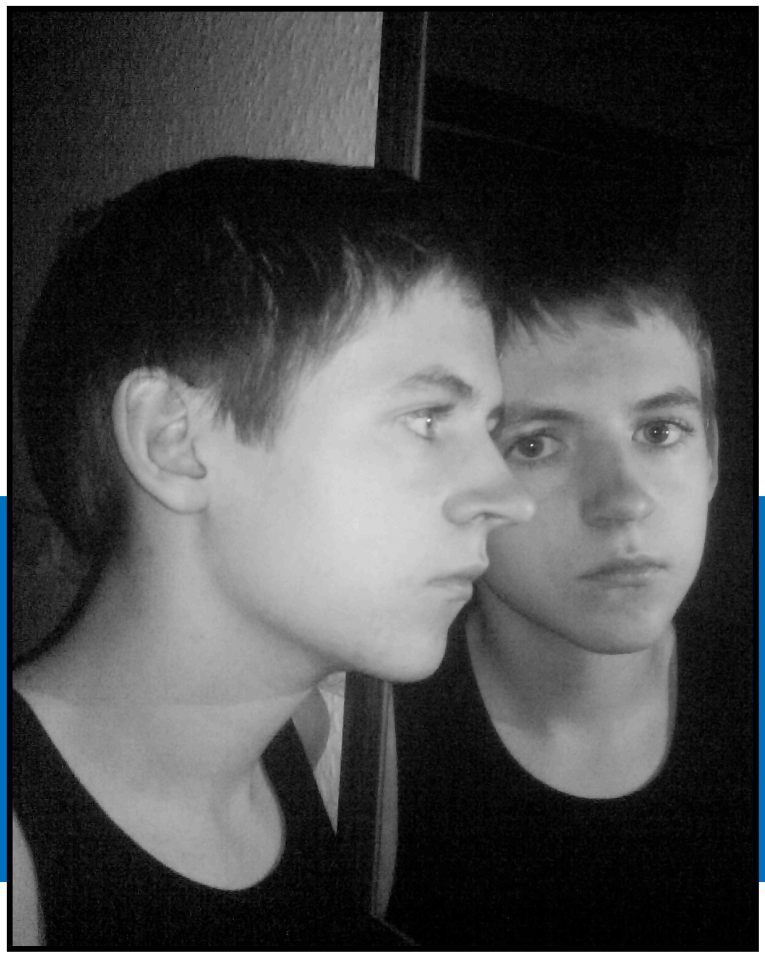

TREATMENT OF MALADAPTIVE AGGRESSION IN YOUTH

T-MAY

The Rutgers CERTs Pocket Reference Guide

For Primary Care Clinicians and Mental Health Specialists

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TABLE OF CONTENTS

INTRODUCTION

Psychotropic agents, particularly second-generation antipsychotics and mood stabilizers, are increasingly prescribed to youth on an outpatient basis for the treatment of overt aggression, a symptom that may have multiple causes. These large-scale shifts in treatment practices have occurred despite potentially troubling side-effects and a lack of supportive empirical evidence. With the increase in the prescription of psychotropic agents outside of FDA-approved indications, concerns have been raised over treatment decision-making, appropriate use of alternative therapies, long-term management, safety of multiple drug regimens, and successful parental engagement and education. Given its indistinct etiology and variability in frequency and severity of symptoms, as well as the presence of overlapping comorbidities, treating and managing aggression is generally difficult and complex. To address this clinical need and improve outcomes for children and adolescents with maladaptive aggression, a steering committee was established to spearhead a consensus development and quality improvement initiative for clinicians treating such children and adolescents.

Through the collaboration of The REsource for Advancing Children's Health Institute (REACH), the Center for Education and Research on Mental Health Therapeutics (CERTs) at Rutgers University, Columbia University/New York State Psychiatric Institute and participating national experts in the fields of policy, research, advocacy and child and adolescent psychiatry, the *Treatment of Maladaptive Aggression in Youth* (T-MAY) guidelines were developed. Under the direction of the T-MAY Steering Committee, the guideline development process involved: (1) extensive literature reviews; (2) an expert consensus survey to bridge existing gaps in the literature; (3) a two-day consensus conference involving content experts; and (4) successive refinement of the guidelines through further input from the T-MAY Steering Committee (cited below). The resulting T-MAY recommendations for diagnosis and assessment, treatment planning and side-effect management are the direct result of these partnered clinical and policy research efforts.*

The guidelines are intended for both primary care and specialty mental health prescribers. As such, T-MAY ultimately relies on physician expertise and discretion, and is not intended to undermine clinical judgment. Here, we present the companion "T-MAY Clinician's Tool Kit," a concise reference guide designed to aid clinicians in their implementation of T-MAY. This handbook provides a systematic, evidence-based treatment approach, but it represents only the first step in an ongoing process. Please contact us at the email addresses below with questions or suggestions. We are greatly interested in your feedback on the utility, format, and content of this guide.

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T-MAY RECOMMENDATIONS

ASSESSMENT + DIAGNOSIS

- Engage patients and parents (emphasize need for their on-going participation)
- Conduct a thorough initial evaluation and diagnostic work-up before initiating treatment
- Define target symptoms and behaviors in partnership with parents and child
- Assess target symptoms, treatment effects and outcomes with standardized measures

INITIAL TREATMENT + MANAGEMENT PLANNING

- Conduct a risk assessment and if needed, consider referral to mental health specialist or ER
- Partner with family in developing an acceptable treatment plan
- Provide psychoeducation and help families form realistic expectations about treatment
- Help the family to establish community and social supports

PSYCHOSOCIAL INTERVENTIONS

- Provide or assist the family in obtaining evidence-based parent and child skills training
- Identify, assess and address the child's social, educational and family needs, and set objectives and outcomes with the family
- Engage child and family in maintaining consistent psychological/behavioral strategies

MEDICATION TREATMENTS

- Select initial medication treatment to target the underlying disorder(s); follow guidelines for primary disorder (when available)
- If severe aggression persists following adequate trials of appropriate psychosocial and medication treatments for underlying disorder, add an AP, try a different AP, or augment with a mood stabilizer (MS)
- Avoid using more than two psychotropic medications simultaneously
- Use the recommended titration schedule and deliver an adequate medication trial before adjusting medication

SIDE-EFFECT MANAGEMENT

- Assess side-effects, and do clinically-relevant metabolic studies and laboratory tests based on established guidelines and schedule
- Provide accessible information to children and parents about identifying and managing side-effects
- Use evidence-based strategies to prevent or reduce side-effects
- Collaborate with medical, educational and/or mental health specialists if needed

MEDICATION MAINTENANCE + DISCONTINUATION

- If response is favorable, continue treatment for six months.
- Taper or discontinue medications in patients who show a remission in aggressive symptoms ≥ 6 months

Note: The order of these recommendations may be tailored to each patient's specific condition and needs.

The check-list provides an essential overview of the T-MAY treatment guidelines developed through the process outlined in the introduction. The following pages of this section outline experts' opinions as depicted in the flow diagram, entitled *T-MAY Recommendations*. Although understanding aggression as a multi-faceted symptom is the main focus of our guidelines, we also emphasize the importance of a thorough diagnostic work-up; assessment of relevant disorders and presenting behaviors of the child; engagement and collaboration of families in the treatment plan; and appropriate monitoring and evaluation of symptoms throughout the treatment process. For each step of the T-MAY approach, mnemonics, tools, strategies and charts are appended throughout. Information not embedded in the body of the text can be found in the appendices.

ASSESSMENT AND DIAGNOSIS

Given the multiple etiologies of aggression, as well as the variety of risk factors associated with outbursts, interpersonal aggression and oppositionality, a comprehensive assessment is necessary for understanding the development and context of maladaptive behaviors. Impulsive aggression is a symptom and treatment target in multiple childhood disorders, including Attention Deficit-Hyperactivity Disorder (ADHD), Conduct Disorder, Bipolar Disorder and Autistic Spectrum Disorders (including Pervasive Developmental Disorders). Assessments should carefully evaluate the child's physical and cognitive functioning and include their performance and behavior in home, school and in other social, peer-dominated spheres. (Please see *BOLDER* following the T-MAY guidelines for assessment and diagnosis).

ENGAGE PATIENTS AND PARENTS

- Relationship-building can determine family and patient knowledge-base, identify perceived barriers to adherence to treatment, and affect the overall viability of the established treatment and management plan.
- Considerations of the family's current level of stress, functioning status and beliefs about treatment should be clearly understood
- Get a clear picture of how they have attempted to deal with this overt aggression up to the point of your visit with them. Ask if they have reached out to other family members, community organizations, or other clinicians. If the answer is no, ask why they finally chose to seek medical treatment

CONDUCT AN INITITIAL EVALUATION AND PERFORM A DIAGNOSTIC WORK-UP BEFORE INITIATING TREATMENT

- Identify the family's concerns, and the reasons they are seeking treatment by contextualizing the target symptoms in terms of time/space/location. Include both the family and the child displaying overt aggression in your question-and-answer
- Determine their perceptions of the overt aggression: What is causing the aggressive symptoms to appear? Where do they occur mostly? What are the risks for injury of the child to self and others? What are their expectations for treatment? How do they want to be involved?
- To rule out potential contributory co-occurring symptoms or disorders which could have a significant effect on prognosis, all possible documentation of the child's treatment history should be collected to grasp the character, intensity and frequency of target symptoms
- Using the DSM or ICD diagnostic criteria to assess other psychiatric or medical comorbidities is an essential first step in initiating treatment and management planning
- Assess target symptoms using available scales and rating tools (see appendix, please)
- Perform necessary diagnostic laboratory tests

ASSESS AND DEFINE TARGET SYMPTOMS AND BEHAVIORS IN PARTNERSHIP

- Assess the behavior of the child, towards him/herself and others.
- Determine the frequency and intensity of the symptoms, and how the child experiences them
- Identify symptom exacerbants and coping mechanisms the child uses to counter the symptoms
- Identify the symptoms of aggression that are most likely to respond to a specific treatment
- Include the family's input to ensure their participation throughout treatment and management planning

B – **BEHAVIOR**: In what ways does the child exhibit aggression?

O – **ONSET**: When does it happen? What triggers it, and why?

L – **LOCATION**: Where do the symptoms occur – home/school?

D – **DURATION**: How long does it last?

E – **EXACERBANTS**: What makes it worse?

R – **RELIEF**: What makes it better?

BOLDER is a useful mnemonic to follow in the beginning stages of assessing and diagnosing a child with aggression. Use these questions to get a more complete understanding of the nature of the problem and to learn more about the child and the family you are working with. Be curious, and keep asking open-ended questions, such as "Can you tell me more about …", or "What do you think about…"

Early during the initial assessment of a child with aggression, it is important to begin to form a team of mental health professionals, educators and advocates in the community who can help the family and participate with them in the treatment plan. To ensure their participation throughout the entire course of treatment, it is essential during this time that the clinician and the family work together to co-construct the treatment objectives and action plan.

