



Effective Health Care

Therapies for Autism Spectrum Disorders Nomination Summary Document

Results of Topic Selection Process & Next Steps

- Therapies for autism spectrum disorders will go forward for refinement as a comparative effectiveness or effectiveness review. The scope of this topic, including populations, interventions, comparators, and outcomes, will be further developed in the refinement phase.
- When key questions have been drafted, they will be posted on the AHRQ Web site and open for public comment. To sign up for notification when this and other Effective Health Care (EHC) Program topics are posted for public comment, please go to <http://effectivehealthcare.ahrq.gov/getInvolved.cfm?invovetype=subscribe>.

Topic Description

Nominators: 1 public payer, 1 advocacy organization

Nomination Summary: The first nominator is broadly interested in the comparative effectiveness of therapies for autism including occupational, speech, and physical therapies and drug effectiveness. They are particularly interested in the effectiveness of therapies by diagnosis, severity, and age. Areas of interest from the second nominator include combined treatments, effectiveness of early interventions, treating comorbid conditions (e.g., depression, sleep-related disorders, etc.), and comparative effectiveness of school and community-based education and treatment programs. This nominator is interested in a variety of outcomes for treatment, including reduction in autism spectrum disorder (ASD) core symptoms; improved language, cognitive, and social abilities; reduction in associated medical conditions and symptoms; and improvement in quality of life and vocational outcome.

Key Questions from Nominator: From Nominator 2 (advocacy organization):

- 1. Understanding the combined effectiveness of medical and behavioral treatments**
 - a. For individuals with ASD who present with severe aggression and irritability, what is the comparative efficacy of a pharmacological treatment versus a pharmacological treatment combined with functional behavioral analysis versus functional behavioral analysis alone for reducing such challenging behaviors?
 - b. For children with ASD whose condition is not improving in response to behavioral intervention, what is the comparative effectiveness of conducting a comprehensive medical evaluation to detect and treat commonly associated medical conditions (e.g., sleep disorder, dietary and/or nutritional deficiencies, GI conditions, and allergies) versus continuing behavioral intervention without

such medical assessments and interventions?

2. Understanding the key effective ingredients of early behavioral intervention

- a. What is the comparative effectiveness of lower versus higher “doses” of early behavioral intervention (e.g., 15 versus 25 hours per week; 2 versus 4 years) for improving long-term outcomes?
- b. What is the comparative effectiveness of early behavioral intervention implemented by highly trained professionals (e.g., Ph.D. Psychologist) versus parents for reducing autism symptoms and improving language, cognitive, and social abilities?
- c. What is the comparative effectiveness of two different models of early behavioral intervention (for example, traditional applied behavior analytic early intervention programs versus developmental behavioral early intervention programs) for reducing autism symptoms and improving language, cognition, and social behavior in children with ASD?
- d. For children with ASD who fail to develop communicative speech in response to early behavioral intervention, what is the comparative effectiveness of continuing with traditional early intervention approaches versus adding computer-assisted communication augmented devices for improving communication skills?

3. Treating commonly associated medical conditions in ASD

- a. What is the comparative effectiveness of cognitive behavioral treatment versus cognitive behavioral treatment plus a pharmacological treatment versus pharmacological treatment alone in reducing depressive or anxiety symptoms in adolescents and adults with ASD?
- b. For individuals with ASD presenting with sleep difficulties, what is the comparative effectiveness of sleep hygiene program versus a combination of sleep hygiene with melatonin versus melatonin alone in reducing sleep-related problems?

4. Assessment of the comparative effectiveness of currently implemented community/school-based treatment/educational programs

- a. Early behavioral intervention programs administered through the public schools or private agencies
- b. Programs for promoting social, language, and cognitive skills for school age children
- c. Programs to facilitate transition to adulthood, focusing on vocational and employment-related skills
- d. Programs designed to promote success for high functioning adults with ASD attending college

Considerations

- The topic meets all EHC Program selection criteria. (For more information, see <http://effectivehealthcare.ahrq.gov/index.cfm/submit-a-suggestion-for-research/how-are-research-topics-chosen/>.)
- A brief literature scan found several individual reviews that looked at various specific strategies for treatment and management. However, a robust review that evaluates and compares multiple strategies

and includes subgroups by diagnosis, age, and/or severity for the management of autism spectrum disorders (ASDs) was not identified.

- There appears to be little synthesis of the current research for the treatment of children with autism. As the prevalence of ASDs has increased, the available treatment options have also increased. Despite the increase in prevalence and treatment options, a very limited set of guidelines for the treatment of childhood autism exist. Thus, patients, providers, and decision-makers are faced with a myriad of treatment options and what appears to be little evidence-based guidance on the selection of interventions for ASDs. It is clear that there is a real need for synthesized research that evaluates the evidence base for various treatments and identifies gaps that exist in the current literature that may drive the research agenda.