A Closer Look: NH Primary Care Clinician Perspective on Caring for Pediatric Patients with ADHD

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University of New Hampshire
Objectives

1) Describe current background of ADHD including prevalence, costs, and clinical guidelines.

2) Examine the findings of NH primary care clinician survey to understand practice patterns, comfort level, and familiarity with family supports relative to caring for pediatric patients with ADHD.

3) Discuss recommendations to support primary care clinicians in caring for pediatric patients with ADHD.
DSM-5 criteria for ADHD

• Three subtypes, requiring >=6 inattentive and/or hyper/impulsive symptoms (>= 5 Inatt or Hyper-impulsive sx in adults)
  – Predominantly inattentive subtype
  – Predominantly hyperactive-impulsive subtype
  – Combined subtype

• Onset before 12 y.o.

• Clinically significant impairment in ≥ 2 settings (home, school, peers, occupational)

• Not due to other medical or psychiatric disorder (e.g. anxiety, mood, substance use, intellectual impairment); Autism no longer exclusionary
ADHD prevalence & course

- **US Prevalence**: 8-11%; most common child/adolescent mental health disorder in primary care settings
- **Highly heritable** (> schizophrenia or autism); runs in families
- **Lasts into adulthood in >50%**, impairment in multiple areas:
  - *Educational*: retention, attrition
  - *Occupational*: unemployment, job loss
  - *Social*: peer relation problems; earlier, unprotected sex; marital problems; victimization
  - *Societal*: legal trouble; driving accidents; accidental deaths
  - Increased risk of suicide: 3.1X

James et al. (2004), Acta Psychiatrica Scandinavica 100: 405-15
ADHD: Social, Emotional, and Cognitive Consequences

Barkley RA. Attention-Deficit Hyperactivity Disorder: A Handbook for Diagnosis and Treatment; 1998.
ADHD often comorbid

- 2/3 of ADHD youth have at least 1 comorbid disorder
- Oppositional defiant (ODD) (45%) or conduct disorder (CD) (15%)
- Anxiety disorders (25%), especially in younger kids
- Major depressive disorder (MDD) (25-40%) in teens, MDD by young 5.5X increased risk, ~4-5 years after onset of ADHD.
- Bipolar (6-20%), especially with bipolar parents
- Learning or language disorders (8-54%)
- Drug or alcohol use disorders
- Early ADHD treatment reduces risk for MDD or SUD

Attention Deficit Hyperactivity Disorder (ADHD): Survey Report

NH Pediatrician and Family Physician Practice Patterns, Comfort Level, and Support Needs Relative to Pediatric ADHD

December 2017
Purpose & methods

• To understand practice patterns, comfort level, and support needs relative to caring for pediatric patients with ADHD.

• A web-based survey sent to pediatric and family physicians in late spring 2016
  – Direct emails
  – NH Academy of Family Physicians listserv
  – NH Pediatric Society listserv
## Demographics

<table>
<thead>
<tr>
<th>Current Area of Practice</th>
<th>Sample Size</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Medicine</td>
<td>65</td>
<td>47%</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>63</td>
<td>46%</td>
</tr>
<tr>
<td>Combined Internal Medicine and Pediatrics</td>
<td>7</td>
<td>5%</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Years Practicing Medicine</th>
<th>Sample Size</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-15 Years</td>
<td>59</td>
<td>43%</td>
</tr>
<tr>
<td>16+ Years</td>
<td>78</td>
<td>57%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Currently Managing Pediatric Patients with ADHD</th>
<th>Sample Size</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>124</td>
<td>91%</td>
</tr>
<tr>
<td>No</td>
<td>13</td>
<td>9%</td>
</tr>
</tbody>
</table>
## Overall findings

<table>
<thead>
<tr>
<th>Practice Patterns</th>
<th>Strengths</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• High use of rating scales to diagnose ADHD*</td>
<td>• Low use of rating scales to monitor treatment response*</td>
</tr>
<tr>
<td></td>
<td>• Majority report seeing youth within 30 days of medication initiation**</td>
<td>• identify co-occurring disorders*</td>
</tr>
<tr>
<td></td>
<td>• Few report seeing youth for recommended monitoring care**</td>
<td>• Low use of algorithms for selecting medications</td>
</tr>
</tbody>
</table>

| Clinician Comfort | | |
|-------------------| | |
|                   | • Comfortable managing patients 6 years and older with ADHD without co-occurring disorders | • Uncomfortable managing children under six with ADHD without co-occurring disorders |
|                   | | • patients with ADHD plus co-occurring disorders as number and severity of disorders increases |
|                   | | • Difficulty managing care of patients with complex family dynamics |

| Family Supports | | |
|-----------------| | |
|                   | • Fairly comfortable answering family questions about school support & behavior therapy | • Lower comfort answering family questions about alternative approaches & managing challenging behaviors |
|                   | | • Just over half report having a local support group to refer a family |

