

# ADHD in ADULTS

**Ann Childress, MD**

President, The American Professional Society of ADHD and Related Disorders

President, Center for Psychiatry and Behavioral Medicine

Adjunct Associate Professor, Kirk Kerkorian School of Medicine at University of Nevada, Las Vegas

Adjunct Associate Professor, Touro University Nevada College of Osteopathic Medicine

# Disclosures

Source	Advisory Board	Consultant	Research Support	Speakers Bureau	Travel Support	Writing Support
Aardvark		X	X			
Adlon	X					X
Akili	X		X			
Allergan			X			
Arbor	X	X	X	X		X
Axsome			X			
Aytu		X				
Cingulate	X	X	X		X	
Corium	X	X	X	X	X	X
Emalex			X			
Ironshore	X	X	X	X		X
KemPharm		X	X			
Lumos		X	X			
Medison Pharma		X				
Neos Therapeutics	X	X	X	X		X
Neurocentria		X	X			
Noven	X					
Otsuka	X	X	X			X
Pfizer	X		X	X		X
Purdue	X	X	X			X
Rhodes	X	X	X			X
Servier			X			
Sky		X				
Sunovion	X	X	X			X
Supernus	X	X	X	X		
Takeda	X		X	X		X
Tris	X	X	X	X		X
Tulex		X				

# Objectives

- Define adult ADHD
- Discuss diagnostic tools
- Discuss prevalence of ADHD
- Discuss ADHD presentation in different populations
- Clinician and patient surveys
  - Discuss clinician knowledge of ADHD and treatment
  - Barriers to care

# What is ADHD?

- Attention-deficit/hyperactivity disorder
  - “Impairing levels of inattention, disorganization, and/or hyperactivity-impulsivity”
    - Interfere with functioning or development
  - Begins in childhood (before age 12) and often continues into adulthood
  - Causes impairment in social, academic, and occupational functioning
  - Not better explained by another psychiatric condition
  - Associated features
    - Emotional dysregulation or emotional impulsivity
      - Easily angered or frustrated
      - Overreacting

# ADHD in Adults

- Is common:
  - Estimated prevalence of 4.4% in the United States
  - 1.3:1 ratio of men to women
  - 2.8% of older adults
  - Prevalence compared to whites is lower in:
    - African Americans, Native Americans, Pacific Islanders, and Asian Americans

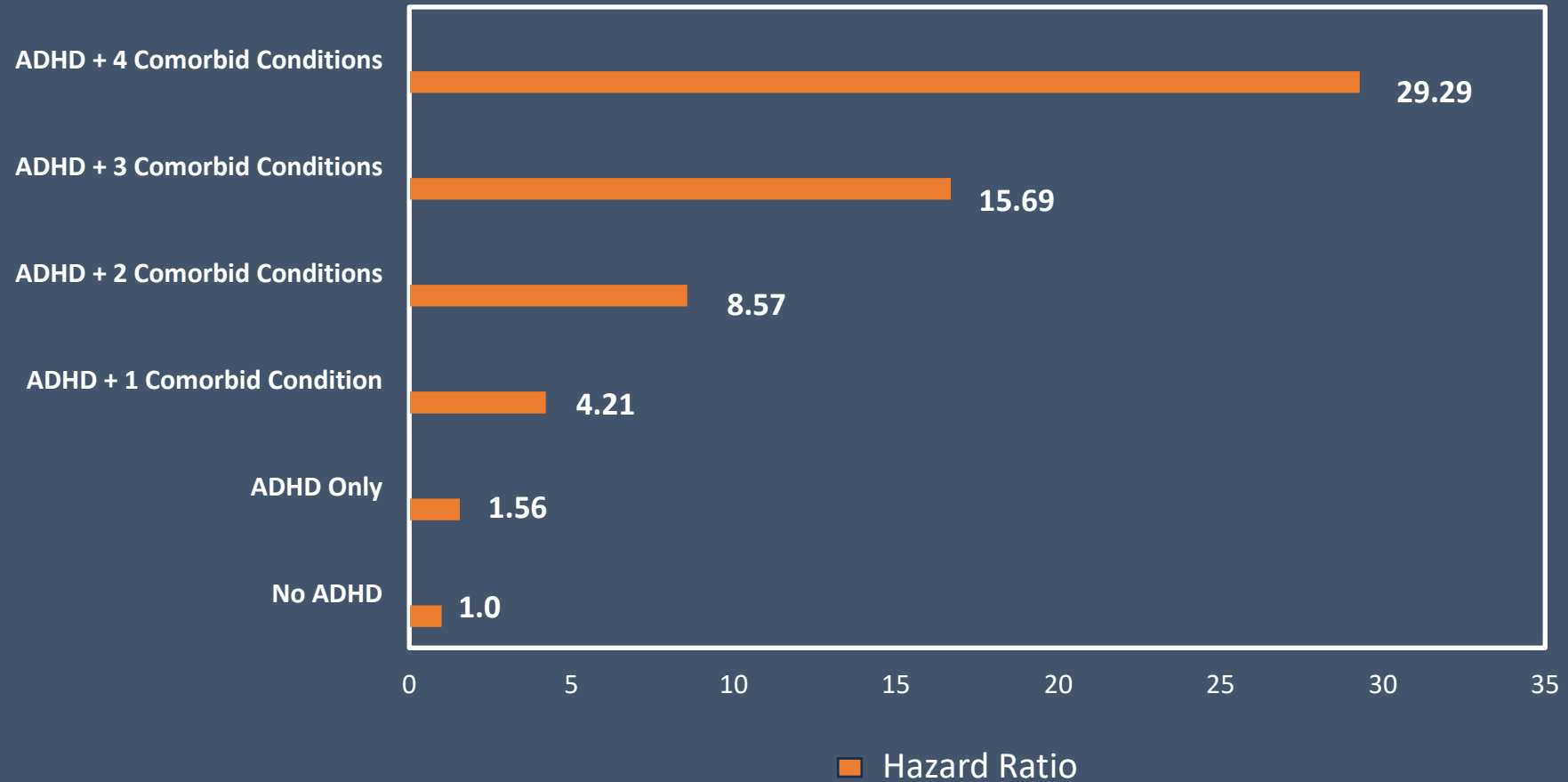
1. Kessler RC, Adler L, Barkley R, Biederman J, Conners CK, Demler O, Faraone SV, Greenhill LL, Howes MJ, Secnik K, Spencer T, Ustun TB, Walters EE, Zaslavsky AM. The prevalence and correlates of adult ADHD in the United States: results from the National Comorbidity Survey Replication. *Am J Psychiatry*. 2006;163:716-723.
2. Solberg BS, Halmoy A, Engeland A, Igland J, Haavik J, Klungsoyr K. Gender differences in psychiatric comorbidity: a population-based study of 40 000 adults with attention deficit hyperactivity disorder. *Acta Psychiatr Scand*. 2018;137:176-186.
3. Michielsen M, Semeijn E, Comijs HC, van de Ven P, Beekman AT, Deeg DJ, Kooij JJ. Prevalence of attention-deficit hyperactivity disorder in older adults in The Netherlands. *Br J Psychiatry*. 2012;201:298-305.
4. Chung W, Jiang SF, Paksarian D, Nikolaidis A, Castellanos FX, Merikangas KR, Milham MP. Trends in the Prevalence and Incidence of Attention-Deficit/Hyperactivity Disorder Among Adults and Children of Different Racial and Ethnic Groups. *JAMA Netw Open*. 2019;2:e1914344.

# ADHD in Adults

- Is more likely to result in:
  - Lower earnings than peers without ADHD
    - \$1.27 million less over lifetime
  - Lower academic achievement
  - Risky driving and car crashes
  - Increased risk of death compared to peers

1. Mustonen A, Alakokkare AE, Scott JG, Halt AH, Vuori M, Hurtig T, Rodriguez A, Miettunen J, Niemela S. Association of ADHD symptoms in adolescence and mortality in Northern Finland Birth Cohort 1986. *Nord J Psychiatry*. 2023;77:165-171.
2. Schiavone N, Virta M, Leppamaki S, Launes J, Vanninen R, Tuulio-Henriksson A, Jarvinen I, Lehto E, Michelsson K, Hokkanen L. Mortality in individuals with childhood ADHD or subthreshold symptoms - a prospective perinatal risk cohort study over 40 years. *BMC Psychiatry*. 2022;22:325.
3. Pelham WE, Page TF, Altszuler AR, Gnagy EM, Molina BSG, Pelham WE. The long-term financial outcome of children diagnosed with ADHD. *J Consult Clin Psychol*. 2020;88:160-171.
4. Arnold LE, Hodgkins P, Kahle J, Madhoo M, Kewley G. Long-Term Outcomes of ADHD: Academic Achievement and Performance. *J Atten Disord*. 2020;24:73-85.
5. Randell NJS, Charlton SG, Starkey NJ. Driving With ADHD: Performance Effects and Environment Demand in Traffic. *J Atten Disord*. 2020;24:1570-1580.
6. Solberg BS, Halmoy A, Engeland A, Igland J, Haavik J, Klungsoyr K. Gender differences in psychiatric comorbidity: a population-based study of 40 000 adults with attention deficit hyperactivity disorder. *Acta Psychiatr Scand*. 2018;137:176-186.

# Adult ADHD and Risk of Death



Solberg BS, Halmoy A, Engeland A, Igland J, Haavik J, Klungsoyr K. Gender differences in psychiatric comorbidity: a population-based study of 40 000 adults with attention deficit hyperactivity disorder. *Acta Psychiatr Scand.* 2018;137:176-186.

# How is Adult ADHD Diagnosed?

## Based on history

- Clinical interview
  - At least some symptoms of ADHD must be present by age 12
  - Functional impairment in at least two situations
  - Asking about comorbid conditions such as depression, anxiety, bipolar disorder, and substance use
  - Family history
  - Medical history
- Rating scales
  - Patient reported scales
  - Clinician administered scales



# Rating Scales

- **Adult ADHD Self-Report Scale (ASRS-v1.1)**
  - Patient completes
  - <https://www.apaservices.org/practice/reimbursement/health-registry/self-reporting-sympton-scale.pdf>
  - Can be used for free and does not require any formal permission or approval
- **Adult ADHD Clinical Diagnostic Scale**
  - Queries all 18 ADHD symptoms from the Diagnostic and Statistical Manual for Mental Disorders (DSM-5<sup>®</sup>) during childhood and adulthood
- **Adult ADHD Investigator Symptom Rating Scale (AISRS)**
  - Queries all 18 DSM-5<sup>®</sup> ADHD symptoms
  - Uses adult prompts

1. Spencer TJ, Adler LA, Meihua Q, Saylor KE, Brown TE, Holdnack JA, Schuh KJ, Trzepacz PT, Kelsey DK. Validation of the adult ADHD investigator symptom rating scale (AISRS). *J Atten Disord.* 2010;14:57-68.
2. Adler L, Spencer T. *The Adult ADHD Clinical Diagnostic Scale (ACDS) V 1.2*. New York, NY: New York University School of Medicine; 2004.

