Complex Cases in Pediatric and Adolescent Psychiatry

Real-World Strategies and Proactive Management

June 7, 2022
Sandy Springs, Georgia
Meeting Summary

Introduction

On June 7, 2022, the first one-day symposium on Complex Cases in Pediatric and Adolescent Psychology was convened in person in Sandy Springs, Georgia. The goal of this event was to foster ongoing collaboration between professionals who touch the lives of children who are at risk for complex psychiatric conditions, including psychiatrists, school counselors, social workers, primary care physicians, and more. Support for the symposium was provided by the Peaceful Family Fund and the Blue Dove Foundation.

> "I hope that this Symposium serves as a platform for understanding various layers of complexity in the care of children and adolescents and provides tools for how to recognize and prioritize the diagnostic workup. I hope it also provides an opportunity to build a diverse network of professionals with expertise in different specialties who understand and can help to address the intricate, overlapping dependency of psychiatric issues. In this way, we can help our patients find solutions that may otherwise remain unaddressed and improve the quality of life for the patient and their entire family."
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> - Dr. Jagan Chilakammari, MD, DFAPA, symposium host and moderator

In support of improving patient care, this activity has been planned and implemented by Medical Education Resources (MER) and xMedica. MER is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

Educational Objectives

After completing the symposium, participants were expected to be better able to:

- *Discuss* strategies for identifying children and adolescents who may be suffering from complex psychiatric conditions
- *Describe* the clinical signs that should prompt investigation of common diagnoses beyond their "top symptoms"
- *Identify* clinical pearls for proactive management and appropriate referral of pediatric and adolescent patients with complex symptomatology
- *Organize* a network of local experts to support a community of collaboration to drive forward the practices of proactive management of these cases

Faculty Speakers

Jagan Chilakamarri, MD, DFAPA | Symposium host and moderator
Child, Adolescent, and Adult Psychiatrist
Atlanta Psychiatric Institute
Expert on ADD/ADHD, bipolar/mood disorders, depression, and autism and developmental disorders

Melissa DelBello, MD, MSP
Professor of Psychiatry and Pediatrics
University of Cincinnati College of Medicine
Expert on child and adolescent psychiatry, mood, and bipolar disorders

Lawrence Scahill, MSN, PhD
Professor of Pediatrics
Emory School of Medicine
Expert on autism, tourette syndrome and childhood OCD, anxiety, and mood disorders

Jay Salpekar, MD, FANPA
Pediatric Neuropsychologist
Kennedy Krieger Institute
Expert on seizures, psychiatry, and treatment options

Jorge L Juncos, MD
Multiple Sclerosis Center in Atlanta
Expert on movement disorders and Tourette syndrome

Agenda

8:00 am	Registration, networking, and breakfast
8:45 am	Welcome and opening remarks Dr. Chilakamarri
9:15 am	Review of complex case studies with faculty Dr. DelBello, Dr. Scahill, Dr. Salpekar, and Dr. Juncos
12:30 pm	Networking lunch
1:30 pm	Complex case study review and discussion in small groups with faculty
4:30 pm	Closing remarks
5:00 pm	Program end

Abbreviations

ADHD	attention-deficit/hyperactivity disorder
ASD	autism spectrum disorder
COVID-19	coronavirus disease 2019
DMDD	disruptive mood dysregulation disorder
DSM-5	Diagnostic and Statistical Manual of Mental Health Disorders, Fifth Edition
GAD	generalized anxiety disorder
NOS	not otherwise specified
ODD	oppositional defiant disorder
PTSD	post-traumatic stress disorder
TS	Tourette syndrome

Summary

Dr. DelBello | Bipolar Disorder in Pediatric Patients

Dr. DelBello kicked off the meeting with a discussion on the phenomenology and development of bipolar disorder in pediatric patients, as well as evidence-based strategies for treatment of children with and at risk for bipolar disorder. She began the discussion with an overview of changes in DSM-5 diagnostic criteria for bipolar, specifically with regard to mixed states, and how these changes have created confusion in the pediatric setting. Dr. DelBello noted that children often present with co-occurring mania and depression, which can make diagnosis a challenge. She then reviewed differential diagnoses of mood dysregulation and irritability, which is how pediatric patients typically present. These include ADHD, anxiety disorders, PTSD, DMDD, and ODD. Dr. DelBello emphasized the importance of spending time and effort up front to differentiate the diagnosis in children with these features to optimize treatment and care. She argued that mood disorders exist on a spectrum, from depression to neatly defined bipolar disorder, and that kids rarely fit nicely into these extremes. Psychiatric comorbidity in pediatric bipolar disorder is also "the rule rather than the exception", and it can help to consider whether certain features, such as ADHD, may be a compensatory mechanism to mood dysregulation. Dr. DelBello also noted that differential diagnosis of bipolar disorder has become increasingly challenging during the COVID-19 pandemic. Irritability is normal during these times as kids are experiencing significant social disruption. It is important to approach diagnosis within the context of what is normal given the circumstances, both general and specific, of the child.