* AAP and AAFP guidelines for ADHD care  ** NCQA quality metric for ADHD
Use of teacher and parent-reported rating scales in *diagnosis* of ADHD
Use of teacher and parent-reported rating scales to monitor ongoing response to treatment
Use of child, teacher, and parent-reported rating scales to screen for *other psychiatric diagnoses*

- **Child-reported (N=56)**
  - Don't Use: 52%
  - 1-25%: 9%
  - 26-50%: 18%
  - 51-75%: 13%
  - 76-100%: 9%

- **Teacher-reported (N=55)**
  - Don't Use: 62%
  - 1-25%: 4%
  - 26-50%: 5%
  - 51-75%: 9%
  - 76-100%: 20%

- **Parent-reported (N=56)**
  - Don't Use: 43%
  - 1-25%: 5%
  - 26-50%: 14%
  - 51-75%: 14%
  - 76-100%: 23%
<table>
<thead>
<tr>
<th>Rating Scale (N=56)</th>
<th>Informant</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Parent</td>
</tr>
<tr>
<td>Vanderbilt</td>
<td>64%</td>
</tr>
<tr>
<td>Conners</td>
<td>36%</td>
</tr>
<tr>
<td>ASEBA(^1)</td>
<td>2%</td>
</tr>
<tr>
<td>SNAP-IV</td>
<td>9%</td>
</tr>
<tr>
<td>CDI(^2)</td>
<td>14%</td>
</tr>
<tr>
<td>PHQ-9</td>
<td>38%</td>
</tr>
<tr>
<td>GAD-7</td>
<td>-</td>
</tr>
<tr>
<td>SCARED(^3)</td>
<td>9%</td>
</tr>
<tr>
<td>MFQ(^4)</td>
<td>5%</td>
</tr>
</tbody>
</table>

1. Achenbach System of Empirically Based Assessment
2. Child Depression Inventory
3. Screen for Child Anxiety & Related Emotional Disorder
4. Mood & Feelings Questionnaire
Use of *treatment algorithms* to guide pharmacological treatment for pediatric patients with ADHD
Pediatric patients starting an ADHD medication seen within 1 month and 3 times within the first 9 months

One month (N=56)

- 5% Don't Do
- 5% 1-25%
- 21% 26-50%
- 68% 51-75%
- 0% 76-100%

3 times in the first 9 months (N=56)

- 23% Don't Do
- 2% 1-25%
- 7% 26-50%
- 20% 51-75%
- 48% 76-100%
Comfort level managing different age groups with only ADHD

- **Adolescents 13 years and up (N=55)**
  - Low: 5%
  - Somewhat Low: 36%
  - Somewhat High: 58%

- **Children 6-12 years (N=55)**
  - Low: 7%
  - Somewhat Low: 13%
  - Somewhat High: 35%
  - High: 45%

- **Children 5 years and younger (N=55)**
  - Low: 53%
  - Somewhat Low: 31%
  - Somewhat High: 15%
  - High: 2%
Comfort level managing pediatric patients with only ADHD and those with ADHD and co-occurring conditions

