T1D Exchange

QI Collaborative Call, Adults

9/20/22

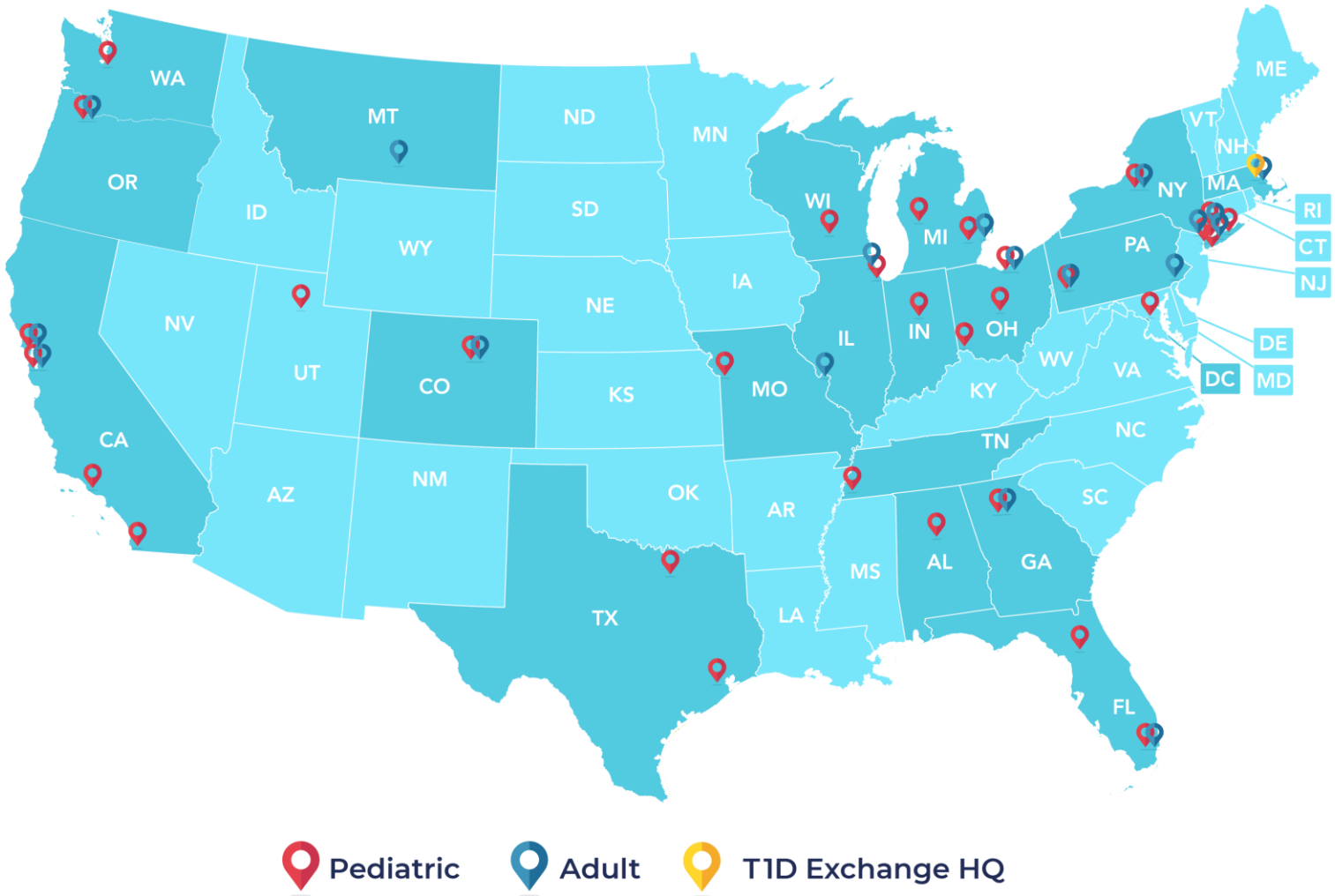
Welcome & introductions

Agenda

- Collaborative updates
  - New clinics joining the Collaborative
  - New T1DX-QI Team member
  - Details and reminders for the November Learning Session
- September Collaborative member presentations
  - Dr. Steenkamp, BMC
  - Dr. Goyal, NYU

T1D Exchange Updates

T1DX-QI network of 50 centers, caring for 75,000+ T1D patients across 20 states and Washington D.C.



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

T1DX-QI welcomes a new team member!

Senior Quality Improvement Analyst
Trevon Wright, MHA

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 Implementing 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 pts	Alissa Guarneri, UPMC

Tuesday Breakout, 8:50-9:50 am

Topic areas	Clinics				Chair
			changes	pts	
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 Techquity 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, >9%	Andrew Ahmann, OHSU

Learning Session

•Agenda will be shared in October

Details for the event: Monday November 7-Tuesday November 8
•Activities begin 8am on 11/7, so in person attendees are encouraged to fly in on Sunday 11/6
•Activities end by 3pm on 11/8 so that you can fly home Tuesday 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 your flight and we reimburse you for the flight.)
•If you wish to bring a 3rd team member, those expenses will need to be covered by your institution.
•Our reimbursement form/details can be found on the T1D Exchange website. Use this link to access on the website.

Learning Session Deadlines

If your abstract was accepted:

Abstracts will be published in the Journal of Diabetes before November 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 intuition name at the top of poster

Clinical Presentation:

INCREASING HYBRID-CLOSED LOOP PUMP USAGE LESSONS LEARNED IN YEAR ONE…

Devin Steenkamp, MD

Director of Clinical Diabetes

Boston University School of Medicine/Boston Medical Center

BOSTON MEDICAL CENTER AND BOSTON UNIVERSITY

- Boston City Hospital was opened in 1864 and was the first municipal hospital established in the United States
- 1996 Boston University Hospital merged with Boston City Hospital to create Boston Medical Center
  - MISSION: Care for all people, regardless of their ability to pay. Provide exceptional care, without exception
- 70% of BMC patients are low-income families, elders, people with disabilities, minorit
  - 30%
  - 65% t level of health

SOME CHALLENGES AT BMC

- A1c is high and disproportionately so in minorities
- T1D population is much smaller than large T2D population
- Limited DSME skills and nutritional literacy in our T1D population
- Limited access to technology trainers
- Poor transition for emerging adults moving up from pediatrics

A1C DISCREPANCIES IN 2015

	Overall	18-25 years old	26-49 years old	>50 years old
Public	9.4	11.2	8.9	8.4
Private	8.6	9.6	8.4	7.6

	HgbA1c, All Ages
White	8.3
Black	10.5
Hispanic	9.3
Asian	8.4
Other	8.2

6-MONTH IMPROVEMENT IN A1C WITH TECHNOLOGY IMPLEMENTATION IN 2015

	HgbA1c Prior to Intervention	HgbA1c Following intervention	Percent change
Pump users n=17	7.9	7.4	-0.5%
CGM users n=16	8.3	7.4	-0.9%

	Overall (n=126)	18-25 years old (n=33)	26-49 years old (n=73)	>50 years old (n=20)
Number of patients on pump + CGM	20 (15.8%)	5 (15.2%)	9 (12.3%)	6 (30%)
HgbA1c, mean for pump + CGM	7.5	7.9	7.4	7.2

LESSONS FROM 2015

- Public insurance beneficiaries and minority populations have higher A1c
- CGM and pumps work (better than expected) to lower A1c in an underserved population with T1D
- How do we increase both pump and CGM utilization?

DIABETES TECHNOLOGY & THERAPEUTICS
Volume 24, Number 2, 2022

DOI: 10.1089/dia.2021.0334

DTT

BRIEF REPORT

Advanced Diabetes Technology Remains Underutilized in Underserved Populations: Early Hybrid Closed-Loop System Experience at an Academic Safety Net Hospital

Zhihui Ju, MSPH,[1,i] Amanda Piarulli, MD,[2] Lauren Bielick, BS,[3] Shannon Marschall, BS,[1] Elizabeth Brouillard, RD, CDCES,[1] and Devin Steenkamp, MD,[1]

