The Treatment of Maladaptive Aggression in Youth (T-MAY)

A web-based curriculum for prescribers of antipsychotic medication
Acknowledgements

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Module 1

T-MAY OVERVIEW
T-MAY Guidelines

Purpose

Developed to:

1. address the need for clinical guidance in the complex area of treating and managing youth aggression

2. Improve outcomes for children with impulsive maladaptive aggression

3. Provide a standardized approach for helping youth with maladaptive aggression seen in outpatient settings
T-MAY Guidelines
Process

• Extensive literature reviews
• An expert consensus survey to help bridge existing gaps in the literature
• A consensus conference involving 80 clinical/research experts, mental health policy-makers, and patient advocates
• A lengthy editorial procedure that resulted in guideline development
Impulsive-Aggressive Spectrum

Cluster B personality disorders
Antisocial Borderline
Conduct Disorder
Substance abuse
Impulse control disorders
Impulsivity and Aggression

ADHD spectrum
Bipolar spectrum
Tourette's/OCD
Severe Anxiety
PTSD
Developmental disorders
Autism Spectrum disorders
Schizophrenia Spectrum

Maladaptive Aggression – What is it?

• Two types of maladaptive aggression:
  1. Impulsive - unplanned, unprofitable, and poorly controlled aggressive behavior
  2. Predatory - planned, profitable and self-controlled aggressive behavior

• The T-MAY guidelines focus on the impulsive subtype of maladaptive aggression
Maladaptive Aggression – What is it?

• Impulsive maladaptive aggression is a symptom of several common child psychiatric disorders
• Aggressive problems affect 10-25% of youth
• Severe aggression:
  – Undermines academic and social functioning
  – Leads to:
    • Drug abuse
    • School dropout
    • Depression
    • Incarceration
Treatment of Youth Aggression

- Psychotropic agents such as second generation antipsychotics and mood stabilizers are increasingly prescribed to youth on an outpatient basis for the treatment of overt aggression
- There is limited efficacy and safety data for the use of these medications to treat aggression in youth
Treatment of Youth Aggression

• Increase in the off-label prescription of psychotropic medication for youth aggression raises concerns about:
  – Treatment decision making
  – Safety
  – Appropriate alternative therapies
  – Long-term management
  – Use of multiple drug regimens
  – Appropriate parent engagement and education
Proof Is Scant on Psychiatric Drug Mix for Young

BY GARDINER HARRIS

Their rooms are a mess, their trophies line the walls, and both have profiles on MySpace.com. Stephen and Jacob Meszaros seem like typical teenagers until their mother offers a glimpse into the family's medicine cabinet.

Bottles of psychiatric medications fill the shelves. Stephen, 15, takes the antidepressants Zoloft and Desyrel for depression, the anticonvulsant Lamictal to moderate his moods and the stimulant Focalin XR to improve concentration. Jacob, 14, takes Focalin XR for concentration, the anticonvulsant Depakote to moderate his moods, the antipsychotic Risperdal to reduce anger and the antihypertensive Catapres to induce sleep.

Over the last three years, each boy has been prescribed 18 different psychiatric drugs.

"Sometimes, when you look at all the drugs they've taken, you wonder, "Wow, did I really do this to my kids?"" said their mother, Tina.

Troubled Children
The Prescription Maze

Kehoe of Sharpsville, Pa. "But I've seen them without the meds, and there's a major difference.

There is little doubt that some psychiatric medicines, taken by themselves, work well in children. For example, dozens of studies have shown that stimulants improve attentiveness. A handful of other psychiatric drugs have proven effective against childhood obsessive compulsive disorder, among other problems.

But a growing number of children and teenagers in the United States are taking not just a single drug for discrete psychiatric difficulties but combinations of powerful and even life-threatening medications to treat a dizzying array of problems.

Last year in the United States, about 1.6 million children and teenagers — 280,000 of them under age 10 — were given at least two psychiatric drugs in combination, according to an analysis performed by Medco Health Solutions at the request of The New York Times. More than 300,000 were prescribed at least three psychiatric drugs. More than 160,000 got at least four medications together, the analysis found.

Many psychiatrists and parents believe that such drug combinations, often referred to as drug cocktails, help. But there is virtually no scientific evidence to justify such multiplication of pills, researchers say. A few studies have shown that a combination of two drugs can be helpful in adult patients, but the evidence in children is scant. And there is no evidence at all — "zero," "zip," "null," experts said — that combining three or more drugs is appropriate or even effective in children or adults.

