T1D Exchange

Adult Collaborative Call

July 22, 2025

Agenda

- Updates from T1DX-QI Coordinating Center, Nicole Rioles, MA

- Presentations
  - University of Michigan, Jennifer Iyengar, MD
  - UC Davis, Deborah Plante, MD, Julie Durette, RD, CDCES, Vivian Lee, Berit Bagley, RN, CDCES, Connor Reilly

Learning Session November 11-12, 2025, Atlanta, GA

- Tues-Wed, Nov 11-12th
- Hotel: The Whitley Hotel Atlanta Buckhead. 3434 Peachtree Rd NE, Atlanta, GA 30326
- Plan your travel for arriving on the afternoon of Monday November 10th and departing on the late afternoon or evening of Wednesday November 12th
- Link for registration
- T1DX will cover two hotel nights for two guests.

THE WHITLEY
ATLANTA BUCKHEAD

Learning Session Abstracts

T1D Exchange has opened a call for abstracts for the November Learning Session

- Abstracts will be considered for publication in the Journal of Diabetes as well as for oral or poster presentations at LS.
- Clinics are welcome to submit on T1D and T2D topics
- Link for the abstract submission
  - The link includes ideas for topic areas of interest
  - Page also shows JOD formatting requirements
  - Deadline: 8/15

Annual Survey deployment

T1D Exchange will be releasing the 2025 Annual Survey on 8/18.

- One survey should be completed by each clinic.
- Deadline for survey completion is 10/1/2025
  - Abstract submissions for 2026
  - Manuscript opportunities for 2026

2025 Annual Survey Topic Areas

- Center demographics, staffing, and structure
- T1D Screening, Staging, and Monitoring
- 4T
- Dietician support
- Health equity
- Healthcare transition
- GLP-1 use in children with T2D
- Economics
- T1DX-QI Portal
- T1DX-QI experience

Invoice deadline SOW work ending in June 2025

All invoices must be received by 8/15/2025 deadline.
Consult your SOW for deliverable details.

7	Contribute to the quality improvement Collaborative, as described in sections 1.c. and 1.d.i.	Jan 1, 2025	Jun 30, 2025

Appendix B: Invoicing

Please invoice for payment following the deliverables schedule in 1.D. Please include deliverable number and date.

All payments will be made through electronic funds transfer (EFT). Please 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: Nicole Rioles- nrioles@t1dexchange.org
CC: Rene Weathers- rweathers@t1dexchange.org
Linda Crasco- linda.crasco@t1dexchange.org

Center Presentation

Addressing Diabetes Distress in Clinical Practice: Provider Feedback and Resource Gaps Following Screening Implementation

Jennifer Iyengar, MD
Clinical Associate Professor
Michigan Medicine

ABOUT US

University of Michigan (Adult)

Academic Center

- **Main location (Domino's Farms)**
- **8 satellite locations**

Serves approximately 2,500-3,000 persons with T1D

~40 faculty + 2 nurse practitioners

Diabetes Distress Project Team

T1D Exchange Site PI: David Broome, MD

Project Team:

Jennifer Iyengar, MD
Hayley Centola, PhD,
David T. Broome, MD,
Kara Mizokami-Stout, MD, MSc,
Lynn Ang, MD,
Jung Eun Lee,
Jennifer Wyckoff, MD,
Briana Mezuk PhD,
Scott Soleimanpour, MD,
Joyce Lee, MD, MPH

Disclosures

Presenter: Jennifer Iyengar, MD

I have no disclosures

Co-author disclosures:

- D. Broome – Research support from Fractyl Health, Sanofi, Rhythm Pharmaceuticals, Novo Nordisk
- S. Soleimanpour – Research support Ono Pharmaceuticals
- J. Lee – Advisory Panel GoodRx

Background:

- Diabetes-related distress (DD) is a common and significant concern among persons with Type 1 diabetes (PwT1DM).
- While routine screening for DD is becoming more widespread, it remains unclear how clinicians are using these results and whether they are consistently and effectively addressing DD during their clinical encounters.

Objective

- To assess the impact of implementing annual DD screening for PwT1D at an academic medical center.

- Explore provider perspectives on ongoing barriers, resource gaps, and support strategies needed to better integrate psychosocial care into routine diabetes management.

Let's Recap

- Annual DD screening was implemented for PwT1D seen by adult endocrinology at Michigan Medicine (5 locations) using the Type 1 Diabetes Distress Assessment System (T1DDAS) core scale, validated 8-question screening tool.
- The T1DDAS was automatically assigned 3-days prior to endocrinology visit as part of the echeck-in process
- Results of the T1DDAS were visible to providers within the EHR to address during the clinical encounter.

DF METAB ENDO & DIAB – PRD/ecp_p1b2 – JENNIFER I.

Search (Ctrl+Space)

[redacted] Patient Station Chart Remind Me UMHS Links Schedule Patient Lists In Basket Media Manager SmartPhrase Manager My SmartPhrases

MiChart Request Print

[redacted] Chart Review Results Review Synopsis Rooming Appt Desk Documentation Plan/Wrap-Up Sign Visit Therapy Plans Health Maintenance Glooko

[redacted] visit with Iyengar, Jennifer Jill, MD for RV EXTENDED - 4-5 mo

OurPractice (BPA) eCheck-In/Welcome Review Current Meds Allergies Episodes Review Additional Review Visit Info Lab Specimen Report Vital Signs OB History

Hearing/Vision General History Pertinent Negatives Questionnaires Assign Qnrs Verify Rx Benefits Goals CSN Barcode Alcohol Use Learning Assessment

[redacted]

Active FYIs: Difficult Airway

Infection: None

OURPRACTICE ADVISORIES

- BP over 140/90
- Order the following overdue lab
- Capture HCC Dx (patient complexity)

Gencyuz, Charisse F., MD
Ref Provider (PCP)

Primary Cvg: Bcbs/Bcbs Me...

Allergies: Prednisone, Sulfamethoxazole-trimethoprim

OB/Gyn Status: Postmenopausal

3/18 RETURN VISIT EXTENDED
for Follow-up

Wt: 87.5 kg (192 lb 12.8 oz)

Ht: 1.575 m (5' 2")

BMI: 35.26 kg/m² !

BP: 151/67 ! >1 day

SINCE YOUR LAST VISIT

Diag/Therapy, SLEEP MED

Lab (2)

CARE GAPS

3

ENDOCRINOLOGY PROBLEMS (1)

Type 1 diabetes mellitus with other specified complication (CMS/HCC)

Start Review

OurPractice Advisories (BPAs)

Collapse All

Very Important (3)

This patient has hypertension and/or diabetes and their blood pressure is 140/90 or greater.