# Rating Scales

- Conners Adult ADHD Diagnostic Interview for DSM-IV™ (CAADID™)
- Conners Adult ADHD Rating Scales - (CAARS)
- Brown Attention-Deficit Disorder Scales
- Behavior Rating Inventory of Executive Function® (BRIEF)
- Adult Attention-Deficit/Hyperactivity Disorder Quality-of-Life Scale (AAQoL)
- Weiss Functional Impairment Rating Scale (WFIRS)

<https://storefront.mhs.com/collections/caadid>

<https://www.wpspublish.com/caars-conners-adult-adhd-rating-scales>

<https://www.pearsonassessments.com/store/usassessments/en/Store/Professional-Assessments/Behavior/Attention-ADHD/Brown-Attention-Deficit-Disorder-Scales/p/100000456.html>

<https://www.parinc.com/Products/Pkey/23>

Brod M, Johnston J, Able S, Swindle R. Validation of the adult attention-deficit/hyperactivity disorder quality-of-life Scale (AAQoL): a disease-specific quality-of-life measure. *Qual Life Res.* 2006;15:117-129.

Canu WH, Hartung CM, Stevens AE, Lefler EK. Psychometric Properties of the Weiss Functional Impairment Rating Scale: Evidence for Utility in Research, Assessment, and Treatment of ADHD in Emerging Adults. *J Atten Disord.* 2020;24:1648-1660.

# Adult ADHD and Other Diagnoses

- Additional psychiatric disorders are common in patients with ADHD
  - >70% have at least one comorbid psychiatric disorder
  - Depressive disorders 8.6% to 55%
  - Bipolar disorder 4.5% to 35.3%
  - Anxiety disorders 4.3% to 47.1%
  - Substance use disorders 2.3% to 41.2%
- How do we screen for comorbidity?

Pehlivanidis A, Papanikolaou K, Mantas V, Kalantzi E, Korobili K, Xenaki LA, Vassiliou G, Papageorgiou C. Lifetime co-occurring psychiatric disorders in newly diagnosed adults with attention deficit hyperactivity disorder (ADHD) or/and autism spectrum disorder (ASD). *BMC Psychiatry*. 2020;20:423.  
Kessler RC, et al. *Am J Psychiatry*. 2006;163(4):716-723  
Choi WS, Woo YS, Wang SM, Lim HK, Bahk WM. The prevalence of psychiatric comorbidities in adult ADHD compared with non-ADHD populations: A systematic literature review. *PLoS One*. 2022;17:e0277175

# What Does ADHD Look Like in Different Populations?

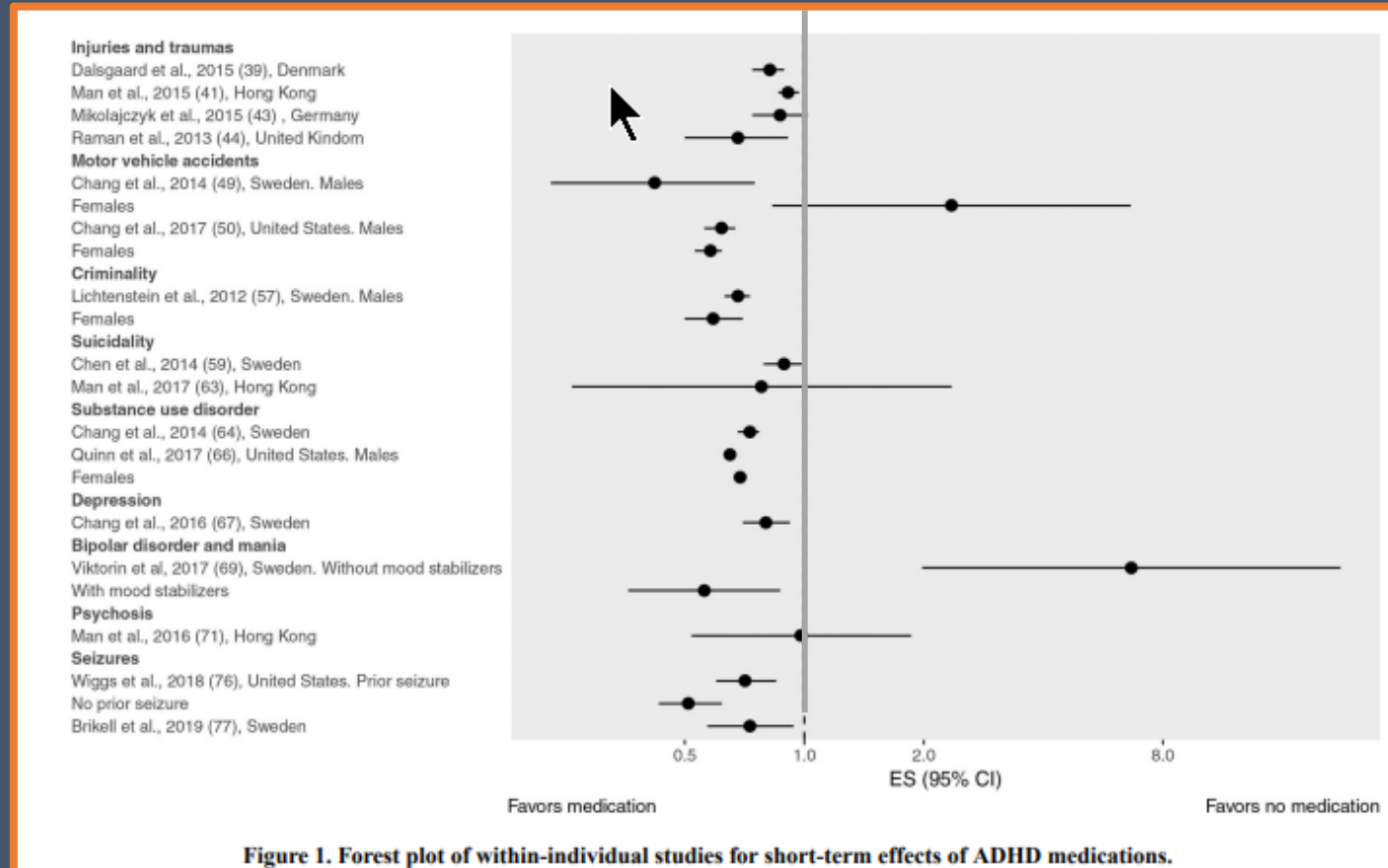
- Males vs Females
  - Externalizing problems more prevalent in males (antisocial behaviors)
  - Emotional problems, anxiety, and depression more often reported in females
  - Borderline personality traits associated with females
  - ADHD Symptoms may be less overt in females
    - May cause delay in diagnosis
  - Women at higher risk for greater mental health impairment and severe mental illness (schizophrenia)

Young S, Adamo N, Asgeirsdottir BB, Branney P, Beckett M, Colley W, Cubbin S, Deeley Q, Farrag E, Gudjonsson G, Hill P, Hollingdale J, Kilic O, Lloyd T, Mason P, Paliokosta E, Perecherla S, Sedgwick J, Skirrow C, Tierney K, van Rensburg K, Woodhouse E. Females with ADHD: An expert consensus statement taking a lifespan approach providing guidance for the identification and treatment of attention-deficit/ hyperactivity disorder in girls and women. *BMC Psychiatry*. 2020;20:404.

# Adult ADHD Treatment

- Pharmacologic
  - Stimulants
  - Nonstimulants
- Nonpharmacologic
  - Psychotherapy
  - Coaching
  - Digital therapies
- Drugs in the pipeline
  - Centanafadine
  - Solriamfetol
  - L-threonic acid magnesium salt

# Adult ADHD Treatment



Chang Z, Ghirardi L, Quinn PD, Asherson P, D'Onofrio BM, Larsson H. Risks and Benefits of Attention-Deficit/Hyperactivity Disorder Medication on Behavioral and Neuropsychiatric Outcomes: A Qualitative Review of Pharmacoepidemiology Studies Using Linked Prescription Databases. *Biol Psychiatry*. 2019;86:335-343.

# Assessing Practice Patterns in Care of Adults With ADHD: Results from Clinician and Patient Surveys



# ADHD Care Gap Assessment via Clinician CME/CE and Patient Surveys

Conducted by Medscape, APSARD, Medscape/WebMD, and CHADD

Supported by An Independent Educational Grant from Supernus Pharmaceuticals, Inc.

Clinician CME/CE survey launched 11/7/23 on Medscape.org, one of the largest educational providers in the US, and was co-promoted the American Professional Society of ADHD and Related Disorders (APSARD)

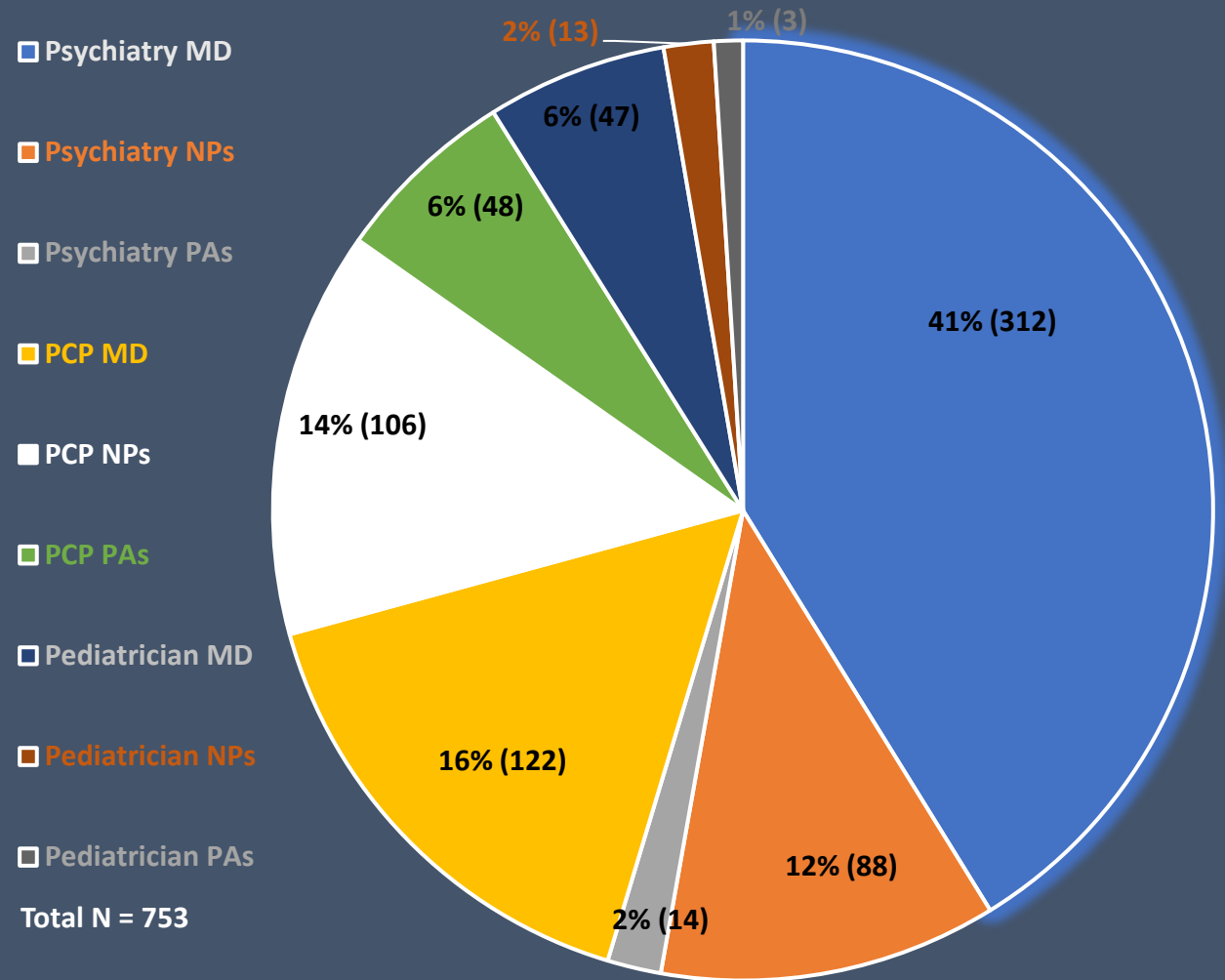
- 41 questions to provide a baseline “snapshot” of knowledge, skills, attitudes, competence, and barriers related to ADHD diagnosis, burden, treatment outcomes, understanding available therapies, and barriers to patient care
- Following each knowledge/competence question, clinicians received referenced clinical feedback, and thus this made the survey eligible for CME/CE credit
- Data from n=753 HCP completers shared today; survey ongoing until 11/7/24
- Survey live [here](#)