32 patients prescribed 670G

70% female

70% white

56% with advanced degrees

94% commercially insured

84% experienced pump users

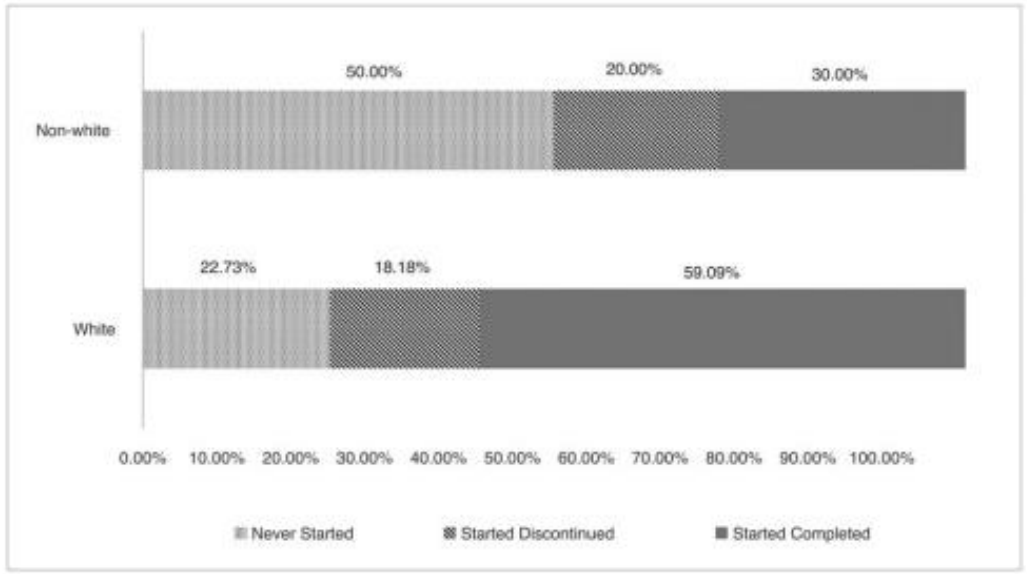
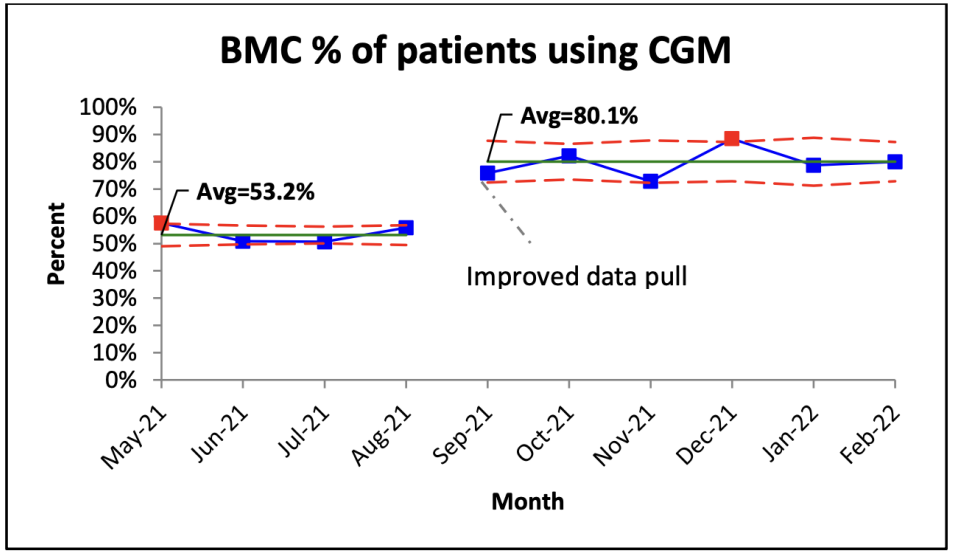


FIG. 1. Comparison of black and Hispanic (nonwhite) and white patients starting on the 670G, including discontinuation before 1 year follow-up (started discontinued) and remaining on the system 1 year after starting (started completed).

WE NEED TO INCREASE HCL SYSTEM USE AMONG NON-WHITE PATIENTS

LARGE CGM VS. PUMP UTILIZATION GAP

T1D Exchange



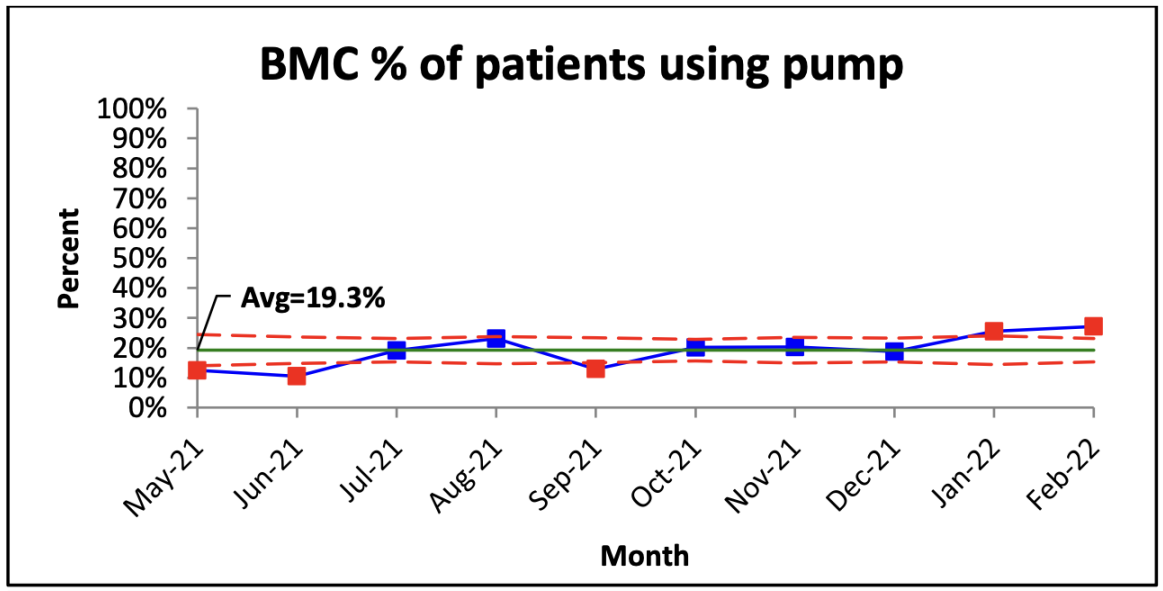
Desired Direction

P-chart

Month	May 21	Jun 21	Jul 21	Aug 21	Sep 21	Oct 21	Nov 21	Dec 21	Jan 22	Feb 22
T1D Population	40	57	73	52	62	84	59	69	47	70
# of patients using CGM	23	29	37	29	47	69	43	61	37	56

BMC is ranked 2nd among 8 T1DX-QI adult clinics on CGM use. The T1DX-QI goal is 70%.

WE HAVE LOTS OF ROOM FOR IMPROVEMENT!



Desired Direction

P-chart

Month	May 21	Jun 21	Jul 21	Aug 21	Sep 21	Oct 21	Nov 21	Dec 21	Jan 22	Feb 22
T1D Population	40	57	73	52	62	84	59	69	47	70
# of patients using pump	5	6	14	12	8	17	12	13	12	19

BMC is ranked 6th among 7 T1DX-QI adult clinics on pump use. The T1DX-QI goal is 65%.

IS THERE A "GOOD" PUMP CANDIDATE IN THE HCL ERA?

The "Real-Life" Candidate:

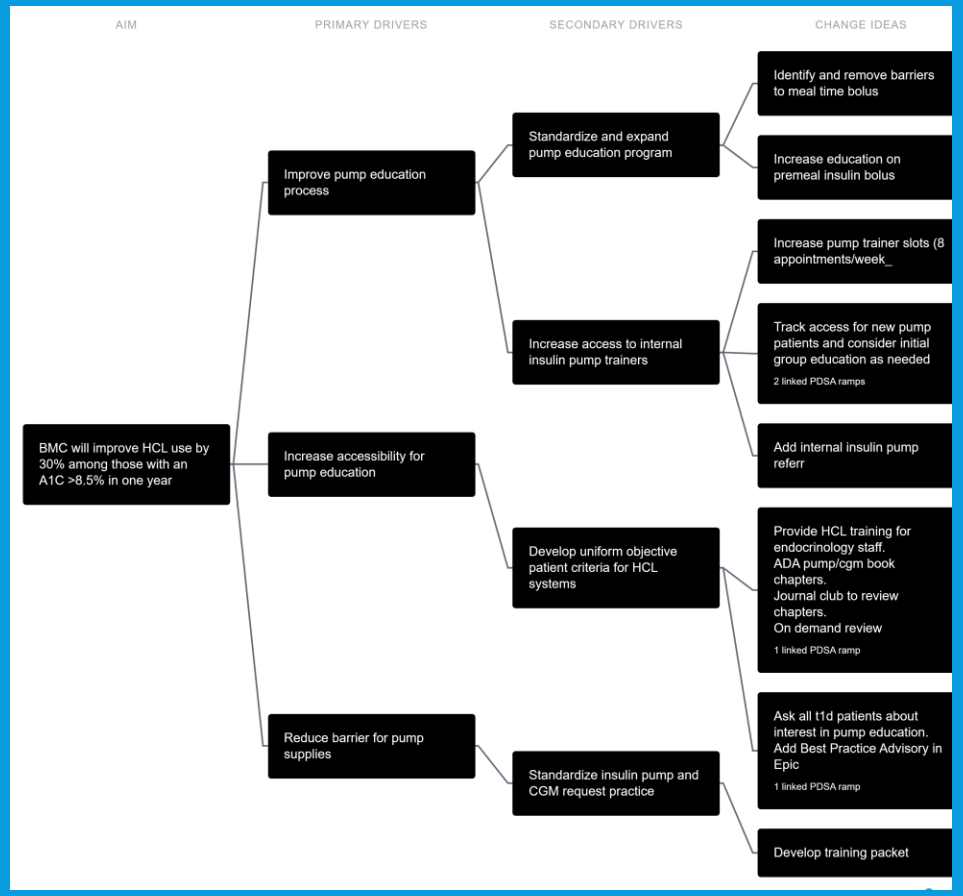
- Limited education
- Moderately motivated
- Basic insurance
- Eat everything diet
- Minimal support
- Uncontrolled diabetes
- Not carb counting