Note: When youth exhibit signs of aggression, certain behavioral strategies such a cueing or prompting, verbal warnings, interventions, time away and time out can be effective. However, one should strongly consider a referral to a psychiatrist or to an emergency room, if 1) as a primary care physician, you do not feel comfortable providing care; or 2) the patient is a danger to him/herself or to someone else. Emergency medications may also need to be given; clinicians should be aware of a patient's current medications and drug use in order to evaluate for the potential for drug-drug interactions.

TREATMENT PLANNING

Multiple factors are likely related to the onset and maintenance of aggression in children and adolescents with mental health disorders. These factors span a wide variety of domains, including inborn biological and genetic anomalies, the media, and larger socio-cultural forces, interactive family processes, school and community influences, limitations in the child's cognitive, physical, social and communication skills, as well as other contributors from relationships with parents, caretakers and peers. Determining the most likely set of factors underpinning and eliciting the child's aggression can be quite intricate, and often lie outside the scope of a single professionals' area of expertise. (Please see *PRESTO* following T-MAY guidelines for treatment planning).

CONDUCT A RISK ASSESSMENT, GET REINFORCEMENTS AND REFER IF NEEDED

- When acute aggression is the cause of concern, the child and family must be carefully interviewed to determine the level and likelihood of physical risk the child presents others and to him/herself. Assessing the child's intention to harm self or others, his/her degree of impulsivity, child and family history of aggression, family parenting style, and the parents' methods of reward and punishment can help to ascertain the appropriate information about the frequency, duration, triggers, and risk of the child's aggressive behaviors
- In addition to the family dynamic, special attention should be paid to determining the impact of the child's social network, and the potential role of drug and/or alcohol use/abuse in inciting aggression
- Given the varied environmental and psychiatric contexts in which aggression can occur, clinicians are encouraged to identify potential obstacles from their on-going collection of data, to optimize treatment conditions

PROVIDE PSYCHOEDUCATION AND SET REALISTIC EXPECTATIONS ABOUT TREATMENT

- Engaging patients and their families from the start of the assessment phase better ensures their openness to participating in dialogues about impulsive aggression, DSM disorders that may be present and strategies to manage the child's behavior.
- Clinicians should seek to maximize communication and effective learning by first inquiring about parents' and children's pre-existing concerns, beliefs and understandings about the causes, consequences and interventions for aggression. If assumptions are invalid or myth-based, providers should make complete, easy-to-read information materials available in the family's preferred language and format.
- In order for families to fully understand the risks, benefits and trade-offs involved in addressing aggression, information should include (1): what is known about the causes of aggression; (2) consequences if not addressed; (3) the various environmental, psychosocial and medication interventions available; (4) types of medical and educational assistance the family can receive; (5) sources of culturally-appropriate family support, and additional services and outlets for information in the local community.
- Outlining the family's and community's role in this way can significantly impact the patient-clinician relationship, treatment adherence and outcomes in an optimistic and constructive way.

HELP THE FAMILY TO ESTABLISH COMMUNITY AND SOCIAL SUPPORTS

- Developing an appropriate treatment plan with the patient and family should take into account their concerns, fears, and expectations. Similarly, specific treatment goals in key areas of functioning should be agreed upon by family members.
- Plans for the short-term, long-term, and emergency situations, are all equally important and deserve coordination. It is essential that a crisis plan be co-developed with the family that outlines how emergency situations should be handled. Identifying potential in-patient and out-patient clinical services and discussing the roles of parents and clinical providers are key elements to plan for when preparing the family for imminent distress.

- Finding the right professional can be more difficult if family is economically disadvantaged, or lives in a geographically-isolated region. You should provide the referrals for the family (if necessary) to primary care physicians, insurance companies, local hospitals and universities, and/or appropriate professional associations.
- It is also important to refer families to relevant resources in the community, including parent advocates and relevant family support groups, to assist them in their coping with disruptions in the family dynamic, and to learn about how to access educational and health care services that can procure stability.

ASSESS TREATMENT EFFECTS AND OUTCOMES WITH STANDARDIZED MEASURES

- A comprehensive assessment of aggression is necessary for symptom identification, and for successfully treating and managing the symptoms; above all, it is relevant to identify the limitations and barriers to the child's achievement in following a specific, recommended regimen. Over the course of the assessment, and following diagnosis, it is important to continually track and reassess aggression problems to verify the adequacy of the treatment response.
- Screening and assessment tools to characterize and/or quantify symptoms can serve as benchmarks of treatment progress and provide insights during monitoring of psychotropic medications. Rating scales vary according to their data-gathering style, content, time-frame, and scale. Most importantly, they should be culturally-appropriate, valid and reliable to promote feedback from the family and child.
- Additional copies of the T-MAY toolkit can be downloaded without cost or ordered in print form at cost at **www.t-may.org**.
- During follow-up visitations with the patient and family, clinicians should evaluate environmental factors and/or changes that may improve or worsen the child's symptoms and determine adherence to prescribed treatment. Collecting family insights can aid in this level of surveillance.

P – **PARTNER** with the family

R – Assess **RISK**, identify professional **REINFORCEMENTS**, and **REFER** if need be

E – **EDUCATE** the family on evidence-based practices and expectations of treatment

S – Ascertain **SUPPORT** in the community

T – **TRACK** signs and symptoms with tools

O – **OBJECTIVES** and Action Plans are established with the family

Note: BOLDER and PRESTO have been designed to positively influence critical thinking throughout the assessment and diagnosis and treatment planning. The above framework establishes the platform for the entire document. For each of the five processes of the T-MAY approach, mnemonics, guidelines, strategies and charts are appended throughout. Information not embedded in the body of the text can be found in the appendices.

PSYCHOSOCIAL INTERVENTIONS

Although a variety of medications show substantial efficacy in reducing aggression associated with different primary conditions (Schur et al., 2003; Turgay et al., 2002; Croonenberghs et al., 2005; Findling et al., 2004; Greenhill et al., 1985), evidence for the successful management of aggression in youth includes the provision of psychoeducation, and setting realistic expectations about treatment with the patient and family. Techniques such as Parent-Management Training, School-Based Social Skills Training and general prevention programs have shown efficacy in reducing aggression (Tremblay et al., 1995; Kellam et al., 1994), promoting positive, pro-social and compliant behavior in children and encouraging parents to adopt more consistent and predictable child-management strategies (Patterson, 1982; Patterson et al., 1992; Webster-Stratton and Spitzer, 1996). Proper management of anger can lead to reduced number of incidents of physical aggression and improved parent and teacher ratings of behavior.

Identifying and organizing yourself through performing a thoughtful and thorough evaluation and diagnosis has allowed you to identify and organize your thoughts and potential concerns. Having gotten to know the family better, you and the family can move on to the next phase: using innovative problem-solving and collective wisdom to tackle aggression with practical application and predication. For younger children, multimodal treatment plan approaches that involve parent and child training and/or therapy have demonstrated the greatest efficacy in managing persistent aggressive behaviors. During our literature review, it became apparent that certain evidence-based treatments were more likely to be used with older children and families with younger children. This is not unusual, given that age and developmental level of the child contribute significantly to the decision of which treatment modality to employ.

PROVIDE OR ASSIST THE FAMILY IN OBTAINING EVIDENCE-BASED INFORMATION

- It is important for families to feel as if their efforts up to the point of requesting your help (the help of a physician) have not been in vain. Most parents have read available books, sought out the advice of a professional counselor or therapist, have had repeated discussions with their child's teachers, and have spoken to family and friends about the impact aggression has on their and the child's life.
- Creating a good life and crafting a promising future for a child with aggression is incredibly complicated, and will require trial and error. Clinicians should seek to maximize communication and effective learning by first inquiring about parents' and children's pre-existing concerns, beliefs and understandings about the causes, consequences and interventions for aggression.
- If assumptions are invalid or myth-based, providers should make complete, easy-to-understand information materials available in the family's preferred language and communication format. In order for families to fully understand the risks, benefits, and trade-offs involved in addressing aggression, information should include (1): what is known about the causes of aggression; (2) consequences if not addressed; (3) the various environmental, psychosocial, and medication interventions available; (4) types of medical and educational assistance the family can receive; (5) sources of culturally-appropriate family support and additional services and outlets for information in the local community. Some individuals may prefer visual learning materials (i.e., DVDs, videotapes, and videostreams) over written materials.

ASSESS AND ADDRESS THE CHILD'S SOCIAL, MEDICATION, EDUCATIONAL AND FAMILY NEEDS

- Though relying on what you know is helpful, it is necessary to work alongside the family to debug those standardized techniques and apply the tools in a way that is appropriate for the circumstance, in "real life."
- Please see the *Family Collaborative Plan*: six basic questions to be answered by the clinician, child and family.

- Please see the *Psychosocial Treatment Planning and Management of Overt Aggression for Families and Clinicians*, a template to develop short-term, intermediate, and long-term action plans to manage and monitor the treatment of overt aggression

ENGAGE CHILD AND FAMILY IN MAINTAINING CONSISTENT PSYCHOLOGICAL/BEHAVIORAL STRATEGIES

- Each family has to make treatment decisions based on the available resources and what makes the best sense for their child.
- Emphasize the family's need for on-going family and community support.
- Treating aggression requires flexibility in planning; prepare the family for multiple changes likely to be needed throughout treatment.

FAMILY COLLABORATIVE TREATMENT PLAN

Dispensing what seems like simple, typical medical advice isn't always enough to send a family home fully-equipped with taking on something as perplexing and inroad as aggression. The difference between what can be read in any information booklet (no matter how adept the reader is or how comprehensive the narrative) and what works to counter aggression in the "real world," lies in the particulars of adapting the advice to the given circumstances of that child and family. A "one-size-fits-all" treatment, whether or not it's coupled with sophisticated pharmaceuticals, will not get at the underlying sources of the aggression.

6 BASIC QUESTIONS:

1 – **WHO** is/are the active agent(s) (physician, therapist, caregiver, teacher, patient, etc.)?

2 – **WHAT** is the treatment goal? What therapeutic modality is going to be used?

3 – **WHERE** is the treatment being given? Is it location-specific?

4 – **WHY** is the patient being treated? Which symptom(s) are targeted?

5 – **WHEN** is therapy given?
WHEN should medication be administered?

6 – **HOW MANY** sessions of therapy are suggested over a determined period of time?
HOW MUCH medication (dose) is prescribed?

The *6 Basic Questions* outline a series of questions that can help parents, children in treatment, and doctors to standardize their efforts towards preventing the symptoms of aggression to arise. By establishing answers to the above questions as a collaborative, compliance to treatment is more likely to be successful. Though the *Family Collaborative Plan* may appear at first-glance as a "cookbook" outline, it is necessary that you keep in mind that the answers to these *6 Basic Questions* may change over the course of treatment. It would be wise to get into the practice of answering these questions each and every time you meet with the family to avoid confusion.

Action Plans, along with the *Family Collaborative Plan*, help to promote long-term vision and short-term motivation for treatment planning and management of side-effects. Treating aggression is often challenging, but short-, intermediate- and long-term planning can keep everyone focused on organizing resources, meeting the family's needs and ensuring that all parties have a clear awareness of what they must do in order to help the child in treatment achieve a particular objective or outcome.

