NH Children and Teens Experiencing Mental Health Disorders: An Analysis of 2019-2021 Health Care Claims Data

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Authors

Bethany Swanson, LMSW-CC, Project Director, IHPP
Erica-Lyn Plante, MS, Senior Health Data Analyst, IHPP
Katie Lipp, LICSW, Project Director, IHPP
Amy Costello, MPH, Director of Health Analytics and Informatics, IHPP
Chris White, Health Analytics Operations Manager, IHPP

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As we all journey on the trail of life, we wish to acknowledge the spiritual and physical connection the Pennacook, Abenaki, and Wabanaki Peoples have maintained to N'dakinna (homeland) and the aki (land), nibi (water), lolakwikak (flora), and awaasak (fauna) which the University of New Hampshire community is honored to steward today. We also acknowledge the hardships they continue to endure after the loss of unceded homelands and champion the university's responsibility to foster relationships and opportunities that strengthen the well-being of the Indigenous People who carry forward the traditions of their ancestors.

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Background

In April and December of 2022, the Institute for Health Policy and Practice (IHPP), in collaboration with the Department of Health and Human Services (DHHS) and the NH Pediatric Improvement Partnership (NH PIP), published the first two versions of the Mental Health Care Access in Pediatrics (MCAP) reports. ^{a,b} This report builds on the work of the prior publications, providing analysis exploring care patterns through 2021 as the COVID-19 pandemic continued to impact our communities. This update focuses heavily on pediatric integrated behavioral health care and primary care provided to New Hampshire children, as shown through medical and pharmacy administrative claims data.

Purpose

The NH MCAP program is a collaborative effort of the NH Department of Health and Human Services and the NH Pediatric Improvement Partnership housed at the UNH Institute for Health Policy and Practice. Funded by the Health Resources and Services Administration, the focus of MCAP is to improve mental health care access in primary care. MCAP provides (a) training to primary care providers and school staff in assessing and treating common pediatric mental health conditions through Project ECHO®; (b) teleconsultation services; and (c) a referral directory of pediatric mental/behavioral health services in NH. In September 2023, the project was awarded continuation funding. This analysis, along with the project's Current State Assessment^c and feasibility study, d will help inform its programming. MCAP funded this analysis of 2019-2021 pediatric medical and pharmacy claims data from commercial and NH Medicaid payers to better understand:

- 1. The prevalence of pediatric mental health conditions among NH children, focusing on each of the largest insurance payer in the state. Prevalence will be defined by the percentage of children under the age of 18 with an indication of a mental health condition.
- 2. The role of primary care in prescribing for pediatric mental health conditions by determining which provider types are prescribing the majority of prescription drugs for mental health conditions in children under the age of 18.
- **3.** The utilization of integrated behavioral health care provided to children under age 18, relative to the number of providers in the geographic area.

^a https://scholars.unh.edu/ihpp/142/

b https://scholars.unh.edu/ihpp/151/

^c Lipp K, Watts D, Thomas J, et al. The Current State of Behavioral Health in Primary Care for NH Youth. Concord, NH: University of New Hampshire; 2023.

^d Lipp K, Gelting M, Watts D, Ryer J, Brackett, F. Mental Health Care Access for NH Youth: A Comparison of Two Models. Concord, NH: University of New Hampshire; 2023.

Data

Data from the New Hampshire Comprehensive Healthcare Information System (NH CHIS), NH's All-Payer Claims Database (APCD), and NH DHHS's Enterprise Business Intelligence (EBI) Data System were analyzed. Information about NH CHIS can be found on the website: https://nhchis.com/. The table below outlines the data and timeframes used in analysis. ^e

| Data | Payer and Source | Timeframe | Notes | | | |
|-----------------|---|----------------|---|--|--|--|
| Medical claims | Commercial | January 2019 – | The analysis is limited to the top commercial | | | |
| and eligibility | (NHCHIS) | December 2021 | medical insurers: Aetna, Anthem/Matthew | | | |
| | | | Thornton, Cigna, Harvard Pilgrim, Health | | | |
| | | | Plans, Inc., Tufts, Tufts Health Freedom, and | | | |
| | | | United Healthcare. These carriers generally | | | |
| | | | include more than 80% of the commercial | | | |
| | | | medical claims in NHCHIS. | | | |
| Medical claims | NH Medicaid | January 2019 – | Managed Care Organizations (WellSense, NH | | | |
| and eligibility | d eligibility (NH DHHS EBI) December 2021 | | Healthy Families, AmeriHealth) and Fee-for- | | | |
| | | | Service Claims | | | |
| Pharmacy claims | Commercial | January 2019 – | The analysis is limited to the top commercial | | | |
| and eligibility | (NHCHIS) | December 2021 | pharmacy insurers: Cigna, Anthem/Matthew | | | |
| | | | Thornton, Harvard Pilgrim, Tufts, Tufts | | | |
| | | | Health Freedom, Caremark, Express Scripts | | | |
| | | | and United Healthcare. These carriers | | | |
| | | | generally include more than 80% of the | | | |
| | | | commercial pharmacy claims in NHCHIS. | | | |
| Pharmacy claims | NH Medicaid | January 2019 – | Managed Care Organizations (WellSense, NH | | | |
| and eligibility | (NH DHHS EBI) | December 2021 | Healthy Families, AmeriHealth) and Fee-for- | | | |
| | | | Service Claims | | | |