Most patients

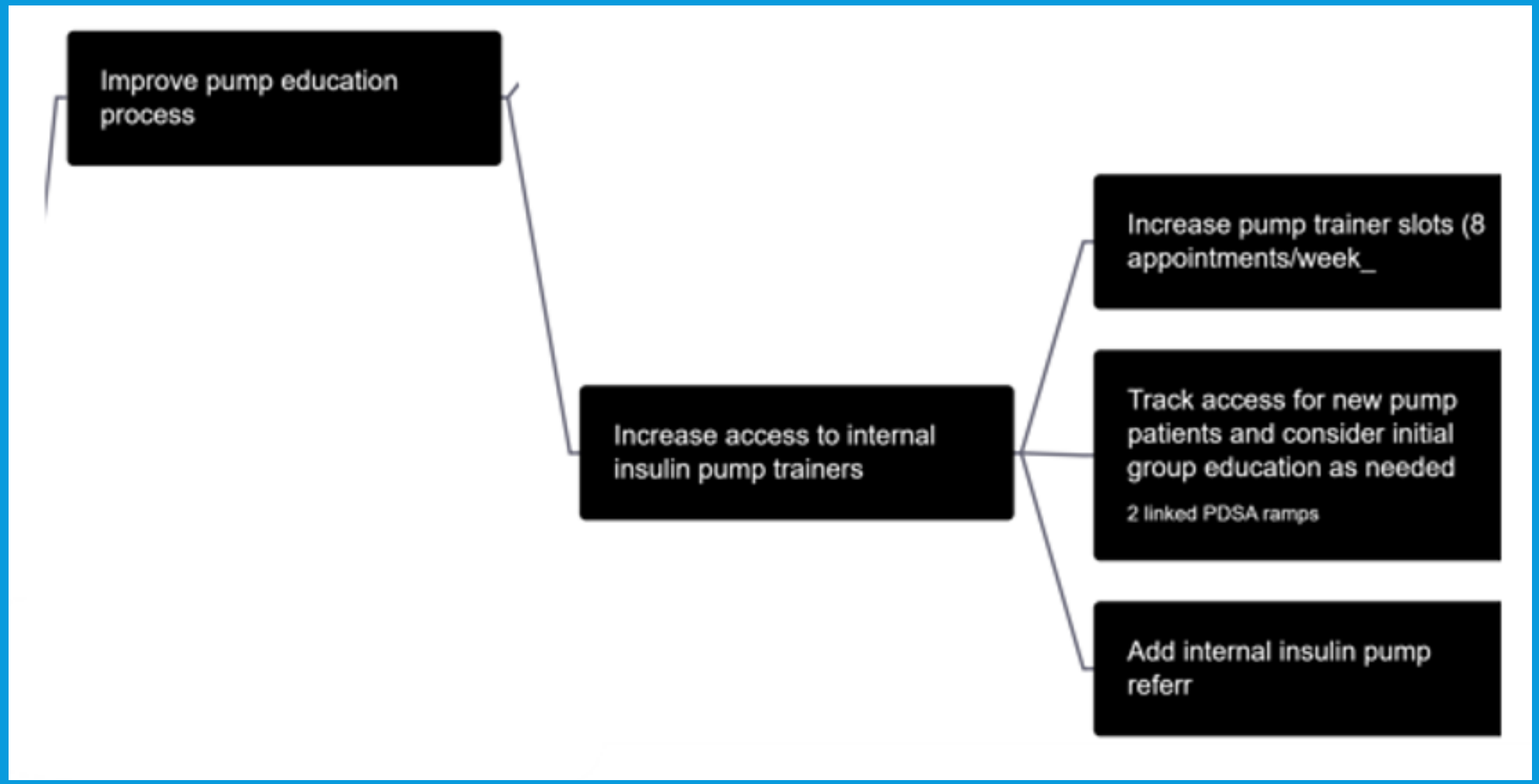
QI PROJECT: SEPT 2021 – SEPT 2022

- Problem: Under-utilization of Hybrid Closed Loop Systems in T1D patients

  Aim statement: BMC will improve HCL use by 30% among those with an A1C >8.5% in one year

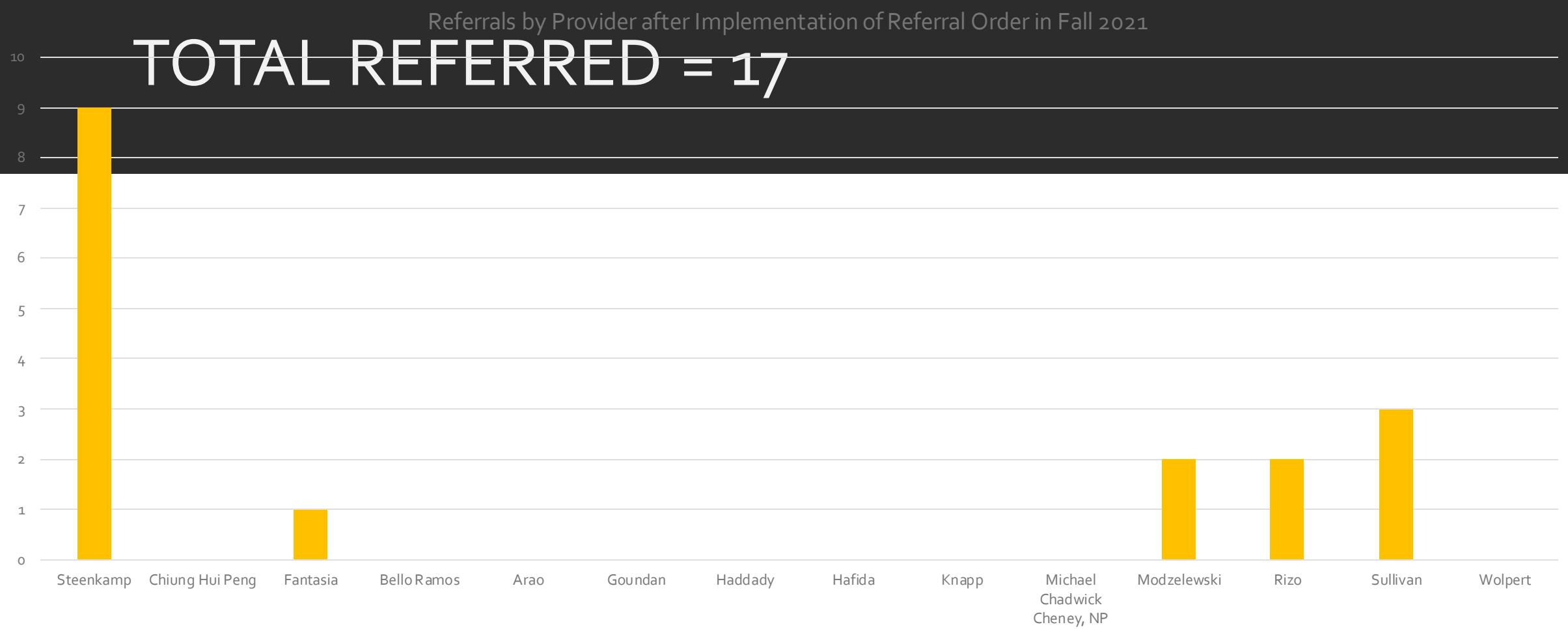

AIM
PRIMARY DRIVERS
SECONDARY DRIVERS
CHANGE IDEAS
BMC will improve HCL use by 30% among those with an A1C >8.5% in one year
Improve pump education process
Increase accessibility for pump education
Reduce barrier for pump supplies
Standardize and expand pump education program
Increase access to internal insulin pump trainers
Develop uniform objective patient criteria for HCL systems
Standardize insulin pump and CGM request practice
Identify and remove barriers to meal time bolus
Increase education on premeal insulin bolus
Increase pump trainer slots (8 appointments/week_
Track access for new pump patients and consider initial group education as needed
2 linked PDSA ramps
Add internal insulin pump referr
Provide HCL training for endocrinology staff.
ADA pump/cgm book chapters.
Journal club to review chapters.
On demand review
1 linked PDSA ramp
Ask all t1d patients about interest in pump education.
Add Best Practice Advisory in Epic
1 linked PDSA ramp
Develop training packet

