THE CARLAT REPORT CHILD PSYCHIATRY

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UNBIASED INFORMATION FOR CHILD PSYCHIATRISTS

Joshua D. Feder, MD
Editor-in-Chief

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IN THIS ISSUE

Psychotropic Risks in Children and Adolescents

Learning Objectives
After reading these articles, you should be able to:

1. Describe the benefits and drawbacks of using psychotropic medications to treat children and adolescents.
2. Identify the value of adhering to the informed consent process with youth patients and their guardians.
3. Evaluate the effectiveness of metformin to minimize antipsychotic-induced weight gain in children and adolescents.
4. Summarize some of the current findings in the literature regarding psychiatric treatment for children and adolescents.

Informed Consent: An Ongoing Process for Focused Care

Josh Feder, MD. Child and family psychiatrist, Solana Beach, CA, Editor-in-Chief of the Carlat Child Psychiatry Report

Dr. Feder has disclosed that he has no relevant financial or other interests in any commercial companies pertaining to this educational activity.

Informed consent is a foundation for good clinical practice and can provide legal protection. But informed consent is more than defensive medicine. It is a vehicle for framing good care.

How often do people use the consent process? Malpractice companies recommend that the patient (or parent) sign consent whenever a medication is started. This might be a new page in the

Continued on page 2

In Summary

- The informed consent process not only helps clinicians with legal protection, it is the foundation for effective patient care.
- The elements of informed consent can foster a climate of collaboration with your patients and their families.
- The process will help you provide the right follow-up care in the context of the overall treatment plan.

Q&A With the Expert

Considerations When Prescribing Psychotropic Medications
Mark Chenven, MD

Private practice child and adolescent psychiatrist, San Diego, CA

Dr. Chenven has disclosed that he has no relevant financial or other interests in any commercial companies pertaining to this educational activity.

CCPR: Thank you for joining us. To start things off, how do you approach using psychotropic medications for children and adolescents?

Dr. Chenven: Most parents do not want to start medications. I empathize with them, which then makes it possible to move together toward medications when indicated. I quote Dr. Oliver Wendell Holmes, Sr., who said, "If all the tools in man's pharmacopeia were to be dumped into the sea, all the better for mankind and all the worse for the fishes." While times have changed, the young, developing brain is still poorly understood; our DSM diagnostic template remains a work in progress; medications may be of limited benefit for many disorders; and access to high-quality and coordinated care is at best a rarity—even in the most advanced community systems of care.

CCPR: What else would you say about the challenges we face as clinicians while taking a psychopharmacology approach?

Continued on page 3

Informed Consent: An Ongoing Process for Focused Care

Continued from page 1

record or initialing an amendment to a more permanent form. Here is a link to a sample of an informed consent form (see: www.thecarlatchildreport.com/consentfortreatment). Some clinics build informed consent into the electronic health record (EHR) or paperwork. Do you spend time on it, or do you just get the signature?

The scant research available suggests that—at least among internists and family practice providers—the depth of the informed consent discussion is quite limited (Braddock CH et al, *J Gen Intern Med* 1997;12(6):339–345).

Lawsuits against child psychiatrists often focus on poor medication outcomes (*Psychiatry-Edgmont* 2009;6(8):38–39), and the absence of good documentation of informed consent can lead to awards and even charges of battery. The California Medical Board regularly reports actions taken when consent is absent (see: http://www.mbc.ca.gov).

But the informed consent process also helps us organize care. At every follow-up appointment, we should review medications in the context of the overall treatment plan, in continual family guidance. The elements of informed consent can foster a climate of collaboration and should include the following:

Demographic information: Like every other page in a chart, the informed consent form should have the patient's name, the patient's date of birth, and the dates of all entries.

Diagnoses: DSM and ICD-10 diagnoses are a limited reflection of a patient's actual situation. Still, list relevant diagnoses and other important medical conditions (eg, neurological, gastrointestinal, respiratory), as well as important V-code circumstances such as recent moves, divorce, or school problems. These impact the patient's presentation and are relevant to the overall treatment plan.

