Handouts for the Webinar

ADHD:
Medication and Treatment Considerations

November 19, 2013

Presenters

COMMUNITY CARE OF NORTH CAROLINA
Theodore Pikoulas, PharmD
Associate Director of Behavioral Health Pharmacy Programs

CHAPEL HILL PEDIATRIC PSYCHOLOGY
Abby Pressel, PhD
Psychologist

Andrew S. Preston, PhD
Psychologist

Produced by
Family and Children's Resource Program, part of the
Jordan Institute for Families
UNC-Chapel Hill School of Social Work

Sponsored by
NC Division of Social Services

Contents

PRESENTER INFORMATION

THEODORE PIKOULAS, PHARMD. Dr. Pikoulas received his Doctor of Pharmacy degree from the Mylan School of Pharmacy at Duquesne University in Pittsburgh, PA. He went on to complete a Pharmacy Practice Residency at the University of Pittsburgh Medical Center Mercy Hospital in Pittsburgh, PA, and a Psychiatric Pharmacy Residency at the Louis Stokes Cleveland VA Medical Center in Cleveland, OH. Dr. Pikoulas is psychiatric pharmacy specialist and is currently the Associate Director of Behavioral Health Pharmacy Programs for Community Care of North Carolina (CCNC). In his role, he works with both the pharmacy team and the behavioral health team, and serves as a bridge between the two.

ABIGAIL S. PRESSEL, PH.D. Dr. Pressel is a licensed psychologist who practices at Chapel Hill Pediatric Psychology. She earned her Bachelor's degree from Yale University and received her doctorate in clinical psychology from the University of North Carolina at Chapel Hill.

ANDREW S. PRESTON, PH.D. Dr. Preston is a licensed psychologist specializing in pediatric neuropsychology at Chapel Hill Pediatric Psychology. He earned his Bachelor's degree from Davidson College and received his doctorate in clinical psychology from the University of Florida. He completed his internship and post-doctoral fellowship at Brown University Medical School.

DSM-5 DIAGNOSTIC CRITERIA FOR ADHD

Reprinted from the Centers for Disease Control and Prevention. (2013). DSM-5 Diagnostic Criteria for ADHD. *Retrieved November 11, 2013 from http://www.cdc.gov/ncbddd/adhd/diagnosis.html*

Here are the criteria in shortened form. Please note that they are presented just for your information.
Only trained health care providers can diagnose or treat ADHD.

People with ADHD show a persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development:

1. **Inattention: Six or more symptoms of inattention for children up to age 16, or five or more for adolescents 17 and older and adults; symptoms of inattention have been present for at least 6 months, and they are inappropriate for developmental level:**
    - Often fails to give close attention to details or makes careless mistakes in schoolwork, at work, or with other activities.
    - Often has trouble holding attention on tasks or play activities.
    - Often does not seem to listen when spoken to directly.
    - Often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (e.g., loses focus, side-tracked).
    - Often has trouble organizing tasks and activities.
    - Often avoids, dislikes, or is reluctant to do tasks that require mental effort over a long period of time (such as schoolwork or homework).
    - Often loses things necessary for tasks and activities (e.g. school materials, pencils, books, tools, wallets, keys, paperwork, eyeglasses, mobile telephones).
    - Is often easily distracted
    - Is often forgetful in daily activities.
2. **Hyperactivity and Impulsivity: Six or more symptoms of hyperactivity-impulsivity for children up to age 16, or five or more for adolescents 17 and older and adults; symptoms of hyperactivity-impulsivity have been present for at least 6 months to an extent that is disruptive and inappropriate for the person's developmental level:**
    - Often fidgets with or taps hands or feet, or squirms in seat.
    - Often leaves seat in situations when remaining seated is expected.
    - Often runs about or climbs in situations where it is not appropriate (adolescents or adults may be limited to feeling restless).
    - Often unable to play or take part in leisure activities quietly.
    - Is often "on the go" acting as if "driven by a motor."
    - Often talks excessively.
    - Often blurts out an answer before a question has been completed.
    - Often has trouble waiting his/her turn.
    - Often interrupts or intrudes on others (e.g., butts into conversations or games)

In addition, the following conditions must be met:

- Several inattentive or hyperactive-impulsive symptoms were present before age 12 years.
- Several symptoms are present in two or more setting, (e.g., at home, school or work; with friends or relatives; in other activities).
- There is clear evidence that the symptoms interfere with, or reduce the quality of, social, school, or work functioning.
- The symptoms do not happen only during the course of schizophrenia or another psychotic disorder. The symptoms are not better explained by another mental disorder (e.g. Mood Disorder, Anxiety Disorder, Dissociative Disorder, or a Personality Disorder).

Q & A about Obtaining Informed Consent

Responses by the NC Division of Social Services

When a child in DSS custody, must DSS obtain written consent from the birth parents before the child can be given a prescription for psychotropic medications?

Even when children are in foster care, birth parents must give consent for medical treatment. Source: NC G.S. 7B-903(a)(2)(c). Exceptions to this include:

- Routine medical care
  - NOTE: starting or changing a course of psychotropic medicines does **not** constitute routine care
- Emergencies (when the child is at imminent risk of harming self or others)
- Both parents are unknown or unable/unavailable to act on child's behalf

Birth parents may wish consent to trying a medication for a specific period of time. A new consent would then be needed to continue/refill prescription. Alternatively, the birth parent may be willing to sign a consent to continue treatment unless/until consent is revoked. In this situation a new consent would not be needed to continue/refill prescription.

Are both parents required to provide parental consent for psychotropic medications? What if the parents disagree?

