General

Guideline Title

Practice parameter for the assessment and treatment of children and adolescents with obsessive-compulsive disorder.

Bibliographic Source(s)

Practice parameter for the assessment and treatment of children and adolescents with obsessive-compulsive disorder. J Am Acad Child Adolesc Psychiatry. 2012 Jan;51(1):98-113. [46 references] PubMed

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Practice parameters for the assessment and treatment of children and adolescents with obsessive-compulsive disorder. J Am Acad Child Adolesc Psychiatry 1998 Oct;37(10 Suppl):27S-45S. [184 references]

Regulatory Alert

FDA Warning/Regulatory Alert

Note from the National Guideline Clearinghouse: This guideline references a drug(s) for which important revised regulatory and/or warning information has been released.

- August 31, 2016 – Opioid pain and cough medicines combined with benzodiazepines : A U.S. Food and Drug Administration (FDA) review has found that the growing combined used of opioid medicines with benzodiazepines or other drugs that depress the central nervous system (CNS) has resulted in serious side effects, including slowed or difficult breathing and deaths. FDA is adding Boxed Warnings to the drug labeling of prescription opioid pain and prescription opioid cough medicines and benzodiazepines.

Recommendations

Major Recommendations

Definitions of the strength of the empirical evidence ratings (rct, ct, ut, cs) and the strength of the empirical and/or clinical support ratings (CS, CG, OP, NE) are provided at the end of the "Major Recommendations" field.

Recommendation 1. The psychiatric assessment of children and adolescents should routinely screen for the presence of obsessions and/or compulsions or repetitive behaviors. [CG]

Clinicians should screen for obsessive-compulsive disorder (OCD) even when it is not part of the presenting complaint. Symptoms may be of mild to moderate severity, wax and wane over time, be prominent in one setting and not another, and be kept secret from others (including family). The simplest probes are those that derive from the diagnostic criteria of the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV): "Do you ever have repetitive, intrusive or unwanted thoughts, ideas, images or urges that upset you or make you anxious and that you cannot suppress?" For younger children the question might be phrased, "Do you have worries that just won't go away?" It is reasonable to offer some examples at this time such as "worries about things not being clean" or "worrying that something bad might happen to you or someone you love."

For compulsions, a similar probe might be: "Do you ever have to do things over and over, even though you don't want to or you know they don't make sense, because you feel anxious or worried about something?" For younger children, the question might be phrased, "Do you do things over and over or have habits you can't stop?" Examples such as washing, checking, repeating, ordering, counting, and hoarding can be offered easily and quickly.

Sometimes adults are left to infer obsessions that are not articulated or even acknowledged by observing behaviors in their children. Examples include avoidance behaviors that imply concerns about some normal and expected activity such as entering a room or handling an object. If screening questions suggest that obsessive-compulsive (OC) symptoms are present, clinicians should follow with more in-depth assessment. The commonly employed parent-report Child Behavior Checklist includes 8 items derived from factor analysis shown to have good sensitivity and specificity as a screen for OCD in children, although even simple positive item scores using item 9 (obsessions), item 66 (compulsions), and item 112 (worries) appear equally useful. The message for clinicians is that screening for OCD is straightforward and that simple probes will reveal the great majority of cases.

Recommendation 2. If screening suggests OC symptoms may be present, clinicians should fully evaluate the child using the DSM-IV-Text Revision (DSM-IV-TR) criteria and scalar assessment. [CS]

The diagnostic criteria of time occupied by OC symptoms, the level of subjective distress, and functional impairment, in addition to a standardized inventory of symptoms and a scalar assessment of severity are best captured by a reliable instrument such as the Children's Yale-Brown Obsessive Compulsive Scale (CYBOCS). The CY-BOCS is a 10-item anchored ordinal scale (0–4) that rates the clinical severity of the disorder by scoring the time occupied, the degree of life interference, subjective distress, internal resistance, and degree of control for obsessions and compulsions. It has been validated for use with pediatric subjects. The CY-BOCS also includes a symptom checklist of more than 60 symptoms of obsessions and compulsions categorized by the predominant theme involved, such as contamination, hoarding, washing, checking, etc. Scores of 8 to 15 represent mild illness, 16 to 23 moderate illness, and at least 24 severe illness. Equally important are quantitative measurements of avoidance, insight, indecisiveness, "pathologic" responsibility, doubt, and obsessional "slowness." The CY-BOCS is a clinician-administered instrument that is most informative when given to children and their parents, where a "worst report" algorithm is likely to be most accurate.

Although the CY-BOCS is the current standard assessment tool for pediatric OCD, there are several important limitations to this scale. The first is that the avoidance rating is not included in the quantitative score of the scale, which may therefore underestimate severity when avoidance is a large part of the presenting behavior. Second, the scale is not linear. Three to 8 hours of obsessions or compulsions rates an ordinal score of 3, whereas longer than 8 hours scores a 4 (the maximum) on the scale. It is for this reason that a 25% to 40% decrease in the CY-BOCS scale score is considered a clinically significant response. Third, the heterogeneous nature of OCD is such that atypical symptoms may not be captured by the CY-BOCS symptom checklist. Examples include behaviors driven by sensory discomfort or a fear of a "transformation" into other people or of acquiring an unwanted character trait from another (an uncommon form of contamination). The mean CY-BOCS score at the ascertainment of OCD in children and adolescents in several studies was 23 (standard deviation, 6.5), indicating moderate to severe illness.

Other OCD scales, such as the Leyton Obsessional Inventory, and interviews that assess more broadly for internalizing symptoms (Ten Year Review of Rating Scales II: Scales for Internalizing Disorders) and anxiety, such as the Anxiety Disorders Interview Schedule for Children, the Pediatric Anxiety Rating Scale, the Screen for Child Anxiety Related Disorders, and the Multidimensional Anxiety Scale for Children, may also be helpful.