Target symptoms: In child psychiatry, it is usually more relevant to focus on target symptoms than diagnoses. I work with families to prioritize target symptoms so that we focus on issues important to them while keeping in mind good medical approaches. For instance, a family may worry about their teen's depressed feelings while you might place the patient's alcohol use on par, in which case you would explain to the family that the teen's alcohol use will need to be addressed to treat the depression.

Treatment protocol: Lay out the specific plan for medication, including medication name(s), dosage, timing, and additional information such as plans for titration. Make clear what the family needs to do.

Alternative treatments: List the other medications or treatments discussed. For example, when considering inattention or impulsivity, you might have talked about stimulants, alpha-adrenergic agents, and other non-stimulant medications. Documenting these options helps you to remember to talk with families about them.

Possible results of no treatment: Make clear what the results of not treating might be. Sometimes it is serious, such as untreated psychosis or mania. Or it may be murkier, such as when a medication might be helpful but has less clear efficacy—in treating depression in children, response rates are often indistinguishable from placebo (Garland EJ et al, *J Can Acad Child Adolesc Psychiatry* 2016;25(1):4–10). We may attempt treatment anyway, hoping to help severe depression, but we should proactively discuss the possibility of limited efficacy with families to manage expectations and avoid surprises.

Discussing side effects: Review common problems that come up—issues with eating, sleeping, weight, etc. There is no clear need to discuss unusual side effects. But note the important things to watch for, such as extrapyramidal symptoms and syndromes with antipsychotics (tardive dyskinesia, akathisia, neuroleptic malignant syndrome), or Stevens-Johnson syndrome with lamotrigine (see: https://www.nimh.nih.gov/health/topics/mental-health-medications/index.shtml).

FDA labeling: Child psychiatrists often prescribe outside of the FDA indications. Discuss this with families and patients (the latter as developmentally appropriate), and document the discussion. Ensure that you have reasonable evidence, record your rationale, and note that while the plan is considered experimental by FDA standards, you judge it to be safe based on use in other populations or situations.

Consent and assent: Note that parents sign consent for treatment, and children of about 7 and up may assent (agree) to treatment. Try to get the child on board in understanding that the medication

Continued on page 3

EDITORIAL INFORMATION

Publisher: **Daniel Carlat, MD**

Editor-in-Chief: **Joshua D. Feder, MD**

Deputy Editor: **Talia Puzantian, PharmD, BCPP,** is associate professor at the Keck Graduate Institute School of Pharmacy in Claremont, CA.

Editorial Director: **Bob Croce**

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Founding Editor: **Caroline Fisher, MD, PhD,** is training director and chief of child psychiatry at Samaritan Health Systems in Corvallis, OR.

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This CME/CE activity is intended for psychiatrists, psychiatric nurses, psychologists, and other health care professionals, with an interest in the diagnosis and treatment of psychiatric disorders.

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Informed Consent: An Ongoing Process for Focused Care

Continued from page 2

is being used to help specific things. Listen to what the child says is helpful and, conversely, what the child does not like. This makes for a more effective treatment process. If you are dealing with a custody situation, pay attention to issues of shared medical decision-making. You often need both parents to sign off on the medication plan, except in certain emergency cases.

Comments, questions, and concerns: Here, note follow-up plans and additional aspects of treatment (eg, therapies, school liaison, and follow-up testing).

Affirmation of understanding and signature block: Families sign that they understand and commit to the plan, consent to the treatment, will work with you on it, and will read the package insert for the medication(s) involved.

Space for updates: I incorporate a flow sheet to add new trials, which is dated and initialed as the informed consent process develops.

CCPR VERDICT:

Informed consent is ongoing, not a one-time event. It's a framework for care. The document can be a touchstone to focus follow-up care, reminding us to ask about the specifics of the clinical situation, effects of the current plan, and treatment options.

Embracing Conflict in the Consent Process

What do you do when your teen patient declines an offer of medication yet the parents insist on it? How about if the teen is coming to you for medication and the parents are opposed to the idea? Does the teen have the right to request and receive medication? And what if the teen is using substances? CBD? Do you still treat, or do you refer elsewhere?