Provide Feedback

This patient has hypertension and/or diabetes and their blood pressure is 140/90 or greater.

Last Blood Pressure Measurements
03/18/25 1339 (!) 151/67

Order the following overdue lab

Provide Feedback

This patient meets the criteria to be screened for heart failure. Please order the appropriate lab test indicated to determine next steps.

You can find more information on screening for heart failure in adult diabetes patients at this link:

MEND Evaluation for Heart Failure in Adult Diabetes Guideline

Please open this SmartSet to order overdue labs.

Open SmartSet | **Do Not Open** | Heart Failure Screening in Diabetes Preview

Acknowledge Reason

Patient declines

Accept

Capture HCC Dx (patient complexity)

Visit Info

More Patient Information

Current as of [redacted] Click to refresh.

Previous Responses

Amb Type 1 Diabetes Distress Assessment System (T1ddas) Core Scale

[redacted] - Filed by Patient

Question	A Moderate Problem (3) / A Serious Problem (4) / A Very Serious Problem (5)
1. I feel burned out by all of the attention and effort that diabetes demands of me.	A Moderate Problem (3)
2. It bothers me that diabetes seems to control my life.	A Serious Problem (4)
3. I am frustrated that even when I do what I am supposed to for my diabetes, it doesn't seem to make a difference.	A Serious Problem (4)
4. No matter how hard I try with my diabetes, it feels like it will never be good enough.	A Serious Problem (4)
5. I am so tired of having to worry about diabetes all the time.	A Very Serious Problem (5)
6. When it comes to my diabetes, I often feel like a failure.	A Serious Problem (4)
7. It depresses me when I realize that my diabetes will likely never go away.	A Serious Problem (4)
8. Living with diabetes is overwhelming for me.	A Serious Problem (4)
T1DDAS Average Score (range: 1 - 5)	4
T1DDAS Absolute Score (range: 8 - 40)	32

Poke and Procedure Plan

Poke and Procedure Plan Details
Print

My Last Relevant Note

Signed • Encounter Date: 3/18/2025

ADD ORDER ADD DX (7) 99214 PRINT AVS 6 SIGN ADDENDUM

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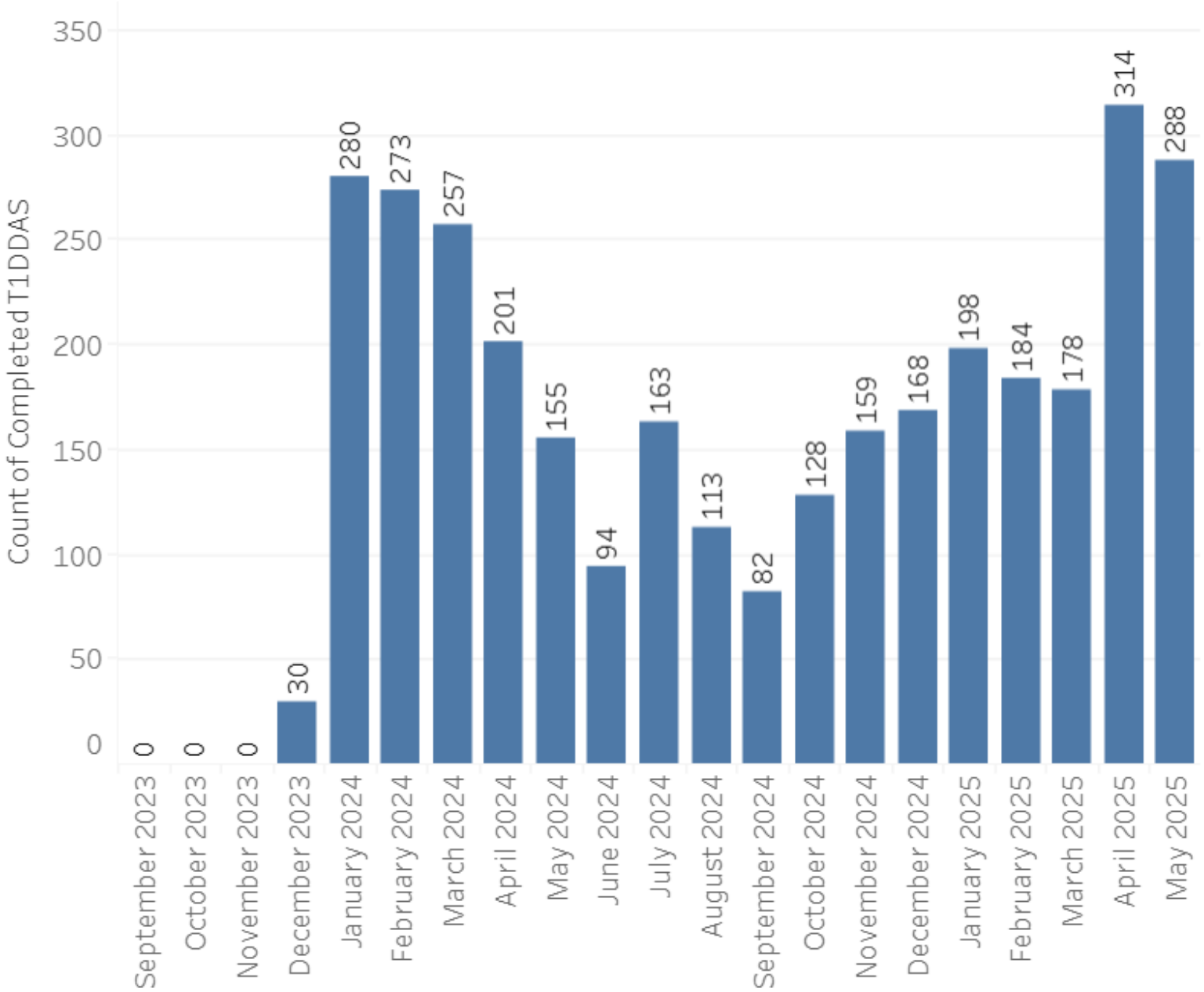
Completed Questionaires By Month