Recommendation 3. A complete psychiatric evaluation should be performed, including information from all available sources and comprising standard elements of history and a mental state examination, with attention to the presence of commonly occurring comorbid psychiatric disorders. [CS]

Psychiatric comorbidity is the rule in youth with OCD, seen in clinically referred and epidemiologic samples and specialty and nonspecialty child psychiatry settings. One study [ut] found that 74% of youth with OCD met the criteria for at least one comorbid diagnosis, and those children with at least one comorbid diagnosis had a lower treatment response and remission rates with cognitive-behavioral therapy (CBT) compared with those without a comorbid diagnosis. The presence of disruptive behavior disorders in particular may represent a therapeutic challenge for clinicians. The identification of major depressive disorder and bipolar disorder is especially important before the initiation of a selective serotonin reuptake

inhibitor (SSRI). Because certain comorbid disorders may adversely moderate the outcome of CBT and the medication treatment of pediatric OCD, careful assessment and treatment of other psychiatric disorders before and concurrent with the treatment of OCD may improve the final outcome in subjects with OCD at all ages (see Recommendation 8 below).

Comorbid eating disorders are infrequent in preadolescent children with OCD but become more prevalent during adolescence. In these children, medical considerations outweigh other concerns of psychopathology (except suicidality) and must be addressed and stabilized to permit mental health interventions. A spectrum of compulsive/impulsive habit disorders such as trichotillomania, compulsive nail biting, skin picking, and other forms of self-injury shares important features with OCD but also has important differences. Although stress may exacerbate these symptoms, they are usually not preceded by specific cognitions (obsessions), but rather a sense of tension that is general or localized. The impulsive behaviors are frequently a source of (temporary) gratification but may be followed by remorse and shame. Behavioral therapy is the mainstay of treatments for these disorders because standard SSRI medications are often less helpful. Body dysmorphic disorder usually onsets in adolescence when normal developmental pressures increase the focus on appearance and attraction among peers, but it may also begin in childhood.

Recommendation 4. A full medical, developmental, family, and school history should be included with the psychiatric history and examination. [CG]

Family Accommodation. Children are embedded in families and, not surprisingly, families may become deeply enmeshed in their children's OCD. Parental efforts to relieve a child's anxiety may inadvertently lead to an accommodation and reinforcement of OC behaviors such as providing verbal reassurance or other "assistance" to children, for example, handling objects that children avoid such as opening doors, laundering "contaminated" clothes and linens, and even wiping children on the toilet who will not do it themselves. The very high intensity of affect and irritability displayed by some affected children engaged in ritualistic behaviors makes it difficult for parents to react with the supportive yet detached responses needed for effective behavioral management. The role of individual family members in the maintenance and management of OC symptoms is important to assess. The familial nature of anxiety disorders and OCD is an added factor in families' responses to a child with OCD. Detailed and specific questions about activities of daily living may be needed to understand the cycle of OC behaviors at home.

Medical History. Medical inquiry should focus on the central nervous system (CNS) during a systems review with attention to trauma and neurologic symptoms (e.g., choreiform movements). Recently, attention to infection with group A β-hemolytic streptococcus (GABHS) as a potential precipitant for a pediatric autoimmune neuropsychiatric disorders associated with streptococcus (PANDAS)-associated OCD [ct] has increased. Inquiry of an infection with GABHS is indicated in acute and dramatic onsets or exacerbations in preadolescent patients or when a child in remission suddenly relapses. Neurologic signs, such as chorea, are evidence of rheumatic fever but may not occur for many months after infection. "Soft" neurologic signs, such as tremor and coordination difficulties on examination, are one criterion of the PANDAS diagnosis. Antistreptococcic antibodies such as antistreptolysin O and anti-DNase B are present in most children by early adolescence, but a 0.2 log increase (doubling) in titers is considered evidence of a recent infection. Intercurrent titers may be helpful because exacerbations can be assayed with subsequent titers to detect any sudden increase in antibody levels, but a GABHS culture is the investigation of choice. Positive antistreptococcic antibody titers are not, by themselves, an indication for antibiotic treatment. At the present time, no neuroimaging procedures have been validated for the assessment or diagnosis of OCD or related comorbid disorders.

Educational Assessment. School and educational histories provide an ecologically valid and important measurement of function and of illness severity. OC symptoms that spill into the school setting imply more anxiety, stronger compulsions, less insight, and less resistance and control. Therefore, educational impairment denoted by falling grades, the need for extra help, or special class placement indicate more urgency for treatment and could justify more aggressive interventions, including medications. Beyond this, there is increasing interest in a specific neuropsychological pattern of dysfunction that may be characteristic of pediatric OCD, evidenced by impairments in visual memory, visual organization, and processing speed. Children with evidence of this pattern often are dysgraphic, prefer reading to writing, and have stronger language than math skills. Impairments in planning complicate the generalization of CBT skills to new situations. A consideration for neuropsychological assessment, intelligence, and academic achievement testing should be high in children with OCD who are struggling at school, especially if the difficulties are chronic and not specifically associated with OCD.

Recommendation 5. When possible, CBT is the first line treatment for mild to moderate cases of OCD in children. [CS]

Perhaps the greatest progress in the previous decade pertains to well-conducted systematic trials of CBT applied to children with OCD. Since the publication of a CBT treatment manual that operationalized and systematized this method, numerous studies have consistently shown its acceptability and efficacy. "Unlike other psychotherapies that have been applied, usually unsuccessfully, to OCD, cognitive behavioral treatment presents a logically consistent and compelling relationship between the disorder, the treatment, and the specified outcome." However, a recent survey of clinicians involved in the treatment of pediatric OCD found that only one third regularly used exposure techniques, one third "sometimes" used them, and the remaining third reported "rarely or never using" them. The protocol used by researchers in the National Institute of Mental Health Pediatric Obsessive-Compulsive Disorder Treatment Study (POTS) [rct] consists of 14 visits over 12 weeks spread across five phases: psychoeducation, cognitive training, mapping OCD, exposure and response prevention (E/RP), and relapse prevention and generalization training.

Except for weeks 1 and 2, when patients come twice weekly, all visits are administered once per week, last 1 hour, and include one between-visit 10-minute telephone contact scheduled during weeks 3 through 12. Each session includes a statement of goals, a review of the preceding week, a provision of new information, therapist-assisted practice, homework for the coming week, and monitoring procedures. Not infrequently, several limitations may preclude delivery of CBT as a first-line treatment option, as discussed in more detail under Recommendation 6 (below).

