WELCOME to the

Mental Health and Substance Use Part 1
ECHO Session 7

Session will start in less than 15 minutes

For educational and quality improvement purposes, we will be recording this video-session

By participating in this clinic you are consenting to be recorded – we appreciate and value your participation

If you have questions or concerns, please email

ECHO@hitchcock.org

Attendance

- Please type your name, organization, and email into chat
- If you joined as a group, please include all the names of those in your group
- Introductions of HUB team

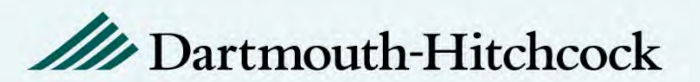
Dartmouth-Hitchcock

Respect Private Health Information

To protect patient privacy, please only display or say information that doesn't identify a patient or that cannot be linked to a patient.

- **Names:** Please do not refer to a patient's first/middle/last name or use any initials, etc.
- **Locations**: Please do not identify a patient's county, city or town. Instead please use only the patient's state if you must.
- **Dates:** Please do not use any dates (like birthdates, etc) that are linked to a patient. Instead please use only the patient's age(unless > 89)
- **Employment:** Please do not identify a patient's employer, work location or occupation.
- **Other Common Identifiers:** Patient's family members, friends, co-workers, phone numbers, e-mails, etc.

