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Attention Deficit Hyperactivity Disorder (ADHD): Survey Report

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NH Pediatric Improvement Partnership

citizenshealthinitiative.org

Attention Deficit Hyperactivity Disorder (ADHD): Survey Report

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

December 2017

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EXECUTIVE SUMMARY

In the spring of 2016, the New Hampshire Pediatric Improvement Partnership (NHPIP) conducted an online survey of NH pediatric and family practice clinicians to understand practice patterns, comfort level, and support needs relative to caring for pediatric patients with Attention Deficit Hyperactivity Disorder (ADHD). Of the clinicians surveyed, 138 responded yielding a 13% response rate.

BACKGROUND INFORMATION ON PEDIATRIC ATTENTION DEFICIT HYPERACTIVE DISORDER

ADHD is the most common pediatric mental health disorder managed in the primary care setting (Cantwell, 1996). Two-thirds of children with ADHD have at least one co-occurring disorder (Pliszka, 1998). ADHD is a costly condition, with an estimated societal cost of $42 billion in the US in 2005 (Beechman, 2014). ADHD is a treatable condition.

AMERICAN ACADEMY OF PEDIATRICS ADHD CARE GUIDELINES

1. Initiate evaluation of children 4 years and older presenting with academic or behavioral problems and symptoms of inattention, hyperactivity, or impulsivity.
2. Assure current *diagnostic* criteria met based on information from family, teachers, and others.
3. Assess for co-occurring disorders, including emotional or behavioral, developmental, and physical.
4. Children with ADHD should be identified as a population with special health care needs.
5. Follow below treatment recommendations:

Age	Treatment Recommendations
Preschool (4–5 yrs)	1. Behavior therapy first 2. Medication if behavior therapy does not work 3. No behavior therapy locally - weigh risks of early medication use vs. harm of delayed treatment
Elementary School (6–11 yrs)	1. Medication & behavior therapy 2. Optimize school environment (e.g., accommodations and/or placement)
Adolescents (12–18 yrs)	Medication & behavior therapy
All Ages	Titrate medication to maximize clinical benefit (per parent and teacher rating scales) & minimize adverse effects

The report highlights opportunities for improving care for children with ADHD and co-occurring disorders, identifies strengths in the current provision of care, and outlines areas where pediatricians and family practice clinicians would like more knowledge, training, and access to community supports for patients and families.

CLINICIAN PRACTICE PATTERNS, COMFORT LEVEL, AND FAMILIARITY WITH FAMILY SUPPORTS

Clinicians reported use of standard rating scales to diagnose ADHD and initial monitoring after prescribing ADHD medication was consistent with guidelines. Clinicians also reported feeling comfortable managing ADHD in children over the age of 6 and had some familiarity with community supports for children and families. Clinicians, however, reported low rates of adherence to medication monitoring recommendations for ongoing treatment and low use of rating scales for monitoring treatment and co-occurring disorders. Surveyed clinicians also indicated low comfort levels in managing ADHD in children under age 6 and those children with co-occurring disorders. They also reported limited knowledge of or access to community supports for children and families and the need for added training and support.

	Strengths	Challenges
Practice Patterns	High use of rating scales to diagnose ADHD* Majority report seeing children within 30 days of medication initiation**	Low use of rating scales to monitor treatment response* Low use of rating scales to identify co-occurring disorders* Few report seeing children for recommended monitoring care** Low use of algorithms for selecting medications
Clinician Comfort	Comfortable managing patients 6 years and older with only ADHD	Uncomfortable managing children under six with only ADHD Uncomfortable managing patients with ADHD and co-occurring disorders as number of severity increases Difficulty managing care of patients with complex family dynamics
Family Supports	Fairly comfortable answering family questions about school support & behavior therapy	Lower comfort answering family questions about alternative approaches & managing challenging behaviors Just over half report having a local support group to refer a family

**American Academy of Pediatrics Guidelines for ADHD Care (AAP, 2011).*

***National Center for Quality Assurance quality metric for ADHD (NCQA, 2016).*

SUPPORT CLINICIANS WOULD FIND USEFUL IN TREATING ADHD WITH CO-OCCURRING DISORDERS

Training & Education 91% Pharmacological Treatment 86 % Assessing Co-Occurring Mental Disorders 73% Online Training About Common Co-Occurring Conditions	**Assessment Tools/Scales** 86% Co-Occurring Mental Disorders 86% Treatment Response 81% Trauma Exposure
Services 87% Psychiatric Consult	**Quality Improvement** 61% Conduct QI Project 51% Prescribing Pattern Data

INTRODUCTION

Attention Deficit Hyperactivity Disorder (ADHD) is the most common pediatric mental health disorder managed in the primary care setting (Cantwell, 1996). In 2011 approximately 8.8% of parents nationally, and 10.1% in NH, indicated having a child between 4-17 years affected by ADHD (CDC, 2017). ADHD can affect a child's academic achievement, well-being and social interactions (AAP, 2011).

ADHD is a costly condition, with an estimated societal cost (health care, education, and juvenile justice systems) of $42 billion in the US in 2005 (Beechman, 2014).

Importantly, ADHD is a treatable condition. The American Academy of Pediatrics (AAP) recommends a series of guidelines for care of ADHD, as outlined in Figure 1 (AAP, 2011).

AMERICAN ACADEMY OF PEDIATRICS ADHD CARE GUIDELINES

1. Initiate evaluation of children 4 years and older presenting with academic or behavioral problems and symptoms of inattention, hyperactivity, or impulsivity.
2. Assure current *diagnostic* criteria met based on information from family, teachers, and others.
3. Assess for co-occurring disorders, including emotional or behavioral, developmental, and physical.
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Adolescents (12–18 yrs)	Medication & behavior therapy
All Ages	Titrate medication to maximize clinical benefit (per parent and teacher rating scales) & minimize adverse effects

Figure 1 American Academy of Pediatrics ADHD Care Guidelines

METHODS

In the spring of 2016 the NH Pediatric Improvement Partnership (NHPIP) distributed an online survey to pediatric and family medicine clinicians through direct emails and listservs of the NH Pediatric Society and the NH Academy of Family Physicians (see Appendix 1). The survey sought to understand clinician practice patterns, comfort level, and need for support to treat pediatric patients with ADHD and co-occurring disorders. As an incentive to participate, clinicians who completed the survey were entered into a raffle for two Amazon gift cards.

Data were analyzed at two levels: summarized for all clinicians and by clinician specialty (family medicine and pediatrics, specifically, for comparison purposes). Of note, the total clinician count is greater than the sum of the family physician and pediatrician responses, because it includes other clinician types (e.g., nurse practitioners, combined internal medicine/pediatrics specialty). Group comparisons between family physicians and pediatricians were completed using two-tailed t-distribution, with tests judged significant at p-value < .05.

RESULTS

Respondent Demographics

A total of 137 pediatricians and family physicians participated in the survey. The 137 respondents represented 13% of the approximately 1,027 pediatric and family physicians in New Hampshire.[1] All respondents were asked the general survey questions; respondents currently caring for pediatric patients with ADHD were asked to complete the entire survey (N=124). See Table 1 for a demographic profile of survey participants.

	Sample Size	Sample
Gender	N=137	
Female	81	59%
Male	56	41%
Degree	N=137	
MD/DO	132	96%
NP	5	4%
Current Area of Practice	N=137	
Family Medicine	65	47%
Pediatrics	63	46%
Combined Internal Medicine and Pediatrics	7	5%
Other	2	1%
Years Practicing Medicine	N=137	
0-5 Years	13	9%
6-15 Years	46	34%
16-30 Years	53	39%
Greater Than 30 Years	25	18%

1 *Estimate based on a NHPIP database of pediatric and family physicians.*

	Sample Size	Sample
Settings	N=137	
Solo Outpatient Practice	3	2%
Group Outpatient Practice	104	76%
Academic Outpatient Care	19	14%
Inpatient Practice	1	1%
Academic Inpatient Practice	0	0%
Other	10	7%
Currently Managing Pediatric Patients with ADHD	N=137	
Yes	124	91%
No	13	9%

Table 1 Survey Respondents Demographics

CLINICIAN PRACTICE PATTERNS IN DIAGNOSIS AND MANAGEMENT OF ADHD

Clinicians were asked to indicate the percentage of their pediatric patients (Don't Use, 1-25%, 26-50%, 51-75%, or 76-100%) for which they did each AAP recommended care guideline. The percentage of clinicians reporting use between 51-100% of the time were classified "frequent" while those reporting less than 50% were classified as "infrequent."

Diagnosis of ADHD

Clinicians reported frequent use of parent and teacher-reported rating scales to diagnose pediatric ADHD (91% and 90%, respectively) with pediatricians reporting slightly more frequent use of such scales than family physicians (93% and 86%, respectively) (see Figures 2 and 3). These differences were not significant.

