



T1D
Exchange

QI Collaborative Call, Pediatrics

9/22/22



Welcome & introductions

Agenda

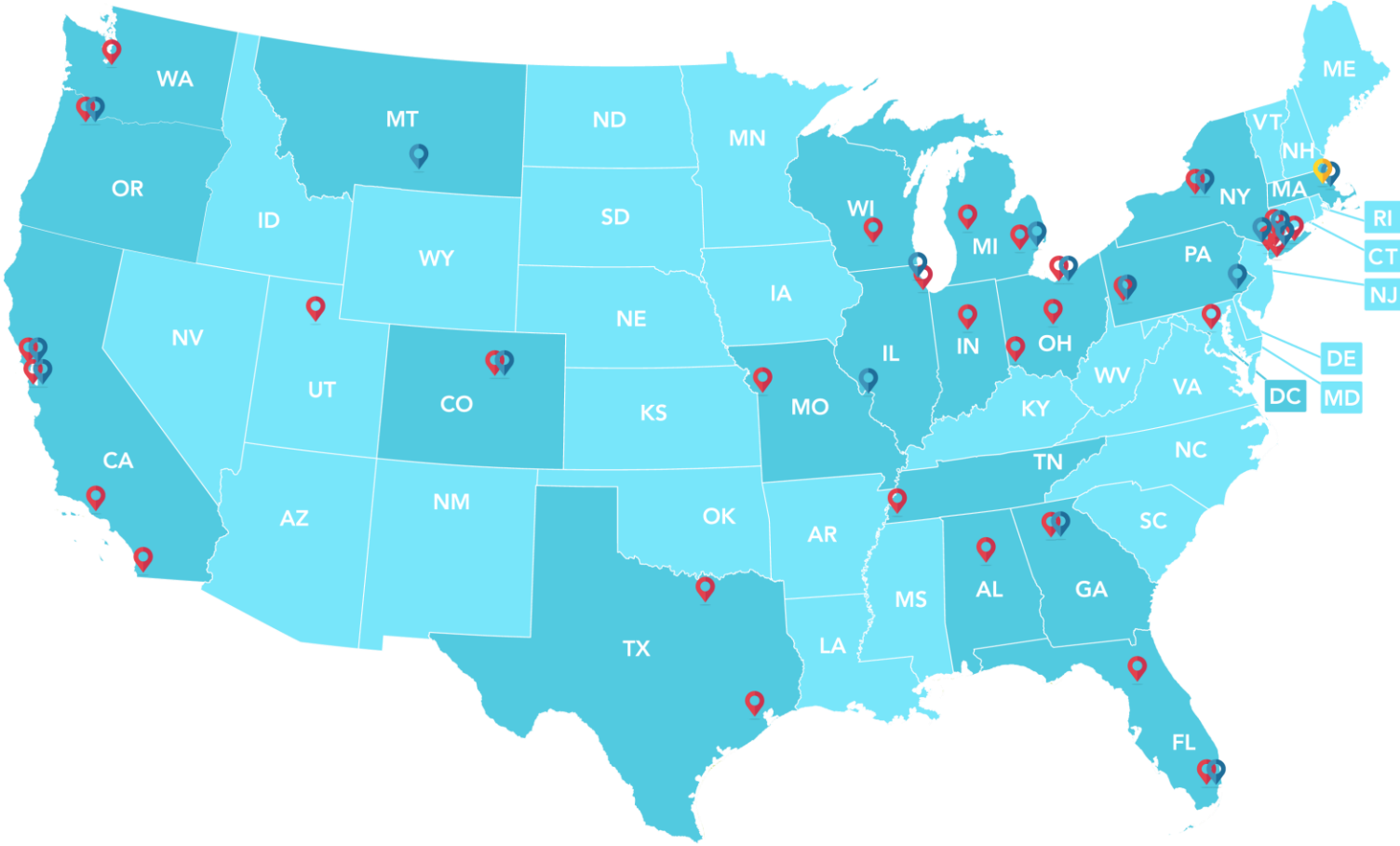
- Collaborative updates
 - New clinics joining the Collaborative
 - New T1DX-QI Team member
 - Reminders for the November Learning Session
- September Collaborative member presentations
 - Dr. Donna Eng, Helen DeVos
 - Drs. Jennifer Sarhis and Allison Mekhoubad, Cohen Children's



T1D Exchange Updates

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

T1D-QI network of 50 centers, caring for 75,000+ T1D patients across 20 states and Washington D.C.



 Pediatric  Adult  T1D Exchange HQ

Priya Prahalad, Nicole Riales et al. T1D Exchange Quality Improvement Collaborative: Accelerating Change through Benchmarking and Improvement Science for People with Type 1 Diabetes. Journal of Diabetes. Nov. 2021



32 pediatric clinics – caring for 50,000 patients with T1D



18 adult clinics – caring for 25,000 patients with T1D



50 Participating Clinics, 32 Pediatric & 18 Adult			Pediatric and Adult Clinics
Pediatric Clinics	Lurie Children's Naomi Fogel MD	Weill Cornell Zoltan Antal MD	Barbara Davis Center Halis Akturk MD & Todd Alonso MD
Children's Mercy Hospital Mark Clements MD PhD	Mott Children's Joyce Lee MD	Adult Clinics Albert Einstein Shivani Agarwal MD MPH	Cleveland Clinic, Pratibha PR Rao MD MPH & Andrea Mucci MD MASc
Children's Hospital Los Angeles Brian Miyazaki, MD	Nationwide Children's Manu Kamboj MD	Billings Clinic Haleigh James MD	Mount Sinai Carol Levy MD & Robert Rapaport MD
Cincinnati Children's Hospital Sarah Corathers MD	Rady Children's Carla Demeterco Berggren MD PhD	Boston Medical Center Devin Steenkamp MD	NYU Langone: Lauren Golden MD & Siham Accacha MD. Hassenfeld Children's Hospital at NYU Mary Pat Gallagher MD
CHOA Kristina Cossen MD	Seattle Children's Hospital, Faisal Malik MD, MSHS and Alissa Roberts MD	Grady Memorial Hospital Sonya Haw MD	Oregon Health & Science University Ines Guttman-Bauman MD and Andrew Ahmann MD
Cohen Children's Medical Center, Northwell Health, Jennifer Sarhis MD & Allison Mekhoubad DO	Texas Children's, Daniel DeSalvo MD	Northwestern Medicine Grazia Aleppo MD	Stanford University Marina Basina MD & Priya Prahalad MD
Cook Children's Susan Hsieh MD	University of Florida Laura Jacobsen, MD	Penn Medicine Ilona Lorincz MD	SUNY, Pediatrics and Adult Ruth Weinstock MD PhD Roberto Izquierdo MD
Helen Devos Children's Donna Eng MD	University of Alabama Mary Lauren Scott MD	Washington University Alexis McKee MD	UCSF, Pediatrics and Adult, Umesh Masharani MD & Jenise Wong MD
Indiana University Health Anna Neyman MD	University of Utah, Intermountain Healthcare Vandana Raman MD and Allison Smego MD	Wayne State University, Berhane Seyoum MD & Elizabeth Morrison MD	UPMC Jason Ng MD and Alissa Guarneri, MD, MBOE
Le Bonheur Children's, U TN Grace Bazan MD	University of Wisconsin, Madison Liz Mann MD		University of Miami, Francesco Vendrame, MD PhD & Janine Sanchez MD

Welcome the University of Utah!



Dr. Raman is an Associate Professor in Pediatrics at the University of Utah. She is an Attending Physician in the Division of Pediatric Endocrinology and provides care for children with diabetes and endocrine conditions in the inpatient and outpatient settings at Primary Children's and University hospitals and clinics .

She is the Program director of Pediatric Endocrinology and Diabetes Fellowship Program at the University of Utah.

She also serves as the Director of the DIME clinic (Diabetes Intensive management and education) and collaborates with behavioral health specialists to provide comprehensive care to patients with Type 1 diabetes.



Dr. Smego is an Assistant Professor of Pediatrics in the Division of Pediatric Endocrinology at the University of Utah. She earned her medical degree from the University of Cincinnati School of Medicine. She completed residency training in Pediatrics at Vanderbilt University and her Pediatric Endocrinology fellowship at Cincinnati Children's Hospital Medical Center. Dr. Smego is board certified in General Pediatrics and is board certified in subspecialty of Pediatric Endocrinology.

Collaborative Clinic Profile

Clinic	Multidisciplinary Team Members	Volume & Medicaid Estimates	Contact Names
Primary Children's Hospital	<ul style="list-style-type: none"> • 8 Board certified or board-eligible endocrinologists • 3 Endocrinology fellows • 4 NPs • 8.5 FTE RNs • 5.2 FTE RNs with CDCES • 1.8 FTE dietitians with CDCES • 1.7 FTE Social workers • 0.5 FTE psychologist 	<p>2,100 patients with T1D 200 patients with T2D 200 patients with other forms of diabetes</p> <p>74% commercial insurance 25% public insurance 1% uninsured</p>	<p>Site Co-PI Vana Raman, MD Vana.raman@hsc.Utah.edu Allison Smego, MD Allison.smego@hsc.Utah.edu</p> <p>Site Coordinator LeAnn Gubler, MSN, RN LeAnn.Gubler@imail.org</p>

T1DX-QI welcomes a new team member!



Trevon Wright, MHA
Senior Quality Improvement Analyst

Monday Breakout, 11:05am-12:05 pm

Topic areas	Clinics			Chair	
Making device access equitable	Einstein Tech equity with young adults	Le Bonheur, Equitable CGM access	Nationwide CGM Continuing Improvement Equity	NYU/T1DX Staffing FTE	Alexis McKee
Improving device access	U of Wisconsin Decreasing barriers to CGM	Rady Increasing CGM access, decreasing inequities	Grady CGM access in safety net	Seattle CGM use, insurance, race equity	Donna Eng, Helen DeVos
Population health & data dashboards	CMH Dashboard of Self-Man Habits	CMH Data dock: continuous improvement	Stanford 4T program CDE perspectives	T1D Registry SES and A1c	Brian Miyazaki, CHLA

Monday Breakout, 1:10 pm- 2:10 pm

Topic areas	Clinics			Chair	
Building equity through SDOH screening	CMH SDOD/ Race/ethnicity	CCHMC Equity, care transformation , SDH spread	Cook Implementin g SHH screener	NYU Screening	Andrea Mucci, CCF
Supporting device use	BDC Tech support: pump failure	TCH Standardizing Pump therapy	CCHMC Remote pump upload	UMiami Tech use: Hispanic patient perspective	Sonya Haw, Grady
Decision support & care continuity	CCHMC Using AI decision support engagement	CCHMC Continuity of care fellowship	Mich D3 Patient driven review, data, insulin changes	Rady Access and Continuity for Medicaid <u>pts</u>	Alissa Guarneri, UPMC

Tuesday Breakout, 8:50-9:50 am

Topic areas	Clinics				Chair
Developing Collaborative Infrastructure	T1DX Publications	T1DX Building QI capacity	T1DX Data mapping errors	T1DX Value: mapped vs unmapped	Vandana Raman, University Utah
Patient engagement: supporting through education, wellness programs and mental health services	Stanford Mental health, Adult	UCSF Depression screening peds	Cook Engagement questionnaire	UCSF <u>Techquity</u> and peer support	Jeff Hitchcock, Patient/Parent Advisor
Identifying, Delaying, and Reducing DKA, Admissions & Supporting High-Risk Populations	CMH Reduced delayed DKA f/u	SUNY Admissions	CMH CGM dashboard for at risk pop	NYU Wellness for high risk, <u>>9%</u>	Andrew Ahmann, OHSU

Learning Session: Monday Nov. 7-Tuesday Nov. 8

- Agenda will be shared in October
- Activities begin 8am on 11/7. -n person attendees are encouraged to fly in on Sunday 11/6
- Activities end by 3pm on 11/8 so that you can fly home Tues. evening
- Activities will have CME/CEU credits

T1D Exchange will cover costs for:

- Two team member flights and hotels for two nights (We book the hotel. You book the flights. We reimburse for economy flights.)
- Our reimbursement form/details can be found on the T1D Exchange website.
- Use this [link](#) to access on the website.

