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Who provides outpatient clinical care for adults with ADHD? Analysis of healthcare claims by types of providers among private insurance and Medicaid enrollees, 2021

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Abstract

Objective: To characterize provider types delivering outpatient care overall and through telehealth to U.S. adults with attention-deficit/hyperactivity disorder (ADHD).

Method: Using employer-sponsored insurance (ESI) and Medicaid claims, we identified enrollees aged 18–64 years who received outpatient care for ADHD in 2021. Billing provider codes were used to tabulate the percentage of enrollees receiving ADHD care from 10 provider types overall and through telehealth.

Results: Family practice physicians, psychiatrists, and nurse practitioners/psychiatric nurses were the most common providers for adults with ESI, although the distribution of provider types varied across states. Lower percentages of adults with Medicaid received ADHD care from physicians. Approximately half of adults receiving outpatient ADHD care received ADHD care by telehealth.

Conclusion: Results may inform the development of clinical guidelines for adult ADHD and identify audiences for guideline dissemination and education planning.

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Introduction

Attention-deficit/hyperactivity disorder (ADHD) is a neurodevelopmental disorder that begins in childhood but has been increasingly recognized as affecting adults (Faraone et al., 2021). Symptoms of inattention, hyperactivity, and impulsivity can affect school and work, relationships, and self-care behavior, and are associated with poorer long-term health and decreased life expectancy (Faraone et al., 2021). Treatments such as medication and behavioral therapy can improve symptoms and functioning; stimulant medications may most effectively reduce symptoms in adults and children older than 6 years, though non-stimulant medications also show effectiveness (Faraone et al., 2021; Wolraich et al., 2019). Information about ADHD in adults has increased, but systematic surveillance of adult ADHD is limited (Song et al., 2021). In recent years, the percentage of adults receiving stimulant treatment has increased (Board et al., 2020), particularly during the COVID-19 pandemic and among females (Danielson et al., 2023).

Recent increases in the prevalence of ADHD medication treatment may be related to several factors. The COVID-19 pandemic may have exacerbated ADHD symptoms by increasing stress and decreasing overall mental health among children and adults (Hollingdale et al., 2021; U.S. Surgeon General, 2021). Awareness of adolescent and adult ADHD has increased, including symptom presentation in females, who have historically been diagnosed at lower rates in childhood (Hinshaw et al., 2022). Additionally, greater availability of telehealth, particularly during the COVID-19 pandemic (Zangani et al., 2022), may have increased access to ADHD diagnosis and stimulant prescriptions.

The current health information landscape in the United States may have contributed to increased ADHD diagnosis and medication rates, including misleading information widely available on social media (Yeung et al., 2022). There are established diagnostic criteria for adult ADHD in the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2022), but no established U.S. guidelines for ADHD clinical care for adults, leaving the standard of care up to individual providers. Adults are treated for ADHD by a variety of professionals with differing levels of training and skill; primary care practitioners and other non-psychiatrists express less confidence in diagnosing and treating adults with ADHD than psychiatrists (Adler et al., 2019; Goodman et al., 2012), and adherence to quality standards in treatment practices, such as verifying that diagnostic criteria are met before initiating treatment, can vary (Callen et al., 2023). Telehealth availability has increased in recent years and can facilitate access to care, but may not be effective if providers or patients lack access to telehealth tools or the training or skills to use them (Zangani et al., 2022). In some cases, questions have been raised about remote providers' adherence to medical practice requirements, such as those for licensing, prescription of medication, or privacy[1],[2]. As of 2023, the American Professional Society for ADHD and Related Disorders (APSARD)[3], in collaboration with Children and Adults with ADHD (CHADD), is developing clinical guidance for ADHD diagnosis and treatment for

[1] https://www.ftc.gov/news-events/news/press-releases/2023/03/ftc-ban-betterhelp-revealing-consumers-data-including-sensitive-mental-health-information-facebook
[2] https://www.dea.gov/press-releases/2022/12/15/dea-serves-order-show-cause-truepill-pharmacy-its-involvement-unlawful
[3] https://apsard.org/us-guidelines-for-adults-with-adhd/

adults (Goodman & Mattingly, 2023). The composition of the professional health workforce who can benefit from this guidance may have changed with increased demand, with more primary care providers without focused mental health training involved in ADHD care (Childress et al., 2023; Sibley et al., 2023); however, the distribution of providers currently delivering care for adult ADHD has not been systematically evaluated.