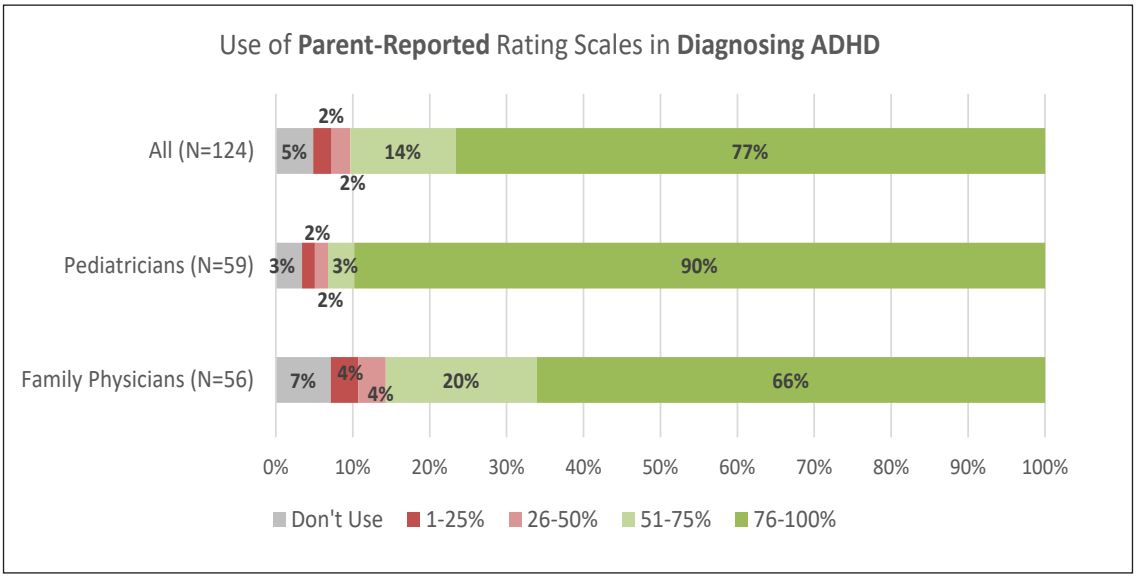

Figure 2 Use of Parent-Reported Rating Scales in Diagnosing ADHD

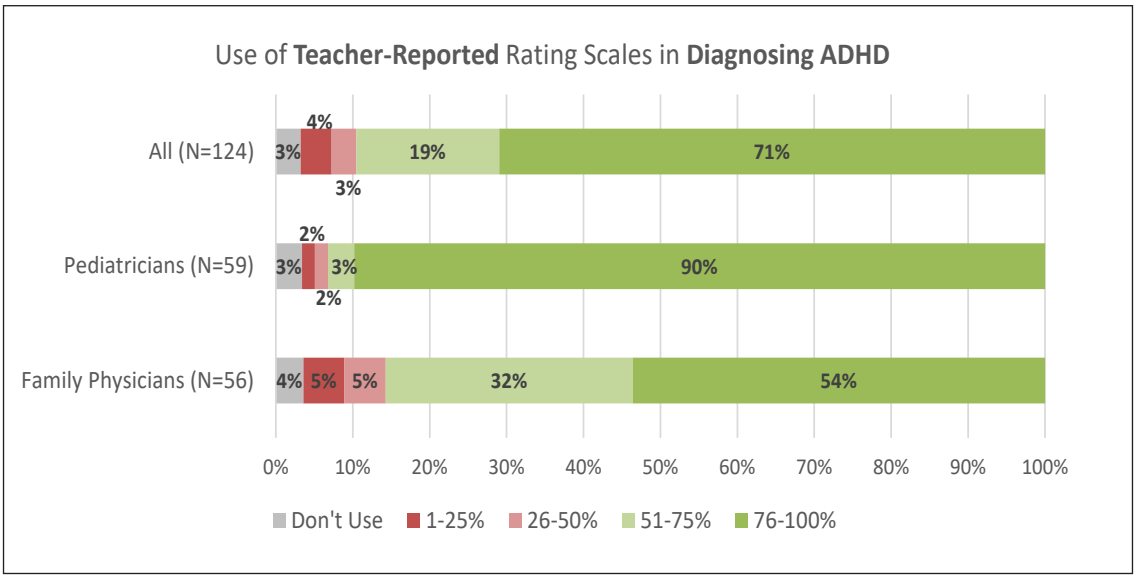

Figure 3 Use of Teacher-Reported Rating Scales in Diagnosing ADHD

Monitoring On-Going Response to Treatment

Overall, clinician use of parent and teacher-reported rating scales to monitor on-going response to treatment was infrequent (see Figures 4 and 5). Approximately 31% of respondents reported NEVER using parent-reported rating scales, and 27% of clinicians reported NEVER using teacher-reported rating scales to monitor treatment response. Family physicians reported less frequent use of both parent and teacher-reported rating scales to monitor treatment response than pediatricians did. Thirty-six percent (36%) of family physicians and 25% of pediatricians reported NEVER using parent-reported rating scales to monitor response to treatment; this difference was not significant (see Figure 4). Thirty-eight percent (38%) of family physicians and 14% of pediatricians reported NEVER using teacher-reported rating scales to monitor response to treatment; this difference was significant ($p = .004$) (see Figure 5). See Appendix 2 for a table of the statistical analyses.

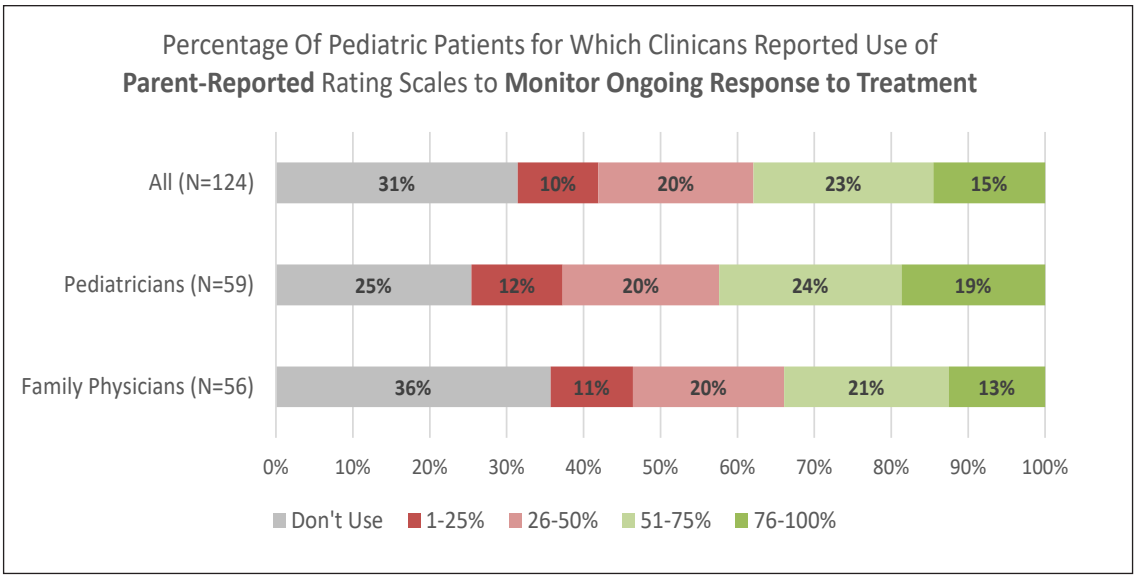

Figure 4 Percentage of Pediatric Patients for Which Clinicians Reported Use of Parent-Reported Rating Scales to Monitor Ongoing Response to Treatment

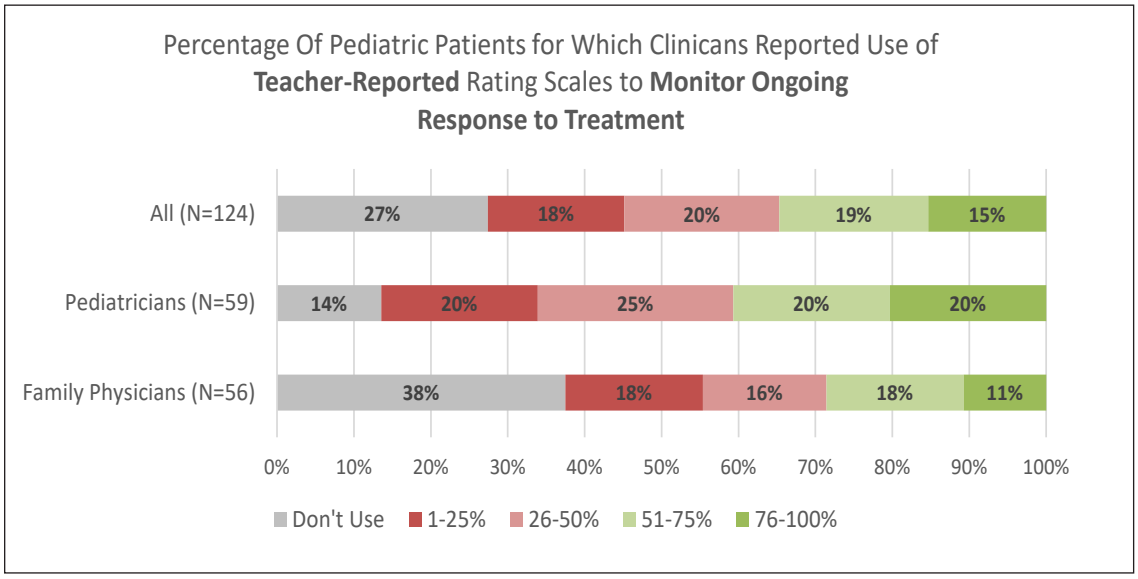

Figure 5 Percentage of Pediatric Patients for Which Clinicians Reported Use of Teacher-Reported Rating Scales to Monitor Ongoing Response to Treatment

