T1D Exchange

QI Project: Screening for stage 1 And stage 2 type 1 diabetes

August 16, 2024

Agenda

- Welcome
- Project Aim
- Monthly Data Reporting/Smartsheet Overview
- Center Fishbone Diagrams
- Coordinating Center Updates
- Preliminary Results
- Next Steps

AIM Statements

Increase, by at least 15% (from baseline,) the proportion of people screened for T1D in 18 months. (June 2024 - December 2025)

Increase, by at least 30% (from baseline,) the proportion of eligible people monitored for progression to stage 3 T1D over 18 months. (June 2024 -December 2025)

Timeline	Expectations
August 2024	• Attend monthly calls • Teams will perform a fishbone activity • Continue to report on Smartsheet
September 2024	• Attend monthly calls • Team will use the PICK tool to prioritize interventions/changes • Team will start testing first PDSAs.
October 2024	• Attend monthly coaching calls • Teams report on their recent intervention activities. • The group will continue to test PDSA Cycles.

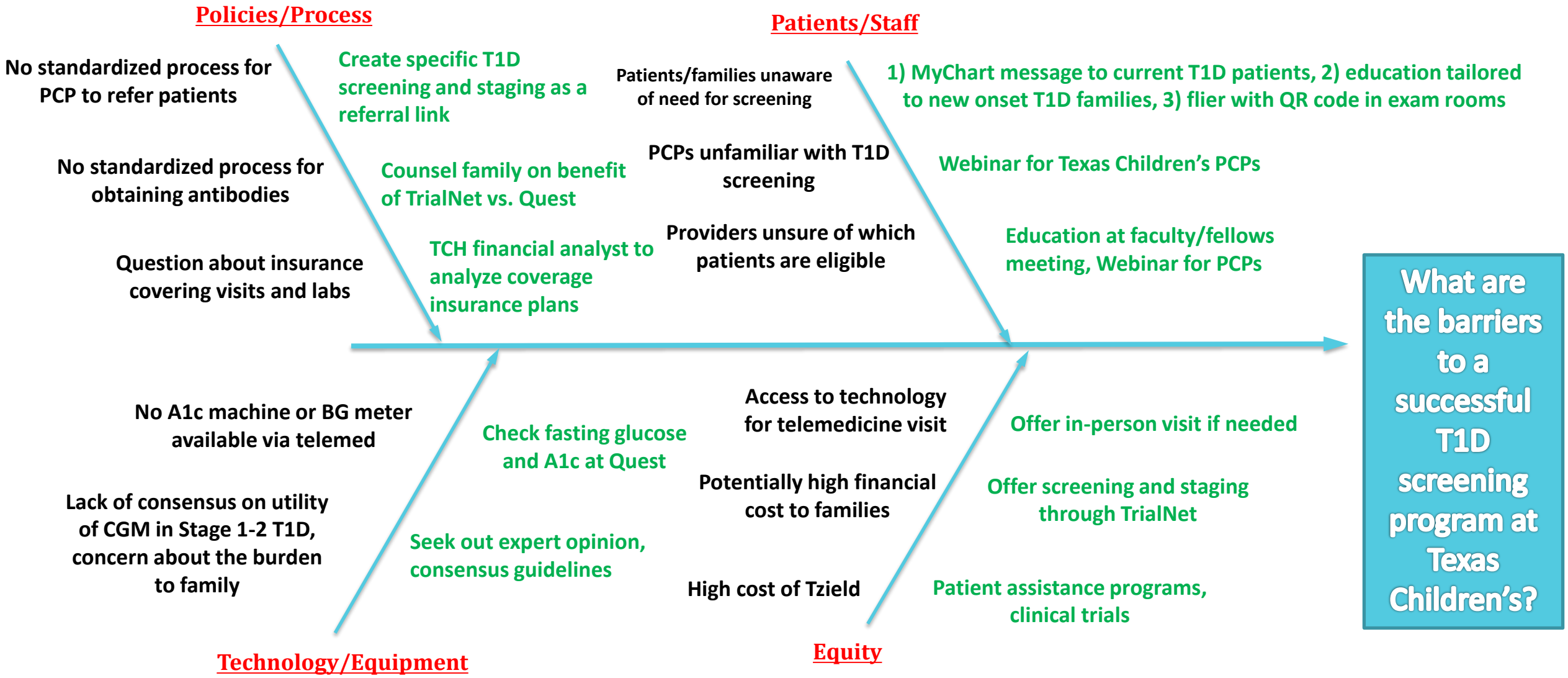
Monthly Data Reporting/Smartsheet Overview

Data Reporting by Center

Centers	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24
Children's National						
Texas Children's						
Lurie Children's						
University of Indiana						