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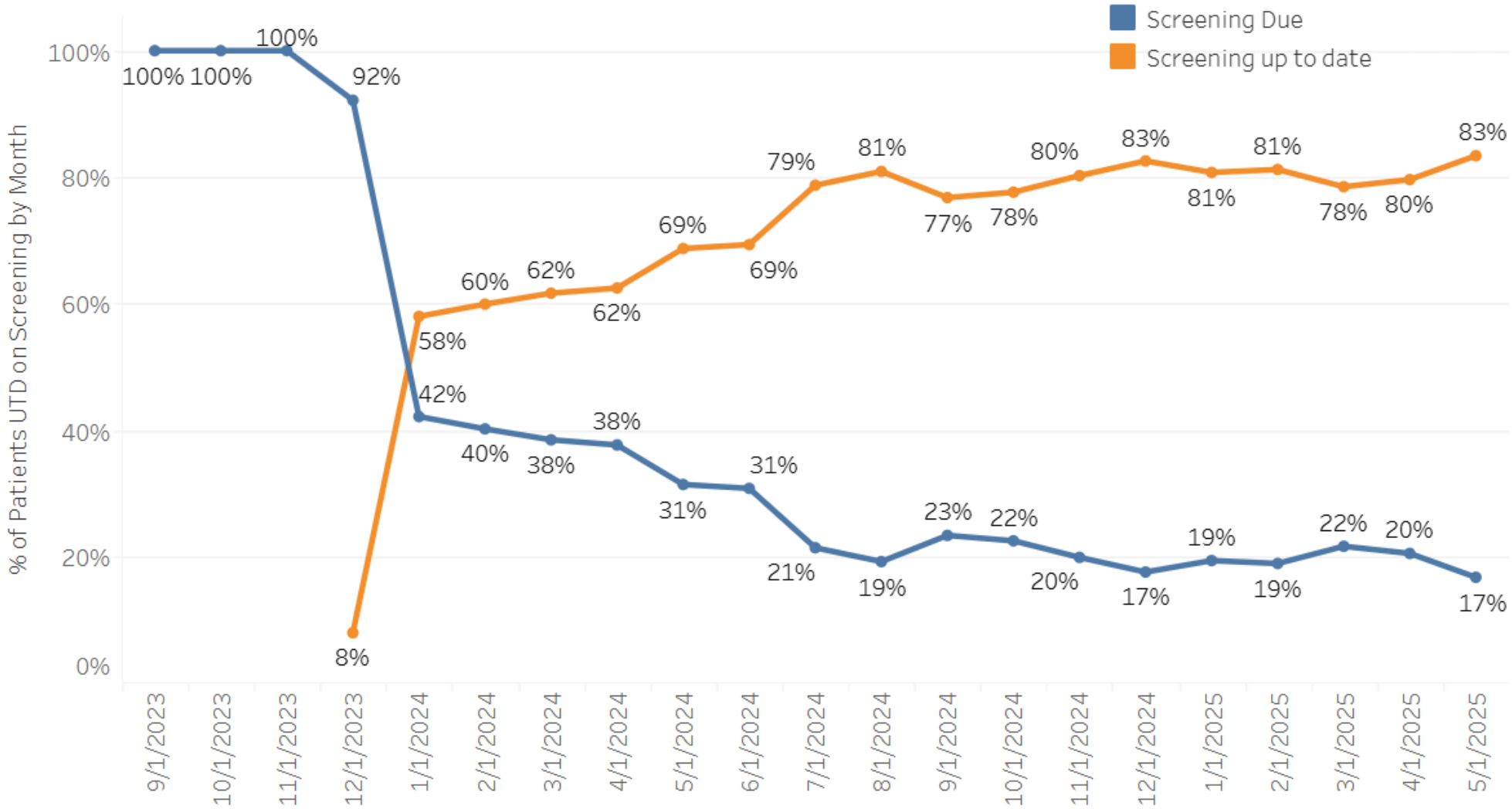
Screening Status By Month



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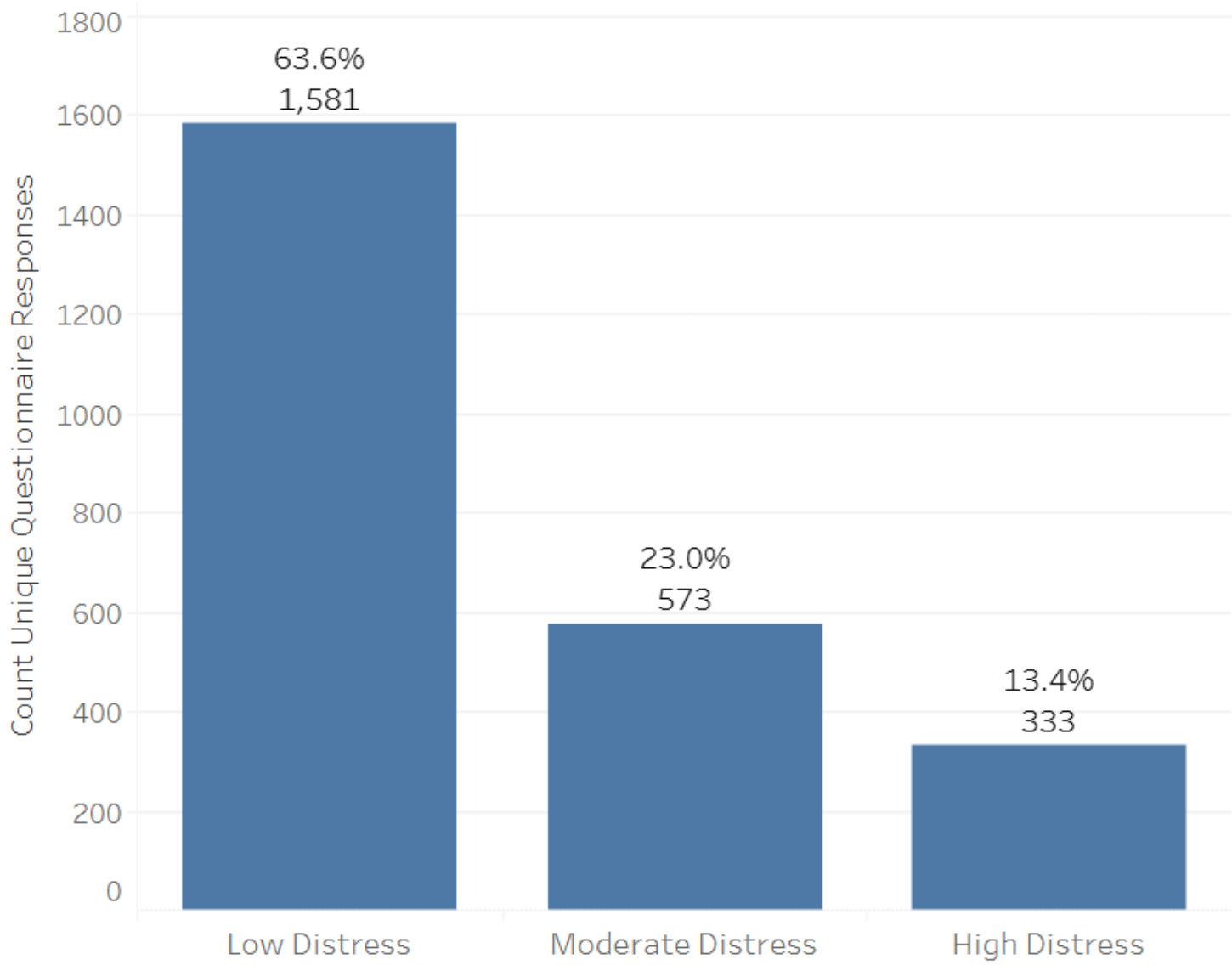
Distress Score Classification