Project
ECHO®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ADHD

Primary Care Evaluation & Management

November 5, 2019

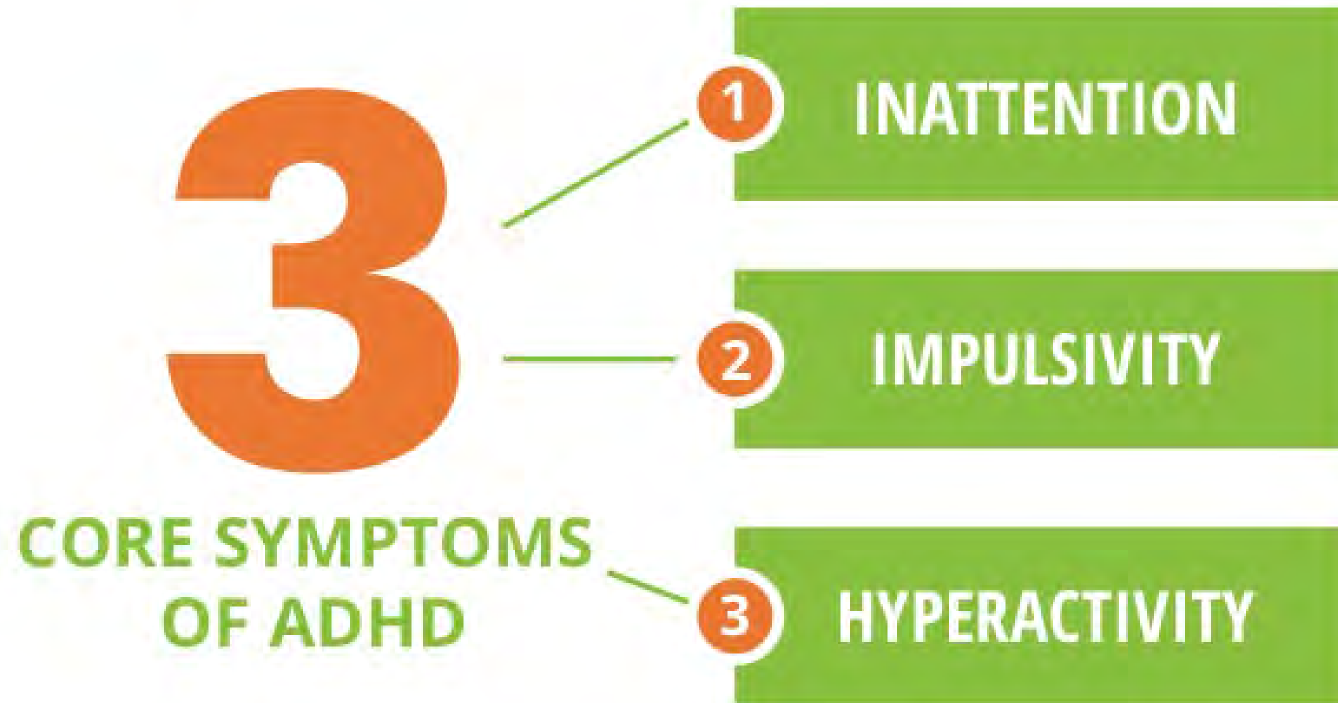
Gillian Sowden, MD

Katherine Shea, MD, MPH

Conflict of Interest Disclosure Statement

No Conflicts of Interest

Attention Deficit Hyperactivity Disorder

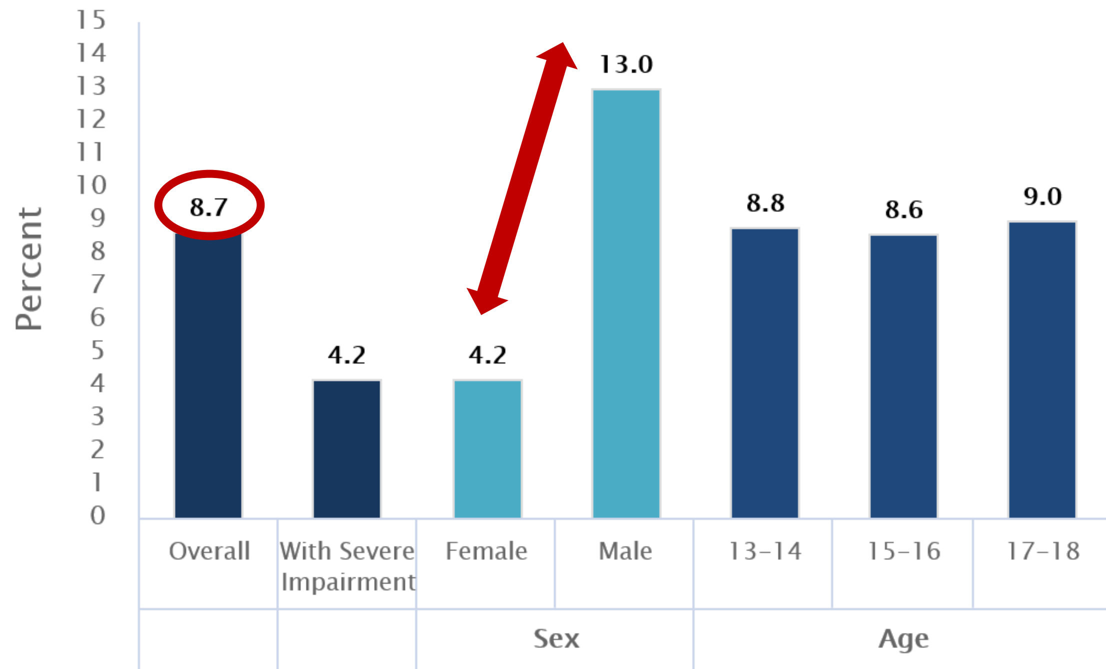


ADHD & ADD. En1Neuro. https://www.en1neuro.com/services/adhd-add/. Published 11/4/2019. Accessed 11/4/2019.