The goal of this study is to characterize the types of providers caring for adults with ADHD in the United States. Healthcare claims data were used to identify and describe the distribution of provider types delivering outpatient care for ADHD overall and by age, sex, and state, focusing on care for adults. Characterizing patterns of provider types can reveal demographic and regional patterns of ADHD-related care and identify provider types for targeted outreach and education. We also sought to describe patterns of provider types delivering ADHD care through telehealth, as this modality may reflect unique patterns of need and service delivery.

Methods

This analysis used 2021 healthcare claims data from the Merative™ MarketScan® Commercial and Multi-State Medicaid Databases. The MarketScan Commercial database is a national convenience sample of deidentified claims data from enrollees in employer-sponsored insurance plans, hereinafter referred to as private insurance; the MarketScan Medicaid database includes deidentified healthcare claims from 7–12 geographically dispersed state Medicaid programs. The Centers for Disease Control and Prevention does not consider analysis of de-identified administrative data to be human subject research. Enrollees who were aged 3–64 years, covered by insurance for at least 3 months in 2021, had their prescription drug and mental health claims data included in the MarketScan databases, and had non-missing data for sex, age, and state of residence (for private insurance data only) were included in this analysis. The primary focus of the analysis was care for adults aged 18–64 years but results for children aged 3–17 years are included for comparison.

Enrollees met the study case definition for receipt of ADHD care during 2021 if they had 2+ outpatient visits with an International Classification of Diseases, Tenth Revision, Clinical Modification code for ADHD (ICD-10: F90.X) 7+ days apart, or 1 outpatient visit with an ADHD ICD-10 code and 2+ prescription fills for an ADHD medication (Supplemental Table 1) 14+ days apart; hereinafter referred to as having ADHD. This case definition for ADHD was used to reduce false negatives, such as enrollees who may have received an ADHD code in error, or who were evaluated for but not diagnosed with ADHD. The distribution of demographic characteristics of adult enrollees (aged 18–64 years) who met the study case definition for receipt of ADHD care, adult enrollees who had any indicators of outpatient ADHD care but not enough to meet the case definition, and adult enrollees with no outpatient ADHD care are provided in Supplemental Table 2. Provider type by billing provider for outpatient visits with an ADHD ICD-10 code (hereinafter referred to as outpatient ADHD visits) was initially categorized by Merative using standard values based off carrier specific provider identification coding; these categories were further grouped for this analysis to identify visits with family practice physicians, internal medicine physicians,

pediatricians, psychiatrists, psychologists, other therapists (e.g., social workers, counselors, physical therapists, occupational therapists), nurse practitioners or psychiatric nurses (NP/psychiatric nurse), physician's assistants, neurologists, and obstetricians and gynecologists (OB/GYN; Supplemental Table 3). A single provider type was documented for each outpatient visit. Telehealth visits were identified by place of service, service subcategory, procedure, procedure group, and procedure modifier codes (Supplemental Table 4).

The percentages of enrollees with ADHD in 2021 in both private insurance and Medicaid sample populations were calculated for the overall samples, children aged 3–17 years, and adults aged 18–64 years; analyses for adults were also subset by sex, age group (18–24, 25–49, 50–64) and urban/rural status[4]. Among enrollees with ADHD, percentages were calculated for receipt of ADHD medication (any, stimulant, non-stimulant); percentage of enrollees receiving care from each provider type was calculated based on having had at least 1 outpatient visit for ADHD care with a given type of provider. Enrollees with ADHD and missing data for provider type on all ADHD visits were excluded from the provider-level analyses (1.4% of private insurance enrollees with ADHD, 9.5% of Medicaid enrollees with ADHD); these enrollees were not included in the denominator for calculating the percentage of enrollees receiving ADHD care by provider type. Enrollees with ADHD and outpatient visits only with non-specific provider types based on healthcare setting (e.g., mental health facility, acute care hospital) or with provider types not included in the 10 types specified above (e.g., medical technician, pathologist, dentist, endocrinologist) were included in the denominator for calculating the percentage of enrollees receiving ADHD care by provider type (11.8% of private insurance enrollees with ADHD, 31.3% of Medicaid enrollees with ADHD). To understand the relative importance of single provider types delivering care for ADHD, a subset analysis of only enrollees who only saw 1 provider type for ADHD care was completed. Another analysis focused on types of providers seen for ADHD through telehealth. State-level percentages of ADHD prevalence, receipt of ADHD medication, and outpatient ADHD visits with each provider type were also calculated for adult private insurance enrollees. All analyses were conducted in SAS v9.4 (SAS Institute, Cary, NC). Due to the large size of the MarketScan databases, statistical testing is likely to identify small differences in percentages that are not clinically meaningful as being statistically significant. Therefore, statistical testing was not performed; results are examined descriptively.