Results

- Between December 2023 and 2024, 2,081 T1DDAS questionnaires were completed by 1,852 unique patients out of 2,452 eligible PwT1D, achieving a **75.5% annual screening rate**.
- The average T1DDAS score was 1.84 ± 0.88. Clinically significant distress was common, with 22.9% of patients reporting moderate distress (2.0–2.9) and 12.9% reporting high distress (>3.0), meaning **over one-third of patients experienced elevated diabetes-related distress.**

What do we do with a high score?

What do we do with a high score?

The answer may vary depending on whether we answer this question from a **research** perspective or a **quality improvement** perspective

Deliverables

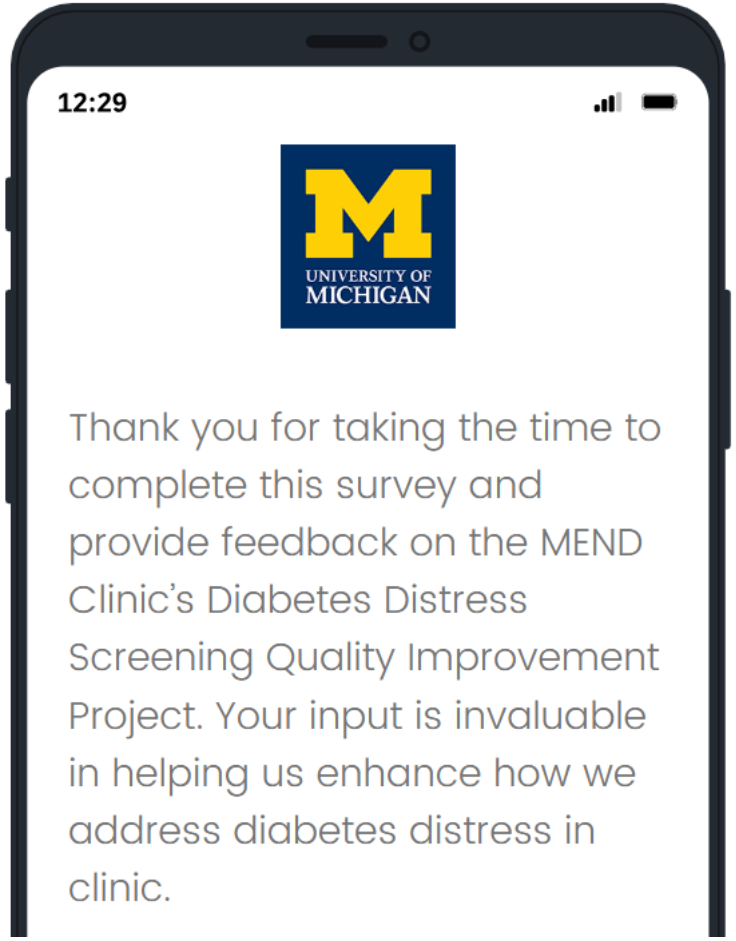
Survey 15-20 Michigan Medicine endocrinologists to ascertain if DD screening results are being reviewed during their clinical encounter and what their current practice pattern is when encountering patients experiencing elevated distress

Survey approximately 250 adults with T1DM managed by Michigan Medicine Endocrinology who have completed the T1DDAS core scale during the e-check in process to understand which tools or interventions patients perceive as most beneficial in addressing diabetes distress

Using an impact/effort matrix, prioritize and develop a set of Clinical Decision Support (CDS) tools around these interventions. We will conduct multiple Plan-Do-Study-Act (PDSA) cycles, aiming to achieve a documented response to moderate or high levels of diabetes distress in 50% of patient encounters.

Results

- The post-implementation survey was completed by 16 of 42 providers (38%).
- Fewer than half of providers who had seen at least five PwT1D in the prior six months (n=14) reported routinely discussing DD with their patients scoring in the moderate or high range on the T1DDAS



Results

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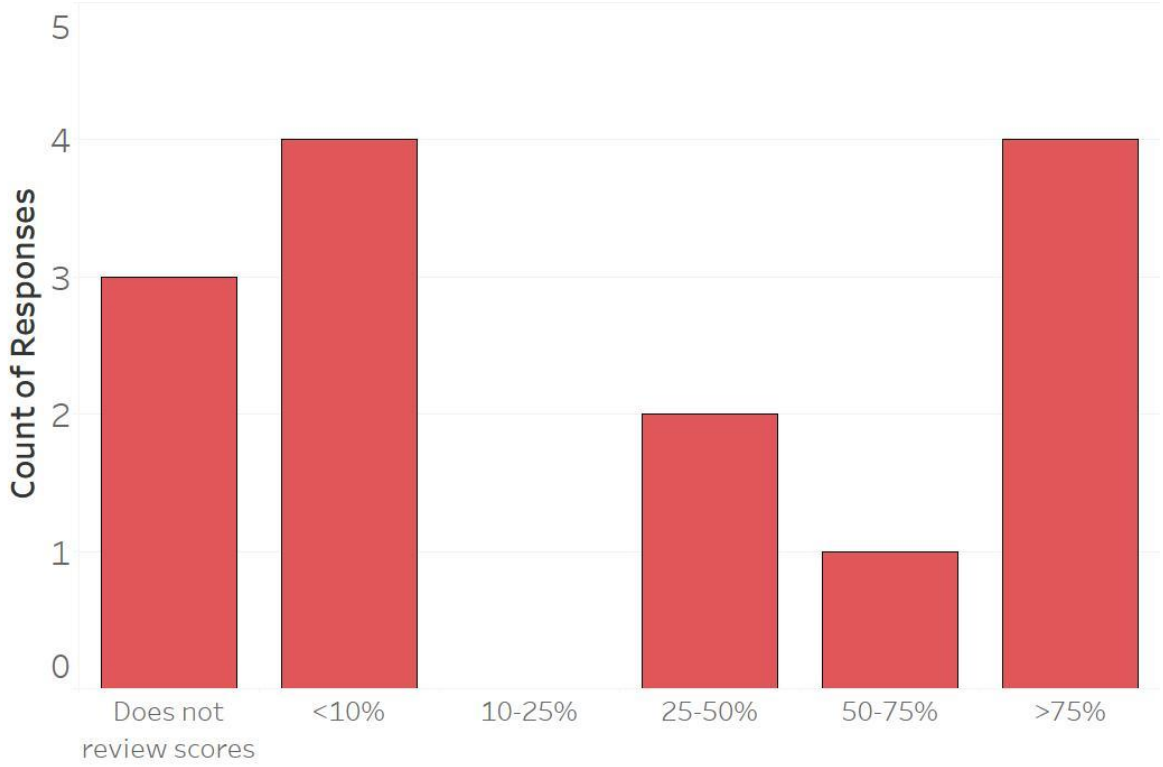
Figure 1: Percent of Patient Encounters where Diabetes Distress is Discussed