^e In March 2016, the Supreme Court ruled that Liberty Mutual, as a self-insured employer, can choose not to submit their health claims data to Vermont's all-payer claims database. This decision resulted in many commercial carriers opting not to submit the self-insured business to the NH CHIS. Please use caution in interpreting analysis/measures derived from data after March 2016 because there are fewer employer plans submitting data after March 2016. For more information, please see https://www.supremecourt.gov/opinions/15pdf/14-181 5426.pdf.

Criteria for Analytic Data Set

- Members with at least nine months of enrollment in commercial or NH Medicaid insurance policies or,
 if nine months old or younger, continuous enrollment since birth
- New Hampshire residents, as determined by the most recent enrollment record in the analytic period
- Less than 18 years of age as of the member's most recent enrollment record in the analytic period

Note on Race and Ethnicity

At this time, data are not analyzed by race and ethnicity. The examination and elimination of health disparities are important; however, at this time, race and ethnicity data are not available/reliable in the claims data and therefore not included in the analysis.

All Covered Children

Chapter 1: Analysis of Pediatric Mental Health Conditions

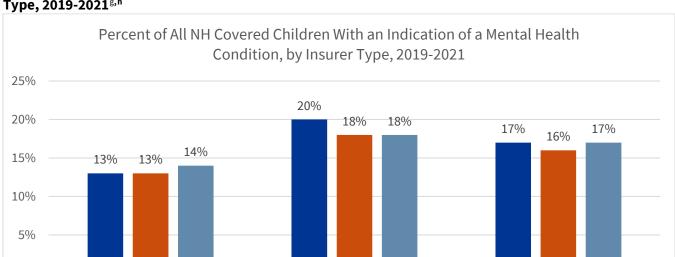
To understand the scope and nature of pediatric mental health conditions diagnosed and treated in NH, medical claims for the period of January 2019 through December 2021 were examined to produce measures of condition prevalence (eg, percent of children with a mental health condition, as determined by diagnosis codes). Analysis was done by type of insurer (Commercial and NH Medicaid) and payer (eg, Aetna, Anthem/Matthew Thornton, Cigna) to determine any variation that may be related to characteristics of the population. For a list of ICD-10 diagnosis codes used to identify the conditions of interest, see **Appendix D**. It should be noted that, for this analysis, each enrollee has been assigned to a specific payer based on their most recent enrollment information. It is possible for enrollees to be insured by one or more additional plans within the analytic period, but this will not be reflected in the analysis.

All Pediatric Mental Health Conditions

Commercial

0%

Medical claims were analyzed to estimate the percent of NH children and teens who had any indication of a mental health condition, as determined by diagnosis code, from 2019 to 2021.



NH Medicaid

■ 2019 **■** 2020 **■** 2021

Figure 1. Percent of All NH Covered Children^f With an Indication of a Mental Health Condition, by Insurer Type, 2019-2021^{g,h}

^f All NH covered children indicates all children insured commercially or by NH Medicaid.

^g The requirement for any indication of a mental health condition was having at least two medical claims with a diagnosis code for a mental health condition.

^h For this analysis, a mental health disorder diagnosis code was not required to be the primary diagnosis on a claim. Claims were included if one of the selected mental health disorder diagnosis codes was on a service line for the claim; this is the approach throughout this report, unless otherwise stated.

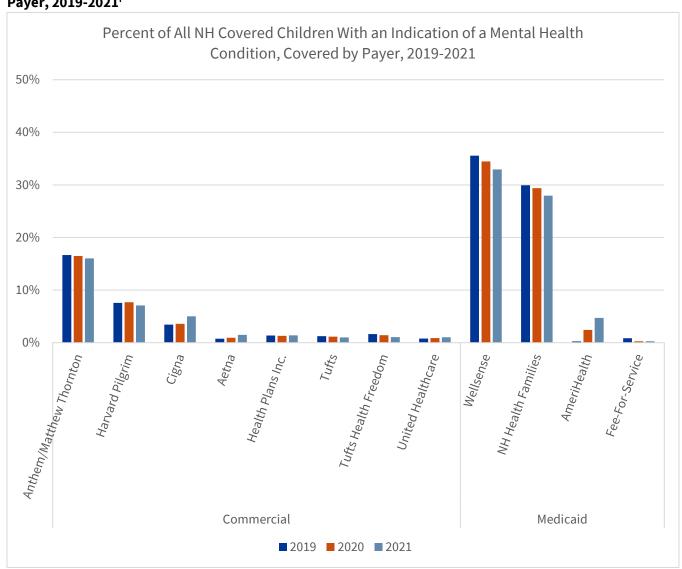


Figure 2. Percent of All NH Covered Children With an Indication of a Mental Health Condition, Covered by Payer, 2019-2021