Center Fishbone Diagrams

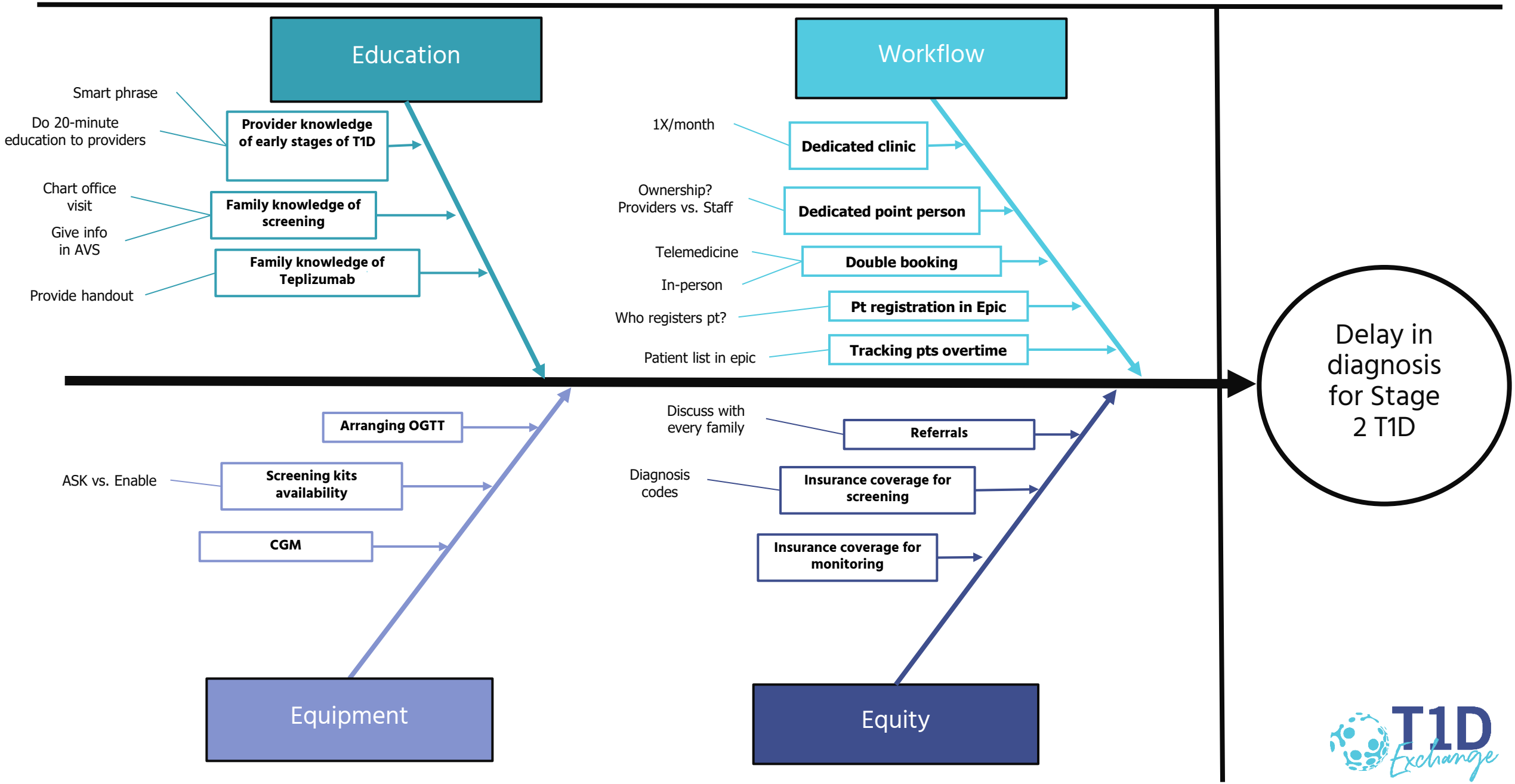
Texas Children's Hospital