Screening for Co-Occurring Disorders

Clinicians reported infrequent use of child, teacher, or parent-reported rating scales to identify co-occurring disorders. Approximately 36%, 51%, and 32% of clinicians respectively reported NEVER using a child, teacher, or parent-reported rating scale to identify co-occurring disorders (see Figure 6). Higher percentages of family physicians reported NEVER using child, teacher, or parent-reported rating scales to identify co-occurring disorders than pediatricians. These differences were statistically significant (see Appendix 2).

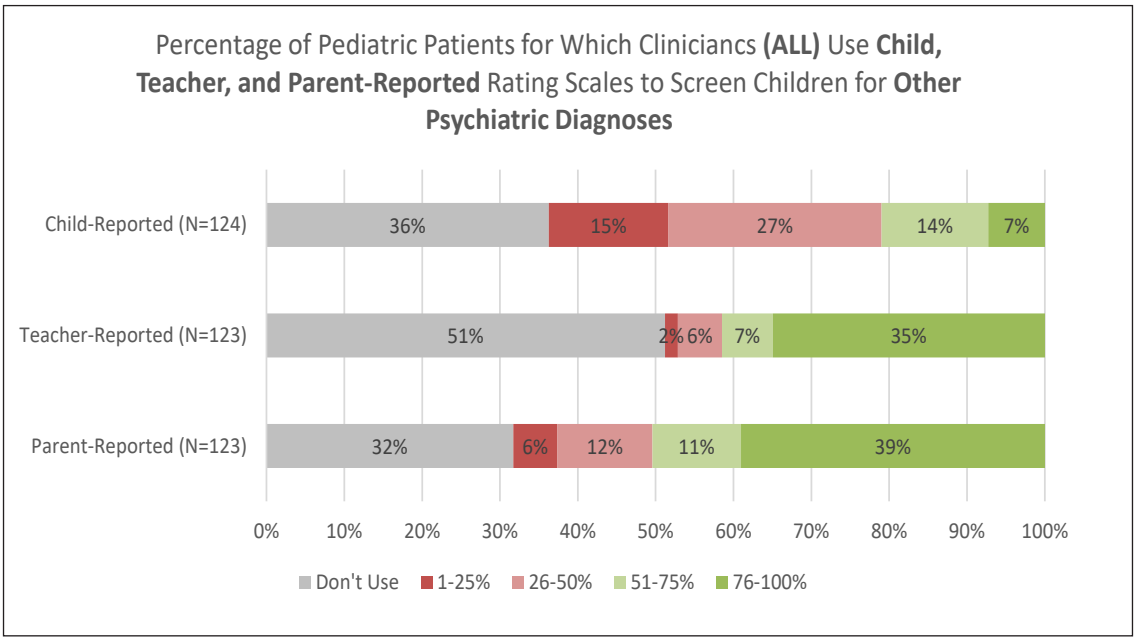

Figure 6 Percentage of Pediatric Patients for Which Clinicians (ALL) Use Child, Teacher, and Parent-Reported Rating Scales to Screen Children for Other Psychiatric Diagnoses

Screening Tools

Table 2 summarizes assessment tools clinicians reported using for diagnosis, treatment monitoring, and co-occurring disorder identification. Respondents could choose more than one screening tool; hence, percentage totals may exceed 100%. By far, the Vanderbilt Assessment Scale is the most frequently used tool.

Screening Tool	Parent-Reported	Teacher-Reported	Child-Reported
Vanderbilt	77%	77%	N/A*
Conners	25%	25%	N/A*
ASEBA (Achenbach System of Empirically Based Assessment)	3%	3%	1%
SNAP-IV	7%	5%	N/A*
CDI (Child Depression Inventory)	11%	N/A*	15%
PHQ-9	28%	N/A*	73%
GAD-7	N/A*	N/A*	39%
SCARED (Screen for Child Anxiety & Related Emotional Disorder)	18%	N/A*	20%
MFQ (Mood & Feelings Questionnaire)	6%	N/A*	10%

Table 2 Clinician Use of ADHD Screening Tools

*No version of screening tool for informant group.

In addition to the tools above, other tools or methods that clinicians reported using included:

- Behavior Assessment System for Children (BASC)
- Talking with patients and families
- Patient Health Questionnaire-Adolescent (PHQ-A)
- DSM V criteria
- Symptom Rating Scale
- CRAFFT
- Teen Screener (Dartmouth)
- ADD-H Comprehensive Teacher's Rating Scale (ACTeRS)
- Autism Quotient (AQ)
- Spence Children's Anxiety Scale (SCAS)

Medication Selection and Initiation

Clinicians were asked to indicate the percentage of their pediatric patients (don't use, 1-25%, 26-50%, 51-75%, 76-100%) for which they completed each AAP-recommended care guideline. The percentage of clinicians reporting use between 51-100% of the time were classified "frequent" while those reporting less than 50% were classified as "infrequent."

Providers reported infrequent use of algorithms to guide medication selection. Forty-five percent of clinicians reported NEVER using an algorithm (see Figure 7). Family physicians reported less frequent use of algorithms to guide medication selection than pediatricians, 61% versus 31%, respectively ($p = 0.001$) (see Figure 7).

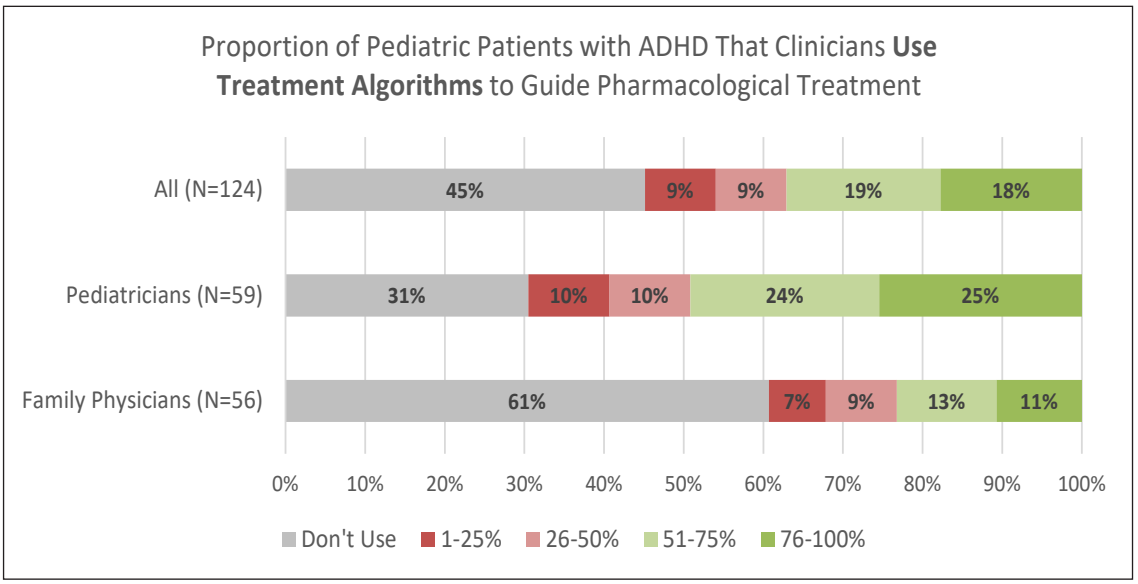

Figure 7 Proportion of Pediatric Patients With ADHD That Clinicians Use Treatment Algorithms to Guide Pharmacological Treatment

Two frequently used metrics to evaluate ADHD care quality include: 1) a follow-up care visit within 30 days of medication initiation and 2) two additional follow-up visits within the nine months subsequent to completing the first month of medication. The survey question relative to frequency of seeing pediatric ADHD patients for monitoring on-going response to medication was time-defined slightly differently than the standard quality metric definition. The survey inquired about the percentage of children seen within one month of starting ADHD medication, while the ADHD quality metric specifies seeing the patient within 30 days. The survey inquired about the percentage of children seen at least 3 times in the nine months subsequent to starting an ADHD medication, while the ADHD quality metric specifies seeing the patient three times in 10 months.

