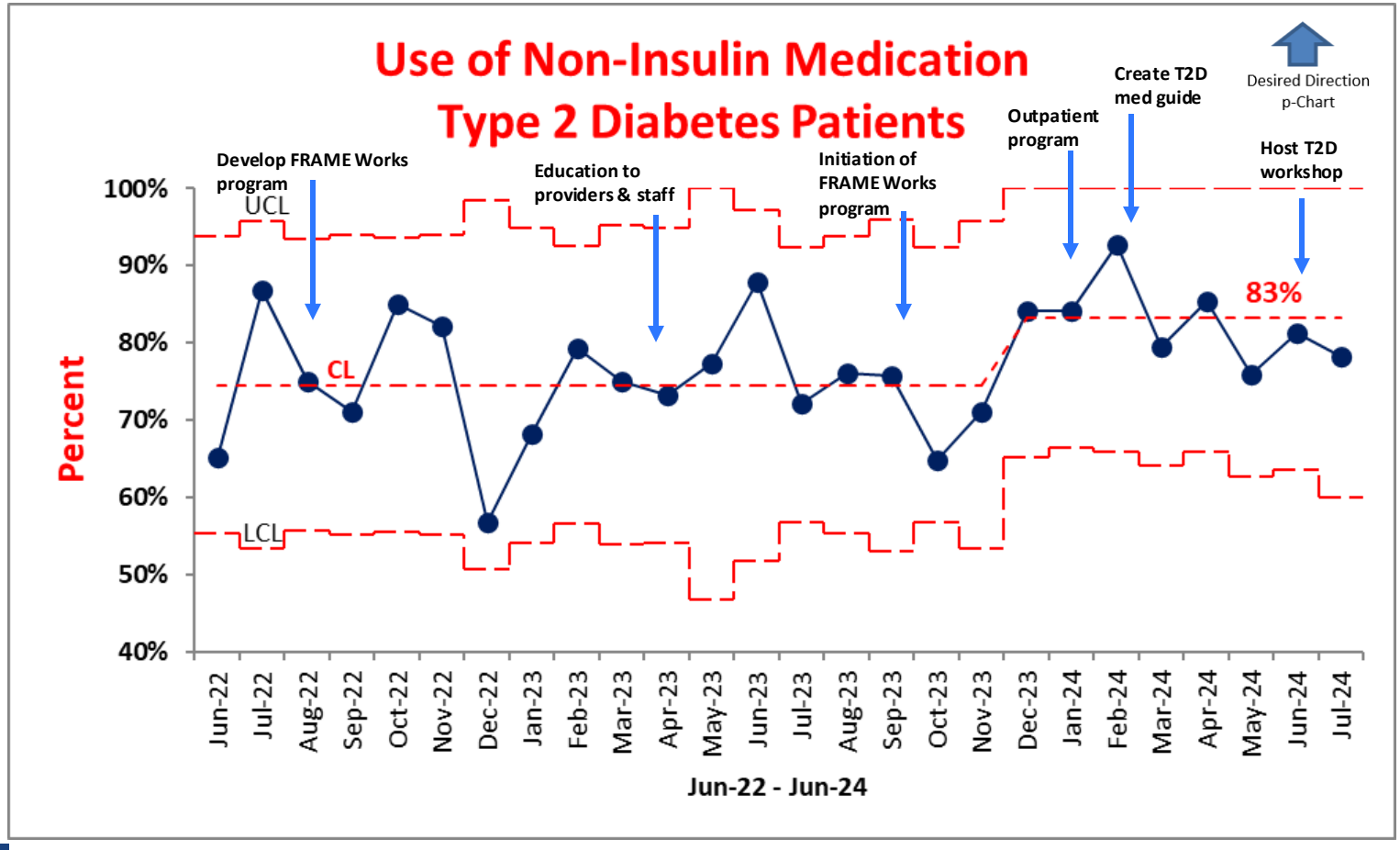
Results

P-chart showed shift in center line with percentage of patients with T2D, <1 year of diagnosis, on a non-insulin medication increased from baseline of 74% to 83%, from June 2022 to July 2024


Use of Non-Insulin Medication
Type 2 Diabetes Patients
Desired Direction
p-Chart
Develop FRAME Works program
Education to providers & staff
Initiation of FRAME Works program
Outpatient program
Create T2D med guide
Host T2D workshop
UCL
CL
LCL
83%
Percent
100%
90%
80%
70%
60%
50%
40%
Jun-22
Jul-22
Aug-22
Sep-22
Oct-22
Nov-22
Dec-22
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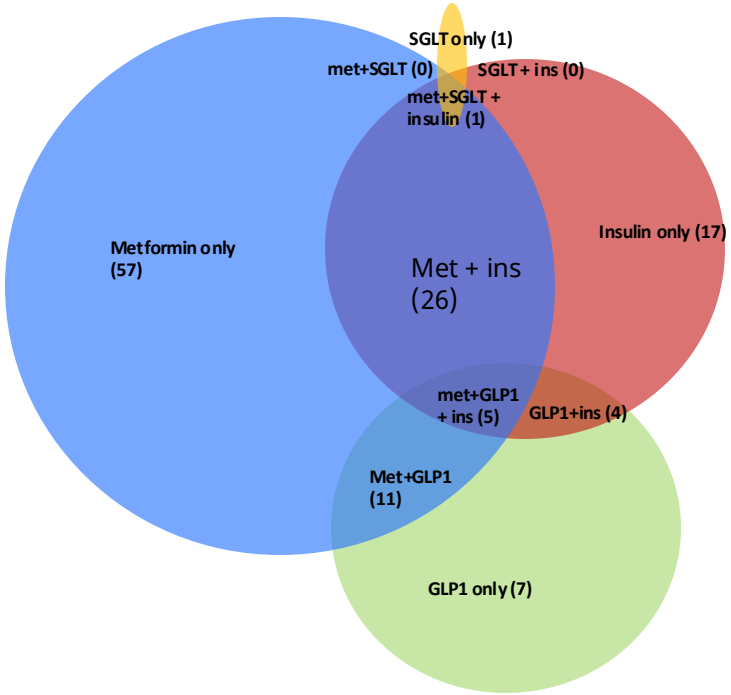
T2D data