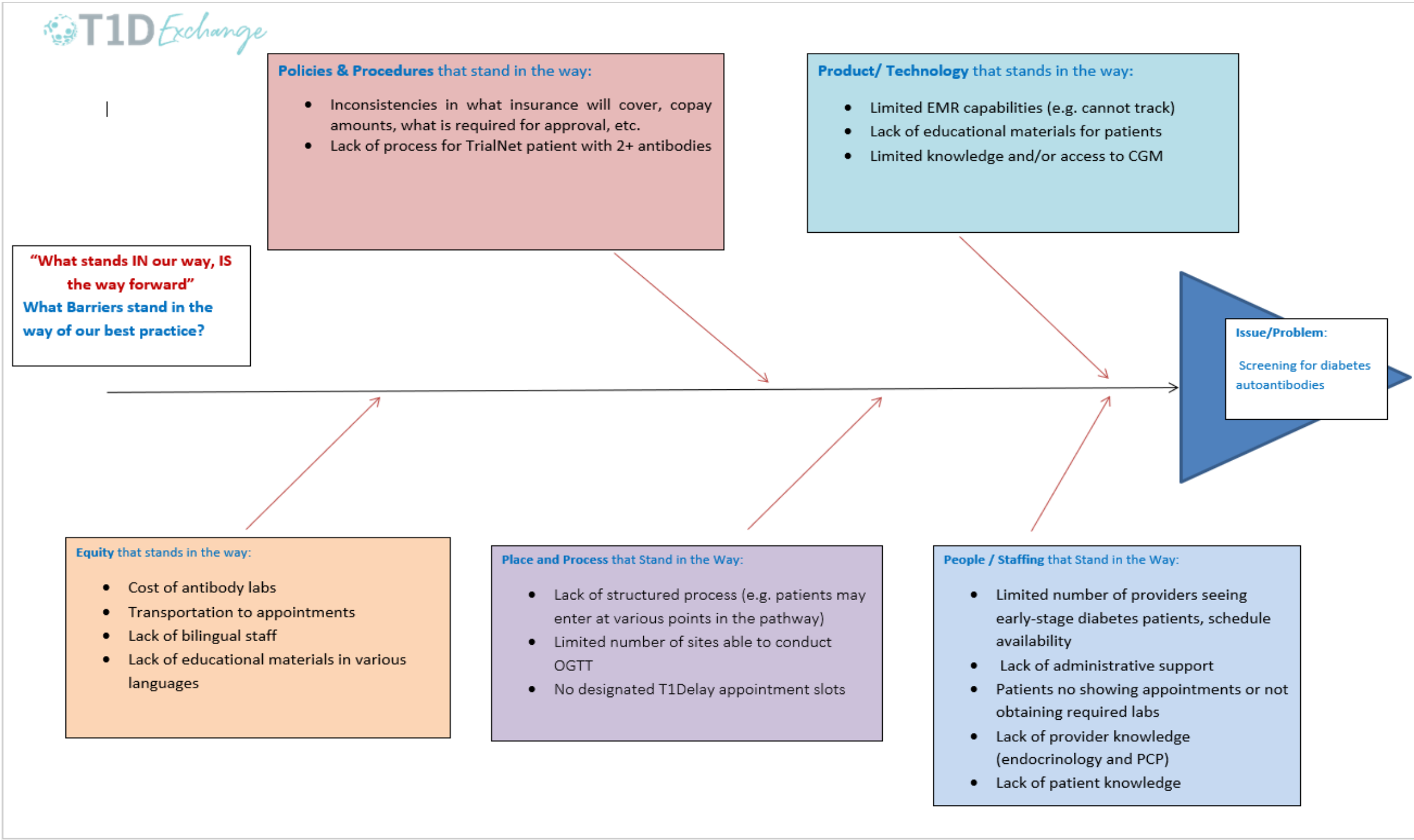
Key Drivers: People, Processes, Policies, Equipment, Supplies, Measurements, Equity