Results

Of 12.3 million adult private insurance enrollees who met study inclusion criteria, 2.4% had ADHD in 2021; of 4.9 million eligible adult Medicaid enrollees, 2.2% had ADHD (based on our care-based case definition; Supplemental Table 5). A higher percentage of adults aged 18–24 years had ADHD than older adult age groups (25–64 years) for both private insurance and Medicaid enrollees; the prevalence of ADHD among those aged 18–24 years was lower than among children aged 3–17 years. Most enrollees who had ADHD had at least 1 ADHD medication prescription fill in 2021 (>75% in all subgroups); a higher

[4]Urban/rural status was defined by living in a metropolitan statistical area (MSA; urban/suburban) or not living in an MSA (rural). Urban/rural status indicators were only available for the private insurance sample.

percentage of enrollees received stimulant ADHD medications than non-stimulant ADHD medications. For state-level estimates of these indicators for adults with private insurance see Supplemental Table 6; state-level percentages of adults with ADHD ranged from 1.1% to 4.1% and the percentages of adults with ADHD taking ADHD medication ranged from 63.1% to 90.4%.

For adult private insurance enrollees with ADHD, 31.9% had outpatient ADHD visits with a family practice physician, 25.7% with a psychiatrist, 17.1% with an NP/psychiatric nurse, and 3.9%–6.6% with a psychologist, other therapist, or physician's assistant (Table 1). Compared to adults with private insurance, a higher percentage of adult Medicaid enrollees with ADHD had outpatient ADHD visits with an NP/psychiatric nurse (29.1%) and a lower percentage had outpatient ADHD visits with a family practice physician, internal medicine physician, psychiatrist, or neurologist. Among young adults (aged 18–24 years) with ADHD, approximately 1 out of 8 (12.0%) with private insurance and 1 out of 10 (10.0%) with Medicaid had an ADHD visit with a pediatrician. A higher percentage of adults with ADHD and private insurance living in urban or suburban areas had visits with specialists such as psychiatrists and neurologists than adults living in rural areas. There was notable variation by state in the percentage of adults with ADHD and private insurance who had visits with each provider type (Supplemental Table 7).

Approximately three-quarters (72.2%) of adults with ADHD and private insurance and half (49.4%) of adults with ADHD and Medicaid had outpatient ADHD visits with only one of the specified provider types during 2021 (data not shown). After excluding enrollees who saw multiple provider types in 2021, a lower percentage of adults with ADHD and private insurance had visits with psychologists, other therapists, NPs/psychiatric nurses, and physician's assistants (Table 2). In contrast, the percentage of adults with ADHD and Medicaid seeing NPs/psychiatric nurses, family medicine physicians, pediatricians, internal medicine physicians, or physician's assistants as their only source of ADHD care was higher after excluding adults with ADHD who saw multiple provider types in 2021 (Table 2).

Among adults who had any outpatient visits in 2021, a higher percentage of adults with ADHD had any outpatient visits (not specific to ADHD) by telehealth compared to adults without ADHD (private insurance: 65.5% vs. 28.4%; Medicaid: 66.6% vs. 26.8%). Among all adults with ADHD, more than half had at least one ADHD visit through telehealth in 2021 regardless of insurance type (52.6% of adults with private insurance, 51.6% of adults with Medicaid; Table 3). For private insurance, the percentage of adults with ADHD visits by telehealth was lower for older adults (aged 50–64 years; 46.7%) than younger adults (53.4–53.5%); the percentage of telehealth for ADHD was similar across age groups for adults with Medicaid (50.4–52.5%). Among adults with ADHD and private insurance living in rural areas, a lower percentage had ADHD visits by telehealth than adults living in urban or suburban areas. For private insurance, the most common provider type for ADHD telehealth visits was psychiatrists (35.3%), followed by family practice physicians (21.6%) and NP/psychiatric nurses (19.7%). NPs/psychiatric nurses were the most common providers for ADHD telehealth visits among adult Medicaid enrollees (29.3%).