Exposure and response prevention (E/RP) relies on the fact that anxiety usually attenuates after a sufficient duration of contact with a feared stimulus. Repeated exposure is associated with a decreased anxiety across exposure trials, with the decrease in anxiety largely specific to the domain of exposure, until the child no longer fears contact with specifically targeted phobic stimuli [ut]. Adequate exposure depends on blocking the negative reinforcement effect of rituals or avoidance behavior, a process termed "response prevention." For example, a child with germ worries must not only touch "germy things" but also refrain from ritualized washing until his or her anxiety diminishes substantially. E/RP is typically implemented in a gradual fashion (sometimes termed "graded exposure"), with exposure targets under a patient's or, less desirably, a therapist's control. Different cognitive interventions have been used to provide the child with a "tool kit" to facilitate compliance with E/RP. The goals of cognitive therapy typically include increasing a sense of personal efficacy, predictability, controllability, and self-attributed likelihood of a positive outcome within E/RP tasks. Each must be individualized and must mesh with the child's cognitive abilities and developmental stage. Modeling, whether overt (the child understands that the therapist is demonstrating more appropriate or adaptive coping behaviors) or covert (the therapist informally models a behavior), may help improve compliance with in-session E/RP and generalization to between-session E/RP homework. Modeling may decrease anticipatory anxiety and provide an opportunity for practicing constructive self-talk before and during E/RP. Clinically, positive reinforcement (rewards) seems not to directly alter OCD symptoms, but rather helps to encourage exposure and so produces a noticeable, if indirect, clinical benefit. In contrast, punishment is unhelpful in the treatment of OCD. Most CBT programs use liberal positive reinforcement for E/RP and proscribe contingency management procedures unless targeting disruptive behavior outside the domain of OCD.

Excellent CBT manuals and self-help books are available for therapists and families interested in developing mastery of these techniques, such as *Talking Back to OCD: The Program That Helps Kids and Teens Say "No Way" and Parents Say "Way to Go"* by John March, M.D.; *Obsessive Compulsive Disorders: A Complete Guide to Getting Well and Staying Well* by Fred Penzell, Ph.D.; *Freeing Your Child from Obsessive Compulsive Disorder* by Tamar Chansky, Ph.D.; and *What to do When Your Child has Obsessive Compulsive Disorder: Strategies and Solutions*, by Aureen Pinto Wagner, Ph.D. These may be found on the OCD Foundation Web site resource section at www.ocfoundation.org.

In a recent meta-analysis of five randomized controlled trials of CBT (N=161) in children with OCD, the researchers found a large mean pooled effect size of 1.45 (95% confidence interval [CI] 0.68–2.22), albeit with less precision and greater heterogeneity in CBT studies compared with pharmacotherapy trials. Several variations in delivering CBT have been studied and reported including those that use family-based approaches [rct]. Without question, families must be involved in the treatment of younger children with OCD, where parents control many contingencies of their daily activity. Another variation shown to be helpful is CBT delivered in group settings [ut], where the positive elements of group therapy and CBT are combined. Intensive CBT approaches work well for children who subscribe in advance to this approach [ut] and may be especially useful for treatment-resistant OCD or for patients who desire a very rapid response.

Recommendation 6. For moderate to severe OCD, medication is indicated in addition to CBT. [CS]

Although CBT is the first line of treatment in mild to moderate and, depending on the patient's and doctor's preference, even severe cases of OCD, more severe symptoms are an indication for medication, preferably added to CBT. Scores higher than 23 on the CY-BOCS or Clinical Global Impression Severity Scale of marked to severe impairment based on time occupied, subjective distress, and functional limitations provide a threshold for the consideration of drug intervention. In addition, any situation that could impede the successful delivery of CBT should be cause for an earlier consideration of medication treatment. For example, a child may be too ill or may refuse to engage in CBT. Concurrent psychopathology, including multiple anxiety disorders, major mood disturbance and disruptive behavioral disorders, including attention-deficit hyperactivity disorder (ADHD), may decrease the acceptance of, or adherence to, CBT and may require medication in its own right. For example, a depressed adolescent with a mood-congruent anhedonic view of the future may see little point in making the effort to tolerate E/RP, and therefore major depression may mediate a poor response to CBT, leaving pharmacotherapy as the best option [ut]. Individual and family factors also are important considerations. Poor insight into the irrational nature of the obsession and/or compulsion can lead to resistance to CBT. The need for close family involvement will make successful implementation of CBT more difficult in chaotic or nonintact families. There is a dire shortage of skilled CBT practitioners with the training to deliver the best standard of CBT in many areas, so that combined treatment or medication only may be the default treatment of first choice, even for cases with lower scalar scores and lesser degrees of impairment. Site-specific differences in CBT outcomes in the POTS [rct] have suggested variability in the outcomes for CBT and medication alone compared with combined treatment, which is immune to said variation. This implies that, in the absence of expert CBT, the choice of combined treatment is also favored because outcomes are better even in the absence of expert CBT. In this context, informed consent is not fully "informed" without a discussion of CBT specifically and not just talk therapy, for the simple reason that outcomes with CBT alone or CBT plus medication are superior to medication alone.

Recommendation 7. Serotonin reuptake inhibitors (SRIs) are the first-line medications recommended for OCD in children and should be used according to American Academy of Child and Adolescent Psychiatry (AACAP) guidelines to monitor response, tolerability, and safety. [CS]

Efficacy. The previous decade has seen rapid advances in the knowledge of the pharmacotherapy of OCD affecting children and adolescents. Clomipramine, the first agent approved for use in pediatric populations with OCD [rct], did not gain approval from the U.S. Food and Drug Administration (FDA) until 1989. Subsequent industry sponsored multisite randomized controlled trials have demonstrated significant efficacy of the SSRIs compared with placebo, including sertraline [rct], fluvoxamine [rct], fluoxetine [rct], and paroxetine [rct]. Unfortunately, no comparative treatment studies have yet been performed and there is little to guide clinicians in their choice of SSRIs.