Lurie Children's Hospital

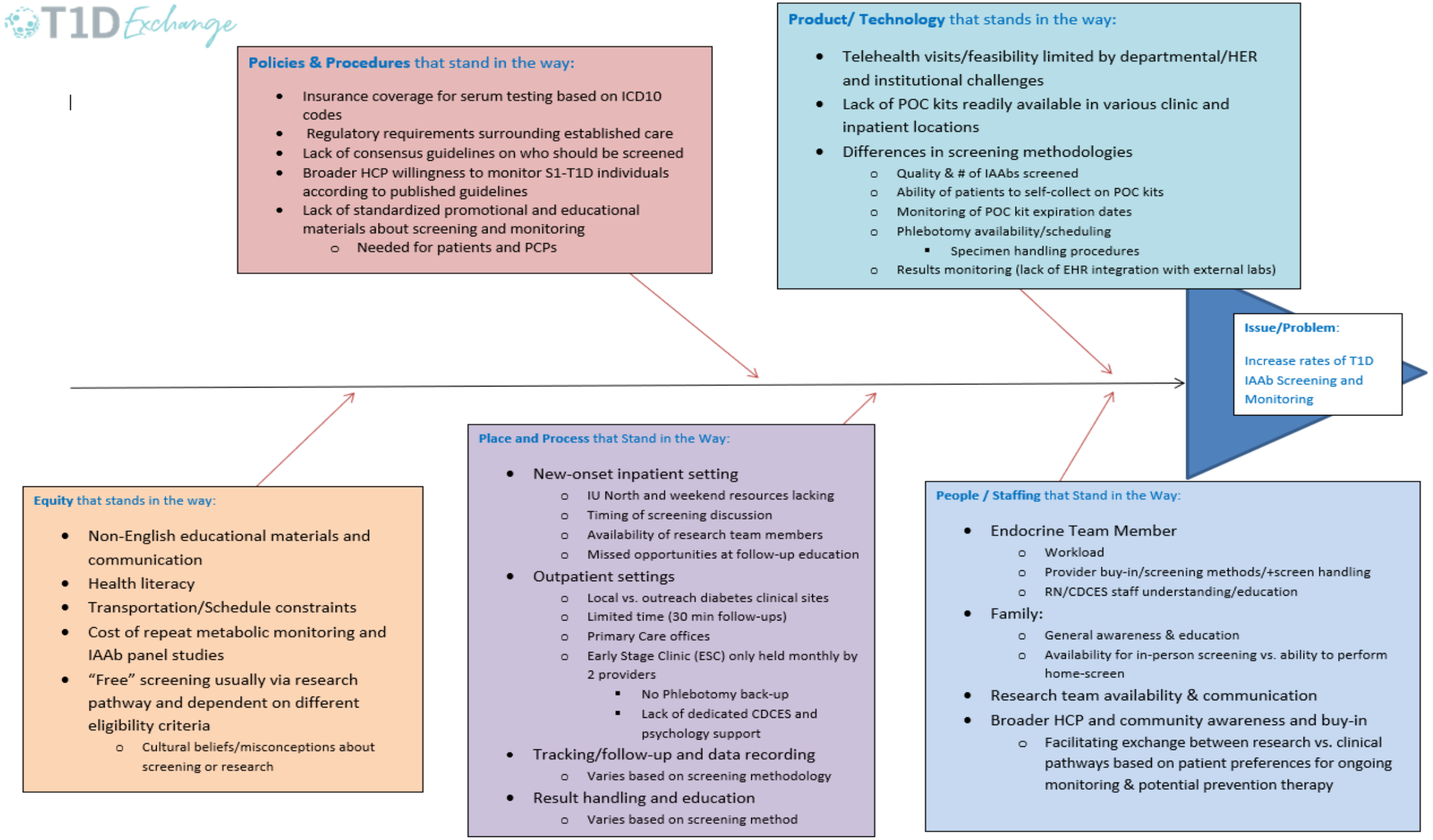
Fishbone Diagram



Children's National Hospital


T1D Exchange
Policies & Procedures that stand in the way:
Inconsistencies in what insurance will cover, copay amounts, what is required for approval, etc.
Lack of process for TrialNet patient with 2+ antibodies
Product/ Technology that stands in the way:
Limited EMR capabilities (e.g. cannot track)
Lack of educational materials for patients
Limited knowledge and/or access to CGM
"What stands IN our way, IS the way forward"
What Barriers stand in the way of our best practice?
Issue/Problem:
Screening for diabetes autoantibodies
Equity that stands in the way:
Cost of antibody labs
Transportation to appointments
Lack of bilingual staff
Lack of educational materials in various languages
Place and Process that Stand in the Way:
Lack of structured process (e.g. patients may enter at various points in the pathway)
Limited number of sites able to conduct OGTT
No designated T1Delay appointment slots
People / Staffing that Stand in the Way:
Limited number of providers seeing early-stage diabetes patients, schedule availability
Lack of administrative support
Patients no showing appointments or not obtaining required labs
Lack of provider knowledge (endocrinology and PCP)
Lack of patient knowledge

University of Indiana


T1D Exchange
Policies & Procedures that stand in the way:
Insurance coverage for serum testing based on ICD10 codes
Regulatory requirements surrounding established care
Lack of consensus guidelines on who should be screened
Broader HCP willingness to monitor S1-T1D individuals according to published guidelines
Lack of standardized promotional and educational materials about screening and monitoring
Needed for patients and PCPs
Product/ Technology that stands in the way:
Telehealth visits/feasibility limited by departmental/HER and institutional challenges
Lack of POC kits readily available in various clinic and inpatient locations
Differences in screening methodologies
Quality & # of IAAbs screened
Ability of patients to self-collect on POC kits
Monitoring of POC kit expiration dates
Phlebotomy availability/scheduling
Specimen handling procedures
Results monitoring (lack of EHR integration with external labs)
Issue/Problem:
Increase rates of T1D IAAb Screening and Monitoring
Equity that stands in the way:
Non-English educational materials and communication
Health literacy
Transportation/Schedule constraints
Cost of repeat metabolic monitoring and IAAb panel studies
"Free" screening usually via research pathway and dependent on different eligibility criteria
Cultural beliefs/misconceptions about screening or research
Place and Process that Stand in the Way:
New-onset inpatient setting
IU North and weekend resources lacking
Timing of screening discussion
Availability of research team members
Missed opportunities at follow-up education
Outpatient settings
Local vs. outreach diabetes clinical sites
Limited time (30 min follow-ups)
Primary Care offices
Early Stage Clinic (ESC) only held monthly by 2 providers
No Phlebotomy back-up
Lack of dedicated CDCES and psychology support
Tracking/follow-up and data recording
Varies based on screening methodology
Result handling and education
Varies based on screening method
People / Staffing that Stand in the Way:
Endocrine Team Member
Workload
Provider buy-in/screening methods/+screen handling
RN/CDCES staff understanding/education
Family:
General awareness & education
Availability for in-person screening vs. ability to perform home-screen
Research team availability & communication
Broader HCP and community awareness and buy-in
Facilitating exchange between research vs. clinical pathways based on patient preferences for ongoing monitoring & potential prevention therapy

