



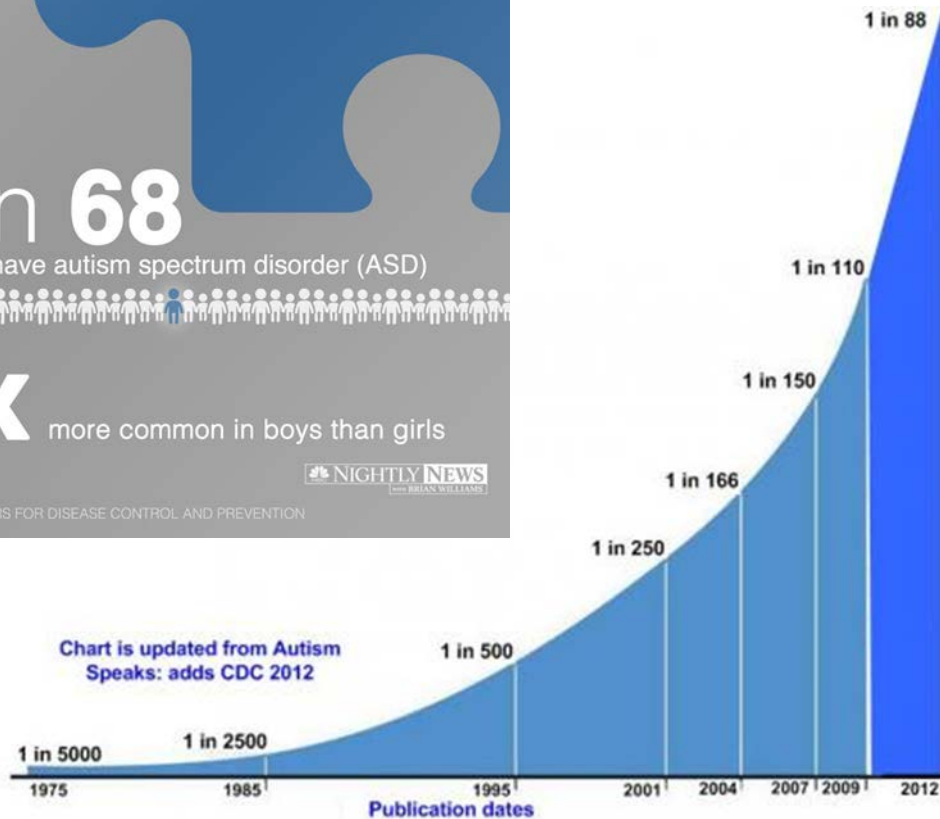
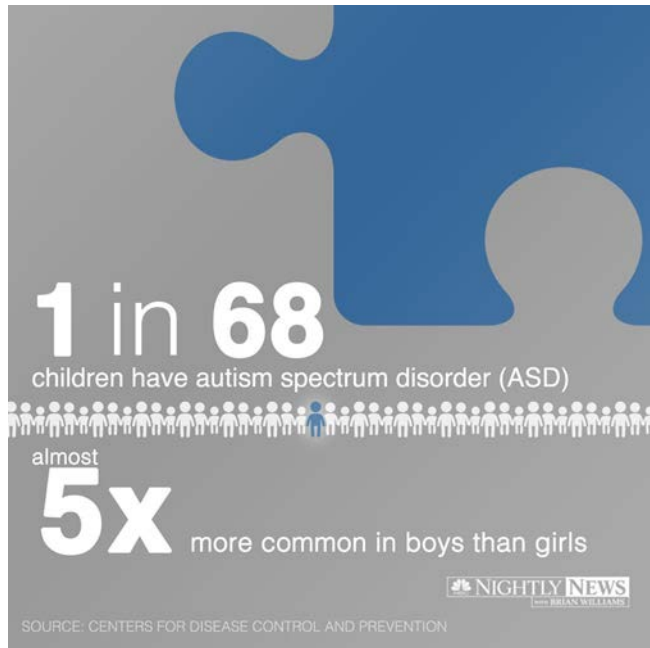
Thompson Center for Autism
& Neurodevelopmental Disorders
University of Missouri

ECHO Autism

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Autism is on the rise...