Aligned patient and caregiver survey launched on WebMD and was developed by Medscape and co-promoted via WebMD (a Medscape patient-facing sister organization) and Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD), the nation's leading nonprofit organization serving people affected by ADHD

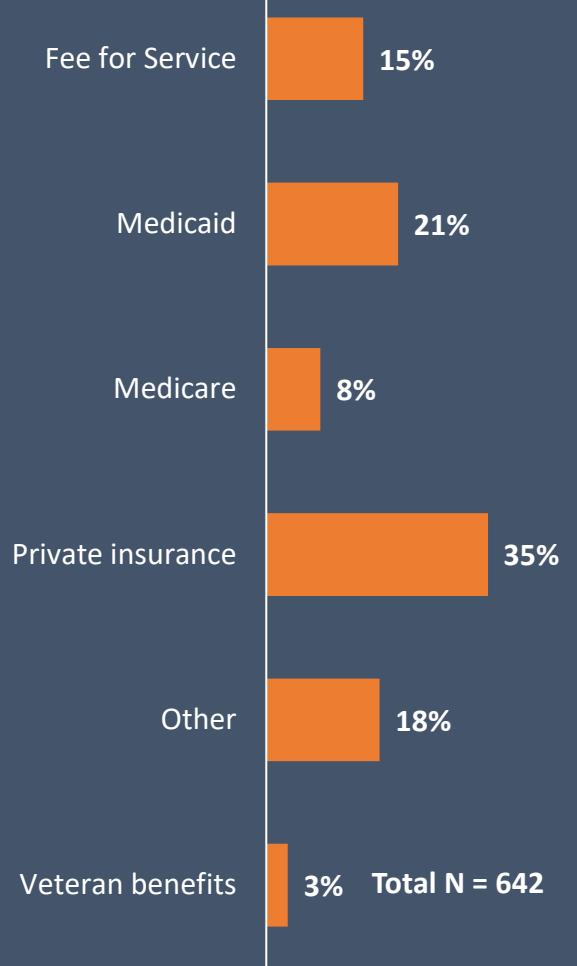
- Survey was composed of 19 questions
- Data presented today includes n=318 patient and caregiver completers (~92% of completers were patients with ADHD); survey closing ~Jan. 2024
- Survey live [here](#)



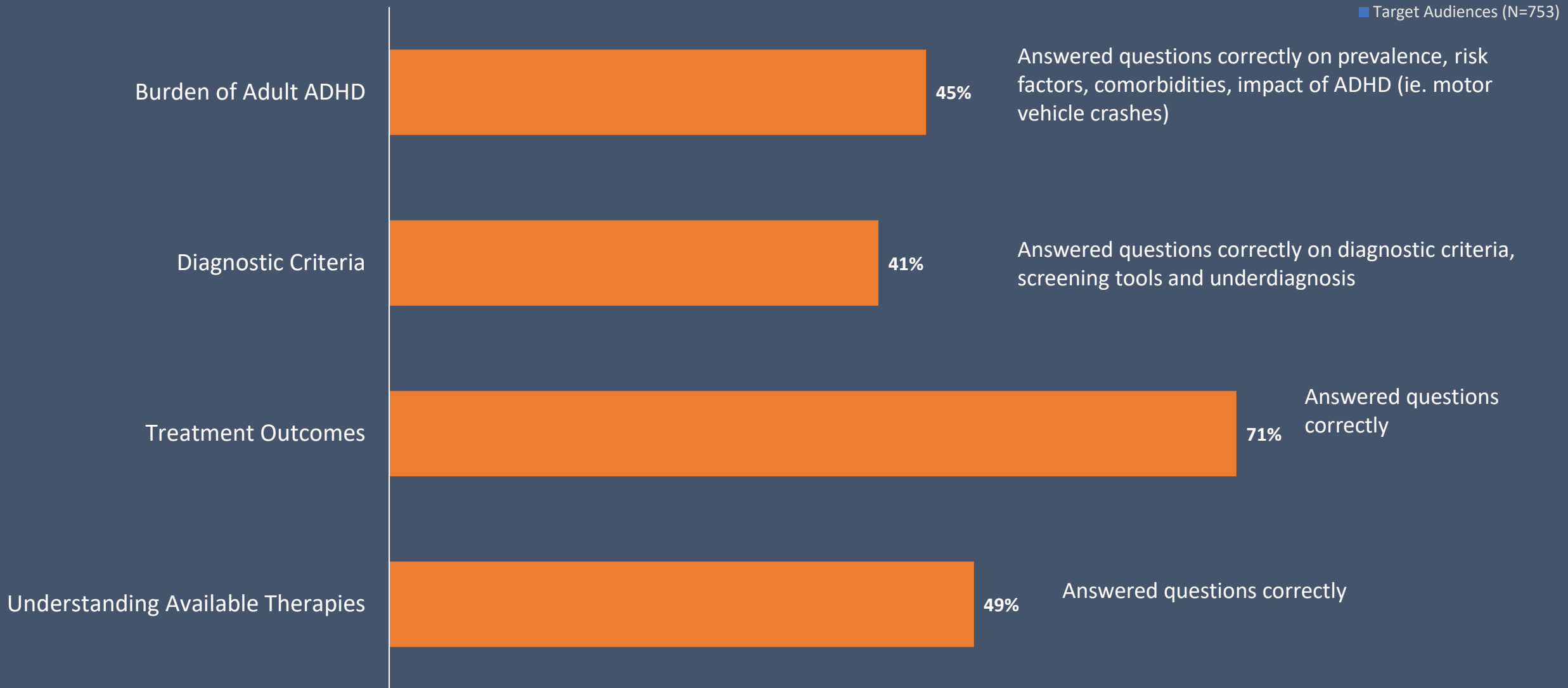
# Survey Demographics: Clinician Survey Included Multiple Specialties and Professions Who See Patients with ADHD



What is the primary method of payment used by patients in your practice?

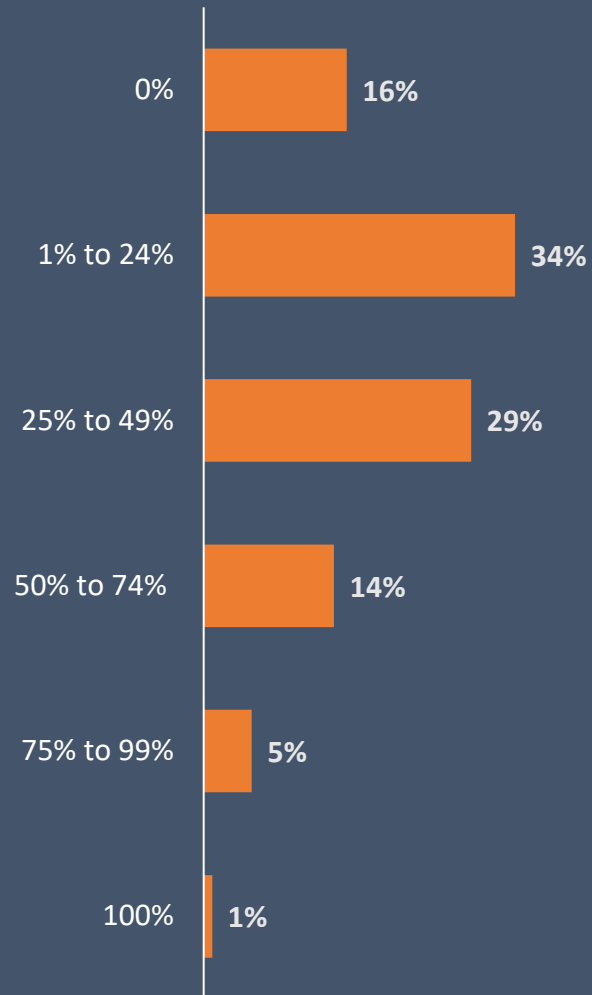


Thematic Trend Analysis Across 21 Knowledge/Competence Questions Shows That Clinicians Need The Most Education On Diagnostic Criteria, Followed By Burden Of Adult ADHD, And Understanding Available Therapies/Treatment Outcomes

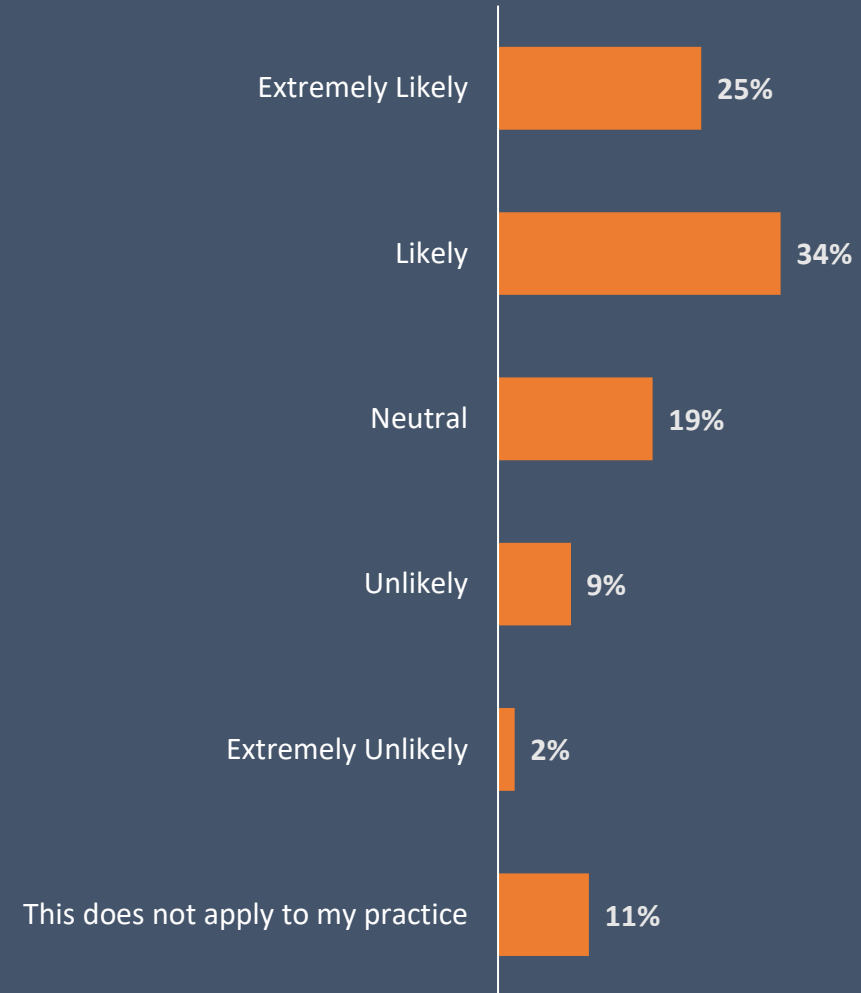


**Short-Acting Stimulants Prescribed by 84% of Clinicians;  
59% of Clinicians Would Complete a Prior Authorization to Prescribe a Medication**

What percentage of your adult patients with ADHD are prescribed short-acting stimulants?