Learning Session Deadlines

Abstracts will be published in the Journal of Diabetes before Nov. 7th

Share your slides to QI@t1dexchange.org by 10/4/22

- 10 min slide presentation during the Learning Session
- Presentations are bundled into thematic areas with four presentations being shared during breakouts
- Please limit to no more than 10 slides

Share your poster to QI@t1dexchange.org by 10/4/22

- 36" X 48" is the preferred for poster
- Use your institution's template/color scheme
- Posters should have 5 sections: Background/Objective(s); Methods; Results; and Conclusion.
- Posters should list poster authors and institution name at the top of poster



Clinical Presentation:



Building a Better Bridge: Implementation of the READDY Assessment in the Transition to Adult Care

Donna Eng, MD

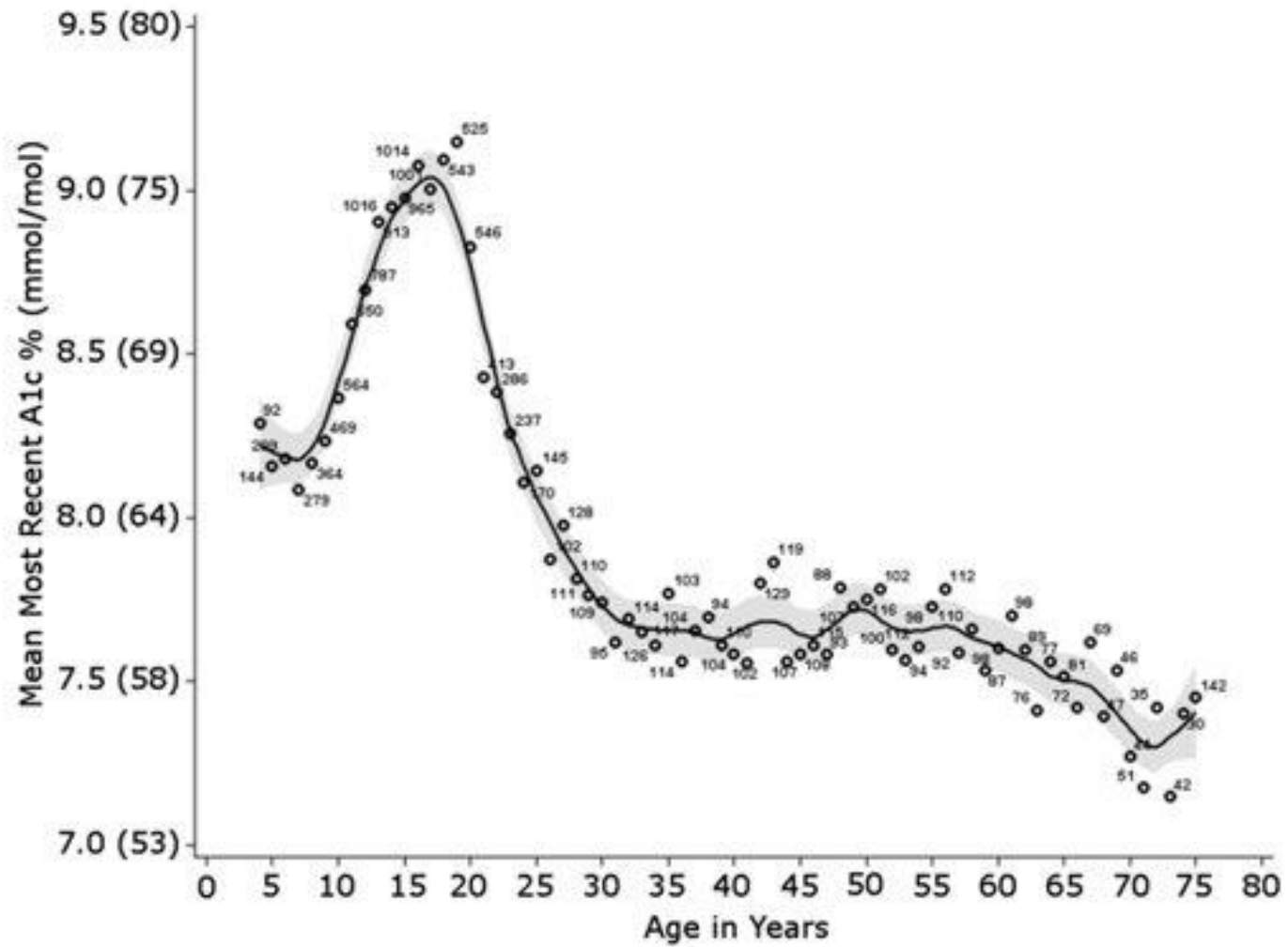
SEPTEMBER 22, 2022

Learning Objectives

- Identify key reasons for the importance of formal transition process to adult medical care
- Identify barriers to successful transition
- Identify one tool for assessing youth readiness for transition
- Describe a measurable outcome related to transition care

Background

- Self-care required of chronic disease
- Time of “life” transition as well
- They may have feelings of “that won’t happen to me”
- Competing priorities

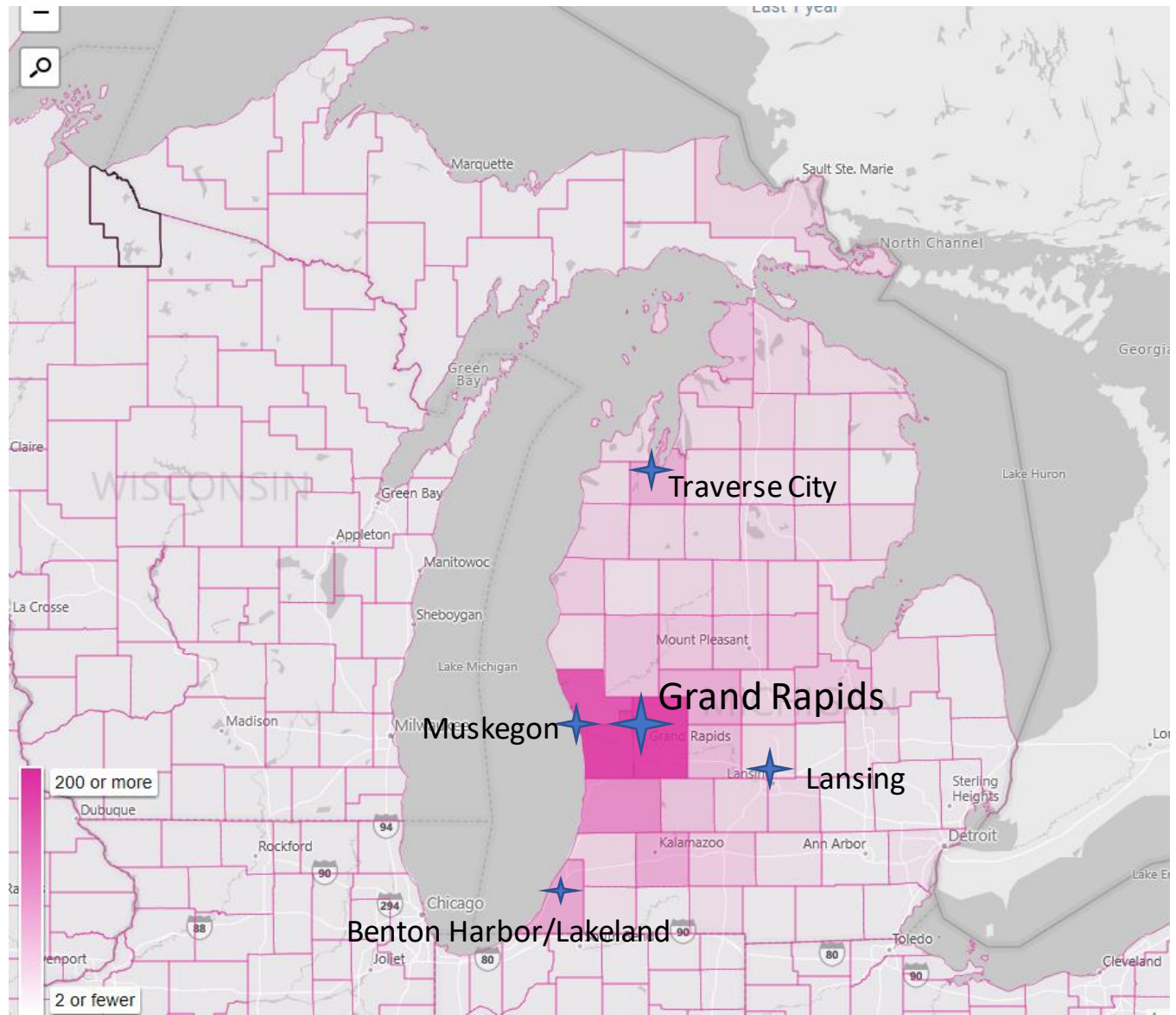


Miller et al. Diabetes Care 2015; 38:971

Helen DeVos Children's Hospital
Pediatric Endocrinology and Diabetes

- **Grand Rapids, MI**
- **Founded in 1995**
- **~1500 T1D patients**
- **200 new onset T1D annually**
- **40% Medicaid**
- **20% rural**





READDY Assessment

- Readiness for Emerging Adults with Diabetes Diagnosed in Youth
- Self-assessment
 - Participants rate their confidence level
- Topics
 - Diabetes Knowledge
 - Health System Navigation
 - Insulin Self-Management
 - Health Behaviors
- Responses- Likert Scale
 - 5 Yes, I can do this
 - 4 Somewhat, but I need a little practice
 - 3 No, I still need a lot of practice
 - 2 I plan to start
 - 1 I have not thought about it

-Corathers et al. *Care Diabetes Spectr* 2020; 33(1):99-103

-Chase HP. *Understanding Diabetes* 11th ed. Aurora, Colo. Barbara Davis Center for Diabetes 2007

-American Diabetes Association Children and adolescents: Standards of Medical Care in Diabetes—2018
Diabetes Care 2018;41 (Suppl. 1):S126- S136

HDVCH TRANSITION TO ADULT READY IMPLEMENTATION

Workflows & Procedures

- Patients needing to complete assessment not easily identifiable
- Difficult to remember to give assessment amongst other usual clinic visit tasks
- Lack of education of staff on purpose of assessment and thus unable to educate patient on intent of assessment
- Patient does not complete assessment due to form fatigue

Procedure

- Staff and Patient often lack time within the office visit to cover topics
- Patient often lacks time to complete assessment
- Lack of ability to document assessment efficiently in EPIC
- Lack of ability to track who has had assessment done and when they need to be reassessed

Problem: Young adults with T1DM are inadequately prepared and supported in transitioning to adult healthcare.