Whether or not both parents' consent is needed may vary by provider. Usually, one parent's consent is sufficient, absent a court order directing otherwise. If the parents disagree with one another, the Court may have to decide what is in the Juvenile's best interest. It may be helpful to involve the juvenile's Guardian ad Litem in discussions with medical providers, if you anticipate that a Court order will be necessary.

Do parents have to consent to therapy as well?

Yes. Though joint parental consent is strongly encouraged (Gottfried, 2009), consent from at least one of the child's parents is required medical treatment, including for psychiatric management and psychological therapy.

> The general rule that parental consent is required is not explicitly stated anywhere in North Carolina law. However, we can be confident this is the general rule, for several reasons:
>
> - NC has a number of laws that explicitly set forth when minors may be treated without their parents' consent. We can reasonably infer from these laws that parental consent is ordinarily required.
> - Parents have a right to the care, custody, and control of their children that is constitutionally protected.
> - Furthermore, there is a state law that specifies that minor children are subject to the supervision and control of their parents. GS 7B-3400. Assuring necessary medical care is part of supervising a child.
>
> Source: Moore, J. (2010). Who May Consent to A Minor's Medical Treatment? Overview of North Carolina Law. Chapel Hill, NC: UNC Institute of Government. Retrieved April 12, 2013 from http://www2.sph.unc.edu/images/stories/centers_institutes/nciph/documents/oce/mgmt_super/legal2minorsconsent.pdf

What forms should county DSS agencies use to obtain this consent?

The North Carolina Division of Social Services does not have a required form for documenting the parent informed consent for medication.

Does the need to obtain parental consent only apply to psychotropic meds or to routine medical treatment?

Parental consent is not required for routine medical care. Source: NC G.S. 7B-903(a)(2)(c). It is required for medical care that is not routine or emergency.

How does this apply to hospitalization/stabilization of a child in care?

Parental consent would be required for any planned hospitalizations, but not for emergencies. Source: NC G.S. 7B-903(a)(2)(c).

Providers I've worked with want consent of the legal guardian (of children in foster care) and that would be the social worker, not the birth parent—isn't that right?

While your county Department of Social Services may be the legal custodian, the parents retain some of their rights, unless the court has found the termination of parental rights, or the child has been adopted, after a relinquishment. Ideally, the county DSS and the parents would both sign the consent or authorization.

What should we do about consent when parents are absent?

When parents are absent, document this fact and ask the court to empower your agency to provide informed consent.

What about children who are in DSS custody and we have been relieved of visitation and reunification efforts with birth parents?

Parents may still retain the right to have informed consent for medical treatment (including psychotropic medication) for their children even if the court has relieved the agency of visitation and reunification efforts. Written consent would still need to be obtained unless the parent is unknown, unavailable, or unable to act on behalf of the juvenile; or the court specifically authorizes DSS to consent to treatment. See NC G.S. 7B-903(a)(2)(c).

MEDICATIONS COMMONLY USED TO TREAT ADHD

GENERIC	NAME	DOSING FREQUENCY
Methylphenidate (MPH)		
MPH-IR	Ritalin®, Methylin®)	2-3 X daily
Dex-MPH-IR	Focalin®	2 X daily
MPH-SR, MPH-ER	Ritalin SR®, Metadate ER®	1-2 X daily
MPH-LA, MPH-CD, MPH-OROS, Dex-MPH-XR	Ritalin LA®, Metadate CD®, Concerta®, Focalin XR®	1 X daily
MPH-transdermal	Daytrana®	1 X daily
MPH-oral suspension	Quillivant XR®)	1 X daily
Amphetamine		
Dextroamphetamine	Dexedrine®, Dexedrine Spansules®	1-2 X daily
Amphetamine mixed salts	Adderall®	1-3 X daily
Amphetamine mixed salts XR	Adderall XR®	1 X daily
Lisdexamfetamine	Vyvanse®	1 X daily
Non-stimulant Medication		
Atomoxetine	Straterra®	
Guanfacine ER	Intuniv®	
Clonidine ER	Kapvay®	

OFF-LABEL MEDICATIONS SOMETIMES USED TO TREAT ADHD

- Bupropion
  - 2nd line treatment option
  - Contraindications – seizure disorder, anorexia/bulimia, ETOH & BZD abuse
- Modafinil
  - 3rd line treatment option
  - Safety concerns
- TCAs
  - 3rd line treatment option

USING A TOKEN SYSTEM

- Focus on a single challenge at a time (e.g., completing homework, getting ready in the morning or ready for bed, completing chores, etc.).
- Limit the number of tasks to complete.
- Make the rewards simple and realistic for the child and parent. It's generally easier to set up a system where the child earns or doesn't earn checks and rewards, rather than getting into arguments about partial credit. ("I read for 5 minutes each night, can I play for half an hour?")
- Expectations and rewards can go up as the child progresses.
- Remind parents to give lots of specific praise and positive interaction for each positive behavior, and to limit interaction/discussion/arguing/pestering when child shows negative behaviors.
- Do not remove points or stickers from the chart for unrelated misbehavior.

Sally's Bed-time Chart

	Brush teeth	Shower	Read for 15 mins.	Settled in bed by 8:00
Saturday				
Sunday				
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				

When Sally has gotten all 4 checks for at least 5 days in the week, she will earn two hours of video game time on the weekend. If she does not get her checks, she has no video game time that weekend.