"There are not any good scientific data to support the widespread use of these medicines in children, particularly in young children where the scientific data are even more scarce," said Dr. Thomas R. Insel, director of the National Institute of Mental Health.

Psychiatrists who prescribe drugs

Continued on Page A28

Fed Chief's Help
Enlisted for Trip To Press China

BY STEVEN R. WEISMAN

WASHINGTON, Nov 22 — Treasury Secretary Henry M. Paulson Jr. has enlisted Ben S. Bernanke, the Federal Reserve chairman, to join an unusual delegation of cabinet members to China next month that will press for changes in Chinese economic policies long criticized by the administration and Congress, officials said Wednesday.
T-MAY Guidelines

Key Principles

• Medication can serve as a key component of a treatment plan for maladaptive aggression, **BUT**

• Should not preempt a comprehensive strategy and should reflect a careful, individualized assessment that balances potential benefits and risks
T-MAY Flowchart

1. Assessment and Diagnosis
2. Initial Treatment & Management Planning
3. Psychosocial Interventions
4. Medication Treatments
5. Side Effect Management
6. Medication Maintenance & Discontinuation
This course will provide an overview of the guidelines in areas 1-3 and focus on the guidelines in areas 4-6 (medication treatment, side-effect management, and medication maintenance and discontinuation)
Assessment and Diagnosis
T-MAY
Assessment and Diagnosis Guidelines

• Engage patient and parents
• Conduct a thorough initial evaluation and diagnostic work up before initiating treatment
• Define and assess target symptoms in partnership with parents and child
What Might be Going On?

• Mental health disorders:
  – General (e.g. Bipolar disorder, autism spectrum disorders)
  – Externalizing: Oppositional defiant disorder (ODD) or Conduct disorder (CD)
  – Internalizing: Anxiety and/or depression

• Development: learning disabilities, speech/language, cognitive impairment

• Temperament: low frustration tolerance, sensory impairment

• Environmental/social

• Medical/medications/other substances
A Good Assessment

• Review
  – Symptoms (across home, school and other settings)
  – Developmental/behavioral/school history
  – Illness & medication history
  – Family history, environment, relationships, functioning

• Conduct a complete physical exam

• Consider any “tests” necessary
Target Symptoms - BOLDER

**Behavior:** In what ways does the child exhibit aggression

**Onset:** When does it happen? What triggers it, and why?

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

**Duration:** How long does it last?

**Exacerbants:** What makes it worse?

**Relief:** What makes it better?
Initial Treatment & Management Planning
T-MAY
Initial Treatment and Management Planning Guidelines

• Conduct a risk assessment, get reinforcements, and refer if needed
• Partner with family in developing an acceptable treatment plan
• Provide psychoeducation and set realistic expectations about treatment
• Help the family establish community and social supports
PRESTO

Partner with the family

Risk assessment, identify professional reinforcements, and refer if needed

Educate the family on evidence-based practices and expectations of treatment

Support in the community

Track signs and symptoms with tools

Objectives and action plans with the family
Partnering with the Family

• Involve the parent: “I can’t do it without you. Pills alone won’t give your child the skills he/she needs.”

• Co-opt the youth: Involve child/youth in monitoring and controlling aggressive outbursts
Parent Support Groups

- Child and Adolescent Bipolar Foundation: www.bpkids.org; 847-256-8525.
- Depression and Bipolar Support Alliance: www.dbsalliance.org; 800-826-3632 (toll-free).
- Federation of Families for Children’s Mental Health: www.ffcmh.org; 703-684-7710.
- National Alliance for the Mentally Ill: www.nami.org; 800-950-NAMI (toll-free).
- National Mental Health Association: www.nmha.org; 800-784-2433 (toll-free).
- ADHD Family Support Center: www.adhd.com
- Children and Adults with ADHD: www.CHADD.org
Family Collaborative Treatment Plan

- **What**: the therapeutic modality
- **Who**: the active agent (professional) the individual/client with whom she works
- **Where**: if the treatment is location specific, this is indicated
- **When**: frequency; e.g. medication administration, # of therapy sessions
- **How much**: e.g. the medication dose, # sessions of therapy
- **Why**: which symptom is targeted
Psychosocial Interventions
T-MAY
Psychosocial Interventions Guidelines