Equity and Access

- Limited access to Adult Endocrinologist especially in rural areas
- Challenging to maintain list of adult endos
- Challenging communication with adult endo practices and their referral processes
- Prolonged scheduling of initial appointment with Adult clinics
- Difficult to follow-up if patient actually "launched" to adult practice

Education

- Patients often have unrecognized differences in learning styles
- There can be an overwhelming list of topics to review
- Knowledge gaps are difficult to identify
- Difficult to track topics that have been covered, topics that need to be covered and topics that need to be reviewed
- No plan as to who is responsible for reviewing which topics (MD vs CDE vs RD vs MSW)
- No formal determination of who is "ready" to transition

Social/Psychological

- Stress/Anxiety/Fear associated with more independence and change
- Lack of family support/stability


Aim

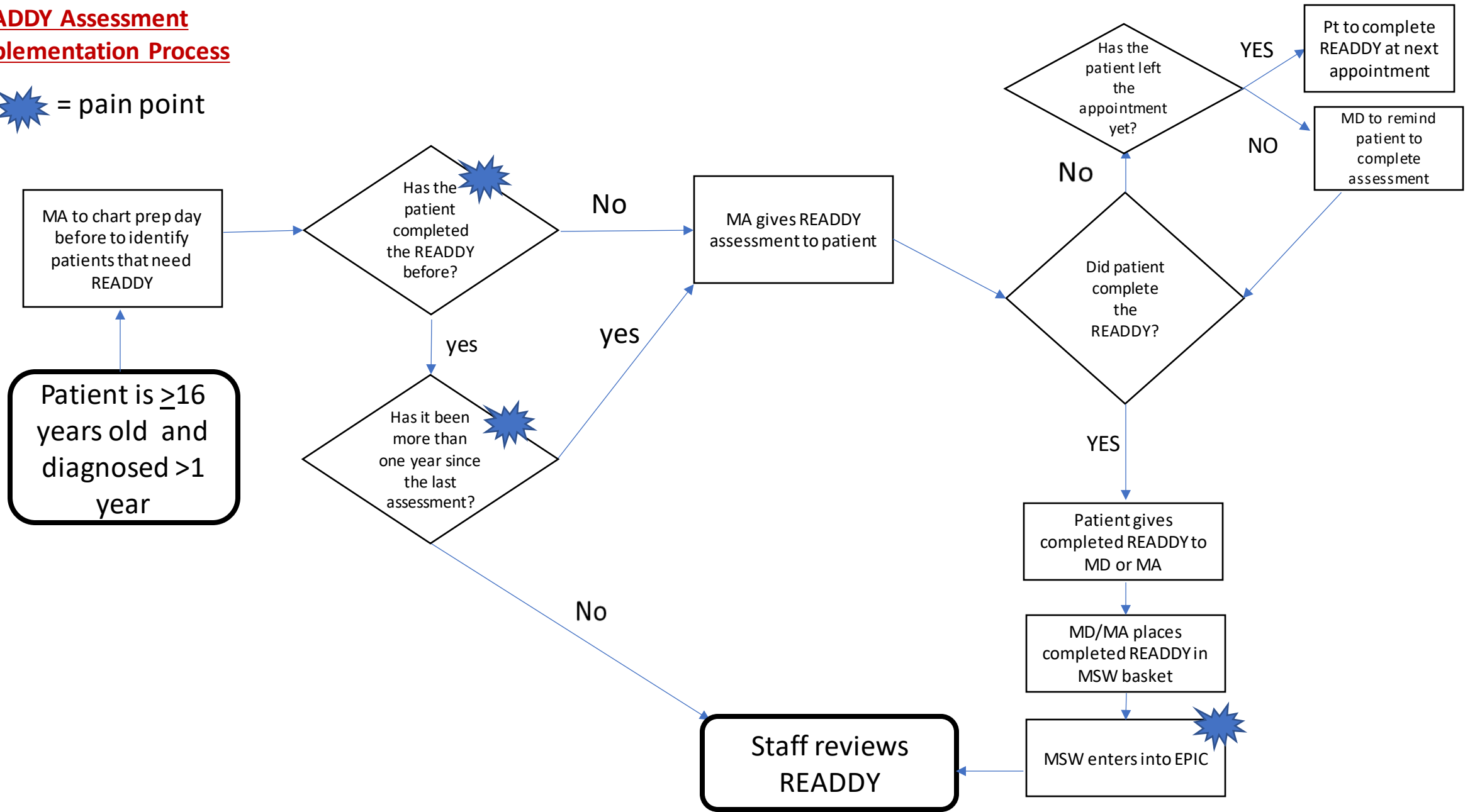
Increase the number of patients with a documented transition plan to adult endocrinology by 25% from baseline

Methods

- Utilized READDY to initiate the transition to adult process for patients aged 16 years and older with anticipation to adult care at the age of 18 years
- PDSA
 - Incorporated a formal process of administering READDY
 - Centralized way of documenting/tracking READDY completion
 - Monthly reports were generated and reviewed using run charts

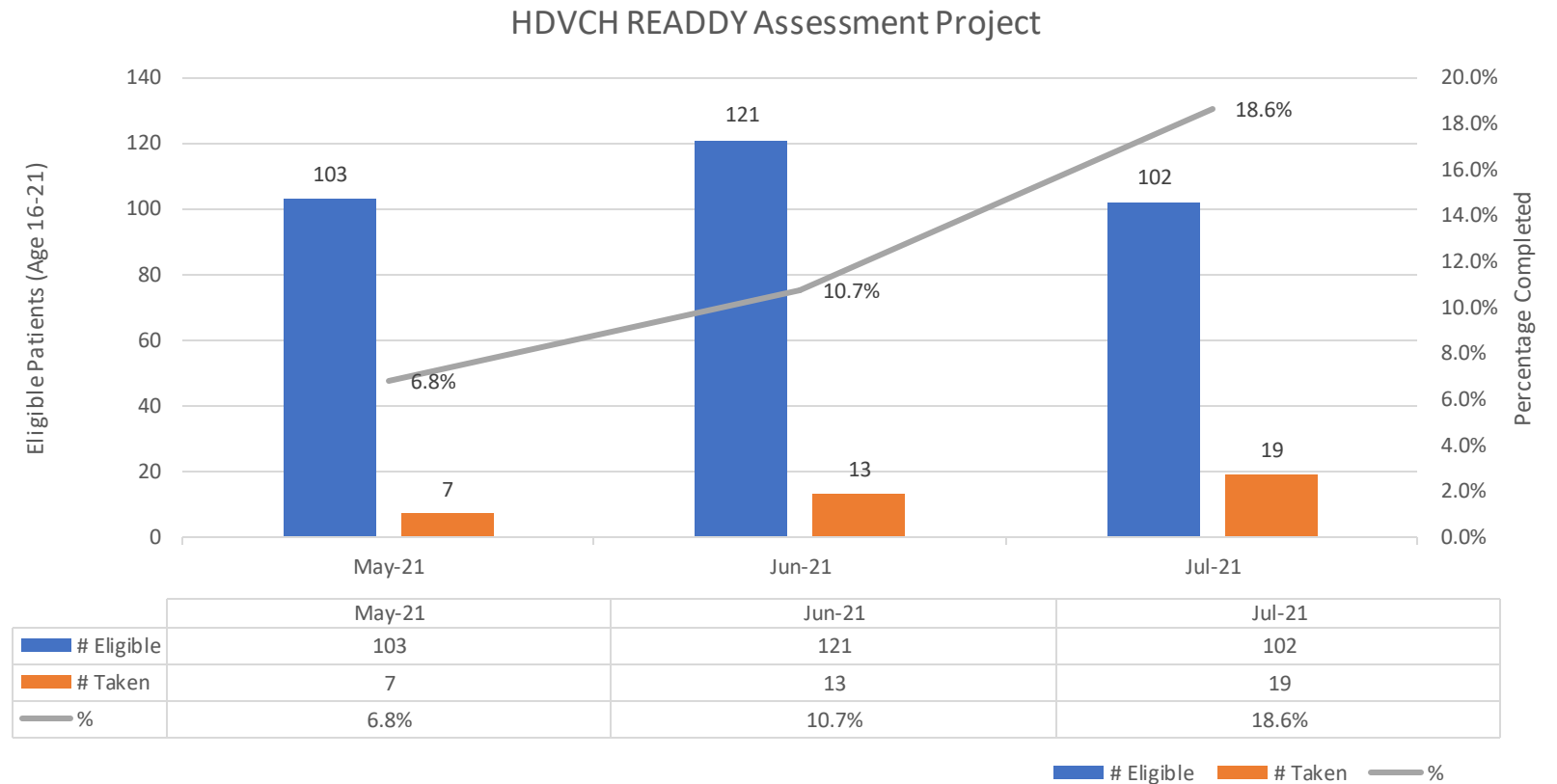
READDY Assessment Implementation Process

 = pain point



PDSA-1

- Objective: Increase administration of READDY by 25% from baseline
- Intervention:
 - One MD/NP/MA/CDE team
 - 8 weeks duration
 - % READDY administered



Pediatric Endocrinology READDY



Responsible Create Note

Show Row Info Show Last Filed Value Show All Choices

Knowing the facts about diabetes (knowledge), I am able to:



Describe diabetes in my own words

Yes, I can do this Somewhat, but I need a little practice No, I still need a lot of practice I plan to start I haven't thought about it

Explain what Hemoglobin A1c (HbA1c) measures

Yes, I can do this Somewhat, but I need a little practice No, I still need a lot of practice I plan to start I haven't thought about it

Recall my most recent HbA1c

Yes, I can do this Somewhat, but I need a little practice No, I still need a lot of practice I plan to start I haven't thought about it

State my target HbA1c

Yes, I can do this Somewhat, but I need a little practice No, I still need a lot of practice I plan to start I haven't thought about it

Understand my current health status

Yes, I can do this Somewhat, but I need a little practice No, I still need a lot of practice I plan to start I haven't thought about it

Describe three long-term problems that might come from high HbA1c

Yes, I can do this Somewhat, but I need a little practice No, I still need a lot of practice I plan to start I haven't thought about it

Teach a friend or roommate about signs of hypoglycemia

Yes, I can do this Somewhat, but I need a little practice No, I still need a lot of practice I plan to start I haven't thought about it

Teach a friend or roommate about treatment of hypoglycemia, including use of Glucagon

Yes, I can do this Somewhat, but I need a little practice No, I still need a lot of practice I plan to start I haven't thought about it