The cumulative data accrued from randomized controlled trials of pediatric OCD over the previous 10 years, involving more than 1,000 youth, are sufficient to examine the overall effect of medication treatment. A meta-analysis of all published randomized controlled medication trials in children and adolescents with OCD found an effect size (expressed as a pooled standardized mean difference for results of all studies) of 0.46 (95% CI 0.37– 0.55) and showed a statistically significant difference between drug and placebo treatments ($z = 9.87$, $p < .001$). Differences in absolute response rate (defined as ≥25% decrease in CY-BOCS scores after treatment) between an SSRI and placebo have ranged from 16% (sertraline and fluvoxamine) to 24% (fluoxetine), yielding a number needed to treat of 4 to 6. However, a multivariate regression of drug effect controlled for other variables showed that clomipramine (a nonselective SRI) was significantly superior to each of the SSRIs, whereas SSRIs were comparably effective. In the absence of head-to-head trials, it is not clear if clomipramine is truly superior to SSRIs or, as is more likely, if the meta-analytic findings reflect the order in which the trials were done along with their methodologic rigor. Superior or not, clomipramine is generally not used as the drug of first choice for children because of its frequent adverse event profile [rct] and concerns of monitoring potential arrhythmogenic effects. Although highly significant statistically, the overall effect sizes of medication were modest. These statistics translate into an improved CY-BOCS score of about 6 points of drug over placebo. It is also possible that placebo response rates in OCD are lower than in other anxiety disorders. Since then, the POTS [rct] confirmed these findings, with an effect size of 0.66 (95% CI 0.12–1.2) for sertraline, whereas a recent meta-analysis of 10 randomized controlled trials showed an overall drug effect size of 0.48 (95% CI 0.36–0.61) and for clomipramine an effect size of 0.85 (95% CI 0.32–1.39). Although the effect size for CBT appears larger than that for medication, meta-analysis cannot determine which treatment is more effective because differences in design (e.g., placebo-control versus wait-list condition) and study population, rather than differences in efficacy of interventions, could account for differences in observed effect sizes. In the POTS [rct], CBT alone did not differ statistically from sertraline alone on scalar outcomes but was superior for the remission rate; CBT and sertraline were better than placebo. Long-term studies are fewer but have suggested a cumulative benefit over longer periods of drug exposure with gradually decreasing scalar scores and increasing remission rates for sertraline [ut] up to periods of 1 year.

Safety and Tolerability. In general, SSRI medications are well-tolerated medications and safer than their predecessor, the tricyclic antidepressants, especially in the setting of misuse or overdose. Titration schedules should be conservative, with modest increases from the initial dose each 3 weeks or so to allow for an improvement to manifest before aggressively increasing doses (see table in the original guideline document). Patience is key to successful outcomes because it may take 12 weeks for substantial benefits to occur. Treatment is generally continued for 6 to 12 months after stabilization (the dose that gets you well is the dose that keeps you well) and then very gradually withdrawn over several months. CBT "booster" sessions may be helpful to address any recurrence of symptoms during or after medication discontinuation and to prolong remission. Two or three relapses of at least moderate severity should lead to a consideration of longer-term treatment (years).

Clinicians should be aware of behavioral side effects that are more likely in younger children and may be late-onset adverse effects appearing in parallel with a decrease in anxiety. In one study, peripubertal children exposed to antidepressants were at higher risk of conversion to mania compared with adolescents and young adults. For children with anxiety disorders or mild depression, the number needed to harm (NNH) was 13 (95% CI 11–15). These side effects are sensitive to dose adjustment and the goal is to find a therapeutic window that provides an adequate clinical response but "acceptable" degrees of behavioral activation. If not achievable, then rotation to another SSRI is indicated. Black box warnings from the FDA about suicide exist for all antidepressant medications in the United States, but it should be noted that no suicides occurred in any of the pediatric randomized controlled trials of SSRIs. In the most comprehensive analysis of the extant data stratified by diagnosis, Bridge et al. found no statistically significant increased risk of suicidal thinking or behavior in the pooled pediatric OCD trials. The pooled absolute risk difference between SSRI- and placebo-treated youth with OCD was 0.5%, with an NNH of 200. In contrast to trials of serotonin-norepinephrine reuptake inhibitor and SSRI medications in OCD and anxiety disorders, in which the risk of a suicidal event is small to negligible, the risk of a suicidal event is notably larger in antidepressant trials, particularly for adolescents.

The use of clomipramine mandates an evaluation of the pediatric patient's medical condition and cardiac status in particular. The baseline evaluation should include a systems review and inquiry for a personal or family history of heart disease. A history of nonfebrile seizures should be noted but is not an absolute contraindication. A general pediatric examination to include auscultation of the heart and measurement of pulse and blood pressures is indicated. A baseline (pretreatment) electrocardiogram should be requested. Guidelines regarding unacceptable electrocardiographic (EKG) indices for the use (or increase) of clomipramine have been recommended by the FDA: a PR interval longer than 200 ms, a QRS interval more than 30% increased over baseline or longer than 120 ms, blood pressure greater than 140 systolic or 90 diastolic and a heart rate faster than

130 beats/min at rest. A prolonged QTc (>450 ms) is associated with an increased risk of ventricular tachyarrhythmias and is a contraindication for clomipramine use (or further increase). Adverse events are common with clomipramine, including anticholinergic, adrenergic, and histaminergic effects (dry mouth, constipation, dizziness, postural hypotension, sweating, and sedation) that occur in up to 60% of children.

It should be noted that very limited knowledge is available of what effects SSRIs have on brain development.

Recommendation 8. The modality of assigned treatment should be guided by empirical evidence on the moderators and predictors of treatment response. [CS]

Psychiatric comorbidity may have a significant influence on treatment response. One trial of children and adolescents treated with an SSRI for OCD showed that, although the response rate in the overall treated sample was high (71%), patients with comorbid ADHD, tic disorder, or oppositional defiant disorder had response rates significantly lower (56%, 53%, and 39%, respectively) than patients with OCD only (75%) [rct]. Further, comorbidity was associated with a higher rate of relapse after treatment in the total patient population (32% for no comorbidity versus 46% for at least one comorbid disorder, $p = .04$; 56% for at least two comorbid disorders, $p < .05$). More recent work has confirmed these findings. One study conducted a post hoc analysis of data from the POTS [rct] comparative treatment trial and found that those with a comorbid tic disorder failed to respond to sertraline alone and did not differ statistically from placebo-treated patients, whereas the response in youth with OCD without tics replicated previously published intent-to-treat outcomes. In children with comorbid tics, sertraline was helpful only when combined with CBT, whereas CBT alone without medications remained effective. Therefore, children with comorbid tics should be assigned to CBT or combined CBT with medication as a first option.