She also discussed the general trajectory of pediatric bipolar disorder, including the occurrence of subsequent episodes and the challenges of unraveling the episodic nature of disease in kids, the rates of conversion to bipolar disorder I or II, the development of other psychiatric conditions, and how to predict outcomes and intervene early. The trajectory of bipolar disorder is based on a combination of modifiable (e.g., treatment adherence, types of medications, substance use disorder, lack of psychotherapy) and non-modifiable risk factors (e.g., age of onset, family history, socioeconomic circumstances). Dr. DelBello emphasized that use of stimulants and antidepressants are associated with worse outcomes, especially in young kids, and may increase the risk for severe effects such as suicidality. In discussions, one attendee suggested that if a differential diagnosis of ADHD or bipolar disorder cannot be determined, they will treat the ADHD with stimulants and see how the patient responds. Dr. DelBello noted, however, that there is emerging research that in some patients, treating with stimulants may accelerate the onset of bipolar disorder. Additionally, some children with ADHD and a family history of bipolar disorder don't respond well to stimulants. She suggested that before using stimulants in this manner, it is important to understand who may be harmed by this approach.

Dr. DelBello concluded with a discussion on the identification and characterization of children who are at risk for bipolar disorder. A first-degree relative with bipolar disorder is the leading risk factor for the condition; in these children, other factors to consider include antidepressant and stimulant use, comorbid psychiatric conditions (e.g., SUD, PTSD), and low omega fatty acid intake. Prodromal features of bipolar disorder include ADHD, unipolar

depression, anxiety, subsyndromal mania, irritability, and anger. These features may trigger suspicion of bipolar disorder, particularly in children with other risk factors or a history of bipolar spectrum illness. Dr. DelBello noted that there is emerging research on possible risk calculators, but these are not ready for integration into the clinic. At present, the evidence for treatment of at-risk children is limited, and the best available evidence is for nonpharmacological interventions, such as family-focused therapies (e.g., psychoeducation) and mindfulness-based cognitive behavioral therapy. She closed by emphasizing that there is a lot left to learn about bipolar disorder in pediatric patients, including the identification of biomarkers to guide early intervention and prevention.

Dr. Scahill | Autism Spectrum Disorder

Dr. Scahill began with an overview of the history of autism spectrum disorder (ASD), which was not officially recognized as a diagnosis until 1980. Since then, the definition of ASD has been expanded to include two key components: impaired social communication, and repetitive behaviors or restricted interest. Many studies suggest the prevalence of ASD is on the rise, but Dr. Scahill argued that this is more related to detection than prevalence – a broader definition of ASD has captured more people who now fit criteria for diagnosis.

He went on to describe the results of a recent Lancet Commission[1] on ASD, which described the current state of autism research, the future of care, and what additional research is needed. He noted that three key principles emerged from this report:

- Heterogeneity: Within the core symptoms of ASD, there is a wide range of severity. Additionally, there are a multitude of co-occurring symptoms or disorders present in ASD that can also be heterogeneous in nature. The severity of these features may not always align, either – that is, one symptom may be severe, whereas another may be mild. In partnership with the patient and their family, it is the clinician's job to determine what features to focus on with regard to treatment and management.
- Malleability: ASD is treatable, and treatment matters. Even children with the highest IQs don't do well without social support. On the other end of the spectrum, low IQ is a marker for poor outcomes, but support can make a difference, and social support is important across the entire spectrum of disease.
- Systems of care: These are particularly important in countries with fewer resources, and the report discusses strategies for building these systems when they aren't already in place.

Dr. Scahill indicated that a stepped care model is needed within the context of the heterogeneity of ASD as an attempt to address the specific symptoms of autism. There is also a need to sort out what is "sitting on top of the autism." Previous versions of DSM indicated that if a particular problem was better explained by autism, the patient did not have that "problem." Updates in DSM-5 have sharpened the clinical understanding of co-occurring disorders in ASD, and it is up to the clinician to help patients and their families

[1] Lord C, Charman T, Havdahl A, et al. The Lancet Commission on the future of care and clinical research in autism. Lancet. 2022;399(10321):271-334.

set priorities and establish markers for success. Dr. Scahill presented a variety of factors to consider when determining what aspect(s) of ASD to focus on, including safety, symptom severity and impact, and cognitive and language delays. Cognitive and language are significant predictors of outcomes, and IQ and adaptive function testing can help open doors to support that may not otherwise be available. Other factors to consider when establishing a treatment plan include family preferences with regard to treatment, age, available evidence, and availability/accessibility.