ACTION PLANS: PSYCHO-SOCIAL TREATMENT PLANNING + MANAGEMENT OF OVERT AGGRESSION FOR FAMILIES AND CLINICIANS

A Template to Develop Short-, Intermediate- and Long-term Action Plans to Manage and Monitor Treatment of Overt Aggression

CHILD'S NEEDS	*WHAT?*	*WHO?*	*WHERE?*	*WHEN?*	*HOW MUCH?*	*WHY?*
ADDRESSING NEEDS + IDENTIFYING RESOURCES	How will the need(s) be addressed? What resources are available?	Who is the active agent? Who is accountable? Who will assist you?	Is treatment location- and time specific? Type of environment?	What is the time-frame? How frequent are sessions? How often is Rx distributed?	How many sessions of therapy are suggested? What is the Rx dose?	Why is the action important? Targeting which symptom(s)? Short-term goals? Objectives?
SOCIAL + EMOTIONAL:	*WHAT?*	*WHO?*	*WHERE?*	*WHEN?*	*HOW MUCH?*	*WHY?*
IMPROVING SELF-ESTEEM	Learn origami; buy fun paper and find a "how-to" book	Parents/Guardians and Child	Dining Room Table or a community-offered class	Weekend Afternoons	1-2 times a week	Developing a skill or hobby can increase interest, dedication, and a feeling of accomplishment. Can facilitate learning from peers + shared experiences. can also facilitate More positive social interactions; increased planned activities with other students.
MAKING FRIENDS	Discuss with teacher; express your concerns and expectations	Parents/Guardians & Teacher May want to discuss with other parents	At the School	Before or After School	Discuss once a week; ask child everyday about the children at School	
MEDICAL NEEDS:	*WHAT?*	*WHO?*	*WHERE?*	*WHEN?*	*HOW MUCH?*	*WHY?*
MAKING THE MOST OF MEDICINE	Determine if prescribed med regimen is best + document what you notice	Child Parents/Guardians Teacher and Doctor	At Home At School At the doctors office	In the AM In the afternoon At night	Chart sleep and behavioral patterns daily; discuss with doctor monthly.	Finding the best type and dose of medication will result in fewer or no side-effects, and improve overall physical, social and mental well-being. Monitoring side-effects will help you to discern whether or not medication is working for your child.
MONITORING SIDE-EFFECTS	Read up to learn about side-effects + document changes in behavior/mood	Child Parents/Guardians Teacher and Doctor	Go to high quality websites for information + find local sources in the community	Record changes in mood + behavior. Report drastic changes to doctor ASAP.	Chart sleep and behavioral patterns daily; discuss with doctor monthly.	
EDUCATIONAL NEEDS:	*WHAT?*	*WHO?*	*WHERE?*	*WHEN?*	*HOW MUCH?*	*WHY?*
PERFORMANCE IN SCHOOL	Better understand your child's academic strengths + weaknesses	Parents/Guardians	At School with the Teacher	Start immediately; it's best to start at the beginning of the school week.	Request a weekly Progress Report to track behavior + learning (e.g., test scores)	Understanding your child's apprehension, perceived hardship and attitudes toward learning can help you to identify new ways to make learning fun and exciting. Alleviating the stressors of school can improve overall time at the kitchen table.
DOING HOMEWORK	Discuss and develop a HW plan to address assignment load	Parents/Guardians and Child	At the kitchen table	After school and, on weekends	Every day/week	

FAMILY NEEDS:	*WHAT?*	*WHO?*	*WHERE?*	*WHEN?*	*HOW MUCH?*	*WHY?*
CHILD IN TREATMENT	Make the child feel good about the extra time you spend with him/her	Parents/Guardians Siblings Teacher	At Home During Activities At School	All the time	Positive feedback and praise should be given as much as possible	Raising a child that requires special attention and additional time, especially when there are other children in the family, can be difficult on everyone. Strong intra-family communication is key to maintenance + progress. Including everyone in the action plans, spending individual time with family members, and taking time for yourself, is key to decreasing conflicts in the home, and preventing feelings of negligence, burnout or burden.
PARENTS	Each should have time alone; parents must both agree on action plans + reward system	Parents/Guardians	Go out, or stay in	Discuss your needs with the children, and family or sitter	At least once a week	
SIBLINGS	Spend quality time with other siblings. Express concern for their health, too	Parents/Guardians & Siblings	Let the siblings decide; show interest in their hobbies + social events	As much as possible. You can formalize plans on a weekly basis.	At least once a week	
FAMILY AS A WHOLE	Include your children in planning activities where everyone is included	Parents/Guardians Siblings Child in Treatment	Decide as a group	Meet as a group to develop the family calendar. It should be in view + revisable.	Once a week, or twice a month	

Modified from: Peter S. Jensen, MD (2004). Making the System Work for You and Your Child With ADHD. Guilford Press. PP. 51 and 254.

Note: This chart is helpful in that it provides examples of how to establish short-term, intermediate, and long-term outcomes and goals with the child and family. A blank copy can be found in the appendix for repeated use.

MEDICATION TREATMENTS

Psychotropic agents, particularly second-generation antipsychotics and mood stabilizers, are increasingly prescribed to youth on an outpatient basis for the treatment of overt aggression, a symptom that may have multiple causes. These large-scale shifts in treatment practices have occurred despite potentially troubling side-effects and a lack of supportive empirical evidence of their effects on adolescents and children; a large part of the information existing on antipsychotics and mood stabilizers have been extrapolated from adult populations. Therefore, information may change as more data from large pediatric populations become available. As the T-MAY guidelines suggest, treatment planning should consider a multimodal approach. Education of the parents and child and forming a team of health care professionals is just as important in this phase of treatment as it is during previous ones. Their input will help you to better understand the potential for unexpected risks and benefits and may result in more appropriate monitoring of patients.

SELECT INITIAL MEDICATION TREATMENT TO TARGET THE UNDERLYING DISORDER(S)

- Treatment planning should consider severity and impairment of the aggression and take into consideration both symptom reduction and functional impairment.
- Doses need to be individualized based on efficacy and tolerability.
- Follow guidelines for primary disorder (when available). Please see the *T-MAY Recommendations* (p. 4).

IF RESPONSE IS INADEQUATE

- Avoid using more than two psychotropic medications simultaneously.
- Assessing symptoms and functioning at home, at school and among peers should be systematic and regular.
- Add an AP, try a different AP, or augment with a mood stabilizer (MS).
- Please see the *Typical Medication Dosing and Titration Intervals of Antipsychotics* (p. 15) and *Mood Stabilizers* (p. 17).

BEFORE ADJUSTING MEDICATION

- Please see the *T-MAY Guidelines (p. 4)*, *General Rules for Switching Psychotropic Medications* (p. 23), and *Clinical Pearls For Switching Psychotropic Medications (p. 23).*

USUAL MEDICATION DOSING AND TITRATION INTERVALS OF ANTIPSYCHOTICS (APs) *

ANTIPSYCHOTIC	DOSE RANGE (mg)	DOSE STRENGTH (mg)	MEDICATION FORMULATIONS (available for use)	STARTING DOSE (mg)	HALF LIFE (hrs)	TIME TO PEAK (hrs)	TITRATION INTERVALS (days)	PRINCIPAL LIVER ENZYME	LIVER ENZYME INDUCER	LIVER ENZYME INHIBITOR
SECOND GENERATION ANTIPSYCHOTICS (SGA)										
ARIPIPRAZOLE (ARI)	Child: 2.5 - 15 Adol: 5 to 15	2, 5, 10, 15, 20, 30 tbl; 10, 15 diss, liquid 1 (30 mg = 25 mL)	po, im short, diss., liquid	2 to 5 Chlorpromazine Dose ∪ 7.5mg	50 to 72	3 to 5	when starting at 2mg, may increase dose every 3rd day; after steady state, increase dose every 7-14 days	2D6 > 3A4	3A4	2D6 3A4
CLOZAPINE (CLO)	Child: 150 - 300 Adol: 200 - 600	25; 100	po	12.5 Chlorpromazine Dose ∪ 50 mg	12	1 to 4	25 mg daily or, every other day	1A2>2C19 2C19>3A4 3A4 > 2C9 2C9 > 2D6	1A2 2C19 3A4	1A2 2C19 3A4 2C9
OLANZAPINE (OLA)	N/A	.5, 5, 7.5, 10, 15, 20 tb 5, 10, 15, 20 diss; 10im	po, im short, diss.	5 to 10 Chlorpromazine Dose ∪ 5 mg	30	6	increase at intervals > 5 days	1A2 2D6 3A4	1A2 2D6 3A4	1A2 2D6 3A4
PALIPERIDONE (PAL)	3 to 12	3, 6, 9	po, ER	3 Chlorpromazine Dose ∪ 3 mg	21 to 30	24	increase at intervals > 5 days	<10% Hepatic Clearance	N/A	N/A
QUETIAPINE (QUE)	150 to 750	25, 100, 200	po, XR	50-100 IR 200-300 XR Chlorpromazine Dose ∪ 75 mg	6 to 7	2	100 mg per day	3A4	3A4	3A4
RISPERIDONE (RIS)	Child: 1.5 - 2 Adol: 2 to 4	0.5, 1, 2, 3, 4 tablets; 0.5, 1, 2 diss; liquid 1mg/mL 30ml bottl	po, im long, diss., liquid	0.5 to 1 Chlorpromazine Dose ∪ 2 mg	3	1 to 2	increase at intervals of 0.5-1 per day or > 5 days	2D6 > 3A4	2D6 3A4	2D6 3A4
ZIPRASIDONE (ZIP)	80 to 160	20, 40, 60, 80 tablets	po im short	20 to 40 Chlorpromazine Dose ∪ 60 mg	7	5	increase at 20- 40 per day	Aldehyde Oxidase > 3A4	3A4	3A4

Modified from: Correll 2008 (Correll CU). Antipsychotics and Adjunctive Medications. In: Textbook of a Child and Adolescent Psychiatry. M Dulcan (ed.), American Psychiatric Publishing, Inc. New York.
Modified from: 2004 .TRAAY - A Pocket Reference Guide. New York State Office of Mental Health, Research Foundation for Mental Hygiene, Inc. and the Trustees of Columbia University.

