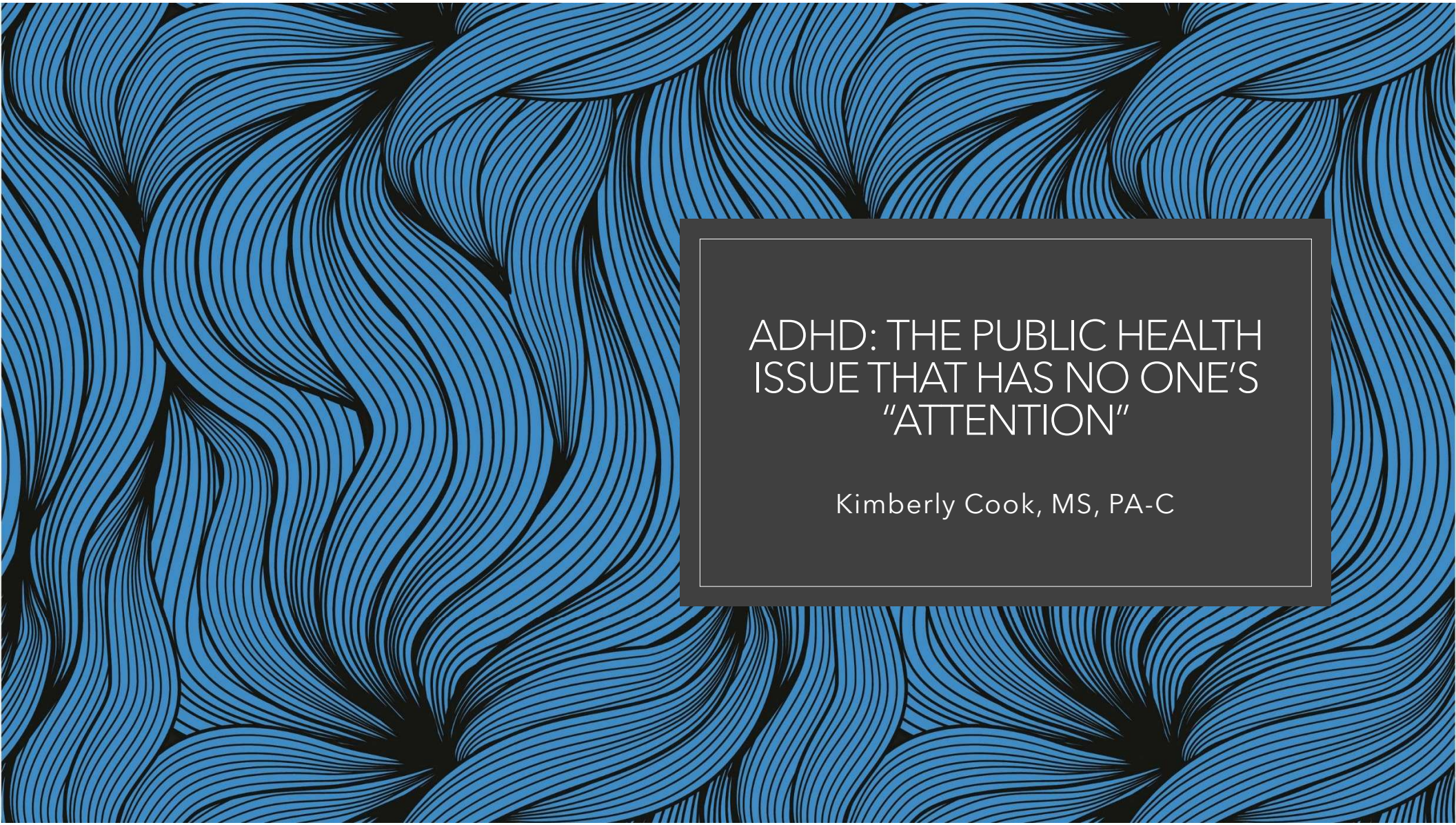


ADHD: THE PUBLIC HEALTH ISSUE THAT HAS NO ONE'S "ATTENTION"

Kimberly Cook, MS, PA-C

- I do not have any financial interests or relationships to disclose.

Objectives

- 1. Define and discuss current public health concerns and look at why ADHD is as well.
- 2. Discuss the manifestations of unmanaged ADHD
- 3. Identify the contributing factors as to why ADHD isn't properly recognized/treated
- Review ADHD clinical features, diagnostic criteria in children and adults, and management
- 5. Theorize what can be done to help educate clinicians and the public about what ADHD actually is.

ATTENTION, BUT NOT THE RIGHT KIND…

Public Health Issues Search

UpToDate

- Lesbian, gay, bisexual, and other sexual minoritized youth
- Prenatal care
- Health concerns following a disaster
- Public health issues in thalassemic syndromes
- Confidentiality in adolescent health care
- Overview of occupational and environmental health
- Health care of people experiencing homelessness in the US
- Vaping and e-cigarettes
- Physician-assisted dying
- Sickle cell disease in sub-Saharan Africa

University of Rochester-Medical Center

Top 10 Most Common Health Issues

- Physical Activity and Nutrition
- Overweight and Obesity
- Tobacco
- Substance Abuse
- HIV/AIDS
- **Mental Health**
- Injury and Violence
- Environmental Quality
- Immunization
- Access to Health Care

Goodwin University

- Covid-19
- **Mental Health Conditions**
- Alcohol & Substance abuse
- Food safety
- Healthcare-associated infections
- Heart disease and stroke
- HIV
- Motor vehicle injuries
- Nutrition, physical activity, and obesity
- Prescription drug overdose

Mental Health Public issues search

- Very Well Health: A Comprehensive List of the Most Common Mental Health Disorders
  - Anxiety disorders
  - Eating disorders
  - Mood disorders
  - Personality disorders
  - Trauma- and stressor-related disorders
  - Psychotic disorders

Web MD
"Mental Health Resource Center":

- Substance Abuse and Addiction
- Depression
- Schizophrenia
- Anxiety and Panic disorders
- Bipolar Disorder
- Postpartum Depression
- Eating disorders
- Social media and mental health

- NIH: Common Mental Health Disorders: Identification and Pathways to Care.
  - This guideline is concerned with the care and treatment of people with a common mental health disorder, including:
    - Depression
    - Generalized Anxiety Disorder (GAD)
    - Panic disorder
    - Phobias
    - Social anxiety disorder
    - Obsessive-compulsive disorder (OCD)
    - Post-traumatic stress disorder (PTSD)

Rates of Mental Health conditions in the U.S.