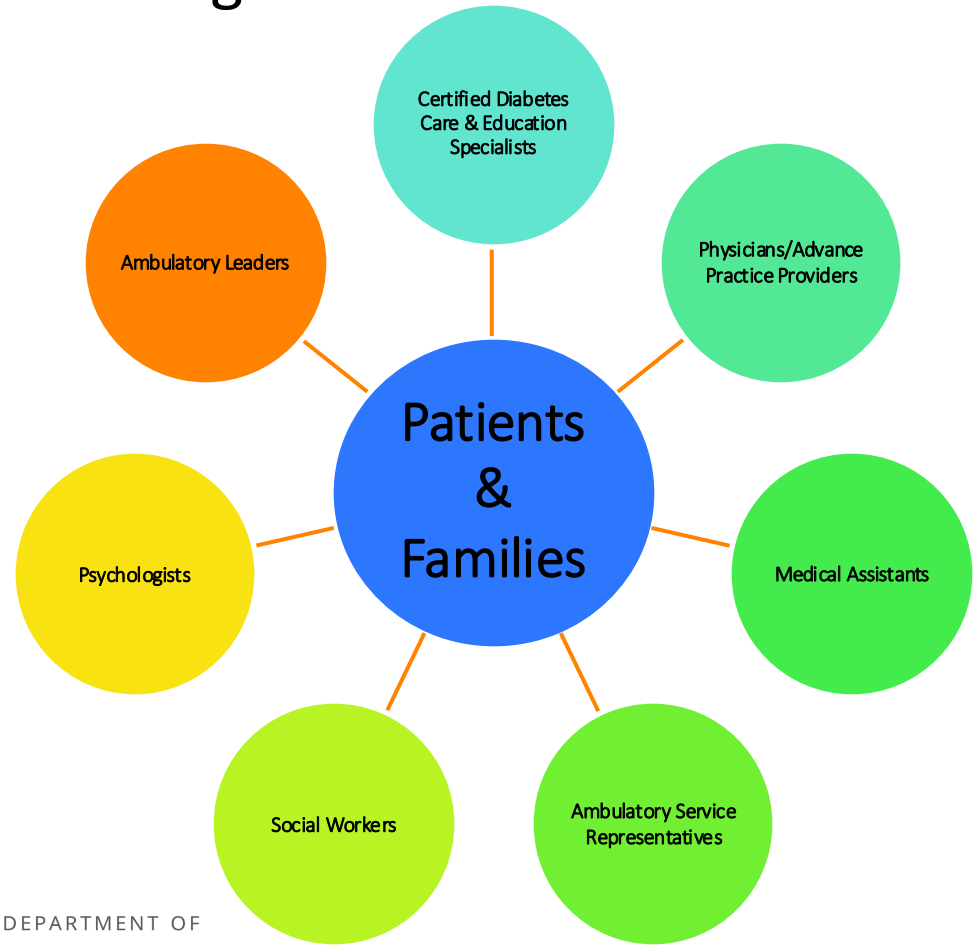
T2D, Dx < 1 year	N=154
Metformin only	57
Insulin(fixed, long acting only, IIM)	17 (fixed 9 + long acting 3 + IIM 5)
GLP1 only	7
SGLT2 only	1
Metformin + insulin	26
GLP1 + insulin	4
SGLT2+insulin	0
Met+GLP1+insulin	5
Met+SGLT2+insulin	1
GLP+SGLT2	0
Met+ SGLT2	0
Met+GLP1	11
Met+GLP1+SGLT2+insulin	0

Lessons Learned & Next Steps

- Multi-disciplinary approach to managing T2D is necessary to provide comprehensive care.
- Youth onset T2D requires tailored medical therapy that is different from those with T1D.
- ADA guidelines recommend using newer agents such as GLP-1 agonist and SGLT-2 inhibitors to achieve tight glycemic control.

- TCH evidenced-based guidelines underway
- Evaluate trends in A1c data
- Assess health inequities with diabetes technology use in those with T2D
  - i.e. CGM devices
- Address barriers to non-insulin medication use among patients
  - Patient/parental concerns about side effects

Acknowledgements



- **Don Buckingham, MBOE, CPHQ**
- **Mark Rittenhouse, EPIC/IS Architect**

- **T1D Exchange**
- **Hemsley Charitable Trust**

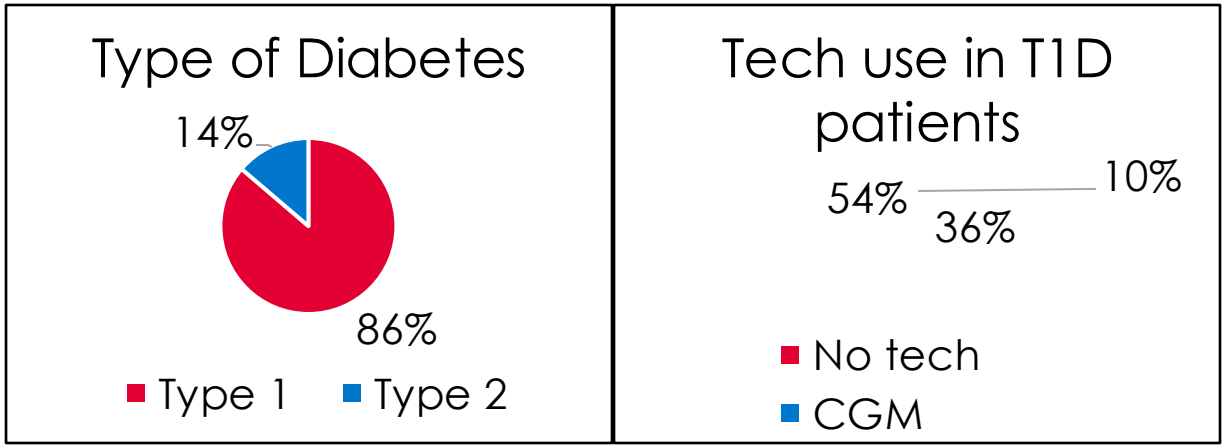
Children's National

Developing a Tracking Tool for Insulin Pump Prescriptions Among Children and Young Adults with Type 1 & Type 2 Diabetes

Amanda Perkins, CPNP, CDCES, MPH; Mai Tran, PharmD, BCACP, BCGP, CDCES; Jody Grundman, MD, MPH; Sarah Lydia Holly, RN, BSN; Hadley Kessenich, RD, CDCES; Shideh Majidi, MD, MSCS