How likely are you to prescribe a medication to treat an adult with ADHD knowing that it requires prior authorization if you feel it is the best option for that particular patient?

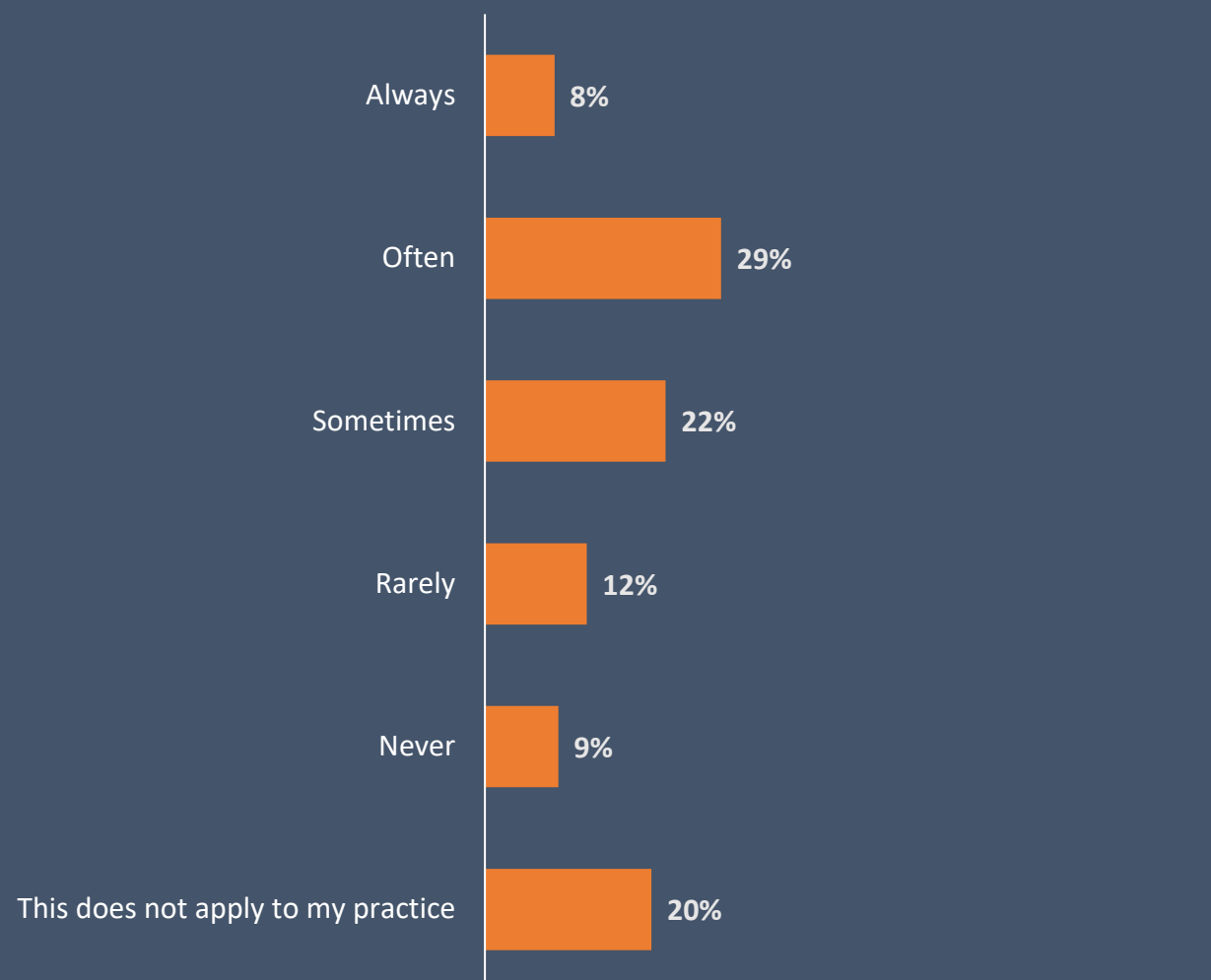


<https://www.medscape.org/viewarticle/998074>

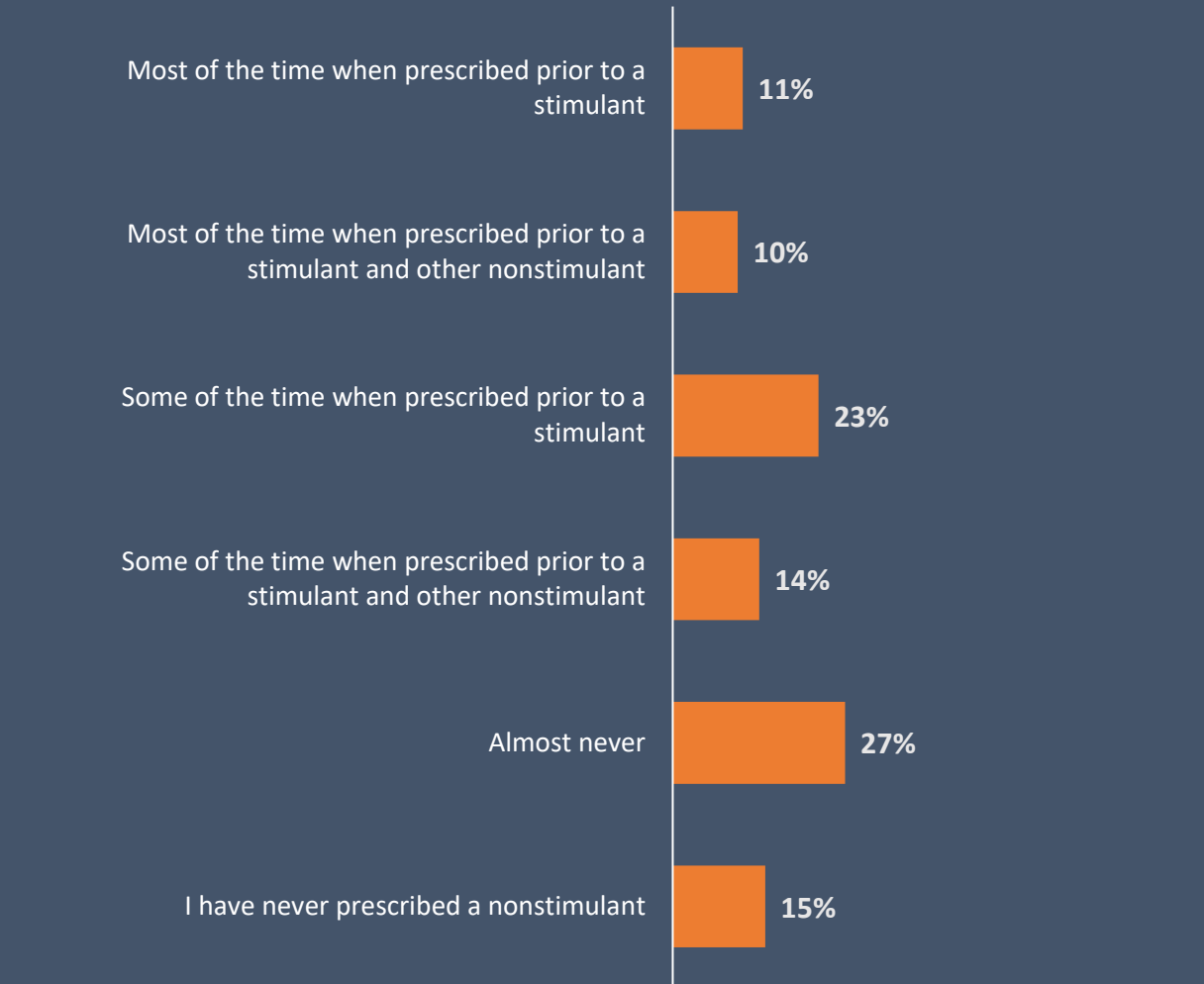
■ Target Audiences (N=642)

**More Than Half of the Clinicians Have Been Instructed by Insurers to Prescribe Short-Acting Stimulants; Insurers Have Refused Nonstimulants for More Than Half The Clinicians**

How frequently have you been instructed by an insurer to prescribe a generic short-acting stimulant that, in your professional opinion, is not the optimal treatment decision for your adult patient with ADHD?



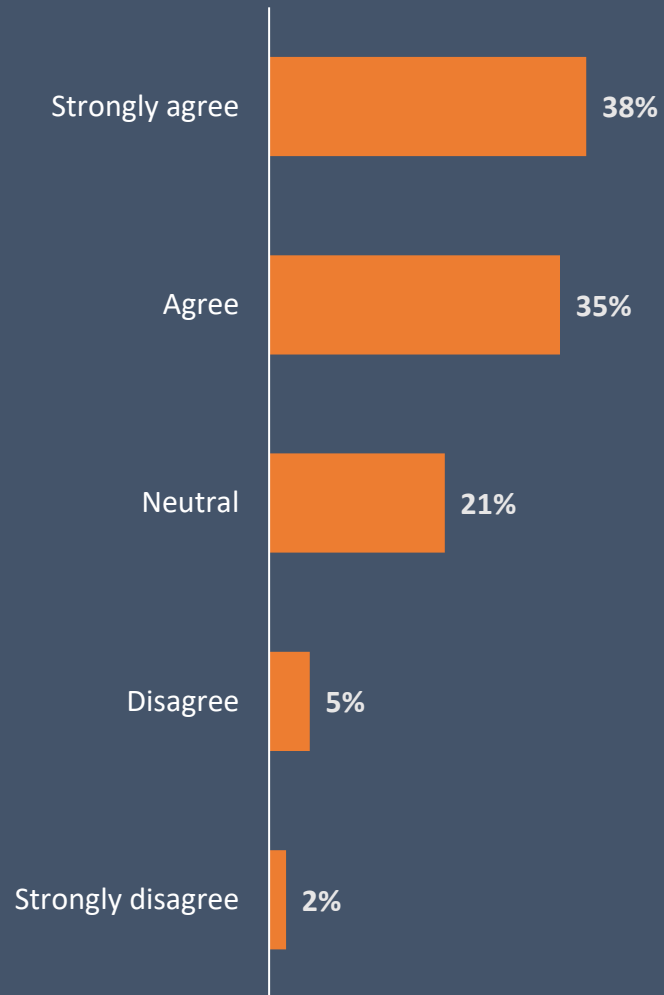
How often has an insurer refused a nonstimulant when, in your expert opinion, it would have been beneficial for your adult patient with ADHD?