In contrast, children with a positive first-degree family history of OCD responded far less well to CBT only compared with those without such a history and are good candidates for initial combined treatment [rct]. Although the reasons are not clear, high levels of parental accommodation may inadvertently lead to treatment resistance. However, it is difficult to disentangle behavioral factors from greater genetic loading that may manifest as a more familial form of OCD and more severe and treatment resistant illness.

In the comparative POTS, youth with lower severity scale scores, less OCD-related impairment, fewer comorbid externalizing symptoms, better insight, and lower levels of family accommodation showed greater improvement across treatment conditions (predictors of positive response) and are therefore good candidates for CBT as a first line of treatment [rct].

Recommendation 9. Multimodal treatment is recommended if CBT fails to achieve a clinical response after several months or in more severe cases. [CS]

For greatest efficacy, the combination of CBT and medication is the treatment of choice and should be considered the default option for firstline treatment in moderate to severe OCD. Recommendations from the comparative treatment trial were to start treatment with CBT alone or combined CBT plus medication treatment [rct]. Combined treatment showed the greatest decrease in symptom scores and remission rate, with an effect size that was more or less the arithmetic sum of the component treatments (CBT = 0.97, sertraline = 0.67, combined = 1.4). Fifty-four percent of children receiving the combined treatment achieved a complete remission (defined by CY-BOCS score ≤ 10) and an unadjusted mean decrease of at least 10 points on the CY-BOCS. Note that this recommendation does not call for switching to medication treatment if CBT alone is unsuccessful, but rather the addition of medication to concurrent CBT. It is possible that one of the greatest benefits of medicine is to mediate better outcomes of CBT by decreasing anxiety and improving a child's ability to tolerate E/RP. Although sertraline was the medication used in the POTS, it is reasonable to extrapolate the POTS findings to other medications that have independently shown efficacy for OCD in children. Strategies for combining CBT with pharmacotherapy are outlined in the POTS method article and in an article by Storch et al [ut].

Recommendation 10. Medication augmentation strategies are reserved for treatment-resistant cases in which impairments are deemed moderate in at least one important domain of function despite adequate monotherapy. [OP]

Treatment Resistance. As a general principle, *treatment resistant* refers to a patient who has not responded to interventions known to be effective for the specific condition being treated. Applied to children with OCD, this indicates persistent and substantial OCD symptomatology in the face of adequate treatment known to be effective in childhood OCD. Experience supports at least two SRI trials as a necessary precondition to declare adequate medication therapy. Therefore, failure of adequate trials of at least two SSRIs or one SSRI and a clomipramine trial and a failure of adequately delivered CBT would constitute treatment resistance. Children should have a minimum of 10 weeks of each SSRI or clomipramine at maximum recommended or maximum tolerated doses, with no change in dose for the preceding 3 weeks. CBT nonresponders of adequate CBT would include a child who has not shown any improvement after 8 to 10 total sessions (or 6 to 8 sessions of E/RP) or has substantial residual OC psychopathology after completing standard CBT, as detailed earlier. To summarize, the failure of at least two monotherapies and CBT is required before labeling a child as treatment resistant.

Most children, however, are not nonresponders, but rather partial responders. To meet the definition of partial response, children must have had at least 3 weeks of stable and persistent moderate (or worse) OCD symptoms at an SSRI dose equal to the maximal dose, or shown a flat dose-

response curve for one-dose increment above the minimum expected starting dose, or experienced adverse effects as a result of dosage increase. Before rotating SSRI medications or implementing any of the augmentation strategies listed below, clinicians should ask themselves the following questions: Has the child received an adequate trial at or above the minimum starting dose? Has the child reached the maximum dose? Has the child been unable to tolerate a dose above his or her current dose? Has the child been stable at his or her current dose for 3 weeks? Has the child had at least 10 weeks of treatment?

Hospitalization is infrequently indicated for OCD alone. Some children, however, require inpatient care for comorbid conditions such as severe mood instability or suicidal ideation. Typical inpatient psychiatric units and staff are not well equipped to deal with youth with OCD, whose avoidance or rituals may be misconstrued as oppositional behavior, leading to unhelpful behavioral interventions. Few highly specialized inpatient units exist to treat children with treatment-resistant OCD, where the milieu and highly trained staff provide an opportunity for intensive CBT.

Medication Augmentation Strategies. Adding clomipramine to an SSRI may be helpful. The rationale is to combine the serotonergic effects of each while minimizing adverse events across different drug classes. Fluvoxamine is the SSRI with the most synergistic effect when added to clomipramine, because of its ability to inhibit the conversion of clomipramine to desmethylclomipramine and increase the ratio in favor of the serotonergic parent compound. Even low-dose augmentation (25–75 mg/day) may be useful, but care must be taken when combining clomipramine with fluvoxamine and with CYP-450 2D6 inhibitors such as fluoxetine or paroxetine owing to potentially toxic increases in serum clomipramine levels, which must be monitored in addition to EKG indices. Other approaches for treatment resistance in pediatric OCD that are not supported by randomized controlled evidence but derive from expert opinion include the use of venlafaxine and duloxetine, which possess similar combined monoamine uptake inhibition properties to clomipramine but with fewer potential cardiovascular adverse effects.