Autism Awareness



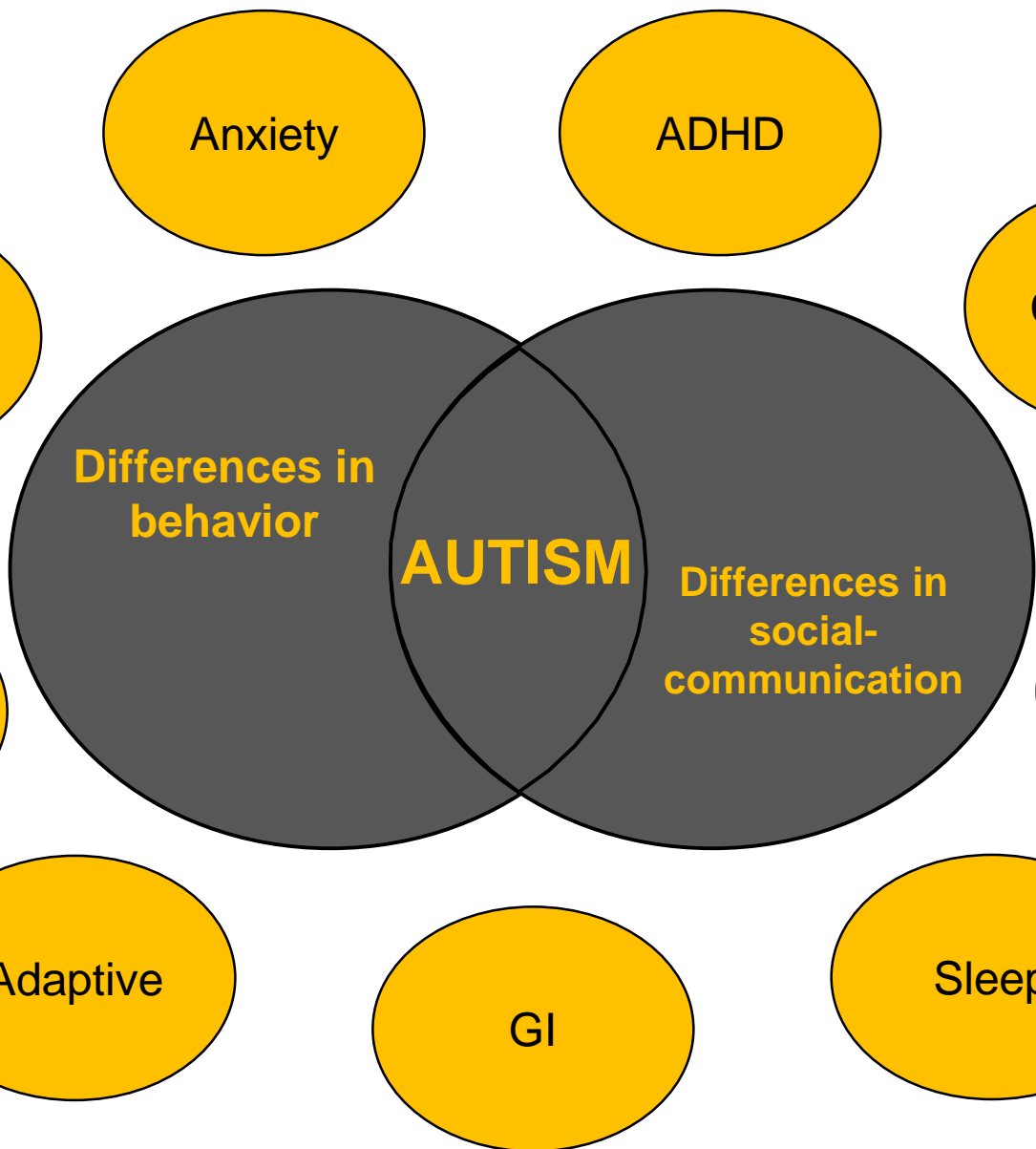
Small victories. Everyday heroes.
Go to Toysrus.com/AutismSpeaks to meet more heroes.



Families are seeking answers

- Lack of clarity in diagnosis
- Difficulty predicting outcomes
- Day-to-day variability in functioning
- Appearance of health
- Relationships
- Information





Primary Care Providers are feeling overwhelmed

- Training
- Knowledge
- Comfort
- Complexity
- Time
- They want to help!

Why do Primary Care Providers need to know more?

Can I do this??

I am SO overwhelmed!!!

Have you heard of this new treatment?

I don't know which way to turn!!

WHAT DO I DO NOW?

Who do I listen to?

If only I would have noticed sooner!

I wonder if....

Everyone gives me a different answer!!

Am I doing enough for my child?

This child did not come with instructions!!

Is there a cure?

Why doesn't my child receive that many hours of therapy?

What information is correct??

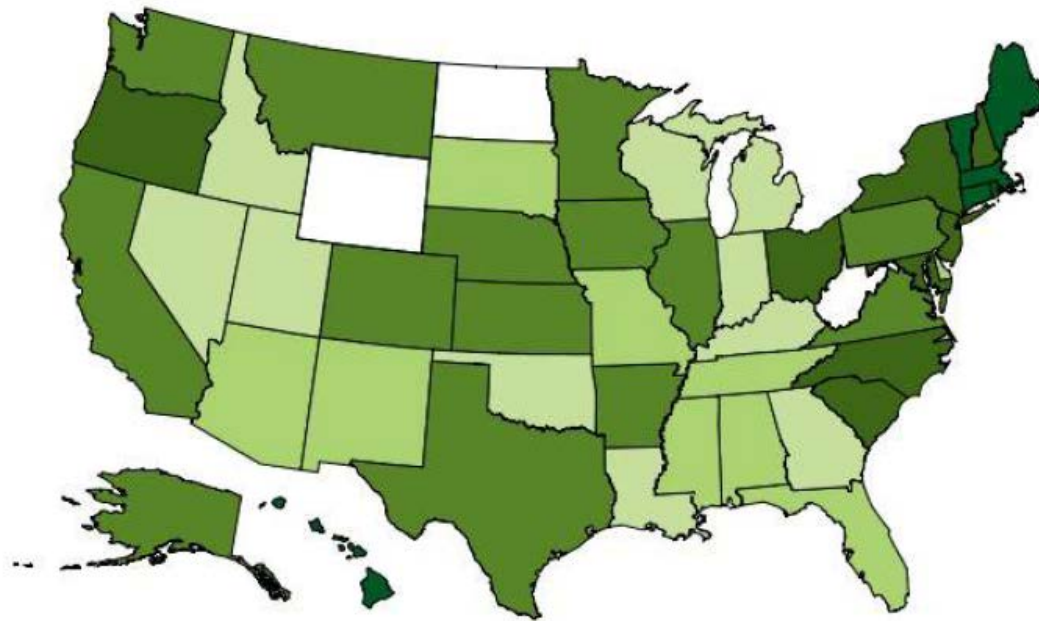
What did I do to cause my child to have autism?

What caused my child to have autism?

The Waiting Game

Relative Distribution of ABP Developmental-Behavioral Pediatrics Diplomates by State

(Total diplomates ever certified* as of December 31, 2014)



Pediatric Specialist-to-Child Ratio

□ No certified specialists ■ 1:300,000+ ■ 1:200,000-299,999 ■ 1:100,000-199,999 ■ 1:60,000-99,999 ■ 1:1-59,999

*Note: The number of diplomates includes only specialists under the age of 66 with known addresses as of 12/31/2014.