Clinicians reported high adherence to seeing children within one month of medication initiation, but lower adherence to seeing the child two more times within the medication maintenance phase (see Figures 8 and 9). No statistically significant difference was found between family physicians and pediatricians seeing patients within the first month after starting an ADHD medication initiation, though family physician reported seeing patients slightly more often than pediatricians (89% and 82%, respectively) (see Figure 8). A higher percent of family physicians frequently reported seeing patients as recommended during the maintenance phase than pediatricians (68% versus 66%, respectively) (see Figure 9). This difference was not statistically significant (see Appendix 2).

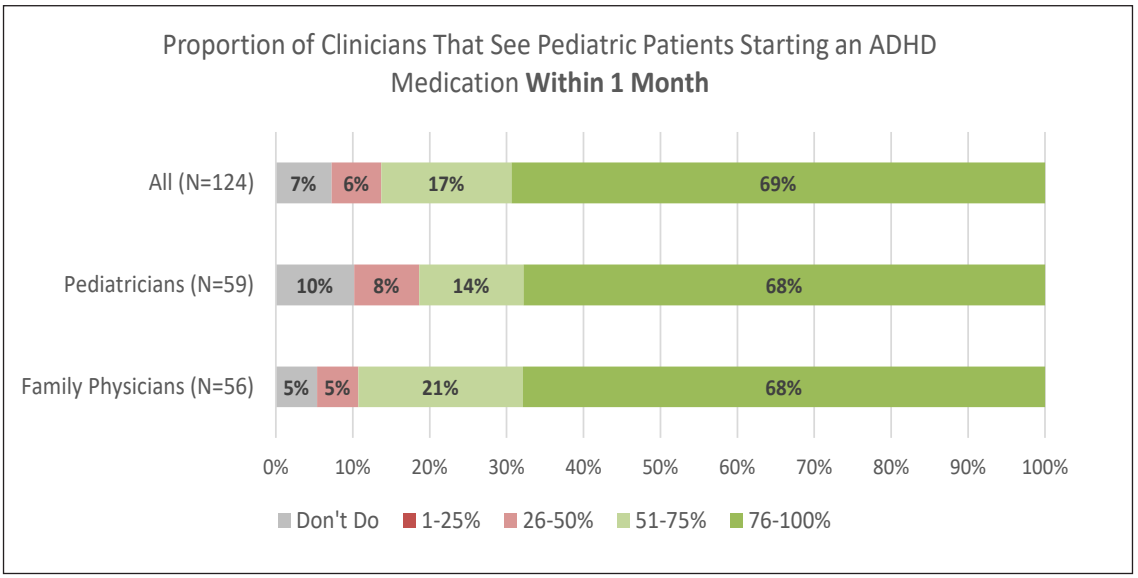

Figure 8 Proportion of Clinicians That See Pediatric Patients Starting an ADHD Medication Within 1 Month

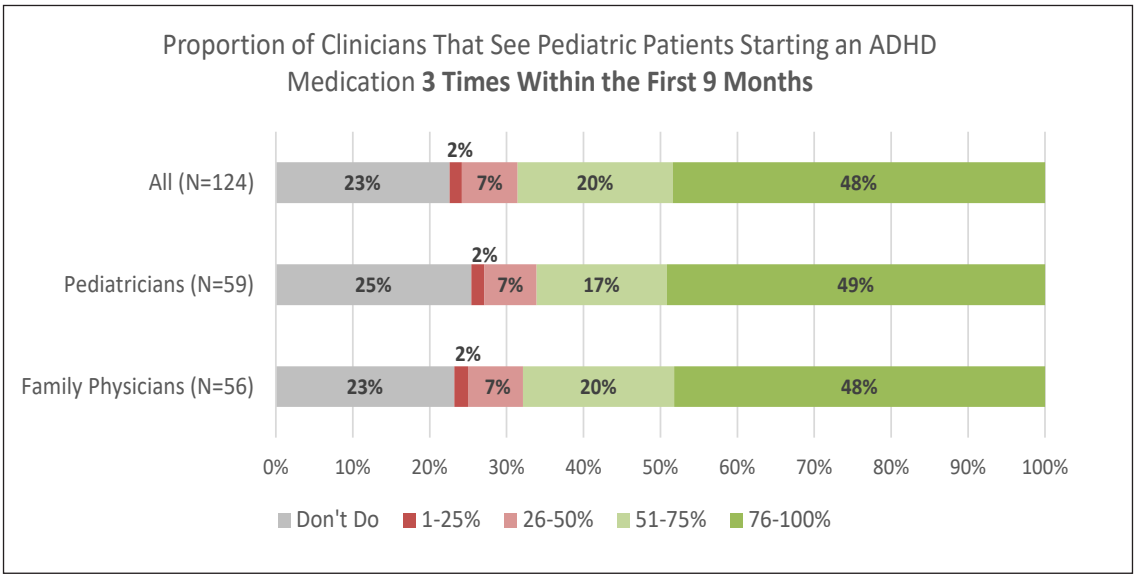

Figure 9 Proportion of Clinicians that See Pediatric Patients Starting an ADHD Medication 3 Times Within the First 9 Months

CLINICIAN COMFORT LEVEL WITH CARING FOR PEDIATRIC PATIENTS WITH ADHD

Clinicians were asked to rate their level of comfort on a scale from one to four, with one indicating low comfort and four indicating high comfort. For this report, clinicians reporting either a one or two were classified as uncomfortable. Conversely, clinicians answering either three or four were classified as comfortable.

By Patient Age

Survey results indicated high clinician comfort with managing the care of children 6-12 years and 13 years and up with ADHD (90% and 97%, respectively) but much lower comfort with caring for a child 5 years and younger (29%). (See Figure 10). Pediatricians reported more comfort than family physicians with managing the care of children 5 years and younger (35% vs 17%), children 6-12 years (98% vs 80%), and adolescents 13 years and up (100% vs 94%) with ADHD (see Figures 11, 12, and 13). These differences were statistically significant for children 5 years and younger ($p = 0.02$) and children 6-12 years ($p = 0.002$) (see Appendix 2 for a table of the statistical analyses).

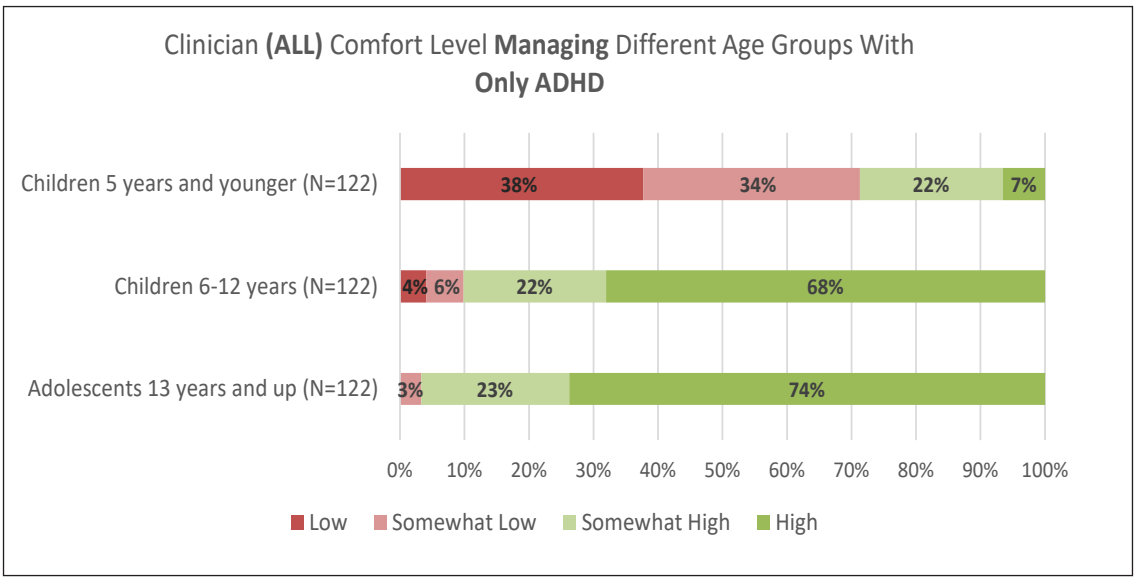

Figure 10 Clinician (ALL) Comfort Level Managing Different Age Groups With Only ADHD