• Provide or assist the family in obtaining evidence-based parent and child skills training
• Assess and address the child’s social, medication, educational, and family needs
• Engage child and family in maintaining consistent psychological/behavioral strategies
Behavioral Principles

• Parent training & support

• Positive approach
  – Positive reinforcement
  – “Catch the child being good”
  – Don’t reward negative behaviors

• Consistency and follow thru
Behavior Management Books

- *Making the System Work for Your Child with ADHD* by Peter S. Jensen

- *Your Defiant Child: Eight Steps to Better Behavior* by Russell A. Barkley & Christine M. Benton

- *1-2-3 Magic: Effective Discipline for Children 2-12* by Thomas W. Phelan

- *The Explosive Child: A New Approach for Understanding and Parenting Easily Frustrated, Chronically Inflexible Children* by Ross Greene
MODULE 2

MEDICATION TREATMENTS FOR AGGRESSION
Medication Treatments
Medication and Aggression

- Pharmacological approaches are generally adjunctive to comprehensive psychosocial, community and psychoeducational interventions.

- *Specific modalities employed may vary based on:*
  - Age of child
  - Primary diagnosis
  - Presence of co-existing health, mental health, or developmental conditions
  - Ability of the child’s family ability to participate in psychosocial intervention
Medication Treatment Guidelines

• 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 treatment for underlying disorder, add an atypical psychotic (AP), try a different AP or augment with a mood stabilizer (MS)
Medication Treatment Guidelines

• Avoid using more than two psychotropic medications simultaneously

• Use the recommended titration schedule and deliver an adequate medication trial before adjusting medication
Algorithm for the Treatment of Childhood Aggression

**Stage 0**
Accurate identification of underlying condition(s); Family consultation regarding treatment.

**Stage 1**
Focus treatment on primary disorder(s) first using evidence-based guidelines.

- Continued/Persistent Severe and Frequent Aggressive Symptoms

  *Response*
  
  - **Continuation**

**Stage 2**
Add Adjunctive Treatment: SGA

- Any stage(s) can be skipped depending on the clinical picture.
- Nonresponse

  *Response*
  
  - **Continuation**

**Stage 3**
Switch Adjunctive Treatment: Alternative SGA.

  *Response*
  
  - **Continuation**

**Stage 4**
Partial Response or Nonresponse

  - **Stage 3A**
    
    - Add Augmentation: Mood Stabilizer

      *Response*
      
      - **Continuation**

Reassess Behavioral/Environmental Interventions; Reassess Diagnosis; Consider Second Opinion.

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1. Consider tapering and discontinuing medications for aggression (not the underlying disorder) after behavior has been stable for 6–12 months.
2. Reperidone has the most efficacy and safety data for any SGA in children.
Select initial medication treatment to target the underlying disorder(s); follow guidelines for primary disorder (when available)
Aggression is associated with different disorders

- Anxiety & Stress
  - situationally related

- ADHD
  - impulsive
  - hyperactive

- Psychosis
  - PDD
  - personality change
  - weird

- Uncivilized
  - not mentally ill
  - never been taught

- Affective Instability
  - irritable/depressed mood

Aggressive Behavior
Aggression in itself is not a psychiatric disorder

- Aggressive, out-of-control behavior in childhood *most often* develops in the context of one or more of the following:
  
  a) Deficits in impulse control (e.g. ADHD but not only ADHD)

  b) Deficits in emotional regulation (e.g. mood/anxiety disorder, disorders of executive function)

  c) Environmental influences that promote social maladjustment

- Of these, (a) and (b) are prime targets for medication treatment
What medication may influence?

