Practice Parameter for the Assessment and Treatment of Children and Adolescents With Autism Spectrum Disorder

Fred Volkmar, MD, Matthew Siegel, MD, Marc Woodbury-Smith, MD, Bryan King, MD, James McCracken, MD, Matthew State, MD, PhD, and the American Academy of Child and Adolescent Psychiatry (AACAP) Committee on Quality Issues (CQI)

Autism spectrum disorder is characterized by patterns of delay and deviance in the development of social, communicative, and cognitive skills that arise in the first years of life. Although frequently associated with intellectual disability, this condition is distinctive in its course, impact, and treatment. Autism spectrum disorder has a wide range of syndrome expression and its management presents particular challenges for clinicians. Individuals with an autism spectrum disorder can present for clinical care at any point in development. The multiple developmental and behavioral problems associated with this condition necessitate multidisciplinary care, coordination of services, and advocacy for individuals and their families. Early, sustained intervention and the use of multiple treatment modalities are indicated. J. Am. Acad. Child Adolesc. Psychiatry, 2014;53(2):237–257. **Key Words:** autism, Practice Parameters, guidelines, developmental disorders, pervasive developmental disorders

Since the first Practice Parameter for the Assessment and Treatment of Children, Adolescents, and Adults with Autism and Other Pervasive Developmental Disorders[1] was published, several thousand research and clinical articles have appeared and the diagnostic criteria for autism have changed. This Parameter revision provides the opportunity to update the previous version and incorporate new research. Because the extant body of research was performed under the *DSM-IV-TR* diagnostic schema, the evidence will be presented using that terminology. This Parameter is applicable to evaluation of children and adolescents (≤17 years of age) but often will have some relevance to adults. This document presumes basic familiarity with aspects of normal child development and child psychiatric diagnosis and treatment. Unless otherwise noted, the term *child* refers to adolescents and younger children, and *parents* refers to the child's primary caretakers regardless of whether they are the biological or adoptive parents or legal guardians.

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METHODOLOGY

The first version of this Parameter was published in 1999. For this revision, the literature search covered the period from 1991 to March 19, 2013 using the PubMed, PsycINFO, Cochrane, and CINAHL (EBSCO) databases. The initial searches were inclusive and sensitive. Search terms were a combination of MeSH headings and keywords, and the MeSH headings were adjusted to terms used by PsycINFO and CINAHL by using their thesauri.

In PubMed the MeSH terms *autistic disorder, childhood development disorders—pervasive, Asperger*,* and *Rett** and the keyword *autism* were searched. The initial search yielded 20,807 results. Then, the results were limited to English, human, *all child (0 to 18 years)*, and 1991 to March 19, 2013. Additional limits included classic article, clinical trial, comparative study, controlled clinical trial, evaluation studies, guideline, historical article, meta-analysis, practice guideline, multicenter study, randomized controlled trial, review, twin study,

and validation studies. The refined PubMed search yielded 3,613 articles.

In the PsycINFO database subject headings (focused) of *autism, autistic thinking, pervasive developmental disorders, retts syndrome, aspergers,* and keyword *autism* were searched. The initial search returned 24,875 articles and was then limited to English, *childhood: birth to age 12yrs, adolescence: age 13-17 yrs, peer reviewed journal,* and 1991 to March 19, 2013. The refined PsycINFO search yielded 9,583 articles.

In the Cochrane Database of Systematic Reviews, keywords of *autism, autistic, rett*, asperger**, or (*pervasive and disorder** and *develop**) were searched without additional limits. The Cochrane search yielded 95 articles. An additional 517 articles were retrieved from the CINAHL database, after excluding Medline articles, by searching *autistic disorder, autism, asperger syndrome, child development disorders, pervasive,* and *rett syndrome*.

A total of 13,808 articles were identified and exported to the EndNote reference management program. After removing duplicate references, the resulting yield from the comprehensive search was 9,581 articles.

The titles and abstracts of all articles were reviewed. Studies were selected for full text review based on their place in the hierarchy of evidence (e.g., randomized controlled trials), quality of individual studies, and generalizability to clinical practice. The search was augmented by review of articles nominated by expert reviewers and further search of article reference lists and relevant textbook chapters. A total of 186 articles were selected for full text examination.

CLINICAL PRESENTATION AND COURSE

Autism was first described in 1943 by Kanner[2] who reported on 11 children with an apparently congenital inability to relate to other people but who were quite sensitive to change in the nonsocial environment. Kanner emphasized that the lack of interest in people was in stark contrast to the profound social interest of normal infants. He also observed that when language developed at all, it was marked by echolalia, pronoun reversal, and concreteness. The children also exhibited unusual, repetitive, and apparently purposeless activities (stereotypies). Autism was initially believed to be a form of childhood psychosis, but, by the 1970s, various lines of evidence made it clear that autism was highly distinctive. By 1980, autism was officially recognized as a diagnosis in *DSM-III*.[3]

Under *DSM-IV-TR*, the diagnosis of autism required disturbances in each of 3 domains: social relatedness, communication/play, and restricted interests and activities with onset by 3 years of age.[4] The disturbance in social relatedness is striking and includes marked impairment in nonverbal communication, peer relationships, and social-emotional reciprocity. Impairments in communication include a delay or total lack of spoken language (without an attempt to compensate through other means) or, for verbal individuals, a marked difficulty in the ability to sustain or initiate conversation, stereotyped and repetitive (or idiosyncratic) language, and lack of developmentally appropriate make-believe or social play. Impairment in interests and activities includes encompassing preoccupations, adherence to apparently nonfunctional routines or rituals, stereotypies and motor mannerisms, and persistent preoccupation with parts of objects.

There is variability in the age at which children may present the features essential for this diagnosis.[5] Preschool children with autism typically present with marked lack of interest in others, failures in empathy, absent or severely delayed speech and communication, marked resistance to change, restricted interests, and stereotyped movements. Common parental concerns include a child's lack of language, inconsistencies in responsiveness, or concern that the child might be deaf. In children with autism, social and communication skills usually increase by school age; however, problems dealing with change and transitions and various self-stimulatory behaviors (sometimes including self-injury) also may become more prominent during this time.[6] In adolescence, a small number of individuals with autism make marked developmental gains; another subgroup will behaviorally deteriorate (e.g., tantrums, self-injury, or aggression). Children and adolescents with autism have an increased risk for accidental death (e.g., drowning).[7] Predictors of ultimate outcome include the presence of communicative speech by 5 years of age and overall cognitive ability (IQ). Evidence that earlier detection and provision of services improves long-term prognosis makes early diagnosis particularly important.[8]

The *DSM-IV-TR* category of pervasive developmental disorders included autistic disorder, Rett's disorder, Asperger's disorder, childhood disintegrative disorder, and pervasive developmental disorder not otherwise specified (PDD-NOS). Rett's disorder was described by Andreas