Clonazepam has also been used in combination with SSRIs in several small open trials but should be used with caution in younger children [ut]. By far the most common drug augmentation strategies have employed (atypical) neuroleptics. High-quality randomized controlled trials using atypicals have been performed in adults with OCD and are summarized in a comprehensive meta-analysis but no controlled data exist in children and only case reports and open trials have been reported. However, expert consensus has suggested that some children with treatment-resistant OCD may benefit from judicious neuroleptic augmentation, particularly children with tic disorders [rct] poor insight, pervasive developmental disorder symptoms, and mood instability. In the adult studies, an absolute response rate difference of 21% was found in pooled data (number needed to treat [NNT] = 4.5), with risperidone and haloperidol showing significant advantage over placebo and an even better response for those with a comorbid tic disorder (NNT = 2.3). Adverse events reported included sedation (NNH = 1.5–3) and weight gain (NNH not computed). This meta-analysis also suggested that at least 12 weeks of SSRI treatment was required before atypical augmentation was effective. Clinical experience indicates a minimum of two different adequate SSRI trials or an SSRI and clomipramine before atypical augmentation. To repeat, no controlled data exist for the use of atypical antipsychotics in children with OCD. In view of the great responsibility involved in prescribing atypical antipsychotic agents to minors, diligence is required in assessing efficacy and accurate safety data by practicing clinicians. Because there is a lack of a well-defined "standard of care," the dictum *non nocere* ("do no harm") is especially relevant. At a minimum, regular weight and adverse event monitoring should occur with baseline and follow-up assays of fasting lipid profile and serum glucose.

Novel augmentation trials also have been reported for stimulants, gabapentin, sumatriptan, pindolol, inositol, opiates, St. John's wort, and, more recently, N-acetyl cysteine and the glutamate antagonists memantine and riluzole, but none of these meet minimal standards that permit recommendation for their routine use. Putative PANDAS cases of OCD have also attracted novel and experimental treatment interventions. Antibiotic prophylaxis with penicillin failed to prevent streptococcal infections in one study but was effective in a subsequent study, with decreases in infections and OCD symptoms in the year of prophylaxis compared with the previous baseline year [rct]. Extant data are insufficient to meet minimal standards to recommend routine antibiotic prophylaxis for children with OCD, even when PANDAS is suspected as an etiology. Instead, standard treatments for OCD and streptococcal infections are recommended. Therapeutic plasma exchange and intravenous immunoglobulin remain experimental interventions with substantial risk and potential morbidity. D-cycloserine augmentation of CBT remains unproved in children, but a meta-analysis in adults suggests efficacy.

Recommendation 11. Empirically validated medication and psychosocial treatments for comorbid disorders should be considered. [CG]

Because CBT interventions for OCD are focused and time limited, additional CBT protocols that have been empirically validated for the treatment of disorders that are frequently comorbid with OCD, such as oppositional-defiant disorder and major depressive disorder, or family-based therapy for comorbid eating disorder symptoms may be incorporated into the treatment of the child to enhance outcome. Insight-oriented psychotherapy, whether delivered individually or in the family setting, has not been shown effective in remitting OCD symptoms in children and adolescents. Some children who have experienced decreased function in some important domain of life, for example, in school grades or an ability to maintain friendships or a loss of self-esteem or marked conflict at home that has disrupted primary relationships as a result of their OCD symptoms, may well benefit from supportive psychotherapy. Family therapy for conflict or dysfunction that impedes treatments aimed at the primary symptoms of OCD or for high parental levels of accommodation to the child's rituals and demands may lead to better outcomes.

Pharmacotherapy for common comorbid disorders is frequently needed. Almost no systematic data are available to guide clinicians in the

management of complex cases. When present, ADHD is best addressed after the OCD has been treated, because stimulants may exacerbate anxiety and obsessions in some children. Some measurement of inattention can often be attributed to OCD symptoms and may improve as a result of treatment. Similarly, oppositional behavior may ameliorate markedly with a decrease in anxiety. However, the behavioral adverse effects of SSRIs, especially in younger children, may mimic the hyperactive impulsive symptoms of ADHD. Atomoxetine may be a useful medication in such situations, as may clomipramine, whose metabolite exerts a secondary amine noradrenergic effect. Although many children with chronic tic and Tourette's disorder require no pharmacological treatment, anxiolytic treatment aimed at anxiety and obsessional symptoms frequently ameliorates tics. Standard anti-tic medications including the α-agonists clonidine and guanfacine may be combined with anti-obsessional medication, with blood pressure, heart rate, and EKG surveillance. The atypical antipsychotics may be especially helpful in OCD comorbid with tics, but great care is required, especially in children. Treatment of mood disorders is also often required. Medication for major depressive disorder aligns with anti-obsessional treatment, but pediatric OCD that is comorbid with bipolar disorder represents one of the greatest treatment challenges in child psychiatry, because SSRIs may exacerbate manic symptoms, even at low doses. In these cases, mood stabilization is usually required before OCD can be addressed.

Definitions:

Strength of the Empirical Evidence

- Randomized controlled trial (rct) is applied to studies in which subjects are randomly assigned to two or more treatment conditions.
- Controlled trial (ct) is applied to studies in which subjects are nonrandomly assigned to two or more treatment conditions.
- Uncontrolled trial (ut) is applied to studies in which subjects are assigned to one treatment condition.
- Case series/report (cs) is applied to a case series or a case report.

Strength of the Empirical and/or Clinical Support

- Clinical standard [CS] is applied to recommendations that are based on rigorous empirical evidence (e.g., meta-analyses, systematic reviews, individual randomized controlled trials) and/or overwhelming clinical consensus.
- Clinical guideline [CG] is applied to recommendations that are based on strong empirical evidence (e.g., nonrandomized controlled trials, cohort studies, case-control studies) and/or strong clinical consensus.
- Option [OP] is applied to recommendations that are based on emerging empirical evidence (e.g., uncontrolled trials or case series/reports) or clinical opinion but lack strong empirical evidence and/or strong clinical consensus.
- Not endorsed [NE] is applied to practices that are known to be ineffective or contraindicated.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Obsessive-compulsive disorder (OCD)

Other Disease/Condition(s) Addressed

- Attention deficit hyperactivity disorder (ADHD)
- Bipolar disorder
- Eating disorder
- Major depressive disorder (MDD)
- Oppositional defiant disorder
- Tic disorder
- Tourettes disorder

Guideline Category

Diagnosis

Evaluation

Management

Screening

Treatment

Clinical Specialty

Family Practice

Pediatrics

Psychiatry

Intended Users

Physicians

Psychologists/Non-physician Behavioral Health Clinicians

Social Workers

Guideline Objective(s)

To incorporate recent research and empirical clinical wisdom to guide child and adolescent psychiatrists who treat children with obsessive-compulsive disorder (OCD) and the other medical and mental health providers involved in their care