**Extension for Community
Healthcare Outcomes**

ECHO Autism

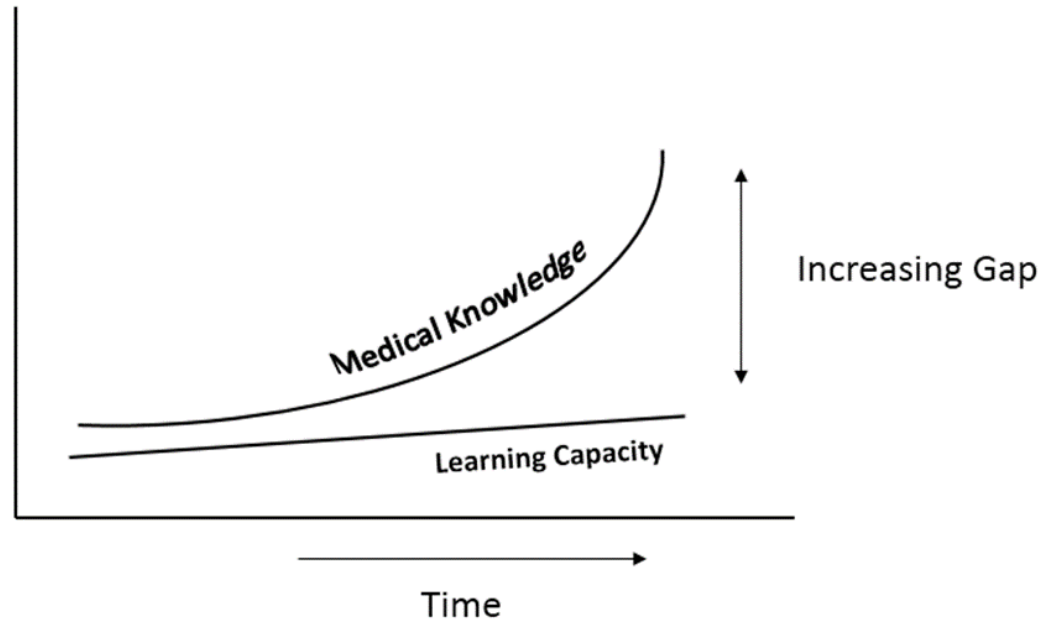
Project ECHO Mission

Expand capacity to provide best practice care for common and complex diseases in rural underserved areas and to monitor outcomes.

- **40+ Disease States**
- **Global**
- **Supported by CMMI, NIH, DOD, CDC, AHRQ, Robert Wood Johnson, & more!**

Bridging the Gap

Transforming Primary Care with Knowledge Networks



“Expanding the Definition of Underserved Population”

How can YOU do this?





ECHO Autism

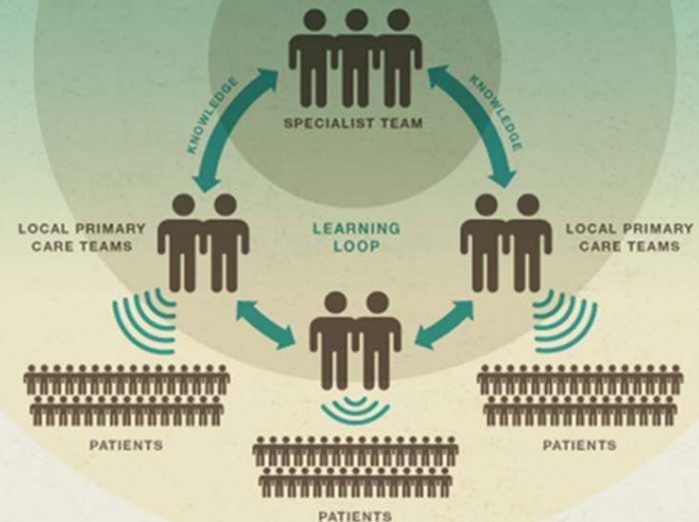
ECHO Autism



A FORCE MULTIPLIER: Spreading medical knowledge, expanding health care capacity

Project ECHO

WHY IS PROJECT ECHO
A GAME-CHANGER?



Learning Loop

2 hour clinic, twice monthly

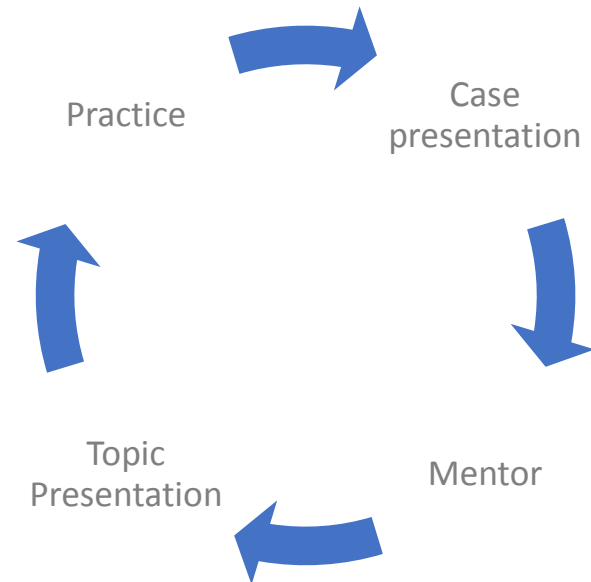
Introductions 10 minutes

Case #1 35 minutes

Didactic 20 minutes

Case #2 35 minutes

Wrap Up 20 minutes



Who? What? When? How?