Dr. Scahill concluded by presenting two case studies involving young children with ASD and how to approach decision-making in similar cases with regard to treatment and intervention. As part of evaluations, he promoted the use of the Aberrant Behavior Checklist, which represents an affordable tool for evaluation of psychiatric symptoms and behavioral disturbances across five subdomains: irritability, agitation and crying, lethargy or social withdrawal, stereotypic behavior, hyperactivity or noncompliance. Utilizing tools such as this can help identify areas of need and aid in the prioritization and personalization of treatment goals in ASD.

Dr. Salpekar | Epilepsy as a Prototypic Model of Psychiatric Illness

There is significant overlap between the field of psychiatry and neurology. The field of neuropsychiatry is growing, but most of the work is typically done in older adults with conditions such as dementia, Parkinson's disease, or stroke. However, Dr. Salpekar argued that neuropsychiatry is equally important in pediatric patients, where there is significant neurodevelopment occurring. Differences in how various regions of the brain and the networks between them mature can influence a variety of psychiatric features, including why some disorders appear earlier in life (e.g., ADHD) than others (e.g., mood disorders).

Dr. Salpekar presented epilepsy as the prototypic neuropsychiatric illness. There is a lot of overlap between epilepsy and psychiatric disorders, particularly depression, and Dr. Salpekar estimates that 70% to 80% of his psychiatric patients also have epilepsy. Just like psychiatric illnesses, seizures can be highly variable. Most seizures are focal, affecting just one part of the brain, and don't always present as expected. Many patients may have seizure events they aren't even aware of and may not consult with a clinician until something else goes wrong. Understanding what part(s) of the brain are affected can help illuminate why various psychiatric symptoms develop. For instance, Dr. Salpekar noted that the amygdala is responsible for regulating emotions, and constant stimulation due to focal seizures could cause anxiety. It is also known that depression is more common in patients with left temporal focal seizures. Depression associated with these kinds of seizures is notoriously aggressive and difficult to treat, requiring proactive management potentially involving a combination of anticonvulsants and antidepressants.

Dr. Salpekar also argued that psychiatric disorders may increase the risk for seizures. He noted that stress changes the way that the brain operates and how brain development occurs. Chronic stress can shut down neurogenesis, which is important in young, developing brains, and may impart a vulnerability for electric overload. In this way, there is a bidirectional relationship between psychiatric conditions and epilepsy. He argued that

the interrelated nature of these conditions is supported by the ability to treat both seizures and bipolar disorder with the same kinds of medication and posited that maybe they aren't such disparate conditions as many believe. A greater appreciation for this overlap may help inform therapeutic management – there are many treatment options available for neuropsychiatric illness, and Dr. Salpekar argued that it may be possible to find more medications with multiple effects.

Dr. Salpekar concluded by suggesting that a neuropsychiatric paradigm may provide greater insights into the care of patients with epilepsy and psychiatric conditions. He suggested that the term "comorbidity" is not quite right in these patients, as it implies that they are distinct conditions. Rather, he believes that epilepsy is a condition that often includes both seizures and mood dysregulation, depending on the localization, development, and timing of these events.

Dr. Juncos | Tourette Disorder in Pediatric Patients

Dr. Juncos concluded the first half of the meeting with a talk on the nature of Tourette Syndrome (TS) in children. He discussed the nature of TS in children vs adults and argued that in younger populations, it is primarily a hereditary developmental disorder heavily influenced by environmental factors. As in other areas of psychiatry, Dr. Juncos indicated that the view of TS is evolving towards one of a disease spectrum, in which the individual comorbidities associated with TS (e.g., ADHD, OCD) are not external to TS, but rather pieces of the larger puzzle. He argued that the tics and comorbidities associated with TS are all integrated, and that individual features cannot be viewed as independent variables. Tics are an external phenotype of the psychiatric condition. They may bring unwanted attention, exhaust energy, and compromise cognitive bandwidth, and may be a source of bullying and trauma.