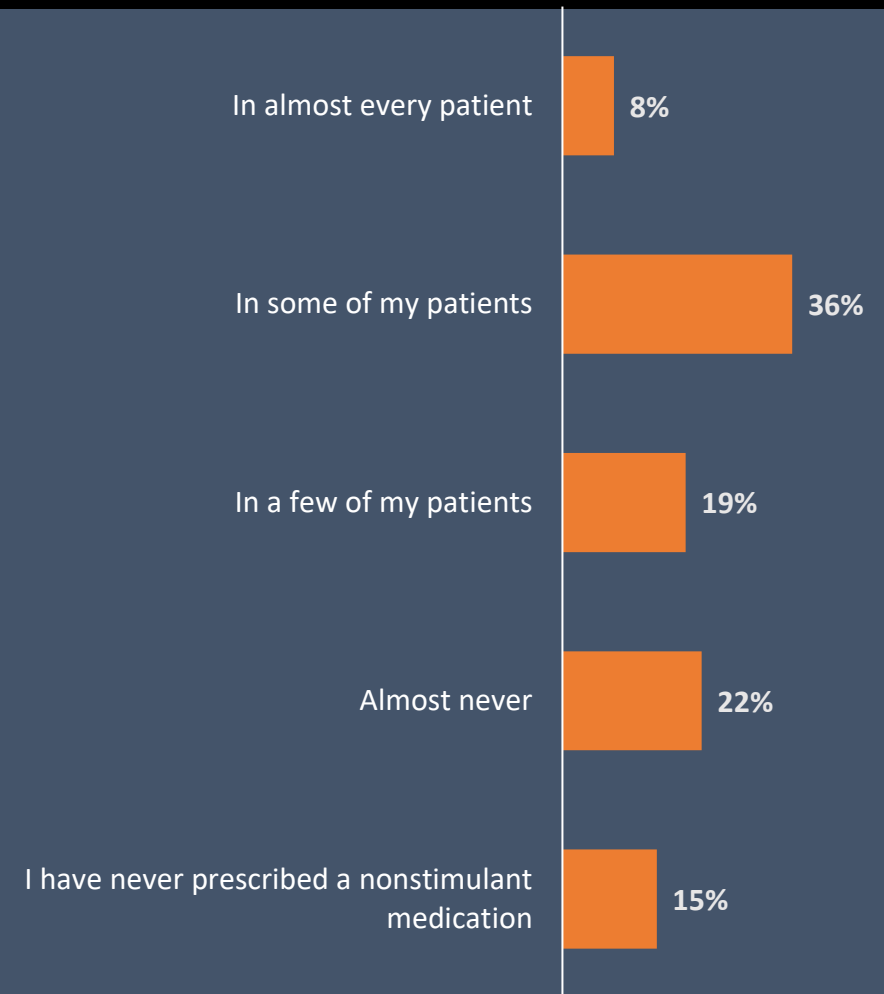
<https://www.medscape.org/viewarticle/998074>

~ 74% of Clinicians Agree/Strongly Agree That All FDA-Approved Medications for ADHD Should Be Available Without Prior Authorization; Almost 50% of Clinicians Report Delays in Treatment

Rate your opinion on the following statement: All FDA-approved medications for adult ADHD should be available to my patients without prior authorization.



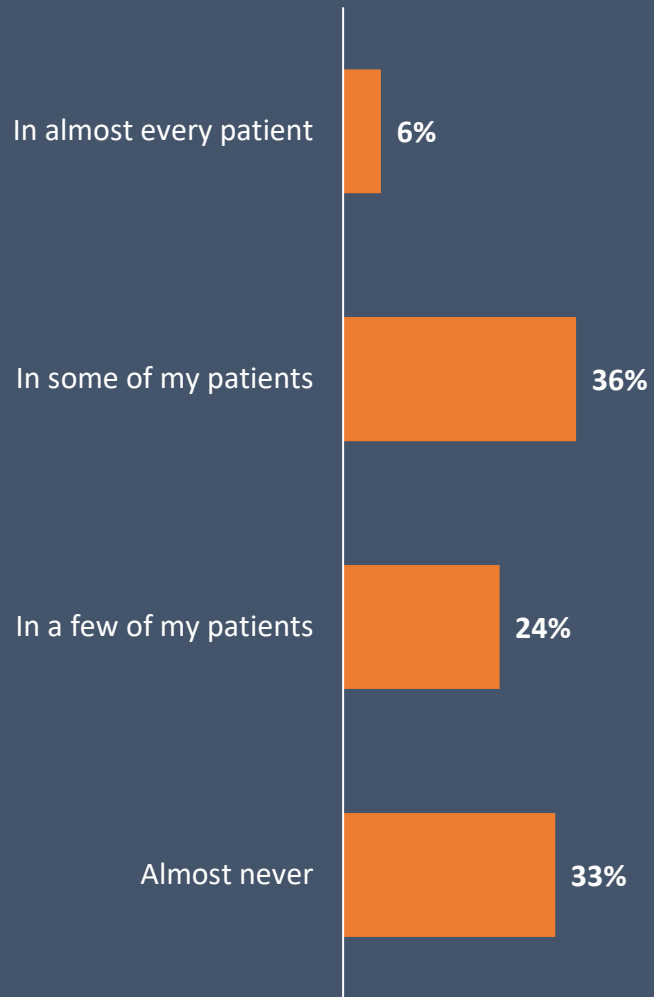
How often has treatment been delayed because an adult patient with ADHD was denied a nonstimulant medication?



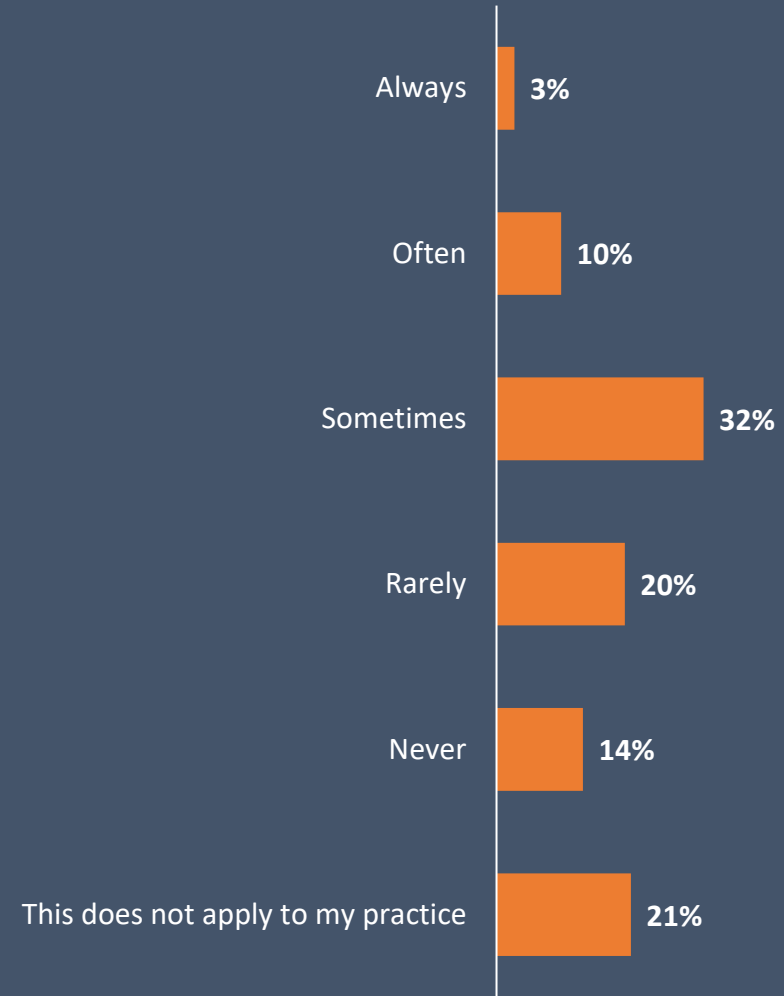
<https://www.medscape.org/viewarticle/998074>

**Less Than Half of Clinicians Report Switching Some or Almost Every Patient to Nonstimulants in The Wake of Stimulant Shortages; Only 13% Often/Always Combine Stimulants and Nonstimulants**

Due to the shortage with stimulants, how often are you switching your adult patients with ADHD to a nonstimulant medication?



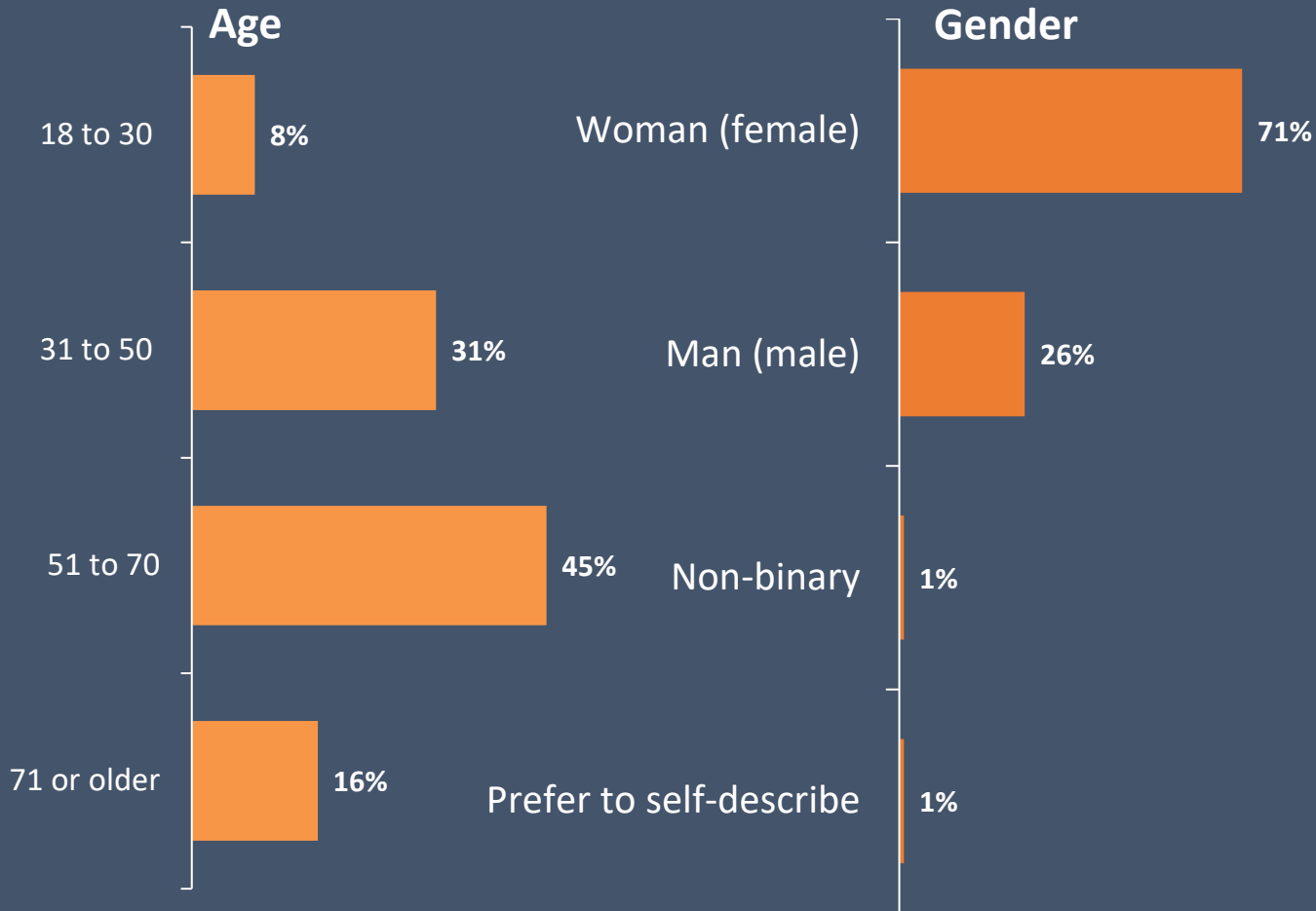
How often do you combine the use of stimulant and nonstimulant treatment in adult patients with ADHD?