Target Population

Children and adolescents with obsessions and/or compulsions

Interventions and Practices Considered

1. Psychiatric assessment
2. Evaluation using the DSM-IV-TR criteria and scalar assessment
3. Complete psychiatric evaluation including history and mental state examination and medical, developmental, family and school history
4. Cognitive-behavioral therapy for mild to moderate cases
5. Medication for moderate to severe obsessive compulsive disorder (OCD) (e.g., clomipramine, selective serotonin reuptake inhibitors [SSRIs])
6. Multimodal treatment
7. Medication augmentation strategies
8. Medication and psychosocial treatment for comorbid disorders

Major Outcomes Considered

- Severity and frequency of obsessive-compulsive disorder (OCD) symptoms
- Psychiatric comorbidity
- Effectiveness of treatment

- Treatment response and resistance
- Adverse effects of medications

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Information and recommendations used in this Parameter were obtained from literature searches using the Medline, PubMed, PsycINFO, and Cochrane Library databases and by an iterative bibliographic exploration of articles and reviews, beginning with more inclusive and sensitive searches employing the search term "obsessive-compulsive disorder", multiple free text and relevant medical subject headings (MeSH terms), and an initial period from 1980 to the present day (749 citations). The search was narrowed using delimiters and filters such as age 0 to 18 years, English language only, human studies, published in the previous 10 years, and using the Boolean operators 'AND' clinical trial 'OR' meta-analysis, practice guideline, randomized controlled trial, review, classical article to decrease the citations to 322. Using similar strategies, obsessive-compulsive disorder AND randomized controlled trial were searched to yield 353 citations, including 11 reviews. Key quality domains were examined including descriptions of the study population (inclusion and exclusion criteria), randomization, blinding, interventions, outcomes (including "last observation carried forward" data and description of dropouts), sources of sponsorship or funding, and statistical analysis. For this Practice Parameter, 65 publications were selected for careful examination based on their weight in the hierarchy of evidence attending to the quality of individual studies, relevance to clinical practice, and the strength of the entire body of evidence.

Number of Source Documents

For this Practice Parameter, 65 publications were selected for careful examination.

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

The strength of the empirical evidence is rated in descending order, as follows:

- Randomized controlled trial (rct) is applied to studies in which subjects are randomly assigned to two or more treatment conditions.
- Controlled trial (ct) is applied to studies in which subjects are nonrandomly assigned to two or more treatment conditions.
- Uncontrolled trial (ut) is applied to studies in which subjects are assigned to one treatment condition.
- Case series/report (cs) is applied to a case series or a case report.

Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review

Description of the Methods Used to Analyze the Evidence

The strength of the empirical evidence is rated in descending order (see the "Rating Scheme for the Strength of Evidence" field).

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

The American Academy of Child and Adolescent Psychiatry (AACAP) Practice Parameters are developed by the AACAP Committee on Quality Issues (CQI) in accordance with American Medical Association policy. Parameter development is an iterative process between the primary author(s), the CQI, topic experts, and representatives from multiple constituent groups, including the AACAP membership, relevant AACAP Committees, the AACAP Assembly of Regional Organizations, and the AACAP Council. Details of the Parameter development process can be accessed on the AACAP Web site. Responsibility for Parameter content and review rests with the author(s), the CQI, the CQI Consensus Group, and the AACAP Council.

The AACAP develops both patient-oriented and clinician-oriented Practice Parameters. Patient-oriented Parameters provide recommendations to guide clinicians toward best assessment and treatment practices.

Recommendations are based on the critical appraisal of empirical evidence (when available) and clinical consensus (when not), and are graded according to the strength of the empirical and clinical support. Clinician-oriented Parameters provide clinicians with the information (stated as principles) needed to develop practice-based skills. Although empirical evidence may be available to support certain principles, principles are based primarily on clinical consensus. This Parameter is a patient-oriented Parameter.

Rating Scheme for the Strength of the Recommendations

Recommendations for best assessment and treatment practices are stated in accordance with the strength of the underlying empirical and/or clinical support, as follows:

- Clinical standard [CS] is applied to recommendations that are based on rigorous empirical evidence (e.g., meta-analyses, systematic reviews, individual randomized controlled trials) and/or overwhelming clinical consensus.
- Clinical guideline [CG] is applied to recommendations that are based on strong empirical evidence (e.g., nonrandomized controlled trials, cohort studies, case-control studies) and/or strong clinical consensus.
- Option [OP] is applied to recommendations that are based on emerging empirical evidence (e.g., uncontrolled trials or case series/reports) or clinical opinion but lack strong empirical evidence and/or strong clinical consensus.
- Not endorsed [NE] is applied to practices that are known to be ineffective or contraindicated.

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

Internal Peer Review

Description of Method of Guideline Validation

Responsibility for Parameter content and review rests with the author(s), the Committee on Quality Issues (CQI), the CQI Consensus Group, and the American Academy of Child and Adolescent Psychiatry (AACAP) Council.

From September 2010 to May 2011, this Parameter was reviewed by a Consensus Group convened by the CQI.

This Practice Parameter was approved by the AACAP Council on August 11, 2011.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

Recommendations are based on the critical appraisal of empirical evidence (when available) and clinical consensus (when not). Although empirical evidence may be available to support certain principles, principles are based primarily on clinical consensus.

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Appropriate assessment and treatment of obsessive-compulsive disorder (OCD)

Potential Harms

- Clomipramine is generally not used as the drug of first choice for children because of its frequent adverse event profile [rct] and concerns of monitoring potential arrhythmogenic effects. The use of clomipramine mandates an evaluation of the pediatric patient's medical condition and cardiac status in particular. Adverse events are common with clomipramine, including anticholinergic, adrenergic, and histaminergic effects (dry mouth, constipation, dizziness, postural hypotension, sweating, and sedation) that occur in up to 60% of children.
- Clinicians should be aware of behavioral side effects of selective serotonin reuptake inhibitors (SSRIs) that are more likely in younger children and may be late-onset adverse effects appearing in parallel with a decrease in anxiety. In one study, peripubertal children exposed to antidepressants were at higher risk of conversion to mania compared with adolescents and young adults. For children with anxiety disorders or mild depression, the number needed to harm (NNH) was 13 (95% confidence interval [CI] 11–15). These side effects are sensitive to dose adjustment.
- Black box warnings from the Food and Drug Administration (FDA) about suicide exist for all antidepressant medications in the United States, but it should be noted that no suicides occurred in any of the pediatric randomized controlled trials of SSRIs. In the most comprehensive analysis of the extant data stratified by diagnosis, the authors found no statistically significant increased risk of suicidal thinking or behavior in the pooled pediatric OCD trials. The pooled absolute risk difference between SSRI- and placebo-treated youth with OCD was 0.5%, with an NNH of 200. In contrast to trials of serotonin-norepinephrine reuptake inhibitor and SSRI medications in OCD and anxiety disorders, in which the risk of a suicidal event is small to negligible, the risk of a suicidal event is notably larger in antidepressant trials, particularly for adolescents.
- It should be noted that very limited knowledge is available of what effects SSRIs have on brain development.
- A history of nonfebrile seizures should be noted but is not an absolute contraindication for use of clomipramine.