- Hub of experts to mentor spokes
- Interdisciplinary professionals
- Knowledge Network
- Learning Loops
- iHealth & iECHO
- Twice Monthly
- Internet access
- Forward facing camera

Curriculum

- Overview of ASD
- Screening & Referral
- Supporting Families
- Behavior Concerns & ABA
- Medication Management
- Sleep Difficulties
- Constipation
- ADHD & Autism
- Feeding Concerns
- Educational Support
- Family Professional Partnerships
- Community Resources

Benefits of ECHO

- **Best practice dissemination**
- **Reduced variations in care**
- **De-monopolizes knowledge**
- **Provider satisfaction**
- **Provider networking**
- **Access to specialty consultation**
- **No cost CMEs**

Benefits to ECHO

- Supports the Medical Home Model
- Reduces health disparities
- Reduces cost to the system & families
- Removes burden of travel for families
- Patients are well served within their home communities!

ECHO AUTISM PILOT STUDY

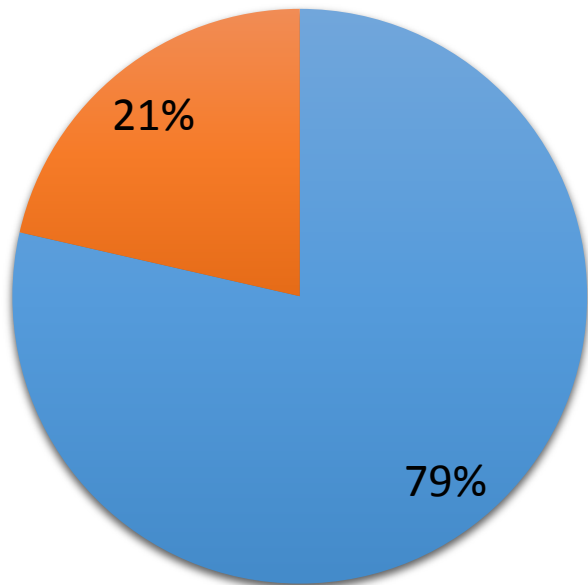
- **6-Month Pilot Study**
 - **Twelve 2-hour ECHO Autism clinics**
 - **2 clinics per month**
 - **Specific focus on:**
 - **Screening and Identification of ASD Symptoms**
 - **Management of Medical and Psychiatric Comorbidities**

Participant Characteristics

- **Primary Care Providers**
 - Pediatricians (n = 10)
 - Family Medicine Physician (n = 1)
 - Nurse Practitioner (n = 2)
 - Other PCP (n = 1)
- **Age: 31-57 ($M= 40.8$)**
- **Years of Practice: 2-29 ($M= 6.1$)**
- **78.6% Female**
- **92.9% Caucasian**

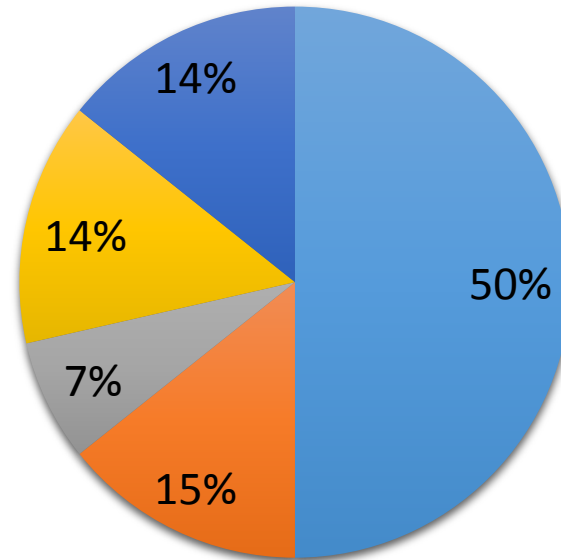
Participant Characteristics

Practicing in Health Shortage or Medically Underserved Area



■ HPSA and/or MUA/MUP ■ Neither

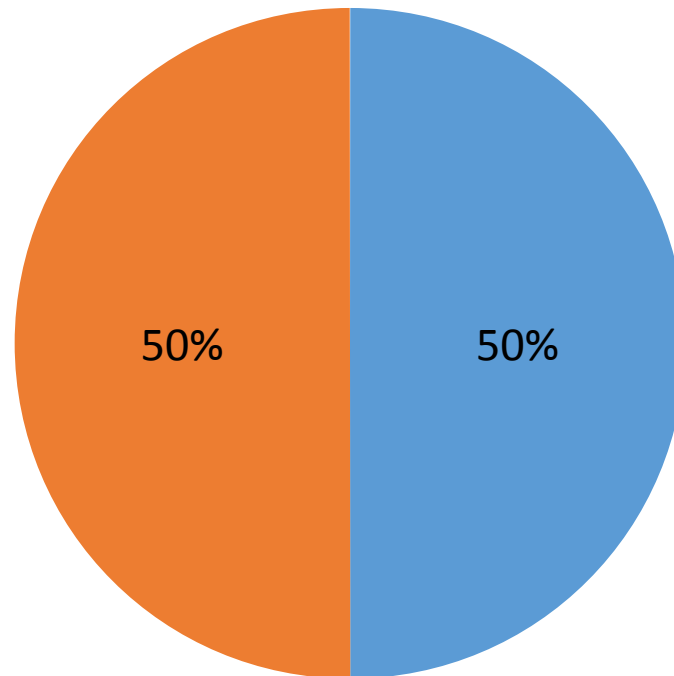
Practice Type



■ Private Practice or Medical Center
■ Federally Qualified Health Center
■ Community Health Agency
■ Rural Health
■ Other

Case Presentations (18 Cases)