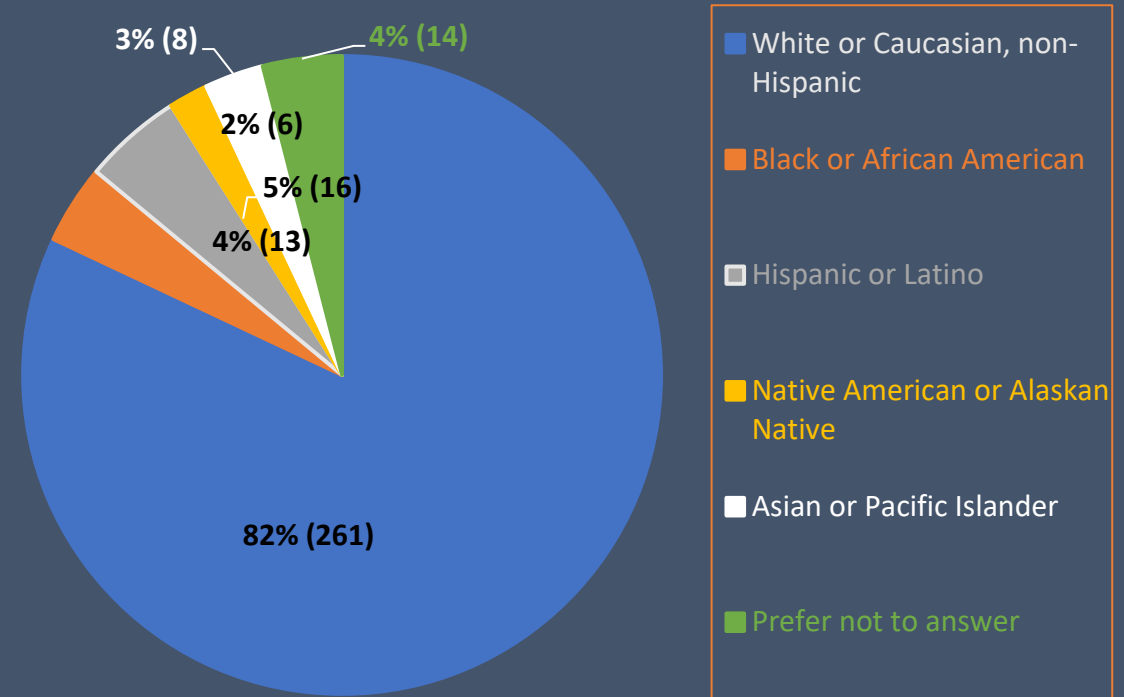
<https://www.medscape.org/viewarticle/998074>

Patient Survey Demographics: Large Sample Of >50 Year Old Adults; 71% Women; 92% Diagnosed/8% Caregiver Completers; 82% White/Caucasian

### Age & Gender of Survey Completers

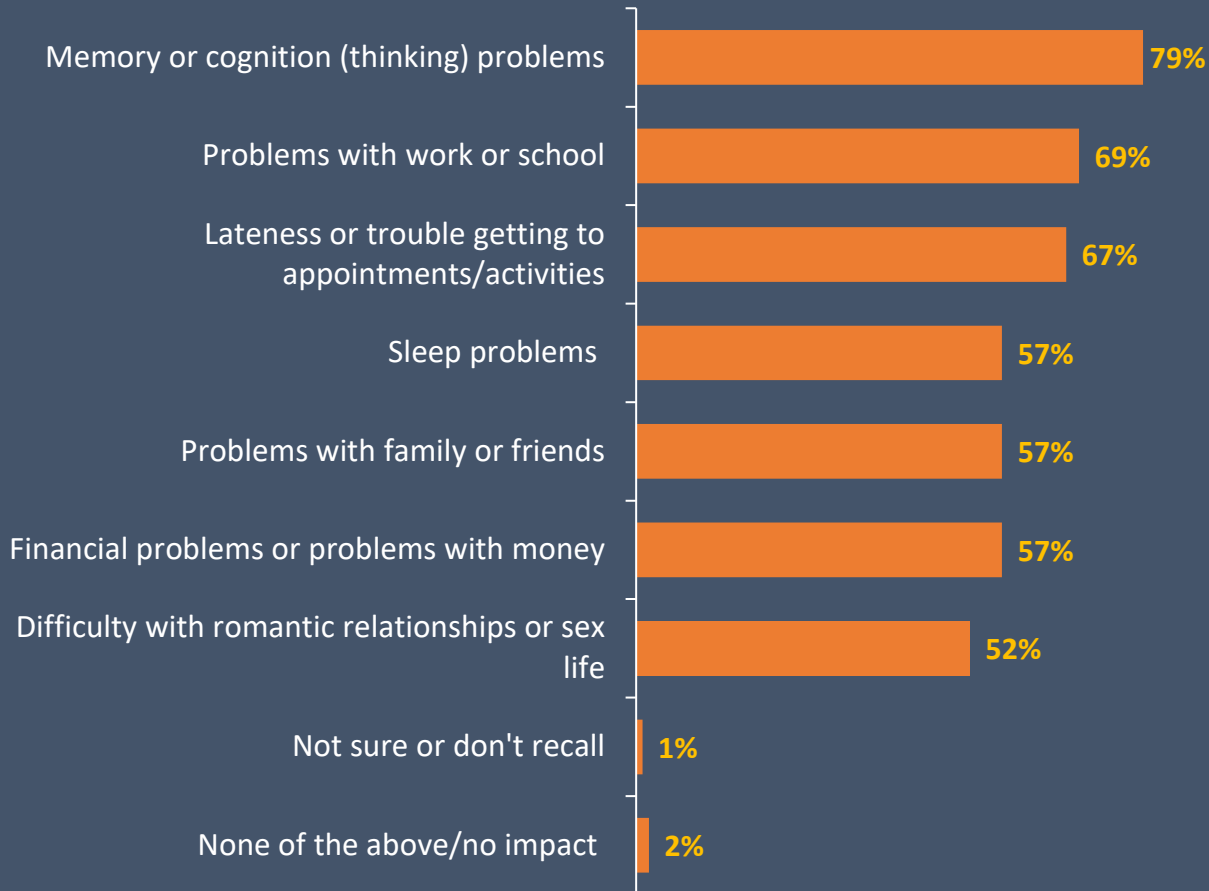


### Race/ethnicity of Survey Completers

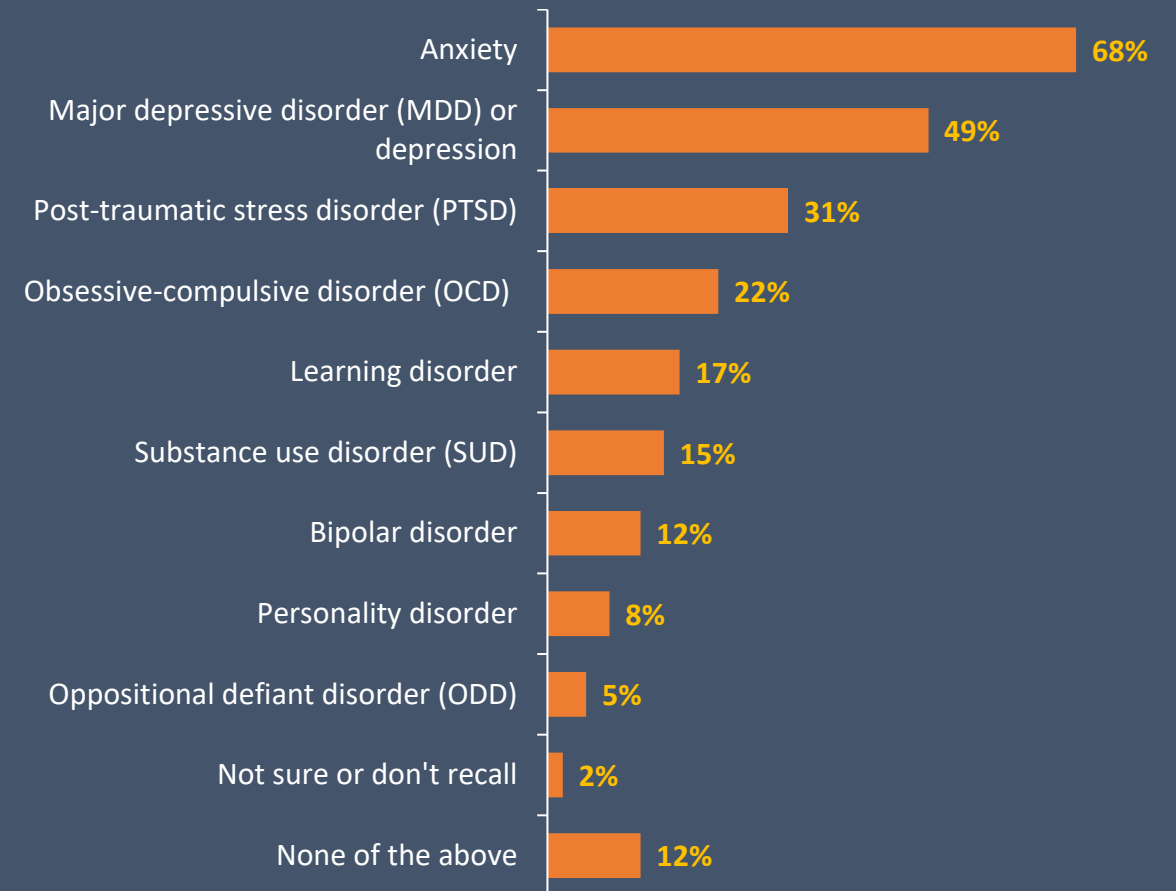


# Impact of ADHD Reported Across Multiple Domains; The Most Common Comorbidities of ADHD are Anxiety and Major Depressive Disorder

**How has quality of life been impacted for you/the person who is living with ADHD? (Select all that apply)**



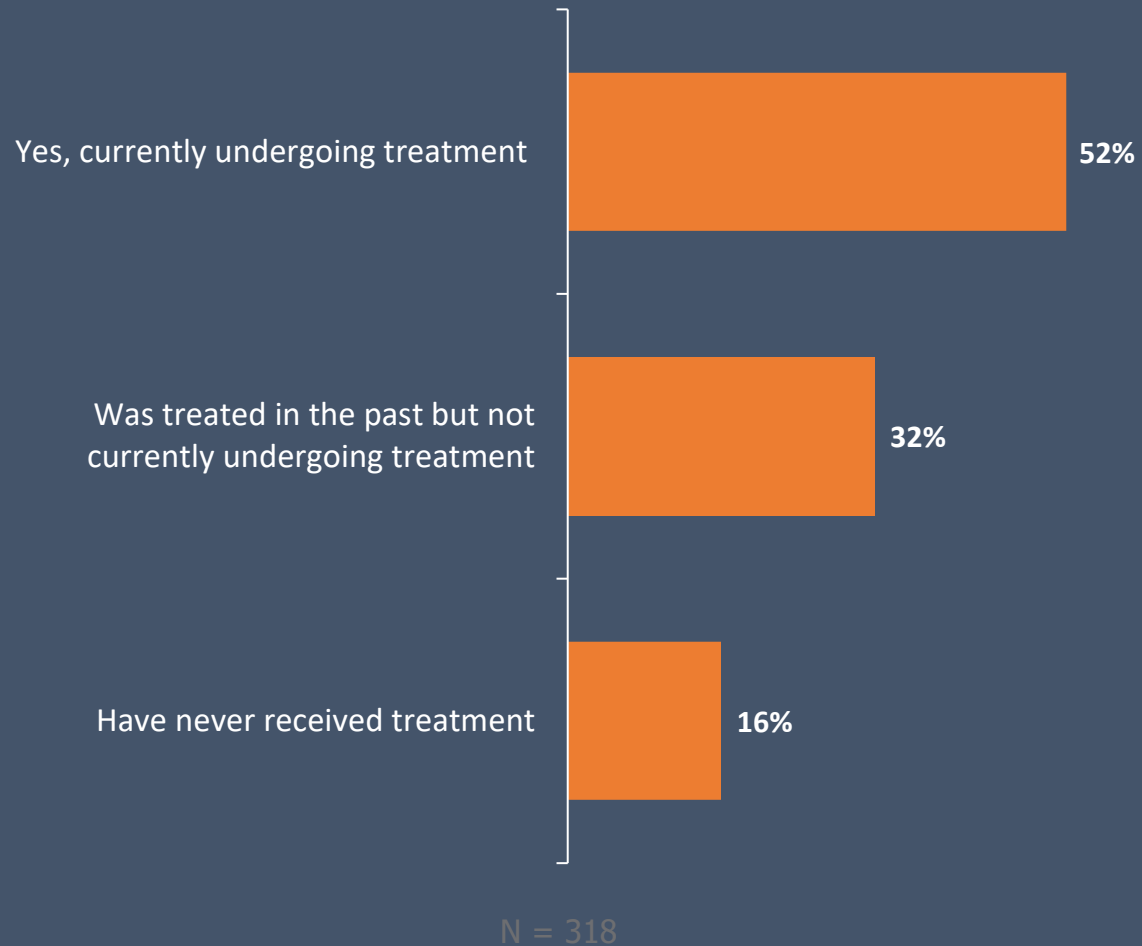
**In addition to ADHD, which of the following conditions have you/the person you care for also been diagnosed with? (Select all that apply)**