- ADHD: 10% children, 4.4% adults
- Depression: 10%
- Generalized anxiety disorder: 2.7-3.1%
- Panic disorder: 2.7%
- Social anxiety disorder: 4-10%
- Specific phobia disorder 3.5-8.7%
- Bipolar disorder: 2.8%
- Schizophrenia: <1%

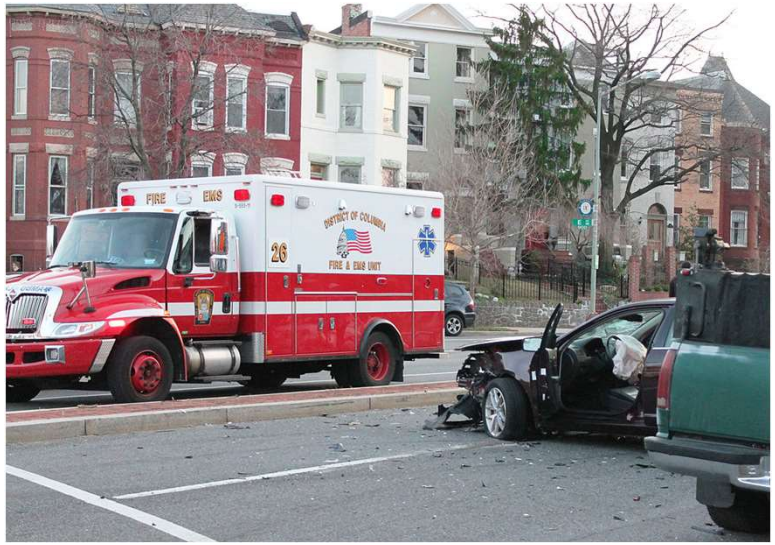
- Taken from UpToDate

Criteria for public health issues

- 1. Preventability
- 2. **High prevalence of a risk factor or disease**
- 3. **A rapid increase in incidence and prevalence**
- 4. **Cost of the disease**
- 5. **Burden of disease**
- 6. **Has the capability of affecting the population as a whole**
- 7. **Will require group action to solve**
- 8. **Ability to recognize the problem unhindered by obstacles posed by culture, politics, lack of resources, or lack of effective measures**

ADHD-Public health issue

- ADHD is a public health concern due to its morbidity/mortality in children and adults.
  - Lost productivity/income from work
  - Adolescents with ADHD: 1/3 don't graduate HS
  - Young adults with ADHD: 8x more likely to receive government assistance.
  - Overall national annual incremental costs of ADHD in adults=up to $194 billion



ADHD-Public health concern

(2012) Klein, Mannuza, & colleagues

- The longest follow-up study to date of children with ADHD into midlife showed:
  - Twice as many had died by age 41 than the control group. (7.2% vs 2.8%)

Other studies=similar outcomes:

- Dalsgaard et al. (2015)
  - Children with ADHD: nearly twice as likely to die in childhood
  - Adults with ADHD are 4x as likely to die by midlife than their neurotypical peers
- London & Landes (2016): In any 4-year period of time, adults with ADHD are nearly twice as likely to die.

Adult ADHD-a public health concern

Childhood

- Pts. with ADHD (combined-type) in childhood
  - 8.4-year reduction in life expectancy

Persistence into adulthood

- 11.1-year reduction in life expectancy

- In comparison to other chronic health conditions:
  - Obesity
    - 4.2-year reduction in life expectancy
  - Smoking 20+ cigarettes/day
    - 6.8-year reduction
  - Elevated blood pressure
    - 5.2-year reduction
  - Excessive alcohol use
    - 2-year reduction (M)/0.4-year reduction (F)
  - Substance use disorder
    - 10-year reduction

Study by Dr. Russell Barkley

Factors contributing to reduced estimated years of remaining life

- Reduced education
- Lack of high school graduation
- Lower annual income
- Poorer overall health
- Greater alcohol consumption
- Reduced sleep
- Increased risk of smoking
- Adverse driving consequences

Barriers to ADHD recognition/treatment

- There has been significant neglect of recognition/diagnosis in primary care.
- Inadequate training in medical programs
- The US has no evidence-based recommendations for psychiatrists, PCPs
- By the time it's recognized, other comorbidities mask it
- General misunderstanding as to what the condition really is
- Improperly named
- Stigma

What would be the benefit of being a recognized public health issue?

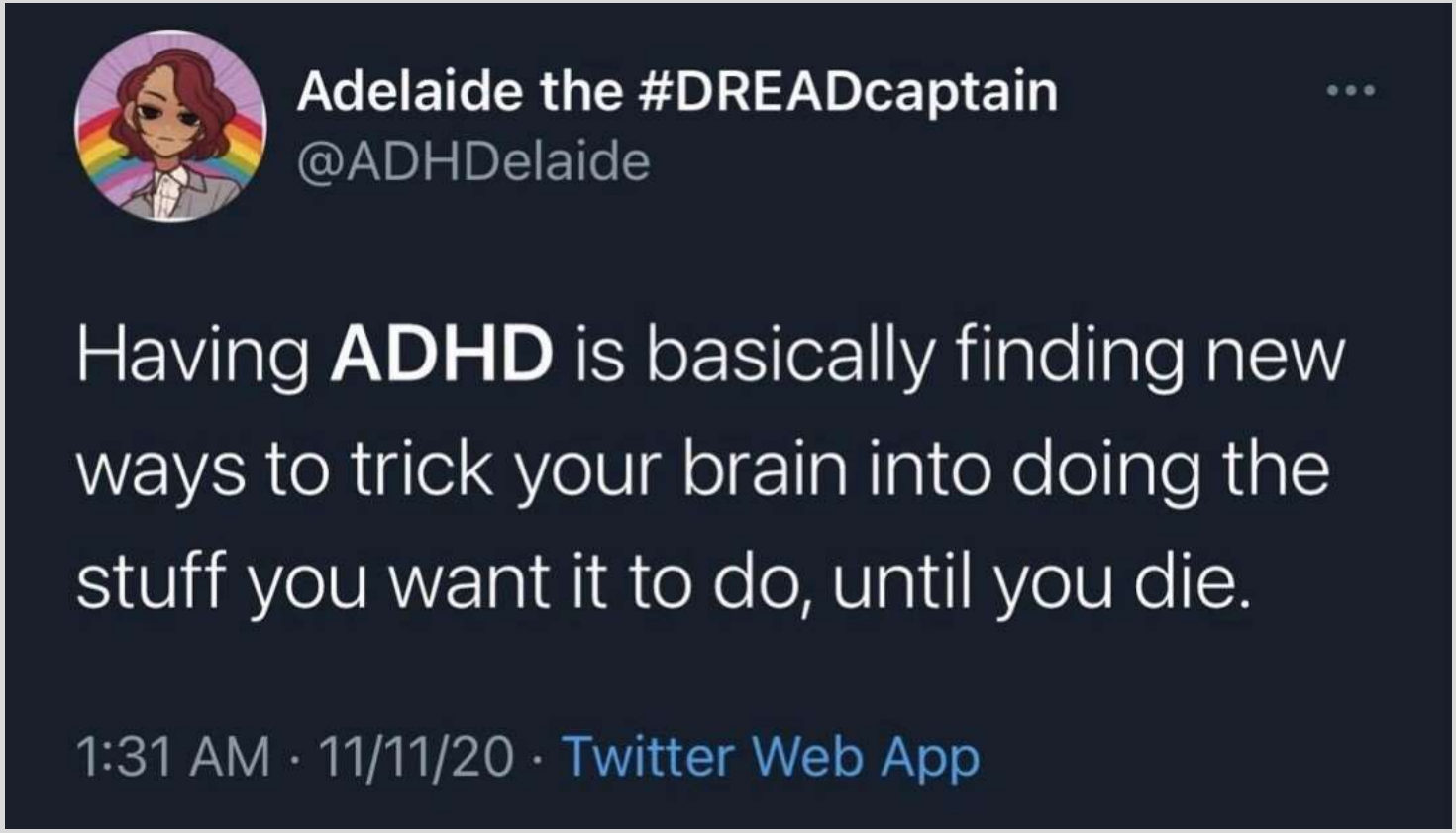
- Public health professionals would conduct research and interpret data to help define the problems.
- Public health workers would work to develop models to address different social, political, historical, and economic factors
- Effective Strategies can be implemented

It's still very improperly named.
More appropriate:
Self-regulation deficit disorder
Executive function disorder
-Dr. Russell Barkley

Would a name change have an impact?

