Introducing Type 1 Diabetes Autoantibody Screening To An Urban Multicultural Community

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INTRODUCTION

Founded in 1882, University Hospital (UH) is the only state-funded public hospital and academic health center in New Jersey. Its mission is to provide exceptional care to every patient, every time. With close to 4,000 employees and over 500 licensed beds, UH had over 17,500 inpatient discharges, 256,000 clinic visits, and 89,000 emergency room visits in Fiscal Year 2022 (FY 2022). University Hospital serves a diverse community, with a significant number of uninsured patients (19%).

BACKGROUND AND SIGNIFICANCE

Screening for type 1 diabetes autoantibodies has been linked to lower rates of diabetic ketoacidosis at diagnosis. However, racial and ethnic minorities tend to participate in risk screening at lower rates compared non-Hispanic Whites.

Objectives

This quality improvement project aimed to demonstrate the feasibility and acceptability of T1D risk screening in a clinical setting that serves a diverse patient population.
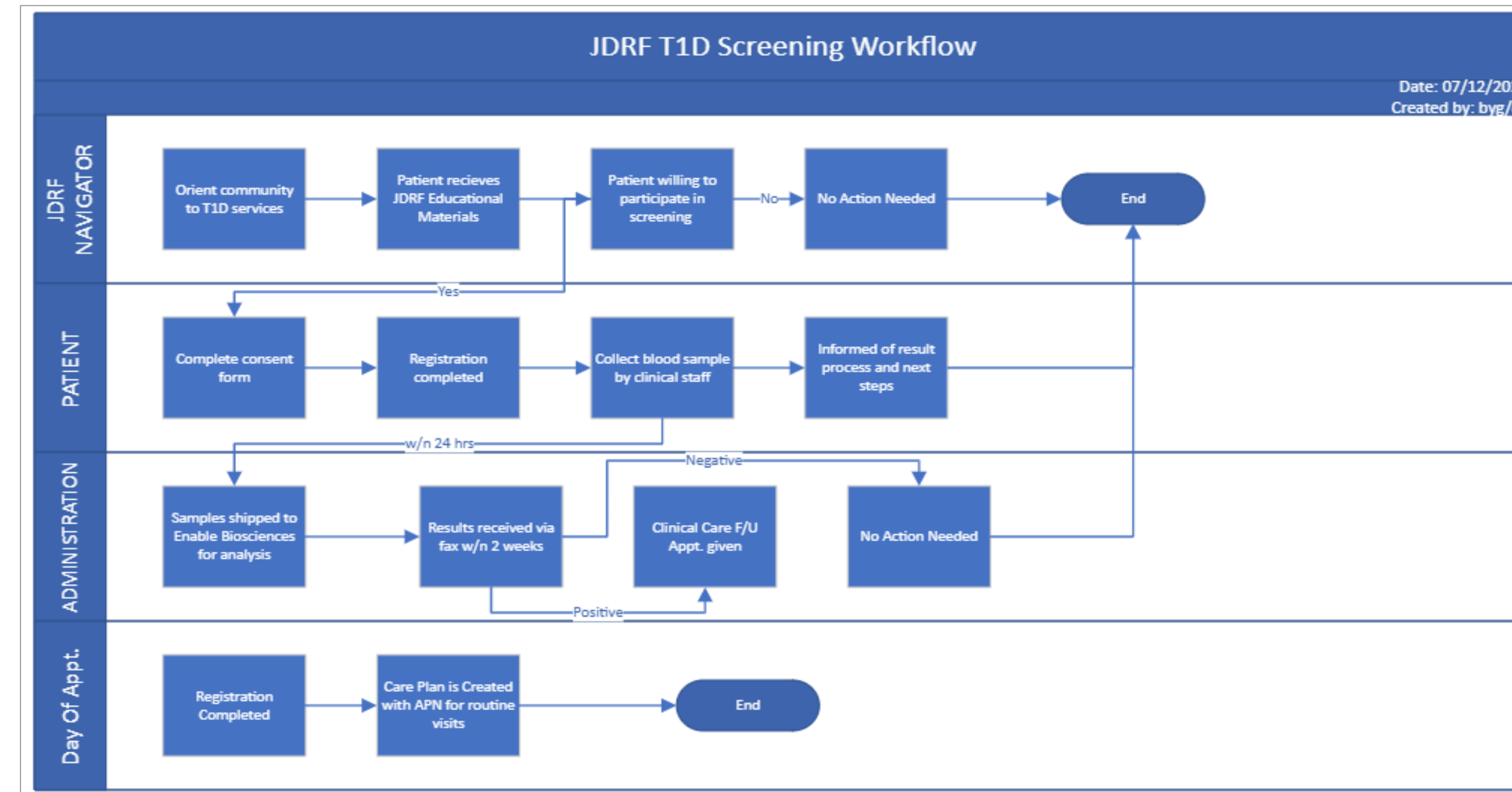
Methods