Results for All Pediatric Mental Health Conditions

From 2019 to 2021, approximately 17% of the pediatric population in New Hampshire, insured commercially or by NH Medicaid, had an indication of a mental health condition, as shown in **Figure 1**. The commercial pediatric population averaged 13% with a mental health condition over the three years, while the NH Medicaid pediatric population averaged 19%. See **Table A1** in **Appendix A** for more detail.

Among all NH covered children with a mental health condition, the majority were insured by WellSense (33% in 2021), followed by NH Healthy Families (28% in 2021), Anthem/Matthew Thornton (16% in 2021), and Harvard Pilgrim (7% in 2021), as shown in Figure 2. See **Table A2** in **Appendix A** for more detail.

¹ For this analysis, payer was assigned based on the member's most recent enrollment record in the analytic period.

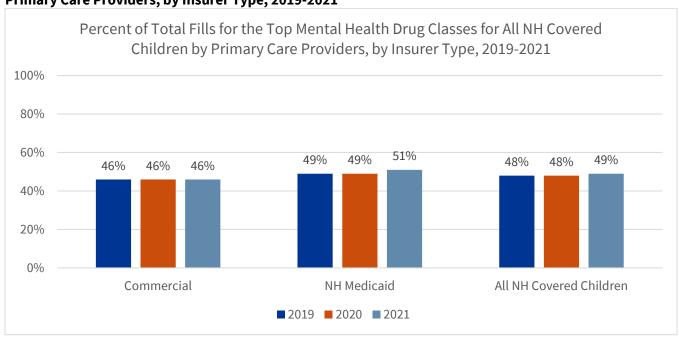
Chapter 2: Analysis of Pediatric Mental Health Prescribing in Primary Care

To better understand the scope of primary care mental health prescribing patterns for the NH pediatric population, pharmacy claims from January 2019 to December 2021 were examined to determine which providers, by provider taxonomy, were prescribing medications for mental health conditions to NH children and teens. Analysis was conducted by type of insurer (Commercial and NH Medicaid) to determine any variation that may be related to characteristics of the population. For a list of mental health-related drug classes used for analysis, see **Appendix E**, and for a list of provider taxonomy codes used to define primary care, see **Appendix G**.

Pediatric Mental Health Prescribing in Primary Care

Pharmacy claims were analyzed to determine which providers, by provider taxonomy, were prescribing the most commonly filled (described as "top") mental health drug classes to NH children and teens. The classes included in the analysis were: Alternative Therapy - Sedative/Hypnotics, Anorexic Agents, Antianxiety Agents, Anticonvulsants, Antidepressants, Antihypertensive Therapy Agents, Antipsychotics (Neuroleptics), Attention Deficit-Hyperactivity Disorder (ADHD) Therapy, Bipolar Therapy Agents, CNS Stimulants, Sedative-Hypnotics, and Smoking Deterrents.





¹ It is important to note that a drug fill on a pharmacy claim does not indicate medication adherence.

^k First Databank[®] Drug Database was used to identify Therapeutic Classes. Copyright 2023, First Databank, Inc.

Table 1. Percent of Total Fills for the Top Mental Health Drug Classes Among All NH Covered Children, by the Top Five Prescribing Provider's Taxonomies and Insurer Type, 2019-2021

| Insurer | Trescribing Provider 3 Taxonomic | Primary Care | Percent of Total Fills for the Top Mental Health Drug Classes | | | | |
|-------------|--|---------------------|--|------|------|--|--|
| Type | Prescribing Provider Taxonomy ^m | Status ⁿ | 2019 | 2020 | 2021 | | |
| | Pediatricians | Primary Care | 27% | 26% | 26% | | |
| | Psychiatry | Not Primary Care | 15% | 15% | 17% | | |
| <u>—</u> | Psychiatric Mental Health Nurse | | | | | | |
| Ğ | Practitioner | Not Primary Care | 10% | 11% | 12% | | |
| Commercial | Psychiatry & Neurology - Child & | | | | | | |
| Om | Adolescent Psychiatry | Not Primary Care | 11% | 11% | 10% | | |
| O | Psychiatry & Neurology with Special | | | | | | |
| | Qualifications in Child Neurology | Not Primary Care | 6% | 6% | 6% | | |
| | Family Medicine | Primary Care | 6% | 6% | 5% | | |
| | Pediatricians | Primary Care | 27% | 26% | 26% | | |
|] | Psychiatric Mental Health Nurse | | | | | | |
| aid | Practitioner | Not Primary Care | 17% | 17% | 15% | | |
| dic | Psychiatry | Not Primary Care | 13% | 13% | 13% | | |
| NH Medicaid | Psychiatry & Neurology - Child & | | | | | | |
| Ξ | Adolescent Psychiatry | Not Primary Care | 7% | 7% | 7% | | |
| | Psychiatry & Neurology with Special | | | | | | |
| | Qualifications in Child Neurology | Not Primary Care | 5% | 6% | 7% | | |