- Evolution of the name
  - 1902-Sir George Frederic Still described "an abnormal defect of moral control in children."
  - 1952-DSM I-ADHD not recognized
  - 1968-DSM II-Hyperkinetic reaction of childhood
  - 1980-DSM III-Attention deficit disorder (ADD)
    - ADD with hyperactivity/ADD without hyperactivity
  - 1987-DSM III (revised)-ADHD
  - 2000-DSM IV-ADHD (with type specification)
    - combined type ADHD
    - predominantly inattentive type ADHD
    - predominantly hyperactive-impulsive type ADHD
  - **2013-DSM V-ADHD (2 types)**
    - **hyperactive/impulsive presentation**
    - **Inattentive**
    - ***Adults can now be diagnosed**

REVIEW OF ADHD


Adelaide the #DREADcaptain
@ADHDelaide
Having ADHD is basically finding new ways to trick your brain into doing the stuff you want it to do, until you die.
1:31 AM · 11/11/20 · Twitter Web App

ADHD

- Neurodevelopmental disorder lasting at least 6 months that is present in at least 2 different environments and is characterized by severe and age-inappropriate inattention and/or hyperactivity and impulsivity.

How it manifests:

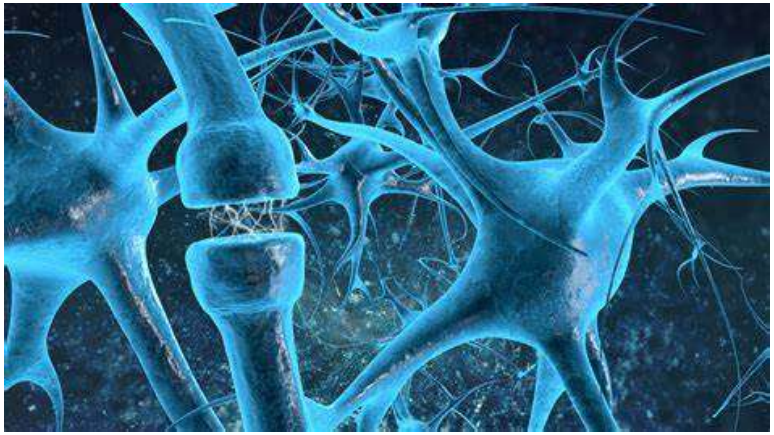
- A disorder of self-regulation
  - Self-regulation is highly genetically mediated (vs. parenting, etc.)
- Difficulty regulating behavior over time toward a future goal…
- A series of responses to irrelevant goals over and over…
- Not a problem with knowledge, but rather with <u>implementation</u> of knowledge
  - Dr. Russell Barkley

Etiology/Associated factors

- Genetics:
  - Mean heritability for ADHD: 77%

Others:

- Pregnancy and delivery complications
  - Low birth weight
- Low socioeconomic status
- Prenatal alcohol exposure
- Prenatal tobacco exposure
- Psychosocial adversity
- Lead exposure



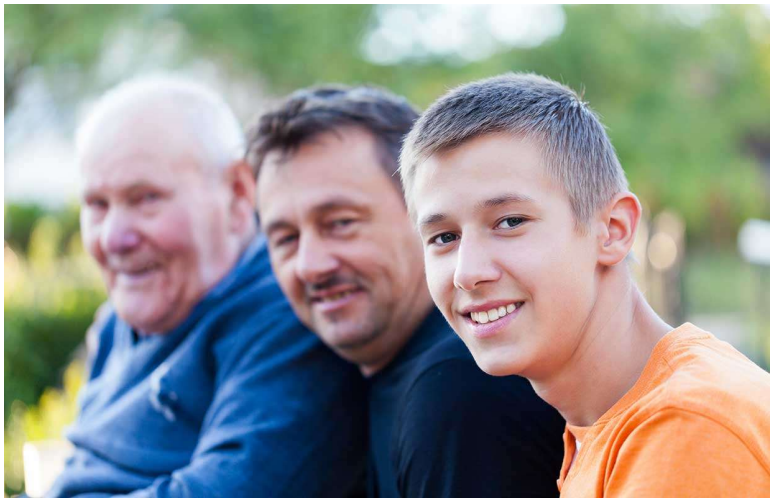
Pathophysiology

- Catecholamine deficiency
  - Hypoactivity of dopamine and norepinephrine in frontal-subcortical circuits
- Areas of brain involvement
  - Frontal/prefrontal region
  - Cingulate
  - Basal ganglia
  - Cerebellum
- In children, those areas of the brain are:
  - 10% smaller
  - 25% less active
  - 2-3-year developmental delay in children

Prevalence:

- Adults: 4.4%
- School-aged children: 9-15%

- M>F
  - M:F is 4:1 for hyperactive type
  - 2:1 for inattentive type



ADHD persistence

- Factors that predict persistence of ADHD into adulthood:
  - Initial ADHD symptom severity
  - Executive function symptoms in childhood
  - Comorbidities
  - Parental mental health problems

DSM V- Diagnostic criteria (cont.)

- Present for at least 6 months
- Symptoms inappropriate and/or disruptive for the person's developmental level
- Several inattentive or hyperactive-impulsive symptoms were present < 12 years
- Several symptoms are present in two or more settings such as 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 are not better explained by another mental disorder (such as a mood disorder, anxiety disorder, dissociative disorder, or a personality disorder). The symptoms do not happen only during the course of schizophrenia or another psychotic disorder

DSM V-Diagnostic criteria-(Need 5)

1. Inattention
   - Failing to give attention to detail
   - Problems maintaining attention
   - Not appearing to listen when spoken to directly
   - Failure to follow through on instructions for completion of schoolwork or other tasks
   - Problems with organization
   - Avoiding activities requiring sustained concentration
   - Losing important items
   - Being easily distracted
   - Forgetfulness

2. Hyperactivity/impulsivity
   - Fidgeting
   - Inability to remain seated
   - Inappropriate running and climbing
   - Difficulty playing quietly
   - Acting as if “driven by a motor,”
   - Excessive talking
   - Blurting out answers before questions are finished
   - Difficulty taking turns
   - Intruding on others’ activities/conversations