How about the situation where the parents of a child, who are perhaps (but not always) divorced, have opposing views on the use of medication? Would you prescribe anyway? And what do you tell the child? Do you explain the situation, or do you say you're providing "vitamins"?

Finally, how do we avoid falling into those Judy Garland or Jefferson Airplane ("Go ask Alice") situations, where we are chasing side effects with more medications? You know the story: The stimulant works but creates sadness, so we add an antidepressant, and then the child's moods become unstable, so we add a neuroleptic. *"One pill makes you larger, and one pill makes you small…"*

There are many potential conflicts in consent. The following are some general guidelines from Josh Feder, MD, on how to manage them:

1. *If it's not an emergency, take your time.* When life and limb are at stake, we should act immediately—but that doesn't usually mean medicating so much as employing emergency services. Even if a child is experiencing stress from an upcoming test or an acutely sad or anxious state, most times the situation is not an emergency. Give yourself time to think, gather more information, and understand as best as you can the many factors at play. Once these are more clear, possible treatment paths are likely to emerge.
2. *Lean in.* When there are opposing forces, embrace the adversarial process, the kind that drives a good judicial system. I tell families that I am grateful for differences of opinion because they lead to a more meaningful discussion of the pros and cons of medication. When everyone knows that you are really listening to their perspectives, they usually settle and think more clearly. For example, this often leads to a very careful trial of medication.
3. *Honor everyone's rights.* Learn what the rights of teens are in your state to request and receive psychotropic medication. Lay out the rights of all parties, and allow the process to lead to solutions rather than imposing them from on high. Do this while making sure that no one dominates to the point of silencing others. Remember to think developmentally with children, assessing their ability to participate and welcoming this possibility as it results in better care.

Expert Interview

Continued from page 1

Dr. Chenven: There are pressures from all sides to use medications—it is often cheaper than psychotherapeutic and psychosocial interventions; the pharmaceutical industry has self-interests, and managed care leans that way too. Families in distress seek quick cures. Schools and social agencies must meet the needs of children and teens with multiple co-occurring challenges, and it's good business for prescribers to prescribe early and often. That's the environment in which we practice.

CCPR: It's not all about the business of medicine, is it?

Dr. Chenven: Most prescription medications are safe, and when used judiciously, many are helpful. Medications can make a difference in the short term, and when meds work well, the benefits are life-changing—a child with ADHD can interact with family, teachers, and friends in normalized and normalizing ways so that the child's psychosocial development gets back on track. An overly anxious teen calms and settles, sleeping soundly and managing responsibilities and social challenges. Life is better for everyone. So, yes, psychotropics have a valuable role to play. We just want to ensure that we're not always simply reaching for the pill bottle.

CCPR: How important is it to consider lack of efficacy and side effects in prescribing decisions?

Dr. Chenven: There are times when medication treatments help only a bit, or only briefly. Often, presenting problems persist and evolve despite our best efforts. Additionally, well-intended treatments may exacerbate the patient's clinical condition, with side effects or other unintended consequences. We often end up with Holmes' dilemma—having an armamentarium whose benefit can be seen as uncertain or downright problematic.

Continued on page 6

Metformin to Control Antipsychotic-Induced Weight Gain in Children

Adam Strassberg, MD. Psychiatrist in private practice in Palo Alto, CA. Contributing writer to the Carlat Report newsletters.

Dr. Strassberg has disclosed that he has no relevant financial or other interests in any commercial companies pertaining to this educational activity.

Metformin has been used off-label for weight loss in psychiatry for many years, much of it for help with adult weight gain as a side effect of atypical antipsychotics. However, most trials of metformin for weight loss were actually conducted on the child and adolescent population.

This article will look at the quality of the data in our pediatric population of 3 studies, and then come up with some recommendations for your practice.

The first study was a randomized, double-blind, placebo-controlled trial of 38 children between 10–17 years old with various psychiatric disorders and who had experienced more than 10% weight gain in less than 1 year of olanzapine, risperidone, or quetiapine treatment. Participants were randomly assigned to either metformin (850 mg BID) or placebo. After 16 weeks, patients on placebo gained an average of 4 kg, while those on metformin lost a little weight (-0.13 kg) (Klein D et al, *Amer J of Psychiatry* 2006;163(12):2072–2079).