The pilot project (July 2022-May 2023) was led by a patient navigator with support from the clinic nurse manager, medical faculty, and administrative staff. The navigator provided T1D screening education and obtained consent. Screening was conducted in the clinic using a capillary T1D autoantibody assay. Results were conveyed by telephone. Individuals with positive autoantibodies received a referral for confirmatory testing.
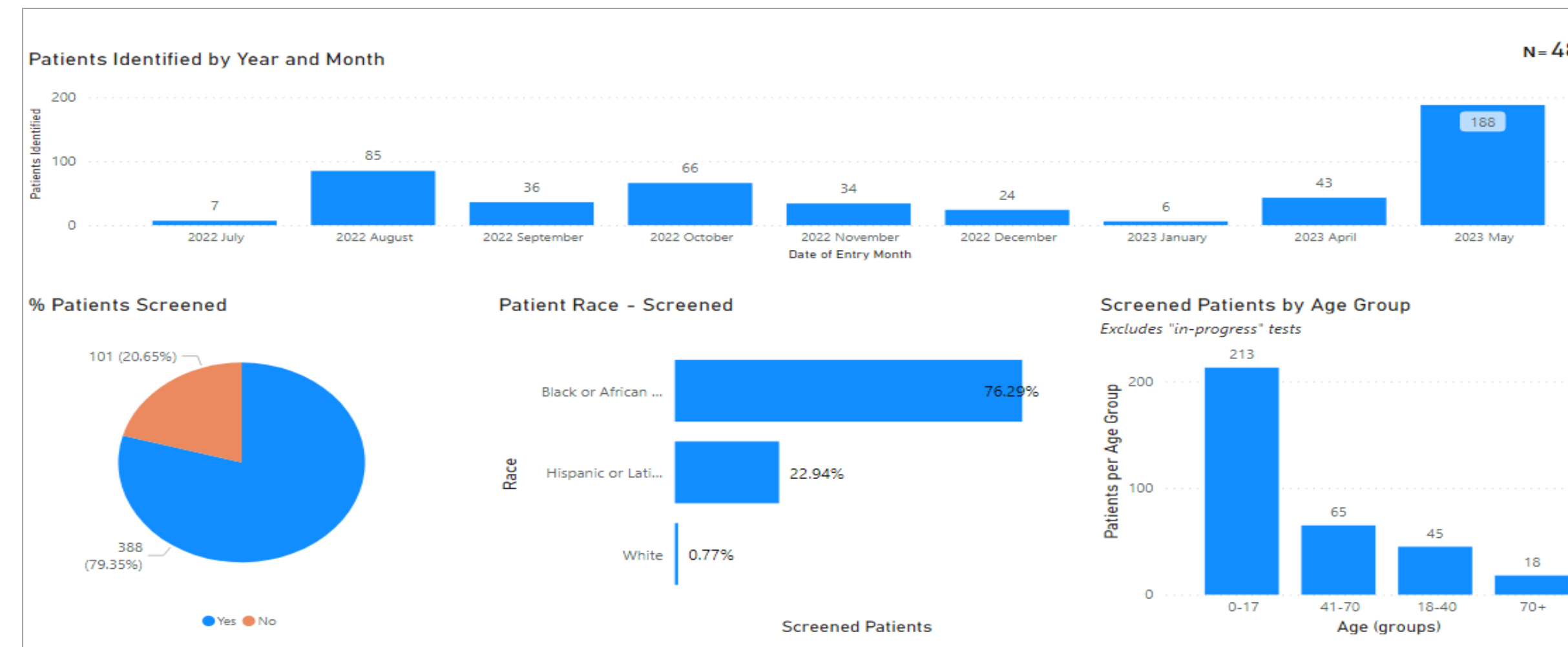
Results

Anonymized demographic data and lab results were collected, and participants completed a satisfaction survey. Of the 489 individuals identified, 388 participated in screening, with a mean age of 18 years and a range of 3 to 94 years. The majority of participants were Non-Hispanic Black (76.26%), followed by Latino (22.94%), and Non-Hispanic White (0.77%). More than 99% of participants tested negative for T1D autoantibodies.

MATERIAL & METHODS

JDRF T1D Screening Workflow — Date: 07/12/2023, Created by: byg/ch

RESULTS

Patients Identified by Year and Month — N=489

% Patients Screened; Patient Race – Screened; Screened Patients by Age Group

KEY TAKEAWAYS

- Screening for type 1 diabetes autoantibodies has been linked to lower rates of diabetic ketoacidosis at diagnosis.
- Clinic-based type 1 diabetes autoantibody screening is feasible and acceptable in a setting that serves a diverse, multicultural community.
- Further research is required to understand how this model can be generalized to other settings.

IMPLICATIONS FOR DIABETES CARE AND EDUCATION SPECIALISTS

- Diabetes Care and Education Specialists should be prepared to educate families and individuals about T1D risk screening and monitoring and help them navigate the process.
- The DCES should be familiar with type 1 diabetes staging criteria, options for screening, and resources for follow monitoring.
- Resources for the DCES:
  Type 1 Diabetes Research: www.trialnet.org
  Monitoring Support for Individuals: www.askhealth.org/experts
  Education about type 1 diabetes risk screening: www.jdrf.org/T1Detect

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ACKNOWLEDGMENTS