Results

Figure 2: Provider perspectives about screening for DD in their clinical practice

94%

Agree or strongly agree DD is an important part of comprehensive diabetes management

75%

Agree or strongly agree it is the role of the endocrinology provider to address diabetes distress

69%

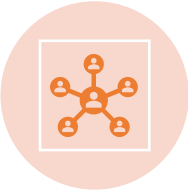
Respondents feel confident in their ability to identify patients who are experiencing DD

19%

Respondents are satisfied with the resources available to them to address DD

Results

Which resources do you think would best support patients in our clinic with Type 1 diabetes who are experiencing distress or burnout?



Social Work Referral (N=11)

In Clinic Psychologist (N=9)

Handouts with Local Mental Health Resources (N=8)

Educator led diabetes support group (N=6)

List of local & national peer support resources (N=6)

Evidence-based structured group program for DD (N=6)

Results

What are the most important barriers to consistently addressing diabetes distress in your clinical encounters for T1DM?

- Limited clinic time (N=9)
- Inadequate resources (N=9)
- Insufficient training (N=5)

Conclusions

- We successfully implemented DD screening, identifying a substantial number of patients with distress that may have previously gone unrecognized.

- While most providers acknowledged DD as an important facet of comprehensive diabetes care, few reported consistently addressing DD it during clinical encounters. **This suggests that screening alone is insufficient to ensure DD is addressed by clinical providers**.

Next Steps

- Patient 1Q survey in progress
- New patient education materials will be presented to the Caswell Diabetes Institute Patient & Family Advisory Council in September
- Provider training scheduled 10/31
- Discussion around hiring psychologist
- Work with IT to build a Smartset or BPA to promote and measure resource utilization

THANK YOU

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UNIVERSITY OF MICHIGAN

Jennifer Iyengar
jmacd@umich.edu

UC DAVIS HEALTH

Implementing an Insulin Pump Backup Plan
TID Exchange

MEDICAL CENTER

Deborah Plante, MD

Julie Durette RD, CDCES

Berit Bagley RN, CDCES

Vivian Lee Medical Student

Connor Reilly Project Manager

Collaborative Clinic Profile
UC Davis Health Adult Diabetes Clinic

Care Team

- 13 Endocrinologists
- 6 Endocrinology Fellows
- 2 DNP, FNP-C, CDCES BC-ADM
- 2 FTE RN, CDCES (1 vacant)
- 1.4 FTE RD, CDCES
- 2 FTE pharmacist
- 1 FTE Medical Assistant

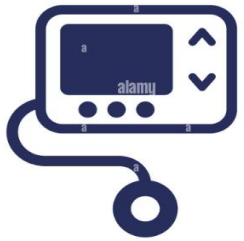
Patient Population

- 1684 patients with T1D seen in last year at endocrine clinics
  - -69% white
  - -15% Latin/Hispanic
  - -6% Black/African
  - -5% Asian
  - -3% Multi race
- Large geographic area serving >30 counties in CA + western NV + Southern OR

T1DX QI Team Contacts

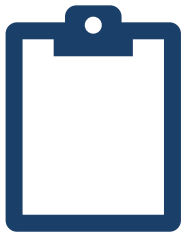
- Deborah Plante, MD (dkplante@health.ucdavis.edu)
- Aili Guo, MD (alguo@health.ucdavis.edu)
- Julie Durette, RD, CDCES (jadurette@health.ucdavis.edu)
- Berit Bagley, RN, MSN, CDCES, BC-ADM (bmbagley@health.ucdavis.edu)

Background



60% of Adults with T1D are on insulin pump therapy.

Pump site failure accounts for 57% of DKA events among pump users



Professional societies recommend patients have a backup plan and education to mitigate episodes of DKA

Insulin Pump Safety

Problem/Issue:
Lack of consistent backup plan documentation and basal insulin/supply pharmacy Rx for T1D pump patients

Aim statement:
Increase insulin pump backup plan documentation and basal insulin prescriptions by 15% by August 2025, documented consistently in EPIC Insulin Instructions.

Interventions (Provider Survey)

1. Do you discuss an insulin pump backup plan (basal, correctional and carb ratio) at each visit?
2. How do you provide that instruction to your patient?
3. Do you routinely update a backup long-acting insulin prescription for patients on insulin pumps?
4. Do you know how to document the presence of an insulin pump/CGM using the implant tag in the EMR?
5. Do you know how to navigate/use EPIC's "Insulin Instructions" for pump patient's backup plans?

Dear UC Davis Endo Providers,

We invite you to participate in a brief survey focused on Type 1 Diabetes and Insulin Pump Safety. Your feedback is important and will contribute significantly to improving T1D quality of care.

The survey will take less than two minutes to complete. We truly appreciate your time and input.

Thank you in advance for your participation!