Children's National Department of Diabetes

~ 1200 patients <18y with 2+ visits in the past year



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Background

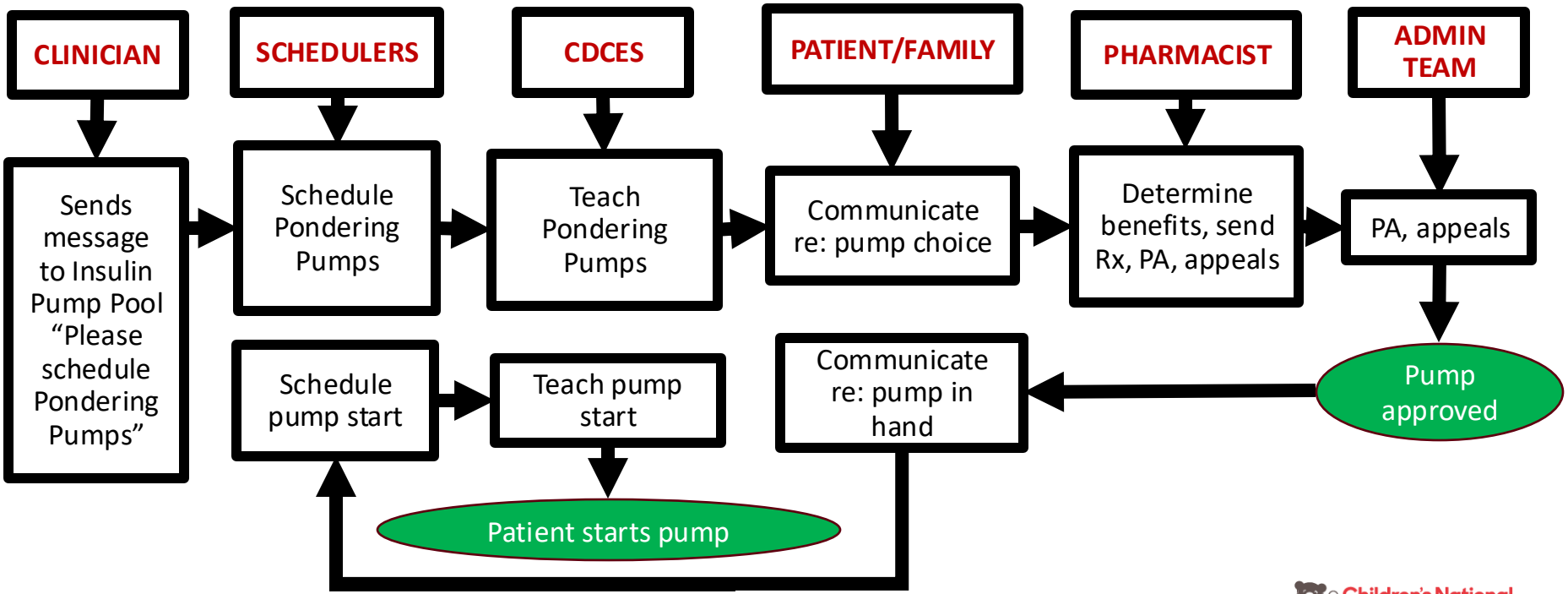
- Disparities exist in rates of insulin pump uptake despite evidence that use improves glycemic control

- **AIM:** Increase insulin pump uptake in our clinic

- **Key Driver Diagram:** Inability to track process (referral → education → prescription → initiation) is a barrier to pump uptake

- **Change idea** →Ability to track the process can increase uptake

Process Mapping: Insulin pump start



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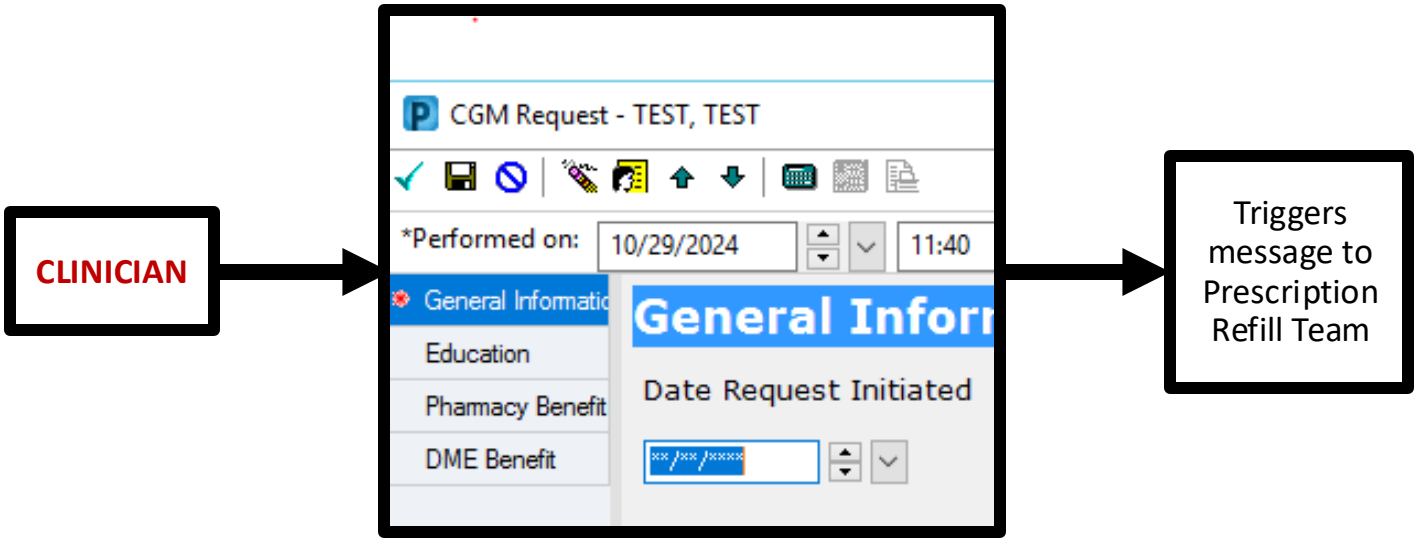
Background

- Success with CGM Powerform last year



PDSA Cycles

Sept-Dec 2023

Worked with IT to develop IPPF modeled on CGM PF

- Go-live in test environment

Dec 2023-Jan 2024

Trialed with key staff in test environment

- Technical glitches resolved

Feb-Apr 2024

Trialed with key staff in CERNER

PAIN POINT!!