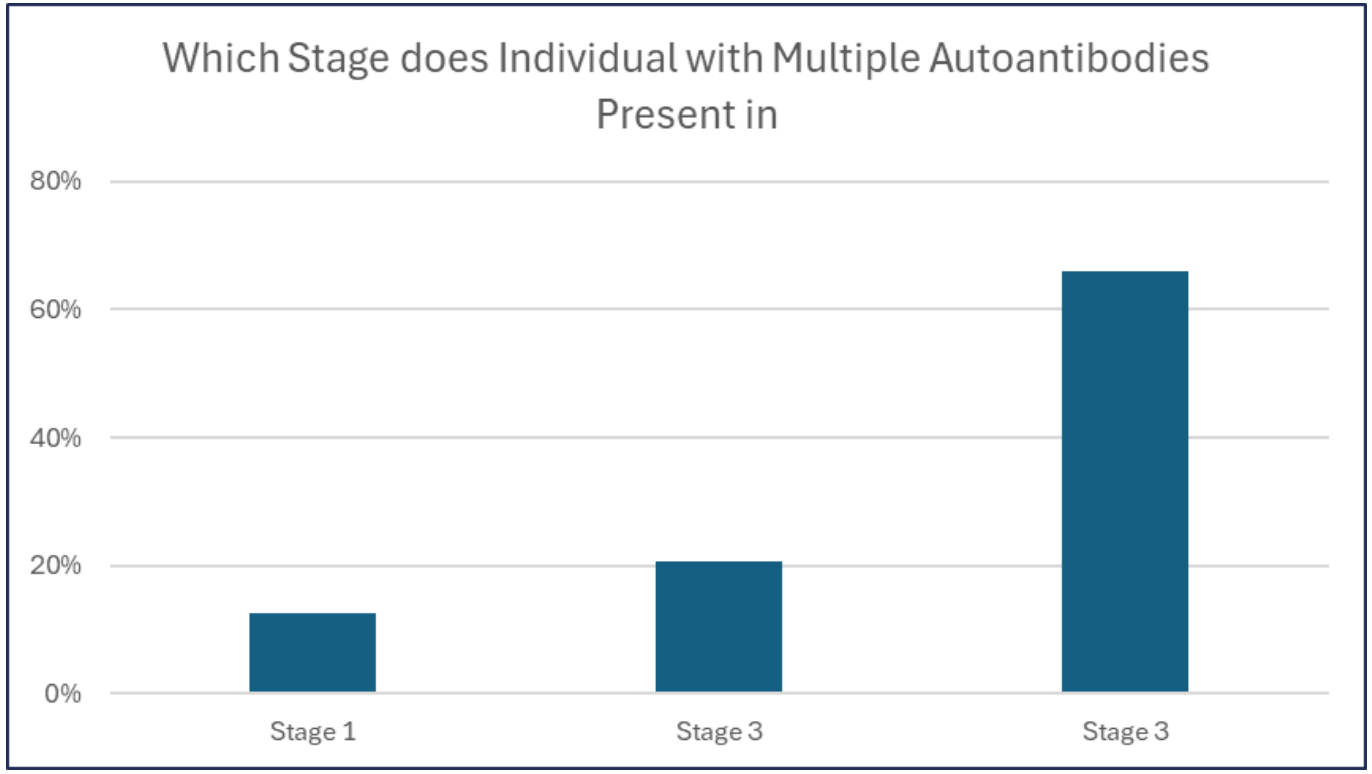
Coordinating Center Updates

Preliminary Results

Preliminary Screening Results

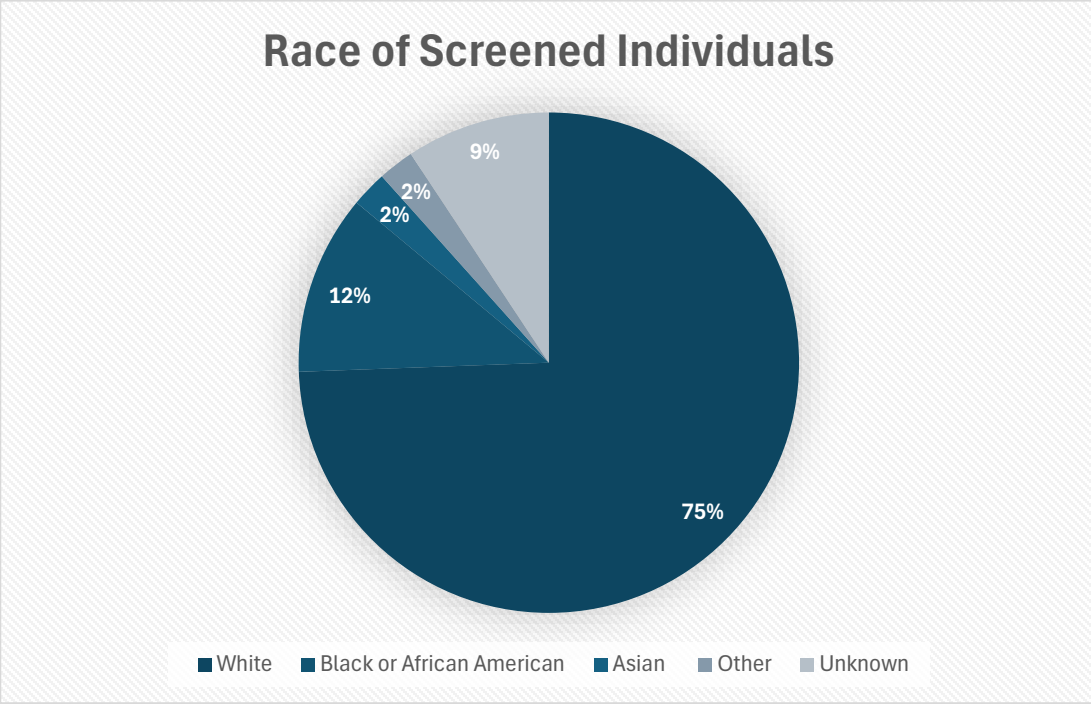
- **157** individuals screened from four centers.

