My Teen is Allergic to School
Practical Strategies for Primary Care

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Conflicts of Interest
• No conflicts to disclose
• No discussion of off-label use of medications anticipated
  – If any off-label use comes up in discussion, I will make a good-faith attempt to identify when this occurs

Learning objectives
• Better appreciate the diversity of interacting factors that can contribute to “school allergy”
• Become more confident in guiding youth and their families in choosing how best to address school underperformance in his or her community
• Improve his or her ability and willingness to work collaboratively with mental health clinicians and school professionals to optimize outcomes
• More fully appreciate how current financial incentives are aligned against collaboration across disciplines

Teenagers: the bottom-line
• Experience full range of emotions
• Limited life-experience
• Sleep deprived
• Complex social/family pressures
• Egocentric
• Optimistic risk assessment
• Access to lethal substances and activities

Overview of Today’s Session
• Patient, not disorder-focused
• Provide approach to help a teen and his/her family to overcome “school allergy”
• Case-based
• Interactive

Practical Strategies for Intervention: School Allergy
• Diagnostic possibilities
• Screening
• Diagnostic assessment
• Adolescent Functional Snapshot
• Treatment planning
• Intervention
• Consolidation
• Monitoring
Diagnostic Possibilities

- Anxiety disorders
- Depression
- Bipolar illness
- ADHD
- Learning disabilities
- Substance abuse
- Family systems issues
- Abuse/traumatic events
- Medical illness
- Bullying

Strategies for screening for Psychosocial problems

- For preventive visits, use some form of a questionnaire
  - GAPS questionnaire
  - Computer-assisted preventive visits
  - PDA
  - Web-based
- Ask about mood, sleep, focus, confidence among other dimensions during interview
  - "Where’s your stress level?"
  - HEADSS
  - f/u with comprehensive tool

Functional Assessment

- Home
- Education
- Activities
- Drugs/drinking/driving
- Sex
- Suicide

Screening for Psychosocial Problems in Primary Care

- Two Examples:
  - Affective problems
  - Substance abuse

Study participants

- 10 practices
  - 5 pediatric
  - 3 family practice
  - 2 mixed
- 36/40 clinicians completed surveys
  - 26 physicians
  - 10 nurse practitioners
Adolescent Report

- Completed after the visit
- 24 multiple choice questions
- Brief health assessment based on “How’s Your Health”
- Report of health issues discussed
- Teen’s appraisal of the visit

Frequency topics discussed in preventive visits to NH primary care clinicians

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<th>Topic</th>
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<th>Previously</th>
<th>Never</th>
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<td>Sex</td>
<td>57</td>
<td>23</td>
<td>20</td>
</tr>
<tr>
<td>Mood</td>
<td>50</td>
<td>22</td>
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Identification of teens with mood problems

- 6.6% (11 of 167) reported feeling “anxious, depressed, irritable, sad, or downhearted and blue” most or all of the time
- Of these 11, 6 reported talking to their clinician at the index visit (55%)

Identification of teens with mood problems

- Clinicians identified mood as a problem in only 2 of the 11 visits that teens reported mood problems most or all of the time (18%)
- Both of these teens reported discussing mood with their clinician
- Clinicians also identified mood as a problem in 17%, 4%, and 0% of teens reporting affective symptoms some of the time, a little of the time, and none of the time

Practice factors predicting improved identification

- Teens using practices that used either a chart prompt or screening questionnaire were 2.25 times (CI 1.14-4.45, p=.01) more likely to report discussing mood

How is our current system working for identifying SUD?

- 533 adolescents recruited from a general adolescent medicine clinic in Boston
- Clinician report compared with Adolescent Diagnostic Interview
- Primary care clinicians’ sensitivity for identifying any use was 63%
- Sensitivity to identify adolescents with problem use, abuse or dependence was only 28/187 or 15%

Wilson et. al. in Pediatrics 2004
"We found that most pediatricians significantly underestimate the severity of adolescent substance use."

Celeste R. Wilson, from 2004 study at BCH Adolescent/Young Adult Clinic

**Diagnostic Process:**

**Key Themes**

- Think broadly-biopsychosocial perspective
- Carefully screen for and follow-up with diagnostic evaluations for difficulties for which effective interventions exist
- Use a broad-based data collection tool
- Obtain appropriate diagnostic evaluations

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**Assessment Visit**

Integrate:

- Second level tools for diagnostic visits
  - Conner's
  - Achenbach
  - GAIN
  - BASC
- Psychoeducational assessments
- Family reports
- Community connections
- Interview and examination

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**Center for Adolescent Health**

**Principles of Behavioral Health Care**

1) timely
2) strength-based
3) patient- and family-centered
4) integrated with other aspects of health care
5) evidence-based when feasible
6) outcomes-driven.

