Evidence insufficient to make recommendation regarding screening for autism

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Quinn, an autistic boy, and the line of toys he made before falling asleep. Repeatedly stacking or lining up objects is a behavior commonly associated with autism. Credit: Wikipedia.

The U.S. Preventive Services Task Force (USPSTF) has concluded that the current evidence is insufficient to assess the balance of benefits and harms of screening for autism spectrum disorder (ASD) in children 18 to

30 months of age for whom no concerns of ASD have been raised by their parents or a clinician. The report appears in the February 16 issue of *JAMA*.

This is an I statement, indicating that evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined. An I statement is not a recommendation against screening but a call for more research.

Autism spectrum disorder is a developmental disorder characterized by persistent and significant impairments in social interaction and communication and restrictive and repetitive behaviors and activities, when these symptoms cannot be accounted for by another condition. In 2010, the prevalence of ASD in the United States was estimated at 14.7 cases per 1,000 children, or 1 in 68 children, with substantial variability in estimates by region, sex, and race/ethnicity.

The USPSTF reviewed the evidence on the accuracy, benefits, and potential harms of brief, formal screening instruments for ASD administered during routine primary care visits and the benefits and potential harms of early behavioral treatment for young children identified with ASD through screening. The USPSTF is an independent, volunteer panel of experts that makes recommendations about the effectiveness of specific preventive care services such as screenings, counseling services, and preventive medications.

Detection, and Benefits of Early Detection and Intervention or Treatment

The USPSTF found adequate evidence that currently available screening tests can detect ASD among children age 18 to 30 months, but found inadequate direct evidence on the benefits of screening for ASD in

toddlers and preschool-age children for whom no concerns of ASD have been raised by family members, other caregivers, or health care professionals. There are no studies that focus on the clinical outcomes of children identified with ASD through screening. Although there are studies suggesting treatment benefit in older children identified through family, clinician, or teacher concerns, the USPSTF found inadequate evidence on the efficacy of treatment of cases of ASD detected through screening or among very young children. Treatment studies were generally very small, few were randomized trials, most included children who were older than would be identified through screening, and all were in clinically referred rather than screen-detected patients.

Harms of Early Detection and Intervention or Treatment

The USPSTF found that the harms of screening for ASD and subsequent interventions are likely to be small based on evidence about the prevalence, accuracy of screening, and likelihood of minimal harms from behavioral interventions.

Risk Assessment

Although a number of potential risk factors for ASD have been identified, there is insufficient evidence to determine if certain risk factors modify the performance characteristics of ASD screening tests, such as the age at which screening is performed or other characteristics of the child or family.

Treatment and Interventions

Treatments for ASD include behavioral, medical, educational, speech/language, and occupational therapy and complementary and

alternative medicine approaches. Treatments for young children are primarily behavioral interventions, particularly early intensive behavioral and developmental interventions.

USPSTF Assessment

The USPSTF concludes that there is insufficient evidence to assess the balance of benefits and harms of screening for ASD in children age 18 to 30 months for whom no concerns of ASD have been raised. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.

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"In rendering its determination of insufficient evidence for ASD screening, the USPSTF demonstrated its understanding of the real-world complexities of primary care and its commitment to be a rigorous, transparent arbiter of best available evidence," write Michael Silverstein, M.D., M.P.H., of the Boston University School of Medicine, Boston Medical Center, Boston, and Jenny Radesky, M.D., of the University of Michigan School of Medicine, Ann Arbor, in an accompanying editorial.

"The ensuing debate around the findings of the USPSTF with respect to screening for ASD has thrown into relief the importance of this circumscribed but critical role. The USPSTF has delivered an important message, which should spur more research and enhance the knowledge base around universal ASD screening. The USPSTF embraced this issue in all its complexity. Physicians, other health professionals, policy makers, insurers, and other stakeholders should do the same."

More information: *JAMA*, DOI: 10.1001/jama.2016.0018

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