Discussion

In 2021, an estimated 2.4% of adults with private insurance and 2.2% of adults with Medicaid insurance had ADHD based on this study's care-based case definition. The pattern of providers delivering ADHD care differed by insurance type; family medicine physicians, psychiatrists, and NPs/psychiatric nurses most commonly provided care for adults with ADHD and private insurance, while NPs/psychiatric nurses and other therapy providers were the most common for adults with ADHD and Medicaid. For both private insurance and Medicaid, about half of adults with ADHD had ADHD visits by telehealth. There was substantial variation across states in ADHD prevalence and distribution of the types of providers delivering care for adults with ADHD and private insurance.

The results from adult enrollees with private insurance provide evidence that primary care physicians, such as family practice and internal medicine physicians, are currently a main source of care for adults with ADHD. This result correlates with findings from an analysis of prescription dispensing data that primary care physicians prescribed more than 1 out of 6 stimulant prescriptions in 2019 (Board et al., 2020). During the pandemic, demand for primary care services related to ADHD extended pre-pandemic increases (Butt et al., 2023). However, many primary care physicians report a low level of confidence in diagnosing and treating ADHD in adults (Adler et al., 2019; Goodman et al., 2012), indicating that primary care physicians could benefit from clinical guidance and more training on quality care for adult ADHD (Callen et al., 2023; Huang et al., 2020; Modesto-Lowe et al., 2023). Nurse practitioners and psychiatric nurses also provide care to a considerable proportion of adults with ADHD, particularly for those with Medicaid insurance where they are often the only provider seen, demonstrating that they are an important segment of the healthcare workforce addressing the needs of adults with ADHD (Waite et al., 2013). Nurse practitioners and other non-physician providers such as physician assistants play a notable and increasing role in providing care for adults newly diagnosed with ADHD (Do et al., 2023). Similar to primary care physicians, nurse practitioners report low levels of confidence in caring for adults with ADHD (Adler et al., 2019), but are one of the provider groups who commonly prescribe stimulants (Board et al., 2020). Only about 1 in 10 adults with ADHD and private insurance and about 1 in 6 adults with ADHD and Medicaid received care from psychologists or other therapists such as counselors, suggesting that a low percentage of adults with ADHD receive behavioral treatment and related therapies.

A higher percentage of adults with ADHD and private insurance receives ADHD care from specialists such as psychiatrists and neurologists than adults with ADHD and Medicaid. However, the percentage of adults with ADHD and private insurance receiving care from these specialists varies across states; for example, the state-level percentages of adults with ADHD receiving care from a psychiatrist ranged from 5.2% to 45.9%. This variation may be partially explained by the unequal availability of specialist clinicians in different regions[5,6] (Andrilla et al., 2018) or other differences in access to care such as by telehealth (Zangani et al., 2022). The lower percentage of adults with ADHD and Medicaid receiving ADHD

[5] https://www.bls.gov/oes/
[6] https://maps.healthlandscape.org/gw/

care from specialists may also be related to differential insurance acceptance rates across specialties (Bishop et al., 2014).

This study shows that young adults had a higher prevalence of ADHD (3.2–4.0%) than older adults (0.9–2.7%) and that pediatric providers play a significant role in providing ADHD care for young adults, with approximately 1 out of 9 young adults seeing a pediatric provider for their ADHD care. A longitudinal study of adolescents with ADHD has also shown that this population commonly continues to see pediatric providers into young adulthood (Hart et al, 2021). Existing US clinical guidance for ADHD care is limited to ages 4–18 years (Wolraich et al., 2019), and adolescents with mental, behavioral, and developmental disorders including ADHD often do not receive the necessary support for the transition from pediatric to adult care (Leeb et al., 2020). Therefore, pediatricians may also benefit from receiving clinical guidance for adult ADHD care to support young adults in this transition.