Executive dysfunction is hallmark

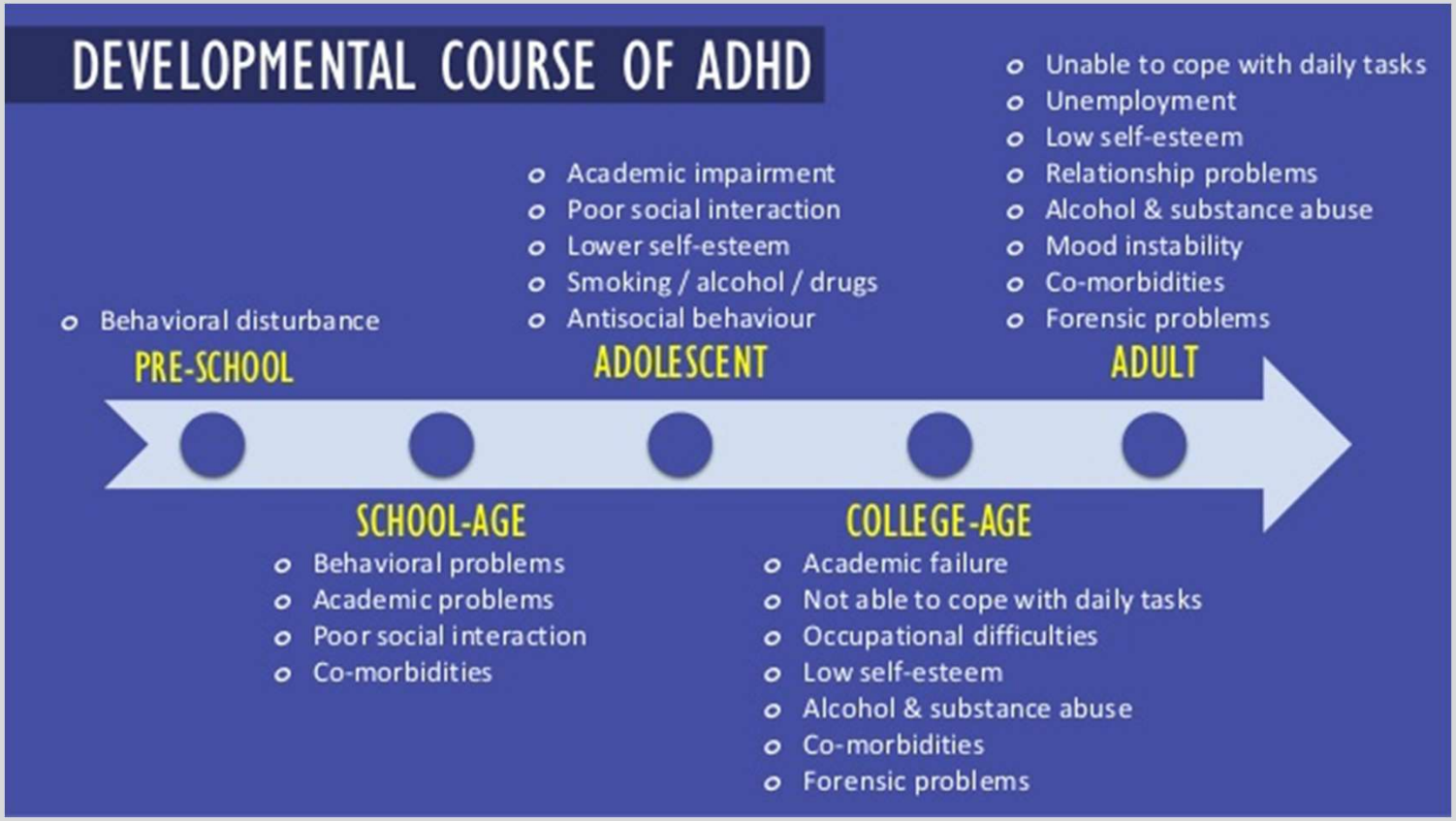
1. Self-awareness/monitoring
2. Inhibition
3. Working memory
4. Initiation
5. Self-motivation
6. Task shifting
7. Planning/problem solving
8. Emotional regulation

- How this dysfunction manifests in children
  - Staying focused
  - Sitting quietly
  - Listening to instructions
  - Following instructions with multiple steps
  - Making transitions from one activity to another
  - Controlling impulses
  - Academic underachievement
  - Increased physical trauma

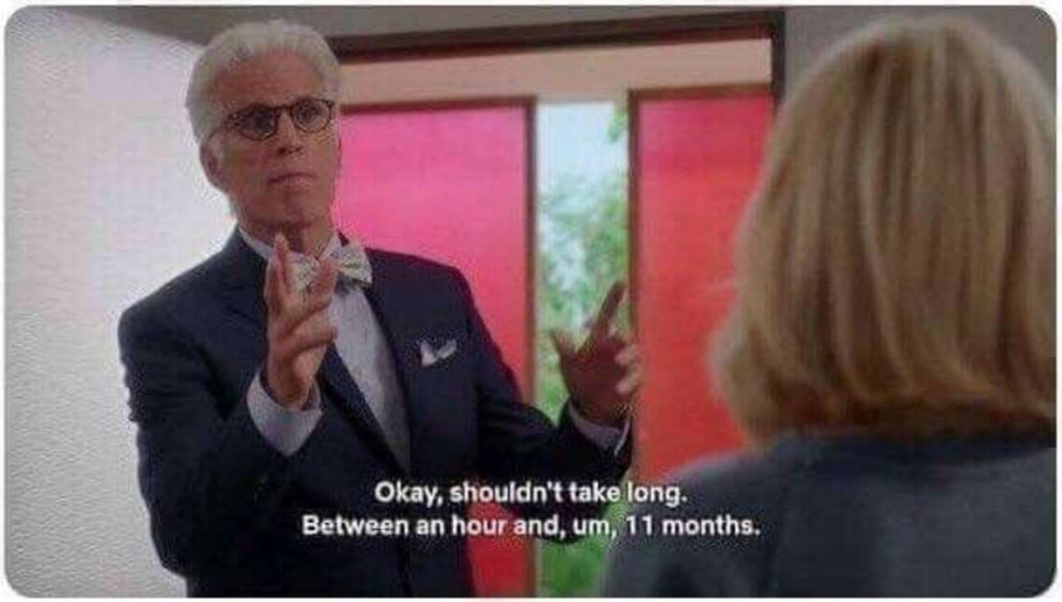
- How this dysfunction manifests in adults
  - Impulsive decisions
  - Difficulty making decisions
  - Inappropriate responses to distractions
  - Inattention
  - Trouble remaining focused in a task, especially for long periods
  - Difficulty organizing activities
  - Problems with prioritizing tasks
  - Failure to follow through/completing tasks
  - Forgetfulness
  - Poor time management (frequently late, missing appts.)
  - Frequently losing things
  - Information processing speed deficits

Adults=Inattention >>Hyperactivity/Impulsivity

- By the time most people with ADHD are adolescents, their physical hyperactivity has been pushed inward and hidden. But it's there, and it still impairs the ability to engage in the moment, listen to other people, to relax enough to fall asleep at night, and to have periods of peace.