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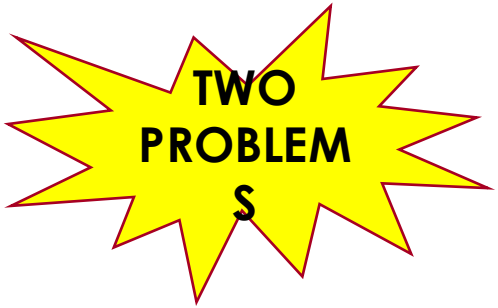
PDSA Cycles



1. Inbox clutter
2. Disconnect between clinician who knows the patient and CDCES teaching the class

PDSA Cycles

Apr-Jun 2024

Developed two separate IPPFs

- Education referral and Prescriptio n tracking

Jun 2024

Go-live in CERNER

- Pump Education PF and Pump Request PF

Jul 2024

Presented at Diabetes Team Meeting

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Pump Education Powerform

General Information

Date Request Initiated

Contact Information If Different From Below

Preferred Language
- English
- Spanish
- Other:

Request Type
- New start
- Upgrade
- Switch pump

Current CGM
- Not currently using CGM
- G6 - Phone
- G6 - Receiver
- G7 - Phone
- G7 - Receiver
- Libre2 - Phone
- Libre2 - Receiver
- Libre3
- Libre 2+
- Other:

Carb Counting?
- Yes
- No

Need Nutrition Refresher?
- Yes
- No

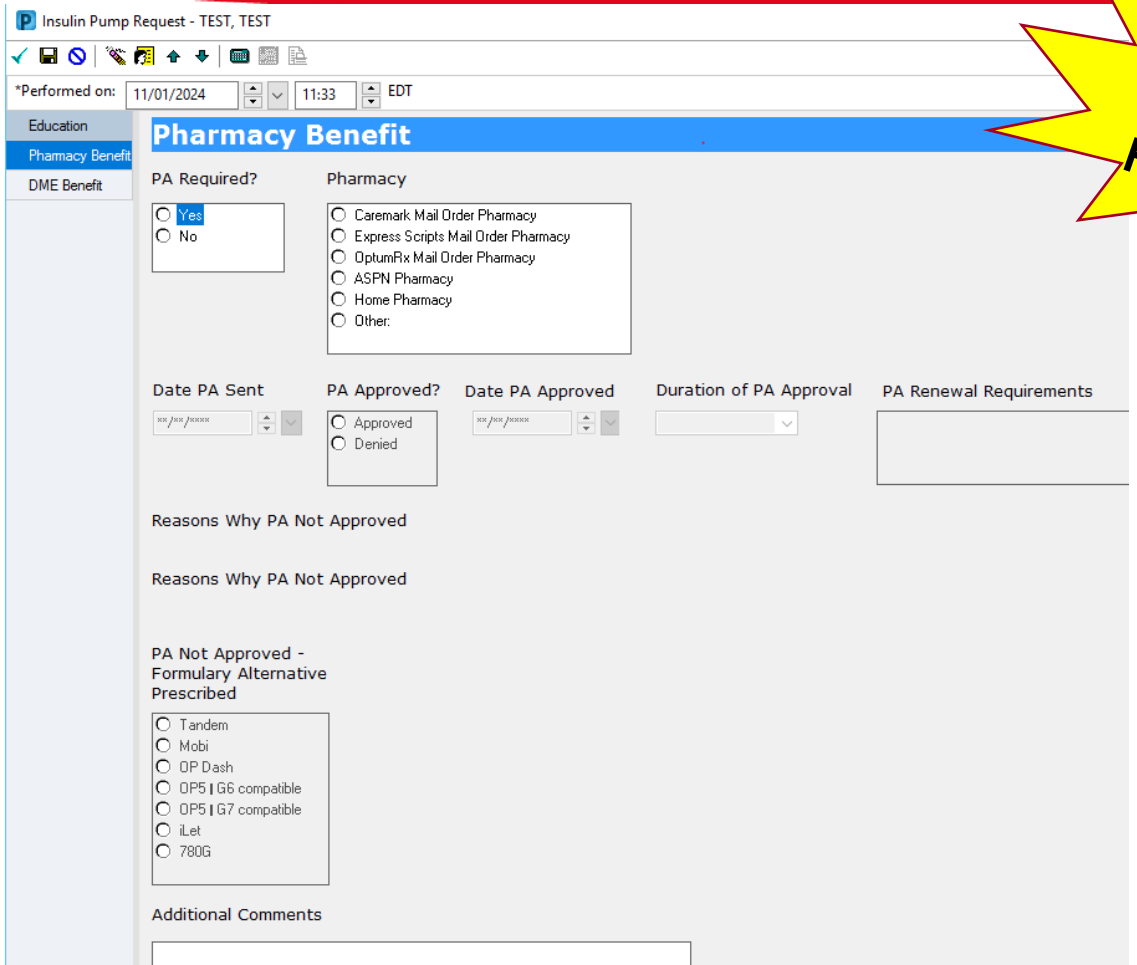
Relevant Considerations for Insurance Approval (Ex: past trial and failure of other pump)

Considerations For Family Training (Ex: Lives with mom but spends weekends at dad's, or grandma watches pt during the week)