- ADHD only (N=55): 5% Low, 38% Somewhat Low, 56% Somewhat High
- ADHD + Depression (N=55): 11% Low, 36% Somewhat Low, 47% Somewhat High, 5% High
- ADHD + Oppositional Defiant Disorder (N=55): 36% Low, 35% Somewhat Low, 27% Somewhat High, 2% High
- ADHD + Drug use (N=55): 55% Low, 33% Somewhat Low, 9% Somewhat High, 4% High
- ADHD + Autism (N=54): 67% Low, 28% Somewhat Low, 4% Somewhat High, 2% High
- ADHD + Bi-polar disorder (N=54): 83% Low, 15% Somewhat Low, 2% Somewhat High, 2% High
<table>
<thead>
<tr>
<th>Activity</th>
<th>Low (0%)</th>
<th>Somewhat Low (10%)</th>
<th>Somewhat High (50%)</th>
<th>High (100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Giving guidance about school supports (N=55)</td>
<td>18%</td>
<td>22%</td>
<td>42%</td>
<td>18%</td>
</tr>
<tr>
<td>Helping parents manage challenging behaviors (N=55)</td>
<td>11%</td>
<td>42%</td>
<td>40%</td>
<td>7%</td>
</tr>
<tr>
<td>Answering questions about alternative medicine approaches (N=55)</td>
<td>27%</td>
<td>35%</td>
<td>22%</td>
<td>16%</td>
</tr>
<tr>
<td>Answering questions about behavior therapy (N=54)</td>
<td>13%</td>
<td>28%</td>
<td>31%</td>
<td>28%</td>
</tr>
</tbody>
</table>
Have local parent/family support services to refer parents of children/youth with ADHD

- Yes: 55%
- No: 11%
- Not sure/Don't know: 35%
Assessment of ADHD

- ADHD symptoms, impairment & age of onset criteria
- Screen for serious comorbidity needing treatment first (psychosis, bipolarity, severe depression, substance use, eating d/o)
- R/o medical causes or potential contra-indications to pharmacotherapy (e.g. seizures, structural heart problems); check vital signs; get labs if indicated
- R/o family history that might contraindicate a stimulant trial: first degree relative with early cardiac death or an active drug use disorder
- Mental status exam: signs of ADHD (not always evident), mood/anxiety, psychosis, tics
Assessment, continued

How do you do all of this in 15-30 minutes???
Use rating scales!!!

• Use to guide assessment, not to replace it
• Scales based on DSM-5 save time, improve diagnostic accuracy, and establish baseline level of severity
• Regular use over time informs treatment decisions and improves outcomes
• Rely on parent and teacher in particular to screen/monitor for ADHD & externalizing disorders
• Rely on parent and child in particular to screen for internalizing disorders (e.g. depression, anxiety, OCD)
Free scales in public domain, parent & teacher versions, endorsed by AAP and increasingly used in psychiatry

- Parent version: 47 items: ADHD, ODD, CD, mood/anxiety symptoms (sxs)
- Teacher version: 35 items: ADHD, ODD /CD, & mood/anxiety sxs

Count clinically significant sxs (2 “often” or 3 “very often”) in various symptom groups

Use as a primary screen, then supplement with other more specific measures (e.g. for depression, mania, anxiety disorders, OCD) as needed

Full scales and scoring guides on-line
Other scales

• Depression
  – Adolescent and Parent PHQ-9
  – Child or Adolescent and Parent: Mood & Feelings Questionnaire

• Manic or Psychotic symptoms
  – Adolescent and Parent Mood Disorder Questionnaires

• Substance/Alcohol use
  – CRAFFT: adolescent self-report

• Anxiety
  – Child and Parent SCARED ratings: 41 items
  – Symptom clusters: A) panic, B) generalized anxiety, C) separation anxiety, D) social anxiety, E) school phobia.

• ADHD Rating Scale Self Reports:
  – For adults, 18 DSM sxs of ADHD: 6-item screener & 12 additional items if needed

Syllabus includes measures and scoring info
# PHQ-9 Adolescent Report

For Youth at least 11 years old to complete

<table>
<thead>
<tr>
<th>Name:</th>
<th>Date of Birth:</th>
<th>Today’s Date:</th>
</tr>
</thead>
</table>

**How often have you been bothered by each of the following symptoms during the past 2 weeks?** For each symptom, put an “X” in the box beneath the answer that best describes how you have been feeling:

<table>
<thead>
<tr>
<th>Symptom</th>
<th>(0) Never</th>
<th>(1) Most of the Days</th>
<th>(2) More than Half the Days</th>
<th>(3) Nearly Every Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeling down, depressed, irritable or hopeless?</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Little interest or pleasure in doing things?</td>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Trouble falling asleep, staying asleep, or sleeping too much?</td>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Poor appetite, weight loss, or over-eating?</td>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Feeling tired, or having little energy?</td>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Feeling bad about yourself - or feeling that you are a failure; or that you have let yourself or your family down?</td>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Trouble concentrating on things like school work, reading, or watching TV?</td>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Moving or speaking so slowly that other people could have noticed; ...Or the opposite—being so fidgety or restless that you were moving around a lot more than usual?</td>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Thoughts that you would be better off dead, or of hurting yourself in some way?</td>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