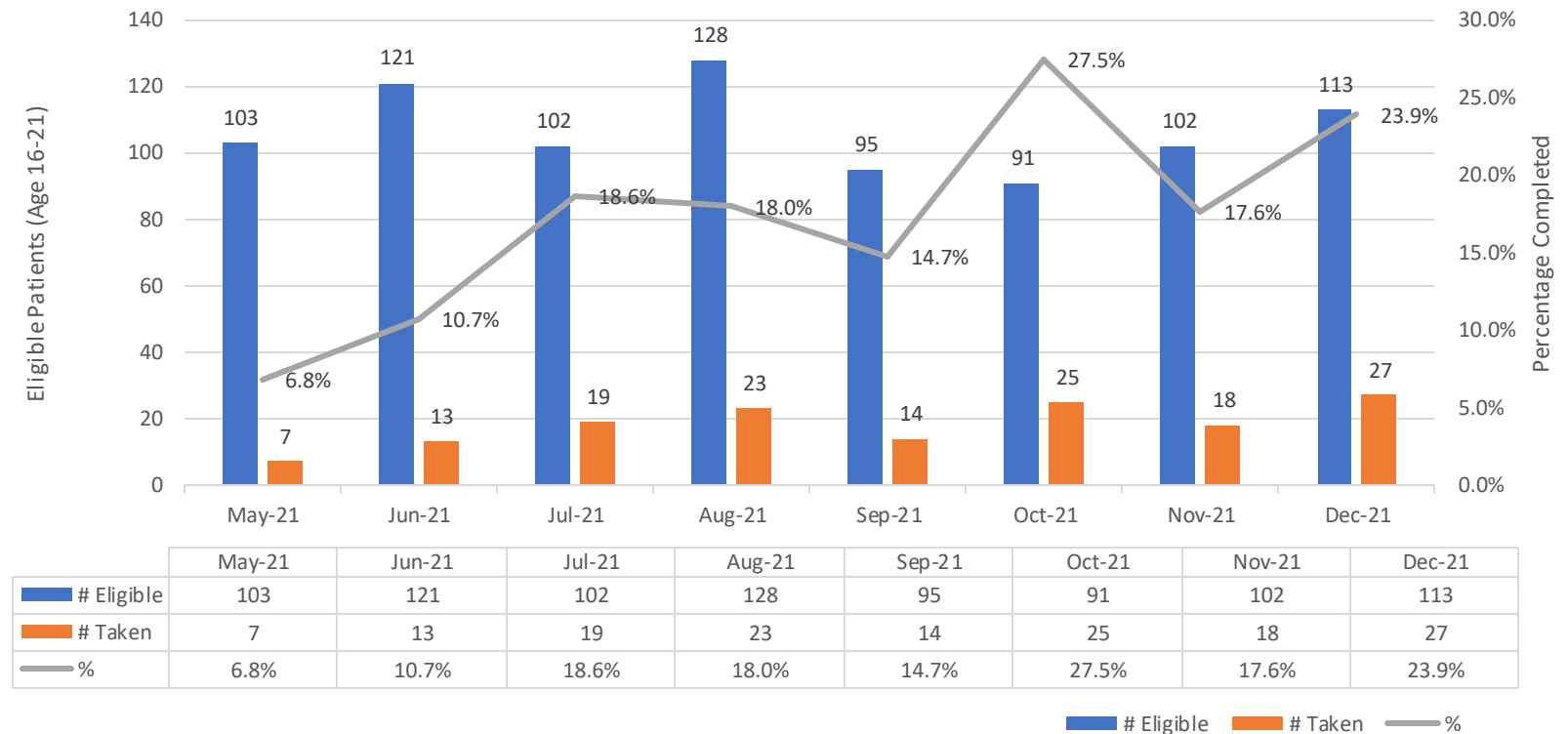
Tell someone how alcohol effects blood glucose

PED ENDO READDY ASSESSMENT SUMMARY	5/24/2022
Knowledge Mean Score	4.23
Navigation Mean Score	3.69
Insulin Management Mean Score	5
Health Behaviors Mean Score	4.56
Pump Skills Mean Score	5

PDSA-2 (Expansion!)

- Objective: Increase administration of READDY by 10% from baseline
- Intervention:
 - Rolled out to whole clinic
 - 4 months
- Barrier:
 - Difficult to identify who needs to get a READDY

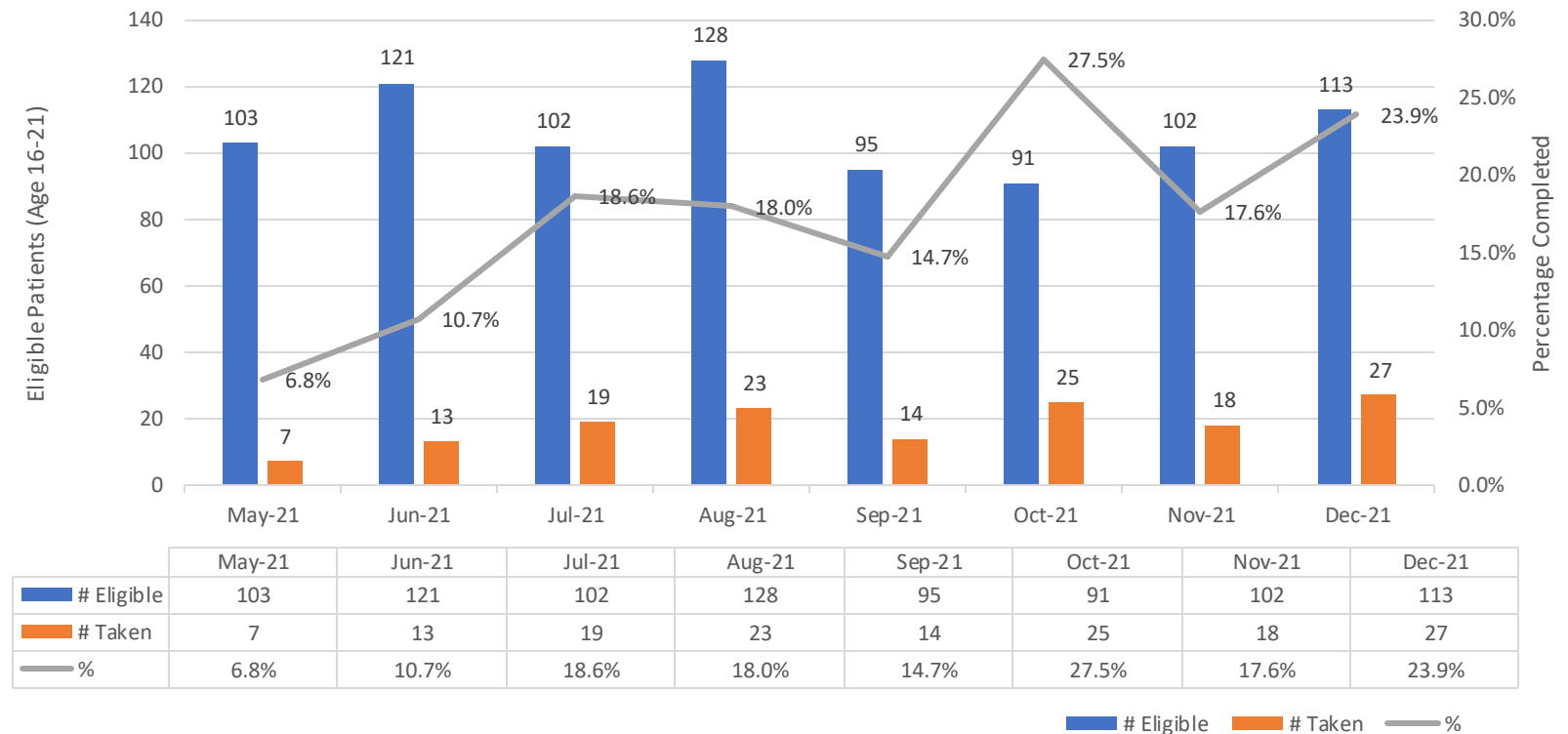
Expanded to all MD/NP



PDSA-3 (Daily Report)

- Objective: Increase administration of READDY by 10% from baseline
- Intervention:
 - Created a Daily Report in Reporting workbench

Expanded to all MD/NP



Report Settings - Find Encounters [21329579]

Criteria | Display | Appearance | Summary | Print Layout | Toolbar | Override | General

Find Encounters ⓘ

Find Criteria

Date Range From: M-1 (8/16/2022) To: T+1 (9/17/2022)

Patient base ⓘ

All Patients

Age in years **1** ⓘ

Less than 21 **AND**
Greater than or equal to 16

Diagnosis by grouper **2** ⓘ

EDG CONCEPT DIABETES TYPE 1 **OR**
EDG CONCEPT DIABETES MELLITUS

Encounter department **3** ⓘ

SHMG PEDS DIAB ENDO 35 **OR**
SHMG PEDS ENDOCRINE ICCNM **OR**
SHMG PEDS DIAB ENDO LKLND **OR**
SHMG PEDS ENDOCRN LANSING **OR**
SHMG PED DIAB ENDO TC 550 **OR**
SHMG PEDS DIAB ENDO TC

Report Logic **Custom** **Show search summary**

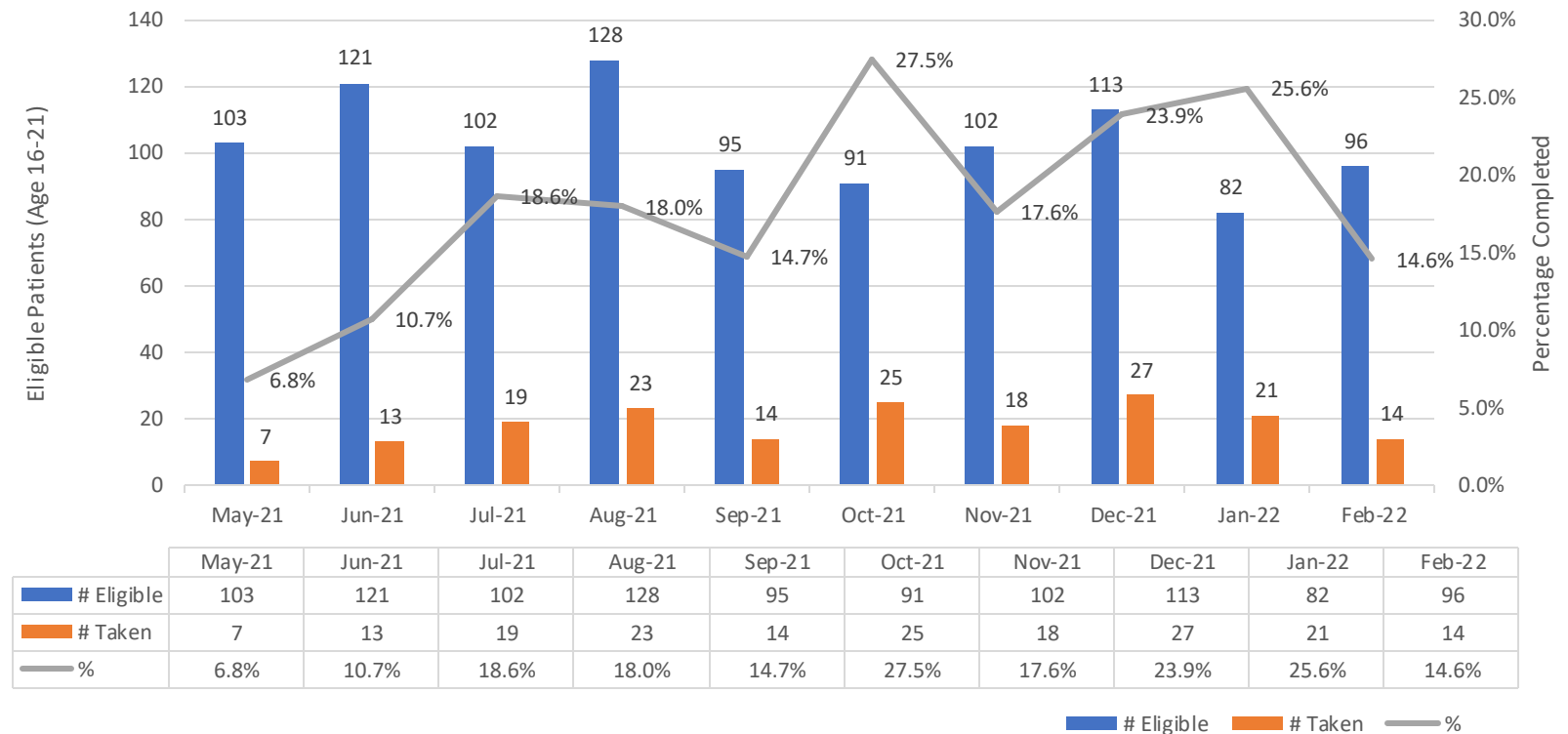
Run **Save** **Save As** **Restore** **Close**

PDSA-3 (Daily Report)

- Objective: Increase administration of READDY by 10% from baseline
- Intervention:
 - Created a Daily Report in Reporting workbench
 - 8 weeks
- Barriers:
 - Education lacking in utilizing report
 - Difficult to remember to run it