IMPROVING ACCESS AND SCHEDULING

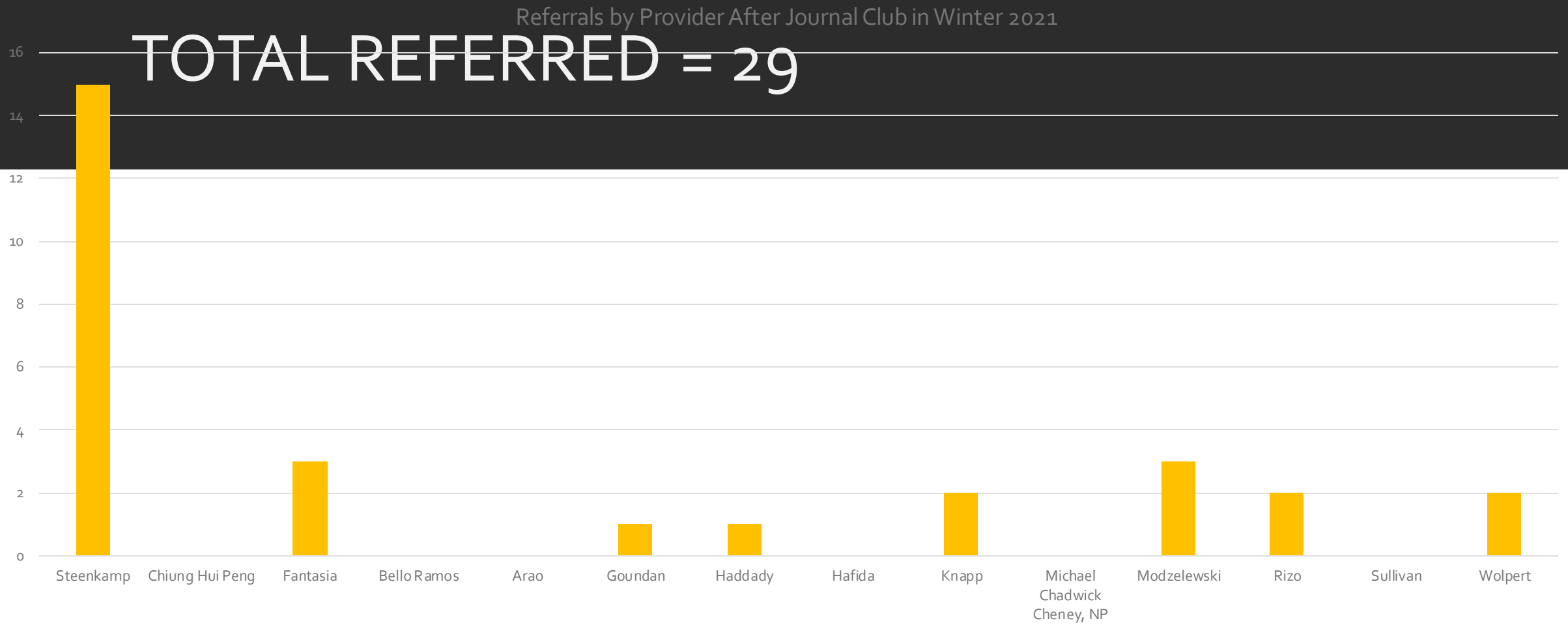


INCREASING PUMP EDUCATION REFERRALS

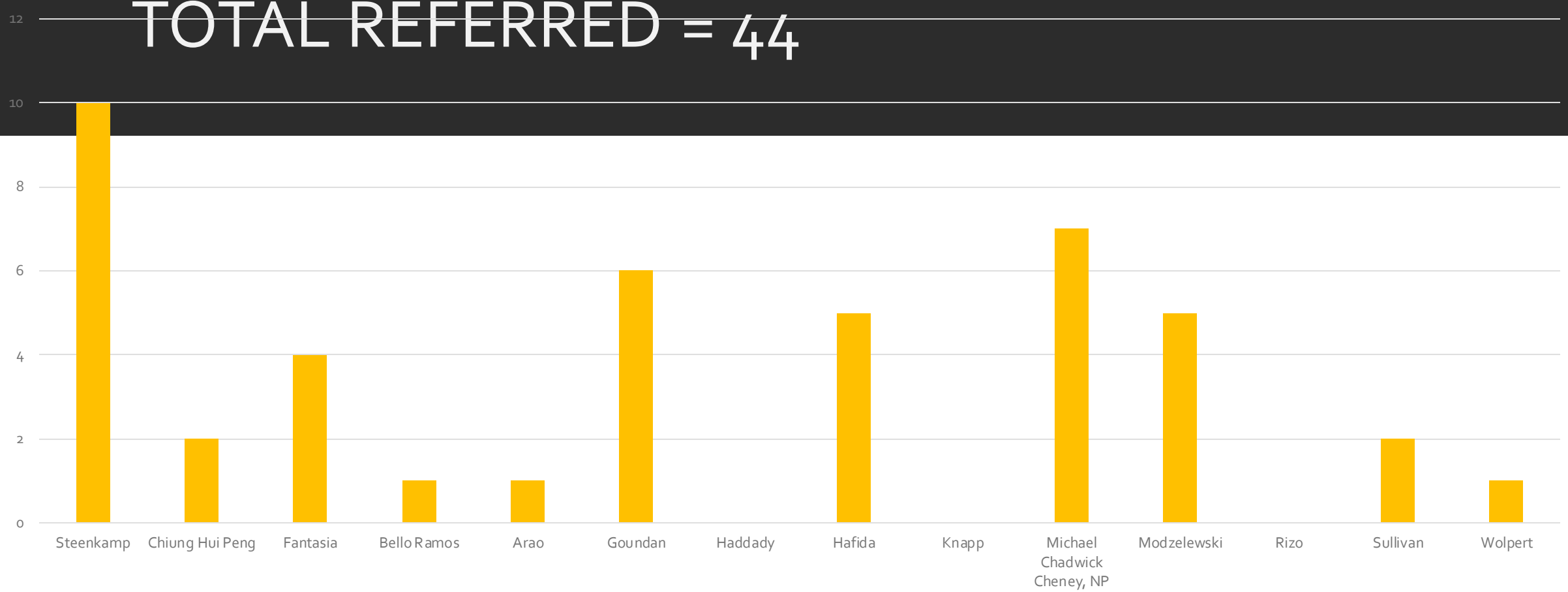
TOTAL REFERRED = 17



TOTAL REFERRED = 29



TOTAL REFERRED = 44

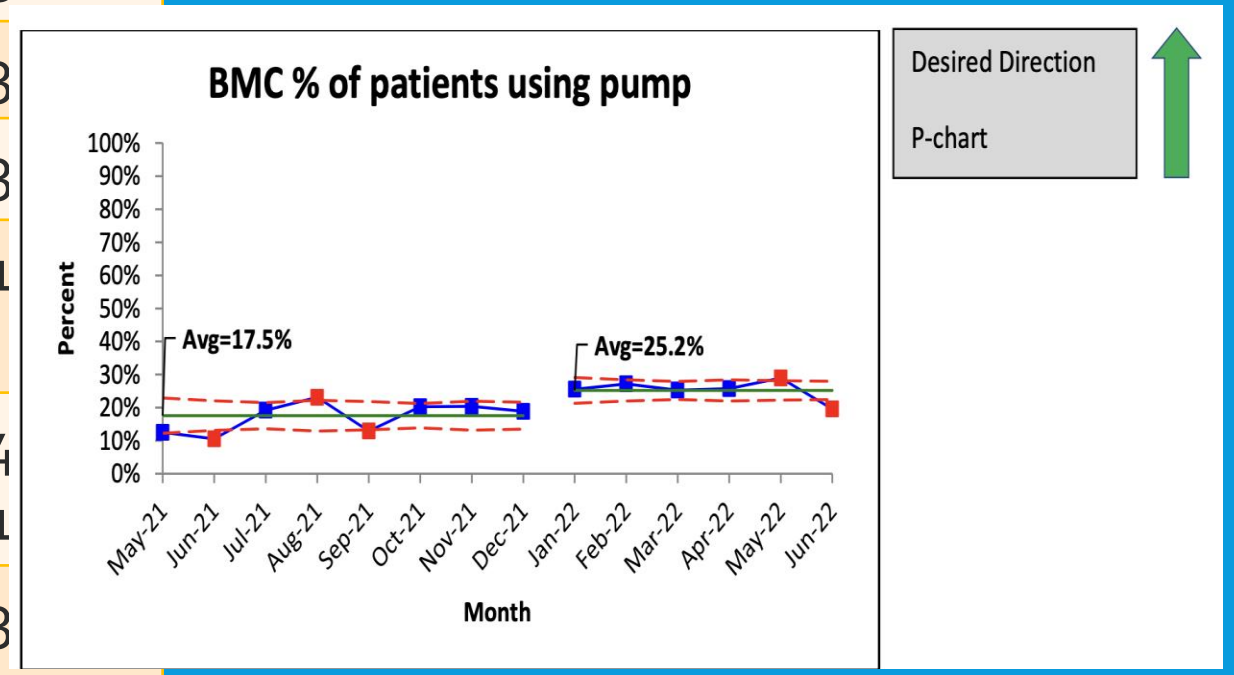


CLINICIAN EDUCATION AND ENGAGEMENT ARE IMPORTANT

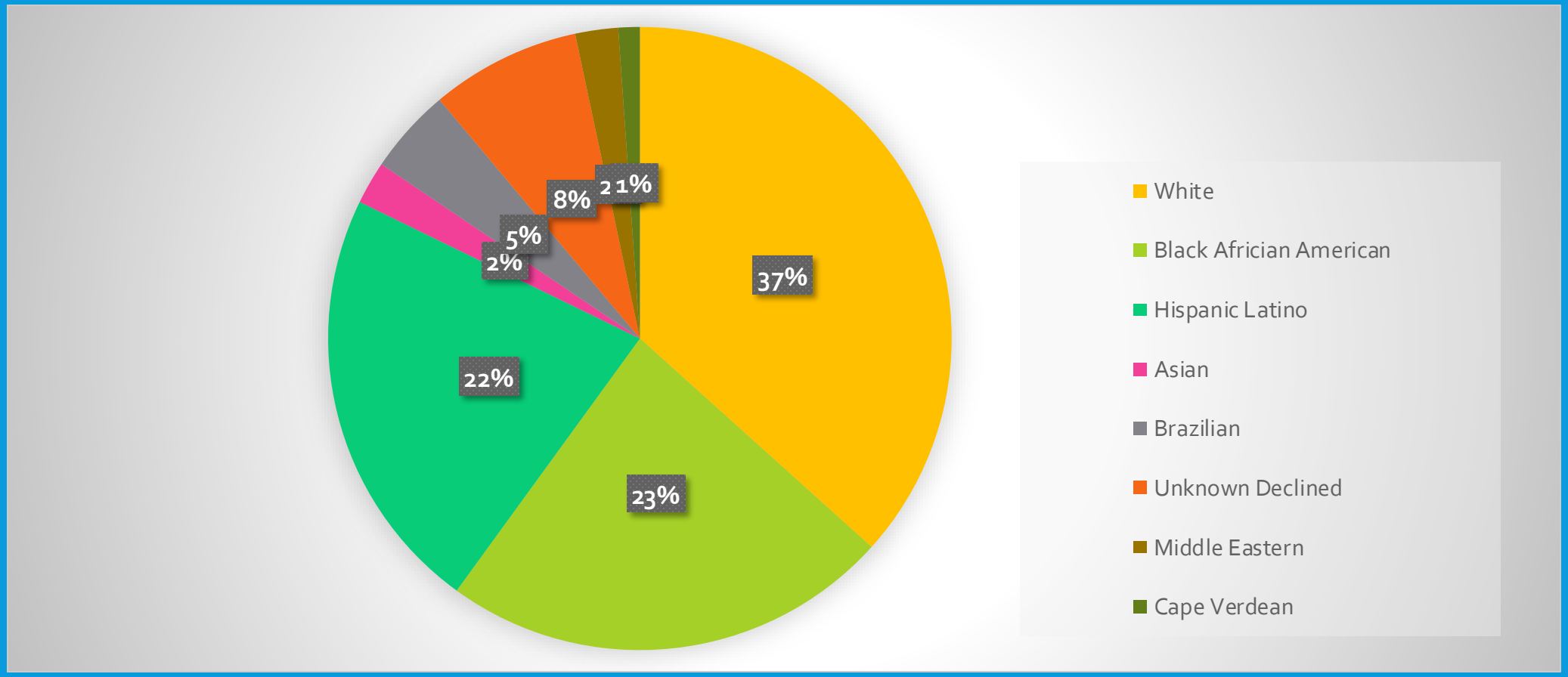
- Technology advances are rapid and may result in clinician discomfort with recommending devices