The prevalence estimates of adult ADHD presented in this study (2.4% among adults with private insurance, 2.2% among adults with Medicaid) are lower than estimates of adult ADHD prevalence from a nationally representative study (4.4%; Kessler et al, 2006) and several meta-analyses on adult ADHD prevalence (5.0–14.6%; Adamis et al, 2022; Song et al., 2021; Wilcutt 2012), though similar to a prevalence estimate (2.5%) from an earlier meta-analysis by Simon and colleagues (2009). Because methods for the current study are different than the symptom- and criteria-based methods used for the other referenced studies, it is difficult to directly compare these estimates. However, given that the estimates derived from this study are based on ADHD care received, the divergence from other prevalence estimates might suggest that a proportion of adults who meet criteria for ADHD are not using health insurance for ADHD care or are not receiving ADHD-related care. A recent investigation of healthcare claims among adults with new ADHD diagnoses estimated that 25% received no treatment for their ADHD in the 3 months after diagnosis, pointing to significant gaps in needed care (Do et al., 2023). Future research using data with both criteria-based information and indicators of care receipt can explore the question of unmet need among all adults with ADHD.

Public health efforts to increase access to effective care for adult ADHD may include expanding training and education opportunities for health care providers. Given the variability of providers currently delivering adult ADHD care by region, urbanicity, and availability of specialists, training needs may vary from one community to another. For example, a family practice physician in a rural area may prefer different types of training opportunities compared to an urban psychiatrist. Local education efforts may consider availability of different provider types and levels of mental health care experience to provide appropriate training opportunities.

Many patients with ADHD also have co-occurring conditions that require careful differential diagnosis and treatment management. For children with ADHD, guidance for complex ADHD such as ADHD combined with other disorders exists (Barbaresi et al., 2020); adult care may also benefit from similar guidance. Targeted guidance could help identify which patients may benefit from referrals to specialty care. Results from the present study indicate that the majority of adults with ADHD see only one type of provider for their ADHD

in a calendar year, suggesting that there may be a need for directed training for specific provider types and opportunities to integrate collaborative care models for patients with unmet ADHD care needs.

Results from this analysis showed that many adults with ADHD received at least some of their ADHD care through telehealth in 2021 and have approximately double the utilization of any outpatient telehealth care compared to adults without ADHD. Given the marked increase in availability of care by telehealth during the COVID-19 pandemic and that telehealth may mitigate ADHD-specific barriers to accessing care (Breaux et al., 2023), future research on the effectiveness of ADHD care through telehealth may help to ensure quality of care and to identify for whom and for what type of care telehealth may be an effective mode of delivery (Breaux et al., 2023; Butt et al., 2023).

There are several limitations that should be considered when interpreting the results of this study. By using claims data, we were unable to characterize unmet need, specifically among those who may have sought care for ADHD but were unable to access a clinician who could make a diagnosis or provide treatment management. The claims data also do not include information on services paid for out of pocket or by other means, and our case definition to identify enrollees with ADHD may have missed individuals with ADHD who did not have the minimum number of outpatient ADHD visits and/or ADHD medication fills during 2021. Relatedly, the identification of outpatient ADHD visits used presence of an ADHD ICD-10 code on insurance claims; these codes are primarily used for billing, do not require that a comprehensive, evidence-based diagnostic assessment for ADHD has been performed, and ADHD may not have been the primary reason for a visit. Further, it is unknown whether the provider code associated with billing reflects the provider who interacted with the patient, including the possibility that multiple types of providers may interact with the patient during one visit. Relatedly, provider codes categorizing facilities or multidisciplinary physician groups as the provider were not assessed individually in this analysis, as specific provider type for those visits could not be determined. The data also do not allow detailed characterization of the type of ADHD care delivered, such as specific diagnostic procedures, type of behavioral health services, and for those who received ADHD medication prescriptions, which provider type was associated with that prescription.

The MarketScan commercial database is a large convenience sample and is not representative of all individuals with private insurance. The MarketScan Medicaid database is limited to 7–12 unidentified states, so is not representative of the national Medicaid population; this limitation is particularly saliant given the high state-level variation for both ADHD clinical indicators and provider types seen by adults with ADHD in the private insurance data. In addition, for Medicaid data, provider type was missing or non-specific for approximately 40% of Medicaid enrollees with ADHD which further limiting generalizability. A final limitation is that the most recent complete data available at the time of analysis was from 2021, which may have had atypical healthcare utilization patterns due to the ongoing COVID-19 pandemic and related mitigation efforts.