DEVELOPMENTAL COURSE OF ADHD
Behavioral disturbance
PRE-SCHOOL
Academic impairment
Poor social interaction
Lower self-esteem
Smoking / alcohol / drugs
Antisocial behaviour
ADOLESCENT
Unable to cope with daily tasks
Unemployment
Low self-esteem
Relationship problems
Alcohol & substance abuse
Mood instability
Co-morbidities
Forensic problems
ADULT
SCHOOL-AGE
Behavioral problems
Academic problems
Poor social interaction
Co-morbidities
COLLEGE-AGE
Academic failure
Not able to cope with daily tasks
Occupational difficulties
Low self-esteem
Alcohol & substance abuse
Co-morbidities
Forensic problems

time management when you have ADHD:



The good stuff

- Fun
- Creative
- Smart
- Good ideas
- Funny
- Outgoing/talkative
- Spontaneous
- Empathetic
- Open-minded
- Entrepreneur

Sequalae of ADHD dysfunction

- Academic failures
- Occupational failures (Fired 2-3 x more)
  - Earn approximately 25% less/month
- Accidental injuries (1.5-3x)
  - MVAs
- Trouble with law/incarceration
- Interpersonal/social difficulties
- Relationship problems
- Annual medical costs are 2-3x higher
- 3x as many sexual partners
  - 8-10x risk of unplanned pregnancies
  - 4x risk of STIs
- Suicide attempts/completion

ADHD evaluation

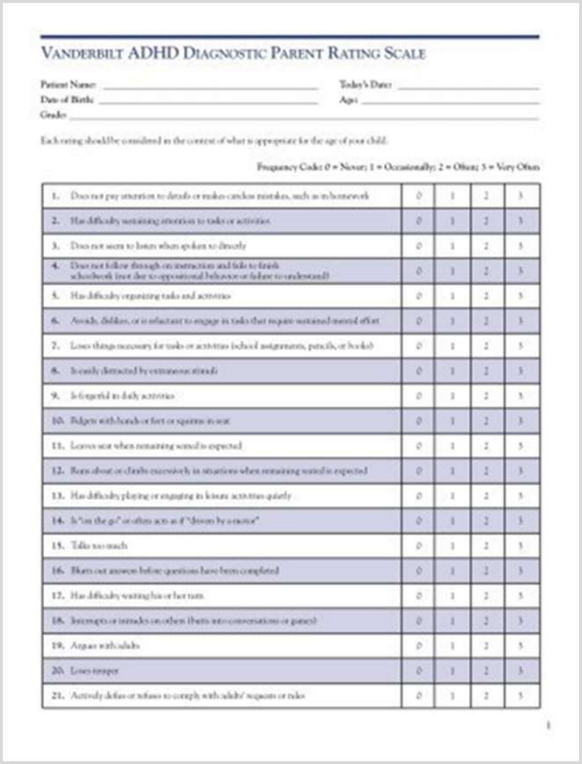
- What are the sxs and how long have they been present?
  - Were the core ADHD sxs present **< 12 years of age?**
- Do the symptoms impair daily functioning?
- Use rating scales (child vs. adult)
- Screen mental status with focus on attention
  - digits forward, digits backwards or serial "7"s, & recall of four words or a brief story at 5–10 minute delay
- Are sxs better explained by another condition?
  - If yes, treat that condition and reassess at later date.
- If hx is consistent with ADHD dx, initiate treatment.
- If information is ambiguous, there is a complicated differential diagnosis, or significant comorbidities, refer to psychologist or psychiatrist for further assessment.

Screeners/Rating Scales

- Narrow screeners (specific to ADHD)
  - Children
    - Vanderbilt scales
    - Conners scales
    - ADHD Rating Scales (ADHD-RS-V)
    - Swanson, Nolan and Pelham (SNAP) scale
  - Adults
    - Adult ADHD Self-Report Scale Symptom Checklist Version 1.1 (Adult ASRS)
    - Conners Adult ADHD Rating Scales (CAARS)
    - Wender Utah Rating Scale
- Broad screeners
  - Child Behavior Checklist (CBCL)
  - Behavior Assessment Scale for Children (BASC)
  - Brown Attention Deficit Disorder Scales (BADDS)
  - Weiss functional impairment rating scale

Link to CHADD to get these screeners: https://chadd.org/adhd-weekly/which-adhd-rating-scales-should-primary-care-physicians-use/

RATING SCALES



Vanderbilt ADHD Diagnostic Parent Rating Scale

Patient Name: _____ Today's Date: _____

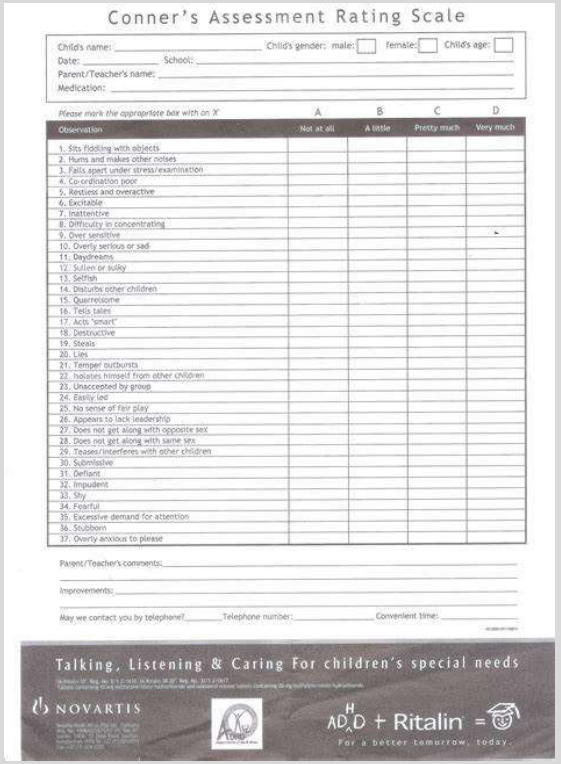
Date of Birth: _____ Age: _____

Grade: _____

Each rating should be considered in the context of what is appropriate for the age of your child.

Frequency Code: 0 = Never; 1 = Occasionally; 2 = Often; 3 = Very Often

1. Does not pay attention to details or makes careless mistakes, such as in homework	0	1	2	3
2. Has difficulty sustaining attention to tasks or activities	0	1	2	3
3. Does not seem to listen when spoken to directly	0	1	2	3
4. Does not follow through on instructions and fails to finish schoolwork (not due to oppositional behavior or failure to understand)	0	1	2	3
5. Has difficulty organizing tasks and activities	0	1	2	3
6. Avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort	0	1	2	3
7. Loses things necessary for tasks or activities (school assignments, pencils, or books)	0	1	2	3
8. Is easily distracted by extraneous stimuli	0	1	2	3
9. Is forgetful in daily activities	0	1	2	3
10. Fidgets with hands or feet or squirms in seat	0	1	2	3
11. Leaves seat when remaining seated is expected	0	1	2	3
12. Runs about or climbs excessively in situations when remaining seated is expected	0	1	2	3
13. Has difficulty playing or engaging in leisure activities quietly	0	1	2	3
14. Is "on the go" or often acts as if "driven by a motor"	0	1	2	3
15. Talks too much	0	1	2	3
16. Blurts out answers before questions have been completed	0	1	2	3
17. Has difficulty waiting his or her turn	0	1	2	3
18. Interrupts or intrudes on others (butts into conversations or games)	0	1	2	3
19. Argues with adults	0	1	2	3
20. Loses temper	0	1	2	3
21. Actively defies or refuses to comply with adults' requests or rules	0	1	2	3