- Reframing clinician expectations and the 'candidacy question' is important given the benefit of modern HCL systems
- Successful CGM use is a good entry point to HCL

1-YEAR RESULTS

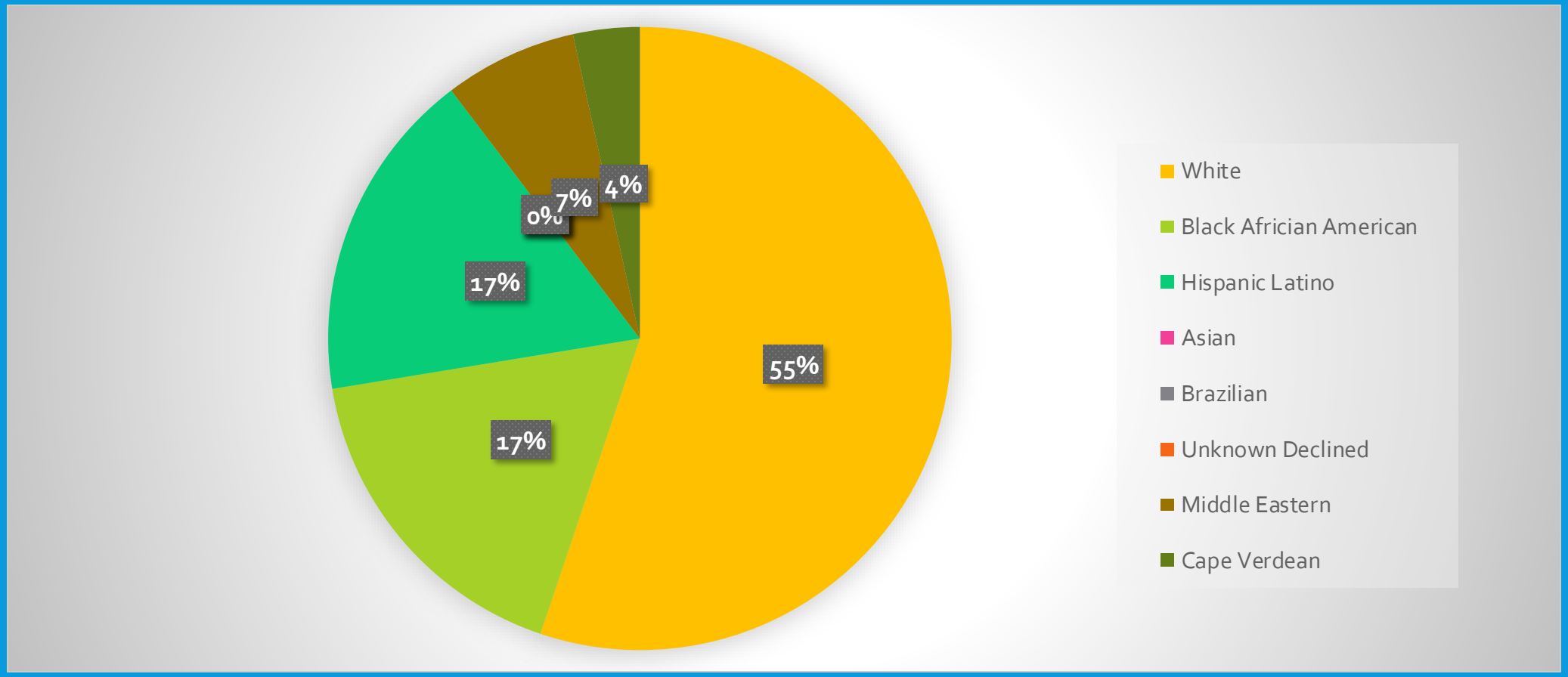
Total referred patients	**91**
Referred patients with A1C >8.5	3
Patients started on HCL pump	3
Patients started on HCL with A1C >8.5	1
Declined pump Did not enter training	4 1
Lost to follow up	3
Still in pump education process	36



