

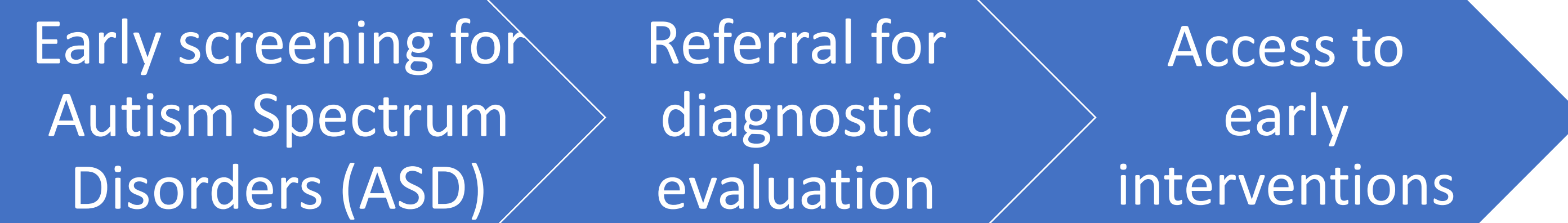
Improving Autism Screening Rates Using a Technology-Based Solution

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Background



INTRODUCTION

- Autism Spectrum Disorder (ASD) is a developmental disorder that causes social, communication, and behavioral challenges.
- Timely diagnosis is critical to minimize developmental delay and support the individual and family with evidence-based therapies⁶
- Diagnosis also promotes a sense of belonging to a community and healthy self-image³
- The Modified Checklist for Autism in Toddlers-Revised (M-CHAT-R) is a tool used to screen children for ASD at their 18 and 24-month well child checks¹.

SCOPE OF THE PROBLEM

- Patients face various barriers to diagnosis, including limited accessibility to healthcare, atypical presentations of ASD, cultural and language barriers, and provider bias and failure to screen⁵
- Black children receive their diagnosis at an average of three years later than their white peers⁴.
- Girls receive their diagnosis at an average of two years later than boys²
- Delayed diagnosis can disproportionately disrupt opportunities for treatment of ASD, resulting in compounding challenges with social and functional abilities⁶

Purpose & Aims

The purpose of this quality improvement project was to improve primary care provider compliance with M-CHAT-R screening at 18 and 24-month well child visits by implementing a technological-based solution in the form of a best practice alert (BPA). Signaling the nursing staff to populate an M-CHAT-R score into the electronic medical record was designed to reduce reliance on provider memory.

- **AIM 1:** To provide education through a brief, interactive module, on the importance of M-CHAT-R screening for ASD outcomes to the nursing staff.
- **AIM 2:** To increase M-CHAT-R completion at 18 and 24-month well child checks within a 12-week period by implementing a best practice alert (BPA).

Methods

AIM 1

DESIGN

- Pre-post test measuring knowledge before and after educational module

SAMPLE

- 35 Medical Assistants (MA) and 18 Licensed Practical Nurses (LPN) in family and pediatric primary care teams

AIM 2

DESIGN

- Comparison of Q3 screening rates (before BPA) to Q4 (during BPA)

SAMPLE

- Convenience sampling of two independent patient cohorts: those seen for an 18- or 24-month well-child check in Q3 2021 (n=302) and those seen for an 18- or 24-month well-child check in Q4 2021 (n=303)