But Dr. Juncos noted that tics need to be a signal to neurologists that there is more "under the hood" that needs to be addressed. The internal phenotype of TS is characterized by the premonitory urges which drive the tics. Most of the medications used to treat tics don't address the underlying urges in TS, and in most cases, patients must learn other ways to control their urges. This can lead to a "core of anxiety" that underlies the other features of TS, such as OCD, other anxiety disorders, and disruptive behavior. A mixture of these symptoms can appear together, and it is up to clinicians to help prioritize which features to treat first. Dr. Juncos noted that is important for clinicians to gain the confidence and trust of their patients by first addressing what they came to them for. In many cases, this is the tics. However, in surveys, many patients report ADHD is the most disruptive symptom. This is an important consideration as surgery can be performed to correct tics, but these procedures do not address the premonitory urges that underly the psychiatric features of the disease. Genetic studies in TS have revealed a series of point mutations that affect GABA and glutamate signaling in the cortex, but this is not the area of the brain targeted with surgery. Dr. Juncos suggested that this indicates that these procedures "miss the boat" by simply targeting the neural circuits that regulate tics, and that more work is needed to understand the neurobiology of the internal manifestations of TS that cause disability.

Breakout Sessions

During the second half of the symposium, participants were divided into small-group breakout sessions where they are able to review complex real-world cases submitted by other symposium attendees. Conversations were moderated by the expert speakers, who prompted attendees to participate in discussions and provide feedback on case management. Experts were able to provide more detailed feedback on topics of interest to participants, including diagnostic approaches, pharmaceutical management, and the challenges of managing patients with nonspecific or complex presentations. In post-meeting surveys, participants overwhelmingly indicated that they were excited to have the opportunity to share complex cases with the speakers and to discuss them with their colleagues.

Case studies that were discussed encompassed a variety of topics in line with the morning presentations, as well as additional considerations for real-world case management.

- Dr. DelBello and Dr. Chilakamarri presented a case involving a 13-year-old boy with multiple psychiatric comorbidities, including ADHD combined type, bipolar disorder NOS, MDD, ODD, GAD, and some OCD-like manifestations. The patient has an extensive treatment history that has been largely unsuccessful – some medications will work for a short period but then efficacy dropped off. He did will with lithium but developed renal problems, and the drug was discontinued. Participants discussed a variety of potential pharmaceutical and non-pharmaceutical treatment options to consider, as well as strategies for obtaining more information from the patient on his understanding of and feelings towards the treatment options that have already been explored.
- Dr. Scahill presented the case of an 8-year-old girl with ADHD combined type and an unspecified neurodevelopmental disorder. She has struggled with inattention since age 4 and now is referred with concerns of inattention, hyperactivity, poor impulse control, reassurance-seeking behaviors, and temper tantrums. The patient purposely annoys her siblings at home, but has not been disruptive in school until recently. Participants discussed what additional information would be need to make a full assessment of the situation and establish next steps, including information regarding the school structure, potential triggers that may have caused behavioral changes, and what kind of support the parents are providing for the girl at home.
- Dr. Salpekar discussed seizure risk with bupropion (Wellbutrin) and other psychiatric medications in the context of a case involving an 18-year-old woman with a history of significant anxiety and emotional abuse. She is currently living in a dorm at college and has started experiencing mood swings, anger issues, and depressive symptoms. She was started on lithium and bupropion and after a year of treatment, she expressed a single seizure, and the bupropion was discontinued. Dr. Salpekar discussed relative seizure risk associated with different formulations of Wellbutrin, noted that risk is lowest with XL. Participants asked questions about managing seizure risk with Wellbutrin as well as potential risk with other treatments (e.g., stimulants), and discussed other potential triggers that may have led to a seizure, such as alcohol, lack of sleep, or possible eating disorders.
- Dr. Juncos discussed the complexities of pharmaceutical management in patients with multiple psychiatric comorbidities within the context of a case involving an 18-year-old woman with a history of ADHD and tics since the age of 6. During the

middle school years, she began developing some OCD-like compulsions, as well as irritability and defiance, and her coprolalia has escalated. Dr. Juncos discussed that in cases such as this, pharmaceutical management can be challenging – one issue may improve, but others may worsen and new ones may appear. Participants discussed the importance of detecting other underlying conditions in patients who present with tics, which can help with management. Dr. Juncos also answered questions related to pharmacological management of TS, including the neurological effects of various drugs and the implications for treatment.

Poster Questions

Throughout the symposium, participants were also invited to provide virtual feedback to thought-provoking and action-oriented prompts on pediatric and mental health care in the United States. Poster prompts and examples of feedback are provided below.