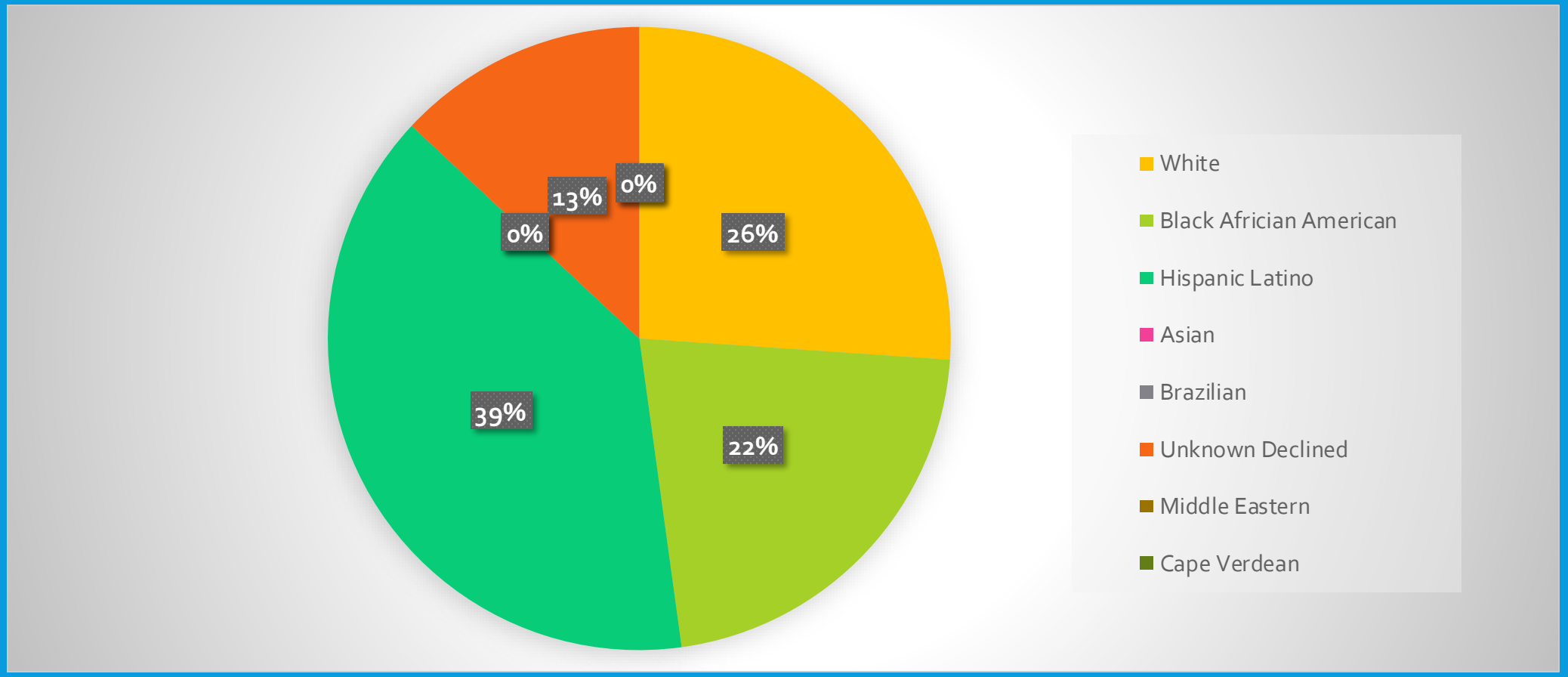
ETHNICITY OF ALL REFERRED PATIENTS NOW REPRESENTS OUR POPULATION!