What lights the fuse

The length of the fuse

The size of the explosion and how long it lasts.
If severe aggression persists following adequate trials of appropriate psychosocial and medication treatment for underlying disorder, add an atypical psychotic (AP), try a different AP, or augment with a mood stabilizer (MS)
MODULE 3

SIDE EFFECT MANAGEMENT
Side Effect Management
Side Effect Management Guidelines

• Assess clinically relevant side effects
• Provide accessible information 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
Side Effects
Second and First Generation Antipsychotics and Mood Stabilizers

Neurological:
• Sedation/ somnolence; Parkinsonism; Akathisia; Tardive dyskinesia

Cardiovascular:
• Postural hypotension/dizziness/syncope; arterial hypertension/ tachycardia

Endocrine:
• Developmentally inappropriate weight gain; hyperglycemia/diabetes, dyslipidemia; hyperprolactinemia; sexual/ reproductive dysfunction

Renal and Hepatic:
• Clinically relevant abnormal electrolytes, full blood count, renal function; abnormally elevated liver enzymes
# Strategies for Managing Side Effects to Antipsychotics and Mood Stabilizers

<table>
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<tr>
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<th>ALTERNATIVE CONSIDERATIONS</th>
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</thead>
<tbody>
<tr>
<td>Medically Life-Threatening</td>
<td>Agranulocytosis</td>
<td>Discontinue AP immediately; Emergency internal med/pediatric consult; Labs</td>
<td>Switch AP once agranulocytosis resolves</td>
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<tr>
<td></td>
<td>Granulocytopenia</td>
<td>Discontinue AP; Pediatric consult; Repeat labs</td>
<td>Switch AP once ANC &amp; WBC returns to nirmal</td>
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<td></td>
<td>LFTs increase</td>
<td>Internal med/pediatrics consult; repeat labs; Consider discontinuing AP</td>
<td>Discontinue AP; Switch to a different AP once LFTs are normal</td>
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<tr>
<td>Extrapyramidal Symptoms</td>
<td>Akathisia</td>
<td>Decrease dose; Slow switch</td>
<td>Add beta adrenergic antagonist; Switch AP</td>
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<td></td>
<td>Akinesia</td>
<td>Decrease dose</td>
<td>Add anticholinergic; Switch AP</td>
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<tr>
<td></td>
<td>Dystonia</td>
<td>Add anticholinergic (IM); Add lorazepam (IM); Add antihistamine (IM)</td>
<td>Decrease dose; Switch AP</td>
</tr>
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<td></td>
<td>Muscle Rigidity</td>
<td>Add anticholinergic; Decrease dose</td>
<td>Add dopamine agonist; Switch AP</td>
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<td></td>
<td>Tardive Dyskinesia</td>
<td>Neurology consult; Discontinue AP; Increase dose</td>
<td>Switch AP</td>
</tr>
<tr>
<td></td>
<td>Tremor</td>
<td>Decrease dose</td>
<td>Add anticholinergic; Switch AP</td>
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<tr>
<td>Cardiac</td>
<td>Orthostatic Hypotension</td>
<td>Teach patient how to change posture slowly; Increase hydration; Decrease dose</td>
<td>Cardiology consult; Switch AP/MS</td>
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<td></td>
<td>Slightly Prolonged QTc Interval (&gt; 450 ≤ 500Msecs)</td>
<td>Repeat EKG; Decrease dose</td>
<td>Cardiology consult; Switch AP/MS</td>
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<tr>
<td></td>
<td>Very Prolonged QTc Interval (&gt; 500 Msecs)</td>
<td>Discontinue AP; Repeat EKG; Cardiology consult</td>
<td>Switch AP with less QTc prolongation</td>
</tr>
<tr>
<td></td>
<td>Tachycardia</td>
<td>Cardiology consult; Decrease dose</td>
<td>Cardiology consult; Switch AP/MS</td>
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<tr>
<td>Endocrine</td>
<td>Amenorrhea</td>
<td>Rule out pregnancy, hyperthyroidism and renal problems; Obtain prolactin levels</td>
<td>Gynecology consult: Wait to see if it resolves; Decrease dose; Switch AP</td>
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<tr>
<td></td>
<td>Galactorrhea</td>
<td>Decrease dose; Obtain prolactin levels; Endocrine consult</td>
<td>Switch AP</td>
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<tr>
<td></td>
<td>Gynecomastia (males)</td>
<td>Obtain prolactin levels; Endocrine consult</td>
<td>Switch AP</td>
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<tr>
<td></td>
<td>Hyperprolactinemia</td>
<td>No action needed unless clinical signs or symptoms, or PRL ≥ 280 mg/mL</td>
<td>Prolactin levels don’t need to be obtained in absence of symptoms</td>
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<tr>
<td>Cognitive &amp; Central Nervous System</td>
<td>Confusion</td>
<td>Assess for medical illness and illicit drug use; decrease dose; Neurology consult</td>
<td>Obtain serum levels; Discontinue AP; Switch AP</td>
</tr>
<tr>
<td></td>
<td>Headache</td>
<td>Add analgesic; Wait for improvement; Rule-out tension headache</td>
<td>Decrease dose; If there are problems with vision, neurology consult</td>
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<tr>
<td></td>
<td>Memory Problems</td>
<td>Decrease dose</td>
<td>Neuro &amp; neuropsychology consult; Meds at bedtime; Switch AP</td>
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<td></td>
<td>Sedation/Hypersomnia</td>
<td>Give AP/MS at bedtime; Discontinue other sedating medications; Decrease dose</td>
<td>Switch AP/MS</td>
</tr>
<tr>
<td></td>
<td>Seizures</td>
<td>Get EEG; Neurology consult; Decrease AP dose; Switch AP; Increase MS dose</td>
<td>Discontinue AP/MS</td>
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<tr>
<td>Diabetes &amp; Weight</td>
<td>Diabetes</td>
<td>Obtain fasting glucose &amp; lipids at baseline, 3 and 6 months; Endocrine consult; Symptom-management education; implement diet/exercise program</td>
<td>Switch AP/MS</td>
</tr>
<tr>
<td></td>
<td>Weight Gain</td>
<td>Nutrition consult; Implement diet/exercise program; Monitor fasting glucose, cholesterol and triglycerides as baseline, 3 and 6 months</td>
<td>Switch AP/MS</td>
</tr>
<tr>
<td>Anti-cholinergic</td>
<td>Constipation</td>
<td>High fiber diet; Give fluids; Bulk laxatives or stool softener; Decrease dose</td>
<td>Switch AP/MS</td>
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<tr>
<td></td>
<td>Dry Mouth</td>
<td>Give sugarless gum or hard candy; Decrease dose</td>
<td>Switch AP/MS</td>
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<td>Other</td>
<td>Decreased libido; Erectile dysfunction</td>
<td>Decrease dose; Discontinue medication with sexual side effects</td>
<td>Switch AP</td>
</tr>
<tr>
<td></td>
<td>Enuresis</td>
<td>Void before sleeping; Decrease fluids in evenings; Decrease dose; Give meds early in the evening; Wake youth to void at night</td>
<td>Use behavior intervention; Switch AP</td>
</tr>
<tr>
<td></td>
<td>Insomnia</td>
<td>Evaluate for depression or anxiety disorder and treat underlying condition; Give total or larger dose AP dose at bedtime; Add hypnotic sleep aid; If due to AP, consider decreasing dose</td>
<td>Switch AP</td>
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<tr>
<td></td>
<td>Nausea/Vomiting</td>
<td>Wait 1-2 days; Decrease dose; Add temporary antiemetic</td>
<td>Switch AP</td>
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<tr>
<td></td>
<td>Rash</td>
<td>Discontinue AP; Dermatology consult if severe</td>
<td>Switch AP/MS once rash resolves</td>
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Module 4