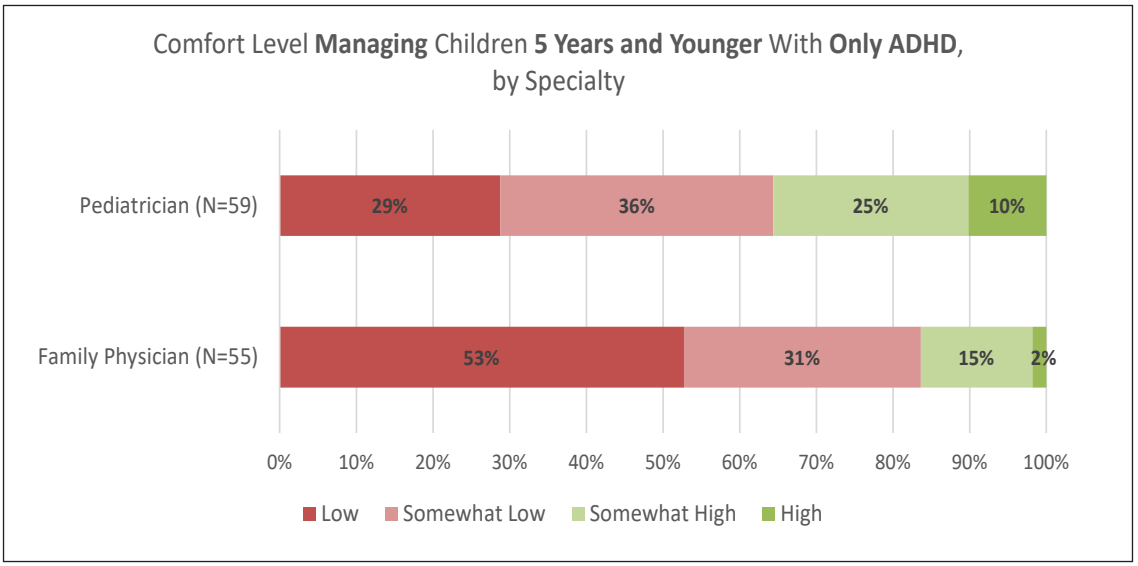

Figure 11 Comfort Level Managing Children 5 Years and Younger With Only ADHD, by Specialty

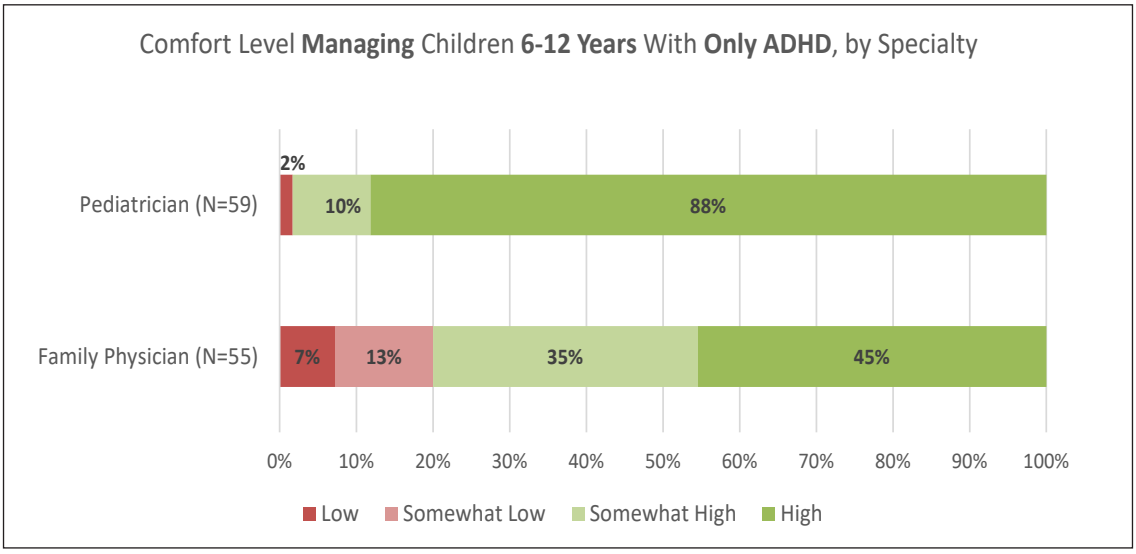

Figure 12 Comfort Level Managing Children 6-12 Years With Only ADHD, by Specialty

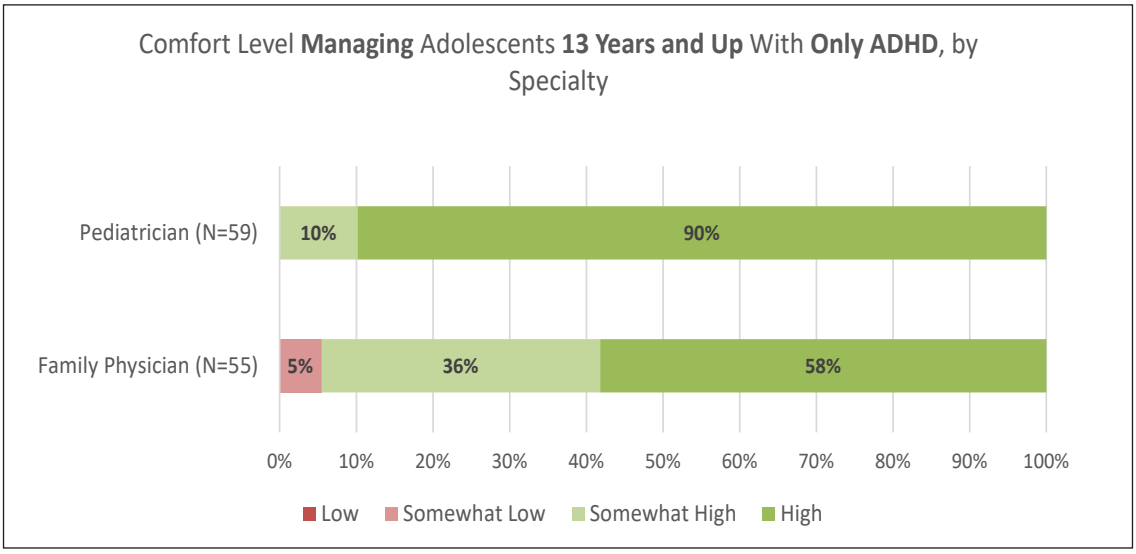

Figure 13 Comfort Level Managing Adolescents 13 Years and Up With Only ADHD, by Specialty

By Co-Occurring Disorder Status

Two-thirds of children with ADHD have at least one co-occurring disorder (Pliszka, 1998). Approximately 50% of children with ADHD will meet the criteria for Oppositional Defiant Disorder (ODD) or conduct disorder, 9-38% for depressive disorders, and 25% for anxiety disorders (Pliszka, 1998).

Clinicians reported more comfort managing the care of children with ADHD without co-occurring disorders, relative to managing the care of children with ADHD plus co-occurring disorders. This response was in regards to managing children with ADHD on their own, without support and consult from other providers. Ninety-eight percent (98%) of clinicians reported high or somewhat high comfort with managing the care of a child with only ADHD (see Figure 14). With the presence of a co-occurring disorder, the percentage of clinicians reporting high/somewhat high comfort ranged from 70% for a child with ADHD and anxiety to only 4% for a child with ADHD and a potential psychotic disorder (see Figure 14). Pediatricians expressed a higher comfort level than family physicians in managing the care of a child with ADHD on their own, either with or without these co-occurring disorders. See Appendix 3 for breakdown of provider comfort level by co-occurring disorder and provider type.

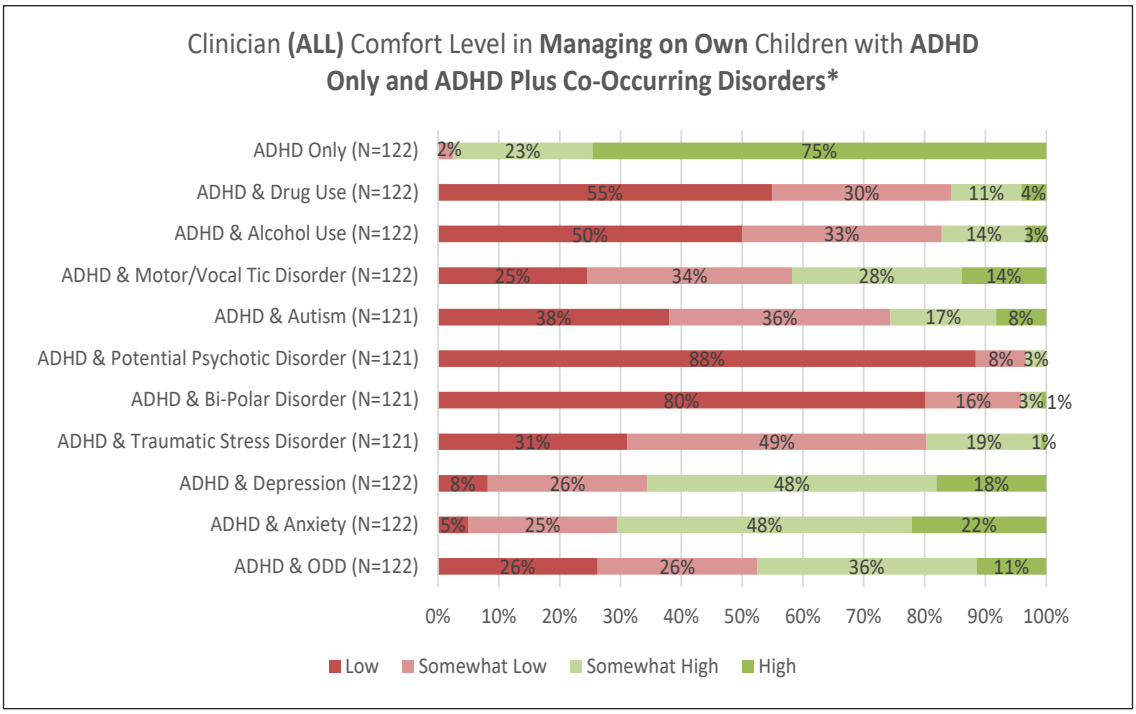

Figure 14 Clinician (ALL) Comfort Level in Managing On Own Children With ADHD Only and ADHD Plus Co-Occurring Disorders