In a second study, a 12-week double-blind placebo-controlled trial of 32 children and adolescents with schizophrenia or schizoaffective disorder on risperidone received either metformin (500 mg BID) or a placebo. This study showed no benefit to the use of metformin for weight control (Arman et al, *Saudi Medical Journal* 2008;29(8):1130–1134).

A third study was a 16-week double-blind, randomized controlled trial of metformin (500 mg BID for kids 6–9 years and 850 mg BID for kids 10–17 years) vs placebo in a group of 61 children and adolescents with autism spectrum disorder, who were on various atypical antipsychotics. After 16 weeks, they found that metformin lowered BMI z-scores significantly more than placebo (-0.08 for metformin vs +0.02 for placebo). In terms of raw weight scores, those on placebo gained an average of 2.80 kg (1.90 kg to 3.70 kg, 95% CI), while those on metformin gained on average only 0.07 kg, with some noted variability (-0.88 kg to 1.02 kg, 95% CI). Metformin was generally well-tolerated, but some participants experienced significantly more GI side effects compared to those taking placebo (Anagnostou E et al, *JAMA Psychiatry* 2016;73(9):928–937).

It is important to note that when using metformin with children, the goal is not weight loss, but rather weight control—to maintain only a small amount of weight gain and to keep them on their BMI growth curve trajectories. Although there is a need for more research, the preliminary data above so far supports the use of metformin for weight control in children and adolescents using atypical antipsychotics.

So, should you use metformin at this point?

CCPR got some advice from **Bradley Engwall, MD,** a private practice child psychiatrist in Berkeley, CA, who often uses metformin to control weight while prescribing atypical antipsychotics. The following are his answers to some questions you might have:

When should you use metformin in children?

Dr. Engwall: About 50%–75% of my patients develop weight issues while on atypical antipsychotics, and I regularly prescribe metformin. Before going to the metformin, however, my initial strategy is to try and use an antipsychotic that is least likely to cause weight gain. I start with aripiprazole as it's usually on the formulary and has less documented weight gain impact than other atypicals. If significant weight gain ensues, lurasidone is more weight-neutral, and if an atypical is needed, it is often the next choice. Depending on the case/indication and insurance restrictions around lurasidone access, we may use ziprasidone or risperidone. I also will try to have patients go through diet modification with an exercise plan before prescribing metformin.

How should you use metformin in children?

Dr. Engwall: I recommend that, when available, you use the once-a-day extended release metformin tablets, dosing with dinner or at bedtime. Start at 500 mg, then have parents titrate up to 750 mg, and then 1000 mg at 1-week intervals over the course of a month, and as they see it benefiting their child. I generally use 500 mg pills. They are also available at 750 mg and 1000 mg, but these are typically too large for most children to swallow. The highest dose I will titrate towards is 1000 mg/day for younger children, and 1500 mg–2000 mg/day for tweens and adolescents.

What are typical side effects, and what parameters do you monitor?

Dr. Engwall: Typical initial side effects are nausea, upset stomach, and loose stools. I follow height, weight, BMI, fasting blood sugar, HbA1c, triglycerides, and LFTs—typical parameters for monitoring anyone on atypical antipsychotics. Due to metformin use, I also often find problems with B12 absorption and folate absorption. It is useful to get baseline B12 and

Continued on page 5

Metformin – At a Glance

Indications	• FDA approved: Diabetes mellitus type 2 (age 10 and up) • Off label: For weight management in children taking antipsychotics
Dosages available	• Tablet: 500 mg, 850 mg, 1000 mg • Extended release tablet: 500 mg, 750 mg, 1000 mg • Oral solution: 500 mg/5 ml
Dosing	• Begin at 500 mg/day • Per clinical response, titrate up to 750 mg and then 1000 mg at 1-week intervals over first month • Maximum recommended dose is 1000 mg/day for younger children, 1500 mg–2000 mg/day for tweens and adolescents
Side effects	• Gastrointestinal side effects most common: abdominal discomfort, diarrhea, indigestion, flatulence
Lab monitoring	• Height, weight, BMI, fasting blood sugar, HbA1c, triglycerides, LFTs, B12, methylmalonic acid, folate, homocysteine
Comments	• Dose with dinner or at bedtime • 500 mg tabs are the easiest to use—the 750 mg and 1000 mg tabs are too large for most children to swallow • Oral solution may be an option for those who have difficulty swallowing tablets