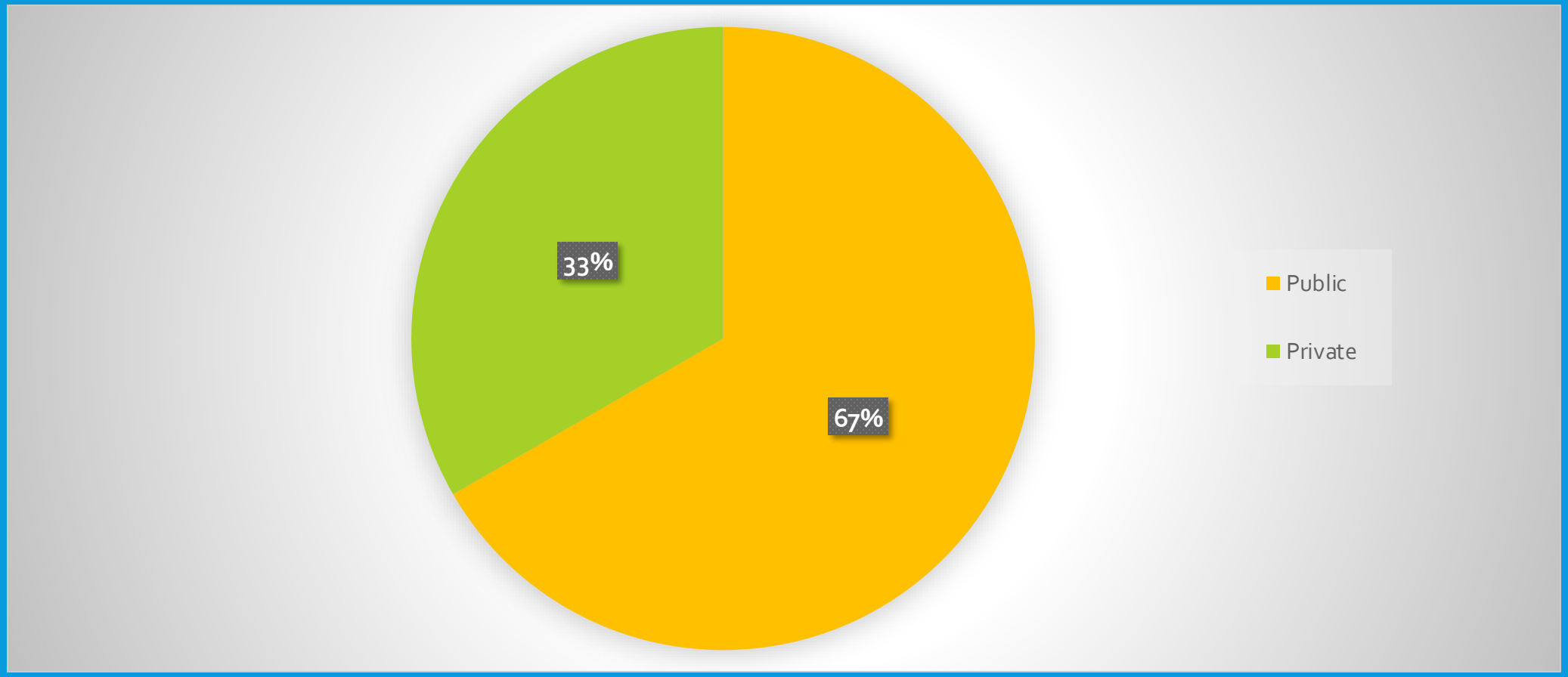
ETHNICITY OF PATIENTS STARTED ON PUMP… BETTER BUT DISPARITIES REMAIN



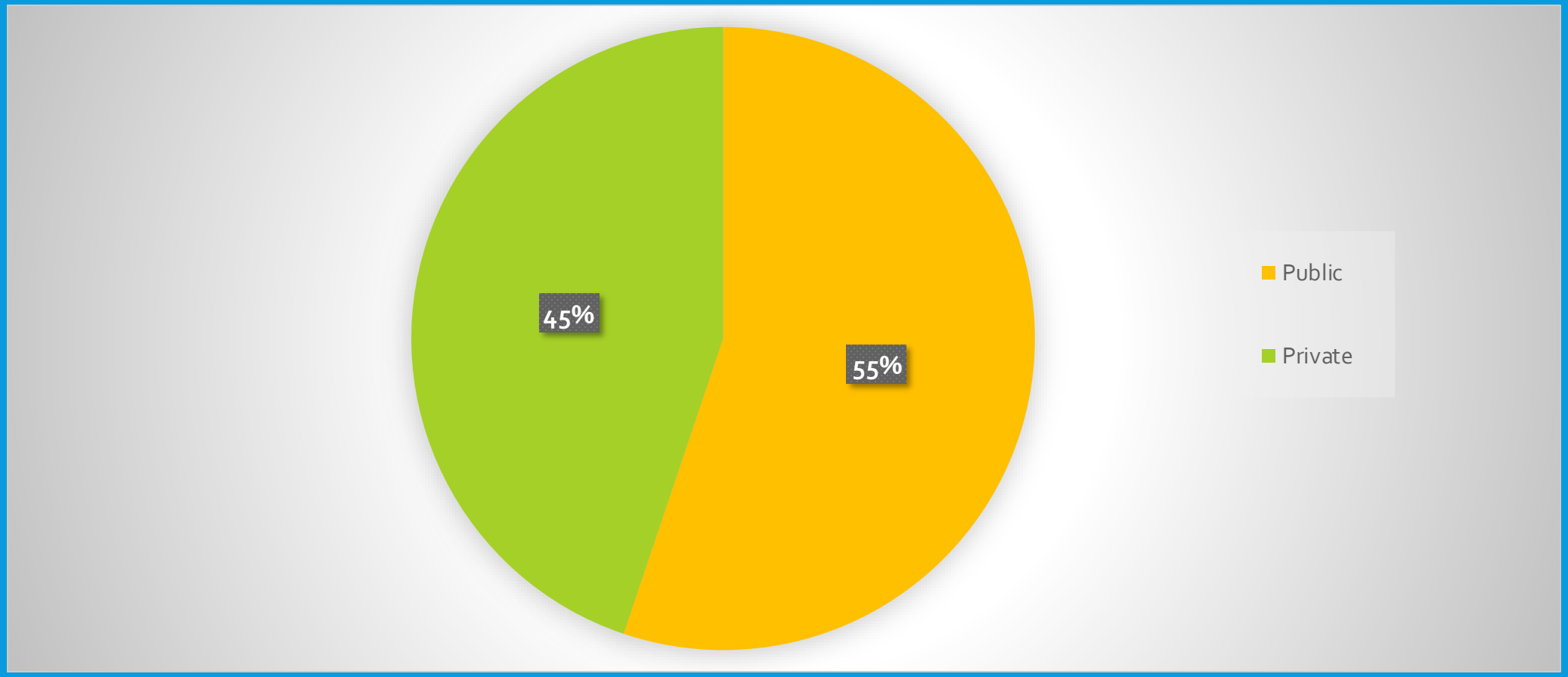
ETHNICITY OF PATIENTS REFERRED BUT WHO HAVE NOT ENGAGED IN EDUCATION



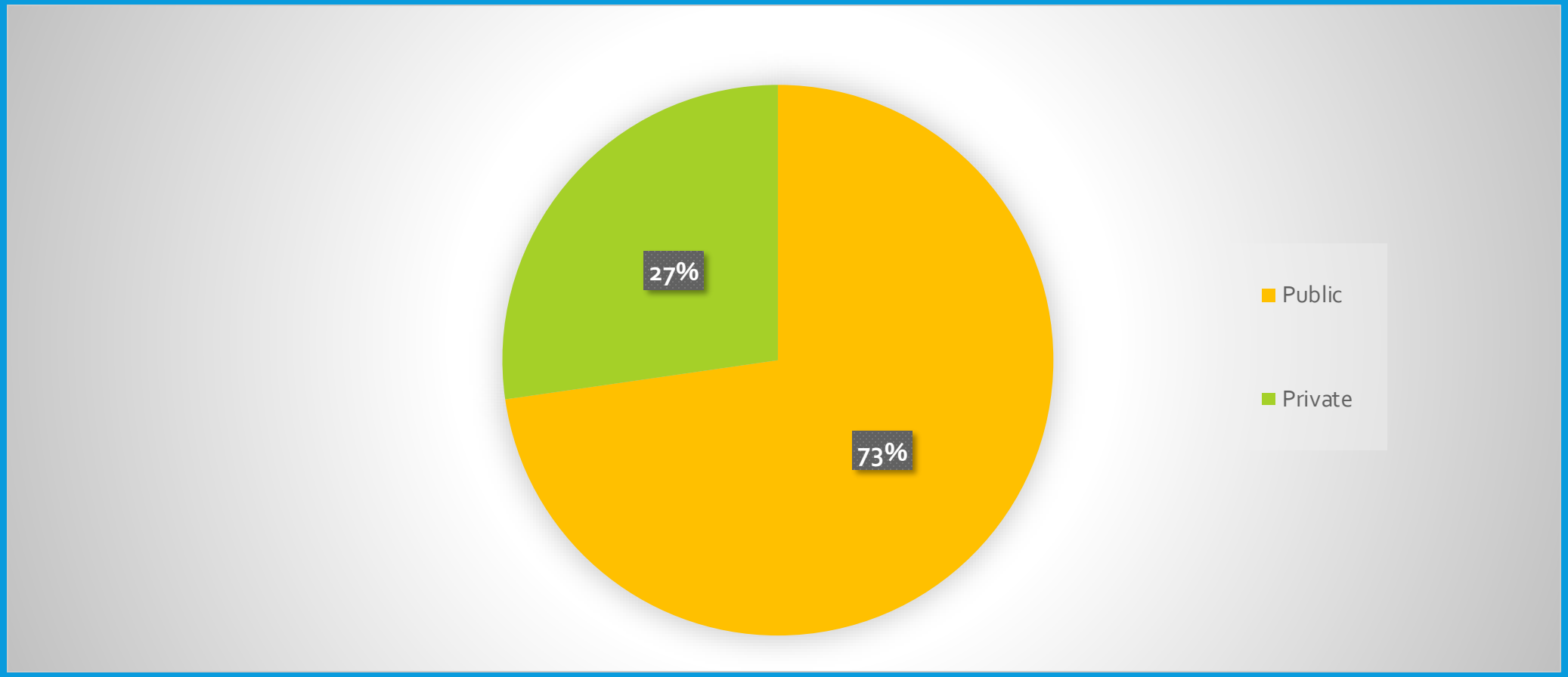
INSURANCE OF ALL REFERRED PATIENTS



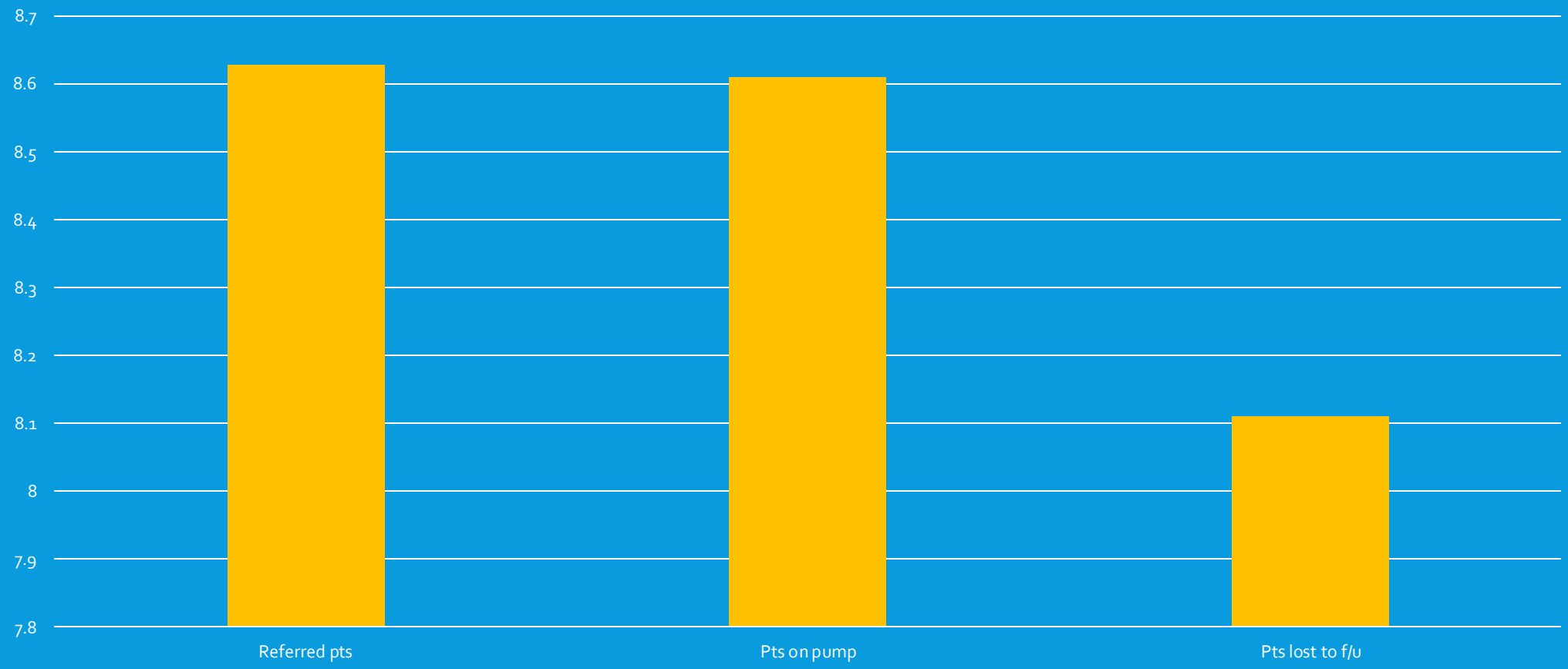
INSURANCE OF PATIENTS ON PUMPS



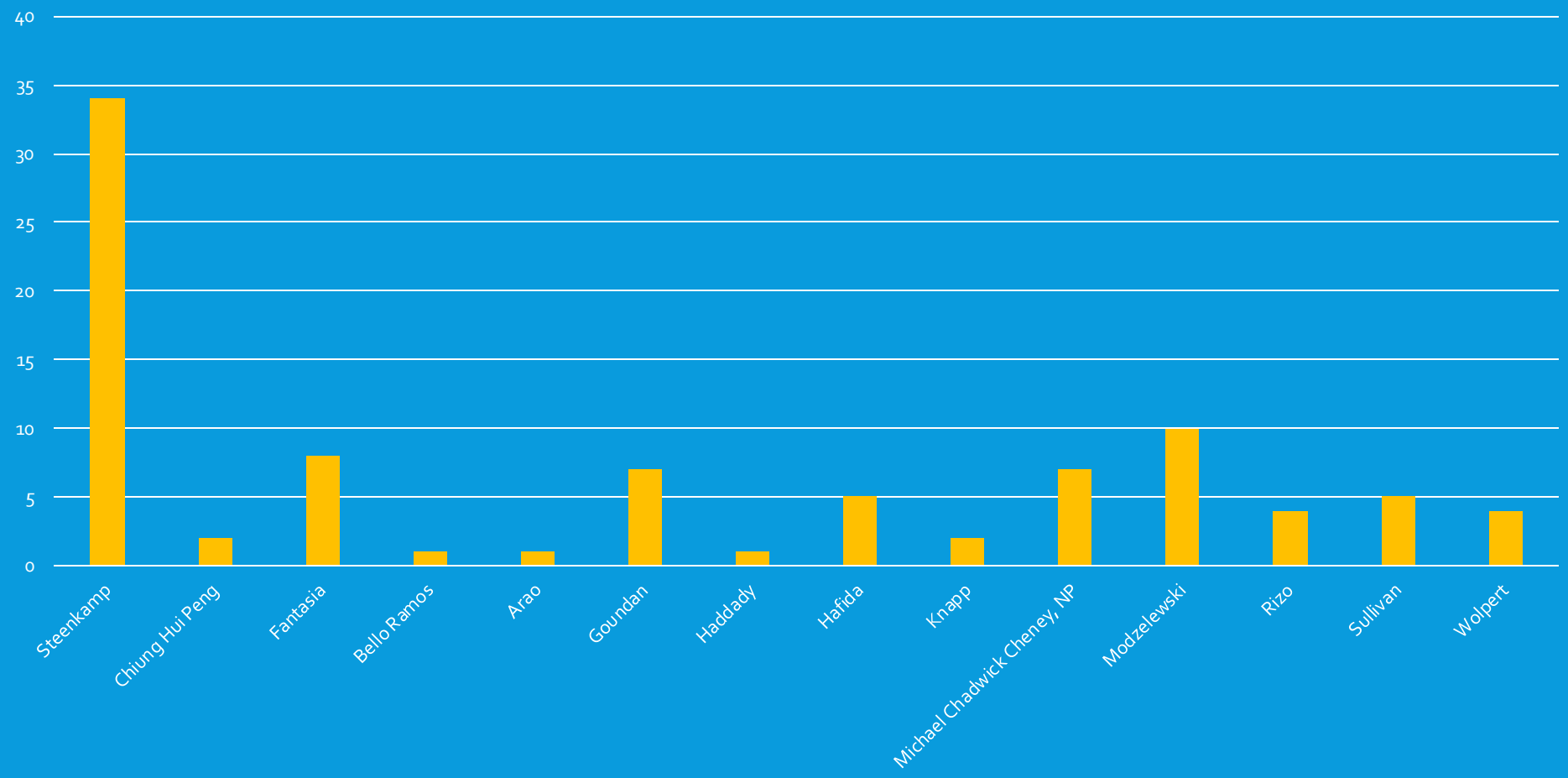
INSURANCE OF PATIENTS NOT YET ENGAGED



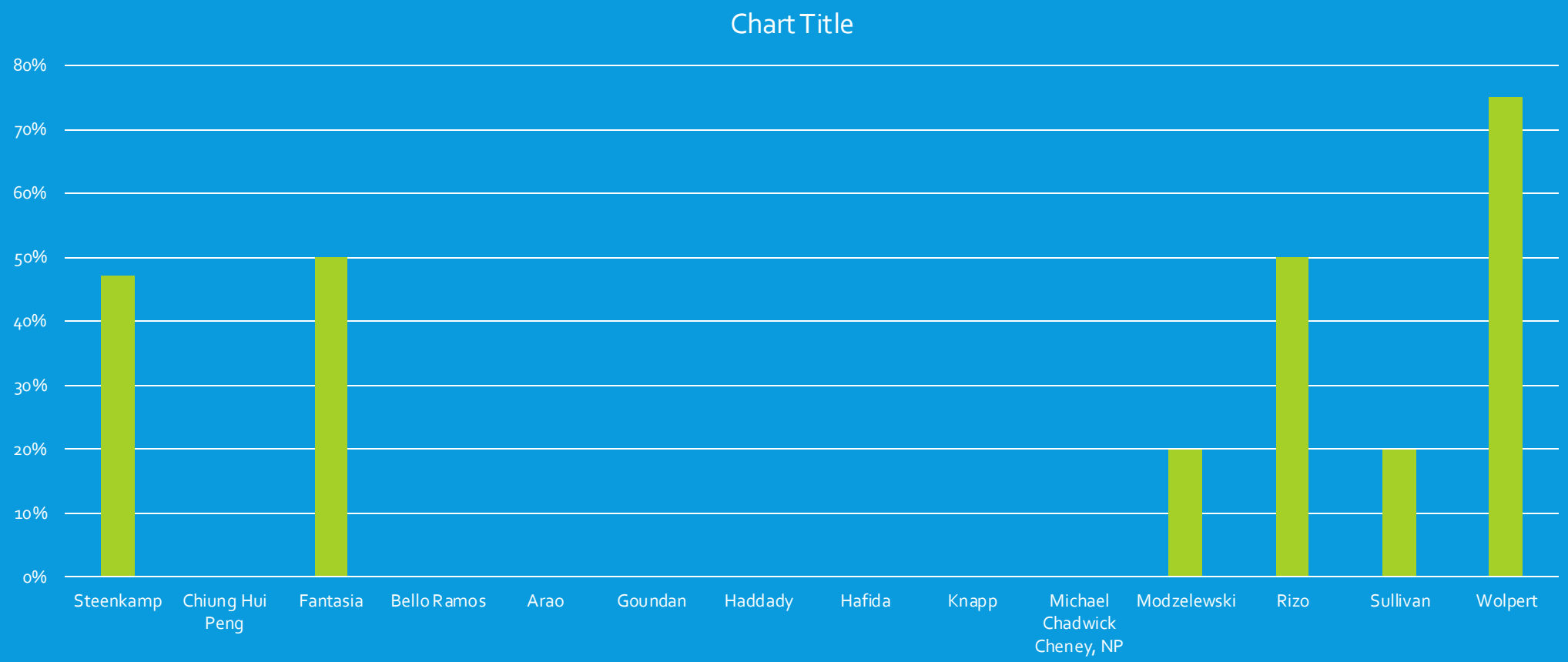
AVERAGE A1C AT TIME OF REFERRAL



TOTAL REFERRALS BY PROVIDER



INCREASED REFERRALS IS ONLY PART OF THE STORY….



WHAT'S NEXT

- Understand the barriers that are driving the "yet to engage in education" group
- Reduce barriers for obtaining and maintaining pump supplies. Avoid attrition!
- Continue to improve ongoing access for pump education follow up and pump starts. How do we increase efficiency?
- Maintain/expand diabetes technology journal clubs and tech focused educational sessions for all our clinicians
- Improve access to ophthalmology for dilated eye exams prior to insulin pump start

T1D EXCHANGE QI TEAM AT BMC

- Endocrinologists
  - Kathryn Fantasia MD
  - Devin Steenkamp MD
  - Catherine Sullivan MD
  - Howard Wolpert MD
- Pump Educators/ CDCES
  - Corinne Aia RD, CDCES
  - Liz Brouillard RD, CDCES
- Research Coordinator
  - Astrid Atakov Castillo

Thank You!

Any Questions?

Clinical Presentation:

NYU Langone MEDICAL CENTER

ENDOCRINOLOGY, DIABETES AND METABOLISM

SEPRA

Akankasha Goyal, MD

Clinical Assistant Professor of Medicine

Sept 20, 2022

SEPRA

Long term comparative effectiveness of once weekly semaglutide versus standard of care in a real world adult US population with type 2 diabetes

A randomized pragmatic clinical trial

➢ **Overall Study Design**:

- 2 year multi-center, randomized, open-label, parallel group, active comparator pragmatic clinical trial