Expanded to all MD/NP

Created Daily Report

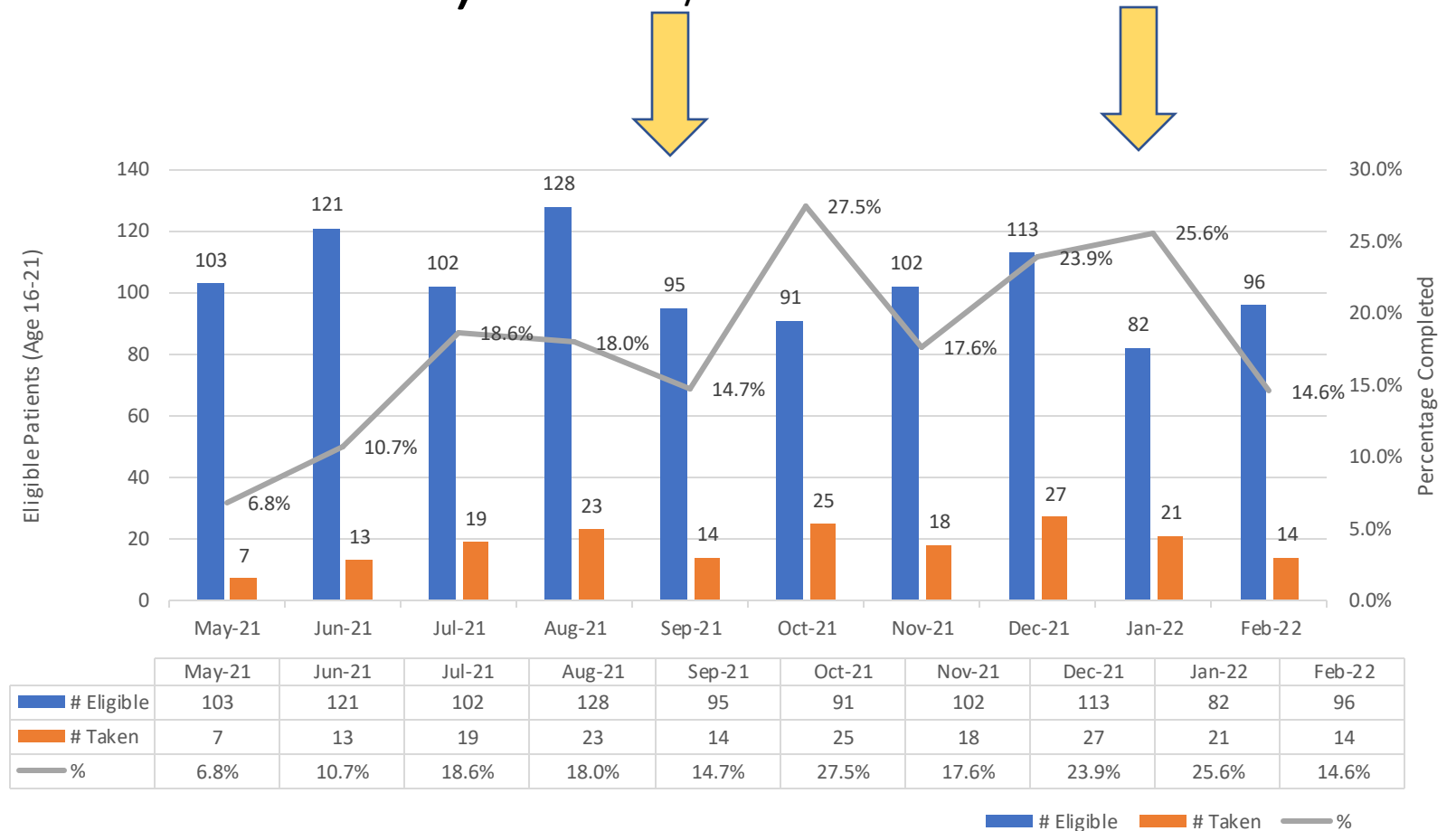


PDSA-4 (READDY Column)

- Objective: Increase administration of READDY by 10% from baseline
- Intervention:
 - Created a “Last completed READDY” column within the schedule
 - 8 weeks

Expanded to all MD/NP

Created Daily Report

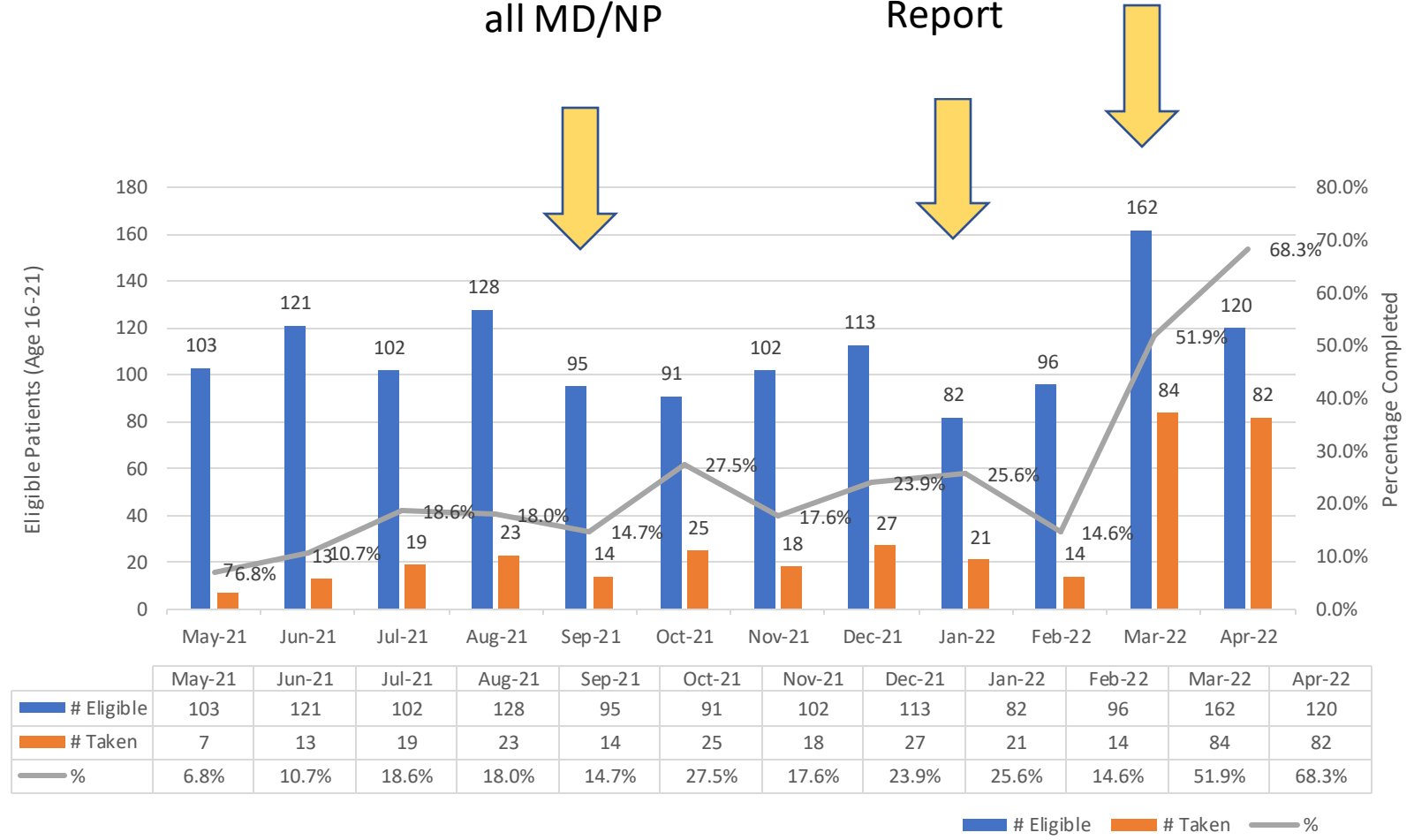


Time	Pri?	Status	Status Details	Provi...	Age/Gender	Checked In	Notes	Last HBA1C	Suicidal..	Last Readdy Assessment
SHMG PEDS DIAB ENDO 35										
7:00 a		Signed	Checked out: 7:37 AM		17 y.o. / F	6:55 AM	-4 months follow up DM frist Available/F2F	7.9		
7:30 a		Signed	Checked out: 10:21 AM		17 y.o. / F	7:30 AM	(need meter) 6 month T2DM	7.2	⚠ Y	
8:00 a		Signed	Checked out: 8:48 AM		8 y.o. / M	8:02 AM	(need tandem/dexcom) 3mo follow up T1D with DE or NP	6.9		
8:30 a		Scheduled	No Show		15 y.o. / M		9-16-22 cw Sent NSx2 letter to PCP and Family (need meter) f/u T1D Eng/NP 3 mo	12.7		
9:00 a		Signed	Checked out: 11:01 AM		12 y.o. / M	9:14 AM	(need meter) Follow up T1DM 3m (Aug/Sep) DE	8.5		
9:30 a		FOLLOW UP DI								
10:00 a		Signed	Checked out: 10:52 AM		20 y.o. / F	9:51 AM	(need meter/tandem) Return in about 3 months (around 7/29/2021) for Face to Face, DE or SK, Diabetes.	6.8		01/13/2022
10:30 a		Signed	Checked out: 11:07 AM		18 y.o. / F	10:25 AM	(need tandem/dexcom) FTF follow Up diabetes	7.2		10/19/2021
11:00 a		Signed	Checked out: 12:28 PM		16 y.o. / F	11:01 AM	(need tandem) 3 month DM follow up/Coming w sib DE/NP	8.3		06/24/2022
11:30 a		Signed	Checked out: 12:29 PM		11 y.o. / F	11:03 AM	(need tandem) 3 month DM follow up DE/NP	9.3		
12:00 p		Signed	Checked out:		5 y.o. / M	11:58 AM	(need dexcom) F2F/1st	7.8		

PDSA-4 (READDY column) Expanded to all MD/NP

- Results: Increased completion percentage from 14% to 68%

Created Daily Report
READDY column



PDSA-4 (READDY column) Expanded to all MD/NP

- Results:

- plateaued over time

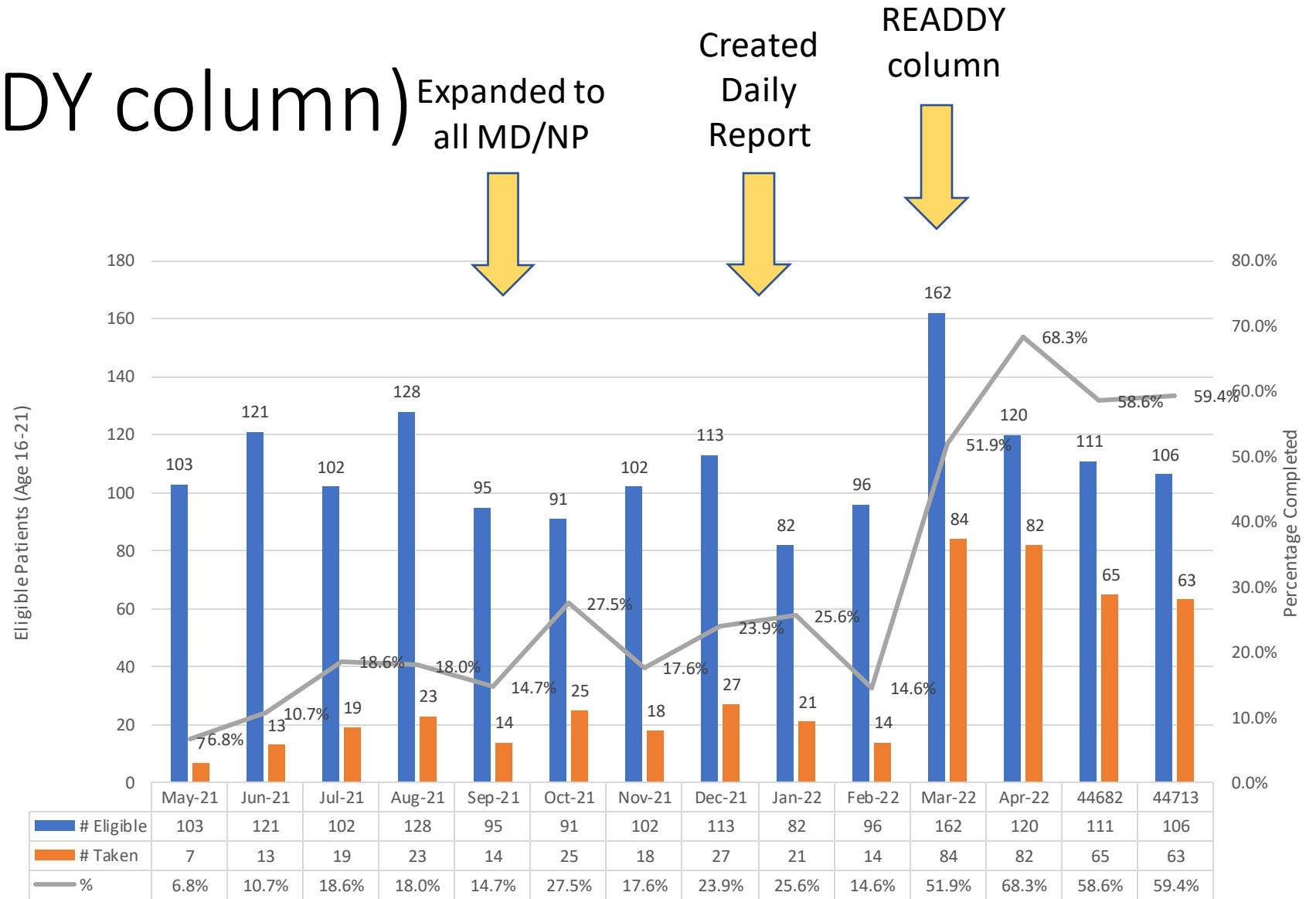
- Observations:

- short attention span

- no structure as to who was covering which topics

- difficult to know who has covered what and when

- limited time



PDSA-5 (Quarter System)

- Interventions:

- divided the year into quarters

- each discipline covers a quarter

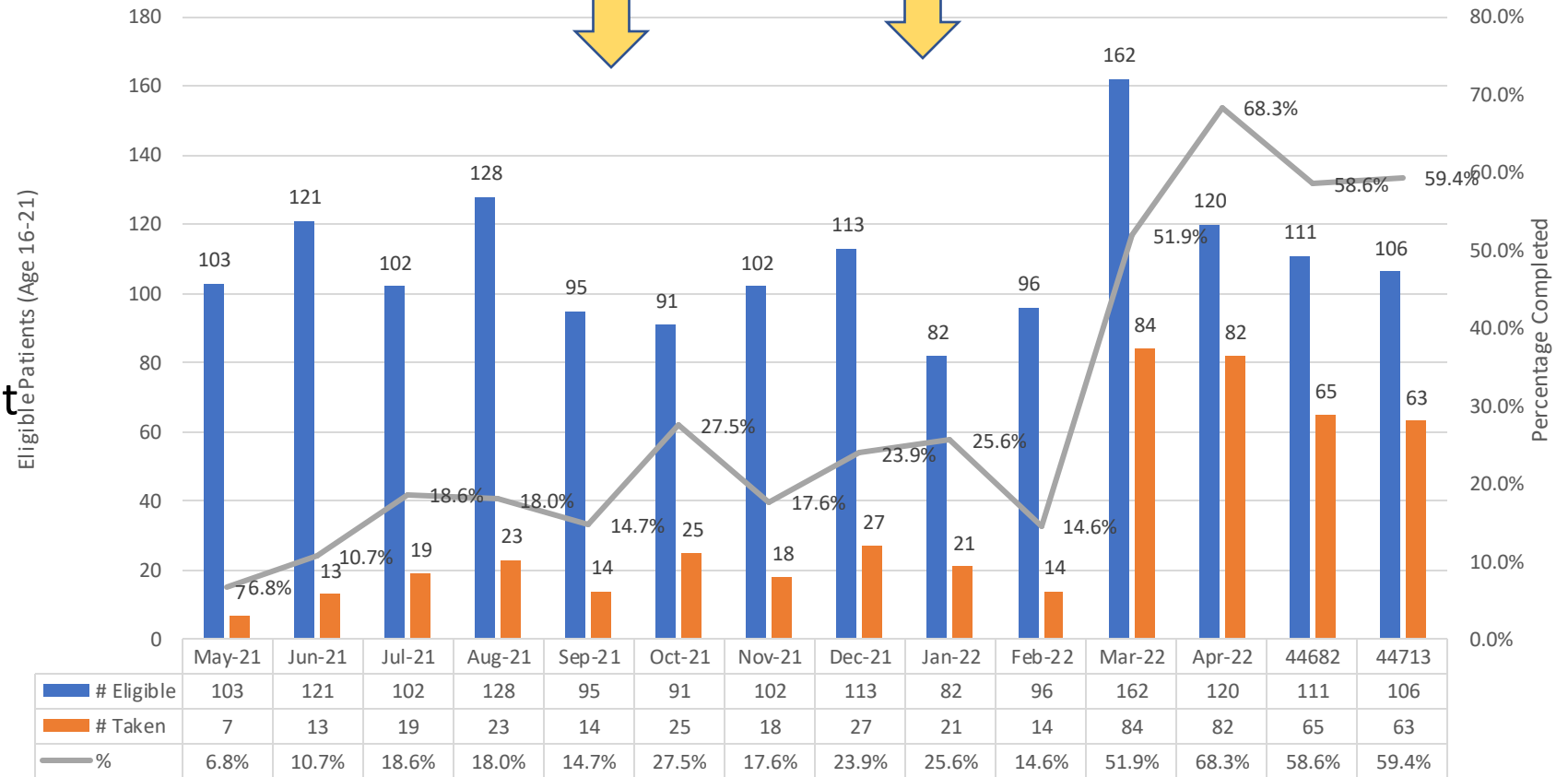
- documented in EPIC when pt was seen by each discipline

- made smart phrases to document topics covered


Expanded to all MD/NP

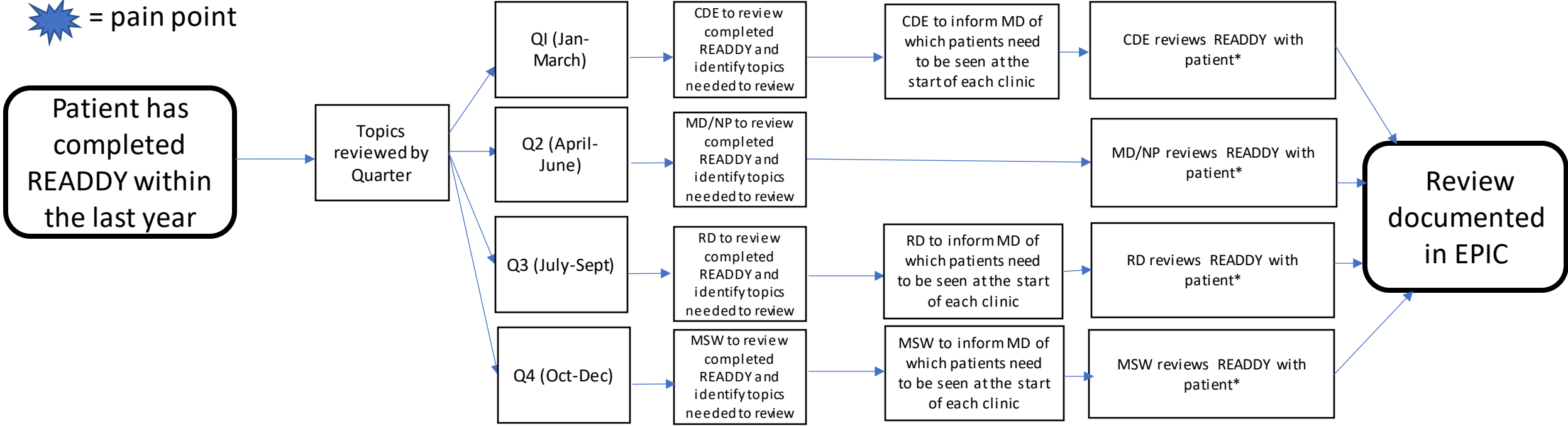
Created Daily Report

READDY column



READDY Assessment review process

 = pain point



RD

Knowledge:

- Teach a friend or roommate about signs of hypoglycemia
- Tell someone how alcohol affects blood glucose

Health Behaviors:

- Count carbohydrates and know where to look for carb information
- Test blood glucose before each meal and when having symptoms of low glucose values
- Perform diabetes care (take insulin, check blood glucose) in front of peers, friends, co-workers or in public when necessary
- Notice differences in my health, such as weight changes or illness
- Manage my diabetes during illness, including when to call my provider
- Describe strategies to prevent low and high blood glucose levels when exercising

CDE

Navigation:

- Arrange for transportation to medical appointments
- Ask questions of the medical team during my clinic visits
- Answer questions about my own past health history
- Answer questions about my family medical history
- Call the office for treatment advice
- Have medical insurance or speak to a social worker or financial counselor about getting coverage
- Call my insurance company and ask about my coverage for supplies and medicines
- Refill a prescription at the pharmacy
- Seek emotional support as needed (family, friends, online community, religious services, social worker, support group, therapist, etc)
- Identify a hospital for emergency care
- Identify a primary care provider (one main health care provider I see for all my medical needs other than diabetes)
- Contact prospective schools and employers for disability/accommodations (if necessary)
- Find out accurate information about diabetes (e.g. support groups, web sites, ADA, JDRF etc)

MSW

Knowledge:

- Describe diabetes in my own words
- Explain what Hemoglobin A1c (HbA1c) measures
- Recall my most recent HbA1c
- State my target HbA1c
- Teach a friend or roommate about treatment of hypoglycemia, including use of Glucagon

Insulin Management

- Give my own insulin with a syringe, pen or pump
- Determine my insulin dose according to my blood glucose
- Determine my insulin dose according to what I am eating
- Adjust my insulin doses according to my blood glucose patterns over time

Health Behaviors:

- Manage my diabetes during illness, including when to call my provider
- Respond to positive ketones
- Manage my diabetes safely when driving (e.g. check blood glucose before driving, treat high or low blood glucose values, etc)
- Pump Skills (answered only if using a pump)
- Change infusion sets and fill insulin reservoirs
- Program basal rates and bolus dose information into pump setup
- Use dose calculator in pump
- Test my basal rate with coaching from my medical team
- Recognize if the pump or infusion set is not working
- Administer insulin by injection if pump is not working
- Call the pump company help line if insulin pump is not functioning properly