Tips for Good Medication Practice

Good practice using psychotropic medications with children and adolescents requires a psychiatrist to pay attention to a number of elements. The following are some recommendations from child psychiatrist Mark Chenven, MD, of the things you should observe and the rules you might want to follow while prescribing medications:

- **Start low, go slow:** Most side effects are dose-related, so gradual up-titration is simple common sense. This allows for the body's homeostatic and regulatory mechanisms to respond gradually and reduces the severity of emerging side effects. With this approach, a favorable clinical response may also be achieved for some patients at lower than standard dosing.
- **One step at a time:** Making one change at a time is another sound practice, as this allows you to monitor the impact of each changed variable. An exception to this rule would be a situation where you are cross-titrating between two agents and/or dealing with a clinically complex problematic situation. But overall, the math of "less is more" applies to the medication change agenda.
- **Consider weekend trials:** Starting a new medication or making a significant dosage adjustment over the weekend affords parents and the child or teen the opportunity to monitor for both efficacy and side effects.
- **Seek feedback:** Requesting parents or the older adolescent/young adult patient to call with any emerging concerns and scheduling timely follow-up visits further enhances our ability to understand and respond to medication impacts.
- **Longitudinal follow-through is key:** Ongoing routine inquiry about side effects and monitoring relevant vital signs is a core practice expectation. Also, routine should be recognition of co-occurring health conditions and coordination of care with the youth's pediatric physician.
- **Focus on med compliance:** Compliance and noncompliance should be reviewed periodically. Use longer-acting agents (eg, fluoxetine) when appropriate, and work with kids and parents on developing more consistent medication use habits.
- **Review and reconsider:** Recognizing the failure of a medication to achieve desired results needs to be considered, and it should trigger a reassessment of the diagnosis and treatment plan. A medication without appreciable and definable benefit probably needs to be set aside.
- **Reject fads:** With newly marketed agents, it's better to be the tortoise than the hare. It is safer for patients to be a late adopter than to pursue the cutting edge.
- **Beware of polypharmacy:** Multiple agents raise the risk of side effects. Combinations can have therapeutic benefits, but it is important to reassess the efficacy of all agents monitored for side effects, interactions, and other challenges.
- **Pay heed to second thoughts:** When in doubt, get a second opinion—either from a trusted colleague or through a more formal request for patient-centered consultation.
- **Monitor sleep patterns:** Disturbances of sleep should be addressed behaviorally when possible, and pharmacologically when warranted. Ask about them.
- **Inquire about herbals and OTC agents:** Many patients and parents think that herbals, supplements, and "natural" remedies are benign. Ask, or you may never be told. Learn more about these agents, and work with families and youth to make mutual decisions on whether to continue them.
- **Ask about cannabis use:** Whether the teen (or younger child!) is using it on the sly or the parent is administering it, inquiring about cannabis is increasingly important. Research will catch up eventually, but absence of evidence does not mean absence of efficacy. Dialog with your patients and their families and, for now, recommend against cannabis use.
- **Check for other substances:** These include alcohol, methamphetamine, psychedelics, heroin, or use of grandma's codeine, sleeping pills, SSRIs, etc. These substances may be misused, so ask, discuss, and intervene wisely.
- **Learn about life changes:** Inquire about other changes in the child's life—parental discord, changes in the family structure (eg, siblings off to college), new or lost friends, changes in school, illnesses, accidents, bullying, or all the other things that can upset the apple cart. Any of them may impact our patients' functioning.

Metformin to Control Antipsychotic-Induced Weight Gain in Children

Continued from page 4

methylmalonic acid levels, as well as folate and homocysteine levels.