** Percentages may not add up to 100% due to rounding*

Clinicians were offered the opportunity to describe any other situations not previously addressed where they did not feel comfortable managing the care of a child with ADHD. Open-ended response themes confirmed clinician discomfort with care of children under six and as the number of co-occurring disorders increased. Another challenge noted was caring for children with complex social/family dynamics, such as parents with different views on treatment or treatment effectiveness, parent refusal to follow recommendations for counseling, parent mental health issues, or families with child protective services involvement. See Appendix 4 for all open-ended responses.

FAMILY SUPPORTS FOR PARENTS OF A CHILD WITH ADHD

Clinicians were asked to rate their level of comfort from one to four with one indicating low comfort and four indicating high comfort. For this report, clinicians reporting either a one or two were classified as uncomfortable. Conversely, clinicians answering either a three or four were classified as comfortable..

Clinicians reported high comfort with answering family questions about behavior therapy (74%) and school supports (70%). Lower comfort levels were reported for answering questions about managing challenging behaviors (57%) and alternative medicine approaches (46%) (see Figure 15). Pediatricians reported higher comfort levels than family physicians in answering family questions about school supports, managing challenging behaviors, and answering questions about behavioral therapy approaches to managing ADHD.

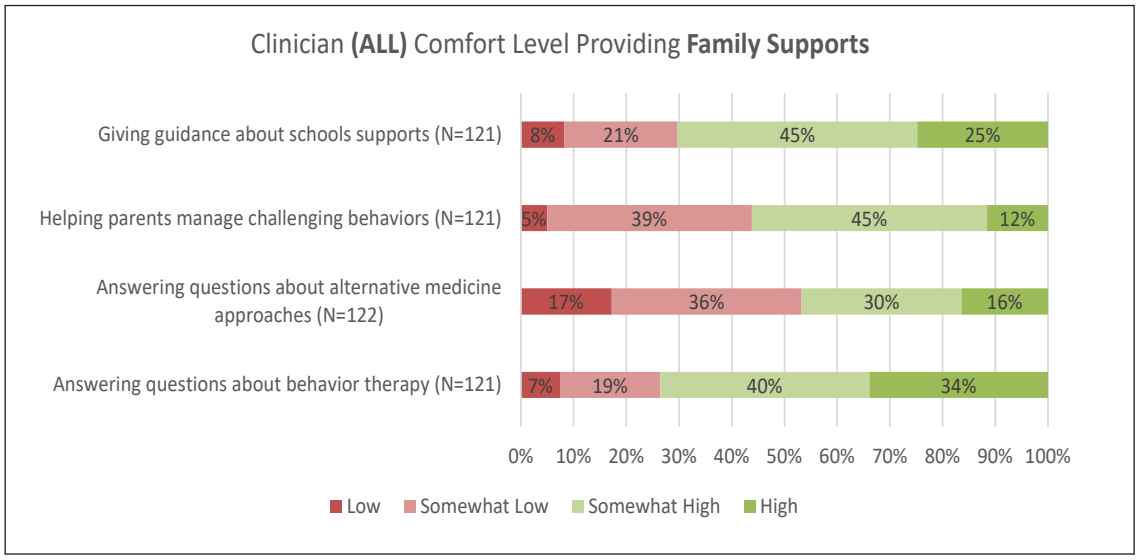

Figure 15 Clinician (ALL) Comfort Level Providing Family Supports

Fifty-seven percent (57%) of clinicians reported having local family support services to refer parents of children with ADHD (see Figure 16). Thirty-five percent (35%) of family physicians were unsure or did not know where they would refer a family for support compared to 24% of pediatricians.

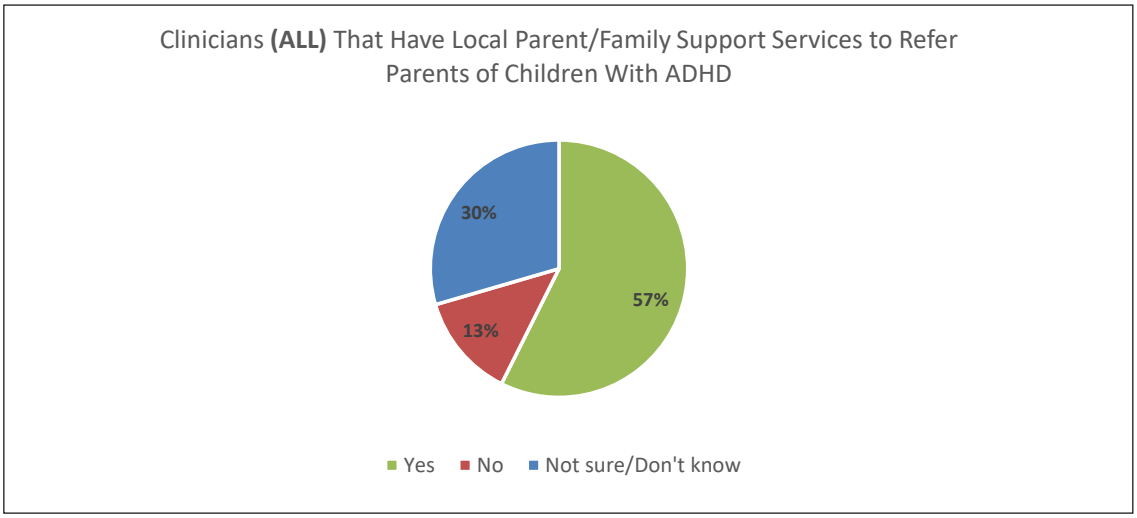

Figure 16 Clinicians (ALL) That Have Local Parent/Family Support Services to Refer Parents of Children with ADHD

SUPPORT CLINICIANS WOULD FIND USEFUL IN TREATING ADHD WITH CO-OCCURRING CONDITION(S)

Clinicians reported that information about pharmacological treatment options (91%) and a consult with a child psychiatrist (87%) would be most useful to them in the pharmacological care of ADHD patients with co-occurring mental health disorders (see Figure 17). Family physicians were slightly more interested in information about pharmacological treatments than pediatricians (94% and 86% respectively). Pediatricians indicated that consultation with a child psychiatrist would be more useful to them than family physicians did (92% and 82%, respectively).