TYPICAL MEDICATION DOSING AND TITRATION INTERVALS OF ANTIPSYCHOTICS *										
ANTIPSYCHOTIC	DOSE RANGE (mg)	DOSE STRENGTH (mg)	MEDICATION FORMULATIONS (available for use)	STARTING DOSE (mg)	HALF LIFE (hrs)	TIME TO PEAK (hrs)	TITRATION INTERVALS (days)	PRINCIPAL LIVER ENZYME	LIVER ENZYME INDUCER	LIVER ENZYME INHIBITOR
FIRST GENERATION ANTIPSYCHOTICS (FGA)										
HALOPERIDOL (HAL)	1 to 6	0.5, 1, 2, 5, 10, 20 tablets, 2; 10 mg/mL liquid, 5 im	po, im short im long	0.25-1 Chlorpromazine Dose » 2 mg	3 - 6 po 10-20 im	2-6 po .05 im	increase dose by 0.5 kg intervals of 5-7 days	3A4	3A4	3A4
MOLINDONE (MOL)	20 to 140	5, 10, 25, 50	po	0.5-1 mg/kg/d divided in 3-4 doses Chlorpromazine Dose ∪ 10 mg	1.5	1.5	N/A	2D6	2D6	2D6
PERPHENAZINE (PER)	8 to 32	2, 4, 8, 16	po	TBD; no data available Chlorpromazine Dose ∪ 10 mg	8 to 12	1 to 3	TBD; no data available	2D6	2D6	2D6

Modified from: Correll 2008 (Correll CU). Antipsychotics + Adjunctive Medications. Textbook of a Child + Adolescent Psychiatry. M Dulcan (ed.), American Psychiatric Publishing, Inc. New York.

USUAL MEDICATION DOSING AND TITRATION INTERVALS OF MOOD STABILIZERS *

MOOD STABILIZER	DOSE RANGE (mg)	DOSE STRENGTH (mg)	MEDICATION FORMULATIONS (available for use)	STARTING DOSE (mg)	HALF LIFE (hrs)	TIME TO PEAK (hrs)	TITRATION INTERVALS (days)	PRINCIPAL LIVER ENZYME	LIVER ENZYME INDUCER	LIVER ENZYME INHIBITOR
CARBAMAZEPINE	100 - 800	100, 200, 100 mg/5mL	po	100 mg B.I.D. (tbl), 1/2 tsp QID (susp) for 6-12 years	Initial 25 - 65 Later 12 to 17	4 to 5	Add < 100 mg/day at weekly intervals, t.i.d or q.i.d. (tbl) til optimal reponse	3A4>2D6 2D6.1A2 Auto-Inducer	3A4 2D6 1A2	3A4 2D6 1A2
CARBAMAZEPINE ER	100 - 800	100, 200, 400	po	100 mg for 6-12 years B.I.D. or T.I.D.	Initial 25 - 65 Later 12 to 17	3 to 12	Add 100 mg/day at weekly intervals b.i.d until optimal response	3A4>2D6 2D6.1A2 Auto-Inducer	3A4 2D6 1A2	3A4 2D6 1A2
DIVALPROEX	500 - 2000	125, 250, 500	po	10 - 15 mg/kg/d B.I.D. or T.I.D.	9 to 16	3 to 4	Add 5-10 mg/kg day q 7 days; give with food. Increase rapidly to lowest effective dose	CYP450 C29 (weak inhibitor)	Rifampin Seco-barbital	# please see footnote
DIVALPROEX ER	500 - 2000	250, 500	po	10-15 mg/kg/day po	9 to 16	7 to 14	Increase dose by 5 - 10 mg/kg/wk until optimal response; clinical response is at plasma levels of 85-125 µg/mL	CYP450 C29 (weak inhibitor)	Rifampin Seco-barbital	# please see footnote
LAMOTRIGINE	50 - 200	25, 100, 150, 200	po	only 25mg < 16 yo, or on DVP	24 - 34	1.4 - 4.8	Keep starting dose stable for 2 wks, increase by 12.5 - 25 mg; but if < 16 yo, or on DVP, increase by 12.5 mg	Glucu-ronidation	N/A	N/A
LITHIUM	600 - 1800	8mEq/5mL	po	15 - 20 mg/kg/d B.I.D or T.I.D.	20 - 24	1 to 3	Dose wkly based on plasma Li+ levels	Renal Elimination Only	Renal Elimination Only	Renal Elimination Only
LITHIUM CR	1800 mg/d, serum level 1-1.5mEq/L adults	300, 450	po	150 - 300 mg B.I.D.	24	4	Dose according to need	Renal Elimination Only	Renal Elimination Only	Renal Elimination Only

Modified from: Correll and Schenck. Correll CU and Schenck EM. Assessing and Treating Pediatric Bipolar Disorder. Oxford American Psychiatry Library. In preparation.

FOOTNOTES: TYPICAL MEDICATION DOSING AND TITRATION INTERVALS OF ANTIPSYCHOTICS + MOOD STABILIZERS

* LIVER ENZYME INDUCERS

1A2: Smoking; Carbamazepine (weak)
2C9: Rifampin; Secobarbital
2C19: Carbamazepine; Norethindrone; Prednisone; Rifampin
2D6: Carbamazepine (high doses)
3A4: Carbamazepine; Phenytoin; Phenobarbital; Rifampin; St. John's Wart

* LIVER ENZYME INHIBITORS

1A2: Fluvoxamine; Omeprazole; Grapefruit Juice
2C9: Fluconazole; Amiodarone; Fenofibrate; Fluvastatin; Fluvoxamine; Isoniazid; Lovastatin; Phenylbutazone; Probenicid; Sertraline; Sulfamethoxazole; Sulphaphenazole; Teniposide; Voriconazole; Zafirlukast
2C19: Lansoprazole; Omeprazole; Pantoprazole; Rabeprazole; Chloramphenicol;Cimetidine;Felbamate;Fluoxetine;Fluvoxamine;Indomethacin;Ketoconazole; Modafinil; Oxacarbazepine; Probenicid; Ticlopidine; Topiramate
2D6: Bupropion; Fluoxetine; Paroxetine; Terbinafine; Quinidine
3A4: Clarithromycin; Erythromycin; Fluconazole; Fluvoxamine; Indinavir; Itraconazole; Ketoconazole; Nelfinavir; Nefazodone; Ritonavir; Grapefruit Juice

NOTES
* A large part of the data is extrapolated from adult populations. Therefore, information contained in the table may change as more data from large pediatric populations become available.
a - Doses need to be individualized based on efficacy and tolerability.
b - Average dose range provided for adolescents with schizophrenia or bipolar disorder; for prepubertal patients or those with other diagnoses, average dose may be approximately 33% to 50% lower.
#: Divalproex levels may be increased when combined with the following medications: Fluconazole; Amiodarone; Fenofibrate; Fluvastin; Fluvoxamine; Isoniazid; Lovastatin; Phenylbutazone; Probenicid; Setraline;

Children on psychotropic medications should be seen by their prescribing clinician no less than once every three months. This is a bare minimum. Children in acute settings, who display unsafe behavior, experience significant side-effects, or do not respond to medication trials, or are in an active phase of a medical trial should be seen more frequently.
If laboratory tests are indicated to monitor therapeutic levels of a medication or to monitor potential organ system damage from a medication, these lab studies should be performed every three months at a minimum (maintenance phase). If the medication is being initiated, these lab tests should be performed more frequently until a baseline is achieved.

N/A = Not applicable; No Data Available.
B.I.D. - *bis in die,* a direction to take medication twice daily
diss. - dissolvable
ER - extended release
im short/long - medication is delivered by intramuscular injection
IR - immediate release
liquid - medication comes in liquid form, and taken by mouth
mEq - milliequivalent
po - *per orem*, a direction to take a medication by mouth
T.I.D. - *ter in die*, a direction to take medication three times daily
TBD - to be determined; data not yet available
XR - extended release

SIDE EFFECT MANAGEMENT

Having established a strong working relationship with the family members will help to monitor the effect each medication has on the child's aggression, and overall well-being. Methods for managing side effects are done on a case-by-case basis, given the need to consider family concerns, tolerability, efficacy, and because each child's response profile will be unique. Even as more data become available from large pediatric populations, it is unlikely that the implementation of successful treatment plans will ever be standardized. Assessing and managing clinically-relevant side-effects require that the tending physician, family and child are aware of the benefits and risks of each medication to effectively utilize pharmacological approaches for clinical aggression.

ASSESS CLINICALLY-RELEVANT SIDE EFFECTS

- In general, there is a direct, positive relationship between dose and adverse effect(s), and use of more than one antipsychotic (AP) increases the risk for AP-related side-effects.
- Studies and tests based on established guidelines should be used whenever available.
- If laboratory tests are indicated to monitor therapeutic levels of a medication or to monitor potential organ system damage from a medication, these lab studies should be performed every three months at a minimum (maintenance phase). If the medication is being initiated, these lab tests should be performed more frequently until a baseline is achieved.

PROVIDE ACCESSIBLE INFORMATION ABOUT IDENTIFYING AND MANAGING SIDE EFFECTS

- Educating the parent and child about the known side effects of antipsychotics and mood stabilizers helps provide them with the knowledge to monitor improvements and identify medication side effects.
- Please see *Relative Side Effects: Safety and Tolerability of Antipsychotics and Mood Stabilizers* (p. 20).

USE EVIDENCE-BASED STRATEGIES TO PREVENT OR REDUCE SIDE EFFECTS

- Reducing and preventing side effects is important to avoid unintended consequences of medication.
- Please see *Strategies for the Management of Relative Side Effects to Antipsychotics (AP) + Mood Stabilizers (MS)* (p. 22).

COLLABORATE WITH MEDICAL, EDUCATIONAL AND/OR MENTAL HEALTH SPECIALISTS

- Identify integral players in the treatment and assign them roles.
- Response to treatment cannot be adequately monitored by using clinical interview and clinical judgment alone.
- Finding the best treatment plan requires the mobilization of existing resources as well as mobilizing your existing resources. Family members and other professional caregivers can help you find the most appropriate, effective treatment for each unique child.

RELATIVE SIDE-EFFECTS: SAFETY + TOLERABILITY OF ANTIPSYCHOTICS AND MOOD STABILIZERS

Comparative Overview of Side-effect Profiles of Second- and First-Generation Antipsychotic Medications and Mood Stabilizers *

ADVERSE EFFECT(S)	TIME	DOSE	SECOND-GENERATION ANTIPSYCHOTICS (SGA)							FIRST-GENERATION			MOOD STABILIZERS (MS)			
1,2,3*	COURSE	DEPENDENCY	ARI	CLO	OLA	PAL	QUE	RIS	ZIP	HAL	MOL	PER	CBZ*	LI*	LTG	VP*
ACUTE PARKINSONISM	Early	+++	+	0	+	++	0	++	+	+++	++	++	0	+	0	0
AKATHISIA	Early/Inter-mediate	+++	++	+	+	+	+	+	+/++	+++	++	++	0	+	0	0
DIABETES	Late	+ ?	+ a	+++	+++	+ a	++	+	+ a	+ a	+ a	+	+ a	+ a	+ a	+/++
↑ LIPIDS	Early/Inter-mediate	0?	+ a	+++	+++	+ a	+/++	+	+ a	+ a	+ a	+	+ a	+ a	+ a	+
NEUTROPENIA	First 6 mo.	+?	+	+++	+	+	+	+	+	+	+	+	++	0	+	+
ORTHOSTASIS	Early/ Titration	+++	+	+++	++	+	++ c	+	0	0	+	+	0	0	0	0
↑ PROLACTIN	Early	+++	0	0	+/++	+++	0	+++	+	++	++	++	0	0	0	0
↑ QT c INTERVAL	Early/ Titration	+?	+ d	+ d	+ d	+ d	+ d	+ d	++ d	+ d	+ d	+ d	0	0	0	0
SEDATION	Early/ May Improve	+++	+	+++	++	+	++ c	+	+	+	+	+	+	+/+	+	++
SEIZURES	During Titration	+++	+	++ a	+	+	+	+	+	+	+	+	0	0	0	0
STEVEN'S JOHNSON SYNDROME (SERIOUS); RASH	High Start Dose; Fast Titration	++	+	+	+	+	+	+	+	+	+	+	+	+	++	+
TARDIVE DYSKINESIA	Late	++	+ a	0	+ e	+ a	+ e	+	+ e	++	+/++	+/++	0	0	0	0
WITHDRAWAL DYSKINESIA	Early Taper Fast Switch	+++	++	0	+	+	+	+	+	++	+/++	+/++	0	0	0	0
WEIGHT GAIN	First 3-6 Months	0?	+	+++	+++	+/++	++	++	+	+	+	++	+	+/++	+	++

Modified from Correll 2008 (Correll CU: Antipsychotic Use in Children + Adolescents: Minimizing Adverse Effects to Maximize Outcomes. J Am Acad Child Adolesc Psychiatry 2008; 47: 9-20)
and, from: Correll and Schenk (Correll CU and Schenk EM: Assessing and Treating Pediatric Bipolar Disorder. Oxford Am Psychiatry Library. In Preparation.