Conner's Assessment Rating Scale

Child's name: _____ Child's gender: male: ☐ female: ☐ Child's age: ☐

Date: _____ School: _____

Parent/Teacher's name: _____

Medication: _____

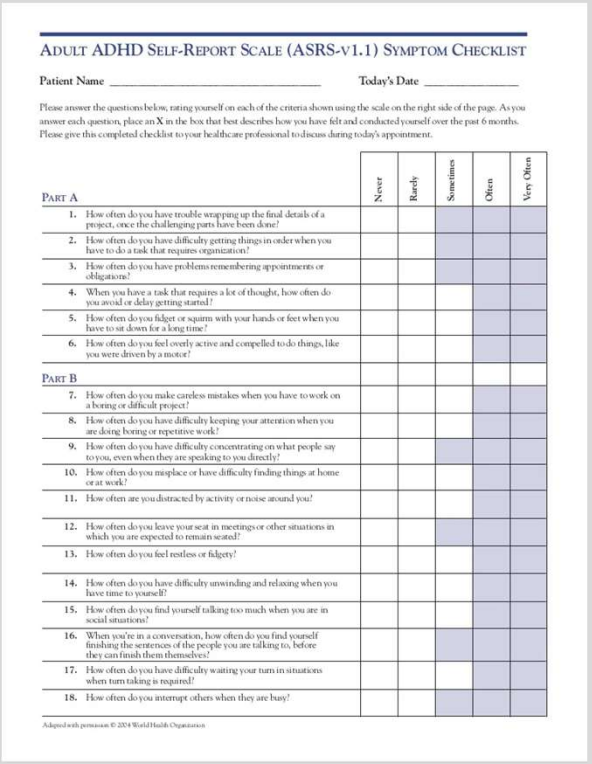
Please mark the appropriate box with an 'X'

Observation	A Not at all	B A little	C Pretty much	D Very much
1. Sits fiddling with objects				
2. Hums and makes other noises				
3. Falls apart under stress/examination				
4. Co-ordination poor				
5. Restless and overactive				
6. Excitable				
7. Inattentive				
8. Difficulty in concentrating				
9. Over sensitive				
10. Overly serious or sad				
11. Daydreams				
12. Sullen or sulky				
13. Selfish				
14. Disturbs other children				
15. Quarrelsome				
16. Tells tales				
17. Acts "smart"				
18. Destructive				
19. Steals				
20. Lies				
21. Temper outbursts				
22. Isolates himself from other children				
23. Unaccepted by group				
24. Easily led				
25. No sense of fair play				
26. Appears to lack leadership				
27. Does not get along with opposite sex				
28. Does not get along with same sex				
29. Teases/interferes with other children				
30. Submissive				
31. Defiant				
32. Impudent				
33. Shy				
34. Fearful				
35. Excessive demand for attention				
36. Stubborn				
37. Overly anxious to please				

Parent/Teacher's comments: _____

Improvements: _____

May we contact you by telephone? _____ Telephone number: _____ Convenient time: _____



Adult ADHD Self-Report Scale (ASRS-v1.1) Symptom Checklist

Patient Name _____ Today's Date _____

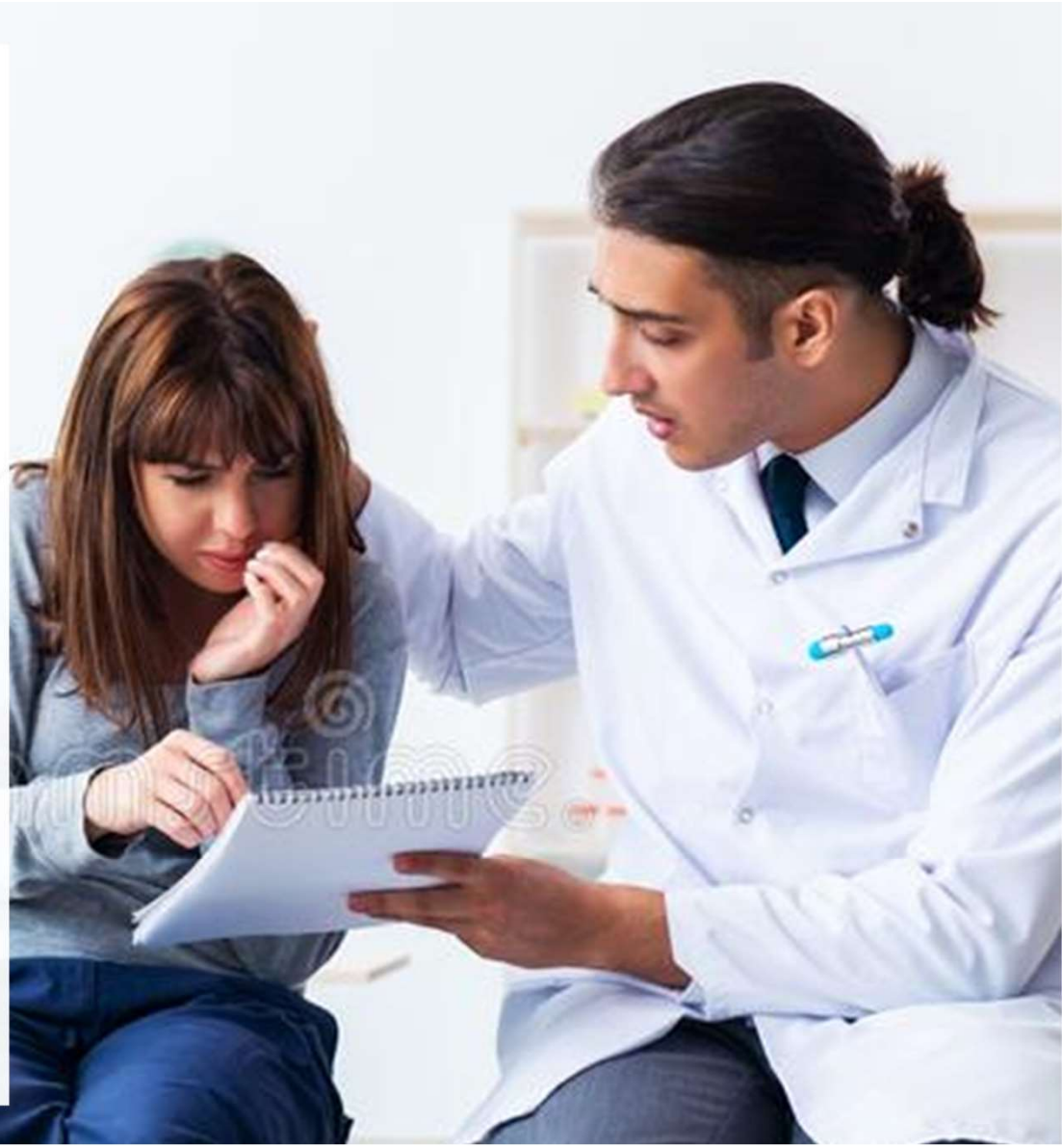
Please answer the questions below, rating yourself on each of the criteria shown using the scale on the right side of the page. As you answer each question, place an **X** in the box that best describes how you have felt and conducted yourself over the past 6 months. Please give this completed checklist to your healthcare professional to discuss during today's appointment.

