Should All Children Be Screened for Autism Spectrum Disorders?

No: Screening Is Not Ready for Prime Time

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This is one in a series of pro/con editorials discussing controversial issues in family medicine.

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The issue of screening young children for autism spectrum disorders (ASDs) received increased attention following publication of a report by the American Academy of Pediatrics (AAP) in 2007. This report, developed by AAP's Council on Children with Disabilities, recommended screening all children for ASDs twice, at 18 and 24 months of age.[1]

However, before adopting screening tests into clinical practice, certain standard criteria should be met. Screening signifies looking for disease in persons without symptoms and should not be confused with diagnosis, which involves testing to confirm disease when it is suspected. A screening test should be easy, accurate, safe, and acceptable; it should detect most cases of disease with minimal false-positive results. A treatment of proven effectiveness should be available, with convincing evidence that early detection in the asymptomatic patient leads to improved, clinically important outcomes compared with later detection, when the condition manifests and the patient is symptomatic. The benefits from detecting the condition in a few patients should also outweigh the harms that can accrue to other patients from false-positive results, unnecessary workups, adverse effects of treatments, and lost opportunities for more meaningful interventions.[2]

To assess whether a screening test meets these criteria, a systematic review should be available to evaluate individual studies and rank the overall quality of the evidence. This process is best performed by a guideline panel with minimal financial, emotional, or other conflicts of interest. This review should be the foundation on which recommendations are built by using a consistent and transparent method of moving from the quality of the evidence to a recommendation.[3,4]

The recommendation to screen all children for ASDs does not meet these criteria. This "guidance for the clinician in rendering pediatric care" was developed inside the AAP by a group of content experts using a consensus method. The AAP has a sound process for developing clinical guidelines that follows standard and widely accepted methods, and has produced some good guidelines (e.g., otitis media, bronchiolitis)[5-7]; however, the AAP does not insist that its specialty councils use this methodology. A reading of the Council on Children with Disabilities report on ASDs reveals that none of the following questions are answered:

- What are the sensitivity and false-positive rate of the best screening test for ASDs available in an average clinical setting?
- How much earlier can screening tests detect ASDs compared with an astute clinician who asks a few key questions about, and acts on, parental concerns regarding a child's communication and interactions?
- What are the potential harms of testing? (Potential harms are not even considered in the report.)
- Does earlier detection by screening result in meaningful and long-lasting improvements compared with detection through routine care?

The last question is arguably the most important. The Council on Children with Disabilities report lists only five references to support the belief that early intervention is beneficial, and none of these references provide any convincing evidence to support this claim. Several reviews of this question, using different methods, have come up with different conclusions.[8-10] Whether or not early detection of ASDs through screening is beneficial is best answered by an unbiased, comprehensive systematic review, before screening recommendations are proposed. Several guideline panels in other countries have conducted such a review using robust assessment methods and have recommended against universal screening.[11,12] In fact, we do not really know if interventions help those younger than two years at all, no matter how ASDs are detected. The most recent systematic review of early interventions published in the United States concluded that the strength of evidence for interventions for children younger than two years is "insufficient."[13] ▶

Research to develop and validate accurate screening tests for ASDs, as well as to assess the advantages (or not) of early detection and intervention will continue. At some point, the evidence to support screening all children for ASDs might materialize. At this time, however, it is not there, and family physicians who provide care for young children should ask parents about any concerns, be alert for the signs and symptoms of ASDs, and use available diagnostic testing tools to assist in making clinical decisions when an ASD is suspected. If an ASD is diagnosed, physicians should use all available resources to assist and support the families of those children.

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