Primary Presenting Question

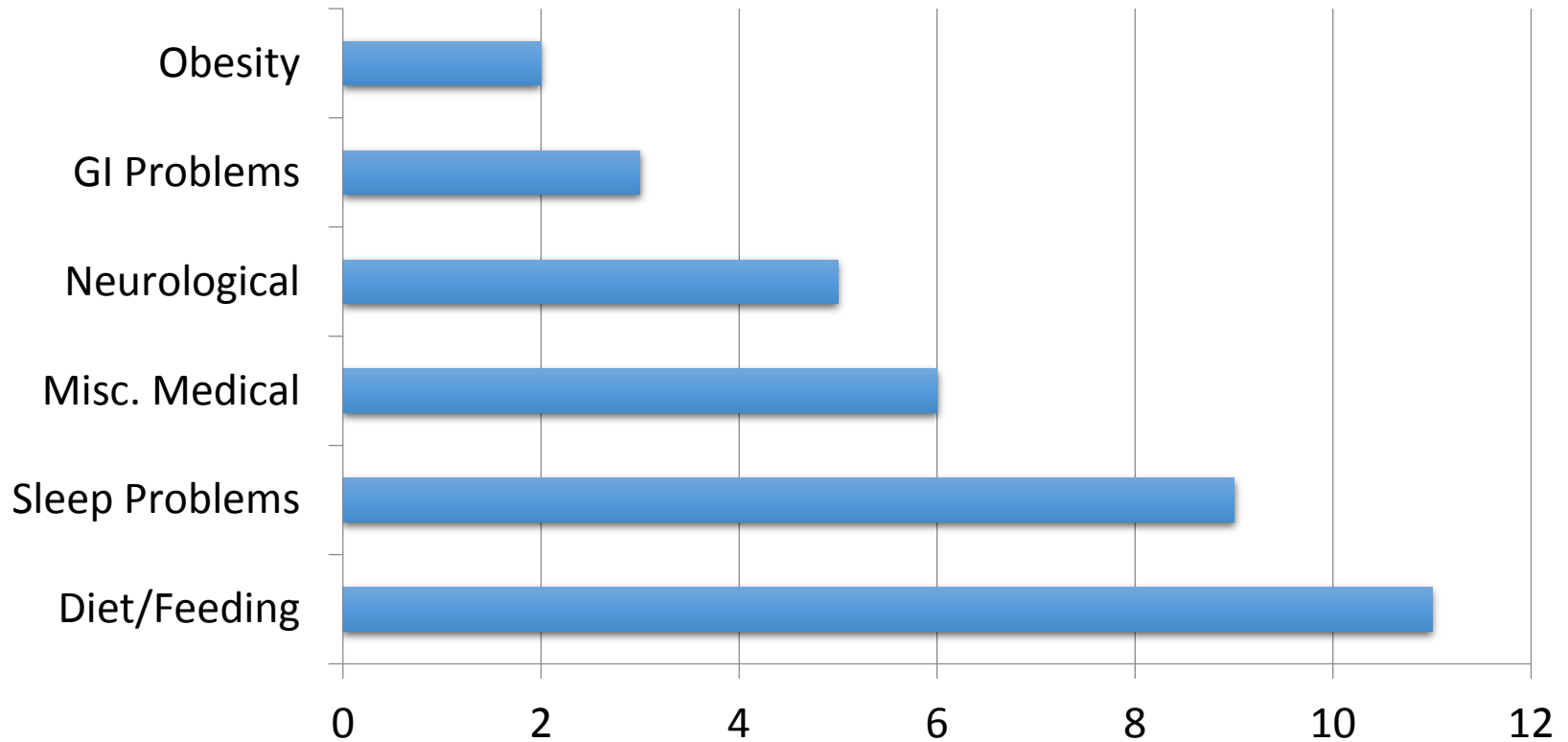


■ Screening/Identification

■ Management of Comorbidities

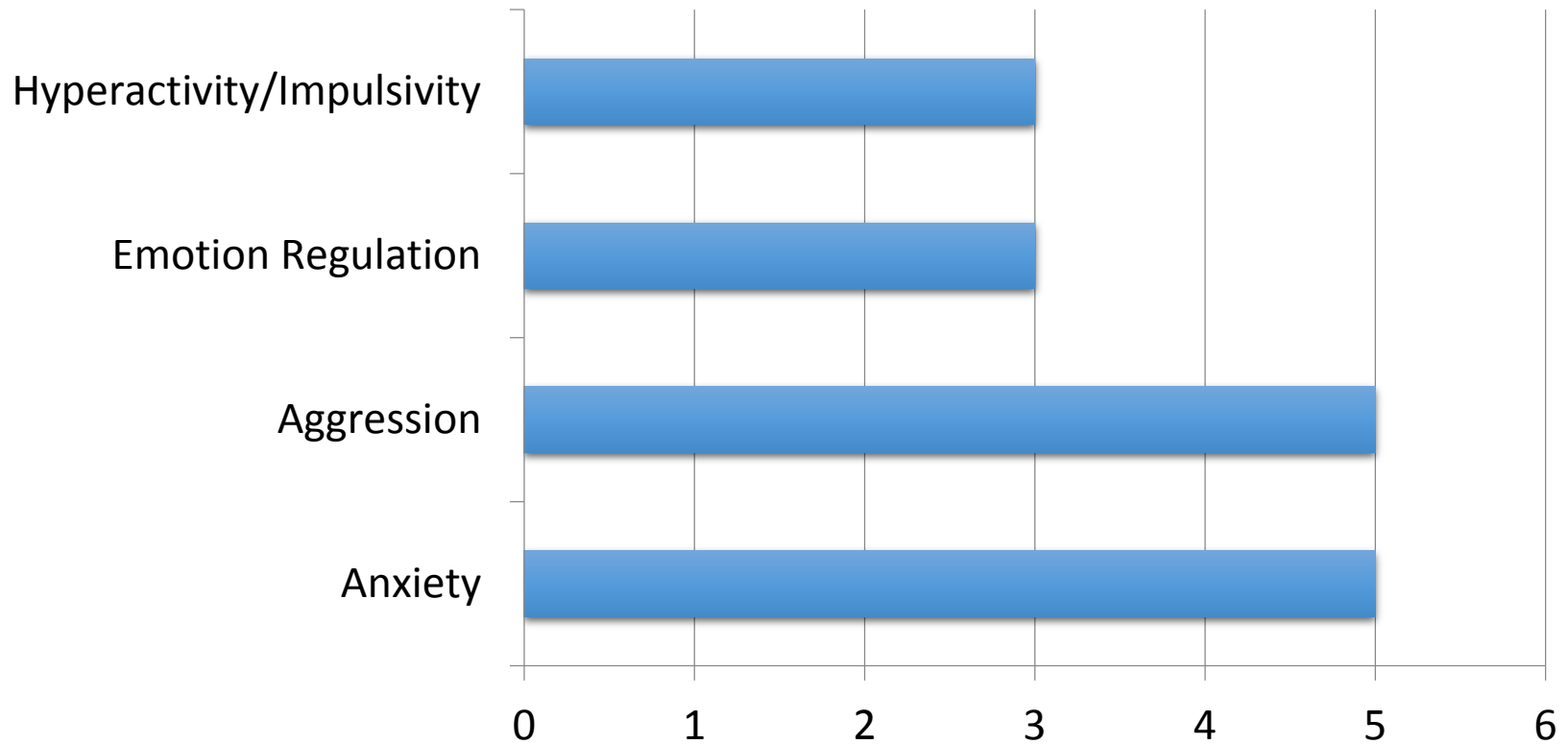