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**Adolescent Functional Snapshot**

- Based on the Child and Adolescent Needs and Strengths (CANS)
- 25 functional domains
- Each domain scored 0-3
  - 0 (no problem or asset)
  - 1 (deserves watching or potential asset)
  - 2 (problem needing to be addressed or relative weakness)
  - 3 (problem needing urgent or priority attention or not an asset)

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**Treatment of School Allergy**

- Goals
  - Shared goals
  - Includes:
    - Healthy developmental trajectory
    - Avoiding the "irreversibles"
    - Relieve symptoms
Treatment Planning

- Process involving the adolescent, his or her family and clinical team
- Realistic about available community resources
- Chose those interventions that best match the adolescent’s and family’s needs, strengths and preferences

Consolidation and Monitoring

- Making recommendations is not enough
- Many adolescents and families seek care when in crisis, but then do no follow through once crisis passes
- Typical care involves the parents providing the care management
- High risk adolescents and their families often benefit from a more proactive approach

Case 1
Spacey Steve

Case 2
Anxious Annie

Case 3
The Situation

Treatment Plan

- Biopsychosocial approach
  - Education
    - Individual
    - Family
  - Natural supports
  - School interventions
  - Psychotherapy
    - Individual
    - Family
  - Pharmacotherapy
ADHD Slides

What is ADHD?

- The name is not as important as the key concept of inattention.
- Minimal Brain Dysfunction (MBD) was an early name.
- Others include Hyperactive Child Syndrome
- Attention Deficit Disorder (ADD) was introduced in 1980
- Attention Deficit Hyperactivity Disorder (ADHD) since 1994

ADHD Overview

- Revolution in neuroscience
- Epidemiology of ADHD
- Impact on life
- Diagnosis
- Treatment options

Revolution in Neuroscience

- Molecular genetics
  - #2 "Scientific Breakthrough" by Science
  - Specific genes associated with schizophrenia, depression and bipolar
  - Mechanisms
- Functional MRI and PET scans
  - Neural pathways
- Neurogenesis

PET Scan of ADHD

Smaller right caudate nucleus in ADHD
Epidemiology

- Prevalence of ADHD among elementary school children is between 3% and 10%
- 50% decline in diagnosis after 5 years
  - Attentional span increases with age
  - Academic demands increase with age
- Prevalence in adolescence is not well defined

Outcomes of untreated ADHD

- School underachievement
- Depression
- Substance abuse
- Conduct disorder
- Relationship problems
- Legal consequences
- Trauma

Substance Abuse and ADHD

Outcomes of untreated ADHD

- Stress and the developing brain
  - Increased cortisol
  - Shrinking of hippocampus
  - Animal studies demonstrate long-lasting behavioral impact of neglect
  - “Privileged” rats have thicker cortex than “deprived”

Identification and Diagnosis

- Is there a functional problem?
- What is the nature of the problem?
- What is the severity of the problem?
- What factors contribute to this problem?

Diagnosis:

Attention-Deficit/Hyperactivity Disorder

- Three domains:
  - distractibility
  - impulsivity
  - hyperactivity
Diagnostic criteria:
Attention-Deficit/Hyperactivity Disorder

- Predominantly Inattentive Type
- Hyperactive-Impulsive Type
- Combined type
- NOS
- In partial remission

Characteristics of ADHD-hyperactive/impulsive

- Restless and fidgety
- Bugs other people
- Interrupts
- Often gets into trouble
- Older kids and teens may report more restlessness than the hyperactivity seen in earlier years

Adapted from DSM-PC

Characteristics ADHD-predominantly inattentive

- School and social problems
- Easily distracted
- Gives up easily
- Shifts activities
- Fails to complete tasks
- Messy and careless
- Doesn’t listen to instructions
- Plunges into tasks
- Mind elsewhere
- Difficulty organizing
- Dislikes activities that require attention
- Often forgetful

Adapted from DSM-PC

Differential Diagnosis and Co-morbidity

- Anxiety disorders
- Bipolar illness
- Depression
- Learning disabilities
- Substance abuse
- Family systems issues
- Abuse/traumatic events
- Medical illness

Diagnosis:
Attention-Deficit/Hyperactivity Disorder

- Interview
- School performance
- Questionnaires
  - CBCL
  - Conners’
  - ACTeRS
- Psychoeducational testing
- Computer

Treatment

- Goals
  - Relieve symptoms
  - Healthy developmental trajectory
  - Avoiding the “irreversibles”
Medications?