MD

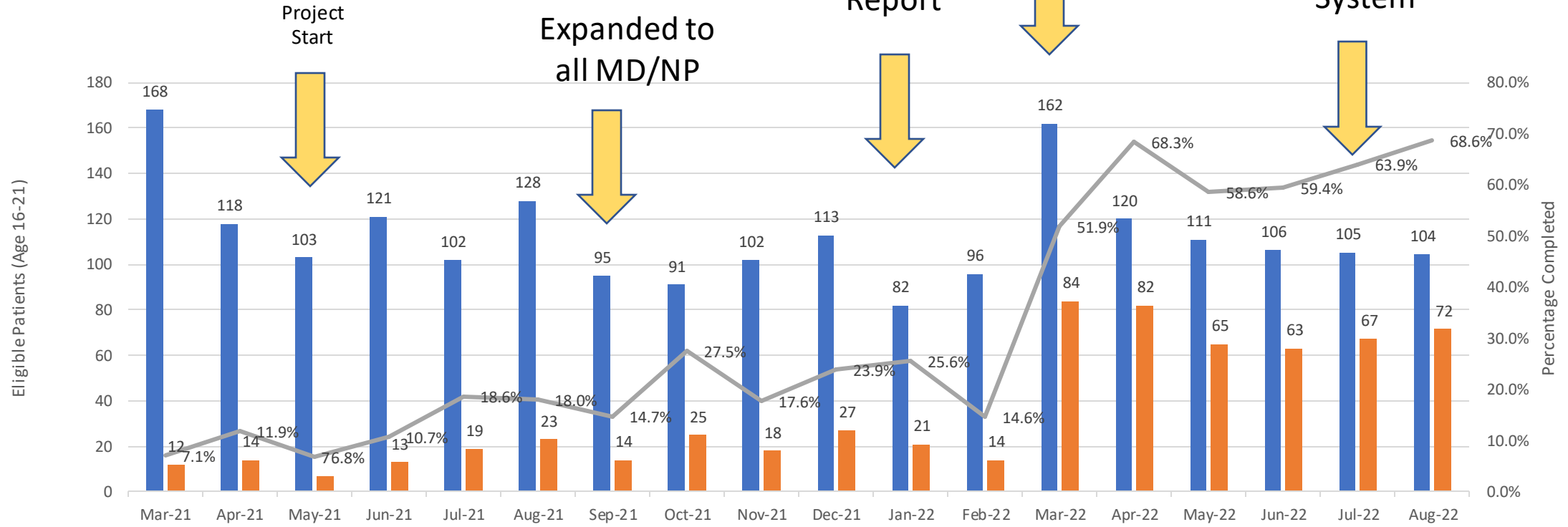
Knowledge:

- Explain the impact of diabetes on sexual health and function
- Explain the long-term impact of tobacco on heart health in people with diabetes
- Tell someone how alcohol affects blood glucose
- Explain the impact of glucose control before and during pregnancy
- List examples of tests done in routine visit to identify or prevent complications of diabetes

Office Visit from 9/15/2022 in HDV...		Last Filed	
9/18/2022			
1500			
Diabetes management (health behaviors), I am able to:			
Notice differences in my health, s...		5	◀◀
Manage my diabetes during illnes...		5	◀◀
Respond to positive ketones		5	◀◀
Describe strategies to prevent low...		5	◀◀
Manage my diabetes safely when ...		5	◀◀
Describe safe sex practices		5	◀◀
Health Behaviors Mean Score		5	◀◀
Insulin pump skills (answer only if you use one), I am able to:			
Change infusion sets and fill insuli...		1	! ◀◀
Program basal rates and bolus do...		1	! ◀◀
Use dose calculator in pump		1	! ◀◀
Test my basal rate with coaching f...		1	! ◀◀
Recognize if the pump or infusion ...		1	! ◀◀
Administer insulin by injection if p...		1	! ◀◀
Call the pump company help line i...		1	! ◀◀
Pump Skills Mean Score		1	! ◀◀
Subsection Mean Scores			
Knowledge Mean Score		4.62	◀◀
Navigation Mean Score		4.23	◀◀
Insulin Management Mean Score		5	◀◀
Health Behaviors Mean Score		5	◀◀
Pump Skills Mean Score		1	! ◀◀
Topics Reviewed			
Topics Reviewed			
Plan for next visit			
Reviewed By			
CDE Review Date	9/21/2021		
RD Review Date	3/4/2022		
MSW Review Date	6/10/2022		
MD Review Date	5/11/2022		

PDSA-5 (quarter system)

Created Daily Report
 READDY column
 Quarter System

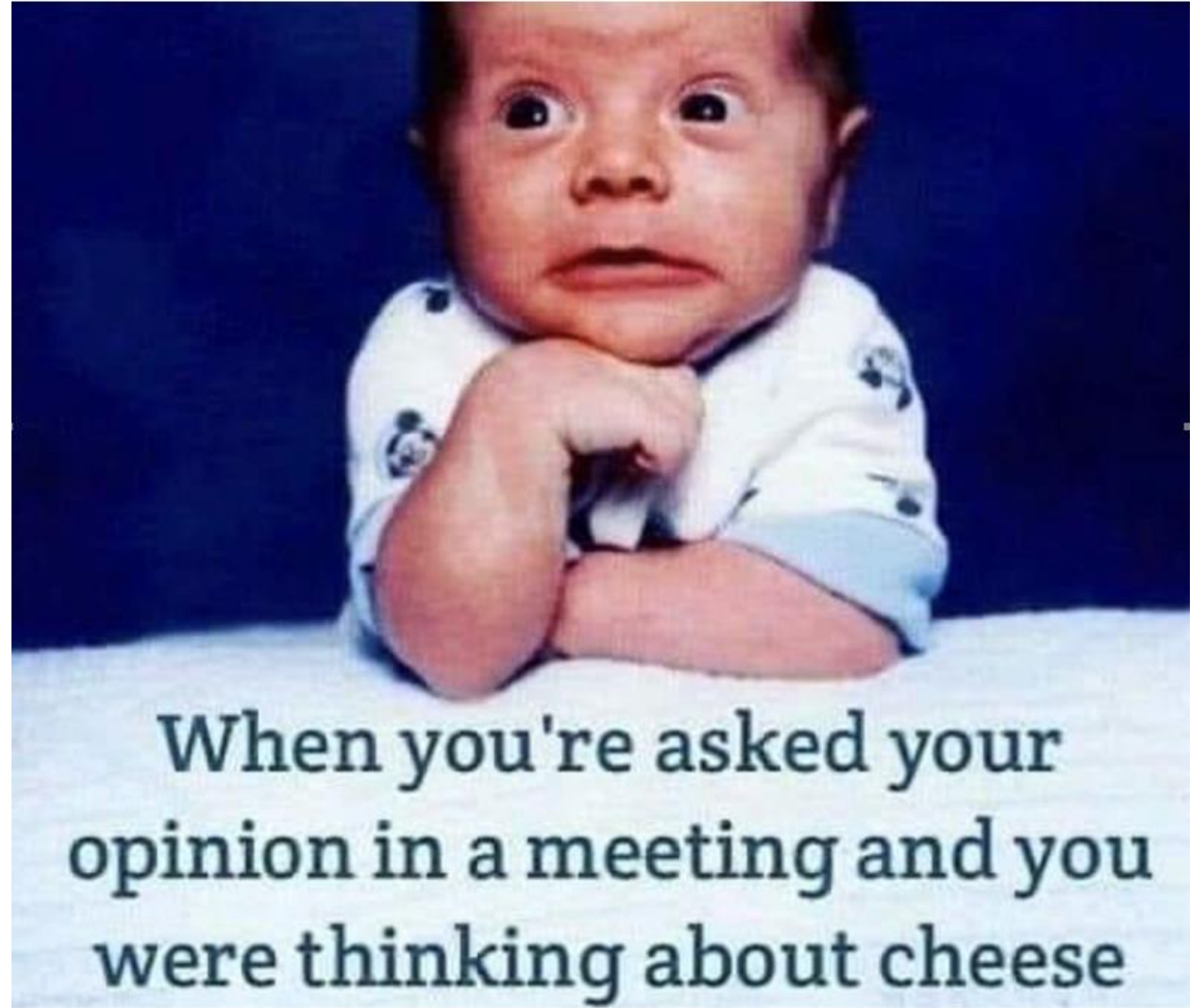


	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22
# Eligible	168	118	103	121	102	128	95	91	102	113	82	96	162	120	111	106	105	104
# Taken	12	14	7	13	19	23	14	25	18	27	21	14	84	82	65	63	67	72
%	7.1%	11.9%	6.8%	10.7%	18.6%	18.0%	14.7%	27.5%	17.6%	23.9%	25.6%	14.6%	51.9%	68.3%	58.6%	59.4%	63.9%	68.6%

Future Areas to Address

- Transition to Adult
 - Is there a way to incorporate this into our telemedicine visits?
 - Is the program actually improving our patients' confidence in independent care?
 - Can we improve the actual launch?

Questions?



Quality Improvement: Depression Screening in Diabetes

Allison Mekhoubad, DO
Jennifer Sarhis, MD
Rashida Talib, MBBS, MPH

September 22, 2022



Objectives

- Increase awareness of the importance of mental health screening in patients with type 1 diabetes
- Recognize barriers in the mental health screening process

Pre/Post Learning Questions

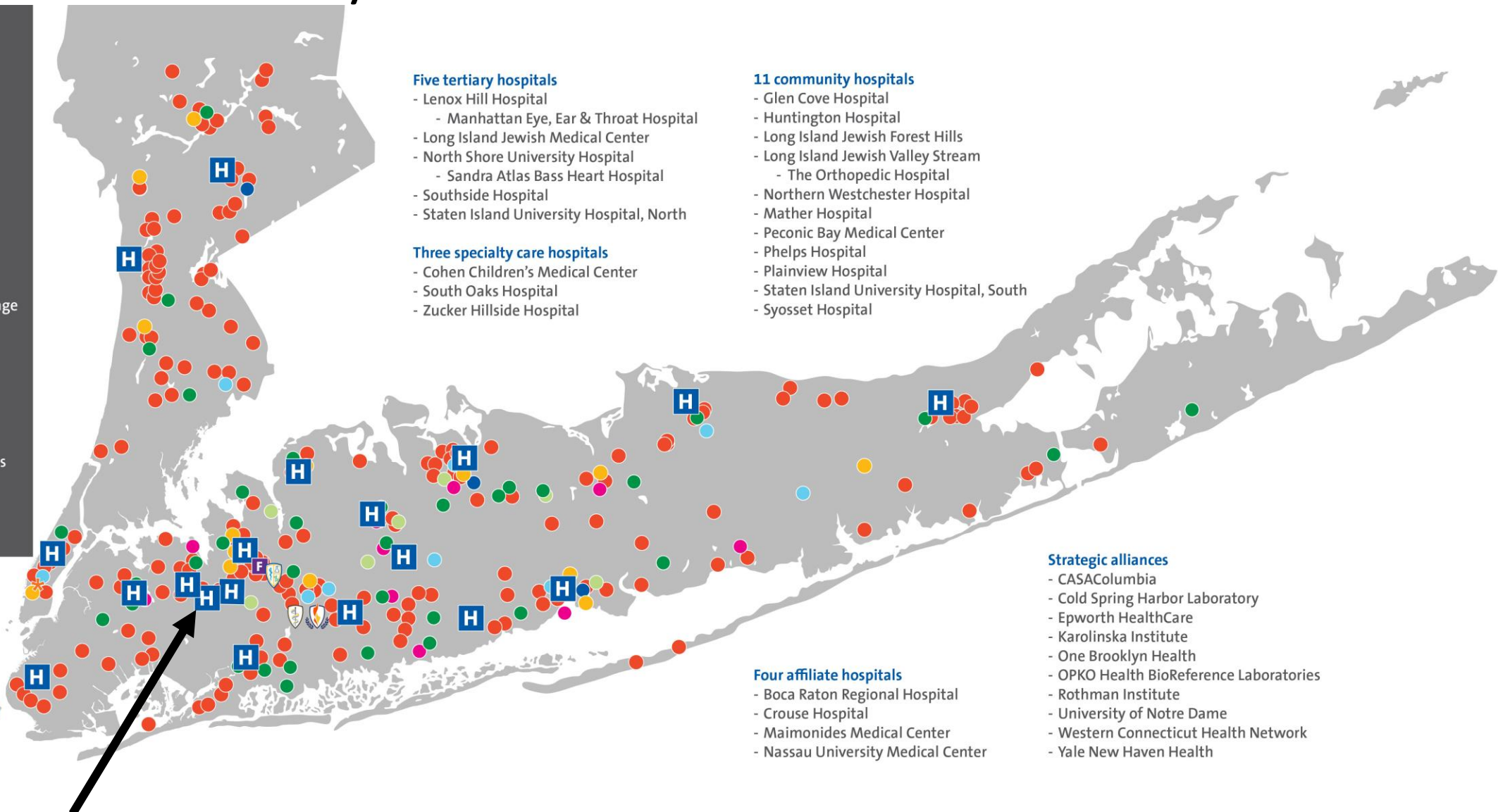
- There is a universal screening tool for depression in patients with type 1 diabetes
- The PHQ 9 is a validated depression screening tool that can be used in patients:
 - 10 and older
 - 11 and older
 - 12 and older
 - 13 and older
 - Any age group

Where is Northwell CCMC?