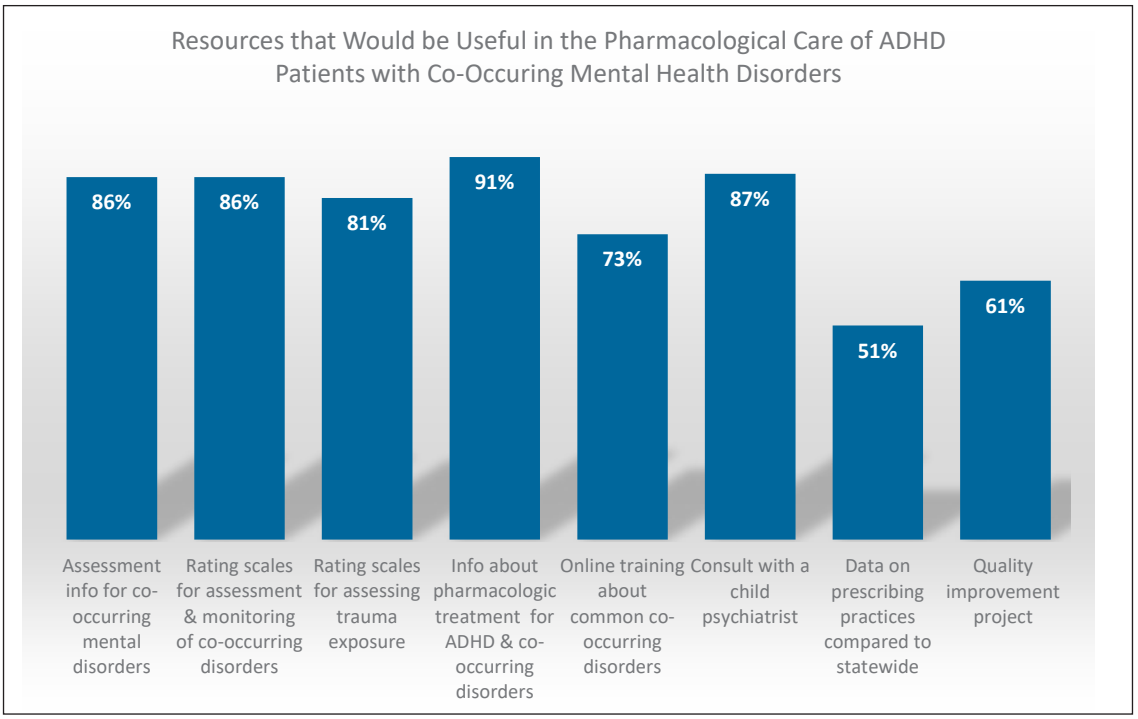

Figure 17 Resources That Would be Useful in the Pharmacological Care of ADHD Patients with Co-Occurring Mental Health Disorders

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APPENDIX 1

SURVEY OF NH PEDIATRIC PRIMARY CARE CLINICIANS ABOUT ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD)

1. What is your degree?
   - O MD/DO
   - O Nurse Practitioner
   - O Physician's Assistant
   - O Other
2. What is your current area of practice?
   - O Family Practice
   - O Pediatrics
   - O Combined Internal Medicine and Pediatrics
   - O Other
3. Which best describes the practice where you provide most patient care?
   - O Solo outpatient practice
   - O Group outpatient practice
   - O Academic outpatient care
   - O Inpatient practice
   - O Academic inpatient practice
   - O Other: Please describe_____
4. What is your gender
   - O Male
   - O Female
   - O Other
5. Please estimate how many years you have been practicing medicine, excluding your time spent in training.
   - O 0-5 Years
   - O 6-15 Years
   - O 16-30 Years
   - O Greater than 30 years
6. Do you currently manage pediatric patients with ADHD in your practice?
   - O Yes. (Go to Question 7)
   - O No. Thank you for your time completing this survey. You are finished!
7. Do you use parent-reported rating scale to assist in diagnosing ADHD
   - O Yes (Go to question 8)
   - O No (Go to question 9)

8. Please estimate the percentage of pediatric patients with ADHD that you use the tool with
   - O 1-25 %
   - O 26-50%
   - O 51-75%
   - O 76-100%
9. Do you use teacher-reported rating scale to assist in diagnosing ADHD
   - O Yes (Go to question 10)
   - O No (Go to question 11)
10. Please estimate the percentage of pediatric patients with ADHD that you use the tool with
    - O 1-25 %
    - O 26-50%
    - O 51-75%
    - O 76-100%
11. Do you use parent-reported rating scales to help screen for other psychiatric diagnoses?
    - O Yes (Go to question 12)
    - O No (Go to question 13)
12. Please estimate the percentage of pediatric patients with ADHD that you use the tool with
    - O 1-25 %
    - O 26-50%
    - O 51-75%
    - O 76-100%
13. Do you use teacher-reported rating scales to help screen for other psychiatric diagnoses?
    - O Yes (Go to question 14)
    - O No (Go to question 15)
14. Please estimate the percentage of pediatric patients with ADHD that you use the tool with
    - O 1-25 %
    - O 26-50%
    - O 51-75%
    - O 76-100%

15. Do you use child-reported rating scales to help screen for other psychiatric diagnoses?
    - O Yes (Go to question 16)
    - O No (Go to question 17)
16. Please estimate the percentage of pediatric patients with ADHD that you use the tool with
    - O 1-25 %
    - O 26-50%
    - O 51-75%
    - O 76-100%
17. Do you use parent rating scales to monitor ongoing response to treatment?
    - O Yes (Go to question 18)
    - O No (Go to question 19)
18. Please estimate the percentage of pediatric patients with ADHD that you use the tool with
    - O 1-25 %
    - O 26-50%
    - O 51-75%
    - O 76-100%
19. Do you use teacher rating scales to monitor ongoing response to treatment?
    - O Yes (Go to question 20)
    - O No (Go to question 21)
20. Please estimate the percentage of pediatric patients with ADHD that you use the tool with
    - O 1-25 %
    - O 26-50%
    - O 51-75%
    - O 76-100%
21. Do you use treatment algorithms (ex. AAP ADHD Practice Guideline) to guide pharmacological treatment for these patients?
    - O Yes (Go to question 22)
    - O No (Go to question 23)

22. Please estimate the percentage of pediatric patients with ADHD that you use the tool with
    - O 1-25 %
    - O 26-50%
    - O 51-75%
    - O 76-100%
23. Do you see these patients within one month of starting a new medication?
    - O Yes (Go to question 24)
    - O No (Go to question 25)
24. Please estimate the percentage of pediatric patients with ADHD that you use the tool with
    - O 1-25 %
    - O 26-50%
    - O 51-75%
    - O 76-100%
25. Do you see these patients at least 3 times in the first 9 months after starting a new medication.
    - O Yes (Go to question 26)
    - O No (Go to question 27)
26. Please estimate the percentage of pediatric patients with ADHD that you use the tool with
    - O 1-25 %
    - O 26-50%
    - O 51-75%
    - O 76-100%

Based on your answers to the above, please indicate what screening tool(s) you use to assess and/or monitor children with ADHD and potential co-occurring disorders.

27. Do you use the Vanderbilt?
    - O Yes (Go to question 28)
    - O No (Go to question 29)
28. Select all of the tools that you use:
    - O Parent tool
    - O Teacher tool

29. Do you use the Conners?
    - O Yes (Go to question 30)
    - O No (Go to question 31)
30. Select all of the tools that you use:
    - O Parent tool
    - O Teacher tool
31. Do you use the Achenbach System of Empirically Based Assessment (ASEBA)
    - O Yes (Go to question 32)
    - O No (Go to question 33)
32. Select all of the tools that you use:
    - O Parent tool
    - O Teacher tool
    - O Child tool
33. Do you use the SNAP-IV?
    - O Yes (Go to question 34)
    - O No (Go to question 35)
34. Select all of the tools that you use:
    - O Parent tool
    - O Teacher tool
35. Do you use the CDI (Child Depression Inventory)?
    - O Yes (Go to question 36)
    - O No (Go to question 37)
36. Select all of the tools that you use:
    - O Parent tool
    - O Child tool
37. Do you use the PHQ9?
    - O Yes (Go to question 38)
    - O No (Go to question 39)
38. Select all of the tools that you use:
    - O Parent tool
    - O Child tool
39. Do you use the GAD -7 Screener (Generalized Anxiety Disorder)?
    - O Yes (Go to question 40)
    - O No (Go to question 41)

40. Select all of the tools that you use:
    - O Child tool
41. Do you use the SCARED (Screen for Child Anxiety & Related Emotional Disorders)?
    - O Yes (Go to question 42)
    - O No (Go to question 43)
42. Select all of the tools that you use:
    - O Parent tool
    - O Child tool
43. Do you use the Mood & Feelings Questionnaire (MFQ)?
    - O Yes (Go to question 44)
    - O No (Go to question 45)
44. Select all of the tools that you use:
    - O Parent tool
    - O Child tool
45. Please write in the space below any additional tools you use that are NOT listed above.

The following set of questions asks about your comfort level with managing by yourself pediatric patients with only ADHD as well as those with ADHD and another co-occurring condition. In the below table please circle your level of comfort providing care on you own for each type of pediatric patient.

	Comfort Level with Providing Care			
	Low Comfort			High Comfort
46. Patient w/ADHD Only	1	2	3	4
47. Patient w/ADHD & Oppositional Defiant Disorder (ODD)	1	2	3	4
48. Patient w/ADHD & anxiety	1	2	3	4
49. Patient w/ADHD & depression	1	2	3	4
50. Patient w/ADHD & traumatic stress disorder	1	2	3	4
51. Patient w/ADHD & bi-polar disorder	1	2	3	4
52. Patient w/ADHD & potential psychotic disorder	1	2	3	4
53. Patient w/ADHD & Autism	1	2	3	4
54. Patient w/ADHD & Motor/Vocal Tic Disorder	1	2	3	4
55. Patient w/ADHD & Alcohol Use	1	2	3	4
56. Patient w/ADHD & Drug use	1	2	3	4

The following set of questions asks about your comfort level with managing by yourself pediatric patients of different ages with only ADHD. In the below table please indicate your level of comfort providing care on you own for each age grouping.