Connected in Clarity with 80% Use in Past 30 Days?
- Yes
- No

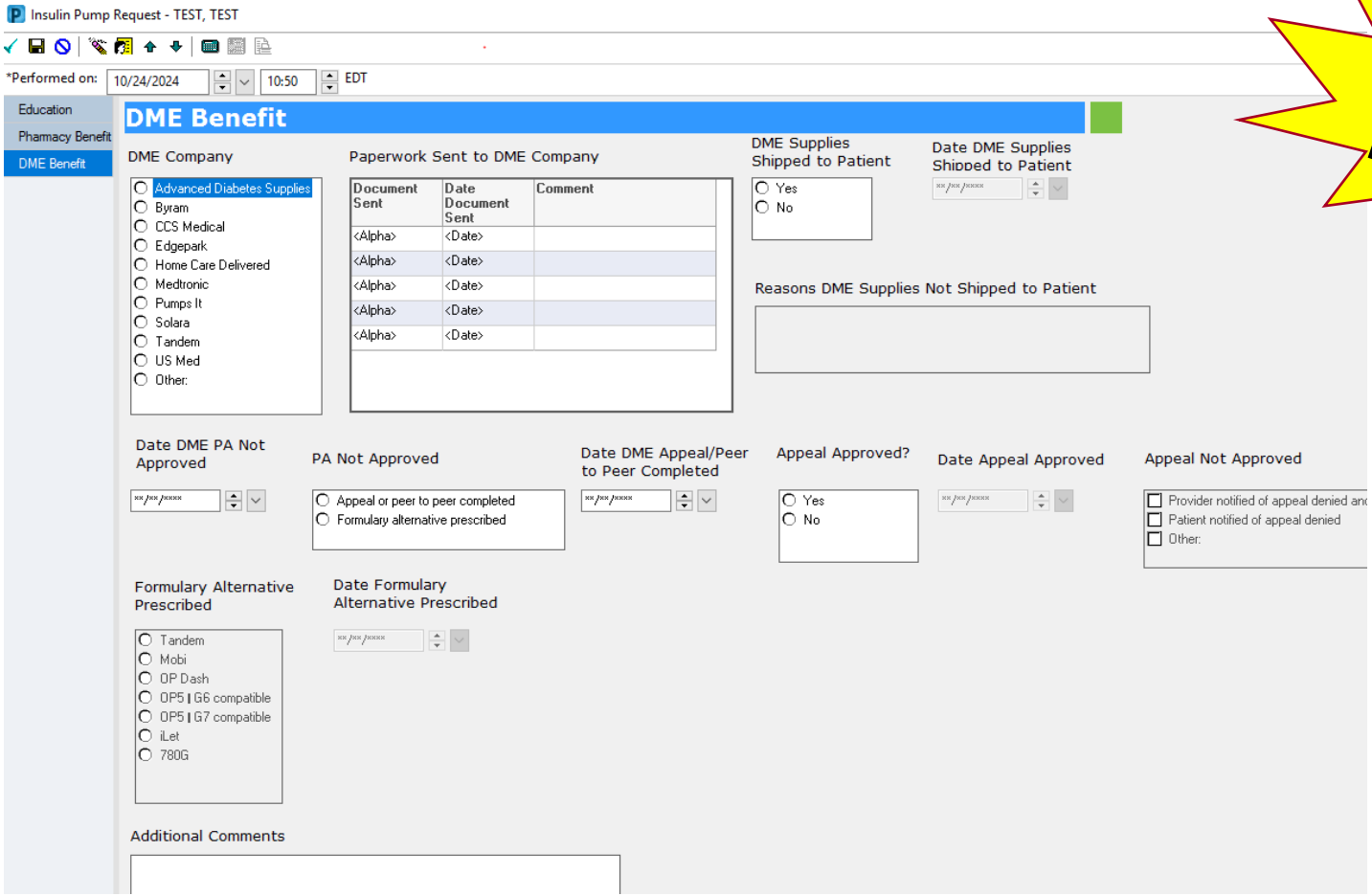
If Not, Explain?

Patient is Appropriate to Start Pump Without CGM (if not currently wearing CGM)
- Yes
- No



Pump Request Powerform

Children's National



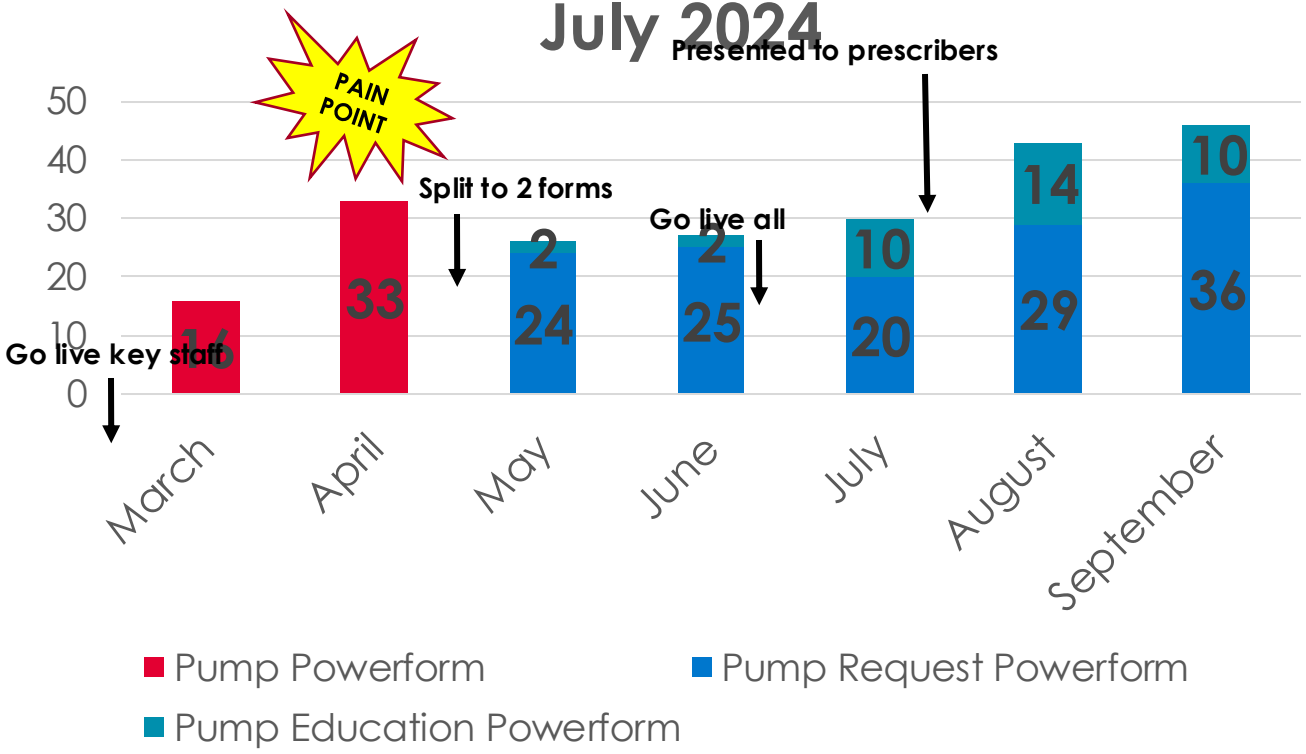
Pump Request Powerform

Children's National

Results

- Two pump PFs accessible for documentation by a multi-d team
- Pump Education PF allows the pump prescriber to indicate patient-specific characteristics pertinent to pump education
- Pump Request PF is documented by pharmacy and admin teams to track prescription fulfillment
- A total of 221 Powerforms were initiated since inception