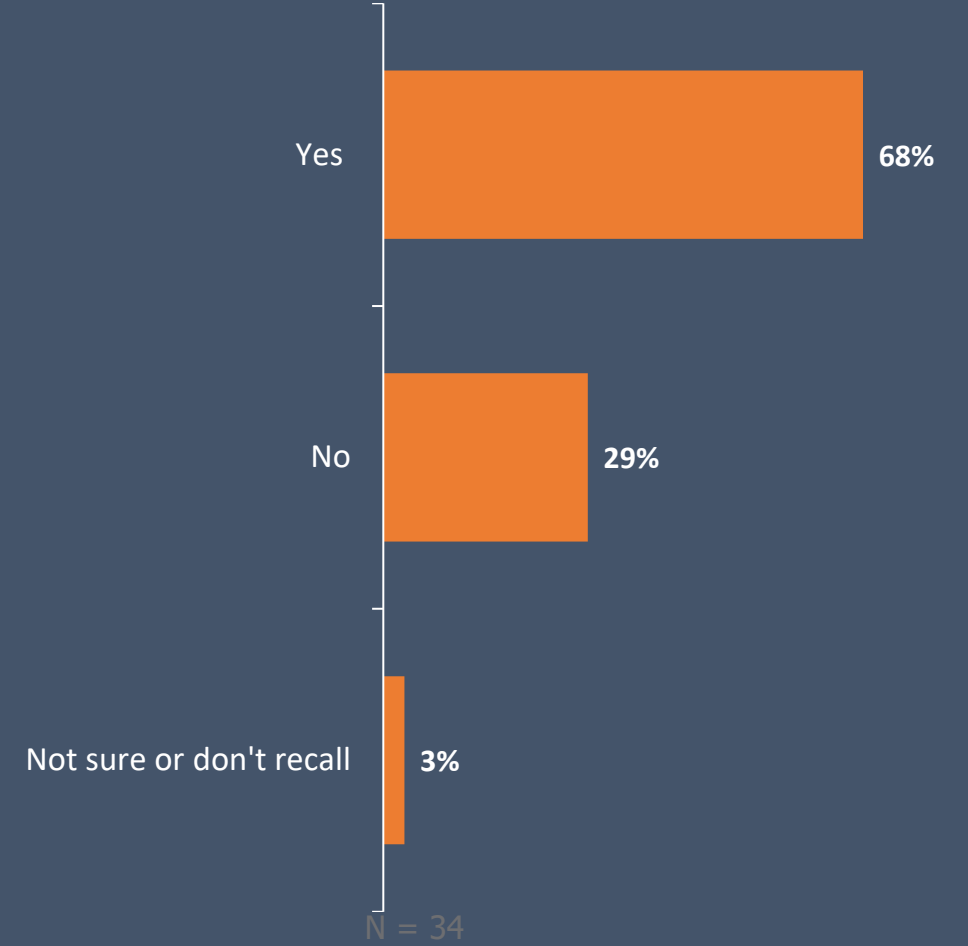


Only Half Of the Patients Are Currently Undergoing Treatment;  
68% Have Been on a Stimulant Prior to a Non-Stimulant Medicine

**Is treatment for ADHD currently being given by a healthcare professional (such as a Physician, PA, or NP)?**

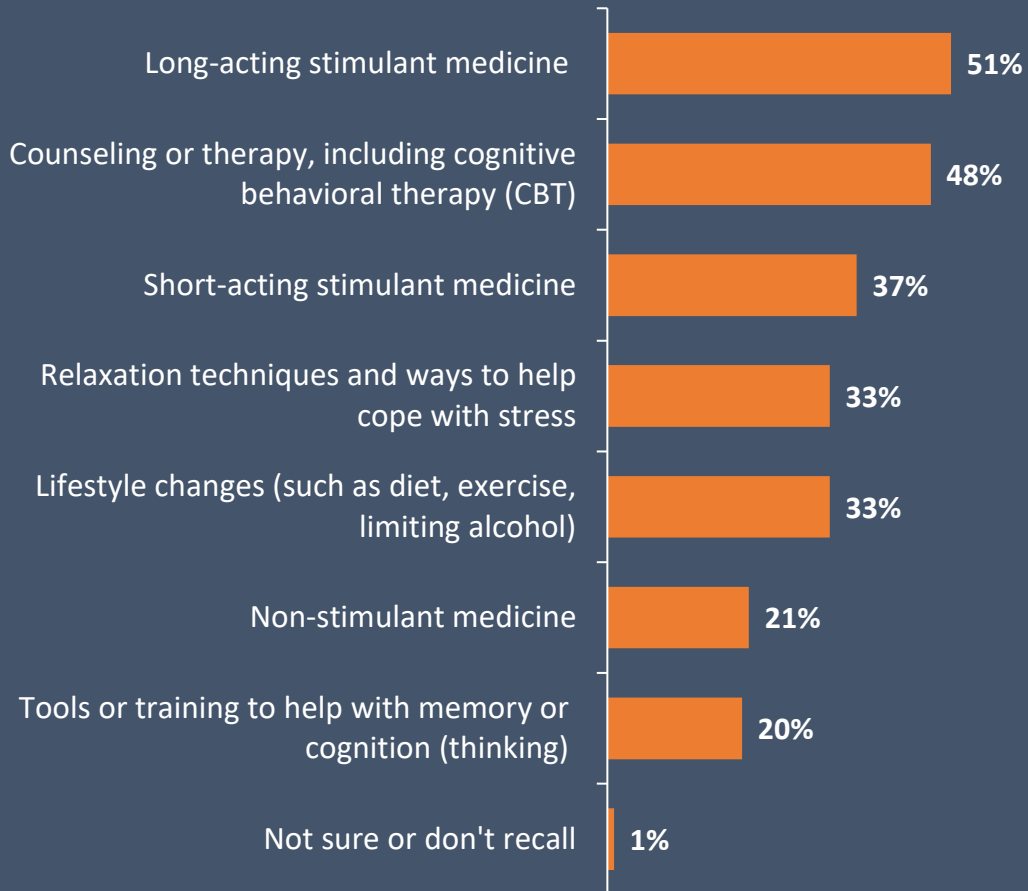


**Was a stimulant medicine used as treatment for ADHD prior to non-stimulant medicine?**

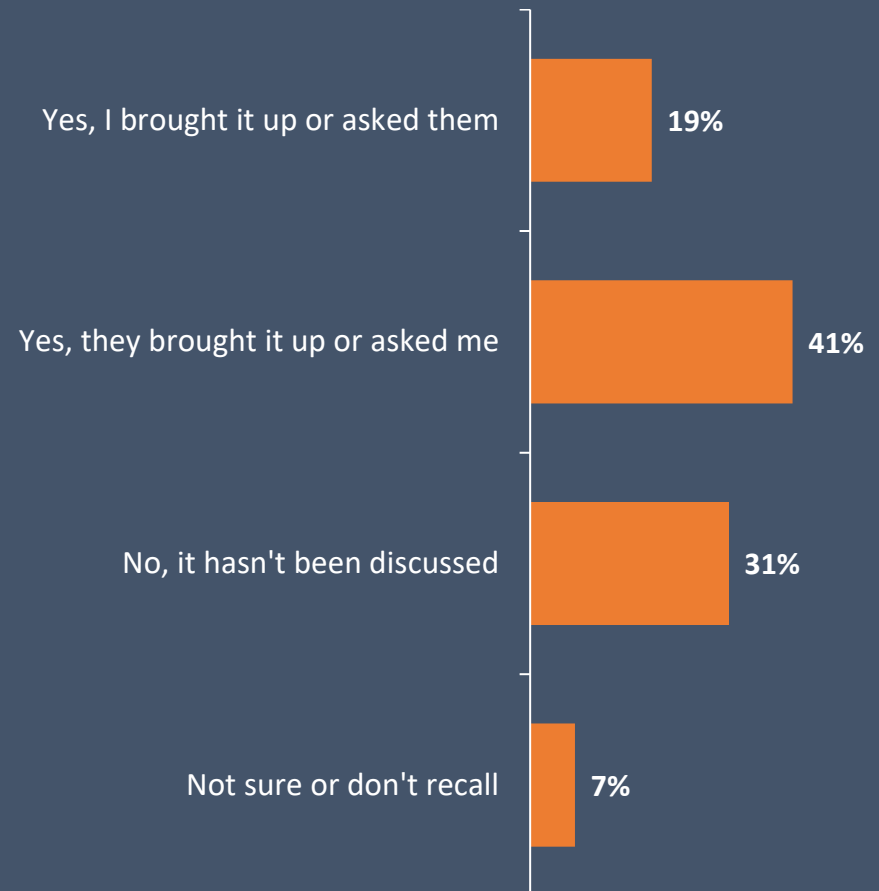


Half Are On Long-Acting Stimulants; A Third Are on Short Acting Stimulants; and Only a Fifth are On Non-Stimulant Medicines Despite Two Thirds of Respondents Report Asking Their HCP About Non-Stimulants

Which of the following types of treatment for ADHD are currently being given as part of the treatment plan? (Select all that apply)