Northwell Health System

-  Hospitals
-  Feinstein Institute
-  Physician Offices
-  Imaging Centers
-  Urgent Care Centers
-  Ambulatory Surgery Centers
-  Cancer Centers
-  Dialysis Centers
-  Lenox Health Greenwich Village
-  Lab Patient Service Centers
-  Donald and Barbara Zucker School of Medicine at Hofstra/Northwell
-  Hofstra Northwell School of Graduate Nursing and Physician Assistant Studies
-  Elmezzi Graduate School of Molecular Medicine at Northwell Health



Five tertiary hospitals

- Lenox Hill Hospital
- Manhattan Eye, Ear & Throat Hospital
- Long Island Jewish Medical Center
- North Shore University Hospital
- Sandra Atlas Bass Heart Hospital
- Southside Hospital
- Staten Island University Hospital, North

Three specialty care hospitals

- Cohen Children's Medical Center
- South Oaks Hospital
- Zucker Hillside Hospital

11 community hospitals

- Glen Cove Hospital
- Huntington Hospital
- Long Island Jewish Forest Hills
- Long Island Jewish Valley Stream
- The Orthopedic Hospital
- Northern Westchester Hospital
- Mather Hospital
- Peconic Bay Medical Center
- Phelps Hospital
- Plainview Hospital
- Staten Island University Hospital, South
- Syosset Hospital

Four affiliate hospitals

- Boca Raton Regional Hospital
- Crouse Hospital
- Maimonides Medical Center
- Nassau University Medical Center

Strategic alliances

- CASAColumbia
- Cold Spring Harbor Laboratory
- Epworth HealthCare
- Karolinska Institute
- One Brooklyn Health
- OPKO Health BioReference Laboratories
- Rothman Institute
- University of Notre Dame
- Western Connecticut Health Network
- Yale New Haven Health

CCMC

Background: Pediatric Endocrinology

- **As part of Cohen Children's Medical Center Northwell Health Physician Partners, our team operates proudly within the framework of one of the largest health systems in the country.**
- **The physicians in our Pediatric Endocrinology Division perform over 12,000 outpatient consultations, ~300 inpatient visits, and more than 200 diagnostic endocrine tests yearly.**
- **We are a designated site for the NY State Adrenal and Thyroid Newborn Screening Programs.**
- **Our department is a proud home to our institution's multidisciplinary DSD Program called GRUPE, which is comprised of specialists from Cohen Children's Medical Center including genetics, gynecology, urology, psychology/psychiatry, endocrinology, and surgery.**
- **Our team is part of the Disorders of Sex Development Translational Research Network (DSD-TRN). It is an NIH-supported group of medical centers working to educate families about DSD and provide both sensible and sensitive care for patients with such diagnoses.**
- **Rated one of the Top 50 pediatric diabetes and endocrine disorder programs in the country by US News and World Report**

Cohen Children's Medical Center, Northwell Health Pediatric Endocrinology

Multidisciplinary Diabetes Team Members

- 12 Board Certified Pediatric Endocrinologists
- 1 Nurse Practitioner
- 6 Registered Nurses
- 2 Registered Dietitian/
Nutritionists
- 7 Certified Diabetes Care and
Education Specialists
- 1 Social Worker
- 1 Research Coordinator

Volume

- 50+ newly diagnosed T1D patients
seen annually
- 547 established T1D patients
receiving ongoing care
- 38% patients insured through
Medicaid



Locations

- Outpatient Clinics:
 - Main Office: New Hyde Park, NY
 - Satellite locations: 7
 - Diabetes Care: New Hyde Park,
Smithtown and Bay Shore
- Inpatient: Cohen Children's Medical
Center



CCMC T1D Exchange Team



Jennifer Sarhis, MD
Co-PI



Allison Mekhoubad, DO
Co-PI



Rashida Talib, MBBS, MPH
Research Coordinator

Additional Support

Nursing: Peggy Pellizzari, MBA, MS, RN, NE-BC, CDCES, CDTC,
FADCES. *Diabetes Program Manager*

Social Work: Claire Pawlak, MSW

IT: Deepika George

Depression Screening

- Patients with type 1 diabetes are at increased risk for depression and other psychological problems.
- No single universal recommended screening tool
- Patient Health Questionnaire (PHQ) – 9
 - Validated self reporting tool for depression screening that can be used in adolescents, aged 12 years and older
 - ADA recommends depression screening for patients with diabetes on a regular basis

PHQ9

PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

NAME: _____ DATE: _____

Over the last 2 weeks, how often have you been bothered by any of the following problems?
(use "✓" to indicate your answer)

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself – or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead, or of hurting yourself	0	1	2	3
	add columns	+	+	

(Healthcare professional: For interpretation of TOTAL, TOTAL: please refer to accompanying scoring card).

10. If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?	Not difficult at all	_____
	Somewhat difficult	_____
	Very difficult	_____
	Extremely difficult	_____

Interpreting PHQ-9 Scores

Diagnosis	Total Score	For Score	Action
Minimal depression	0-4	≤ 4	The score suggests the patient may not need depression treatment
Mild depression	5-9	5 - 14	Physician uses clinical judgment about treatment, based on patient's duration of symptoms and functional impairment
Moderate depression	10-14		
Moderately severe depression	15-19	> 14	Warrants treatment for depression, using antidepressant, psychotherapy and/or a combination of treatment.
Severe depression	20-27		

Place

- Less support in satellite clinics vs main office
- No SW in satellites
- CDE in satellites not administering PHQ9

People

- Decreased availability of SW (previously available 4 days/week → part time)
- Nurse educators administering PHQ9 at random
- Patients not always sharing mental health struggles if not asked
- Varying patient education and literacy levels
- Language barrier

Policies and Procedures

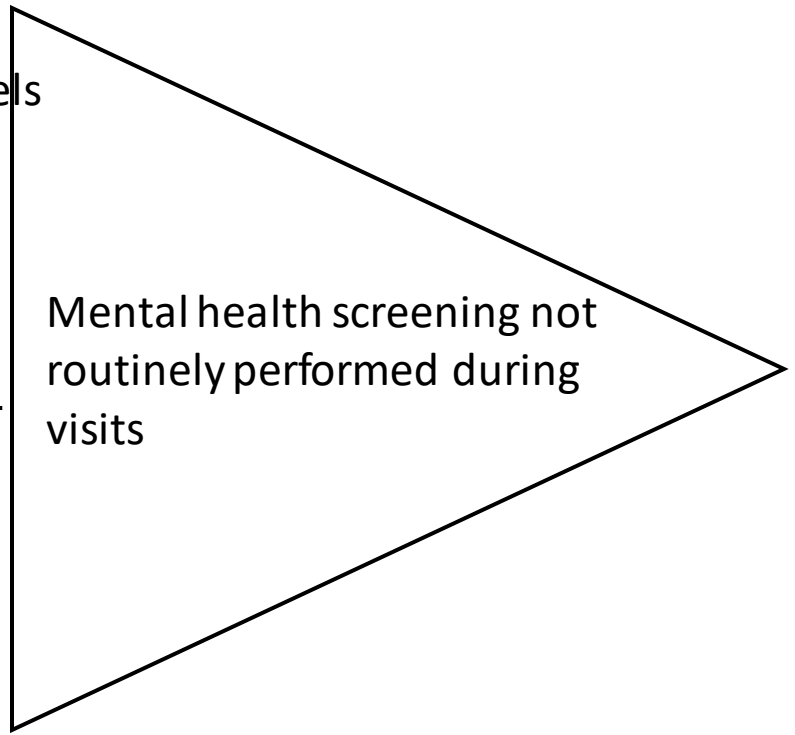
- MH screening policy not enforced

Process

- PHQ9 administered at random
- Unclear process regarding administration of PHQ9

Product

- PHQ9 not readily available in patient rooms or front desk
- Supply in CDE office not routinely replenished





PLAN

- Administer PHQ9 for patients of 2 physicians.
- MOAs to distribute paper copy of PHQ9 to patients upon rooming



DO

- Assess eligible patients of 2 providers at the main office over 2 weeks
 - Week 1: 5 eligible patients, 5 screened
 - Week 2: 3 eligible patients, 2 screened

ACT

- Educate MOAs to identify patients who are eligible for screening and hand out PHQ9 when rooming
- Create workflow:
 - for entering PHQ9 into EMR
 - For providing handouts/referrals
- Create handouts
- Improve access to psychiatric services
- Educate physicians and nurses on PHQ9 use

STUDY

7 negative screens

Challenges observed

- MOA not familiar with eligible patients, requiring physician to identify patients prior to clinic session
- SW not in the office every day to assist
- No streamlined process regarding inputting to medical record





PLAN

- Administer PHQ9 for all eligible patients with T1DM across the entire office
- MOAs to distribute paper copy of PHQ9 independently to patients upon rooming



DO*

- Assess eligible patients of all physicians, CDEs and NP at the main office over 3 days
- Provide MOAs with eligibility criteria, without identifying specific patients
 - Day 1: 2 eligible patients, 2 screened
 - Day 2: 4 eligible patients, 3 screened
 - Day 3: 5 eligible patients, 3 screened

STUDY

7 negative screens, 1 positive screen

Challenges observed

- Variability in MOA skill level. Some MOAs required a single prompt and handed PHQ9 to all eligible patients. Others needed multiple reminders, handing PHQ9 during or after the visit
- Variability in schedule and patient load
- No process for collecting completed PHQ9s

ACT

- Reinforce process with MOAs
- Improve workflow:
 - For collecting completed PHQ9
 - for entering completed PHQ9 into EMR
 - For providing handouts/referrals
- Create handouts and make more readily available
- Improve access to psychiatric services
- Educate physicians and nurses on PHQ9 use



DO (Continued)

- Day 1: 2 eligible, 2 screened
 - No additional reminding
 - 0 patients missed
- Day 2: 4 eligible, 3 screened
 - Additional reminding needed for all screened patients
 - 1 patient missed
- Day 3: 5 eligible, 3 screened
 - Additional reminding needed for 1 patient
 - No additional reminded needed for 2 patients
 - 2 patients missed

Goals and Next Steps

- Increase frequency of depression screening during diabetes visits
- Have PHQ9 become a routine part of the diabetes office visit
- Improve workflow for administering PHQ9
- Improve workflow for documenting PHQ9 results
- Increase recognition of patients with mental health concerns, especially those who are not transparent about their mental health