Pump Powerform Usage March - July 2024



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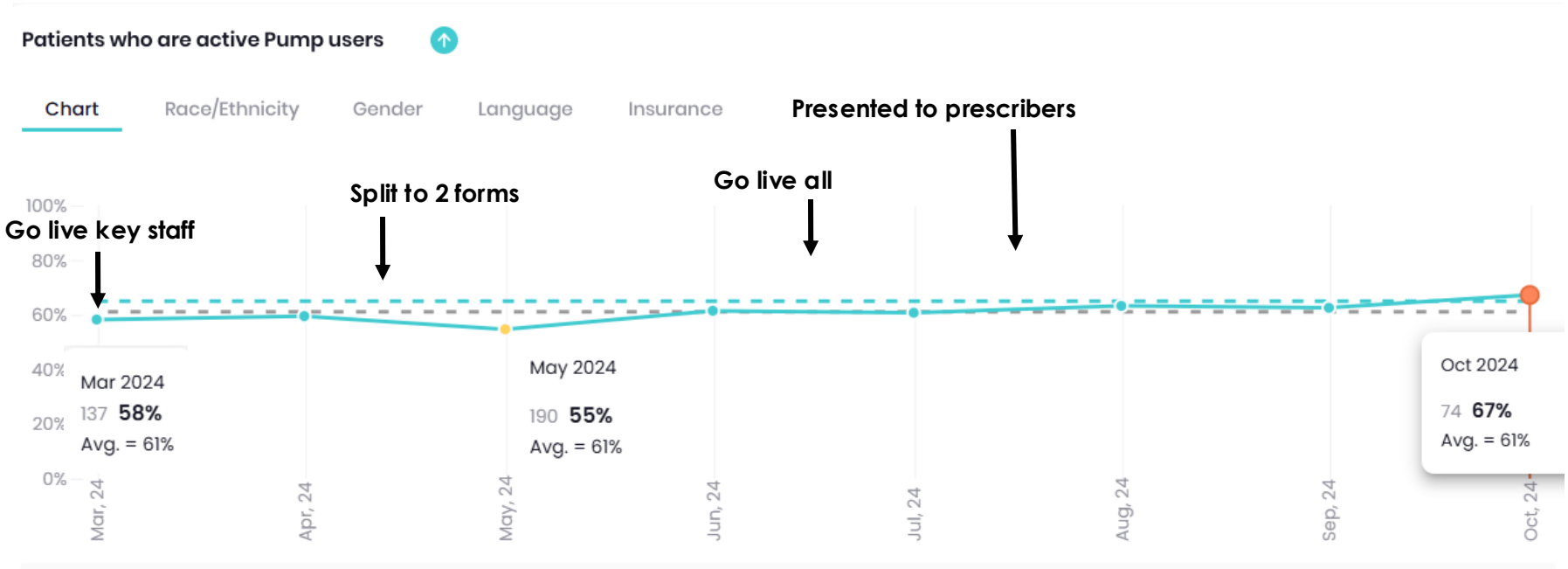

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Conclusions

- IPPFs create a centralized location to document new pump starts
- Prepare the diabetes educator to deliver customized education
- Optimize successful patient transition to technology
- Increase pump uptake

Next steps

- Extracted data from the IPPFs will identify areas for further process improvement and disparities in the process
- Implement interventions to improve equity

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Increasing Lipid Profile Screening in Youth with Type 2 Diabetes

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Disclosures:

- None

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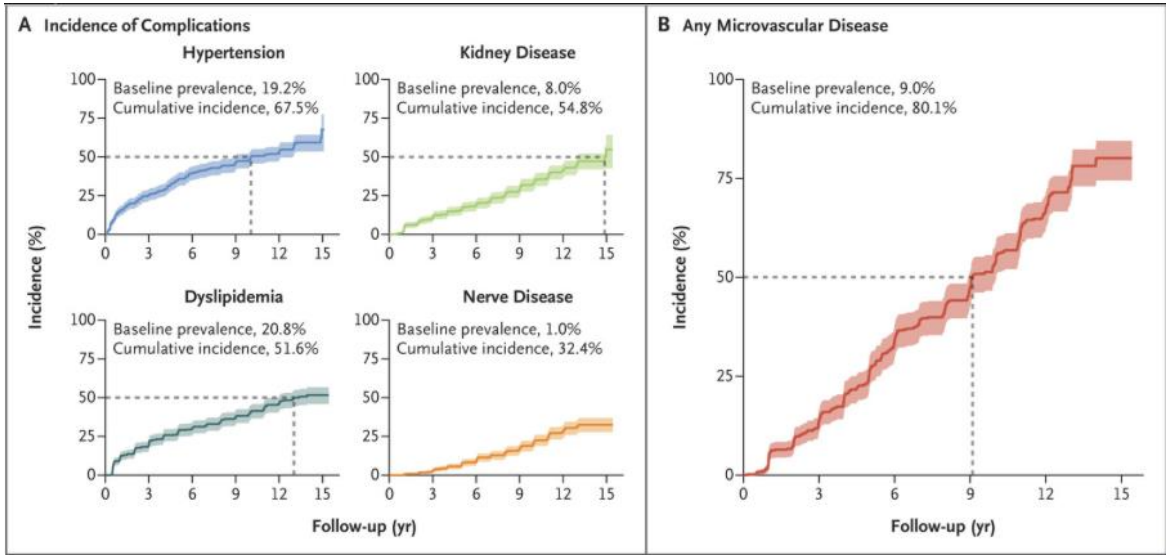
Background:

- Type 2 Diabetes (T2D) in youth associated with significant microvascular and macrovascular risk burden
- Comorbidities may be present at time of diagnosis of T2D
- Increase in risk of cardiovascular morbidity and mortality at earlier age
- Progression of vascular abnormalities is more pronounced in youth onset T2D



TODAY Study Group; Bjornstad P, Drews KL, Caprio S, Gubitosi-Klug R, Nathan DM, Tesfaldet B, Tryggestad J, White NH, Zeitler P. Long-Term Complications in Youth-Onset Type 2 Diabetes. N Engl J Med. 2021 Jul 29;385(5):416-426. doi: 10.1056/NEJMoa2100165. PMID: 34320286; PMCID: PMC8697255.