10. **In the past year**, have you felt depressed or sad most days, even if you felt okay sometimes?
    - [ ] Yes
    - [ ] No

11. If you are experiencing any of the problems on this form, how difficult have these problems made it for you to do work, take care of things at home, or get along with other people?
    - [ ] Not difficult at all
    - [ ] Somewhat difficult
    - [ ] Very Difficult
    - [ ] Extremely Difficult

12. **Has there been a time in the past month** when you have had serious thoughts about ending your life?
    - [ ] Yes
    - [ ] No

13. **Have you EVER**, in your WHOLE LIFE, tried to kill yourself or made a suicide attempt?
    - [ ] Yes
    - [ ] No
### Mood and Feelings Questionnaire: Parent Version

This form is about how your child might have been feeling or acting recently. For each question, please check how much she or he has felt or acted this way in the past 2 weeks. If a sentence was true most of the time, circle 2 = TRUE. If it was only sometimes true, circle 1 = SOMETIMES. If a sentence was not true, circle 0 = NOT TRUE.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1 | He/she felt miserable or unhappy. | 0 | 1 | 2 |
| 2 | He/she didn't enjoy anything at all. | 0 | 1 | 2 |
| 3 | He/she felt so tired he/she just sat around and did nothing. | 0 | 1 | 2 |
| 4 | He/she was very restless. | 0 | 1 | 2 |
| 5 | He/she felt he/she was no good anymore. | 0 | 1 | 2 |
| 6 | He/she cried a lot. | 0 | 1 | 2 |
| 7 | He/she found it hard to think properly or concentrate. | 0 | 1 | 2 |
| 8 | He/she hated him/herself. | 0 | 1 | 2 |
| 9 | He/she felt he/she was a bad person. | 0 | 1 | 2 |
| 10 | He/she felt lonely. | 0 | 1 | 2 |
| 11 | He/she thought nobody really loved him/her. | 0 | 1 | 2 |
| 12 | He/she thought he/she could never be as good as other kids. | 0 | 1 | 2 |
| 13 | He/she felt he/she did everything wrong. | 0 | 1 | 2 |
| 14 | He/she was less hungry than usual. | 0 | 1 | 2 |
| 15 | He/she ate more than usual. | 0 | 1 | 2 |
| 16 | He/she felt grumpy and cross with you. | 0 | 1 | 2 |
| 17 | He/she didn't sleep as well as he/she usually sleeps. | 0 | 1 | 2 |
| 18 | He/she slept a lot more than usual. | 0 | 1 | 2 |
| 19 | He/she thought there was nothing good for him/her in the future. | 0 | 1 | 2 |
| 20 | He/she thought that life wasn't worth living. | 0 | 1 | 2 |
| 21 | He/she thought about killing him/herself. | 0 | 1 | 2 |
Now we'd like to ask you about other types of mood symptoms. Has there ever been a period of time when your child was his/her usual self and ...

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>... felt too good or excited?</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>2</td>
<td>... was so irritable that he/she started fights or arguments with people?</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>3</td>
<td>... felt he/she could do anything?</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>4</td>
<td>... needed much less sleep?</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>5</td>
<td>... couldn't slow his/her mind down or had thoughts race through his/her head?</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>6</td>
<td>... was so easily distracted by things?</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>7</td>
<td>... had much more energy than usual?</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>8</td>
<td>... was much more active or did more things than usual?</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>9</td>
<td>... had many boyfriends or girlfriends at the same time?</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>10</td>
<td>... was more interested in sex than usual?</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>11</td>
<td>... did many things that were were foolish or risky?</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>12</td>
<td>... spent too much money?</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>13</td>
<td>... used more alcohol or drugs?</td>
<td>no</td>
<td>yes</td>
</tr>
</tbody>
</table>

14 If you checked “YES” to more than one of the above, have several of these ever happened to your child during the same period of time? | no | yes |

15 How much of a problem were any of these to your child—school problems, failing grades, problems with family and friends, legal troubles? Please circle one response only:

<table>
<thead>
<tr>
<th>No problem</th>
<th>Minor Problem</th>
<th>Moderate Problem</th>
<th>Serious Problem</th>
</tr>
</thead>
</table>