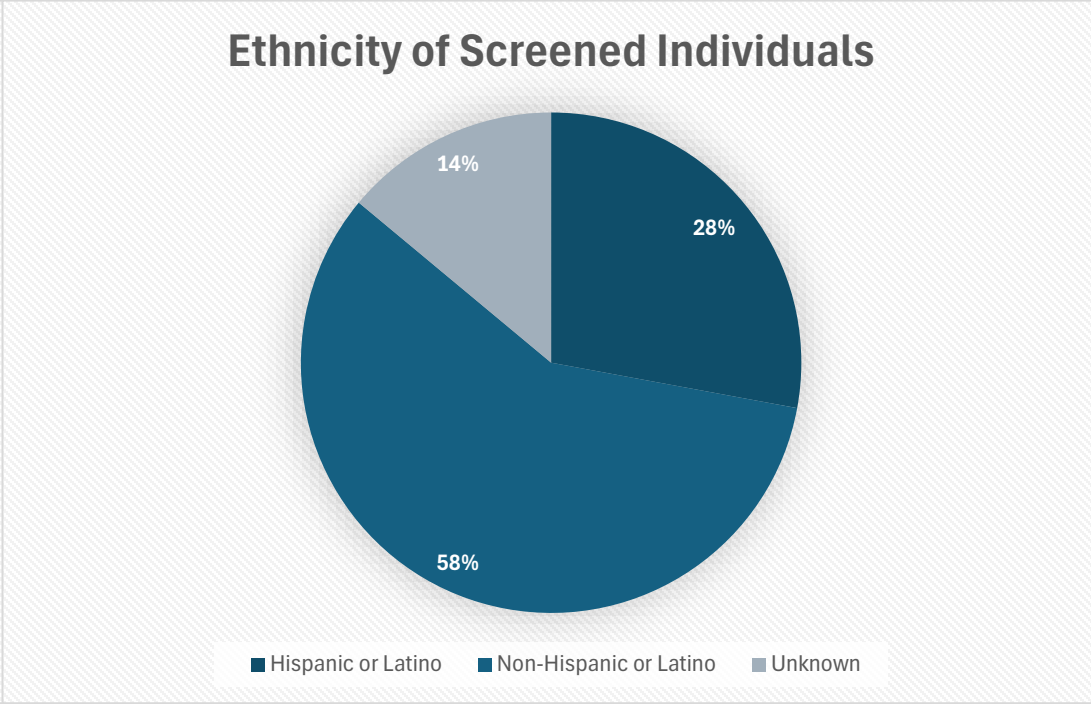
- **92** screened positive with confirmed results.



Preliminary Results- Demographics

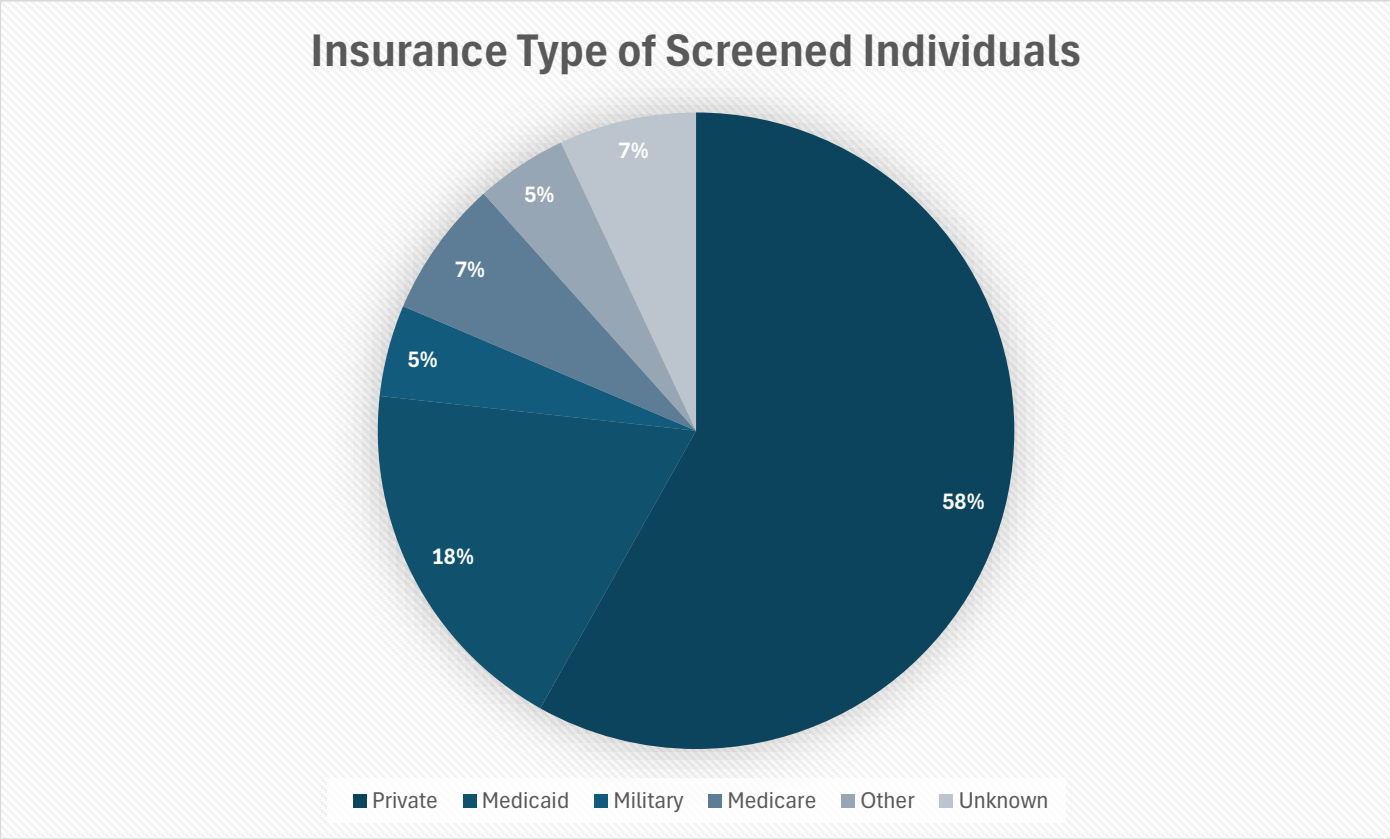
- Mean age of individuals screened was 11 years old
- Age ranged from 2 years old to 25 years old
- Race was predominantly White (75%) and ethnicity was Non-Hispanic (58%)