Modified from: 2004 .TRAAY - A Pocket Reference Guide. New York State Office of Mental Health, Research Foundation for Mental Hygiene, Inc. and the Trustees of Columbia University.

FOOTNOTES: RELATIVE SIDE-EFFECTS FOR SGAs, FGAs and MOOD STABILIZERS

Comparative Overview of Side Effect Profiles

+ - There is a direct, positive relationship between dose and adverse effect(s)
a - There is insufficient long-term data to fully determine the risk
b - Unlikely due to low risk factors in childhood and adolescents, and long lag time for cerebrovascular disease to develop
c - Less at higher doses (? Above 250 mg/day)
d - Relevance for the development of *torsade de points*not established
e - Less than 1% per year in adults who were often pre-treated with FGAs
f - Of unclear clinical relevance
g - (1) Hyponatremia/SIADH is evident with Carbamazepine (CBZ); the dose dependency is +
h - (2) Hypothyroidism is evident with Lithium (LI); the dose dependency is +++
i - (3) Hyperparathyroidism is evident with mood stabilizers: Carbamazepine (CBZ); Lithium (Li); and Valproic Acid (VP); the dose dependency is + for each
j - (4) Polycystic ovaries occurred in 1090 of young adults women treated with Valproic Acid (VP) for a year

* A large part of the data is extrapolated from adult populations. Therefore, information contained in the table may change as more data from large pediatric populations become available
* Use of more than one AP increases the risk for AP-related side-effects

STRATEGIES FOR THE MANAGEMENT OF RELATIVE SIDE-EFFECTS TO ANTIPSYCHOTICS (AP) + MOOD STABILIZERS

Suggested Treatment Courses/ Interventions to Restore Relevant Abnormality in Pediatric Patients

CATEGORY	POTENTIAL SIDE-EFFECTS	FIRST-LINE OPTIONS (Not necessarily in order of priority)	ALTERNATIVE CONSIDERATIONS (Not necessarily in order of priority)
Anti-Cholinergic	Constipation	High fiber diet; Give fluids; Bulk laxatives or stool softener; Decrease dose	Switch AP/MS
	Dry Mouth	Give sugarless gum or hard candy; Decrease dose	Switch AP/MS
Cardiac	Orthostatic Hypotension	Teach Pt. how to change posture slowly; Increase hydration; Decrease dose	Cardiology consult; Switch AP/MS
	Slightly Prolonged QTc Interval (> 450 ≤ 500Msecs)	Repeat EKG; Decrease dose	Cardiology consult; Discontinue AP/MS; Switch AP with normal EKG
	Tachycardia	Cardiology consult; Decrease dose	Cardiology consult; Switch AP/MS
	Very Prolonged QTc Interval (> 500 Msecs)	Discontinue AP; Repeat EKG; Cardiology consult	Switch AP with less QTc prolongation
Cognitive + Central Nervous Sys	Confusion	Assess for medical illness + illicit drug use; Decrease dose; Neurology consult	Obtain serum levels; Discontinue AP; Switch AP
	Headache	Add analgesic; Wait for improvement; Rule-out tension headache	Decrease dose; If there are problems with vision, neurology consult
	Memory Problems	Decrease dose	Neuro + neuropsychology consult; Meds at bedtime; Switch AP
	Sedation/Hypersomnia	Give AP/MS at bedtime; Discontinue other sedating medications; Decrease dose	Switch AP/MS
	Seizures	Get EEG; Neurology consult; Decrease AP dose; Switch AP; Increase MS dose	Discontinue AP/MS
Diabetes + Weight	Diabetes	Obtain fasting glucose + lipids at baseline, 3, and 6 months; Endocrine consult; Symptom-management education; Implement diet/exercise program	Switch AP/MS
	Weight Gain (developmentally inappropriate)	Nutrition consult; Implement diet/exercise program; Monitor fasting glucose, cholesterol and triglycerides at baseline, 3, and 6 months	Switch AP/MS
Endocrine	Amenorrhea	Rule out pregnancy, hyperthyroidism + renal problems; Obtain prolactin levels	Gyn consult; Wait to see if resolves; Decrease dose; Switch AP
	Galactorrhea	Decrease dose; Obtain prolactin levels; Endocrine consult	Switch AP
	Gynecomastia (males)	Obtain prolactin levels; Endocrine consult	Switch AP
	Hyperprolactinemia	No action needed unless clinical signs or symptoms, or PRL ≥ 280 mg/mL	Prolactin levels don't need to be obtained in absence of symptoms
Extra-pyramidal Symptoms	Akathisia [1]	Decrease dose; Slow switch	Add beta adrenergic antagonist; Switch AP
	Akinesia [2]	Decrease dose	Add anticholinergic; Switch AP
	Dystonia [2]	Add anticholinergic (IM); Add lorazepam (IM); Add antihistamine (IM)	Decrease dose; Switch AP
	Muscle Rigidity [2,3]	Add anitcholinergic; Decrease dose	Add dopamine agonist; Switch AP
	Tardive Dyskinesia [3]	Neurology consult; Discontinue AP; Increase dose	Switch AP
	Tremor [2]	Decrease dose	Add anticholinergic; Switch AP
Medically Life-threatening	Agranulocytosis	Discontinue AP immediately; Emergency internal med/pediatric consult; Labs	Switch AP once agranulocytosis resolves
	Granulocytopenia	Discontinue AP; Pediatric consult; Repeat labs	Switch AP once ANC + WBC returns to normal
	LFTs Increase	Internal med/pediatric consult; Repeat labs; Consider discontinuing AP	Discontinue AP; Switch to different AP once LFTs are normal
Other	Decreased libido; Erectile dysfunction	Decrease dose; Discontinue medications with sexual side-effects	Switch AP
	Enuresis	Void before sleep; Decrease fluids in evenings; Decrease dose; Give meds early in the evening; Wake youth to void at night	Use behavior intervention; Switch AP
	Hypersalivation	Decrease dose; Teach Pt. to sleep in lateral decubitus position; Put towel over pillow	Switch AP; If caused by EPS, add anticholinergic; If caused by Clozapine, add alpha agonist (eg. Guanfacine)
	Insomnia	Evaluate for depression or anxiety disorder and treat underlying condition; Give total or larger AP dose at bedtime; Add hypnotic sleep aid; If due to AP, consider decreasing dose	Switch AP
	Nausea/Vomiting	Wait 1-2 days; Decrease dose; Add temporary antiemetic	Switch AP
	Rash	Discontinue AP; Dermatology consult if severe	Switch AP/MS once rash resolves

Modified from: 2004. TRAAY: Treatment Recommendations for the Use of Antipsychotics for Aggressive Youth. A Pocket Reference Guide for Clinicians in Child and Adolescent Psychiatry. New York State Office of Mental Health, Research Foundation for Mental Hygiene, Inc. and the Trustees of Columbia University.

Notes: Use of more than one AP increases risk for AP-related side-effects. For further recommendations, please see Appendix for handouts, rating scales and additional guidelines for the management of side-effects.

FOOTNOTES:

[1] = Barnes Akathisia Rating Scale

[2] = Simpson Angus Scale

[3] = Abnormal Involuntary Movement Scale

AP = Antipsychotic

MS = Mood Stabilizer

MEDICATION MAINTENANCE + DISCONTINUATION

CLINICAL PEARLS OF SIDE EFFECT MANAGEMENT

- Follow guidelines for primary disorder (when available); initial medication treatment should target the underlying symptom(s)/disorder.
- If inadequate response, add an AP, try a different AP, or augment with a MS; use the recommended titration schedule + deliver an adequate medication trial before adjusting medication.
- Conduct side effect and metabolic assessments and laboratory tests that are clinically relevant, comprehensive, and based on established guidelines.
- Provide accessible information to parents/guardians about identifying + managing side effects.
- Use evidence-based strategies to prevent or minimize side effects.
- Collaborate with medical or mental health specialists as needed.
- Follow general rules and clinical pearls for switching psychotropic medications (see below).

MINIMIZING SIDE EFFECTS WHEN SWITCHING PSYCHOTROPIC MEDICATIONS

- Start low! Go slow! And stop slowly! Avoid abrupt stopping, starting, and/or switching to reduce risk of rebound and withdrawal phenomena.
- Do not switch until the primary disorder has been treated according to target disorder guidelines at adequate dose and duration.
- Only stop and/or switch abruptly if a serious adverse effect necessitates it (i.e. severe neutropenia; agranulocytosis; diabetic ketoacidosis; neuroleptic malignant syndrome; acute pancreatitis; lithium toxicity; Stevens Johnson Syndrome; etc.).
- Slow switch using cross-titration is the preferred method; an even slower switch can be done using the plateau-cross titration method, with therapeutic dose overlap of medications (when switching to a less sedating or cholinergic medication, or one with a much longer half-life).
- If time permits, do not reduce the first medication by more than 25-50% per 5 half-lives.

ADDITIONAL CONSIDERATIONS

- When switching medications, the more different the binding affinity for the same receptor (between the two drugs), the greater the risk for side effects and rebound and withdrawal phenomena (esp. sedating; anti-cholinergic; dopaminergic).
- The more different the half-life of the medications with the same physiological effect (desired or undesired), the greater the risk for rebound and withdrawal phenomena; withdrawal and rebound phenomena are most likely when discontinuing from a short half-life medication.
- Withdrawal and rebound phenomena are mostly likely to occur when switching from a strongly anti-histaminergic (sedating) or anti-cholinergic medication (i.e., Clozapine, Olanzapine, Quetiapine), to a less strong binding medication (i.e., haloperidol, molindone, peridone, paliperidone, aripiprazole, Ziprasidone); or from a strongly binding anti-dopaminergic (i.e. FGA AP, Risperidone Paliperidone) to a less strongly binding antipsychotic (i.e., clozapine, quetiapine, clozapine); or a full antagonist, to a partial agonist (aripriprazole).
- Insufficient efficacy or increased side effects may occur during a switch when medications metabolized by cytochrome P450 liver enzymes are paired with a medication that affects that same enzyme.
- Never discontinue Lithium or Clozapine abruptly to avoid potentially severe rebound of mania or psychoses.
- Quetiapine and Mirtazapine can lead to more sedation at lower doses (below 250-300 mg for Quetiapine, and below 30 mg for Mirtazapine).

