

## 5-minute screen identifies subtle signs of autism in 1-year olds

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A five-minute checklist that parents can fill out in pediatrician waiting rooms may someday help in the early diagnosis of autism spectrum disorder (ASD), according to a study funded by the National Institutes of Health. Published today in the *Journal of Pediatrics*, the study's design also provides a model for developing a network of pediatricians to adopt such a change to their practice.

"Beyond this exciting proof of concept, such a screening program would answer parents' concerns about their child's possible ASD symptoms earlier and with more confidence than has ever been done before," noted Thomas R. Insel, M.D., director of the National Institute of Mental Health (NIMH), part of NIH.

Identifying autism at an early age allows children to start treatment sooner, which can greatly improve their later development and learning. However, many studies show a significant delay between the time parents first report concerns about their child's behavior and the eventual ASD diagnosis, with some children not receiving a diagnosis until well after they've started school.

Recognizing the need to improve early ASD screening, Karen Pierce, Ph.D., of the University of California, San Diego, and colleagues established a network of 137 pediatricians across San Diego County. Following an hour-long educational seminar, the pediatricians screened all infants at their 1-year, well-baby check-up using the Communication and Symbolic Behavior Scales Developmental Profile Infant-Toddler

Checklist, a brief questionnaire that detects ASD, language delay, and [developmental delay](#). The questionnaire asks caregivers about a child's use of eye gaze, sounds, words, gestures, objects and other forms of age-appropriate communication. Any child who failed the screen was referred for further testing and was re-evaluated every six months until age 3.

Out of 10,479 infants screened, 32 were identified as having ASD. After excluding for late onset and regression cases, this is consistent with current rates that would be expected at 12 months, according to the researchers. When including those identified as having language delay, developmental delay, or some other form of delay, the brief screen provided an accurate diagnosis 75 percent of the time.

Following the screen, all toddlers diagnosed with ASD or developmental delay and 89 percent of those with language delay were referred for behavioral therapy. On average, these children were referred for treatment around age 17 months. For comparison, a 2009 study using data from the Centers for Disease Control and Prevention found that, on average, children currently receive an ASD diagnosis around 5.7 years (68.4 months) of age, with treatment beginning sometime later.

In addition to tracking infant outcomes, the researchers also surveyed the participating pediatricians. Prior to the study, few of the doctors had been screening infants systematically for ASD. After the study, 96 percent of the pediatricians rated the program positively, and 100 percent of the practices have continued using the screening tool.

"In the context of a virtual lack of universal screening at 12 months, this program is one that could be adopted by any pediatric office, at virtually no cost, and can aid in the identification of children with true developmental delays," said Dr. Pierce.

The researchers note that future studies should seek to further validate and refine this screening tool, track children until a much older age, and assess barriers to treatment follow up.

**More information:** [www.nimh.nih.gov/health/topics...isorders/index.shtml](http://www.nimh.nih.gov/health/topics...isorders/index.shtml)

#### Reference

Pierce K, Carter C, Weinfeld M, Desmond J, Hazin R, Bjork R, Gallagher N. Catching, Studying, and Treating Autism Early: The 1-Yr Well-Baby Check-Up Approach. *J Pediatr*. 2011 Apr. [Epub ahead of print]

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