AIM 1 AND 2

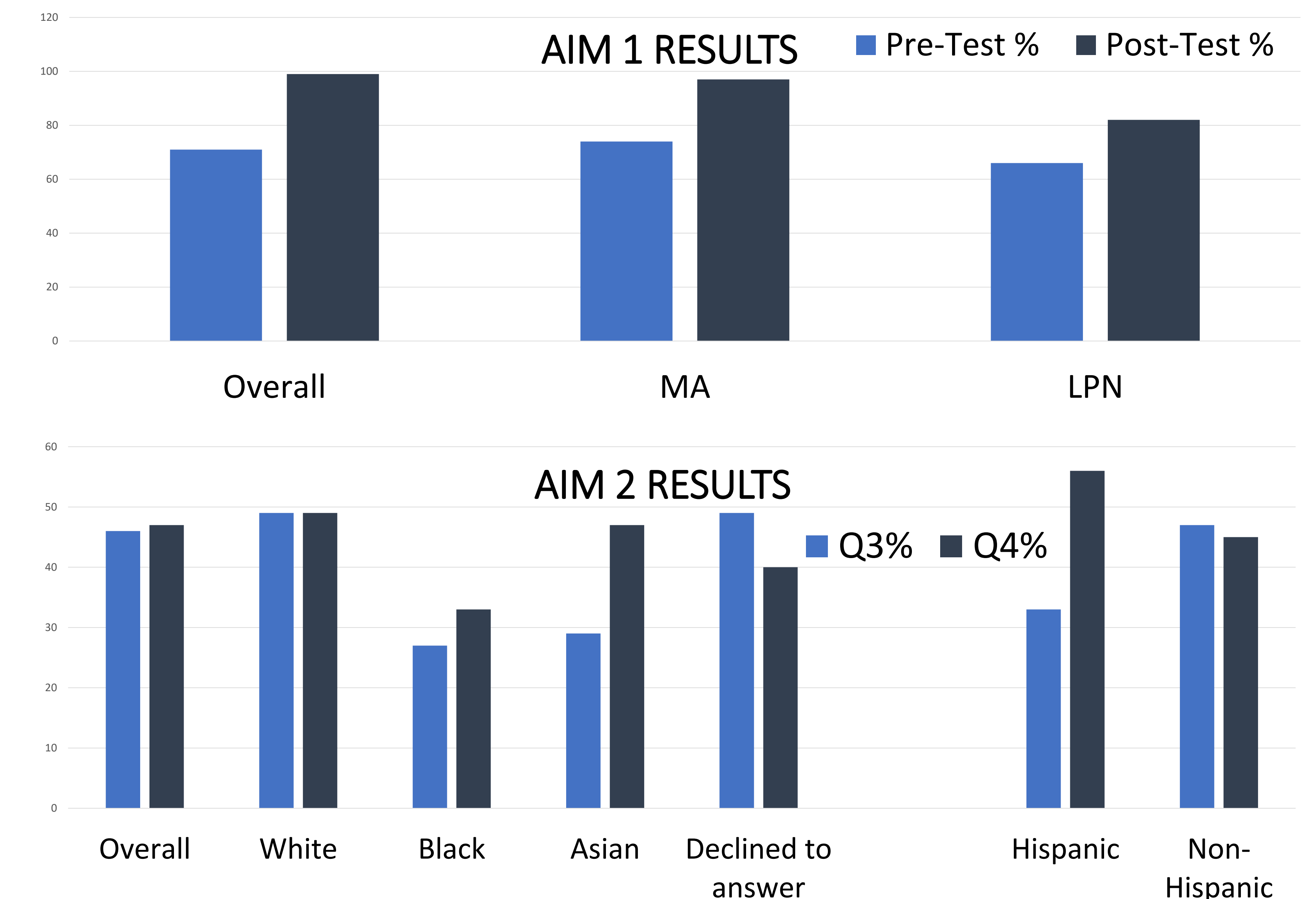
SETTING

- Primary and specialty care cooperative comprised of six clinic locations (62 primary care providers) in south central WI

AIM 2: Sociodemographic Characteristics of Patients

| Baseline characteristic | Q3 | | Q4 | |
|--------------------------|-----|-------|-----|-------|
| | n | % | n | % |
| Age | | | | |
| 18 mo. | 149 | 49% | 178 | 59% |
| 24 mo. | 153 | 51% | 125 | 41% |
| Race | | | | |
| Caucasian | 228 | 75.5% | 235 | 77.6% |
| African American | 26 | 8.6% | 24 | 7.9% |
| Asian | 21 | 7% | 19 | 6.3% |
| American Indian | 0 | 0% | 2 | 0.7% |
| Other/Declined to answer | 27 | 8.9% | 23 | 7.5% |
| Ethnicity | | | | |
| Non-Hispanic | 258 | 85.4% | 265 | 87.5% |
| Hispanic | 27 | 8.9% | 25 | 8.3% |
| Other/Declined to answer | 17 | 5.6% | 13 | 4.3% |
| Primary Language | | | | |
| English | 296 | 98% | 298 | 98.4% |
| Spanish | 3 | 1% | 3 | 1% |
| Mandarin | 3 | 1% | 1 | .3% |
| Hmong | 0 | 0% | 1 | .3% |

Results



Results, Discussion & Implications

RESULTS

- Aim 1 had an improvement of 19 percentage points (SD 16.5) in pre/post-test scores
- Aim 2 overall, there was a one percentage point increase in screening rates in Q4 vs Q3.
 - The percentage of Black patients who were screened increased from 27% in Q3 to 33% in Q4
 - The percentage of Hispanic patients who were screened increased from 33% in Q3 to 56% in Q4

DISCUSSION

The overall percentage in Aim 2 did not change however racial disparities were lessened by a standardized workflow. For Aim 1, an educational module with the evidence on and reasoning behind screening improved knowledge on the screening process.

IMPLICATIONS & SUSTAINABILITY

This project will be sustained by firstly, maintaining the educational module for all new employees, and secondly, continuing to have the BPA fire at 18- and 24-month well child checks. Future projects should aim to target other systemic barriers to screening for ASD, such as improving access to care for minority patient populations or creating a care gap in the electronic medical record

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