SMART Aim Statement:

To increase the percentage of patients with Type 2 diabetes who had lipid profile performed in the last year from baseline of 70% in May 2023 to 90% by May 31, 2024

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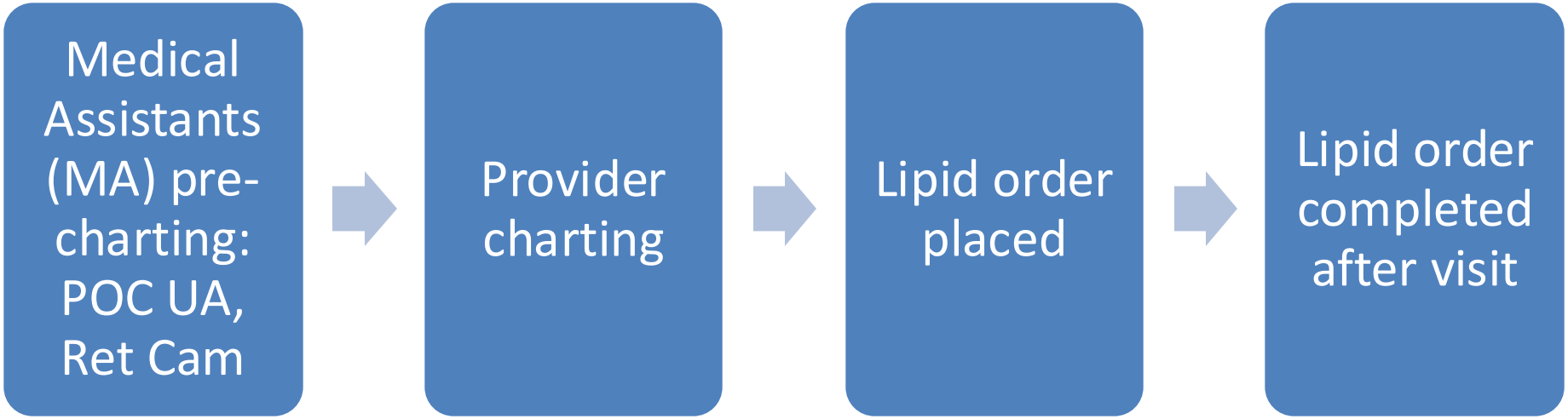
Process Map – Standard Workflow



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Key Driver Diagram (KDD)

SMART Aim

Increase % of lipid profile completion in T2D from 70 to 90% in 12 months

Global Aim

Timely screening for comorbidities associated with T2D and compliance with ADA guidelines

Key Drivers (THE WHAT)

- Integration of screening into the clinic visit workflow
- Efficient integration and use of technology
- Screening acceptance from providers, staff, patients and their families
- Patient centered care

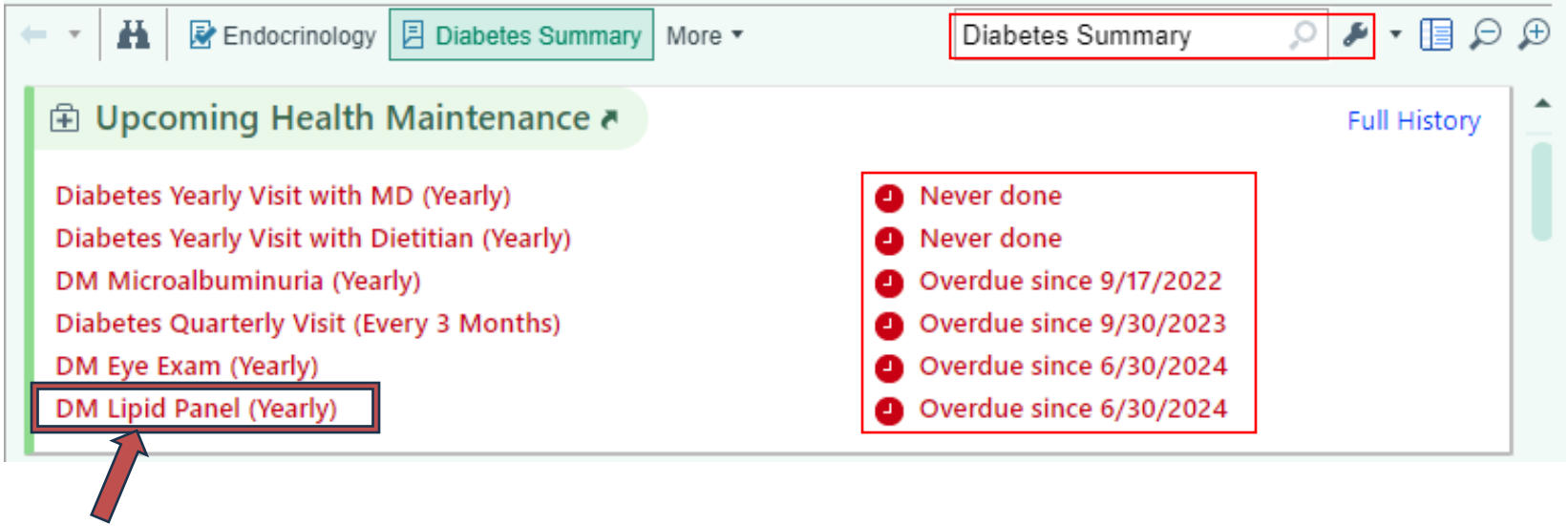
Interventions (THE HOW)

- Lipid POC machine in clinic
- Review the use of the Diabetes Health Maintenance in EHR with providers and staff
- Order set with annual labs for T2D patients
- MA education and training on lipid screening
- Education for patients and families through clinic handout
- Education for providers on ADA guidelines
- RN post-clinic visit follow up on non-completed orders
- Team sends reminders to providers regarding patients due for screening

Key

White shaded box = proposed intervention
Gray shaded box = completed intervention
Green shaded box = what we're working on now

Health Maintenance in Electronic Health Record (EHR)



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Patient Education Handout

Why is it important to have your cholesterol checked every year?

People with Type 2 Diabetes have increased risk for elevated cholesterol levels.

Cholesterol levels help determine how well the body is controlling fat in the blood stream.
The American Diabetes Association (ADA) recommends annual screening of cholesterol levels so your diabetes care team can tell you how your overall health is doing.

How does my diabetes care team check cholesterol levels?

Lab to check	How often	Goal Numbers
Lipid panel	Once per year	LDL (or bad cholesterol) < 100 mg/dl HDL (or good cholesterol) > 35 mg/dl Triglycerides < 150 mg/dl

What can I do to make cholesterol better?

- Changes in food choices such as:
  - Eating whole-grain foods over processed foods and grains. Avoiding fried or processed foods
  - Compare labels of your favorites foods and focus on choices that are lowest in both saturated and trans fats
  - High fiber foods like fruits, vegetables, nuts, beans
  - When consuming meat aim for skinless poultry and lean meats. When you choose to eat red meat and pork, select options labeled "loin" and "round." These cuts usually have the least amount of fat.
  - Choose omega -3 rich options such as: Flax seeds, chia and hemp hearts, or fatty fish like salmon, trout, albacore tuna and sardines.
- Physical activity of 150 minutes spread out over the week.

Ask your diabetes care team about Lipid screening questions!




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CHOLESTECH LDX™ ANALYZER

CONFIDENCE IN RESULTS

Accurate, actionable results from the leader in point-of-care lipid testing.