16 Has there ever been a period of time when your child ...

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>... had suspicious or strange thoughts others didn't think were true</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>17</td>
<td>... heard voices that nobody else could hear</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>18</td>
<td>... saw things that nobody else could see</td>
<td>no</td>
<td>yes</td>
</tr>
</tbody>
</table>
General interventions

• Encourage school evaluation for 504/IEP
• Helpful websites for parents:
  – ADDitude.com
  – NICHQ.com
• Therapists especially helpful regarding behavioral strategies for externalizing and/or individual therapy for internalizing comorbidities
• Use nursing and support staff to insure med compliance and monitoring, and help refer to other resources in community
Texas medications algorithms for ADHD & comorbidity

• Consensus panel of experts reviewed available medical literature

• Offered medication algorithms for various presentations of ADHD and comorbidity:
  – ADHD alone
  – ADHD + Anxiety
  – ADHD + MDD
  – ADHD + Aggression
  – ADHD + Tics

Pliszka et al. (2000), JAACAP, 39(7):908-19
Pliszka et al. (2006), JAACAP, 45(6): 642-57
Case #1: ADHD + Aggression

11 year old boy referred by his “play therapist” for chronic h/o ADHD and increasing CD symptoms confirmed by mom’s and teacher’s Vanderbilts. He is having severe aggressive outbursts toward peers (when teased) or adults (when redirected). He’s had mild sleep latency. Otherwise, no sx’s c/w depression, mania, psychosis, or anxiety. No clear trauma history. PMH and ROS unremarkable. He’s had prior, brief trials by another PCP on Concerta at 27 mg (wasn’t helpful), and Seroquel 25-50 mg, which helped only with sleep.

What would you do?
ADHD + Aggression

- Step 1: Stimulant monotherapy
- Step 2: Add behavioral therapy
- Step 3: Add atypical antipsychotic
- Step 4: Add lithium or divalproex sodium

Now that FDA has approved extended-release guanfacine (Intuniv) and clonidine (Kapvay) for augmenting stimulant treatment, can also add alpha agonist between Steps 2 and 3

Pliszka et al. (2006), JAACAP, 45(6): 642-57
Case #2: ADHD + Depression

16 year old girl referred by parents for concerns about school failure and moodiness. Parent/teacher Vanderbilts: 6/4 inattentive and 5/1 hyper-impulsive sx. Main stressor is school failures and conflicts with parents about them. She was offered a stimulant trial in 4th grade but parents declined. She has had one prior episode of MDD 2 years ago related to break-up with boyfriend. Today’s PHQ-9 scores are in the mild – moderate range (9 and 11), with depressed/irritable moods, anhedonia, and concentration problems. No lifetime h/o suicidal ideations/behaviors, substance use, or other psychiatric history.

What would you do?
ADHD + MDD

Refer to therapist; If desired by patient and family, start medication treatment for more severe condition:

• If ADHD > MDD (e.g. Case #2):
  – Step 1: Start stimulant per ADHD algorithm (Pliszka et al., 2006); 75% will stay at this step (Emslie et al., 2004)
  – Step 2:
    • If depression persists, add SSRI per MDD algorithm
    • If Depression or ADHD worsens, switch to SSRI

• If MDD > ADHD:
  – Step 1: Start with SSRI per MDD algorithm
  – Step 2: Add stimulant if ADHD remains (usually does)

When to refer to a child/adolescent psychiatrist?

• ADHD and/or comorbidity refractory to first few steps of treatment algorithm
• Unusual or intolerable side effects
• Significant depression or suicide risk
• Psychosis or bipolar disorder
• Second opinion or curb-side consult for things beyond your “comfort range”
Concluding remarks

• ADHD the most common psychiatric disorder in primary care
• Work up should assess for comorbidity, and medical causes or contra-indications to meds
• Use parent and teacher rating scales to assess, monitor, and optimize response
• Med treatment (especially with stimulants) usually effective with appropriate dosing, even with most comorbidities
• Exceptions: severe depression, bipolarity, psychosis, substance use disorders
Discussion

• How would you like to be supported?
  – Project ECHO model
    • Collaborative model of medical education and care management that empowers clinicians everywhere to provide better care to more people, right where they live.
  – Learning collaborative
  – Online toolbox of resources (screening tools, registries, etc.)
Contact Us

- Dr. Daviss William.B.Daviss@hitchcock.org
- Molly O’Neil molly.oneil@unh.edu

For the full report go to: https://www.nhpip.org/Publications