Areas for future research may include characterizing the types of services offered by different provider types, such as describing the distribution of providers prescribing

ADHD medication. Further, information about co-occurring conditions among adults with ADHD and which providers offer services for different co-occurring conditions may identify additional training needs for providers and opportunities for specialization of guidelines. Given regional differences in treatment patterns, further research may also include sociodemographic factors to identify possible differences in care utilization and gaps in access to care.

Future research could also investigate whether pandemic-related shifts in treatment patterns, such as increases in stimulant prescriptions, increased use of telehealth, and increased need for ADHD care in primary care will persist. Ongoing shortages[7],[8] of stimulant medications may impact patterns of prescribing as well as ability to fill prescriptions. The relatively high utilization of telehealth for ADHD and the distribution of providers seen for ADHD may shift in post-pandemic years; however, documenting a point-in-time examination of the healthcare workforce for adult ADHD can be useful for ongoing work to understand patient service needs and clinician education efforts. For telehealth, care models may include telehealth-only online providers as well as providers who offer in-person and telehealth care. Future research can investigate the effects of different care options on the quality of care, including whether telehealth is equally effective and safe as in-person care for diagnosis, medication treatment, or behavioral health services for ADHD.

The description of provider types delivering care for U.S. adults with ADHD detailed in this study addresses a significant knowledge gap in current healthcare service utilization in the growing population of adults identified with ADHD. These results can help inform the development of clinical guidelines for adult ADHD, their dissemination and associated education planning, as well as begin to identify differences in adult ADHD healthcare utilization by demographic subgroups. Ongoing surveillance of patterns of care for adult ADHD, supplemented with evaluation of the quality of the care received, can help ensure that resources are distributed to address the needs of adults with ADHD in the context of a shifting health care delivery landscape.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Table 1:

Percentage of enrollees receiving ADHD care who had 1+ outpatient visit for ADHD with provider type[a], MarketScan 2021

	Family Practice Physicians	Internal Medicine Physicians	Pediatricians	Psychiatrists	Psychologists	Other Therapists [b]	NP/ Psychiatric Nurses	Physician's Assistants	Neurologists	OB/GYN
	%	%	%	%	%	%	%	%	%	%
Private insurance[c] (n=448,608)										
Adults (18–64 years)	31.9%	11.8%	3.5%	25.7%	4.1%	6.6%	17.1%	3.9%	1.6%	0.4%
Males	33.0%	12.9%	4.4%	25.6%	4.0%	6.1%	15.2%	3.8%	1.8%	0.1%
Females	31.0%	11.0%	2.8%	25.8%	4.1%	7.0%	18.6%	4.0%	1.5%	0.6%
18–24 years	27.0%	8.5%	12.0%	25.3%	6.0%	9.3%	17.2%	3.9%	2.0%	0.3%
25–49 years	33.8%	12.8%	0.6%	25.7%	3.6%	6.0%	17.7%	4.1%	1.5%	0.4%
50–64 years	32.8%	13.7%	0.4%	26.3%	2.7%	4.4%	14.4%	3.2%	1.7%	0.3%
Urban/suburban	31.1%	12.5%	3.6%	27.3%	4.0%	6.6%	16.6%	3.9%	1.8%	0.4%
Rural	37.7%	8.0%	2.1%	13.7%	2.5%	5.5%	20.1%	3.7%	0.8%	0.4%
Children (3–17 years)	11.0%	2.1%	46.5%	18.7%	8.9%	12.5%	10.9%	1.8%	3.3%	0.2%
Overall (3–64 years)	24.6%	8.4%	18.6%	23.2%	5.8%	8.7%	14.9%	3.2%	2.2%	0.3%
Medicaid[c] (n=384,404)										
Adults (18–64 years)	7.3%	2.7%	3.9%	9.0%	4.2%	12.6%	29.1%	6.6%	0.4%	0.1%
Males	5.9%	2.1%	5.8%	8.8%	4.1%	13.1%	26.8%	5.6%	0.5%	0.0%
Females	8.2%	3.1%	2.6%	9.1%	4.2%	12.3%	30.8%	7.3%	0.4%	0.2%
18–24 years	6.4%	1.7%	10.0%	10.8%	4.4%	14.2%	24.8%	5.8%	0.6%	0.1%
25–49 years	8.0%	3.3%	0.2%	7.9%	4.1%	12.0%	32.2%	7.2%	0.3%	0.2%
50–64 years	6.5%	3.2%	0.2%	7.7%	3.3%	9.8%	29.0%	6.3%	0.4%	0.1%
Children (3–17 years)	4.5%	0.8%	26.8%	9.8%	6.9%	17.6%	21.6%	5.4%	0.6%	0.0%
Overall (3–64 years)	5.3%	1.3%	20.7%	9.5%	6.2%	16.3%	23.6%	5.7%	0.5%	0.0%

