Interdisciplinary ASD Rounds to Improve Time to Diagnostic Clarity

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Background

- Autism spectrum disorder (ASD) can be detected at 2 years of age; however, many children are diagnosed later. (Daniels & Mandell, 2014).
- ASD specific intervention can improve a child's social behavior, communication, and reduce family distress (Lord et al, 2018).
- Access to ASD diagnostic services can be improved by utilizing NPs to the full extent of their license (Ayamami & Furlong, 2019)
- Interdisciplinary teams have been shown to be successful in diagnosing ASD, decrease the time for evaluations, increase reimbursement, increase provider satisfaction, and increase patient participation in care (Gerdts et al., 2018).

Significance

- The delay from the time of identified ASD concern to the time the diagnosis can result in delayed treatment which is associated with worsened clinical outcomes (Dawson et al., 2010) and increased societal cost (Buescher et al., 2014).
- The inclusion of nurse practitioners in interdisciplinary teams will likely be of increasing importance given to the continued shortage of subspecialists who are experienced with ASD (Gerdts et al., 2018 & Johnson et al., 2007).

Purpose & Aims

- **Purpose**: Evaluate the impact of utilizing interdisciplinary ASD rounds in developing a plan of care for existing patients with concerns of ASD.
- **Project Aims:**
  1. Increase the number of patients who achieve diagnostic clarity over a 16-week period
  2. Determine the feasibility of implementing interdisciplinary ASD rounds using a survey at the end of the 16-weeks
  3. Increase provider satisfaction with the ASD diagnostic process using a survey pre and post intervention

Methods

- Usual care vs intervention design was used evaluate the time to diagnostic clarity and provider satisfaction. The feasibility of the intervention was assessed using a post intervention measure.
- The setting was an outpatient developmental and behavioral pediatrics division of a large urban academic children's hospital on the east coast.
- There were two samples of patients for the first aim of this study, usual care and intervention, which included children 2-16 years of age who were existing patient.
- There were 23 providers in the clinic eligible to participate in the patient satisfaction and feasibility surveys.

Results

- While not statistically significant, 18.2% of patients in the baseline sample achieved diagnostic clarity as compared to 33.3% of the intervention sample.
- Teamwork and overall provider satisfaction demonstrated statistically significant improvements (p values .047 & .042 respectively).
- Feedback was positive on the feasibility survey.

Table 1: Provider Sample Characteristics

	Pre-Intervention Sample	Post-Intervention Sample
N	15	10
Provider Role		
Attending	10 (66.7%)	7 (70%)
Fellow	2 (13.3%)	1 (10%)
Nurse Practitioner	3 (20%)	2 (20%)
Provider Years of Experience		
<3 yrs	3 (20%)	3 (30%)
3-5 yrs	4 (26.7%)	3 (30%)
5-10yrs	1 (6.7%)	0 (0%)
>10yrs	7 (46.7%)	4 (40%)

Table 3: Feasibility

	N	Mean	Mode	Std Dev
Likely to Attend	9	4.44	4	0.527
Developing a Plan of Care	9	3.89	4	0.601
Confidence	8	4.38	4	0.518
Productivity	5	3.20	3	0.447

Table 2: Patient Sample Characteristics

	Baseline Sample	Intervention Sample
N	11	6
Treating Provider Type		
Attending	0 (0%)	0 (0%)
Fellow	1 (9.1%)	1 (16.7%)
Nurse Practitioner	10 (90.1%)	5 (83.3%)

Table 4: Provider Satisfaction

	Pre Mean (Median, IQR)	Post Mean (Median, IQR)	Significance
Teamwork	8.27 (8, 1.5)	9.40 (9, 1)	0.047
Respect	9.27 (10, 1)	9.50 (9.5, 1)	0.180
Communication	8.33 (8, 1)	8.90 (9, 0.75)	0.408
Morale	6.60 (7, 2)	7.20 (7.5,1)	0.683
Recommend Care	9.47 (10,1)	9.60 (10,1)	0.527
Summary	41.94 (42, 3.5)	44.6 (44.5, 3.25)	0.042

Discussion & Conclusions

- It is unclear if interdisciplinary rounds were successful in decreasing the time needed to achieve diagnostic clarity. A greater percentage of participants in the intervention group achieved diagnostic clarity, but the difference was not statistically significant.
- A statistically significant improvement was found in in overall provider satisfaction and provider teamwork, and positive feedback on feasibility survey suggests promise for implementation.
- Interdisciplinary rounds may be an intervention to aid in decreasing the time to a diagnosis of ASD and utilize nurse practitioners to the full scope of their license give a lack of specialists available.
- Rounds may improve provider satisfaction which may in turn be protective to the workforce.

Limitations

- A small sample size, both regarding the patient sample and the provider sample. The constrained time frame of this Quality Improvement project
- Due to the nature of the feasibility survey the only statistical analysis performed is descriptive.
- Psychometrics were available on the provider satisfaction survey (Tantau, 2018), including no information on the validity of a summary score which was calculated as a part of this project.

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