CASE SCENARIOS

1. Andrew

You are a CPS in-home social worker. One of your families includes a 6-year-old boy named Andrew. His parents report that the school wants Andrew to be started on medication for ADHD. The teacher says Andrew can't stay in his seat, doesn't get his work done, and is always disrupting the class. The family doesn't want him medicated, and they don't even think he has ADHD. They report that he has never liked school, but he can play video games or play with his Star Wars action figures for a long time without wanting to stop. Andrew lives with his mother and two younger sisters. His father stays at the house sometimes, and other times stays at his mother's. The family was referred to DSS for inappropriate discipline when he came to school one day with bruises caused by his mother hitting him with a belt. The parents have been pretty receptive to your help, saying they don't really like to hit but can't get Andrew to listen to them.

1a. What questions would you ask Andrew's parents?

1b. What questions would you ask school staff?

1c. As part of your work with the family, you arrange for the child to be evaluated at his medical home. What questions would you want answered during this evaluation?

1d. What information from this presentation would you want to be sure the family has?

2. Ariana

You are a foster care social worker. Ariana is a 13-yea-old girl diagnosed with ADHD who takes Ritalin but continues to have problems at home and school. She is doing poorly academically and is getting into fights with peers at school. Her foster parents are concerned about her behavior in school, and also are frustrated that at home she doesn't listen or complete homework, chores, or other things she's supposed to do. You and your supervisor decide to try cognitive behavioral problem solving with Ariana.

2a. Which problem would you start with, and how would you identify it with Ariana?

2b. How would you encourage Ariana to brainstorm and then evaluate possible choices with you?

2c. How would you help her evaluate how her decision worked since you won't be seeing her for another few weeks?

2d. How could you involve and coach the foster parent on this technique?

2e. What information from this presentation would you want to be sure the family has?

CARING FOR A CHILD WHO TAKES PSYCHOTROPIC MEDICATION

Reprinted from Fostering Perspectives, vol. 18, no. 1 (Nov. 2013) • fosteringperspectives.org

Children in foster care—especially those who have experienced trauma—often require mental health treatment. For many, that treatment involves prescriptions for psychotropic medications.

Psychotropic (pronounced "sike-oh-trope-ick") medications affect a person's mind, emotions, moods, and behaviors. Examples include psychostimulants such as Adderall® and Ritalin®, antipsychotics such as Seroquel®, and antidepressants such as Paxil® and Zoloft®.

When it comes to managing children's medications, foster parents and kin caregivers have an important role to play. After all, you're the one who spends the most time with the child. You know whether that child is taking the medication appropriately and how that medication affects that child's behavior.

So what can foster parents and caregivers do to make sure that children taking psychotropic medications get the care and the oversight they need? Here are some suggestions:

1. See this as a team effort. Managing children's care is a shared responsibility. Important partners in this task include your supervising agency, the birth family, and the DSS that has custody of the child. When it comes to managing medications, it is very important that the team work with someone with special expertise in this area—usually this will be the child's mental health clinician or physician.

It can be intimidating to work with doctors and mental health clinicians, but you bring something essential to the table—information about the child and how they are doing. Without this, it's hard to make good decisions or recommendations about treatment and medications.

2. Be sure you have the information you need. Communicate regularly with the child's social worker, mental health provider, and physician to make sure you have a current list of all children's prescriptions and dosages.

3. Watch for side effects. The majority of children will not experience any side effects from their medications; however, side effects are possible. Different psychotropic medication can cause different side effects so it's important that you are familiar with the possible side effects.

If a child in your care is taking medications, be sure to ask the prescriber about possible side effects and what to do if they occur. If you see anything that concerns you, be sure to let the prescriber know.

4. Beware of over-medication or inappropriate medication. The same dose of medication can have different effects in two different people because not all people react to medications the same. Just because a dosage doesn't cause drowsiness in one child, doesn't mean it won't cause another child to be drowsy. This is similar to being aware of side effects. If the medication seems to be having a negative impact on the child for any reason, let the child's social worker and prescriber know right away.

5. Document and communicate. Track and log any changes you see in your child's behavior, wellness, or functioning, especially when a medication has just been introduced or an adjustment has been made. Share this information with other members of the team caring for the child.

6. Remember that meds can sometimes work best when used in combination with therapy. When it comes to treating anxiety, depression, or other mental health needs, medication alone is sometimes not as effective as medication in combination with therapy. If a child in your care is taking psychotropic medication, but is not receiving therapy, ask the child's social worker and other members of the child's team if therapy would be appropriate.

7. Listen to the child. Children and youth are a great source of information about their medications and how well they are working. Older youth can use a journal to note any changes in their experience on a medication, concerns they have, or responses to treatment. Sharing these written notes with physicians and DSS staff during or between appointments can help providers gauge the effectiveness of a treatment and alerts them to unintended effects of the medication.

8. Know your limits. If you are a foster parent, therapeutic foster parent, or kin caregiver, understand that you do not have the power to give consent for treatment or to make decisions about treatment or medication for children in foster care. If a decision needs to be made about these things, involve other members of the child's team, in particular the child's social worker.

9. Ask for help if you need it. If you don't feel comfortable with your responsibilities related to a child's medication, reach out to your supervising agency—they will be glad to answer your questions, clarify your role and what is expected of you, and provide you with the training and support you need to look after the children in your care.

1. **Know why the child is taking a particular medication.**
2. **Know side effects to watch for and what to do if they occur.**
3. **Know what your agency expects of you.**

ADHD RESOURCES FOR FAMILIES

- Children and Adults with Attention Deficit/Hyperactivity Disorder (CHADD) • www.chadd.org
- Attention Deficit Disorder Association (ADDA) •www.add.org
- National Institutes of Mental Health ADHD Overview www.nimh.nih.gov/health/publications/adhd/complete-publication.shtml

Books

- *Taking Charge of ADHD* by Russell Barkley
- *Understanding Girls with AD/HD* by Patricia Quinn
- *Driven to Distraction* by Hallowell and Ratey
- *Delivered from Distraction* by Hallowell and Ratey

IEP and 504 Information

- Exceptional Children's Assistance Center (ECAC) •www.ecac-parentcenter.org
- www.wrightslaw.com

REFERENCES

American Academy of Child and Adolescent Psychiatry. (2007). Practice parameter for the assessment and treatment of children and adolescents with attention-deficit/hyperactivity disorder. *J Am Acad Child Adolesc Psychiatry,* 46(7), 894-921.

