



Effective Health Care

Autism Treatment for Children, Adolescents, & Young Adults Nomination Summary Document

Results of Topic Selection Process & Next Steps

- Early intervention for children under 24 months of age with a suspected Autism Spectrum Disorder (ASD) was found to be addressed by an in-process review by the Effective Health Care (EHC) Program. Given that the in-process review covers this nomination, no further activity will be undertaken on this topic.
 - In-process: *Comparative Effectiveness of Therapies for Children with Autism Spectrum Disorders*. To view a description and status of the research review, please go to: <http://www.effectivehealthcare.ahrq.gov/index.cfm/search-for-guides-reviews-and-reports/>
 - To sign up for notification when this and other EHC Program topics are posted, please go to <http://effectivehealthcare.ahrq.gov/index.cfm/join-the-email-list1/>
- Management of medical comorbidities in children with an ASD was found to be partially addressed by the in-process review discussed above titled *Therapies for Children with Autism Spectrum Disorders*. Areas not covered by the in-process review were found to not be feasible for a full systematic review due to the limited data available for a review at this time.
- Management of ASD in adolescents and young adults, including vocational and employment-related skills and transition to work or college, will go forward for refinement as a systematic 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 EHC Program topics are posted for public comment, please go to: <http://effectivehealthcare.ahrq.gov/index.cfm/join-the-email-list1/>.

Topic Description

Nominator: Organization

Nomination Summary: The nominator is interested in three main areas. The first focuses on very early intervention for children under 24 months of age with a suspected ASD. The second area, on management of medical comorbidities associated with ASD, is represented by staff-generated PICO #1 below. The third area focuses on therapies for adolescents and young adults with an ASD and is represented by staff-generated PICO #2 below.

Staff-Generated PICO #1

Population(s): Children with ASDs, pervasive developmental delay-not otherwise specified (PDD-NOS), or Asperger syndrome with medical comorbidities such as dietary

and/or nutritional deficiencies, allergies, gastrointestinal conditions, sleep dysfunction, neurological issues, or psychiatric comorbidities

Intervention(s): Pharmacologic therapy, surgical intervention, behavioral therapy, cognitive-behavioral therapy, diet/nutritional therapy, and other interventions intended to modify disease symptoms

Comparator(s): Interventions listed above

Outcome(s): Symptoms of medical comorbidities as well as core symptoms of ASD such as social skills/interaction, language, and communication; repetitive and other maladaptive behaviors; psychological distress; adaptive independence/self-care; interpersonal relationships/community involvement

Staff-Generated PICO #2

Population(s): Adolescents and young adults with ASD, pervasive developmental delay-not otherwise specified (PDD-NOS), or Asperger syndrome

Intervention(s): Pharmacologic therapy, behavioral therapy, cognitive-behavioral therapy, diet/nutritional therapy, educational interventions, including vocational training, allied health interventions (physical, speech, and occupational therapies), CAM therapies, and other interventions intended to modify disease symptoms and/or support transitioning to adulthood

Comparator(s): Non-use of interventions above

Outcome(s): Core symptoms of ASD, educational and cognitive outcomes, vocational and employment-related skills, transition to work or college

Key Questions from Nominator:

1. For children with suspected autism spectrum disorders younger than 24 months, what is the effect of behavioral interventions on early signs of autism? What are the modifiers of outcomes for these children?
2. For children with autism spectrum disorder (ASD), does evaluation and treatment of commonly associated medical conditions (e.g., sleep disorders, dietary and/or nutritional deficiencies, GI conditions, allergies) improve the effectiveness of behavioral interventions in reducing core symptoms? What are the most effective treatments, components of treatments, or combinations of treatments to treat these medical comorbidities?
3. What are the components and the effectiveness of treatments designed to develop vocational and employment-related skills of adolescents and young adults with ASD transitioning to work and college? At what age should these treatments begin?

Considerations

- The topic meets EHC Program appropriateness and importance criteria. (For more information, see <http://effectivehealthcare.ahrq.gov/index.cfm/submit-a-suggestion-for-research/how-are-research-topics-chosen/>.)
- The topic represents three main areas of interest:
 1. Very early intervention for children under 24 months of age with a suspected ASD
 2. Management of medical comorbidities associated with ASD
 3. Therapies for adolescents and young adults with an ASD, including vocational and employment-related skills and transition to work or college.

- Early intervention for children under 24 months of age was found to be addressed by Key Question 7 of an in-process EHC Program review titled *Comparative Effectiveness of Therapies for Children with Autism Spectrum Disorders*.

Key Question 7: What evidence supports the use of a specific treatment approach in children under the age of two who are at high risk of developing ASD based upon behavioral, medical, or genetic risk factors?

- Several of the medical comorbidities in the nominator's question on management of medical comorbidities (anxiety, sleep dysfunction, hyperactivity/attention deficit hyperactivity disorder, and nutritional/food issues) are being addressed by Key Questions 1 and 2 of the in-process review above:

Key Question 1: Among children ages 2-12 with ASD, what are the short- and long-term effects of available behavioral, educational, family, medical, allied health, or CAM treatment approaches?

Specifically,

- a. What are the effects on core symptoms (e.g., social deficits, communication deficits and repetitive behaviors) in the short term (≤ 6 months)?
- b. What are the effects on commonly associated symptoms (e.g., motor, sensory, medical, mood/anxiety, irritability, and hyperactivity) in the short term (≤ 6 months)?
- c. What are the longer term effects (> 6 months) on core symptoms (e.g., social deficits, communication deficits, and repetitive behaviors)?
- d. What are the longer term effects (> 6 months) on commonly associated symptoms (e.g., motor, sensory, medical, mood/anxiety, irritability, and hyperactivity)?

Key Question 2: Among children ages 2-12, what are the modifiers of outcome for different treatments or approaches?

- a. Is the effectiveness of the therapies reviewed affected by the frequency, duration, and intensity of the intervention?
 - b. Is the effectiveness of the therapies reviewed affected by the training and/or experience of the individual providing the therapy?
 - c. What characteristics, if any, of the child modify the effectiveness of the therapies reviewed?
 - d. What characteristics, if any, of the family modify the effectiveness of the therapies reviewed?
- These are commonly associated conditions that are sometimes also considered symptoms of the ASD. A review on management of other medical comorbidities (e.g., epilepsy, allergies, depression, obsessive compulsive disorder) is not feasible due to the limited amount of literature available at this time.
 - Therapies for adolescents and young adults with an ASD, including interventions intended to support transitioning to adulthood such as vocational and employment-related skills, will not be addressed by the in-process review listed above. The needs and issues facing adolescents and young adults are fundamentally different from those facing younger children with ASD. Therefore, this area of the topic will go forward as a new systematic review.