APPENDIX

Algorithm for the Treatment of ADHD with Comorbid Aggression

Algorithm for the Treatment of Depression/Anxiety with Comorbid Aggression

Action Plans: A Template to Develop Creating Short-Term, Intermediate, and Long-term Action Plans

Action Plans: Tips for Families

Dietary and Physical Activity Recommendations

AP Side Effects Checklist

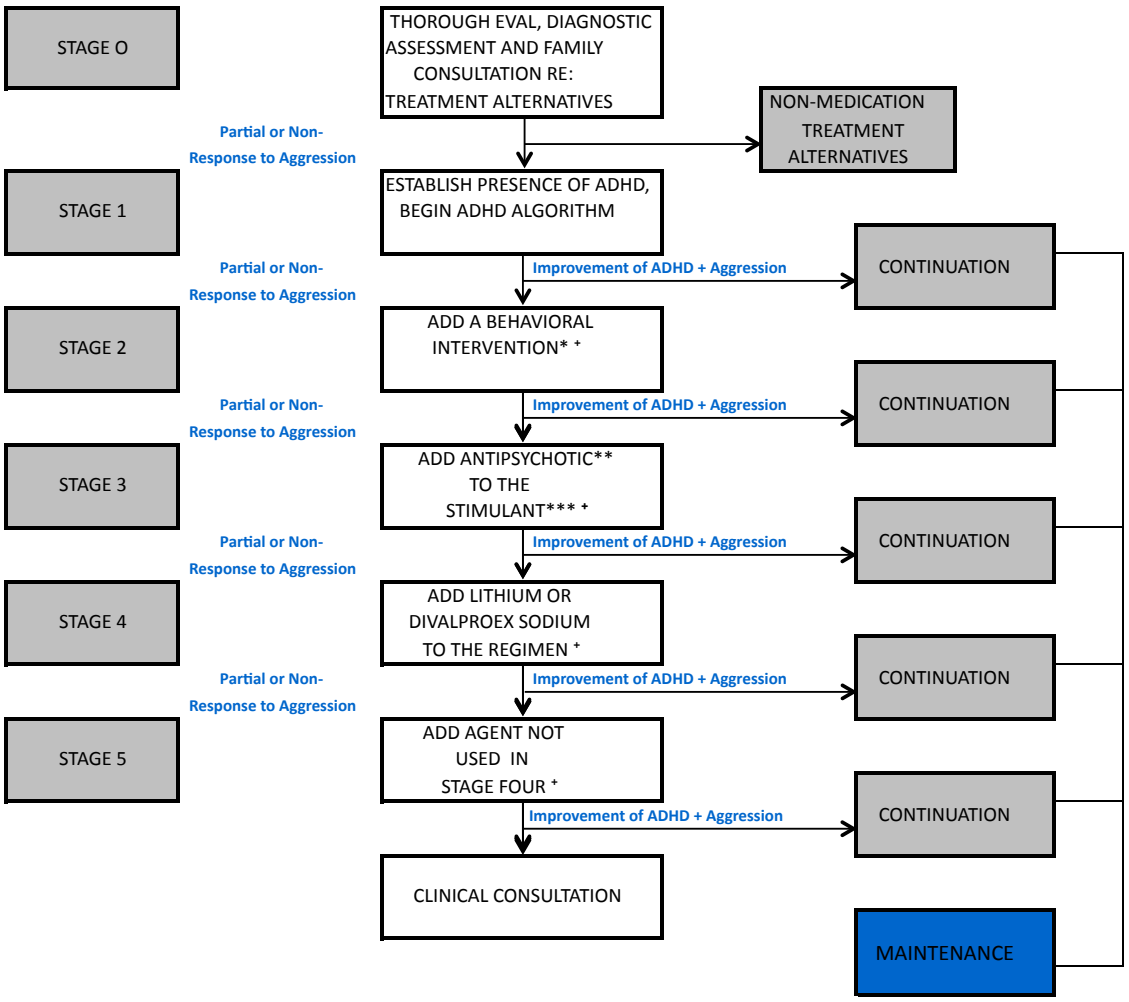
Clinical Global Impressions (CGI)

Brief Psychiatric Rating Scale for Children (BPRS-C-9)

Modified Overt Aggression Scale (MOAS)

Young Mania Rating Scale

ALGORITHM FOR THE TREATMENT OF ADHD WITH COMORBID AGGRESSION



FOOTNOTES:

* Evaluate adequacy of behavior treatment after inadequate response at any stage.

** Risperidone has the most efficacy and safety data for any AP (antipsychotic) in children.

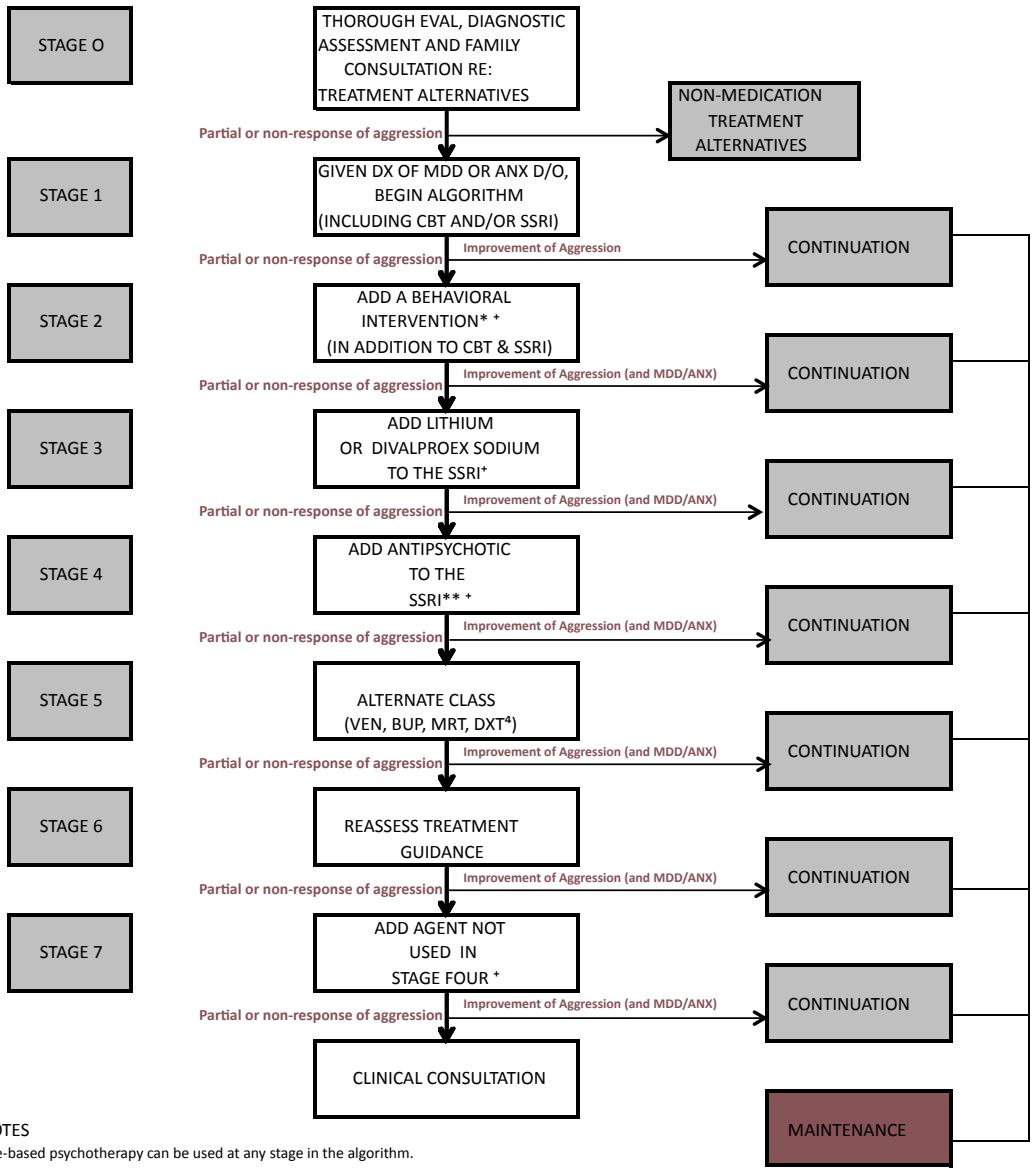
*** If patient is an imminent threat to self or others, antipsychotics may be started with behavioral treatment.

\+ Primary care physicians (PCP)s may choose to obtain psychiatric consultation (either at this step, or prior to), depending on level of experience, training and comfortability.

Note: Any stage can be skipped depending on the clinical picture.

Adapted from: Pliszka, SR, Crismon, M.L., Hughes, CW, Conners CK et al. 2006.

ALGORITHM FOR THE TREATMENT OF DEPRESSION/ANXIETY WITH COMORBID AGGRESSION



FOOTNOTES

[1] Evidence-based psychotherapy can be used at any stage in the algorithm.

[2] FLX (Fluoxetine) is the only antidepressant with an FDA-approved indication for depression in youth.

[3] SSRI = Selective Serotonin Reuptake Inhibitor (includes: FLX (Fluoxetine); CIT (Citalopram); SRT (Setraline); EST (Escitalopram); Paroxetine (not rec. for pre-adolescents);

[4] VEN = Venlafaxine; BUP = Buproprion; DXT = Duloxetine, MRT = Mirtazapine

+ Primary care physicians (PCP)s may choose to obtain psychiatric consultation (either at this step, or prior to), depending on experience, training and comfort, level

Note: Any stage can be skipped depending on the clinical picture.

Adapted from: Hughes CW; Emslie GJ; Crismon M.L.; Bosner K; et al. Conference Panel on Medication Treatment of Childhood Major Depressive Disorder. J. Am. Acad. Child Adolesc. Psychiatry, 46:6.