	Comfort Level with Providing Care			
	Low Comfort			High Comfort
57. Children 5 years and younger	1	2	3	4
58. Children 6-12 years	1	2	3	4
59. Adolescents 13 years and up	1	2	3	4

60. Please type below any situations (if not covered above) when you don't feel comfortable managing the care of a child with ADHD. (For example, managing care of an elementary age child with ADHD and anxiety)

The below list describes various types of family support that pediatric primary care clinicians may provide when caring for pediatric patients with ADHD. Please circle below your level of comfort with providing each of the following:

	Comfort Level with Providing Care			
	Low Comfort			High Comfort
61. Answering questions about behavior therapy approaches to managing ADHD	1	2	3	4
62. Answering questions about alternative medicine approaches (vitamins, dietary changes) to managing ADHD	1	2	3	4
63. Helping parents manage challenging behaviors	1	2	3	4
64. Giving guidance about schools supports (i.e. 504 accommodations/Individualized Ed. Plan (IEP)	1	2	3	4

65. Do you have parent/family support services in your local area that you are able to refer parents of children with ADHD?
    - ○ Yes
    - ○ No
    - ○ Not sure/Don't know

In the future the following thing(s) would help me in my pharmacological care of ADHD pediatric patients with co-occurring mental health problems.

	Not at all Useful			Extremely Useful
66. Having information about how to assess for co-occurring mental disorders	1	2	3	4
67. Free rating scales useful for assessment and monitoring common co-occurring disorders	1	2	3	4
68. Free rating scales useful for assessing trauma exposure	1	2	3	4
69. Information regarding pharmacologic treatment guidelines/algorithms for ADHD alone and/or w/a co-occurring disorder	1	2	3	4
70. Online or webinar training about common-o disorders co-occurring with ADHD, and their assessment and treatment by expert clinicians.	1	2	3	4
71. The option of having a phone consultation with a child psychiatrist regarding more complicated ADHD pediatric patients	1	2	3	4
72. Feedback by mail or email on how my prescribing practices compare to statewide averages among peers.	1	2	3	4
73. Participation in a short-term quality improvement project that provides coaching and other resources to support my practice in improving care for pediatric patients with ADHD alone or with co-occurring conditions.	1	2	3	4

APPENDIX 2
STATISTICAL ANALYSES

Group comparisons between family physicians and pediatricians were completed using two-tailed t-distribution, with tests judged significant at P value < .05.

Analysis	Family Medicine	Pediatricians	P Value
Clinician Comfort with Caring for Pediatric Patients with ADHD			
Somewhat High/High Comfort Level Managing Children with ADHD 5 Years and Younger	N=9 16.36%	N=21 35.59%	0.0216
Somewhat High/High Comfort level managing children with ADHD 6-12 years	N=44 80.00%	N=58 98.31%	.0019
Somewhat High/High Comfort level managing children with ADHD 13 years and up	N=52 94.55%	N=59 100%	NS*
Diagnosis and Management of ADHD			
Frequently (51-100%) use parent-reported rating scales in diagnosing ADHD	N=48 85.71%	N=55 93.22%	NS
Frequently (51-100%) use teacher-reported rating scales in diagnosing ADHD	N=48 85.71%	N=55 93.22%	NS
Never use parent-reported rating scales to monitor ongoing response to treatment	N=20 35.71%	N=15 25.42%	NS
Never use teacher-reported rating scales to monitor ongoing response to treatment	N=21 37.50%	N=8 13.55%	.0038
Never use child-reported rating scales to screen for other psychiatric diagnoses	N=29 51.79%	N=13 22.03%	.0012
Never use teacher-reported rating scales to screen for other psychiatric diagnoses	N=34 61.82%	N=24 40.68%	.0260
Never use parent-reported rating scales to screen for other psychiatric diagnoses	N=24 42.86%	N=12 20.68%	.0123
Medication Selection and Initiation			
Don't use treatment algorithms	N=34 60.71%	N=18 30.51%	.0015
Frequently (51-100%) see children within 1 month after starting ADHD medication	N=50 89.29%	N=48 81.36%	NS
Frequently (51-100%) see children 3 times within the first 9 months after starting ADHD medication	N=38 67.86%	N=39 66.10%	NS

* Non-significant

APPENDIX 3

COMFORT LEVEL MANAGING PEDIATRIC PATIENTS WITH A CO-OCCURRING DISORDER BY AREA OF PRACTICE

	Family Medicine	Pediatrics	Combined Internal Medicine and Pediatrics	Other	Total
ADHD Only					
Low Comfort	0	0	0	0	0
Somewhat Low Comfort	3	0	0	0	3
Somewhat High Comfort	21	4	2	0	27
High Comfort	31	55	4	1	91
Total	55	59	6	1	121
ADHD & Oppositional Defiant Disorder (ODD)					
Low Comfort	20	9	3	0	32
Somewhat Low Comfort	19	9	2	1	31
Somewhat High Comfort	15	28	1	0	44
High Comfort	1	13	0	0	14
Total	55	59	6	1	121
ADHD & Anxiety					
Low Comfort	4	1	0	1	6
Somewhat Low Comfort	20	8	2	0	30
Somewhat High Comfort	27	28	3	0	58
High Comfort	4	22	1	0	27
Total	55	59	6	1	121
ADHD & Depression					
Low Comfort	6	3	0	1	10
Somewhat Low Comfort	20	10	2	0	32
Somewhat High Comfort	26	27	4	0	57
High Comfort	3	19	0	0	22
Total	55	59	6	1	121

	Family Medicine	Pediatrics	Combined Internal Medicine and Pediatrics	Other	Total
ADHD & Traumatic Stress Disorder					
Low Comfort	19	16	3	0	38
Somewhat Low Comfort	28	28	2	1	59
Somewhat High Comfort	8	14	1	0	23
High Comfort	0	1	0	0	1
Total	55	59	6	1	121
ADHD & Bi-Polar Disorder					
Low Comfort	45	45	5	1	96
Somewhat Low Comfort	8	10	1	0	19
Somewhat High Comfort	1	3	0	0	4
High Comfort	0	1	0	0	1
Total	54	59	6	1	120
ADHD & Potential Psychotic Disorder					
Low Comfort	50	49	6	1	106
Somewhat Low Comfort	5	5	0	0	10
Somewhat High Comfort	0	4	0	0	4
High Comfort	0	0	0	0	0
Total	55	58	6	1	120
ADHD & Autism					
Low Comfort	36	7	2	0	45
Somewhat Low Comfort	15	25	3	1	44
Somewhat High Comfort	2	18	1	0	21
High Comfort	1	9	0	0	10
Total	54	59	6	1	120

	Family Medicine	Pediatrics	Combined Internal Medicine and Pediatrics	Other	Total
ADHD & Motor/Vocal Tic Disorder					
Low Comfort	27	3	0	0	30
Somewhat Low Comfort	20	16	5	0	41
Somewhat High Comfort	7	25	1	0	33
High Comfort	1	15	0	1	17
Total	55	59	6	1	121
ADHD & Alcohol Use					
Low Comfort	30	27	2	1	60
Somewhat Low Comfort	17	20	3	0	40
Somewhat High Comfort	7	10	0	0	17
High Comfort	1	2	1	0	4
Total	55	59	6	1	121
ADHD & Drug Use					
Low Comfort	30	33	2	1	66
Somewhat Low Comfort	18	15	3	0	36
Somewhat High Comfort	5	9	0	0	14
High Comfort	2	2	1	0	5
Total	55	59	6	1	121

APPENDIX 4
OPEN ENDED RESPONSES TO THE QUESTION….

Please type below any situations (if not covered above) when you don't feel comfortable managing the care of a child with ADHD. (For example, managing care of an elementary age child with ADHD and anxiety)

Complex Social Environments

- Complex social concerns (e.g. DCF involvement).
- Disagreement for treatment between parents.
- When parents provide completely different views of how the child is doing on medication.
- Children with parents who have psychiatric disorder, history of substance abuse, etc.
- Co morbid disorders and parents will not seek counseling.

Young Children

- Most comfortable managing the older kids.
- Do not diagnose or treat for ADHD under age 6, uncomfortable/reluctant to start young children on medication and generally insist on consultation with child psych.
- Managing children under 6 with co-occurring disorders.

Comorbidities

- The more co-occurring disorders the more challenging, thus, comfort level dropped.
- Children with ODD, anxiety/depression, trauma are particularly tricky.
- Any age child with ADHD with any type of psychiatric co morbidity. Particularly the elementary level children.

Other

- Most comfortable if the diagnosis (and possibly medication initiation) is made elsewhere.
- Don't feel it is appropriate to manage ADHD patients completely medically when there are co-occurring disorders.
- Poor response to medication.
- Comfortable managing the medication issues alone for many of these issues, but want involvement of a treatment team with a good psychologist or behavioral health professional and the school.
- ADHD + brain injury