ADHD Prevalence in the US

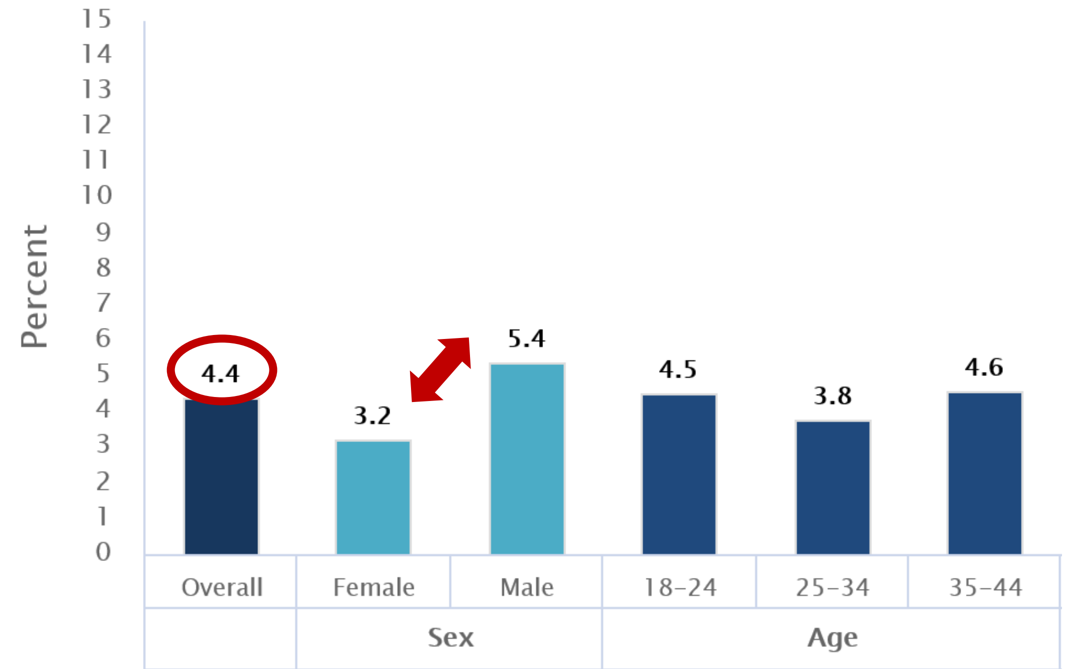
Lifetime Prevalence – Adolescents

Data from National Comorbidity Survey-Adolescent Supplement (NCS-A) 2001-2004



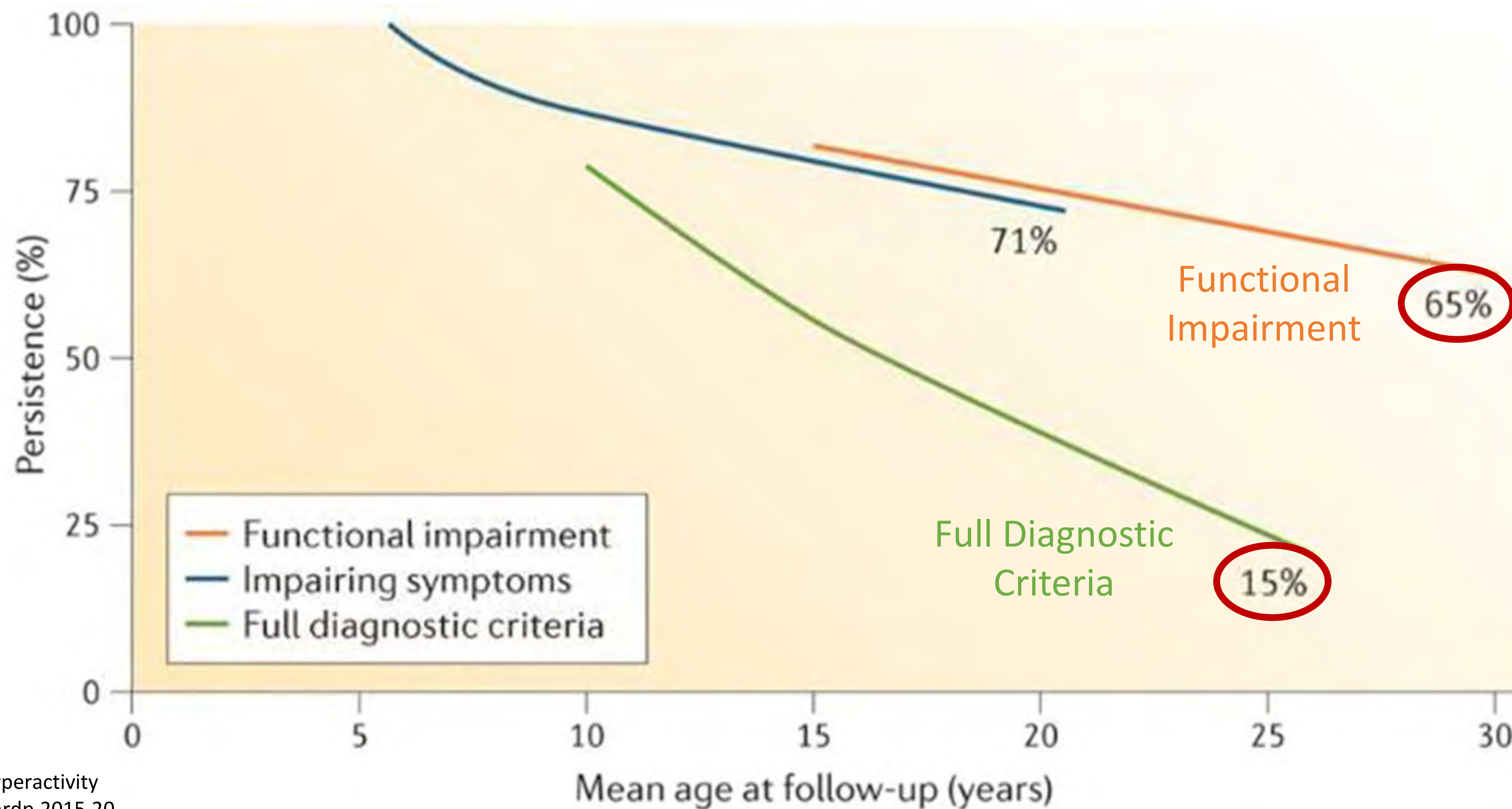
Current ADHD – Adults

Data from National Comorbidity Survey Replication (NCS-R) 2001-2003



NIMH. Attention-Deficit/Hyperactivity Disorder. Updated November 2017.

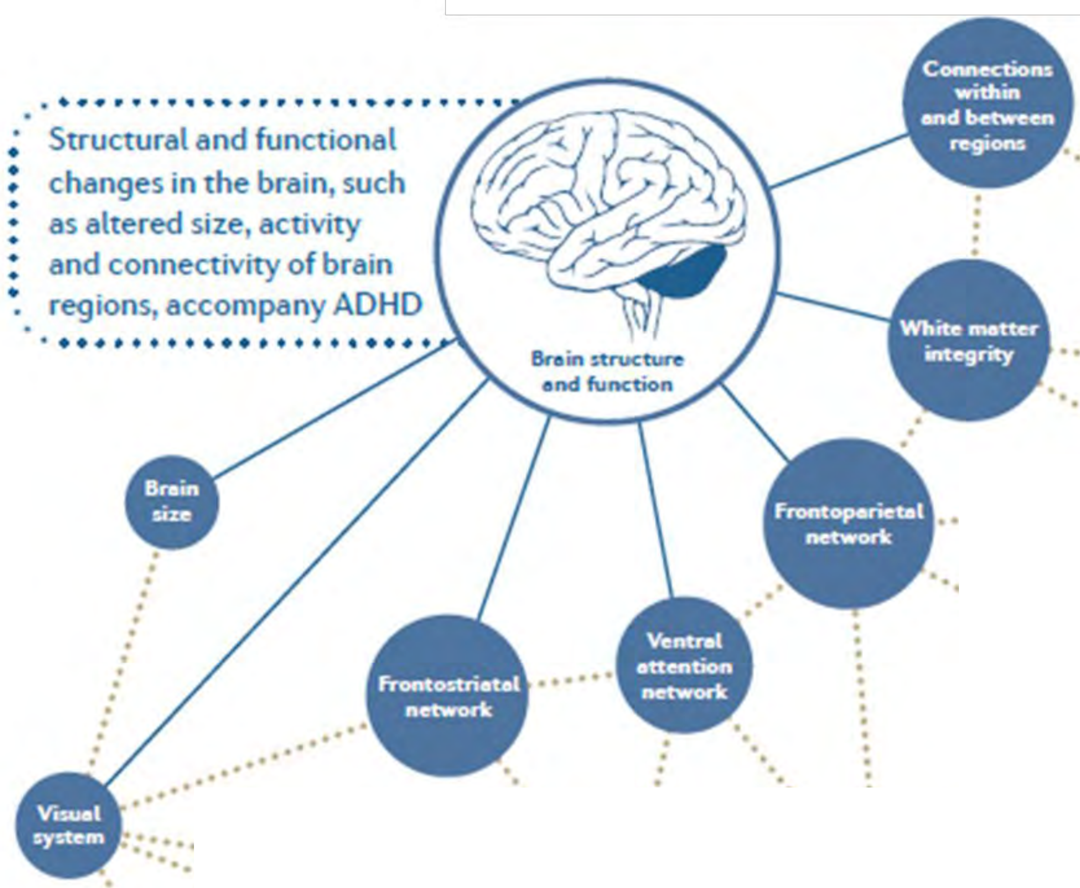
Persistence of ADHD symptoms through the lifetime