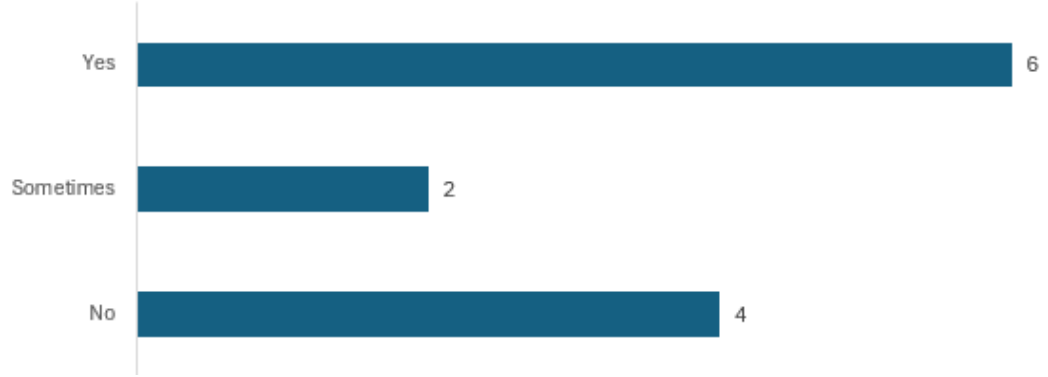
T1D Exchange

https://ucdavis.co1.qualtrics.com/jfe/form/SV_50U0mP3HdD6NZ3g

Outpatient Adult Endocrinology Survey Results

- **Discussion of Insulin Pump Backup Plans (Q1):**

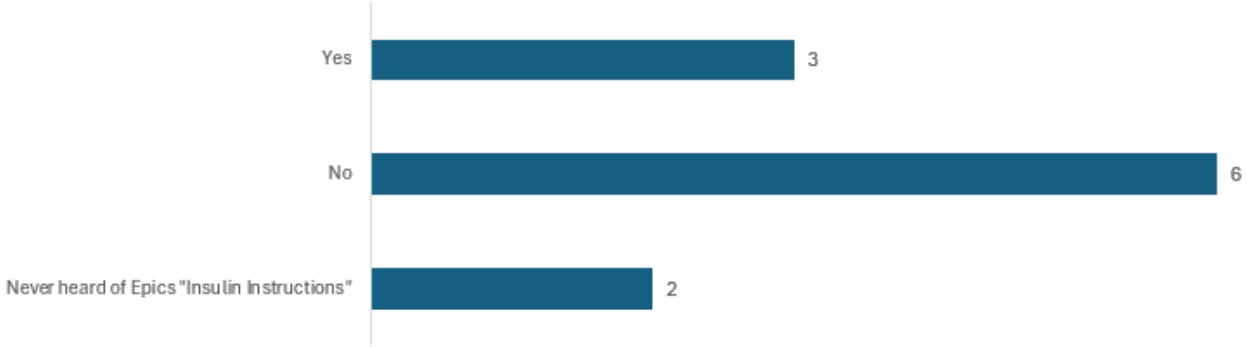
- **Method of Providing Backup Plan Instructions (Q2):**
  Methods used: **Verbal**, **AVS**, **Prescription**, **Free text**. Multiple methods often used together
- **Routine Updating of Backup Insulin Prescriptions (Q3):**



Outpatient Adult Endocrinology Survey Results (continued)

- **Use of EMR to Document Insulin Pump/CGM (Q4):**

- **Knowledge of EPIC's "Insulin Instructions" Feature (Q5):**



- **Documentation of Insulin Pump Settings (Q6):**
  - Most commonly documented as **Free text in the note**.
  - Some also used methods like **Prescription data** or **importing/copied pump data**.

Components of a Backup Plan

Prescription:

- Basal Insulin – Lantus Solostar pen or covered alternative
- Rapid or Ultra-rapid acting insulin pen
- Pen needles and/or Syringe

Documented Instructions:

- Basal Insulin dose
- Mealtime and Correctional dose (ICR and ISF)

Patient Education (CDCES can assist!):

- Awareness of insulin/supply pharmacy Rx
- Knows how to use plan

A retrospective chart review was completed to assess frequency of patients having the necessary components of a backup plan

Retrospective Chart Review Results

Inclusion: T1D Endo patients on pump (ACC/PCN)