MEDICATION MAINTENANCE AND DISCONTINUATION
Medication Maintenance and Discontinuation Guidelines

• If response is favorable, continue treatment for six months.

• Taper or discontinue medications in patients who show a remission in aggressive symptoms ≥ 6 months
Principles for Switching of Psychotropic Medications

General Rules

• Don’t switch until primary disorder has been treated at adequate dose/duration, according to disorder guidelines
• Start low, go slow, stop slow; avoid abrupt stopping, starting and switching to reduce risk of rebound and withdrawal phenomena
• Abrupt stopping/switching only indicated if serious adverse effect necessitates stopping/switching
• The more different the binding affinity for the same receptor, the greater the risk for side effects and rebound and withdrawal phenomena
• The more different the half life of medications with the same physiological (desired or undesired) effect, the greater the risk for rebound and withdrawal phenomena
Principles for Switching of Psychotropic Medications – cont’d

Specific rules:

• Slow switch using cross-titration is the preferred method
• Even slower switch using plateau cross-titration with therapeutic dose overlap of medications when switching to a much less sedating or anticholinergic medication or one with a much longer half life
• If time permits, do not reduce the dose of the first medication by more than 25-50% per 5 half lives
• Withdrawal and rebound phenomena are most likely when switching from a short half life to a long half life medication, even if dose equivalency is attempted