If you are starting out with a folate deficit, it will become even more important to supplement with folate. I recommend using l-methylfolate instead of just folate, as l-methylfolate is the only form of folate to go through the blood-brain barrier. As tolerated, you can supplement with l-methylfolate at 400 micrograms/day or 1000 micrograms/day. At about 2 months in, you should recheck the levels of B12, methylmalonic acid, homocysteine, and folate to confirm that these patients are receiving sufficient amounts.

If I see a change, I adjust as needed and add B12 and l-methylfolate. A serious potential side effect to metformin, especially at higher doses, would be hypoglycemia. It's uncommon, and I have never seen it with our ASD kids—since they are eating so much, this is a very rare issue.

Any concluding thoughts on using metformin for children?

Dr. Engwall: Yes. Consult with the patient's pediatrician or primary care physician early on in treatment. Most pediatricians and family practice doctors think of metformin as only for use in cases of diabetes. They are typically unaware of the emerging literature supporting the use of metformin for these kids on atypicals. So, it's important to let them know about this up front—there is an educational piece here, and I typically explain the reasons for starting metformin and share the supporting literature. The judgment call to start metformin is not hard—you usually see massive weight gain quickly with atypicals. It is infrequent, but unfortunately some patients' weight gain simply does not respond to the metformin. For those patients, I consider the risks and benefits of continuing the atypical antipsychotic vs other alternatives.

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Research Updates IN PSYCHIATRY

ANTIDEPRESSANTS

Youth, Antidepressant Medications, and Type 2 Diabetes

REVIEW OF: Burco M et al, *JAMA Pediatrics* 2017;171(12):1200–1207

Over the last decade, several published studies have reported an increased risk of type 2 diabetes associated with antidepressant use in adults. But does the same hold true for children and adolescents?

This paper is the first population-based study to examine the risk of onset of type 2 diabetes with the use of antidepressants in younger patients.

Medicaid administrative claims data from California, Florida, Illinois, and New Jersey were analyzed in a cohort of 119,608 youths, ages 5–20, who initiated treatment with antidepressants from 2005 through 2009. Regression models were used to analyze the risk of onset of type 2 diabetes relative to antidepressant use, duration, and dosing.

Current use of antidepressants was associated with a 1.92 adjusted relative risk for type 2 diabetes (95% CI, 1.43–2.57). Current users of SSRIs or SNRIs had a 1.88 adjusted relative risk (95% CI 1.34–2.64), and current users of TCAs had a 2.15 adjusted relative risk (95% CI 1.06–4.36). There were no elevated risks in current users of antidepressants other than SSRIs, SNRIs, or TCAs.

For SSRIs or SNRIs, the risk of onset of type 2 diabetes increased with longer durations of exposure and with larger cumulative dosing. Compared to risk for their use for the first 90 days, there was a relative risk of 1.68 (CI 0.83–3.40) for 91–150 days of use, 2.56 (CI 1.29–5.08) for 151–210 days of use, and 2.66 (CI 1.45–4.88) for > 210 days of use.

Compared to risk after a cumulative antidepressant dose of 1 mg–1500 mg of fluoxetine hydrochloride equivalents, there is a relative risk of 1.22 (CI 0.59–2.52) for 1501 mg–3000 mg of dose equivalents, 2.17 (1.07–4.40) for 3001–4500 mg of dose equivalents, and 2.44 (1.35–4.43) for > 4500 mg of dose equivalents.

CCPR'S TAKE

The study suggests that long-term antidepressant use, particularly with SSRIs or SNRIs, is associated with increased risk of onset of type 2 diabetes mellitus in children and adolescents. This increased risk is particularly prominent with long-term use and higher daily doses. But the study is observational and must be interpreted with caution. Causality cannot be inferred; however, there is a correlation. Type 2 diabetes mellitus represents a rare but serious adverse outcome to discuss with patients and families, and we should vigilantly monitor for it.

—Adam Strassberg, MD. Dr. Strassberg has disclosed that he has no relevant financial or other interests in any commercial companies pertaining to this educational activity.

Expert Interview

Continued from page 3

CCPR: How can we manage this?