American Academy of Pediatrics. (2011). ADHD: Clinical practice guidelines for the diagnosis, evaluation, and treatment of attention deficit/hyperactivity disorder in children and adolescents. *Pediatrics,* 128(5), 1-16.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (5th ed.).* Arlington, VA: American Psychiatric Publishing.

Barkley, R. (2005). *Taking charge of ADHD*. New York: Guilford Press.

Centers for Disease Control and Prevention. (2013). *Attention-deficit / hyperactivity disorder (ADHD): Data & statistics*. Retrieved October 29, 2013 from http://www.cdc.gov/ncbddd/adhd/data.html.

Centers for Disease Control and Prevention. (2013). *Attention-deficit / hyperactivity disorder (ADHD): State-based prevalence data of ADHD diagnosis*. Retrieved October 29, 2013 from http://www.cdc.gov/ncbddd/adhd/prevalence.html.

Therapeutic Research Center. (2013, Feb.). Comparison of ADHD medications (PL Detail-Document #290204). *Pharmacist's Letter*. Retrieved October 29, 2013 from http://pharmacistsletter.therapeuticresearch.com.

Cooper, Sox CM, et al. (2011). ADHD drugs and serious cardiovascular events in children and young adults*. N Engl J Med.* 365, 1896-904.

Murray DW, Arnold LE, Swanson J, et. al. (2008). A clinical review of outcomes of the multimodal treatment study of children with attention deficit/hyperactivity disorder (MTA). *Curr Psychiatry Rep.*, 10(5), 424-31.

Nadeau, K.G., Littman, E.B., & Quinn, P. O. (1999). *Understanding girls with ADHD*. Silver Spring, MD: Advantage Books.

Newcorn JH, et al. (2008). Atomoxetine and osmotically released methylphenidate for the treatment of attention deficit hyperactivity disorder: Acute comparison and differential response. *Am J Psychiatry, 165, 721-730.*

Schelleman H, Bilker WB, Strom BL, et al. (2011). Cardiovascular events and death in children exposed and unexposed to ADHD agents. *Pediatrics,* 127, 11-20-1100.

Solanto, M. V. (2001). Attention Deficit/Hyperactivity Disorder: Clinical Features. In M. V. Solanto, A.F.T. Arnstein, & F.X. Castellanos (Eds.) *Stimulant Drugs and ADHD, Basic and Clinical Neuroscience*, 3-30.

Swanson J, Arnold LE, Kraemer. (2008). Evidence, interpretation, and qualification from multiple reports of long-term outcomes in the multimodal treatment study of children with ADHD (MTA): Part I: executive summary. *J Atten Disord,* 12:4-14.

Texas Dept. of Family and Protective Services & University of Texas at Austin College of Pharmacy. (2013, September). *Psychotropic medication utilization parameters for foster children*. Accessed November 11, 2013 from http://www.dfps.state.tx.us/documents/Child_Protection/pdf/TxFosterCareParameters-September2013.pdf

ADHD: Medication and Treatment Considerations

Welcome!

Please click on the colored link below to download the handout for today:
11-19-13 webinar handout

NC DSS Child Welfare Services
Statewide Training Partnership

UNC School of Social Work
The University of North Carolina at Chapel Hill

Goals of this Webinar

- Understand common medication options and challenges for children with ADHD
- Identify other key interventions for improved functioning

Ultimate Goal
Ensure appropriate, effective ADHD treatment for children in the child welfare system.

Agenda

- Brief Orientation
- Introductions
- Medication for ADHD: Overview
- Other Key Interventions
  - Family
  - Behavioral
  - Educational
- Case Scenarios

Panelists

Theodore Pikoulas, PharmD

Abby Pressel, PhD

Andrew S. Preston, PhD

Moderator

Mellicent Blythe

Tech Support

Phillip Armfield

John McMahon

ADHD

1. A persistent pattern of inattention or hyperactivity; impulsivity that interferes with functioning or development as characterized by:
   - 6 or more inattention symptoms for 6 months or more
   - 6 or more hyperactivity-impulsivity symptoms for 6 months or more
2. Several symptoms present before age 12 and present in 2 or more settings
3. Clear evidence symptoms interfere with or reduce quality of functioning
4. Not better explained by another mental disorder

(APA, 2013)

Medication for ADHD: Overview

Prevalence

- Parents report approximately 9.5% of children aged 4-17 have been diagnosed with ADHD
- ADHD diagnosis varies by state—low is 5.6% (Nevada); high is15.6% (North Carolina)
- According to NC Medicaid claims data 8% of kids (aged 0-20) have had an ADHD diagnosis in the past year

Foster care Medicaid recipients in NC are more than 3x likely to have ADHD (25% vs. 8%)