Presenting Problems by Type

Medical Problems Presented (Number of Cases)



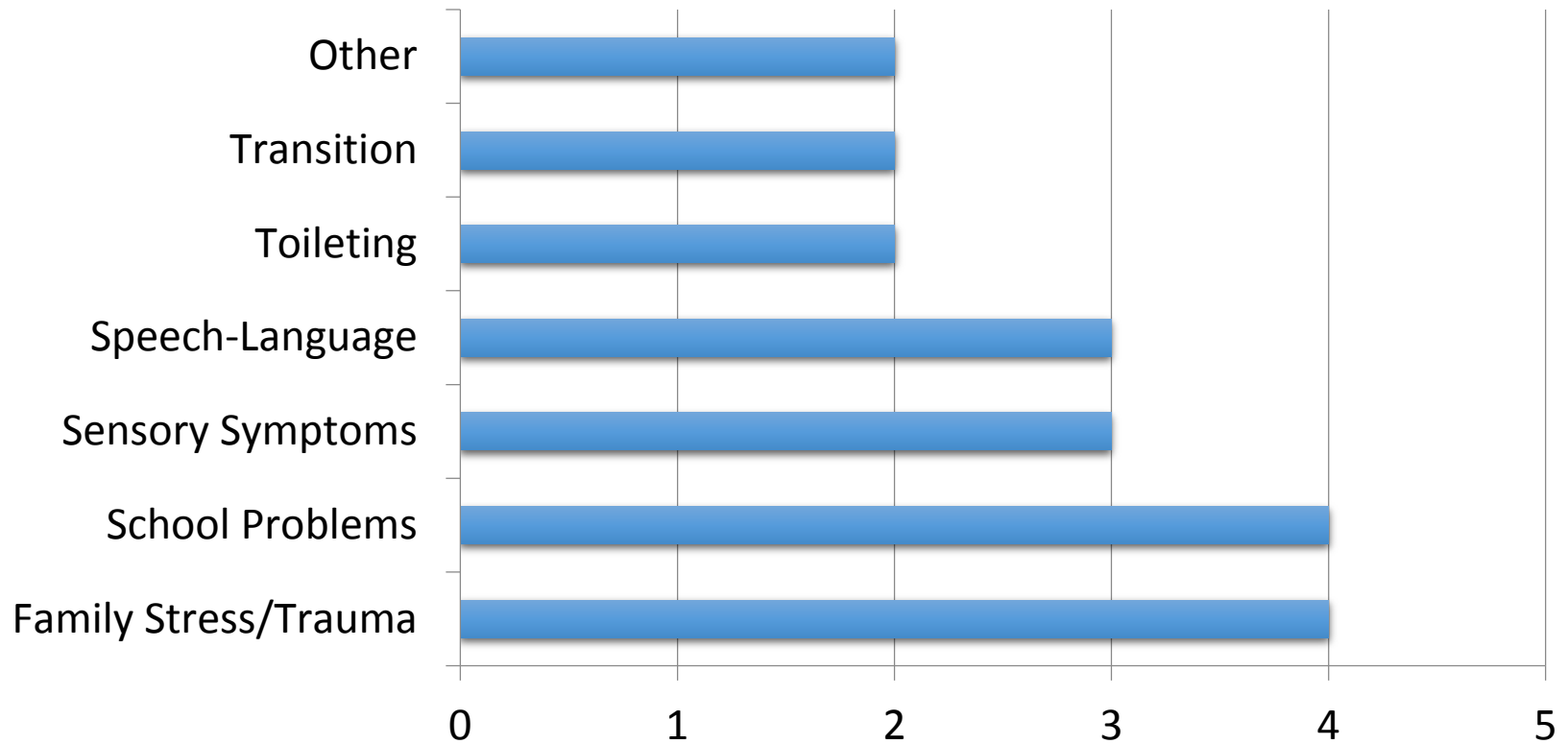
Presenting Problems by Type

Psychiatric Problems Presented (Number of Cases)