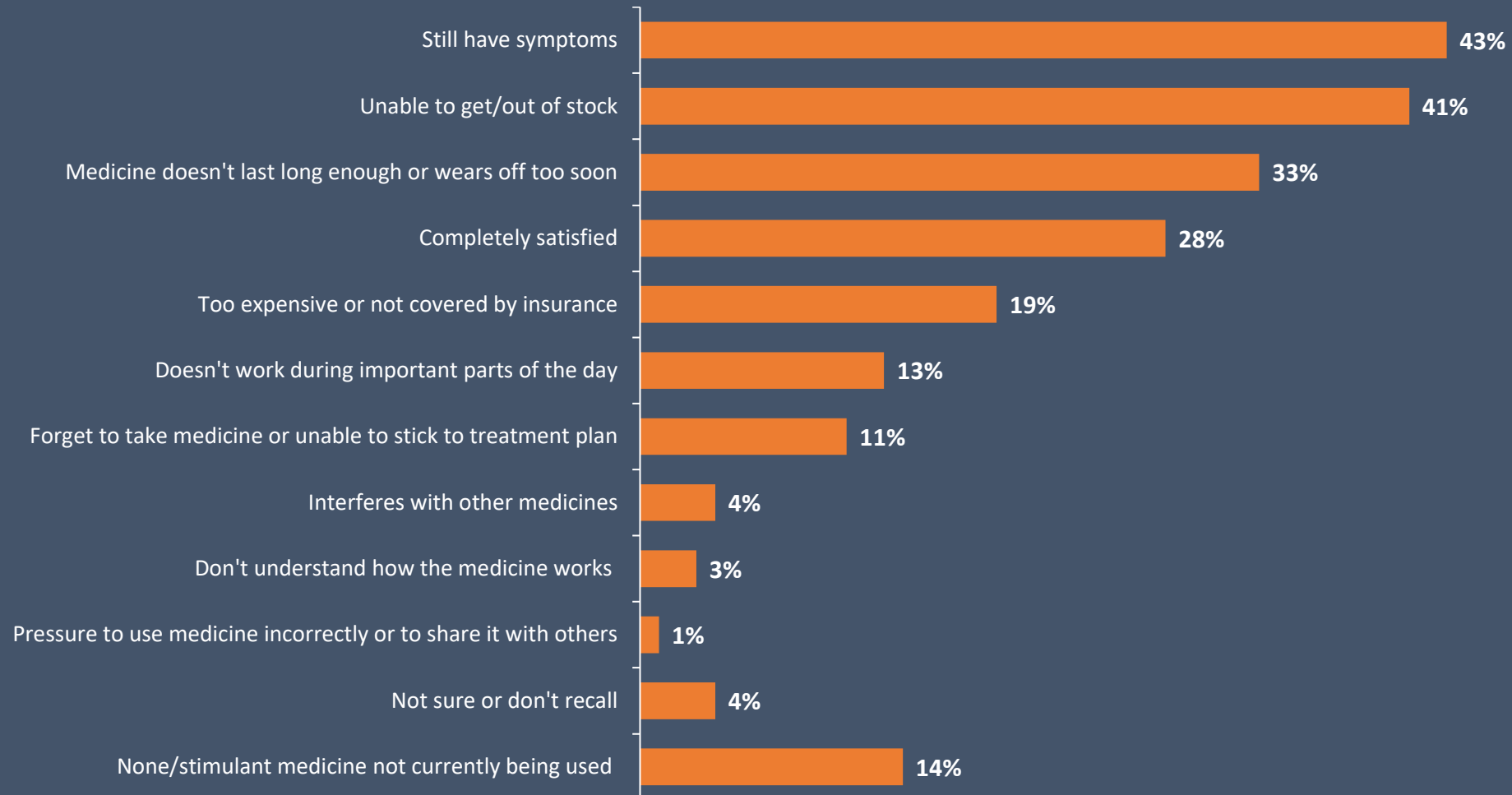


Has a healthcare professional (such as a Physician, PA, or NP) discussed non-stimulant medicines with you as part of an ADHD treatment plan?



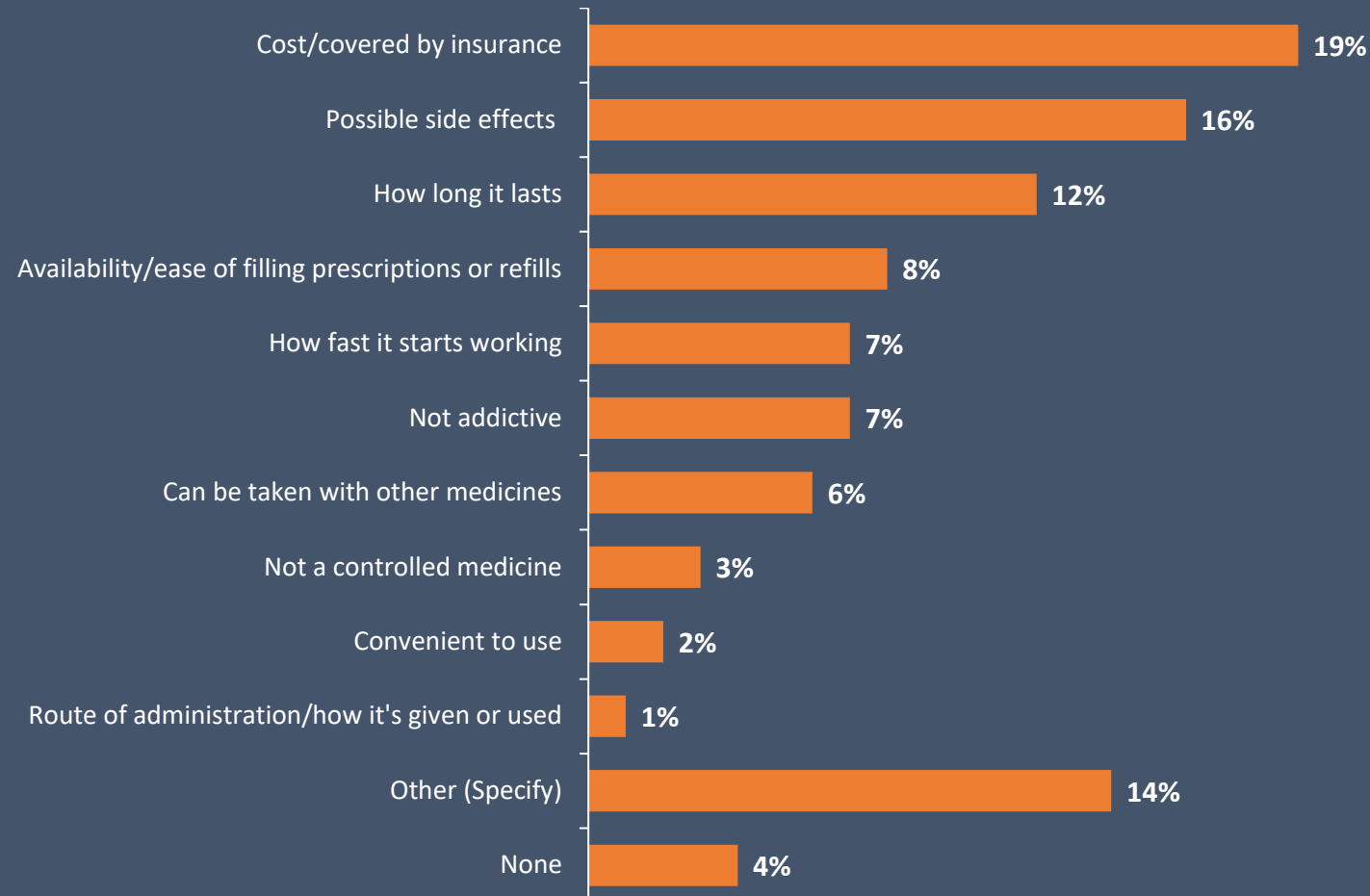
# Experience With Stimulant Medicine for ADHD; 41% Report Medicine Shortages and Only 28% Are Completely Satisfied with Current Stimulant Treatment

## What is your experience with stimulant medicine currently being used for ADHD? (Select as many as apply)



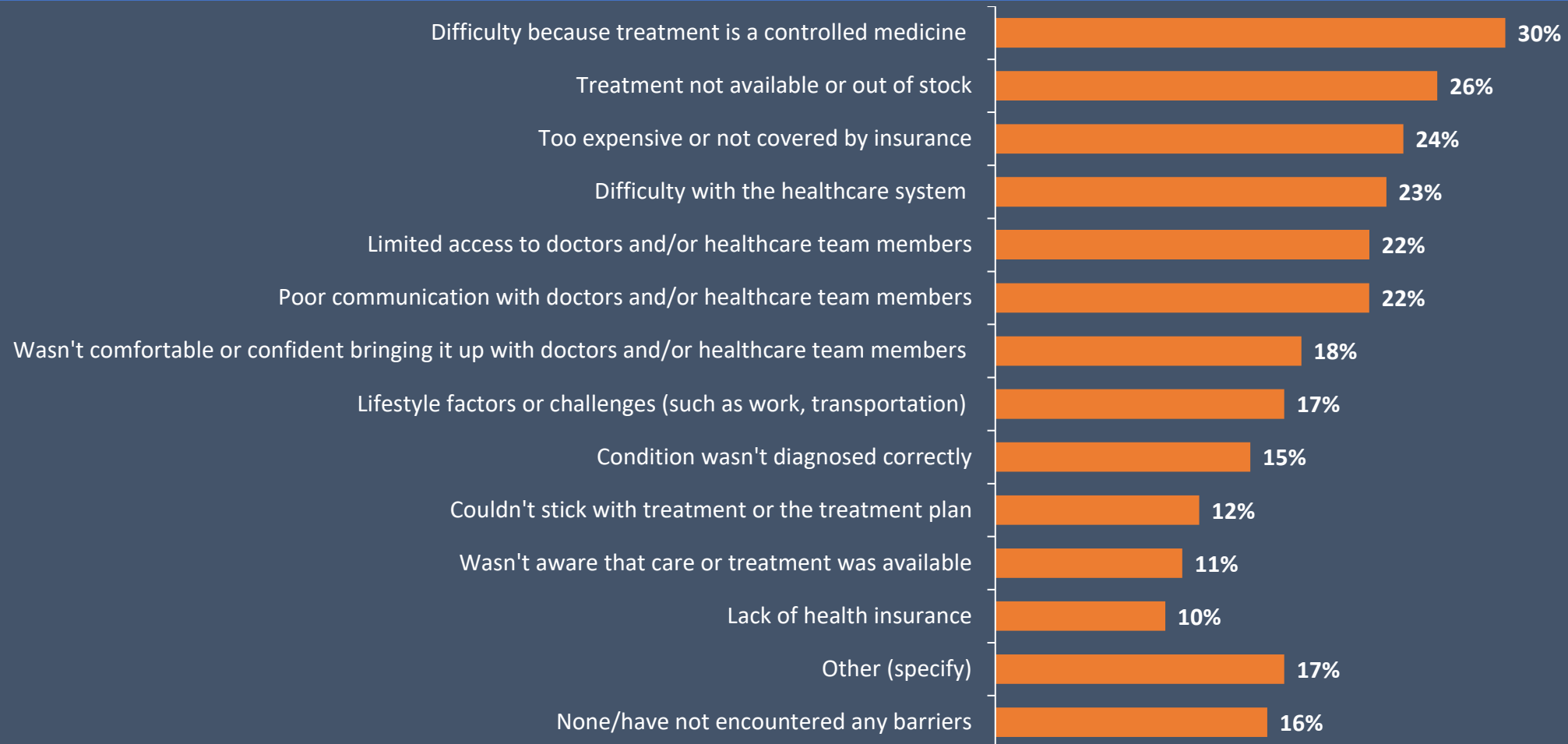
# The Top 5 Most Important Factors When Considering ADHD Treatments for Patients

What is most important to you when considering treatment for ADHD? (Please select one)



# The Top 5 Barriers Associated with Medical Care/Treatment for Disease

Which of the following barriers, if any, have you/the person you care for encountered getting medical care and/or treatment for ADHD? (Select all that apply)



# Summary

- ADHD is common
- Diagnosis in adults is complex
- Survey results indicate:
  - Lack of knowledge about ADHD for many practitioners
  - Approximately half of patient respondents are not receiving treatment
  - Cost of medication and insurance coverage are barriers to care
  - Many patients have had difficulty getting medication that was prescribed
- Clearly adult guidelines are needed – and they are on the way!