	Never	Rarely	Sometimes	Often	Very Often
Part A					
1. How often do you have trouble wrapping up the final details of a project, once the challenging parts have been done?					
2. How often do you have difficulty getting things in order when you have to do a task that requires organization?					
3. How often do you have problems remembering appointments or obligations?					
4. When you have a task that requires a lot of thought, how often do you avoid or delay getting started?					
5. How often do you fidget or squirm with your hands or feet when you have to sit down for a long time?					
6. How often do you feel overly active and compelled to do things, like you were driven by a motor?					
Part B					
7. How often do you make careless mistakes when you have to work on a boring or difficult project?					
8. How often do you have difficulty keeping your attention when you are doing boring or repetitive work?					
9. How often do you have difficulty concentrating on what people say to you, even when they are speaking to you directly?					
10. How often do you misplace or have difficulty finding things at home or at work?					
11. How often are you distracted by activity or noise around you?					
12. How often do you leave your seat in meetings or other situations in which you are expected to remain seated?					
13. How often do you feel restless or fidgety?					
14. How often do you have difficulty unwinding and relaxing when you have time to yourself?					
15. How often do you find yourself talking too much when you are in social situations?					
16. When you're in a conversation, how often do you find yourself finishing the sentences of the people you are talking to, before they can finish them themselves?					
17. How often do you have difficulty waiting your turn in situations when turn taking is required?					
18. How often do you interrupt others when they are busy?					

https://www.add.org/wp-content/uploads/2015/03/adhd-questionnaire-ASRS111.pdf

ADHD evaluation

- Historically, comorbid conditions, such as depression and anxiety were treated first and if there were residual ADHD symptoms, then the ADHD was addresses.
- The goal now is to consider/treat both simultaneously, unless the patient has:
  - Substance abuse disorder
  - Suicidal ideation
  - Severe mood disorder



Diagnostic tests

- Medical tests
  - In select patients can be helpful, generally not helpful
    - Thyroid studies
    - Lead level
    - Sleep study

Differential diagnosis

- Children
  - Lead poisoning
  - Hearing/Visual impairment
  - Thyroid disease
  - Learning disabilities
  - Language/communication disorders
  - ASD
  - Fetal alcohol spectrum disorder
  - Anxiety
  - Mood disorders
  - ODD/Conduct disorder
  - PTSD
  - Substance use disorder
- Adults
  - Depression
  - Anxiety
  - Mania
  - Substance abuse disorders

Differentiating from other mental health disorders

Overlapping Symptoms of ADHD and Other Psychiatric Disorders						
		Other Disorder				
Symptom	ADHD	Anxiety	Bipolar Disorder	Depression	Personality Disorders	Substance Abuse/ Dependence
Difficulty completing tasks	✓			✓		
Fidgeting	✓	✓	Agitation			
Hyperactivity	✓		✓			
Impulsivity	✓		✓		✓	
Inattention	✓	+	✓	✓		✓
Mood swings	✓		✓		✓	✓
Poor concentration	✓	✓		✓		✓
Poor memory	✓			✓		✓
Sleep difficulties	✓	✓	✓	✓		
Talkativeness	✓		✓			

Based on Searight et al

Factors contributing to delay in diagnosis

- ADHD-Inattentive-type
- Patients with higher IQs
- Patients who had previously been in structured educational and work settings
- Patients not raised with parents with ADHD- thus structured home environments
- Lack of medical home

Psychiatric Comorbidities

- ODD/Conduct disorder
- Mood disorders
- Anxiety disorders
- Substance use disorders (SUDs)
- Eating disorders
- Hoarding disorder

- 80-85% of pts. will develop a comorbid disorder
- 50% will develop 2+ disorders

Medical Comorbidities

- Coronary artery disease
- Type II DM (2-3x risk)
- Dental hygiene/dental disease
- Obesity (3x risk)
- Dementia (3.4x risk)
- Migraines
- Parkinson's disease

Management

- Pre-School children:
  - Behavioral therapy-initiated early
    - The only age group in which stimulants are first-line

Management-Medications

- **Stimulants-First-line**
  - 29 FDA approved stimulants
  - Significant improvement in core ADHD/EF sxs

- **Methylphenidate**
  - NE/Dopamine reuptake inhibitor at both the presynaptic and postsynaptic membranes
  - "Plugs the drain"

  - Short and long-acting forms
    - Aptensio XR; Concerta; Cotempla XR-ODT; Daytrana; Metadate CD; Metadate ER; Methylin; QuilliChew ER; Quillivant XR; Ritalin; Ritalin LA; Ritalin SR

- **Amphetamine salts**
  - NE/Dopamine reuptake inhibitors at both the presynaptic and postsynaptic membranes
  - "Plugs the drain" + causes release of Dopamine

  - Dextroamphetamine
    - Short and long-acting forms
      - Dexedrine; ProCentra; Zenzed
  - Lisdexamfetamine
    - Prodrug of Dextroamphetamine
    - Extended release
      - Vyvanse
  - Dextroamphetamine-amphetamine salts
    - Short and long-acting forms
      - Adderall; Adderall XR; Mydayis

Stimulant efficacy

- Efficacy: 65-75% in all age groups
- Stimulants improve:
  - attention span, distractibility, impulsive behavior, hyperactivity, and restlessness, vigilance, cognition, reaction time, response inhibition, and short-term memory
- Little effect on emotional/mood symptoms
- They are very effective, but certainly aren't all that is required for success

- Treatment with stimulants reduces accidental injuries, traumatic brain injury, substance abuse, cigarette smoking, educational underachievement, bone fractures, STIs, depression, suicide, criminal activity, and teenage pregnancy."

Stimulant side effects:

- Appetite suppression
- Insomnia
- GI sxs
- Headache
- Increased heart rate/blood pressure
- Agitation/mood disturbances
- Uncover/induce tic disorders

Management-Medications

Non-stimulants

- **Alpha blockers**
- Help with emotional sxs of ADHD
  - Guanfacine
    - (Intuniv)-long acting
    - (Tenex)-short acting
  - Clonidine (Kapvay)
- **SNRI**
  - Atomoxetine (Strattera)
    - Very modest response in adolescents/adults
- Off-label
  - Buproprion (Wellbutrin)

- Adverse side effects of alpha blockers
  - Lowered heart rate/blood pressure
  - GI upset
  - Headache
  - sedation

- Adverse side effects of atomoxetine
  - GI upset
  - Headache
  - Black box warning: suicidal ideation

Treatment	Class	Effect	Adverse effects
Methylphenidate	Stimulant	NE/Dopamine reuptake inhibitor Helps with core ADHD/EF sxs	Decreased appetite Insomnia GI sxs H/As Increased HR/BP Mood changes/agitation
Amphetamine salts	Stimulant	NE/Dopamine reuptake inhibitor + increases the release of dopamine Helps with core ADHD/EF sxs	Same as above
Guanfacine	Alpha-2 receptor agonist	Helps with emotional sxs/aggression	Lowered HR/BP GI upset H/A sedation
Clonidine	Central alpha-2 receptor agonist	Helps with emotional sxs/aggression	Same as above
Atomoxatine	Adrenergic uptake inhibitor	Helps with core ADHD sxs and emotional sxs	GI upset H/A Suicidal ideation

Non-pharmacologic Management

- Behavior therapy
- Exercise
- Cognitive behavioral therapy
- Coaching
- Mindfulness meditation
- Braintraining
  - Neurofeedback and Cogmed
- Nature therapy
- Trigeminal nerve stimulation system

What techniques work?