ACTION PLANS: PSYCHO-SOCIAL TREATMENT PLANNING + MANAGEMENT OF OVERT AGGRESSION FOR FAMILIES AND CLINICIANS

A Template to Develop Short-, Intermediate- and Long-term Action Plans to Manage and Monitor Treatment of Overt Aggression

CHILD'S NEEDS	*WHAT?*	*WHO?*	*WHERE?*	*WHEN?*	*HOW MUCH?*	*WHY?*
ADDRESSING NEEDS + IDENTIFYING RESOURCES	How will the need(s) be addressed? What resources are available?	Who is the active agent? Who is accountable? Who will assist you?	Is treatment location- and time specific? Type of environment?	What is the time-frame? How frequent are sessions? How often is Rx distributed?	How many sessions of therapy are suggested? What is the Rx dose?	Why is the action important? Targeting which symptom(s)? Short-term goals? Objectives?
SOCIAL + EMOTIONAL:	*WHAT?*	*WHO?*	*WHERE?*	*WHEN?*	*HOW MUCH?*	*WHY?*
IMPROVING SELF-ESTEEM						Developing a skill or hobby can increase interest, dedication, feelings of accomplishment, and a positive sense of self-worth. Having friends builds self-esteem, and creates more positive social interactions. Consider planning activities with other students.
MAKING FRIENDS						
MEDICAL NEEDS:	*WHAT?*	*WHO?*	*WHERE?*	*WHEN?*	*HOW MUCH?*	*WHY?*
MAKING THE MOST OF MEDICINE						Finding the best type and dose of medication will result in fewer or no side-effects, and improve overall physical, social and mental well-being. Monitoring side-effects will help you to discern whether or not medication is working for your child.
MONITORING SIDE-EFFECTS						
EDUCATIONAL NEEDS:	*WHAT?*	*WHO?*	*WHERE?*	*WHEN?*	*HOW MUCH?*	*WHY?*
PERFORMANCE IN SCHOOL						Understanding your child's apprehension, perceived hardships, and attitudes toward learning can help you find new ways to make learning more fun. Doing and finishing homework prepares child for more success the next day at school, and on tests and final grades.
DOING HOMEWORK						

FAMILY NEEDS:	*WHAT?*	*WHO?*	*WHERE?*	*WHEN?*	*HOW MUCH?*	*WHY?*
CHILD IN TREATMENT						Raising a child that requires special attention and additional time, especially when there are other children in the family, can be difficult on everyone. Strong intra-family communication is key to maintenance + progress. Including everyone in the action plans, spending individual time with family members, and taking time for yourself, is key to decreasing conflicts in the home, and preventing feelings of negligence, burnout or burden.
PARENTS						
SIBLINGS						
FAMILY AS A WHOLE						

Modified from: Peter S. Jensen, MD (2004). Making the System Work for You and Your Child With ADHD. Guilford Press. PP. 51 and 254.

Note: This chart is helpful in that it provides examples of how to establish short-term, intermediate, and long-term outcomes and goals with the child and family. This form can be copied for repeated use.

ACTION PLANS: TIPS FOR FAMILIES

Far too often, the systems in place to help children with aggression fall short, largely because the unique problems of an individual child require costly, time-consuming attention, and the number of individual kids needing such care exceeds the capacity of available resources. The template for Action Plans provide a framework useful for both younger and older children; this template can be used together with psychosocial interventions, and can be tailored depending on the needs of your child and the environment in which the Action Plan template is being used.

PRINCIPLES OF ACTION FOR THE PARENT

- Even with a relatively treatable condition such as asthma, in addition to carefully monitoring your child's medications, you must ensure that babysitters, teachers and relatives know what to do if your child has an "attack" and you are not there. Now, think about the kinds of steps you must take to prevent your child's exposure to potential triggers that can set off an attack (house dust, pollens, or pets). The same kind of planning is needed to anticipate or prevent your child's reactions to aggression "triggers".
- Show warmth and acceptance to your child despite his/her flaws, identify available resources to help you, prioritize short, intermediate and long-term goals, plan action steps that are truly feasible, and commit yourself to small changes first, then building upon them.
- Remember when you are feeling overwhelmed by the lack of available resources, time pressures and conflicting priorities, take into account the child's capabilities and input, and your strengths and weaknesses as a parent. Don't be hard on yourself…or your child. Patient, long-term approaches will usually succeed, but demands for big results immediately will overwhelm both you and your child.
- As a parent, think of yourself as the skipper on a sailing vessel. At the beginning of a voyage, your craft should at minimum be outfitted with sails, a rudder, a compass, map, a radio, a knowledgeable crew, and adequate provisions. Even with all of these necessities on board, and despite that you charted a thoughtful course at the outset, any significant change in weather is likely to dictate a change in plans. Adapting to prevailing winds and adjusting course are minimum revisions, but more dramatically, you may need to weigh anchor temporarily in a safe harbor, return to port, or even radio for help! Remember that flexibility will assist you in finding the most perfect solution. Don't set yourself up for failure; rather, recognize that though missteps are likely to happen, you can eventually achieve success if you keep at it, working your plan, and patiently revising it when needed.
- Developing and implementing a plan for your child (and for yourself and family) will help you to be able to step back and reflect as often as needed, giving you the ability to explore new options and make necessary mid-course corrections.
- Planning won't solve all of your problems, but it certainly will help you be prepared for the challenges ahead; it's better to empower yourself by taking charge, rather than letting yourself become overwhelmed by your child's aggression or by the challenges in getting help from your child's school or healthcare system.

DIETARY AND PHYSICAL ACTIVITY RECOMMENDATIONS FOR CHILDREN AND ADOLESCENTS ON PSYCHOTROPIC AGENTS		
TARGET		MANAGEMENT STRATEGIES
Age Group		Pediatric patients <18 years receiving psychotropic medications associated with weight gain.
Parenting Style		Allow child to self-regulate meals; encouraging authoritative parenting style supporting increased physical activity and reduced sedentary behavior, providing tangible and motivational support; discourage overly restrictive parenting style.
Family Involvement		Yes; It is very important to have support.
Sugar-sweetened Beverages		Replace sugar-sweetened drinks, including "diet" drinks, with water, or moderate amounts of unsweetened tea or low-fat milk (no sugar-sweetened beverages if overweight or obese), assess for excessive consumption of 100% fruit juice.
Meal Frequency		Assess for meal frequency (including quality), aim for 3 to less than 6 separate meals per day, with no more than 1 meal in the evening or at night.
Breakfast		Daily breakfast.
Meal Portions		Assess for consumption of excessive portion sizes for age, promote serving small meal portions.
Pacing of Food Consumption		Eat slowly and take second helpings only after a delay of 15-20 minutes.
Sugar Content		Assess for excessive consumption of foods that are high in energy density, preferentially eat food with a low glycemic index.
Fat Content		Diet with balanced macronutrients (calories from fat, complex carbohydrates, and protein in proportions for age recommended by Dietary Reference Intakes); Reduce saturated fat intake, but avoid extensive consumption of processed fat-free food items.
Fiber Content		Diet high in fiber (25-30 grams/day); five or more servings of fruits and vegetables per day (avoid fruit juice).
Snacks		Assess for snacking patterns (including quality); Avoid snacking in a satiety state, replacing high-fat, high-calorie snacks with fruit and vegetables.
Outside Meals / Fast Food		Limit meals outside the home, especially in fast-food restaurants (no more than once per week); family meals at least 5-6 times/week.
Sedentary Behavior		Two or fewer hours of screen time per day, and no television or videogames in the room where the child sleeps.
Exercise		Perform moderate level physical activity for at least 30-60 minutes/day.

Modified from: American Medical Association 2007. Expert Committee Recommendations on the Assessment, Prevention, and Treatment of Child and Adolescent Overweight and Obesity recommendations for treatment of pediatric obesity

Modified from: Correll CU, Carlson HE. 2007. Endocrine and metabolic adverse effects of psychotropic medications in children and adolescents. J Am Acad Child Adolesc Psychiatry 2006;45:771-791. a Authoritative parents are both demanding and responsive.

AP SIDE-EFFECTS CHECKLIST

Patient: Date:

Rater:

INSTRUCTIONS

Rate the severity of the following side-effects from 0 (not present) to 3 (severe).
Side-effects marked with a † should be scored using only 0 (not present) or 1 (present).

ANCHORS

0 = None *1 = Mild* *2 = Moderate* *3 = Severe* *N/A = Not Assessed*

LIFE-THREATENING
†NMS* _____
Decreased ANC* _____
†Agranulocytosis _____
Marked Increase in LFTs* _____

EPS
Tardive Dyskinesia _____
Akathisia _____
Akinesia _____
Tremor _____
Muscle Rigidity _____
†Dystonia _____
Tardive Dyskinesia _____

COGNITIVE EFFECTS
Confusion _____
Memory Problems _____
Sedation _____
Hypersomnia _____
Insomnia _____
Headache _____

CARDIAC
QTc Prolongation _____
Tachycardia _____
Hypotension _____

* Abbreviations
NMS = Neuroleptic malignant syndrome
LFTs = Liver function tests
ANC = Absolute neutrophil count

WEIGHT AND DIABETES
Current Height _____inches
Baseline Weight _____ pounds
Current Weight _____ pounds
Weight Gain _____ pounds
Baseline BMI Percentile _____
Current BMI Percentile _____
Elevated Glucose _____
Elevated Cholesterol _____
Elevated Triglycerides _____

ENDOCRINE
†Amenorrhea _____
†Galactorrhea _____
†Gynecomastia _____
Excess Thirst _____
Unexplained Weight Loss_____

ANTICHOLINERGIC
Dry Mouth _____
Blurred Vision _____
Constipation _____

OTHER
Irritability _____
Nausea/Vomiting _____
Sexual Dysfunction _____
Decreased Libido _____
Dermatological _____
Hypersalivation _____
Enuresis _____

CLINICAL GLOBAL IMPRESSIONS (CGI)

Patient: **Date:**

Rater:

INSTRUCTIONS

The CGI helps quantify the overall severity and improvement of a patient's condition.
Rate the patient's severity of illness and global improvement using the anchors below.

SEVERITY OF ILLNESS

How ill is the patient at this time?

1 = Normal, not at all ill
2 = Borderline mentally ill
3 = Mildly ill
4 = Moderately ill
5 = Markedly ill
6 = Severely ill
7 = Among the most extremely ill patients

GLOBAL IMPROVEMENT

Compared to the patient's condition prior to treatment, how ill is he/she now?

1 = Very much improved
2 = Much improved
3 = Minimally improved
4 = No change
5 = Minimally worse
6 = Much worse
7 = Very much worse

BRIEF PSYCHIATRIC RATING SCALE FOR CHILDREN (BPRS-C-9)*

Patient: Date:

Rater:

DESCRIPTION

The BPRS-C (9-item version) can be used to screen for and monitor a variety of psychiatric symptoms. Item descriptions are presented below, along with anchors to guide how the severity of each item is rated.

ANCHORS

Items are rated using the following scale:

0 = Not Present 1 = Very Mild 2 = Mild 3 = Moderate 4 = Moderate-Severe 5 = Severe 6 = Very Severe

___ 1. UNCOOPERATIVE:
NEGATIVE, UNCOOPERATIVE, RESISTANT, DIFFICULT TO MANAGE
Not Present: Cooperative, pleasant.
Mild: Occasionally refuses to comply with rules and expectations, in only 1 situation/setting.
Moderate-Severe: Persistent failure to comply with rules/expectations in more than 1 setting. Causes frequent impairment in functioning.
Extremely Severe: Constantly refuses to comply with rules and expectations, delinquent behaviors, running away. Causes severe impairment in functioning in most situations/settings.