CDC, 2013a; 2013b; Medicaid data based on CCNC 2013Q1 S1 Report

Before Medication

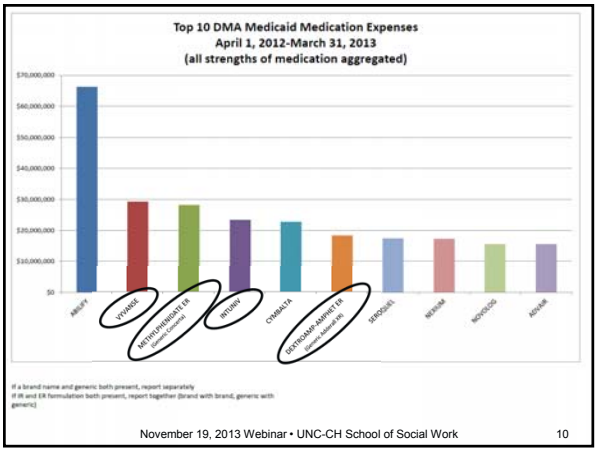
- Comprehensive evaluation prior to treatment
- Assess across multiple domains
- Non-pharmacological interventions should be considered along with psychotropic medication
- Informed consent to treat the patient should be obtained from the appropriate party

Texas DFPS, 2013; AACAP, 2007

Informed Consent to Treat

- Diagnosis
  - Specific diagnosis, when it was given, comorbid psychiatric diagnoses
- Expected benefits and risks of treatment
  - Side effects, labs
- Alternative treatments
  - Cost effective alternatives, efficacy through RCTs
- Risks associated with no treatment

Texas DFPS, 2013



ADHD Medications

1. **Stimulant agents*****
2. **Non-Stimulant agents**
   - Atomoxetine (Straterra®)***
   - Alpha-2 Adrenergic Agonists***
     - Clonidine XR (Kapvay®), guanfacine XR (Intuniv®)
   - Bupropion (Wellbutrin®)
   - Modafinil (Provigil®)
   - Tricyclic Antidepressants (amitriptyline, notriptyline, doxepin, etc.)

*** = *FDA-approved*

Stimulant Agents

Stimulant Agents: The Basics

- 2 Types:
  - Methylphenidate (MPH)
    - Ritalin®, Metadate®, Concerta®, Daytrana®, Focalin®, Methylin®
  - Amphetamine
    - Adderall®, Dexedrine®, Vyvanse®
- Generally considered first-line agents
- Mechanism of Action: ↑ DA, NE
- Dosing varies

(AAP, 2011; AACAP, 2007; Texas DFPS, 2013)

Stimulant Agents

Adverse Effects

Side Effect	Possible Solution
Decreased appetite *(probably the most common)*	• Assess periodically for weight loss • Switch to another stimulant • Switch to a non-stimulant agent
Insomnia	• Evaluate time of administration • Give dose earlier in the day • Reduce dose • Switch to non-stimulant agent
Increased anxiety	• Reduce dose • Switch to non-stimulant agent
GI distress	• Take with food • Switch agent
Irritability	• Evaluate when this side effect is occurring (wearing off effect) • Switch agent
Tachycardia/ Hypertension	• Reduce dose • Switch to non-stimulant agent

Stimulant Agents

Other Considerations

Growth

Results mixed:

- In one study, weight loss during first 3 – 4 months; then weight gain resumed
- Rate of growth in height decreased by about 1-3 cm/year over the first 1-3 years of treatment

Cardiovascular

- Changes in BP & HR may not be clinically significant
- No proven causal link
- Recent evidence: no significant differences in rate of sudden death, ventricular arrhythmia, or death from any cause

Murray, et al., 2008; Texas DFPS, 2013; Swanson, et al., 2007; Cooper, et al., 2011; Schelleman, et al., 2011

Non-Stimulant Agents

Atomoxetine (Straterra®)

- Mechanism of Action: ↑ NE
- NOT a controlled substance
- Place in therapy:
  - 2nd line agent
  - 1st line agent in those who can't take stimulants
- May take up to 4 weeks to work
- Common Adverse Effects:
  - GI discomfort
  - Insomnia
  - Dizziness

Newcorn, et al., 2008.

Non-Stimulant Agents

Alpha-2 Adrenergic Agonists

- Includes guanfacine ER (Intuniv®) and clonidine ER (Kapvay®)
- Mechanism of Action – stimulate inhibitory receptors regulating NE in the CNS
- Place in therapy:
  - 2nd line agent
  - 1st line agent – children with comorbid tic disorders or ADHD associated sleep disturbances
- Adverse Effects:
  - Sedation
  - Hypotension
  - Dizziness

Approved vs. Off-Label Prescribing

- US Food and Drug Administration controls marketing of drugs
- "Off-label" prescribing not malpractice
- Multiple factors:
  - Available evidence
  - Expert opinion
  - Their own clinical experience
  - Clinical judgment

Texas DFPS, 2013

Cost of FDA-approved ADHD Medications

Lower (~ $20 - $100)

- Generic IR stimulants (Adderall®, Focalin®, Ritalin®)
- Generic methylphenidate ER (Ritalin SR®)

Higher (~ $200 - $300)

- Brand/Generic ER stimulants (Vyvanse®, generic Adderall XR®, generic Concerta®)
- Kapvay®
- Intuniv®
- Straterra®

AAP Recommendations

- Preschool-aged children (age 4-5)
  - Behavior therapy
  - May prescribe methylphenidate
- Elementary school-aged (age 6-11) & Adolescents (age 12-18)
  - FDA-approved medications
  - AND/OR behavior therapy
  - Preferably both

AAP, 2011

AACAP Recommendations

- "It seems established that a pharmacological intervention for ADHD is more effective than a behavioral treatment alone."
- Behavior therapy alone can be pursued in certain situations:
  - Symptoms are mild with minimal impairment
  - Diagnosis is uncertain
  - Parents reject medication treatment
  - Marked disagreement about the diagnosis between parents or between parents and teachers
- "If a patient with ADHD has a less than optimal response to medication, has a comorbid disorder, or experiences stressors in family life, then psychosocial treatment in conjunction with medication treatment is often beneficial."