Presenting Problems by Type

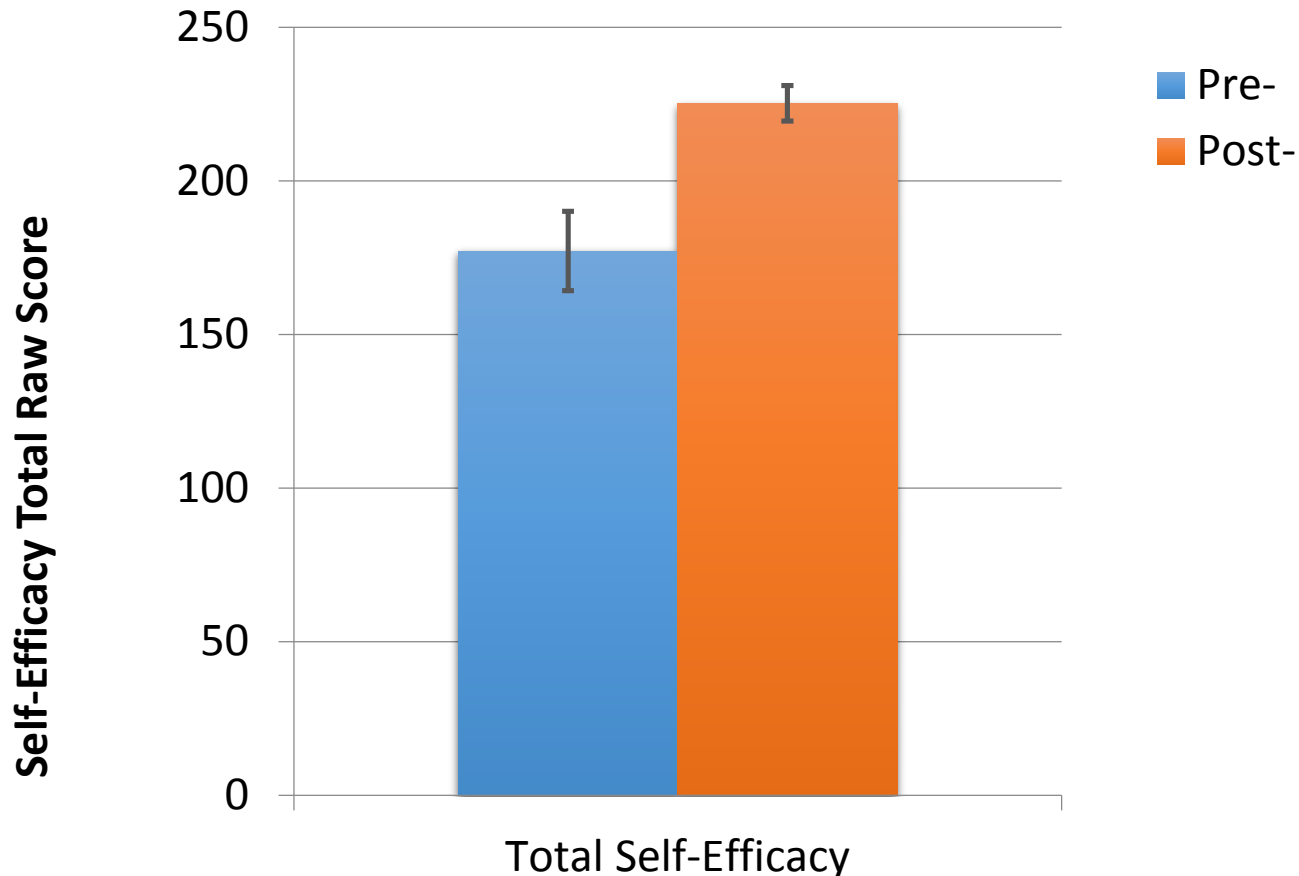
Additional Problems Presented (Number of Cases)