Faraone, SV et. al. (2015) Attention-deficit/hyperactivity disorder. Nat. Rev. Dis. Primers doi:10.1038/nrdp.2015.20

Etiology

Heterogeneous condition with many causes that differ between individuals



Faraone, SV et. al. (2015) Attention-deficit/hyperactivity disorder. Nat. Rev. Dis. Primers doi:10.1038/nrdp.2015.20

ADHD Comorbidity

(past 12 months)

Adult ADHD is significantly comorbid with multiple psychiatric disorders.

Co-morbidity is the rule!

100%
80%
60%
40%
20%
0%

without ADHD
with ADHD

OR 5.0
(95% CI 3.0-8.2)

OR 3.7
(95% CI 2.4-5.5)

OR 3.0
(95% CI 1.4-6.5)

OR 3.7
(95% CI 2.2-6.2)

Mood
Anxiety
Substance Use
Intermittent explosive

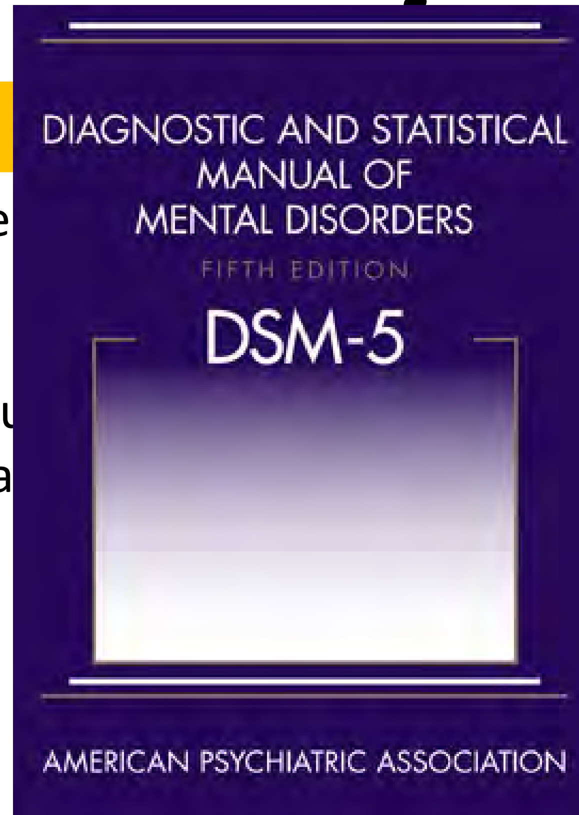
Kessler RC et al (2006). The prevalence and correlates of adult ADHD in the United States: Results from the National Comorbidity Survey Replication. Am J Psychiatry 163: 716-723.

DSM-5 Criteria for ADHD in Adults

5 or more of the following:

Inattention

- ❑ Lack of attention to details / care
- ❑ Difficulty sustaining attention
- ❑ Does not seem to listen
- ❑ Does not follow through on instru
- ❑ Difficulties organizing tasks and a
- ❑ Avoids sustained mental efforts
- ❑ Loses and misplaces objects
- ❑ Easily distracted
- ❑ Forgetful in daily activities



re of the following:

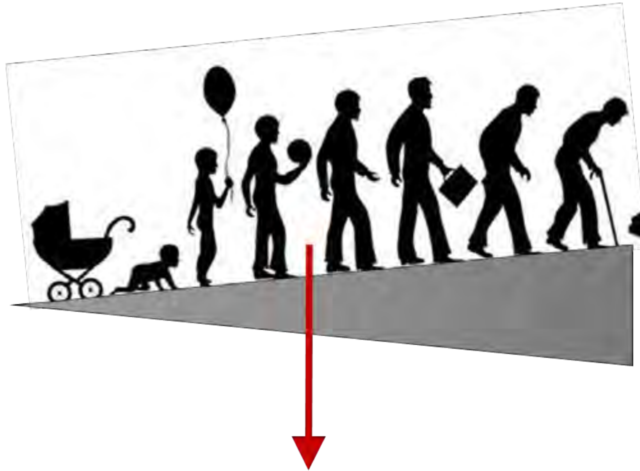
Hyperactivity

- of attention to details / careless
- tiness or squirms in seat
- s seat frequently
- ng about / feeling restless
- sively loud or noisy
- s "on the go"
- excessively