AACAP, 2007

Take-Home Points

1. ADHD is a highly prevalent diagnosis in NC; much is spent each year on ADHD medications
2. There are a number of FDA-approved and non-FDA-approved medications used for ADHD
3. Stimulant agents are typically considered first line agents in the treatment of ADHD
4. Helping the child and family understand medications will help to make them more adherent with the medication

Other Key Interventions for ADHD

Therapeutic Interventions

- Why consider approaches beyond medication management?
- Family and behavioral interventions
- Educational interventions

Why Meds Alone May Not Always Be Indicated

- Some children do not respond to medication or experience problematic side effects.
- Up to half are not completely normalized in behavior and school performance even when on medication.
- Often cannot use medications in the evening.
- Many are likely to have other psychological and learning disorders.

Barkley, 2005; Solanto, 2001

Behavior and Cognitive-Behavioral Therapy Goals

- Can use in combination with meds
- Psych-education
- Attend more directly to positive behaviors
- Increase compliance through use of specific commands, immediate feedback
- Reward behavior as it gets closer to goal

Token Economy System

- Increases incentives for the child to comply
- Point or sticker chart
  - Helps track positive behaviors through the day
  - Set up smaller and larger rewards child can earn
  - Practice sessions
- Can be used successfully in home, at school
  - Must be manageable so everyone can follow through

Cognitive-Behavioral Problem-Solving Training

1. Identify the problem
2. Brainstorm different possible choices
3. Evaluate different choices
4. Make a decision
5. Evaluate how it worked

Social Skills Support

- How to wait your turn
- How to share toys
- How to ask for help
- How to react to teasing
- Learning to read facial expressions
- Learning how to pick up on tones of voice
- How to repair situations

For Parents

- Keep rules consistent
- Keep daily routines set and predictable
- Increase positive feedback for positive behaviors
  - Specific and enthusiastic verbal praise
  - Immediately after action if possible
  - Increase nonverbal positive cues (hugs, pats on the back, high fives, big smiles)

For Parents

Keep directions explicit, short, and specific

- Make eye contact, get on child's level, and minimize distractors when giving a direction.
- Child can also be asked to repeat it back.

A child with ADHD may have trouble with "Go clean your room" because the task feels large and unwieldy. The same child may do better with a written check-off list to put clothes in the hamper, put books on the bookshelf and make the bed.

Increase Structure and Schedule

- Write it down with checklists and reminders
- Use tools to help with time management
  - Large visual calendars help break down multipart assignments
  - Visual Timers help with completing self-care or homework tasks in a timely fashion
  - Reminder functions on smart phones prompt for taking medication or switching activities

Treating Girls with ADHD

- Less likely to be identified early if predominantly inattentive type
- Treatment may focus less on behavior management, more on organizational help
- Mother-daughter issues
  - 71% of combined type, 61% of inattentive type qualified as ODD when mothers completed rating scales
- Peer issues can be more intense
  - Help with social skills relating to other girls

Nadeau, Littman, & Quinn, 1999

Treating Teens with ADHD

- Sensation-seeking
  - Sexual acting out, impulsive decision-making
  - Substance abuse for experimentation or self-medication
- ADHD and learning to drive
  - In their first years of driving, individuals with ADHD are 4x more likely to get in accidents as those who do not have ADHD

Considerations for Working with Schools

School/Educational Interventions

- Children with ADHD often qualify for 504-Plan or Individualized Education Plan (IEP).
- This can address difficulties at school that impact their behavior, academic progress, social relationships, mood, etc.
- Parents must often advocate for their child to receive services.

504-Plan vs. IEP

- Both are Federal Law, but IEP is a more binding legal contract.
- **IEP**. Provides classroom accommodations and individualized interventions, such as pull-out tutoring, social skills, etc.
- **504-Plan**. Provides classroom accommodations without additional interventions.

Important Facts about Special Education

- An IEP or Special Education DOES NOT MEAN self-contained Special Ed classrooms.
- Parents CANNOT be required to medicate their child in order to get other services.
- Repeating a grade is usually NOT recommended unless there will be new interventions or supports in place.

Classroom Accommodations

- **Preferential Seating**. Sit in front, away from windows or doors, etc.
- **Additional Activity Breaks**. Allow child to stand, use a squeeze ball, ask to pass out papers, etc.
- Check-in regularly with child
- Break tasks and instructions into smaller parts.
- Provide organizational tools, such as checklists

Classroom Accommodations (2)

- Do NOT require child to miss recess to complete work
- Modify assignments – reduce number of items child has to complete
- Provide notes ahead of time
- Use planner for homework, tests, etc.
- Accommodations for testing

Interventions

- Pull out academic services in reading, writing, math (*if child has an additional learning disability*)
- Social skills group
- Classroom behavior interventions
- Time with counselor to address emotional difficulties

Interventions (2)

Curriculum Assistance

- Varies significantly in quality, goals
- Should provide organizational strategies to child, such as:
  - Effective use of a planner
  - Strategies to break projects into manageable parts
  - Time management strategies
  - Strategies to improve organization and efficiency in specific areas (e.g., writing, test taking, etc.)

Homework Strategies

- Break homework into smaller units of time, with a 5-minute break to snack or exercise.
- Avoid long breaks and breaks that are too stimulating (e.g., NO videogame breaks)
- Complete homework in a quiet setting
- Allow child to stand, pace, etc., as long as they are working
- Use a checklist to keep track of multi-step work

Case Scenarios

43

Scenario 1: Andrew

Use your chat box

a) What questions would you ask Andrew's parents?

b) What questions would you ask school staff?

c) What questions would you want answered at his medical home?

d) What info from this presentation would you want to be sure the family has?