➢ **Primary objective:**

- Demonstrate superior long term effects of treatment with semaglutide to SOC both added to 2 oral anti-diabetic medications in routine clinical practice in adults with T2D

➢ **Secondary objective**

- Weight loss
- Patient reported outcomes and Clinical reported outcomes
- Hypoglycemia
- Adherence and persistence to treatment

➢ **<u>Key Inclusion Criteria</u>**

- Patients with T2D
- Must require further intensification with an additional oral or injectable medication to achieve glycemic target at the discretion of the physician
- Must NOT be treated with more than 2 oral DM medications, oral semaglutide or any injectable medication within 30 days before the day of eligibility assessment.

➢ **Number of subjects for our site: 8 (9 recruited)**

➢ **Recruitment End date : Dec 31, 2020**

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➢ **<u>Randomization</u>**: Eligible patients are randomized (1:1) to receive semaglutide or SOC

- Study involves about 3 visits.
- During these visits Vital Signs, Height, Weight and hemoglobin A1c checked
- Questionnaires about health and daily activities, patient's satisfaction with T2D
- treatment, quality of life, and diabetes symptoms filled

- Now that enrollment has ended focus is on the completion of Year 1 and Year 2 visits.

➢ The primary endpoint of this study is: HbA1c < 7% at year 1

➢ The secondary endpoints of this study include:

Change in HbA1c (%-point) from baseline to year 1 HbA1c

HbA1c < 7% at Year 2

Change in HbA1c (%-point) from baseline to year 2

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- Therefore it is vital that the dedicated study visits are conducted within the completion window of +/_- 6 weeks

Data Management center

Quaterly meetings and newsletter

Thank you

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Pre/Post learning