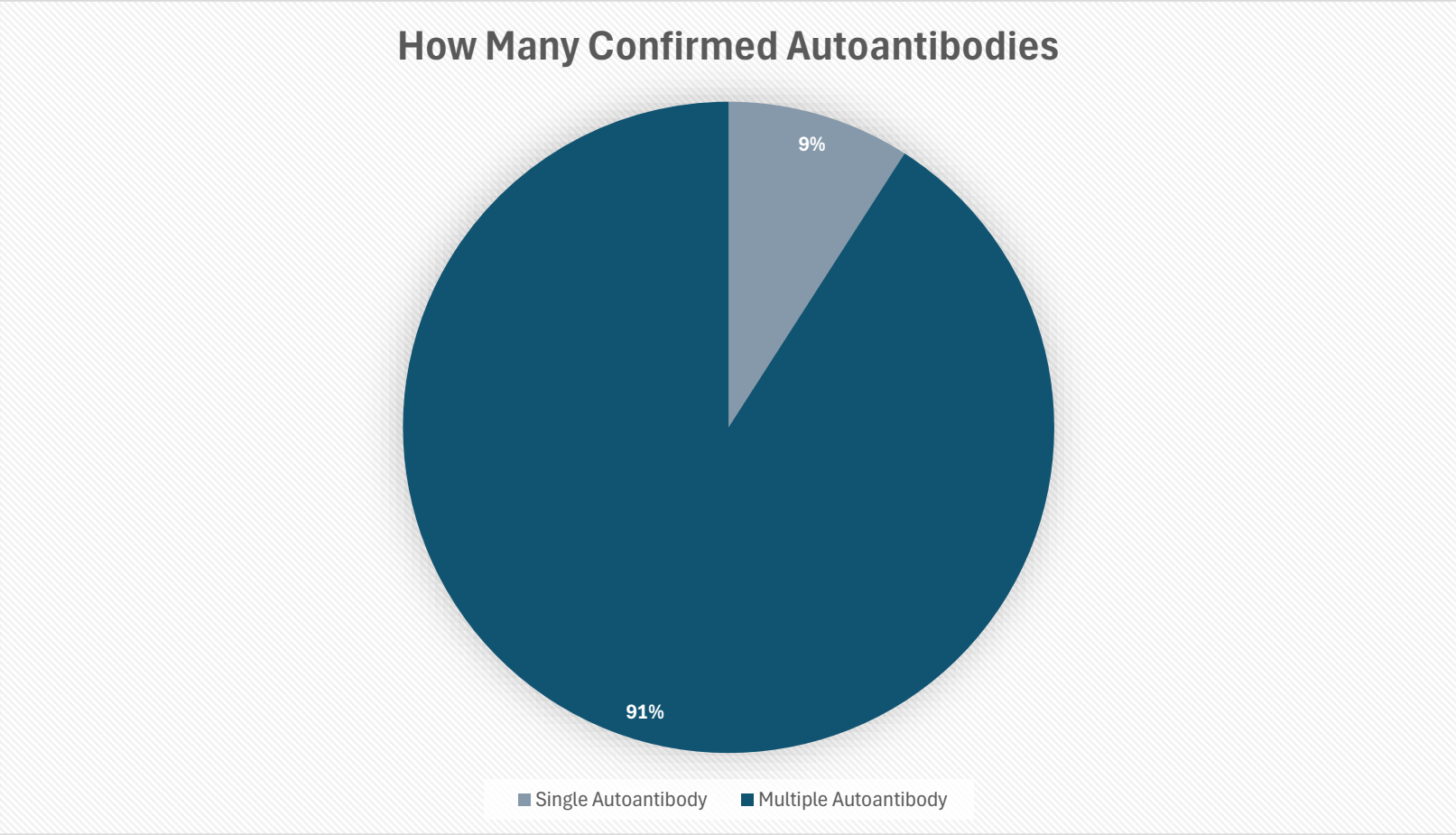
Preliminary Results- Demographics

- The majority of individuals screened had private insurance (58%)



Preliminary Results- How many confirmed positive autoantibodies does the individual have?