Scenario 2: Ariana

Use your chat box

a) Which problem would you start with, and how would you identify it with Ariana?

b) How would you encourage Ariana to brainstorm and then evaluate possible choices with you?

c) How would you help her evaluate how her decision worked since you won't be seeing her for another few weeks?

d) What info from this presentation would you want to be sure Ariana and her family have?

45

Presenter Contact Info

Dr. Theodore Pikoulas
Community Care of North Carolina
tpikoulas@n3cn.org

Dr. Abby Pressel
Chapel Hill Pediatric Psychology
apressel@chppnc.com

Dr. Andrew S. Preston
Chapel Hill Pediatric Psychology
apreston@chppnc.com

Follow-up Document from the Webinar

ADHD: Medication and Treatment Considerations

Webinar delivered November 19, 2013

Follow-up document date: December 4, 2013

Presenters

COMMUNITY CARE OF NORTH CAROLINA
Theodore Pikoulas, PharmD, BCPP
Associate Director of Behavioral Health Pharmacy Programs

CHAPEL HILL PEDIATRIC PSYCHOLOGY
Abby Pressel, PhD
Psychologist

Andrew S. Preston, PhD
Psychologist

Produced by
Family and Children's Resource Program, part of the
Jordan Institute for Families
UNC-Chapel Hill School of Social Work

Sponsored by
NC Division of Social Services

Handouts. Be sure to consult the handouts for this webinar:
https://www.ncswlearn.org/ncsts/webinar/handouts/30_Webinar_Handouts_11-19-13.pdf

Recording. If you missed the webinar or want to view it again, you can access a recording of this event by going to: http://fcrp.unc.edu/videos.asp

Topics Covered in this Document

Answers and Resources from the Webinar

1. General Questions about ADHD

What are your thoughts on primary care providers diagnosing ADHD and PTSD instead of mental health professionals?

Primary care providers (PCPs) will always be the front line contact for most people with symptoms of ADHD. They also may be the ones managing medications for ADHD. These physicians must be knowledgeable about PTSD so that they can screen for whether it may be an issue in the presenting symptoms. If they have significant concerns that someone has PTSD in addition to or rather than ADHD, we recommend they refer the person to a mental health professional for a full evaluation.

Is there a consensus what is causing the rise of ADHD diagnoses or the prevalence of ADHD?

When ADHD/ADD is suspected it is important to ensure that the child is thoroughly evaluated. We must see the behavior in multiple settings, and get feedback from people who are familiar with the child in these settings. We need to get a clear sense of what is going on overall for the child (in terms of medical history, the family system, etc.).

At a national level, the increase in diagnoses of ADHD may be attributable to awareness increase. It may also be related to the kind of behaviors we are expecting from children in schools—the amount of focus, sitting still, lack of opportunities to move around. Schools have different expectations of children than they did 20 years ago. Several recently published articles have stated they believe the new DSM-5 diagnostic criteria will continue to increase ADHD diagnosis and prevalence.

How can we make sure we are not overlooking children with the "inattentive" type of ADHD?

This can be a concern, especially for girls who are more likely to have this type of ADHD. One recommendation is to pay attention to whether the child enjoys school and actually understands the material. If not, it's important to ask more questions and confer with the teacher to get a sense of what is making it difficult for the child to learn to their potential.

Is it true that the earlier ADHD is identified and treated, the more successful the child will be?

An appropriate diagnosis can help individuals as well as their parents and teachers to have a better understanding of the ADHD symptoms and help them to link the behaviors they observe to the diagnosis rather than attributing negative characteristics to the child. If children are better able to establish routines and learn ways to adapt and manage their symptoms, it is less likely they will miss content in class, fall as far behind, or lose confidence in their academic abilities.

2. Medication Questions

I understand that Welbutrin is used for ADHD. It is also used for depression. Are there any main differences in the doses?

Generally, higher doses (i.e., 450 mg) will be used for adults with depression, while lower doses (i.e., 3 mg/kg/day) will be used for children with ADHD or depression.

Should children on stimulants have regular EKGs?

EKGs do not need to be done routinely for every single child taking stimulant medication for ADHD. The decision to do an EKG should be made on a child-by-child basis by the child's medical provider. If the

child has a family history of cardiac problems or the child already has cardiac problems, it may be warranted.

Isn't Clonidine more for anxiety?

Immediate release clonidine is FDA approved to treat hypertension. The extended release version, Kapvay ®, is FDA approved to treat ADHD in children, which is typically given at lower doses (i.e., 0.05-0.4 mg per day). While clonidine can be used as an off-label medication to treat anxiety, physicians will typically try several other classes of medications (SSRIs, SNRIs, benzodiazepines, buspirone) before trying a medication like clonidine.

If a person takes medication for ADHD or ADD as a child, will he or she need to continue on medication as an adult as well?

It depends. As individuals mature, some feel they are able to manage their symptoms with behavioral strategies alone. Some may only utilize medication for certain situations, such as around midterms and final exams. Others find benefit from continuing medication on a daily basis.

Is it really true that at least half of meds our kids use are not FDA approved? Should we be concerned about this?

It is true that many medications used with preschool-aged children are administered "off-label." It is estimated that more than 75% of the prescriptions written for psychiatric illness in children and adolescents are "off-label" in usage (Nauert, R. "Psychotropic Medications Overused Among Foster Children." *PsychCentral*, 2008.There are medically appropriate reasons to prescribe one of the common off-label prescriptions for ADHD, including difficulty with side effects from FDA approved medication types. As with any psychotropic medication, it is good practice to ask the prescriber why the medication was selected, how it is to be given, what side effects to watch for, and how long it should take to see a benefit.