Impulsivity

- out answers
- ❑ Difficulty waiting his or her turn
- ❑ Tends to act without thinking

DSM-5 Criteria for ADHD in Adults



Some symptoms must have onset prior to age **12 years old**

ADHD symptoms in Children vs. Adults

Symptom	Childhood presentation	Adult presentation
Inattention	Difficulty with homework Doesn't listen Forgetful Loses things Easily distracted	Complaints that they read, "but it doesn't register" Frustrated over inability to organize Poor time management Problems prioritizing Prefers multi-tasking
Hyperactivity	Talks excessively Squirms and fidgets Runs/climbs excessively Can't play quietly "On the go"	Inner restlessness Feelings of being overwhelmed Chooses active jobs Inability to enjoy quiet leisure Subjective sensation of being "driven"
Impulsivity	Blurts out answers Can't wait turn Interrupts others	Irritability & quick to anger Blurts out rude/insulting thoughts Impulsively changes jobs and relationships Reckless driving Impulsive sexuality and spending Quits new projects

Clinical Presentation

Clinical Concerns

- Usually self refer with concerns about concentration, focus, and vocational/academic difficulties
- Symptoms often worsen when demands increase (i.e. new job); no longer able to compensate

Screening & Assessment

Interview

Rating Scales

History

Physical Exam

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
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 A					
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?					
Part B					

Treatments *(Adults)*

Psychopharmacological therapies

1st Line

Psychostimulants – treatment of choice; very large effect size, by far the most effective treatment

Long-lasting, **extended release** formulations are preferred for reasons of adherence to treatment, for the protection against abuse, to avoid rebound symptoms, for safer driving, and to provide cover throughout the day without the need for multiple dosing.

2nd Line

- **Atomoxetine**
- **Modafinil**
- **Bupropion**
- **Alpha-2-agonists** (clonidine, guanfacine)
- **Tricyclic antidepressants** (TCAs)

Treatments *(Adults)*

Psychopharmacological therapies

Medication	Trade Names
Stimulants–immediate release	
Methylphenidate	Ritalin,[71] Methylin,[72] Metadate[32]
Dexmethylphenidate	Focalin[73]
Amphetamine	Adderall,[74] Evekeo[75]
Methamphetamine	Desoxyn[76]
Dextroamphetamine	Dextrostat,[77] ProCentra,[78] Zenzedi[79,a]
Stimulants–extended release	
Methylphenidate	Concerta,[80] Metadate CD,[81] Ritalin LA,[82] Metadate ER,[83] Daytrana,[84,a,b] Ritalin SR,[71] Quillivant XR,[85] Aptensio XR,[86] QuilliChew ER,[87] Methylin ER[88]
Dexmethylphenidate	Focalin XR[89]
Amphetamine	Adderall XR,[90] Adzenys XR-ODT,[91] Dyanavel XR[92]
Dextroamphetamine	Dexedrine Spansule[93]
Lisdexamfetamine dimesylate	Vyvanse[94]
Nonstimulants	
Atomoxetine	Strattera[95]
Guanfacine	Intuniv[96,b]
Antidepressants	
Bupropion	Wellbutrin[97]
Desipramine	Norpramin[98]

[a]Approved for ages 3–16 years, off-label use in adults.
[b]Approved for ages 6–17 years, off-label use in adults.
Abbreviation: ADHD = attention-deficit/hyperactivity disorder.

ADHD Medication Guide*

Revised: May 2018

Methylphenidate Derivatives – Long Acting/Extended Release**

(Capsules and tablets in this section are shown at 90% of actual size)

Medication	Dosing									
Cotempla XR-ODT™¶ (grape flavor)	6-17 Yrs: 8.6–51.8mg; SD: 17.3mg	8.6mg		17.3mg	25.9mg	34.6mg (T2 + T2)		51.8mg (T3 + T3)		
Aptensio® XR‡	6 Yrs–Adult: 10–60mg; SD: 10mg	10mg	15mg	20mg	30mg	40mg	50mg	60mg		
Concerta®†	6-12 Yrs: 18-54mg; SD: 18mg 13-17 Yrs: 18-72mg; SD: 18mg ≥18 Yrs: 18-72mg; SD: 18mg or 36mg	G 18mg	G 27mg	G 36mg	G 54mg	G 72mg (36 + 36)				
Quillivant XR® 25mg/5mL (5mg/mL) (banana flavor)	6 Yrs–Adult: 20–60mg; SD: 20mg	10mg 2mL 1 Bottle: 300mg 60mL		20mg 4mL 1 Bottle: 600mg 120mL	30mg 6mL 1 Bottle: 900mg 180mL	40mg 8mL 2 Bottles: 600mg 120mL	50mg 10mL 2 Bottles: 750mg 150mL	60mg 12mL 2 Bottles: 900mg 180mL		
Quillichew ER™§ (cherry flavor)	6 Yrs–Adult: 20–60mg; SD: 20mg			20mg	30mg	40mg				
Focalin® XR‡ (dexmethylphenidate)	6-17 Yrs: 5–30mg; SD: 5mg 18 Yrs-Adult: 5–30mg; SD: 5mg	G 5mg		G 10mg	G 15mg	G 20mg	G 25mg	G 30mg	G 35mg	G 40mg
Ritalin® LA‡	6-12 Yrs: 10–60mg; SD: 20mg	G 10mg		G 20mg	G 30mg	G 40mg		G (red)◆ 60mg		
Metadate® CD‡	6-17 Yrs: 10–60mg; SD: 20mg	G (red) 10mg		G (red) 20mg	G (red) 30mg	G (red)◆ 40mg	G (red) 50mg	G (red)◆ 60mg		
Metadate® ER†	6 Yrs-Adult: 20–60mg; SD: 20mg	G (red)◆ 10mg		G 20mg						