- The majority of screened individuals had multiple confirmed autoantibodies (91%)



Preliminary Results- Which Autoantibodies are Present?

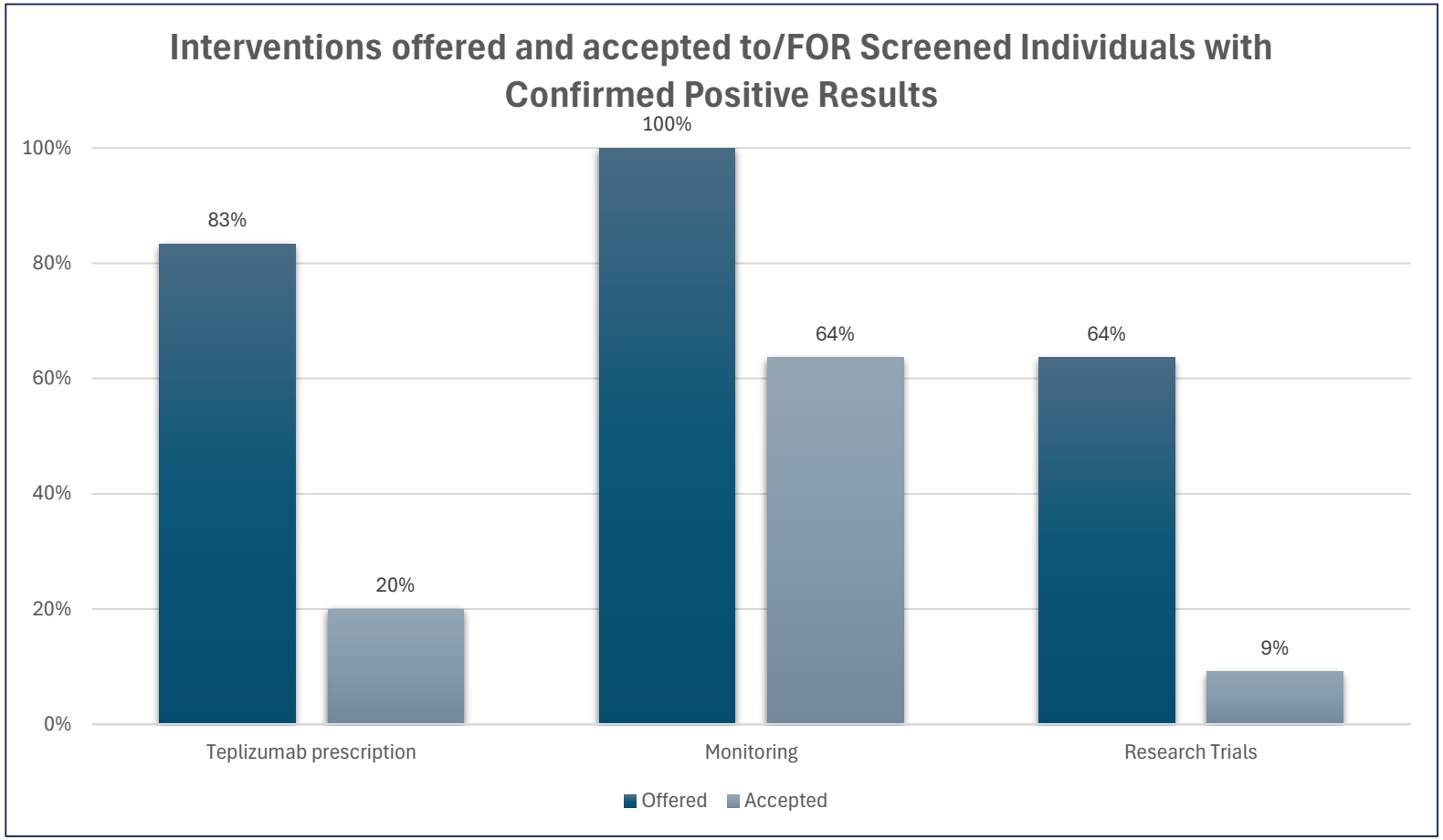
- For the single individual that screened positive for 1 autoantibody, **GAD65** was present
- For the individuals that screened positive for multiple autoantibodies

Type of Autoantibody	Percent of Screened Individuals
GAD65	80%
Anti-IA2	60%
IAA	30%
ZNT8	80%
ICA	20%

Preliminary Results- Do Individuals have a Scheduled Follow up with Endocrinologist in the Next Year

- **100%** of screened individuals with confirmed positive test results have a follow up appointment scheduled in the next year.
- The mean A1c of individuals screened with a confirmed positive test was **5.5**
- **100%** of individuals with stage 3 did **NOT** have a documented DKA.

Preliminary Results- Was the individual offered any interventions?



Next Steps