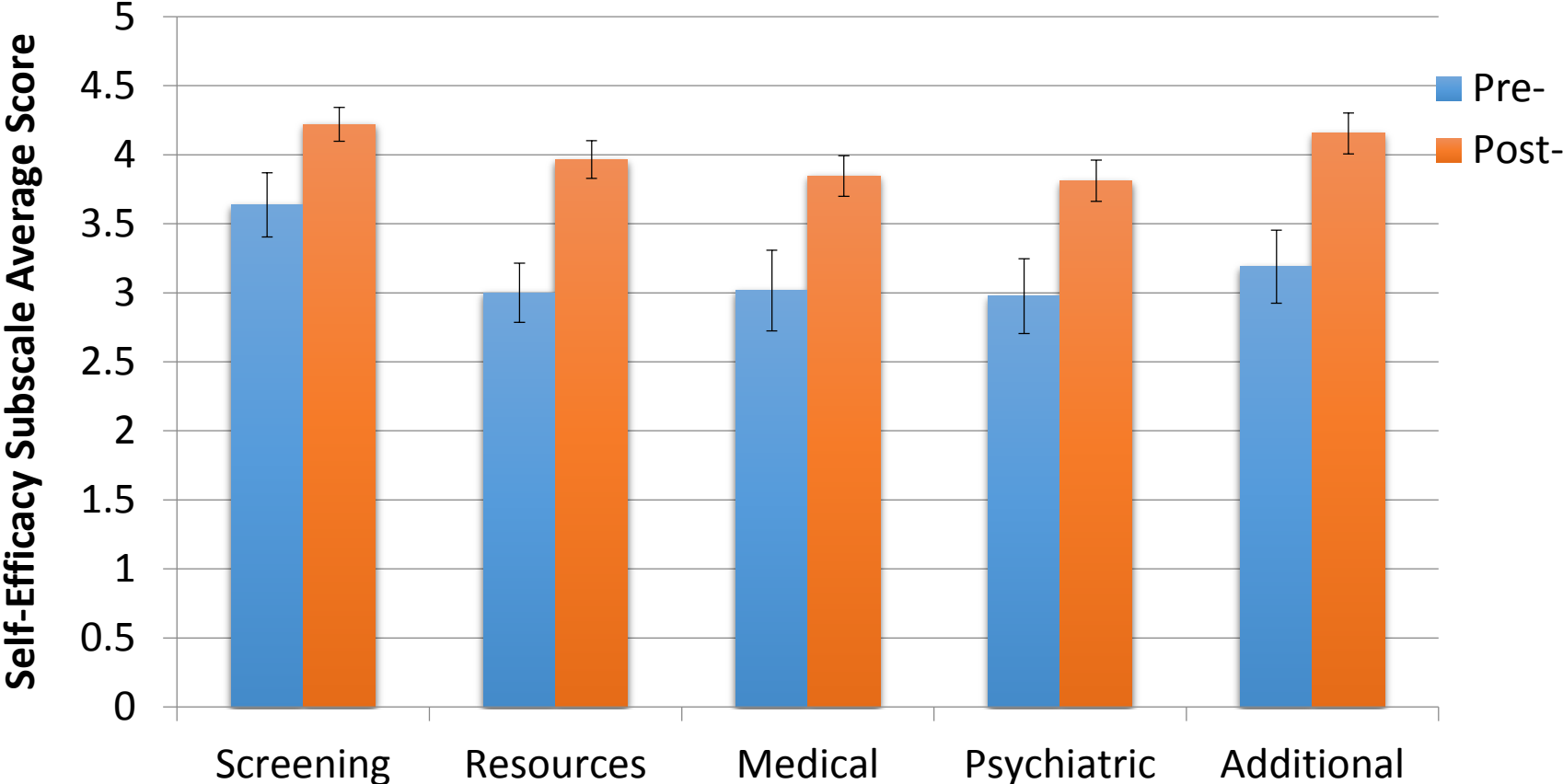
Measures

- **Baseline Only**
 - Demographics
- **Each Clinic**
 - Fidelity (average of 90%)
 - De-Identified Case Presentation Data
- **Pre- and Post-Test Measures**
 - Self-Efficacy in Screening & Management of ASD
 - Practice Behavior
 - Autism-specific screening at 18- and 24-month well-child visits
 - Use of autism-specific resources
- **Post-Test Only**
 - Satisfaction
 - Qualitative Interviews

Improvement in Overall Self-Efficacy

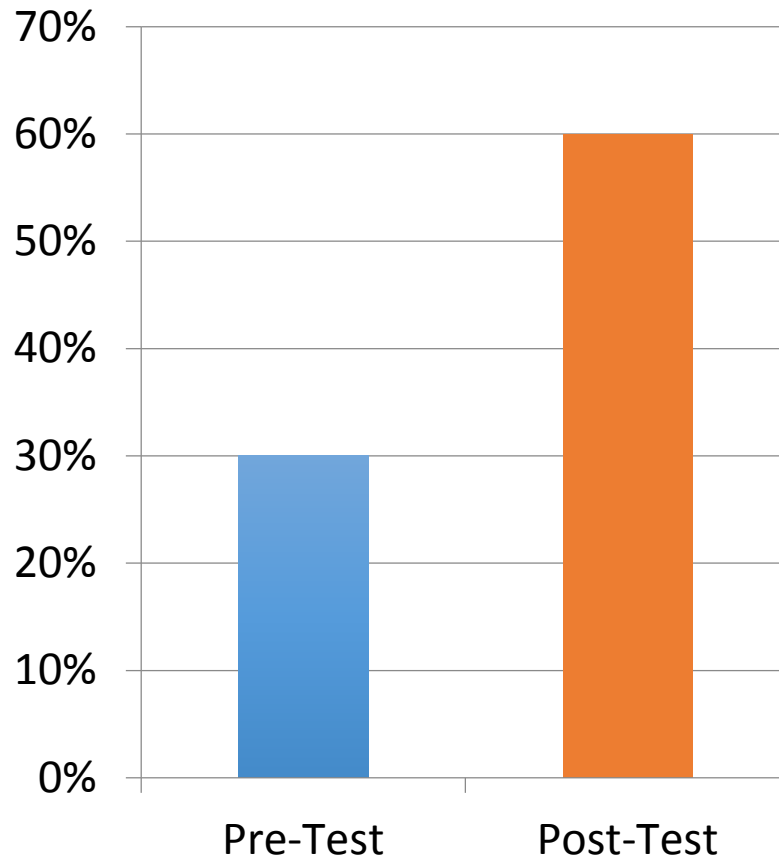


Improvement in Self-Efficacy Subscales



Adherence to Autism Screening Guidelines

Percentage of Pediatricians in Compliance with AAP
Autism Screening Guidelines*



*Using ASD-specific screening tools at 100% of 18-month and 24-month well-child visits conducted over the prior 6 month period.

Participant Satisfaction with ECHO Autism

Question (strongly agree = 1, strongly disagree = 5)	M	SD
Participation in ECHO Autism improved my ability to care for children with autism in my practice	1.57	0.51
I learned best-practice care in autism through participation in ECHO Autism	1.50	0.52
I was able to connect with peers and colleagues through participation in ECHO Autism	1.57	0.51
ECHO Autism specialists provided guidance in managing children with autism	1.36	0.50
I respected the professional advice received from ECHO Autism experts	1.21	0.43
The didactic presentations enhanced my knowledge about autism	1.43	0.51
Discussions with other participants enhanced my knowledge about autism	1.64	0.63
Case-based learning increased my knowledge about autism	1.29	0.47
I have been satisfied with the technology associated with the ECHO Autism clinic	1.43	0.51
The technology for the ECHO Autism clinic functioned smoothly	1.50	0.65

Conclusions

- ECHO Autism appears to be feasible, effective, and associated with high satisfaction among participants.
- PCPs demonstrated improvements in:
 - Self-efficacy in ASD screening and management
 - Adherence to AAP autism screening guidelines
 - Use of ASD-specific resources
- ↑ knowledge and adherence to best-practice screening guidelines should foster earlier diagnoses
- ↑ PCP competence in managing co-morbid conditions should have beneficial effects on overall health and reduced health-care costs.

Limitations and Future Directions

- **This initial pilot study was limited by**
 - **A small sample size**
 - **Lack of control or comparison group**
 - **Lack of direct measures of practice change or patient outcomes**
- **We hope that these promising results will inform future research on the use of this model for increasing access to healthcare for children with ASD.**

Funding Streams

Thank you:



Leda J. Sears Trust