Daytrana®	6-17 Yrs: 10–30mg; SD: 10mg (Patches are shown at 60% of actual size)	10mg	15mg	20mg	30mg

Methylphenidate Derivatives – Short Acting/Immediate Release**

(Medications in this section are shown at actual size)

Medication	Dosing				
Focalin® (dexmethylphenidate)	6–17 Yrs: Daily: 5–20mg, divided BID; SD: 2.5mg BID		G 2.5mg	G 5mg	G 10mg
Ritalin®	6–12 Yrs: Daily: 10–60mg, divided BID or TID; SD: 5mg BID Adults: Daily: 10–60mg, divided BID or TID		G 5mg	G 10mg	G◆ 20mg
Methylphenidate Chewable§ (grape flavor)	6–12 Yrs: Daily: 10–60mg, divided BID or TID; SD: 5mg BID Adults: Daily: 10–60mg, divided BID or TID	G (red)◆ 2.5mg	G (red)◆ 5mg	G (red)◆ 10mg	
Methylin® Solution (grape flavor)	6–12 Yrs: Daily: 10–60mg, divided BID or TID; SD: 5mg BID Adults: Daily: 10–60mg, divided BID or TID		G 5mg/5mL	G 10mg/5mL	

G indicates a generic formulation is also available; generic products are not shown

G (red) indicates a generic (but NOT a branded) formulation is available

Administration Key:

- ¶ Orally disintegrating tablet
- † Must be swallowed whole
- § Chewable
- ¥ Can be mixed with yogurt, orange juice, or water
- ‡ Can open capsule and sprinkle medication on applesauce

****Important Information:** The age-specific dosing information listed for each medication reflects the FDA-approved prescribing information. "SD" refers to the FDA-recommended starting dose, which sometimes varies by age. Practitioners should refer to the full prescribing information for each medication.

Please note: medications have been arranged on the ADHD Medication Guide for ease of display and comparison; dosing equivalence cannot be assumed.

*Disclaimer: The ADHD Medication Guide was created by Dr. Andrew Adesman of Northwell Health, Inc. Northwell Health is not affiliated with the owner of any of the brands referenced in this Guide.

The ADHD Medication Guide is a visual aid for professionals caring for individuals with ADHD. The Guide includes only medications indicated by the FDA for the treatment of ADHD. In clinical practice, this guide may be used to assist patients in identifying medications previously tried, and may allow clinicians to identify ADHD medication options for the future. Medications have been arranged on the card for ease of display and comparison, but dosing equivalence cannot be assumed. Practitioners should refer to the FDA-approved product information to learn more about each medication. Although every effort has been made to depict the size and color of each medication, we cannot guarantee that there are not minor distortions in the final image.

This Guide should not be used as an exclusive basis for decision-making. The user understands and accepts that if Northwell Health were to accept the risk of harm to the user from use of this Guide, it would not be able to make the Guide available because the cost to cover the risk of harm to all users would be too great. Thus, use of this ADHD Medication Guide is strictly voluntary and at the user's sole risk.

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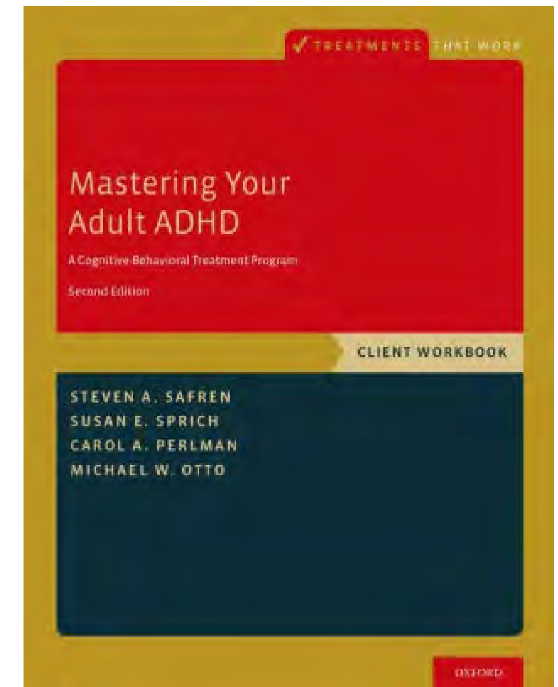
This Guide is accurate as of May 10, 2018.