The CLIA-waived Cholestech LDX™ Analyzer is engineered for confidence, providing accurate, actionable, and readily accessible results that have set the standard in point-of-care lipid profile, cholesterol, and glucose testing.

- Meets National Cholesterol Education Program (NCEP) performance goals for lipids with lab-accurate results
- Certified by the CDC's Lipid Standardization Program (LSP) and Cholesterol Reference Method Laboratory Method Network (CRMLN) programs (the lipid testing accuracy standards)

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POCT Lipid implemented

MA review of Health Maintenance Tab → order POCT lipid and complete prior to provider → Lipid handout at time of clinic visit/AVS → Family counseled on the importance

Updated Patient Tracker (built into EHR) for required screening at time of visit

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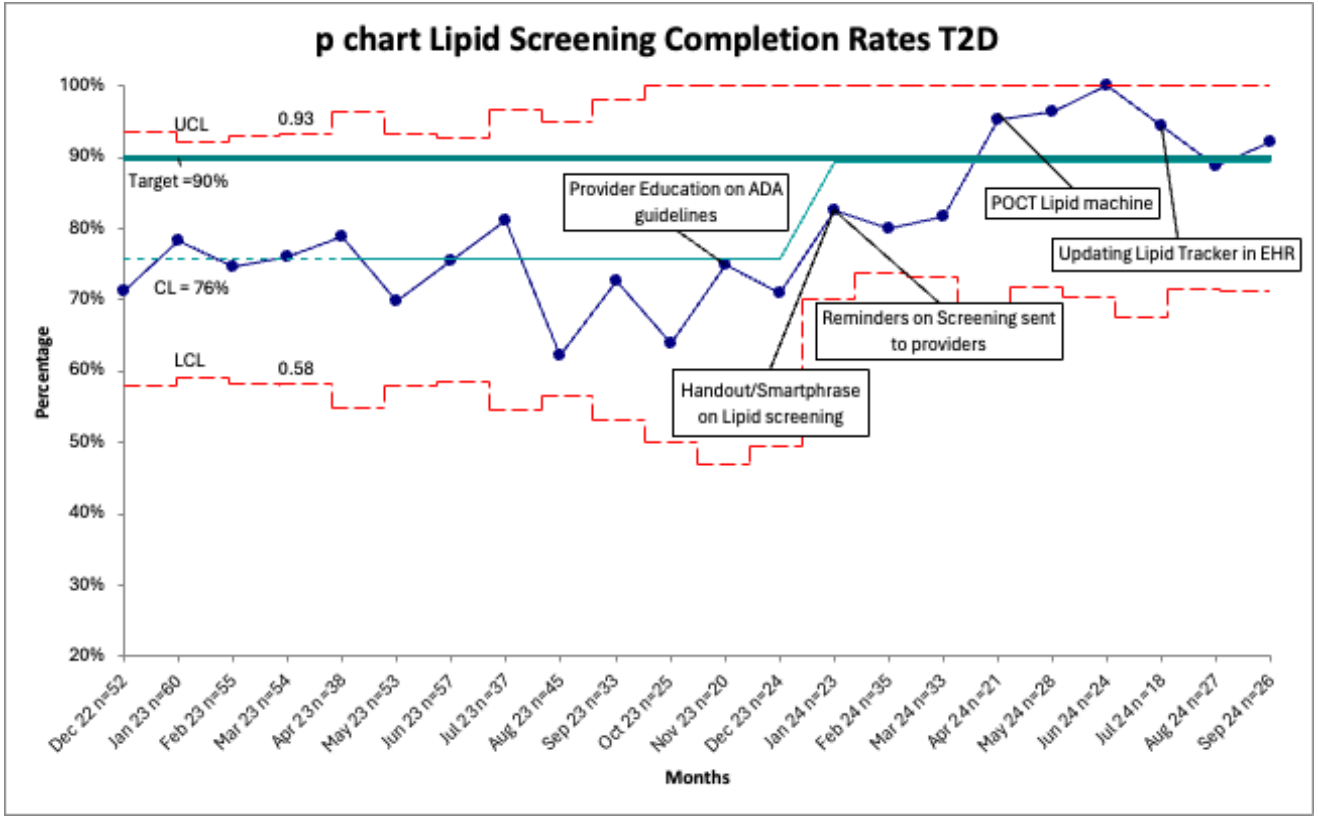
Interventions & Results:



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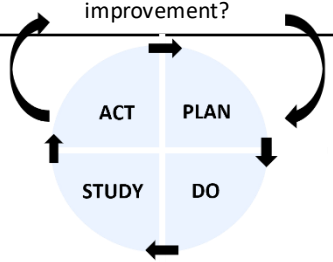
PDSA Sharing

PDSA Cycle #	2

What are we trying to accomplish?	Increase percent of lipid profiles completed for patients with Type 2 Diabetes
How will we know if a change is an improvement?	Increased percentage of lipid profiles done
What changes can we make that will result in an improvement?	Education on importance and screening guidelines



Plan *Describe your plan for this test (i.e., who, what, where, when, and how). Remember to include your data collection plan.*	Education on guidelines for providers. Patient education on importance of lipid screening. Implementing POCT lipid machine.	
Do *Describe how you ran this test and collected your data.*	Reviewed guidelines with providers. Created and distributed patient handout . Weekly data collection on lipid profile completion	
Study *Summarize what you learned: Describe the results of your test, and how they compared to your prediction.*	Not all providers used electronic handout. Lipid orders were placed by providers, but not always completed by patients.	
Act (Adapt, Adopt, Abandon) *Describe what's next (i.e., make modifications and run another test, test the change on a larger scale, abandon the intervention)*	This test of change will be: (select one) **Adapted**	Remind providers on use of handout in AVS. RN/MA use of POCT Lipid tracker.

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QI Milestones

Successes	Lessons Learned	Navigating Challenges

• Creation of a handout to educate patient/families
• Provider education on lipid screening guidelines
• 100% compliance with lipid order placement
• Implementation of POCT Lipid machine in clinic
	• Lipid order being placed alone is not enough
	• Time taken to obtain all screening tests and patient rooming
		• Patient barriers to getting labs completed
		  • Not fasting at time of visit
		  • Do not want to wait/not enough time to do labs at RCH
		• POCT machine maintenance: enough supplies etc.
		• Optimizing MA workflow to improve rooming time for patients

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Conclusions:

- QI methodology can improve diabetes health screening for comorbidities such as dyslipidemia
- Provider education, staff training, and optimized workflow, and POCT increased lipid screening
- Continued new strategies to improve sustainability of project

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Thank you

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T1D Exchange

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