Note. ADHD: attention-deficit/hyperactivity disorder. NP: Nurse practitioner. OB/GYN: obstetricians/gynecologists.

[a] Provider type percentages are not mutually exclusive; enrollees who had visits for ADHD with multiple provider types are included in multiple columns

[b] Other therapists includes but is not limited to social workers, counselors, physical therapists, and occupational therapists.

[c] 11.8% of private insurance enrollees with ADHD and 31.3% of Medicaid enrollees with ADHD only had outpatient ADHD visits coded with provider types that were non-specific and based on setting (e.g., mental health facility, acute care hospital) or with a provider type not included in the 10 types focused on in this analysis.

Table 2:

Percentage of enrollees receiving ADHD care who had 1+ outpatient visit for ADHD with only one provider type, MarketScan 2021

	Family Practice Physicians	Internal Medicine Physicians	Pediatricians	Psychiatrists	Psychologists	Other Therapists [a]	NP/Psychiatric Nurses	Physician's Assistants	Neurologists	OB/GYN
	%	%	%	%	%	%	%	%	%	%
Private insurance (n=313,631)										
Adults (18–64 years)	35.2%	11.7%	3.5%	25.4%	2.2%	3.2%	14.4%	2.7%	1.4%	0.3%
Males	36.0%	12.6%	4.5%	25.1%	2.2%	3.0%	12.4%	2.6%	1.6%	0.1%
Females	34.6%	10.9%	2.7%	25.7%	2.2%	3.3%	16.1%	2.8%	1.3%	0.4%
18–24 years	28.9%	7.8%	12.9%	23.9%	3.3%	4.7%	14.1%	2.6%	1.7%	0.2%
25–49 years	37.2%	12.6%	0.6%	25.6%	1.8%	2.8%	15.0%	2.9%	1.3%	0.3%
50–64 years	37.5%	14.2%	0.4%	27.2%	1.7%	2.3%	12.6%	2.2%	1.7%	0.3%
Urban/suburban	33.8%	12.2%	3.6%	27.0%	2.2%	3.1%	13.7%	2.6%	1.5%	0.2%
Rural	47.1%	8.8%	2.3%	13.9%	1.3%	2.9%	19.6%	3.0%	0.8%	0.3%
Children (3–17 years)	11.7%	2.0%	51.8%	14.2%	4.3%	5.2%	7.1%	1.0%	2.5%	0.2%
Overall (3–64 years)	27.4%	8.5%	19.5%	21.7%	2.9%	3.8%	12.0%	2.1%	1.8%	0.2%
Medicaid (n=197,006)										
Adults (18–64 years)	11.2%	3.7%	6.0%	12.0%	4.7%	11.0%	42.7%	7.9%	0.6%	0.1%
Males	9.3%	3.0%	9.3%	12.3%	5.1%	12.7%	40.9%	6.8%	0.7%	0.0%
Females	12.5%	4.3%	3.8%	11.8%	4.5%	9.9%	44.0%	8.7%	0.5%	0.2%
18–24 years	9.2%	2.0%	15.1%	14.1%	5.0%	13.5%	34.1%	6.3%	0.7%	0.1%
25–49 years	12.6%	4.8%	0.4%	10.5%	4.6%	9.6%	48.0%	9.0%	0.4%	0.2%
50–64 years	11.3%	5.1%	0.3%	11.9%	4.0%	8.7%	48.6%	9.3%	0.7%	0.1%
Children (3–17 years)	5.4%	0.8%	35.6%	9.6%	6.1%	14.4%	23.3%	4.5%	0.4%	0.0%
Overall (3–64 years)	6.9%	1.6%	28.1%	10.2%	5.7%	13.5%	28.3%	5.4%	0.5%	0.0%

Note. ADHD: attention-deficit/hyperactivity disorder. NP: Nurse practitioner. OB/GYN: obstetricians/gynecologists.