Treatments *(Adults)*

Psychosocial interventions

Cognitive Behavioral Therapy (CBT) for ADHD

- **Cognitive interventions** for thought distortions and associated negative emotions
- **Compensatory strategies:**
  - Increasing organization and planning
  - Breaking down projects into smaller, more manageable parts
  - Managing time effectively
  - Reducing distractibility
  - Providing self-rewards



Treatments *(Adults)*

Psychosocial interventions

- **Aerobic exercise**
- **Yoga**
- Employment and educational **accommodations**
  - Americans with Disabilities Act (ADA)
  - Individuals with Disabilities Education Act (IDEA)
- Pairing **skills and talents** with expectations
- **Partner psychoeducation/support**

Treatments *(Adults)*

No evidence

- Dietary supplements
  - L-carnitine, St. John's Wart, French maritime pine bark, Ginkgo Biloba
- Acupuncture
- Massage therapy
- Neurofeedback

Primary Care Management

- **Screen** all patients with significant mental health issues for ADHD due to high rate of comorbidity
- Thorough **assessment**, including screening for ADHD mimics and/or comorbidities:
  - medical conditions (e.g. obstructive sleep apnea), substance use disorders, anxiety disorders, and trauma-based disorders
- **Screening tools** can be helpful
- Obtain **collateral**

- **BE MINDFUL** of the college student or patient with a new job who is struggling to keep up with demanding work requirements
- **Stimulants** are one of the most effective psychiatric treatments that exist – do not be shy to prescribe a stimulant if the patient has ADHD and doesn't have glaring contra-indications
- Employ strategies to **prevent misuse or diversion** of prescribed medications

When to Refer &/or Co-Manage

1. Co-morbid substance abuse

- Treating ADHD can decrease risk of relapse to substance use
- Tighter controls – more frequent visits, urine toxicology screen, consider pill counts
- Monitor for red flags → early refills, stolen prescriptions, inconsistent urine tox screens
    - *NOTE: methylphenidate does not show up in standard tox screen*
- Avoid stimulants in patients actively abusing substances

2. Co-morbid anxiety disorder

- Anxiety can mimic ADHD and stimulants can worsen anxiety
- Treating ADHD can improve anxiety symptoms *("my thoughts are no longer all over the place")*

When to Refer &/or Co-Manage *(continued)*

3. **Sub-optimal response to treatment**

4. **Diagnostically unclear/ADHD mimics**
   - Common psychiatric disorders like MDD, PTSD, GAD
   - Concomitant use of benzodiazepines, cannabis, and other sedating medications
   - Learning disabilities
   - Traumatic brain injuries can mimic ADHD *(may still benefit from a stimulant)*

Additional Resources

Adult ADHD Self-Report Scale

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
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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 A					
7. How often do you make careless mistakes when you have to work on a boring or difficult project?					
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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?					
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Part B					

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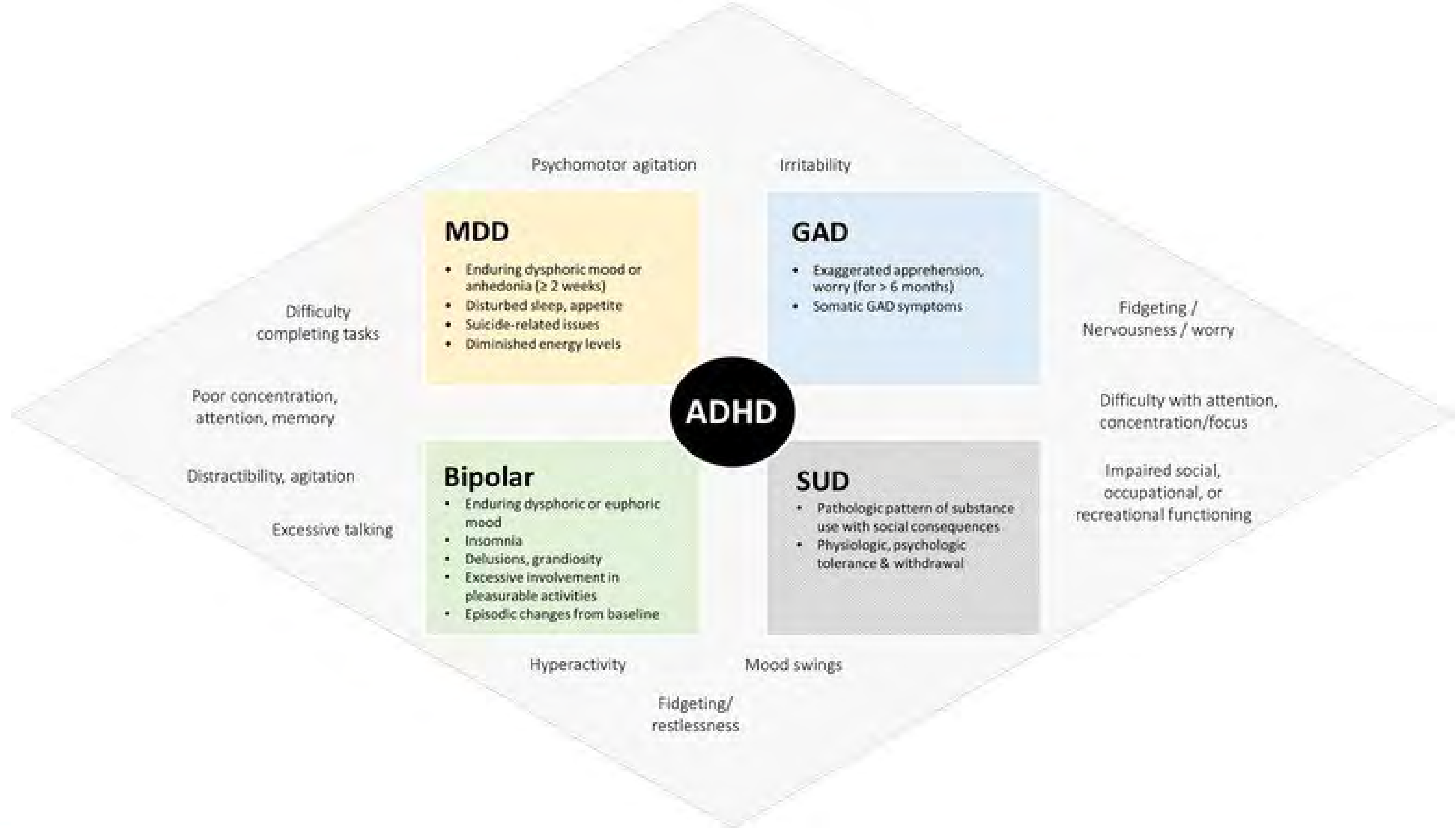