- Implementing support systems
  - Both people and external things
- Accountability partners
- Body double
- Use of external sources of reminders
  - Post-it notes, having things out in sight,
  - Clear storage bins
- Technology
  - Alarms, digital reminders, etc.
- Use of planners
- Breaking tasks down into small chunks
- Timers/clocks
- Increasing activity level/exercise
- Stand-up desks/treadmill-desk

Some considerations for management

- Deficient emotional self-regulation/control (DESR) has become an important consideration in the A/P again.
  - Important part of the management
- Patients with ADHD lack intrinsic motivation-it has to be external
  - They need things broken down into small tasks/frequent rewards/consequences-due to lacking intrinsic motivation and proper self regulation
- Patients need so much more than medical treatment, it's very important to direct them to lots of other resources

What else can be done?

- Educate pts/families about the pros and cons of taking and not taking stimulant medication
  - By high school: 75% aren't taking meds
  - After high school: 90% aren't taking meds

- A study published in the Journal of the American Academy of Child and Adolescent Psychiatry (JAACAP) found:
  - 2 million more children in the U.S. were diagnosed with ADHD between 2003-2012.
  - 1 million more U.S. children were taking medication for ADHD between 2003-2012.

- Education on patient outcomes on stimulant medication
  - Many are concerned of the risks of starting or continuing a stimulant
  - Should be concerned about not taking one

What else can be done?

- Support patients by developing strategies within your practice to help assure they come to f/u appointments.
  - A study by McQueenie et al. (2019) showed that pts. who missed 2+ behavioral health appointments/year had an overall 8x higher risk in all-cause mortality than those who didn't miss appts.

What else can be done?

- Education/training of medical learners
  - Increase their didactic and clinical knowledge/experience with ADHD
- Clinicians need to be vigilant and screen more frequently; patients often don't know to seek care (it's all they've ever known)
- If clinicians aren't comfortable treating, know who specializes in ADHD and refer
- Make sure we aren't contributing to the stigma around ADHD
  - Be kind, patient, empathetic

What else can be done?

- Education
  - Patients/families need to understand this is a chronic disease
    - Direct them to quality online resources, podcasts about what the condition really is, what to expect, what helps (other than just meds)
    - Remind pts-don't give up, often takes several different meds
    - Encourage a willingness to seek support
      - Coaches, therapists, support groups
    - Explain to families they need support too
      - Support groups, therapy
    - Encourage pts. to speak with their supervisors/HR to evaluate for job/workplace accommodations
    - Take inventory of required tasks
      - Can things be delegated, responsibilities changed according to functionality, can an assistant be hired
- Public awareness (walks, community events)

ADHD awareness month

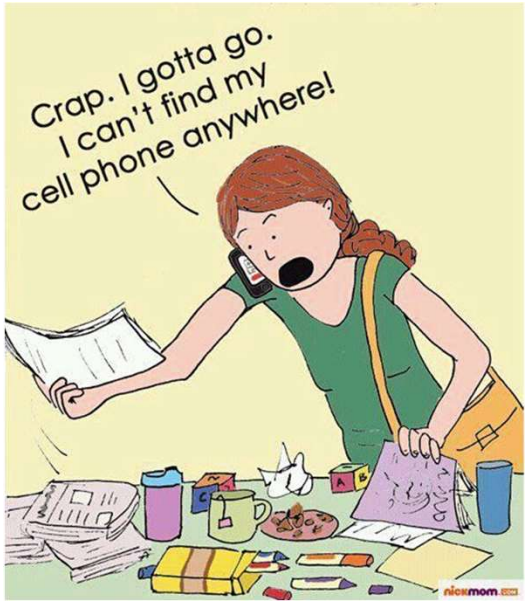
- ADDA
  - "TADD"-only 9 minutes long, instead of normal 18 minutes
- https://www.adhdawarenessmonth.org/
  - Hold a webinar or teleclass
  - Present at a local community meeting: Rotary Club, Parent Teacher Organization, Mental Health Support group, or Faith based group.
  - Contact organizations in your community to recognize and hold ADHD Awareness Month activities.
  - Write to legislators to inform them of awareness month and ask for their participation in your events.
  - Print posters/fact sheets & post throughout your community.
  - Arrange for a local library or community center display on ADHD.

Good resources

- Websites:
  - ADDitude mag website
    - https://www.additudemag.com
  - CHAAD
    - https://chadd.org/
- YouTube presentations by:
  - "TADD" talks
  - Dr. Russell Barkley
  - Dr. Sharon Saline
  - Dr. Ned Hallowell
  - Dr. Rakesh Jain
- Newsletter (for clinicians/educated parents)
  - The ADHD Report
- Podcasts:
  - ADDitude: ADHD Experts
  - I have ADHD with Kristen Carder
  - Women and ADHD
- Movie:
  - The Disruptors (Documentary)

In Summary…

- ADHD is a prevalent, all-encompassing condition that has been misunderstood, underrecognized, and inadequately treated over the years.
- We need to do our part to recognize and support measures to increase awareness and better care for patients and their families affected by ADHD.
- We need to look for signs in patients that may not know they or their children have ADHD.
- As clinicians, if we are diagnosing/managing ADHD, we need to make sure we aren't stopping after prescribing a medication (or 2 or 3).
  - The vast majority will need much more of a treatment plan than just meds.
- Patients can have extreme success with the right treatment plan
  - Ideally:
    - Medication +
    - ADHD coaching/CBT +
    - Education/support of their family +
    - A created daily environment/schedule of structure +
    - Use of lots of external cues +
    - Use of technology (reminders) +
    - Delegation of tasks that someone else can do easier


Crap. I gotta go.
I can't find my
cell phone anywhere!


LET ME FORGET TO
THINK ABOUT IT AND
GET BACK TO YOU
AFTER IT'S
TOO LATE

THANK YOU

Resources

- The ADHD report; ADHD Adversely Impacts Health, Mortality Risk, and Estimated Life Expectancy by Adulthood v28 (20200817): 1-5; Russell A. Barkley, New York, NY : Guilford Publications 1993
- Mental health weekly. Groundbreaking study examines ADHD, life expectancy in children and adults. v29 n2 (20190114): 1-6; Canady, Valerie A., Providence, RI : Manisses Communications Group 1991
- Kuntsi J. The Conundrum of Treatment Discontinuation of Stimulant Medication for ADHD Despite Its Efficacy. The American journal of psychiatry. 2021;178(9):789-790. doi:10.1176/appi.ajp.2021.21070689
- Siffel C, DerSarkissian M, Kponee-Shovein K, et al. Suicidal ideation and attempts in the United States of America among stimulant-treated, non-stimulant-treated, and untreated patients with a diagnosis of attention-deficit/hyperactivity disorder. Journal of affective disorders. 2020;266:109-119. doi:10.1016/j.jad.2020.01.075
- From Barkley, R.S. & Fischer, M. (in press). Hyperactive child syndrome and estimated life expectancy at young adult follow-up: The role of ADHD and other potential predictors. Journal of Attention Disorders, in press.
- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2518387/