Treatment Plan

• Biopsychosocial approach
  – Education
    • Individual
    • Family
  – Support
  – School interventions
  – Nutrition
  – Exercise
  – Psychotherapy
  – Pharmacotherapy

Selecting appropriate medicines

• Carefully define target symptoms and severity
• Chose medications likely to address the important symptoms
• Side-effects and safety issues
• Adequate dose for adequate duration
• Careful follow-up

Psychopharmacology

• Efficacy
• Safety
  – Teratogenicity
  – Overdose
  – Interactions
  – Long-term effects
• Side effects
• Cost

Stimulants

• Methylphenidate and derivatives
  – short-acting
  – long acting
• Amphetamine and derivatives
  – short acting
  – long acting

Atomoxetine

• SNRI
• Sometimes very helpful, often if co-morbid anxiety
• Most don’t stick with it
• Tastes terrible
• Need to take every day
Alpha-noradrenergic antagonists

- Clonidine (Catapres)
  - tablets
  - patches
- Guanfacine (Tenex, Intuniv)

Tricyclic Antidepressants

- imipramine (Tofranil)
- desipramine (Norpramin)
- nortriptyline (Pamelor)

Others

- buproprion (Wellbutrin)
- trazodone (Desyrel)
- venlafaxine (Effexor)

The Take-Home Messages

- ADHD is real
- Childhood ADHD often persists into adolescence and adulthood
- Multipronged approach to treatment
- The “right” medicine often determined by trial and error
- Collaboration with school, psychologist and physician critical

Depression Slides

Depression: Epidemiology

- Depression is common
  - 2% of school-age children
  - 5% of young adolescents
  - 8% of older adolescents
- More than 5000 youths commit suicide each year
- 7.7% of high school students report attempting suicide within 12 months
Depression Natural History

- Mean length of untreated episodes is 7-9 months
- Recurrences are common
  - 40% within 2 years
  - 70% within 5 years
- Kindling
- Developmental impact/sequelae

Depression Diagnosis

- DSM IV
  - diagnostic criteria for disorders
- DSM PC
  - continuum from developmental variations to problems to disorders
  - environmental influences
  - severity based on symptoms, functioning, burden of suffering and risk/protective factors

Depression in Adolescence

- Irritability
- Hopelessness
- Anhedonia
- Tearfulness
- Low self-esteem
- Feeling unloved
- Separation anxiety
- Phobias
- Sleep problems
- Eating changes
- Fatigue/lethargy
- Somatic complaints
- Declining school performance
- Behavioral disturbances

Bipolar disorder

- Controversial whether chronic irritability and explosiveness meets definition of bipolar
  - geographic differences
- No controlled studies for the treatment of juvenile bipolar
- Mania may be induced by SSRI’s in susceptible individuals

Depression Psychotherapy

- Few controlled studies
- Individualized plan
  - Cognitive-behavioral therapy
  - Individual therapy
  - Group therapy
  - Family interventions

Depression Psychopharmacology

- Efficacy
- Safety
  - Teratogenicity
  - Overdose
  - Interactions
- Side effects
- Cost
- SSRIs
- Bupropion
- Tricyclics
- Trazodone
- Others
Medication treatment

• 5 controlled trials demonstrating benefit of SSRI’s versus placebo (2 fluoxetine, paroxetine, citalopram, sertraline)
• No controlled studies with other agents
• Antidepressants can precipitate mania in adolescents
• 20+% of children and adolescents with depression eventually will have bipolar

Controlled trials

• Two studies of the use of fluoxetine for the treatment of adolescents with depression
  • Emslie 1997
    – 97 subjects received 20mg fluoxetine
    – 56% positive response vs 33% with placebo
  • Emslie 2002
    – 219 subjects with 20 mg fluoxetine
    – 41% remission vs 20% placebo

Controlled trials

• Paroxetine trial-Keller 2001
• Response rates:
  Paroxetine Imipramine Placebo
  10-40mg/day 200mg/day
  63% 50% 46%
• High dropout rate on imipramine

Controlled trials

• Citalopram-Wagner 2001 abstract
• 174 outpatients 7-17 years
• 8 week trial
• Citalopram 20-40mg or placebo
• Evidence of benefit

Controlled trials

• Sertraline-Donnelly 2001
• Multicenter study with 376 ages 6-17
• 10 week DBPC trials
• 50-200mg/day
• Significantly improved CDRS-R scores vs placebo
• GI side effects more common in sertraline

Treatment

“Treatment response” is not the same as “remission”
Medications for adolescent depression

- SSRI’s with growing evidence of effectiveness, albeit limited benefit
- Developmental differences from adult depression
  - difficult to diagnose as adolescents not clear about own feelings
  - less robust response to medication
  - complex web of psychosocial factors
  - prevalence of bipolar disorder

Medications for Adolescent Depression

- Potential for activation with SSRI’s
- Bupropion may be less likely to activate mania, however no studies in adolescents
- Other agents used often in the absence of solid data.
- Any agent may benefit the patient, but be alert that it might also make things worse

Promoting Healthy Decision-making

- Feedback
- Responsibility
- Advice
- Menu
- Empathy
- Self-efficacy

- Assess
- Advise
- Agree
- Assist
- Arrange

The Take-Home Messages

- Depression is common
- Primary care clinicians can identify and diagnose depression
- Treatment needs to be goal-directed and interdisciplinary
- Support individual and family decision-making
- Provide follow-up