[a] Other therapists includes but is not limited to social workers, counselors, physical therapists, and occupational therapists.

Table 3:

Percentage of enrollees receiving ADHD care through telehealth who had 1+ ADHD telehealth visit with provider type[a], MarketScan 2021

		Of those with a telehealth visit for ADHD									
	Visit by telehealth	Family Practice Physicians	Internal Medicine Physicians	Pediatricians	Psychiatrists	Psychologists	Other Therapists [b]	NP/ Psychiatric Nurses	Physician's Assistants	Neurologists	OB/GYN
	%	%	%	%	%	%	%	%	%	%	%
Private insurance (n=448,608)		n=221,209									
Adults (18–64 years)	52.6%	21.6%	6.8%	2.1%	35.3%	4.5%	8.5%	19.7%	3.8%	1.5%	0.1%
Males	50.7%	21.7%	7.3%	2.6%	36.1%	4.5%	7.8%	17.8%	3.7%	1.7%	0.1%
Females	54.0%	21.6%	6.3%	1.7%	34.7%	4.5%	9.0	21.1%	3.9%	1.3%	0.2%
18–24 years	53.4%	18.6%	4.5%	6.7%	34.0%	6.2%	11.4%	19.4%	3.6%	1.8%	0.1%
25–49 years	53.5%	23.0%	7.5%	0.5%	35.0%	4.0%	7.7%	20.3%	4.1%	1.3%	0.2%
50–64 years	46.7%	21.1%	7.4%	0.3%	39.4%	3.5%	6.1%	17.3%	2.9%	1.6%	0.1%
Urban/suburban	54.8%	20.8%	7.0%	2.1%	36.3%	4.5%	8.3%	19.4%	3.8%	1.6%	0.1%
Rural	34.9%	32.9%	5.0%	1.5%	24.1%	2.7%	7.8%	21.0%	3.4%	0.7%	0.1%
Children (3–17 years)	43.3%	9.1%	1.2%	23.2%	30.0%	10.1%	14.4%	12.6%	1.7%	3.5%	0.1%
Overall (3–64 years)	49.3%	17.7%	5.0%	8.7%	33.6%	6.2%	10.3%	17.5%	3.2%	2.1%	0.1%
Medicaid (n=384,404)		n=186,402									
Adults (18–64 years)	51.6%	3.2%	1.5%	1.9%	12.1%	4.1%	12.6%	29.3%	5.7%	0.3%	0.0%
Males	50.1%	2.2%	1.1%	2.9%	11.9%	4.0%	12.1%	27.1%	4.7%	0.4%	0.0%
Females	52.8%	3.9%	1.8%	1.2%	12.3%	4.2%	12.9%	30.8%	6.4%	0.2%	0.0%
18–24 years	50.4%	2.3%	0.6%	4.7%	14.9%	4.2%	14.0%	24.0%	5.2%	0.5%	0.0%
25–49 years	52.5%	3.8%	2.1%	0.2%	10.5%	4.1%	12.0%	32.7%	6.1%	0.2%	0.0%
50–64 years	51.8%	3.2%	2.0%	0.1%	10.0%	3.7%	10.4%	30.8%	5.3%	0.3%	0.0%
Children (3–17 years)	47.4%	1.6%	0.3%	11.3%	13.7%	6.3%	14.7%	19.3%	4.9%	0.4%	0.0%

		Of those with a telehealth visit for ADHD									
	Visit by telehealth	Family Practice Physicians	Internal Medicine Physicians	Pediatricians	Psychiatrists	Psychologists	Other Therapists [b]	NP/ Psychiatric Nurses	Physician's Assistants	Neurologists	OB/GYN
	%	%	%	%	%	%	%	%	%	%	%
Overall (3–64 years)	48.5%	2.1%	0.6%	8.6%	13.3%	5.7%	14.1%	22.1%	5.1%	0.4%	0.0%

Note. ADHD: attention-deficit/hyperactivity disorder. NP: Nurse practitioner. OB/GYN: obstetricians/gynecologists.

[a] Provider type percentages are not mutually exclusive; enrollees who had telehealth visits for ADHD with multiple provider types are included in multiple columns

[b] Other therapists includes but is not limited to social workers, counselors, physical therapists, and occupational therapists.