- The mental well-being of LGBTQ+ children and adolescents is at risk. What role does the healthcare provider play in creating a safe space for LGBTQ+ youth?
  - "Learn about local resources for both families and youth."
  - "Educate EVERYONE in the office on best practices for communicating a supportive stance to all patients."
- Racial and ethnic biases may influence mental health diagnoses. How might these early experiences shape the way vulnerable individuals interact with the healthcare system as they get older?
  - "More importantly, what can professionals do to ensure that they are aware of these implicit biases...education/empathy are critical to ensure best practices and lack of harm."
- Polypharmacy rates have tripled in the United States among young people. Do these trends reflect an improved understanding of how to manage mental health in children or inappropriate over-prescription?
  - "These trends are inconclusive. There is inaccurate data to show if pediatric patients are accurately diagnosed, which can lead to polypharmacy, ineffective medication regimen, etc."
- Only 1 in 4 adolescents with severe depression receive consistent care. What steps can healthcare teams take to ensure that adolescents with depression are continually engaged with care?
  - "Make an effort to help patients understand and access insurance benefits."
  - "Have more interventions in schools like DBT programs to teach skills to manage depression."
- Nearly 1 in 11 children in the United States experiences clinical anxiety. What feedback would you share with the US Preventive Services Task Force which is soliciting feedback?
  - "Disseminate and use more helpful screeners to schools and pediatricians to address more anxiety disorders. I often see kids who are only screened with the PHQ-9 or GAD-7, and these miss a lot of kids (for example, those with OCD)."
  - "When looking for anxiety in kids, I tend to pick up on it through ANGER and less with fears at a young age. My 'angry' kids are the most anxious kids - anger just feels more in control. Also rigidity."
- The transition of care from child and adolescent mental health services into adulthood is "poorly planned, poorly executed, and poorly experienced." What steps can healthcare teams takes to help bridge the care gap from adolescence to adulthood?
  - "Clearly communicate what ages you see and develop a network of referrals to 'graduate' patients when they age out."

- Suicide is the second leading cause of death among adolescents. What can healthcare providers do to interrupt these trends?
    - "Develop enduring support networks (as opposed to only emergent intervention or short-term monitoring)."
    - "Include parent training."
    - "Reduce access to firearms/household medications."
- Children in foster care are at increased risk for developing mental illness. What are the possible implications of these effects on the perpetuation of trauma for young people?
    - "Multigenerational effects are real and important to consider not only are these kids at high risk but their kids too are at high risk. Need early intervention services."

Key Learnings and Insights

In this first ever Complex Cases in Pediatric and Adolescent Psychology Symposium, mental health professionals were able to engage with leading experts on a variety of subjects in the field of neuropsychiatry, including the diagnosis and care of young patients with bipolar disorder, ASD, and TS. Across presentations and discussions, three key themes emerged:

- Many fields of neuropsychiatry are shifting towards a spectrum-based view of disease, in which patients may not fit neatly into previously defined categories of disease. Across the areas discussed, symptomology and severity may vary greatly, which can make diagnosis challenging in some cases.
- Comorbidity in psychiatric disorders is, in many cases, the rule rather than the exception, particularly in young patients. Disruption or disturbance of normal neurodevelopment in growing brains can lead to dysregulation in a variety of domains, resulting in multiple interrelated conditions.
- The heterogeneous nature of psychiatric diseases and associated comorbidities means that the onus is on clinicians to work with patients and their families to prioritize which symptoms of disease require the most urgent care and develop a personalized treatment plan based on the individual needs of each patient.

In the post-meeting survey, participants expressed their gratitude and appreciation for the symposium and offered feedback for future events.

> "Thank you for today! It was an excellent opportunity to discuss clinical challenges with so many colleagues and have the opportunity to expand my network!"
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> - Symposium attendee

> "This was an exceptional conference with a wealth of knowledge in specialties and subspecialties. All the presenters are top in their fields. It was an honor to participate."
>
> - Symposium attendee

Common concerns were expressed by attendees that may help improve experiences moving forward:

- Some participants noted that they appreciated digging into the nuances of case management but did not have the medical background to follow along with some of the specific medical and pharmaceutical discussions. Participants indicated that they would have appreciated more generalized background information and better explanations of some technical terminology.
- Participants were interested in learning more about non-medical needs of patients and multi-disciplinary perspectives on care (e.g., more information on speech therapy, OT, and in-school management). Attendees indicated that they would have valued hearing from more non-MD presenters.
- Several attendees suggested reworking small-group sessions to allow for better collaboration and more time for questions. Participants noted they would have appreciated more time for open discussion and questions.
- Participants noted that there is an opportunity to extend the program to cover additional topics (e.g., ADHD), discuss multidisciplinary treatment approaches in greater detail, and offer more opportunities for networking.