Dr. Chenven: The Hippocratic commitment to "do no harm" must be front and center. We need to judge whether a medication's possible benefit outweighs its risks and whether the consequences of not prescribing may be worse. We need to know our patient well enough to decide whether to prescribe—in-depth knowledge of a child's life at home, in the community, at school, and on the internet. Dr. George Engel's biopsychosocial medical model for diagnosis, assessment, and treatment requires this level of clinical engagement, bridging the pharmacologic treatment, psychotherapeutic, and case management realms. Psychosocial interventions should never be underestimated. In a 1 + 1 = 3 paradigm, when medication is indicated, its appropriate use can be supplemented by well-formulated psychosocial interventions to optimize outcomes.

"When a patient does not respond to interpersonal therapies, educational interventions, and the like, and if symptoms cause suffering or impinge upon developmental progression, considering medication should be part of the comprehensive treatment strategy."

Mark Chenven, MD

Psychotropic Drug Side Effects

Medication Category	Potential Side Effects
Antidepressants	Excessive psychomotor activation or blunting, changes in emotional tone, gastrointestinal disturbances, more intense dreaming, suicidal ideation, changes in autonomic tone
Antipsychotics	Sedation, increased appetite and weight gain, atypical movements (tics, EPS, etc.)
Alpha-adrenergic agonists	Sedation, dry mouth, constipation, dizziness
Mood stabilizers	Changes in mood, arousal, motor side effects, allergic reactions
Stimulants	Decreased appetite, weight loss, jitteriness, rebound responses, tics, dysphoric mood, sleep difficulties, tachycardia

CCPR: I like that idea, 1 + 1 = 3. What about the family?

Dr. Chenven: Good prescribing practice is a partnership, as formulated in the Institute of Medicine's "Crossing the Quality Chasm: A New Health System for the 21st Century" (see: http://bit.ly/2qcJrC6) and promulgated within systems of care guiding principles. Joint decision-making should be a central tenet in treatment. Working collaboratively in defining goals and in monitoring efficacy and side effects is simply good practice. Patient empowerment enhances compliance and improves decision-making.

Continued on page 7

CME Post-Test

To earn CME or CE credit, you must read the articles and log on to www.TheCarlatChildReport.com to take the post-test. You must answer 75% of the questions correctly to earn credit. You will be given two attempts to pass the test. Tests must be completed within a year of each issue's publication date. As a subscriber to *CCPR,* you already have a username and password to log onto www.TheCarlatChildReport.com. To obtain your username and password, please email info@thecarlatreport.com or call 978-499-0583.

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Below are the questions for this month's CME/CE post-test. This page is intended as a study guide. Please complete the test online at www.TheCarlatChildReport.com. Note: Learning Objectives are listed on page 1.

1. According to a recent study, which of the following statements regarding medication use in children and adolescents with depression is true? (LO #1)
   a. In cases of combined anxiety and depressive disorders, response to placebo is small
   b. In cases of severe depression, research supports medication use only in combination with cognitive behavior therapy
   c. In cases of depressive disorders, response to placebo is large
   d. In cases of combined mood dysregulation and depression, research supports the use of antidepressants and benzodiazepines

2. You decide to prescribe lamotrigine to your 16-year-old patient who has a mood disorder. As part of the informed consent process, you share which of the following with the patient and her family? (LO #2)
   a. The necessity of monthly check-ins to monitor for weight changes
   b. The latest research showing the difference in effectiveness between regular and orally disintegrating tablets
   c. The importance of reporting mild side effects such as sore throat
   d. The significance of symptoms associated with Stevens-Johnson syndrome

3. Studies show that children and adolescents who take metformin in conjunction with antipsychotics lose an average of 3 pounds of weight after 6 months on both medications. (LO #3)
   a. True b. False

4. According to Dr. Chenven, which of the following statements is true about pharmacotherapy alternatives to antidepressants for treating children and adolescents with depression? (LO #1)
   a. The combination of kratom and N-acetylcysteine has shown to be somewhat effective in treating depressive disorders
   b. Although studies have shown marijuana to be both safe and effective for treating depressive disorders, psychosis occurs in over 60% of patients
   c. According to the latest safety data, CBD oil has been shown to be safer than marijuana for the treatment of depressive disorders
   d. Evidence-based research has not yet established the safety or efficacy of kratom for the treatment of depressive disorders

5. According to a recent study, the relative risk of type 2 diabetes in younger patients taking SSRIs or SNRIs increases in the short-term but decreases after longer durations of exposure. (LO #4)
   a. True b. False

Expert Interview

Continued from page 6

CCPR: How do you monitor for side effects?