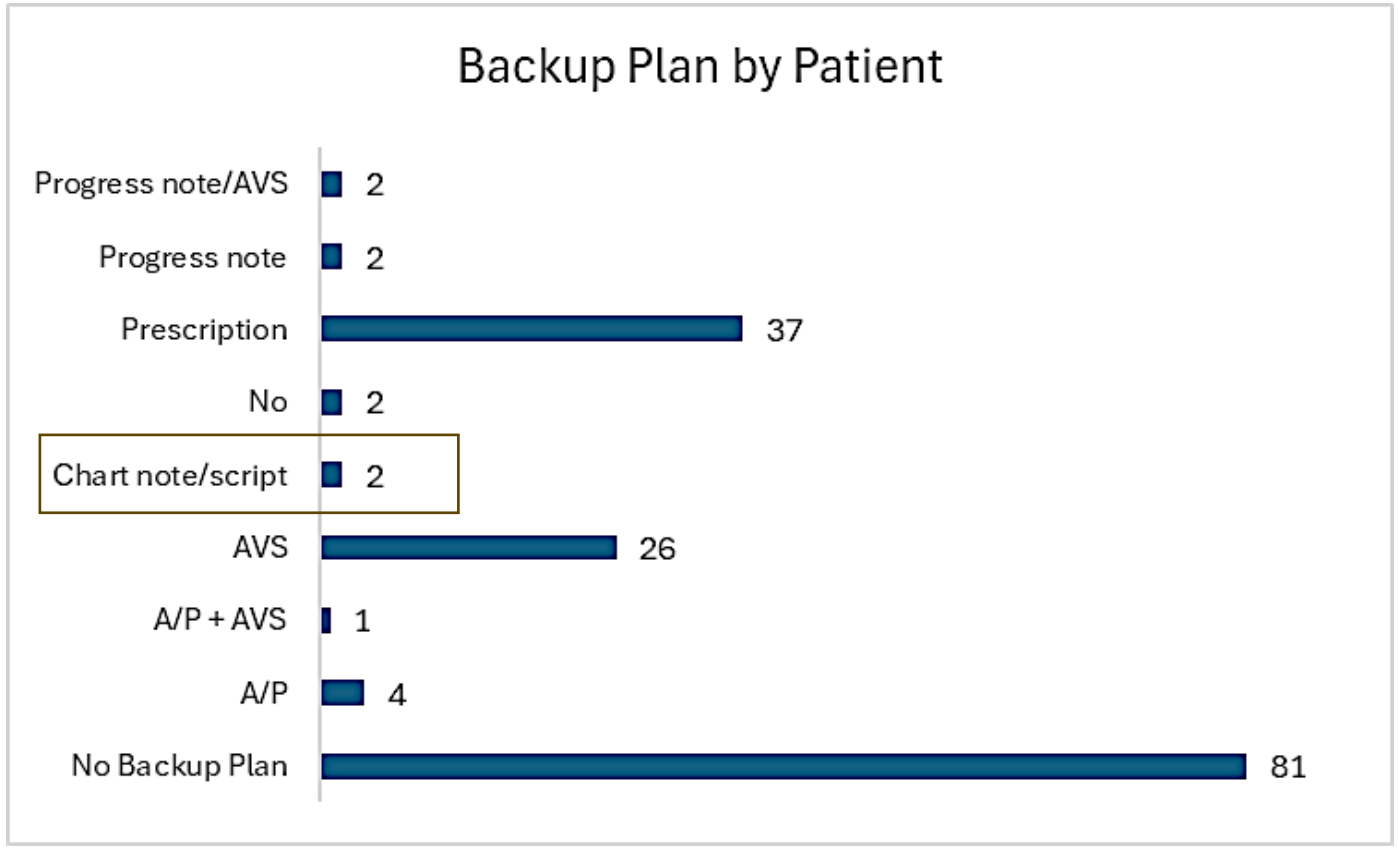
N = 157 patients

	No	Yes
Pump Implant Flag	(18%)	(82%)
Pump Settings Documented	(11%)	(89%)
Backup Plan Documented Chart note/AVS	(81%)	(19%)
Active Basal Insulin prescription	(58.6%)	(41.4%)
All components of successful backup plan	(88.5%)	(11.5%)

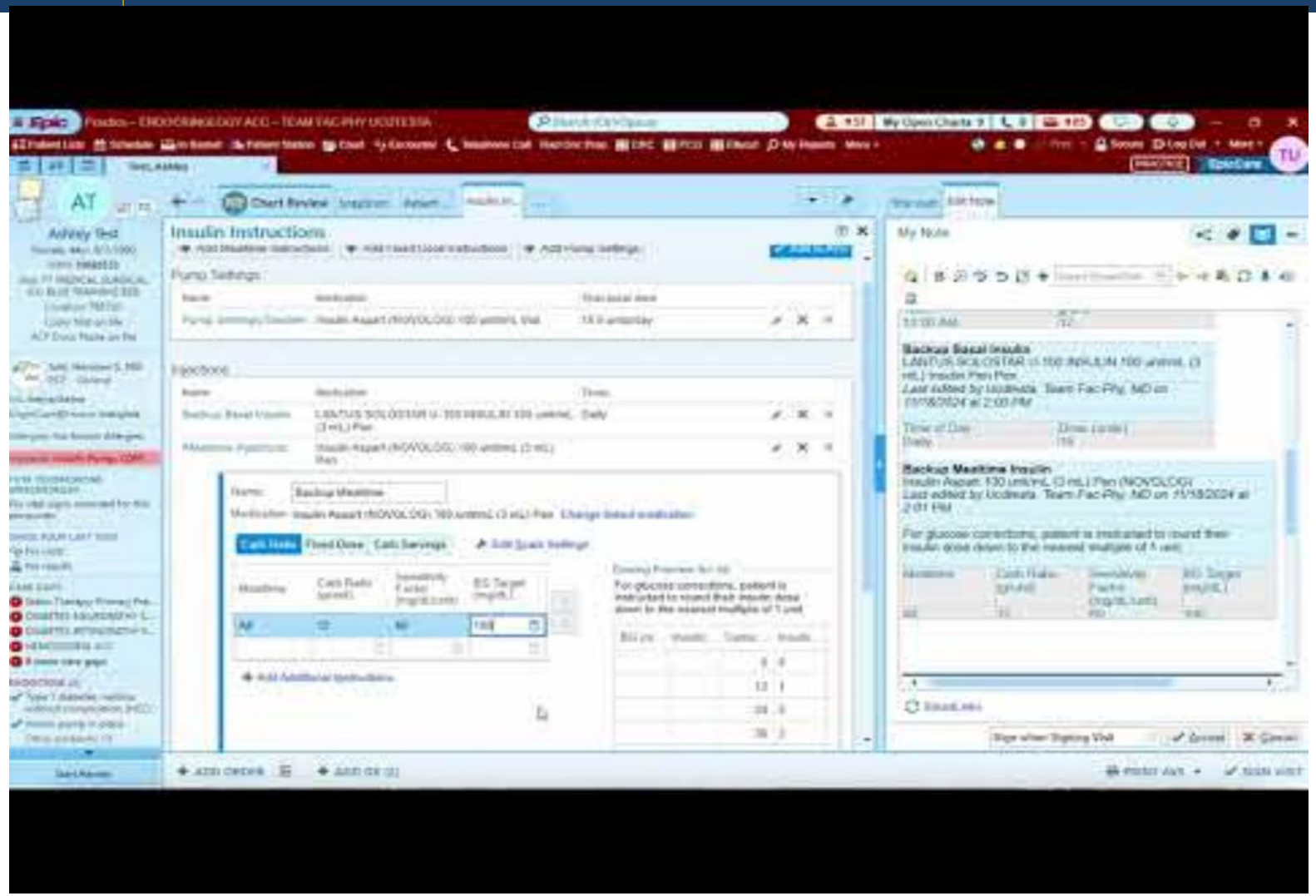
*2 patients did not have CGM

Inconsistent Documentation Jeopardizes Patient Safety

- EMR Documentation location varies by provider
- Majority have no backup plan
- CDCES difficulty finding plan
- Inpatient providers difficulty finding pump settings and backup plan