Contraindications

Contraindications

A prolonged corrected QT interval (QTc) (>450 ms) is associated with an increased risk of ventricular tachyarrhythmias and is a contraindication for clomipramine use (or further increase).

Qualifying Statements

Qualifying Statements

Parameter Limitations

American Academy of Child and Adolescent Psychiatry (AACAP) Practice Parameters are developed to assist clinicians in psychiatric decision making. These Parameters are not intended to define the sole standard of care. As such, the Parameters should not be deemed inclusive of all proper methods of care nor exclusive of other methods of care directed at obtaining the desired results. The ultimate judgment regarding the care of a particular patient must be made by the clinician in light of all of the circumstances presented by the patient and his or her family, the diagnostic and treatment options available, and the available resources.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Patient Resources

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Living with Illness

IOM Domain

Effectiveness

Patient-centeredness

Safety

Identifying Information and Availability

Bibliographic Source(s)

Practice parameter for the assessment and treatment of children and adolescents with obsessive-compulsive disorder. J Am Acad Child Adolesc Psychiatry. 2012 Jan;51(1):98-113. [46 references] PubMed

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2012 Jan

Guideline Developer(s)

American Academy of Child and Adolescent Psychiatry - Medical Specialty Society

Source(s) of Funding

American Academy of Child and Adolescent Psychiatry

Guideline Committee

AACAP Committee on Quality Issues (CQI)

Composition of Group That Authored the Guideline

Principal Authors: Daniel A. Geller, M.B.B.S., John March, M.D., and the AACAP Committee on Quality Issues (CQI): Heather J. Walter, M.D., M.P.H., and Oscar G. Bukstein, M.D., M.P.H. (*Co-Chairs*) and R. Scott Benson, M.D., Allan Chrisman, M.D., Tiffany R. Farchione, M.D., John Hamilton, M.D., Helene Keable, M.D., Joan Kinlan, M.D., Ulrich Schoettle, M.D., Matthew Siegel, M.D., and Saundra Stock, M.D.

AACAP Liaison: Jennifer Medicus

Financial Disclosures/Conflicts of Interest

Disclosures: Dr. Geller receives or has received research funding from Otsuka and Boehringer Ingelheim and has served as a consultant for and received honoraria from Eli Lilly and Co. Dr. March receives or has received industry support from MedAvante, Pfizer, Eli Lilly and Co., Bristol-Myers Squibb, and Johnson and Johnson; royalties from Multihealth Systems, Guilford Press, and Oxford University Press; is a scientific advisor for Pfizer, Eli Lilly and Co., Scion, and Psymetrix; and has federal affiliation with the Treatment for Adolescents with Depression Study, the Child/Adolescent Anxiety Multimodal Study, the Pediatric Obsessive-Compulsive Disorder Treatment Study I and II and Junior, the Research Units on Pediatric Psychopharmacology and Psychosocial Interventions, the Child and Adolescent Psychiatry Trials Network, and K24. Dr. Walter has no financial relationships to disclose. Dr. Bukstein receives or has received research support, acted as a consultant, and/or served on a speaker's bureau for McNeil Pediatrics and Novartis Pharmaceuticals Corporation. Disclosures of potential conflicts of interest for all other individuals named in the original guideline document are provided on the American Academy of Child and Adolescent Psychiatry (AACAP) Web site on the Practice Parameters page.

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Practice parameters for the assessment and treatment of children and adolescents with obsessive-compulsive disorder. J Am Acad Child Adolesc Psychiatry 1998 Oct;37(10 Suppl):27S-45S. [184 references]

Guideline Availability

Electronic copies: Available in Portable Document Format (PDF) from the American Academy of Adolescent and Child Psychiatry (AACAP) Web site.

Availability of Companion Documents

None available

Patient Resources

The following is available:

- Obsessive-compulsive disorder in children and adolescents. Facts for families. Washington (DC): American Academy of Child and Adolescent Psychiatry; 2011 Dec. Electronic copies: Available from the American Academy of Child and Adolescent Psychiatry Web site .

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC Status

This summary was completed by ECRI on February 6, 1999. The information was verified by the guideline developer on December 15, 1999. This NGC summary was updated by ECRI Institute on April 2, 2012. This summary was updated by ECRI Institute on May 24, 2016 following the U.S. Food and Drug Administration advisory on Olanzapine. This summary was updated by ECRI Institute on October 21, 2016 following the U.S. Food and Drug Administration advisory on opioid pain and cough medicines combined with benzodiazepines.

Copyright Statement

Disclaimer

NGC Disclaimer

The National Guideline Clearinghouseâ„¢ (NGC) does not develop, produce, approve, or endorse the guidelines represented on this site.

All guidelines summarized by NGC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public or private organizations, other government agencies, health care organizations or plans, and similar entities.

Guidelines represented on the NGC Web site are submitted by guideline developers, and are screened solely to determine that they meet the NGC Inclusion Criteria.

NGC, AHRQ, and its contractor ECRI Institute make no warranties concerning the content or clinical efficacy or effectiveness of the clinical practice guidelines and related materials represented on this site. Moreover, the views and opinions of developers or authors of guidelines represented on this site do not necessarily state or reflect those of NGC, AHRQ, or its contractor ECRI Institute, and inclusion or hosting of guidelines in NGC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding guideline content are directed to contact the guideline developer.