Psychomotor agitation
Irritability
MDD
Enduring dysphoric mood or anhedonia (≥ 2 weeks)
Disturbed sleep, appetite
Suicide-related issues
Diminished energy levels
GAD
Exaggerated apprehension, worry (for > 6 months)
Somatic GAD symptoms
Difficulty completing tasks
Fidgeting / Nervousness / worry
Poor concentration, attention, memory
ADHD
Difficulty with attention, concentration/focus
Distractibility, agitation
Bipolar
Enduring dysphoric or euphoric mood
Insomnia
Delusions, grandiosity
Excessive involvement in pleasurable activities
Episodic changes from baseline
SUD
Pathologic pattern of substance use with social consequences
Physiologic, psychologic tolerance & withdrawal
Impaired social, occupational, or recreational functioning
Excessive talking
Hyperactivity
Mood swings
Fidgeting/ restlessness

ADHD Medication Guide

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		Short-Acting		Longer-Acting	
Stimulants	**Methylphenidate**	Methylphenidate IR	*4-6 hours*	Ritalin LA (50% IR)	*8-10 hours*
				Metadate CD (30% IR)	*8 hours*
				Metadate ER	*8 hours*
				Quillivant XR	*10-12 hours*
				Concerta	*10-12 hours*
		Focalin *(dexmethylphenidate)*	*4-6 hours*	Focalin XR	*10 hours*
	Amphetamines	Adderall *(mixed amphetamine salts)*	*4-6 hours*	Adderall XR	*8-12 hours*
		----		Vyvanse *(lisdexamphetamine)*	*10-12 hours*
Non-stimulants	**Alpha-2-agonists**	Clonidine	*Dose BID-QID*	Kapvay	*Dose BID*
		Guanfacine	*Dose BID-TID*	Intuniv	*Dose daily*
	SNRI	----		Strattera	*Dose daily or BID*
	Anti-depressant *(aminoketone)*	Wellbutrin *(bupropion)*	*Dose BID-TID*	Wellbutrin SR	*Dose BID*
				Wellbutrin XL	*Dose daily*

Symptom after starting stimulants	Intervention
Worsening or unchanged ADHD symptoms (inattention, impulsivity, hyperactivity)	Change medication dose (increase or decrease) Change timing of dose Change preparation, substitute stimulant Evaluate for possible tolerance Consider adjunctive treatment (antidepressant, alpha-adrenergic agent, cognitive enhancer) Consider adjusting non-pharmacological treatment (cognitive-behavioral therapies or coaching or re-evaluating neuropsychological profile for executive function capacities)
Intolerable side effects	Evaluate if side effect is drug-induced Assess medication response versus tolerability of side effect Aggressive management of side effect (change timing of dose; change preparation of stimulant; adjunctive or alternative treatment)
Symptoms of rebound	Change timing of dose Supplement with small dose of short-acting stimulant or alpha-adrenergic agent 1 hour before symptom onset Change preparation Increase frequency of dosage
Development of tics or Tourette's syndrome (TS) or use with co-morbid tics or TS	Assess persistence of tics or TS If tics abate, re-challenge If tics are clearly worsened with stimulant treatment, discontinue Consider stimulant use with adjunctive anti-tic treatment (haloperidol, pimozide) or use of alternative treatment (antidepressants, alpha-adrenergic agents)
Emergence of dysphoria, irritability, acceleration, agitation	Assess for toxicity or rebound Evaluate development or exacerbation of co-morbidity (mood, anxiety, and substance use [including nicotine and caffeine]) Reduce dose Change stimulant preparation Assess sleep and mood Consider alternative treatment
Emergence of major depression, mood lability, or marked anxiety symptoms	Assess for toxicity or rebound Evaluate development or exacerbation of co-morbidity Reduce or discontinue stimulant Consider use of antidepressant or anti-manic agent Assess substance use Consider non-pharmacological interventions
Emergence of psychosis or mania	Discontinue stimulant Assess co-morbidity Assess substance use Treat psychosis or mania

Reminders:

- Please type your name, organization, and email into chat
- Please complete post-session survey (link will be emailed)
  - includes CME/CNE survey
- Slides will be posted to the D-H ECHO Connect site

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