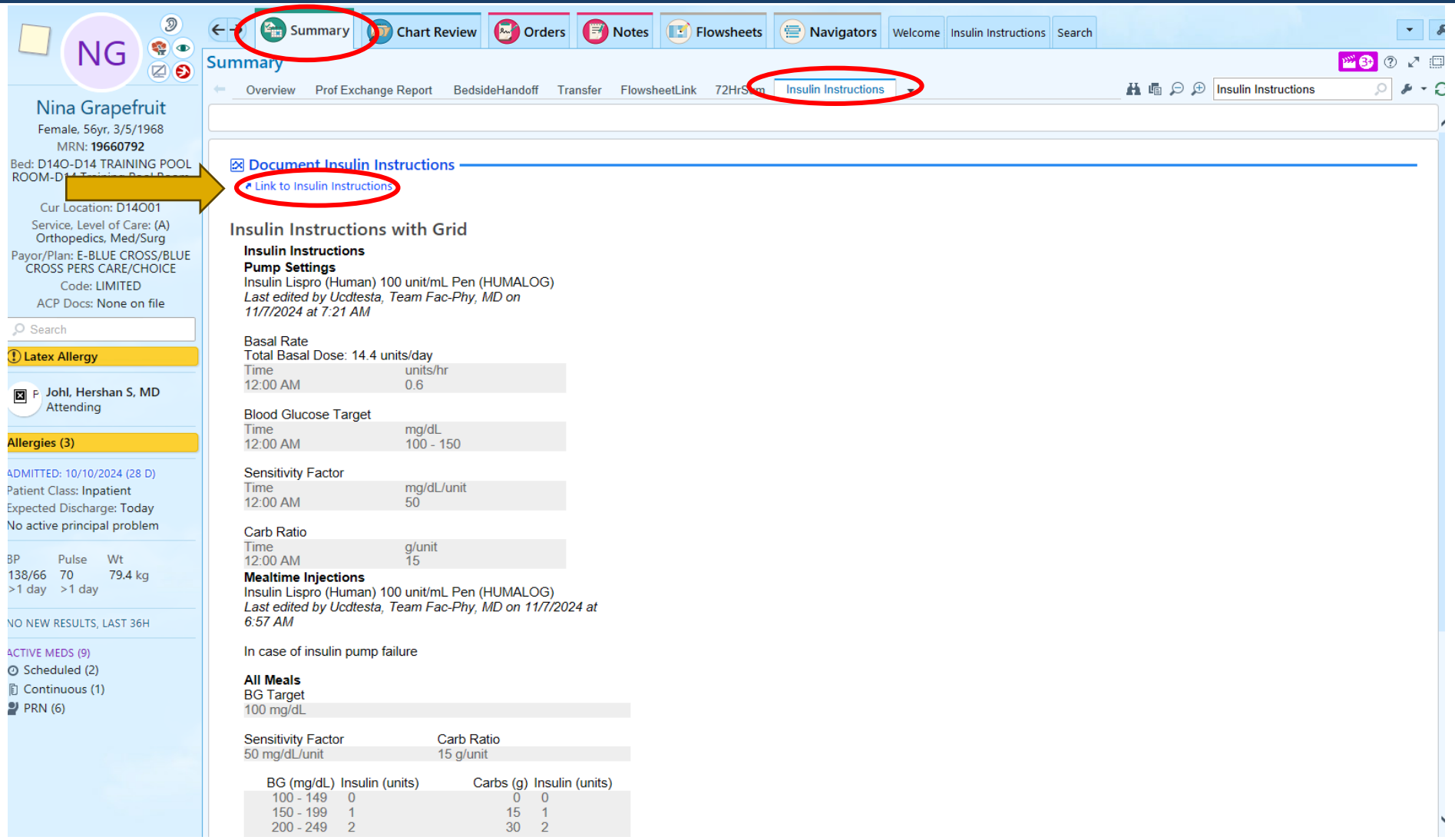


Insulin Pump Settings & Backup Insulin Plan



Link: https://www.youtube.com/watch?v=96auw2v9sc4

Standardization: Use of Insulin Instructions



Patient Education: Adult Diabetes Insulin Pump High Glucose Action Plan

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Adult Diabetes Insulin Pump High Glucose Action Plan

When glucose is too high, you will need to take action. A complication of diabetes, called diabetic ketoacidosis (DKA), can occur from increased levels of ketones. Ketones are a sign the body does not have enough insulin and can progress to a life-threatening condition if not treated.

When to call your diabetes care team:

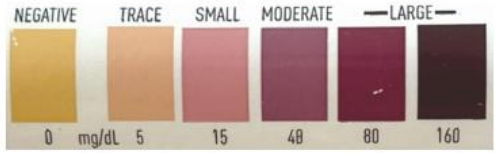
- If glucose is consistently less than 70 or greater than 250
- If your pump fails and you don't know or can't find your "Insulin Pump Back-Up Plan"

Clinic Phone Number: _____

After Hours Phone Number: _____

When to check urine or blood ketones:

- If unexplained glucose is higher than 250 (3 hours after taking a rapid-acting correction dose)
- When you are sick or have a fever, nausea or vomiting, stomach-ache, or short of breath
- Note: Avoid exercise until ketones are negative



URINE KETONE RESULTS

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Adult Diabetes Insulin Pump High Glucose Action Plan

GREEN ZONE
Urine Ketones Negative, Trace, Small (Blood less than 0.6 mmol/L)

1. Continue taking insulin through pump.
2. Continue checking glucose on usual schedule. If ketones are Small, continue checking every 3 hours until ketones are Trace or Negative.
3. Drink water, sugar free fluids, or broth to hydrate.
4. If ill, test ketones at least twice a day until you recover.

YELLOW ZONE
Urine Ketones Moderate (Blood 0.6-1.5 mmol/L)

1. Take a rapid-acting insulin injection through SYRINGE or PEN. DO NOT GIVE THROUGH THE PUMP.
2. CHANGE POD OR INFUSION SET no matter when it was last changed. If using an Omnipod®, put the pump into Manual Mode until ketones are Trace or Negative.
3. Drink water, broth, or sugar free fluid for hydration. If glucose is less than 150, drink fluids with carbohydrates (ex: Gatorade®, Pedialyte®, diluted apple juice) and take rapid-acting insulin as prescribed.
4. Recheck glucose and ketones in 3 hours. Continue to take rapid-acting correction insulin doses every 3 hours through the new infusion site until ketones are Trace or Negative.

RED ZONE
Urine Ketones Large (Blood greater than 1.5 mmol/L)

1. ***Call 911 or go to the nearest emergency department if unable to keep fluids down, continuous vomiting, rapid breathing or short of breath, confused or not responding normally.***
2. Take a rapid-acting insulin injection through SYRINGE or PEN. DO NOT TAKE DOSE through the PUMP.
3. CHANGE POD or INFUSION SET regardless of when it was last changed. If using an Omnipod®, put the pump into Manual Mode until ketones resolve.
4. Recheck glucose and ketones in 2 hours. Take a rapid-acting correction insulin dose every 2 hours through syringe or pen until ketones are Trace or Negative.
5. Drink water, broth, or sugar free fluids. If glucose is less than 150, drink fluids with carbohydrates (ex: Gatorade®, Pedialyte®, diluted apple juice) and take rapid-acting insulin as prescribed.
6. Call Diabetes Care Team if ketones are not improving (in 4-6 hours) or if you have any questions or concerns.

UC Davis Health | MPEC rev: 03/25

Summary

ALL insulin pump patients should have a backup plan documented in a standardized location

EPIC's Insulin Instructions are recommended for documentation consistency, ease of access to RN/RD CDCES and inpatient providers

Next Steps

- Survey patients
  - Do you have back up insulin and supplies?
  - Do you know your backup plan?
- Provider Practice
  - Select small group of providers to implement initially
  - Gather provider feedback about process
  - Offer stepwise approach (long acting insulin Rx first)
- Chart Review 9-12 months
- RN CDCES placing insulin instructions
  - Needs clinic policy
  - Needs training

Next meeting

Adult: September 25th 11:00 am – 12:30 pm EST