Dr. Chenven: Monitoring should be shared with patients and their parents, plus (with discretion) other caretakers such as teachers, therapists, primary care providers, program staff, etc. Educate even the youngest patients; let them know that we want to hear from them. Ask them, "Do you feel better?" relative to the treatment targets. Ask, "Is there anything about the medication that bothers or troubles you?" Our interest increases their propensity to self-evaluate and enhances our capacity to monitor their care. Use developmentally appropriate and culturally attuned language. With every new prescription, I review the common side effects and let the patient and parents know that it's important for them to tell me about any concerns that arise, so we can discuss them collaboratively (see side effects table on page 6).

CCPR: How do you balance risks and benefits?

Dr. Chenven: All treatment should be assessed within a developmental context, with appreciation of short- and long-term costs and benefits. When a patient does not respond to interpersonal therapies, educational interventions, and the like, and if symptoms cause suffering or impinge upon developmental progression, considering medication should be part of the comprehensive treatment strategy.

CCPR: How does research help us to decide about medication for depression, or between stimulants and other meds for ADHD?

Dr. Chenven: Evidence-based practice brings in relevant research, clinical judgment and experience, and family culture/values as well as school and community context to make decisions. For depression in kids, placebo effects often match medication, yet on balance, research favors trying them (Locher C et al, *JAMA Psychiatry* 2017;74(10):1011–1020), especially when symptoms are severe, and when possible together with therapy. Decisions about ADHD medication consider side effects vs efficacy. Stimulants often have more of both, so while research supports trying them first, have a backup plan (Shier A et al, *J Cent Nerv Syst Dis* 2012;5:1–17). *Continued on page 8*

THE CARLAT REPORT: CHILD PSYCHIATRY

P.O. Box 626
Newburyport, MA 01950

This Issue's Focus:
Psychotropic Risks in Children and Adolescents

Next Time in *The Carlat Child Psychiatry Report:*
Autism in Children and Adolescents

Expert Interview
Continued from page 7

CCPR: What about mood dysregulation?

Dr. Chenven: Irritability can seem nonspecific, and medications—antipsychotics and anticonvulsants—can be toxic. We need to look at the whole person. Is there poor sleep, a learning challenge, or a chronic ear infection at the root of it? In the spirit of the Research Diagnostic Criteria (RDoC) approach of NIMH in recent years, the concept of irritability is defined as a clinical entity associated with affective disorders (Vidal-Ribas P et al, *J Am Acad Child Adolesc Psychiatry* 2016;55(7):556–570). This may help guide us toward antidepressants before more problematic antipsychotics.

CCPR: What about parents who come in having given their child alprazolam or even cannabidiol oil? Or teens coming in and telling us that kratom is "perfectly safe"?

Dr. Chenven: For benzodiazepines, one study recently showed high rates of chronic use in children under 15 and called for regulating their use (O'Sullivan K et al, *BMJ Open* 2015;5(6):e007070). Educate parents about the limited efficacy, dangers of dependence, and impaired learning. CBD has been shown to help seizures and explored to treat schizophrenia, but marijuana more than doubles the rate of psychosis in young adults, with a dose-dependent increased risk in teens (Hall W and Degenhardt L, *World Psychiatry* 2008;7(2):68–71). CBD oil is interesting, but we do not have safety data nor regulation. Even recalcitrant teens often accept trials of more recognized medical approaches. Kratom is now getting attention, but there's just no research to prove its safety or efficacy. At this point, I'd strongly advise against kratom.

CCPR: Thank you for your time, Dr. Chenven.