When asked about ADHD medication side effects they have seen or are concerned about, participants responded:

- Headaches
- Loss of appetite
- Drowsiness
- Stomach pain
- Chest pain
- Insomnia
- Increased heart rate
- Parents selling child's medication
- Irritability/moodiness
- Children act like zombies
- GI distress

3. Co-Occurring Disorders/Issues

What percentage of children has a dual diagnosis of ADHD and Autism Spectrum Disorder?

Generally speaking, a diagnosis on the Autism spectrum would preclude a diagnosis of ADHD—in other words, technically you cannot have both. Thus, a child with an ASD diagnosis might have behaviors common to someone with ADHD, but those would be attributed to the ASD.

That said, some children may have been diagnosed with both ASD and ADHD. For example, early on they may have been diagnosed with ADHD, but they have since been seen as having ASD.

Is it common for children with ADHD to have issues with hygiene?

This does occur. Problems with hygiene in children with ADHD can have different causes. It may be due to a sensory issue—for some children showering or bathing may be experienced as aversive/negative at a sensory level. But problems with hygiene can just as easily be due to difficulties with time management or inattention to detail. For these children, having a check-off list of self-care activities you need to do every morning when getting ready for school or each night before bed is very helpful.

How often does sensory integration disorder coexist with ADHD?

Sensory processing disorder is not recognized as a mental disorder in any of the medical manuals, such the DSM-5. That term, "sensory integration," is used more often in the context of Occupational Therapy (OT). That said, in our experience children with ADHD often have challenges related to sensory integration. In our practice we approach it as difficulty regulating reactions to stimuli.

Though we do see kids who have the sensory piece without ADHD, usually they are co-occurring. OT solutions ("wiggle seats," "bumpy seats," a "fidget" if they can hold it in their hands without distracting others, etc.) can be very helpful in the school setting).

4. Non-Pharmacological Interventions for ADHD

Does behavior modification—especially the use of charts and tokens—really work when used with teens?

For teens, checklists and calendars are usually more effective than charts. In addition, the strategies of cognitive behavioral problem-solving and social skills training covered in the slides can also work well for teens.

Behavior management strategies participants said they see families for children with ADHD:

- Behavior charts
- Sometimes families put their children in front of the television or give them a video game
- Using schedules to help organize their day
- Short simple requests not giving them complex lists of tasks, trying to keep it simple and concrete
- Checklists
- Involve children in sports or outside play to release energy
- Timers
- Immediate rewards
- Giving kids face-time
- Writing out lists on fridge
- Repetition
- Reminders

5. School Issues

In my experience classroom accommodations are tougher to put in place for older children (i.e., those in middle or high school). Is this true in your experience as well?

Definitely. We encourage parents to try to get accommodations put in place formally in writing as part of an IEP or 504 Plan. This is true even if you have a very supportive/accommodating teacher right now; next year the child may have a teacher who isn't so supportive and without a written plan it may be harder to get the child's needs met. Once you have a 504 or IEP, don't drop it if you can avoid it—it can be hard to recreate/restore.

I have a child that the school said they could no longer link his ADHD to a school deficit. They say his behaviors are not a reason for continuing his IEP, so they have dropped it. Can they do that?

Yes. Schools are able to drop a child's IEP if there are no perceived deficits at school. If you are working with parents and children in this situation, we suggest exploring the behaviors that are going on and what evidence you have for saying the IEP should continue. For example, the school may be persuaded to maintain the IEP if you can show that the child is experiencing stress/difficulty related to homework. Sources of information to draw on when making your case for keeping an IEP include observations from parents and teachers who are on the parents' side.

If the school ends the IEP and you can't get it back you may improve the situation by working harder at home. You also can bring representatives from the Exceptional Children's Assistance Center (ECAC, http://www.ecac-parentcenter.org/) or other advocates to meetings with the school. A 504 Plan may be a helpful second avenue to explore if your child's IEP comes to an end and the child still seems to need accommodations within the classroom.

Can you add writing assistance on the IEP for a child that has extreme handwriting issues?

Often it depends on the age of the child. If the child is very young, you may get help. If child is older, the best approach might be to seek accommodations (typing, dictating to adults who can write things down for them, etc.).

Some parents do not understand the tests and/or test results. Any advice for practitioners about working with these families?

Part of the job of an evaluator is to explain results in a way that parents understand. Encourage parents to ask for this for themselves, or if necessary you can ask on a parent's behalf for additional explanation in a follow up meeting or phone call. You can also help parents prepare a list of questions ahead of time, and encourage them to take notes if it would be helpful to remember key points or wording that may be new to them. Remind parents they have the right to ask as many questions as they need. If you can be present for the meeting when results are shared, you may be able to stop the conversation and check in with the parent if you sense that he or she is not understanding.

Particpant responses when asked if the families they work with are more likely to have IEPs or 504 plans:

- Mostly IEPs
- I think families are not aware of the 540
- Parents are also not aware they can request testing from the schools if they put that request in writing

6. Resources for Parents

Can you recommend any good books for parents on how to work with the ADHD/ADD child and create routines/consistency and modify behaviors?

We have included a list of recommendations on p. 10 of the handouts. Books by Russell Barkley, including those listed below, are particularly helpful for parents.

- *Taking Charge of ADHD* (Guilford Press, 2005)
- *Your Defiant Teen: 10 Steps to Resolve Conflict and Rebuild Your Relationship* (Guilford Press, 2008)
- *Executive Functions: What They Are, How They Work, and Why They Evolved* (Guilford Press, 2012)