___ 2. HOSTILITY:
ANGRY OR SUSPICIOUS AFFECT, BELLIGERENCE, ACCUSATIONS AND VERBAL CONDEMNATION OF OTHERS
Not Present: Cooperative, pleasant.
Mild: Occasionally sarcastic, loud, guarded, quarrelsome. Causes mild dysfunction in one situation or setting.
Moderate-Severe: Causes frequent impairment in several situations/settings.
Extremely Severe: Assaultive, destructive. Causes severe impairment in functioning in most situations/settings.

___ 3. MANIPULATIVENESS:
LYING, CHEATING, EXPLOITIVE OF OTHERS
Not Present: Not at all.
Mild: Occasionally gets in trouble for lying, may cheat on occasions.
Moderate-Severe: Frequently lies/cons/manipulates people he knows. Causes frequent impairment in functioning in several situations/settings.
Extremely Severe: Constantly relates to others in an exploitive/manipulative manner, cons strangers out of money/situations. Causes severe impairment in functioning in most situations/settings.

___ 4. DEPRESSIVE MOOD:
SAD, TEARFUL, DEPRESSIVE DEMEANOR
Not Present: Occasionally/quickly disappears.
Mild: Sustained periods/excessive for event.
Moderate-Severe: Unhappy most time/no precipitant.
Extremely Severe: Unhappy all time/psychic pain. Causes severe impairment in functioning.

___ 5. FEELINGS OF INFERIORITY:

LACKING SELF-CONFIDENCE/SELF-DEPRECIATORY
Not Present: Feels good/positive about self.
Mild: Occasionally feels not as good as others/deficits in 1 area.
Moderate-Severe: Feels others are better than they are. Gives negative, bland answers, can't think of anything good about themselves.
Extremely Severe: Constantly feels others are better. Feels worthless/not lovable.

___ 6. HYPERACTIVITY:
EXCESSIVE ENERGY EXPENDITURE, FREQUENT CHANGES IN POSTURE, PERPETUAL MOTION
Not Present: Slight restlessness, fidgeting. No impact on functioning.
Mild: Occasional restlessness, fidgeting, frequent changes of posture. Noticeable, but does not cause impairment in functioning.
Moderate-Severe: Excessive energy, movement, cannot stay still or seated. Causes dysfunction on numerous occasions/situations. Seeks help for behaviors.
Extremely Severe: Continuous motor excitement, cannot be stilled. Causes major interference in functioning on most occasions/situations.

___ 7. DISTRACTIBILITY:
POOR CONCENTRATION, SHORTENED ATTENTION SPAN, REACTIVITY TO PERIPHERAL STIMULI
Not Present: Performance consistent with ability.
Mild: Occasionally daydreams, easily distracted. Is able to focus with prompting.
Moderate-Severe: Frequently has trouble concentrating, avoids mental tasks, disruptive. Needs frequent assistance to stay focused. Causes decreased performance.
Extremely Severe: Constant, needs 1:1 assistance to stay focused.

___ 8. TENSION:
NERVOUSNESS, FIDGETINESS, NERVOUS MOVEMENTS OF HANDS OR FEET
Not Present: Not at all.
Mild: Occasionally feels nervous or fidgets. Can be relaxed or reassured.
Moderate-Severe: Most days/time feels nervous/fidgety. Causes mental or physical distress.
Extremely Severe: Pervasive and extreme nervousness, fidgeting, nervous movements of hands and/or feet.

___ 9. ANXIETY:
CLINGING BEHAVIOR, SEPARATION ANXIETY, PREOCCUPATION WITH ANXIETY TOPICS, FEARS OR PHOBIAS
Not Present: Not at all.
Mild: Occasionally worries (at least 3 times a week) about anticipated/current events, separation, fears, or phobias. These worries appear excessive for situation.
Moderate-Severe: Most days/time worries about at least 2 life circumstances, or anticipated/current events.
Extremely Severe: Pervasive and extreme worry about most everything, real or imagined.

____TOTAL SCORE FOR ALL 9 ITEMS

*Reprinted with permission from the author (Hughes et al., 2003–2004).

MODIFIED OVERT AGGRESSION SCALE (MOAS)*

INSTRUCTIONS AND SCORING SUMMARY: CATEGORY SUM SCORE WEIGHTS WEIGHTED SUM

The MOAS helps clinical interviewers track aggressive incidents in outpatient settings.
Rate the patient's aggressive behavior over the past week. Select as many items as are appropriate.
1) Add items within each category; 2) In the scoring summary, multiply sum by weight and add all the weighted sums for total weighted score. Use this score to track changes in level of aggression over time.

VERBAL AGGRESSION: VERBAL HOSTILITY, STATEMENTS OR INVECTIVES THAT SEEK TO INFLICT PSYCHOLOGICAL HARM ON ANOTHER THROUGH DEVALUATION/DEGRADATION, AND THREATS OF PHYSICAL ATTACK

___ 0. No verbal aggression
___ 1. Shouts angrily, curses mildly, or makes personal insults
___ 2. Curses viciously, is severely insulting, has temper outbursts or deliberately (e.g., to gain money or sex)
___ 3. Impulsively threatens violence toward others or self
___ 4. Threatens violence toward others or self repeatedly
____ SUM VERBAL AGGRESSION SCORE

AGGRESSION AGAINST PROPERTY: WANTON AND RECKLESS DESTRUCTION OF WARD PARAPHERNALIA OR OTHERS' POSSESSIONS

___ 0. No aggression against property
___ 1. Slams door angrily, rips clothing, urinates on floor
___ 2. Throws objects down, kicks furniture, defaces walls
___ 3. Breaks objects, smashes windows
___ 4. Sets fires, throws objects dangerously
____ SUM PROPERTY AGGRESSION SCORE

AUTOAGGRESSION: PHYSICAL INJURY TOWARD ONESELF, SELF-MUTILATION, OR SUICIDE ATTEMPT

___ 0. No autoaggression
___ 1. Picks or scratches skin, pulls hair out, hits self (without injury)
___ 2. Bangs head, hits fists into walls, throws self on floor
___ 3. Inflicts minor cuts, bruises, burns, or welts on self
___ 4. Inflicts major injury on self or makes a suicide attempt
____ SUM AUTOAGGRESSION SCORE

PHYSICAL AGGRESSION: VIOLENT ACTION INTENDED TO INFLICT PAIN, BODILY HARM, OR DEATH

___ 0. No physical aggression
___ 1. Makes menacing gestures, swings at people, grabs at clothing
___ 2. Strikes, pushes, scratches, pulls hair of others (without injury)
___ 3. Attacks others, causing mild injury (bruises, sprains, welts, etc.)
___ 4. Attacks others, causing serious injury (fracture, loss of teeth, deep cuts, loss of consciousness, etc.)
____ SUM PHYSICAL AGGRESSION SCORE

CATEGORY	SUM SCORE	WEIGHTS	WEIGHTED SUM
Verbal Aggression		X1	
Aggression Against Property		X2	
Autoaggression		X3	
Physical Aggression		X4	
TOTAL WEIGHTED SCORE			

*Modified from Kay, S. R., Wolkenfeld, F., & Murrill, L.M. (1988). Profiles of aggression among psychiatric patients: I. Nature and prevalence. *Journal of Nervous and Mental Disease, 176*(9), 539–546.

YOUNG MANIA RATING SCALE*

Patient: Date:

Rater:

INSTRUCTIONS

The purpose of each item is to rate the severity of that abnormality in the patient. When several keys are given for the grade of severity, the presence of only 1 is required to qualify for that rating.
The keys provided are guides. One can ignore the anchors if that is necessary to indicate severity, although this should be the exception rather than the rule. This is particularly useful when the severity of a particular item in a patient does not follow the progression indicated by the anchors.

ELEVATED MOOD
0 = Absent
1 = Mildly or possibly increased on questioning
2 = Definite subjective elevation; optimistic, self-confident; cheerful; appropriate to content
3 = Elevated, inappropriate to content; humorous
4 = Euphoric; inappropriate laughter; singing

INCREASED MOTOR ACTIVITY/ENERGY
0 = Absent
1 = Subjectively increased
2 = Animated; gestures increased
3 = Excessive energy; hyperactive at times; restless (can be calmed)
4 = Motor excitement; continuous hyperactivity (cannot be calmed)

SEXUAL INTEREST
0 = Normal; not increased
1 = Mildly or possibly increased
2 = Definite subjective increase on questioning
3 = Spontaneous sexual content; elaborates on sexual matters; hypersexual by self-report
4 = Overt sexual acts (toward patients, staff, or interviewer)

SLEEP
0 = Reports no decrease in sleep
1 = Sleeping less than normal amount by up to one hour
2 = Sleeping less than normal by more than one hour
3 = Reports decreased need for sleep
4 = Denies need for sleep

IRRITABILITY
0 = Absent
2 = Subjectively increased
4 = Irritable at times during interview; recent episodes of annoyance or anger on ward
6 = Frequently irritable during interview; short, curt throughout
8 = Hostile, uncooperative; interview impossible

SPEECH (RATE AND AMOUNT)
0 = No increase
2 = Feels talkative
4 = Increased rate or amount at times, verbose at times
6 = Push; consistently increased rate and amount; difficult to interrupt
8 = Pressured; uninterruptible; continuous speech

LANGUAGE/THOUGHT DISORDER
0 = Absent
1 = Circumstantial; mild distractibility; quick thoughts
2 = Distractible; loses goal of thought; changes topics frequently; racing thoughts
3 = Flight of ideas; tangentiality; difficult to follow; rhyming, echolalia
4 = Incoherent; communication impossible

THOUGHT CONTENT
0 = Normal
2 = Questionable plans, new interests
4 = Special projects; hyperreligious
6 = Grandiose or paranoid ideas; ideas of reference
8 = Delusions, hallucinations

DISRUPTIVE/AGGRESSIVE BEHAVIOR
0 = Absent, cooperative
2 = Sarcastic; loud at times, guarded
4 = Demanding; threats on ward
6 = Threatens interviewer; shouting; interview difficult
8 = Assaultive; destructive; interview impossible

APPEARANCE
0 = Appropriate dress and grooming
1 = Minimally unkempt
2 = Poorly groomed; moderately disheveled; overdressed
3 = Disheveled; partly clothed; garish makeup
4 = Completely unkempt; decorated; bizarre garb

INSIGHT
0 = Present; admits illness; agrees with need for treatment
1 = Possibly ill
2 = Admits behavior change, but denies illness
3 = Admits possible change in behavior, but denies illness
4 = Denies any behavior change

TOTAL SCORE _____

(0–13 = minimal severity; 14–20 = mild; 21–26 = moderate; 27–38 = severe)

*Reprinted from Young, R. C., Biggs, J. T., Ziegler, V. E., & Meyer, D. A. (1978). A rating scale for mania: Reliability, validity, and sensitivity. *British Journal of Psychiatry, 133*(5), 429–435.

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