Results for Pediatric Mental Health Prescribing in Primary Care

As shown in **Figure 3**, from 2019 to 2021, approximately 49% of fills for mental health drugs prescribed for all NH covered children were prescribed by primary care providers. Among children insured by NH Medicaid, approximately 50% were prescribed by primary care, compared to 46% prescribed for children insured commercially. The percentage prescribed by primary care providers has increased slightly among the NH Medicaid pediatric population but remained stable among commercially insured children over the three years. See **Table B1** in **Appendix B** for more detail.

When analyzed by the prescribing provider taxonomy, findings show that among all NH covered children, approximately 70% of fills for mental health drugs were prescribed by just five provider taxonomies consistently over the three years. The provider taxonomy prescribing the highest percent of fills for mental health drugs for children insured both commercially and by NH Medicaid was Pediatricians (26% in 2021), followed by Psychiatrists (17% and 13%, respectively) and Psychiatric Mental Health Nurse Practitioners (12% and 15%, respectively) as shown in **Table 1**. See **Tables B2-B3** in **Appendix B** for more detail.

¹ If a prescribing provider taxonomy did not appear in the top five for all of the consecutive years of data displayed, the corresponding cell has been shaded gray to indicate that drug class did not make the top five in that respective year.

^m Provider taxonomy was assigned based on the provider's primary taxonomy associated with their National Provider Identifier (NPI) in the National Plan and Provider Enumeration System (NPPES) database.

Pediatric primary care status was assigned based on the provider's primary taxonomy.

Chapter 3: Analysis of Pediatric Integrated Behavioral Health Care

The Agency for Healthcare Research and Quality (AHRQ) has defined integrated behavioral health care as: °

"The care that results from a practice team of primary care and behavioral health clinicians, working together with patients and families, using a systematic and cost-effective approach to provide patient-centered care for a defined population. This care may address mental health and substance abuse conditions, health behaviors (including their contribution to chronic medical illnesses), life stressors and crises, stress-related physical symptoms, and ineffective patterns of health care utilization."

To better understand the use of integrated behavioral health care in pediatric primary care, medical claims from January 2019 to December 2021 were examined to determine where integrated behavioral health care is being provided throughout the State and to which pediatric age groups the integrated behavioral health care is being provided.

Analysis was done by type of insurer (Commercial and NH Medicaid) to determine any variation that may be related to characteristics of the population. For a list of procedure codes used for this analysis, see **Appendix F**. P

[°] Peek CJ, the National Integration Academy Council. Lexicon for behavioral health and primary care integration: concepts and definitions developed by expert consensus. AHRQ Publication No.13-IP001-EF. Rockville, (MD): Agency for Healthcare Research and Quality, 2013

^p This analysis is limited to service lines with the following place of service codes: Telehealth provided in patients home, Telehealth provided other than in patients home, Office, Home, Federally Qualified Health Centers, Rural Health Clinics

Utilization of Integrated Behavioral Health Care in Pediatrics, by Providers

Medical claims were analyzed to determine the utilization, volume, and distribution of specific integrated care codes by provider county and number of billing providers, from 2019 to 2021.^q

Table 2. Integrated Care Codes Utilization and Volume (Quantity of Services) Among NH Children, by Insurer Type, 2019-2021

| Insurer | ypc, 2013 2021 | | Quantity of Services | S |
|-------------|---|--------|----------------------|--------|
| Туре | Integrated Care Code Category | 2019 | 2020 | 2021 |
| | Collaborative Care Model | 0 | 0 | 20 |
| al | Developmental Screening | 12,661 | 13,590 | 16,042 |
| erci | General Behavioral Health Integration | 0 | 1 | 0 |
| Commercial | Health Behavior Assessment and Intervention | 8 | 91 | 222 |
| S | Office-Based SUD Treatment | 0 | 0 | 0 |
| | SBIRT | 3 | 2 | 4 |
| | Collaborative Care Model | 0 | 0 | 7 |
| Þ | Developmental Screening | 11,506 | 11,500 | 15,061 |
| NH Medicaid | General Behavioral Health Integration | 0 | 0 | 4 |
| Me | Health Behavior Assessment and Intervention | 0 | 81 | 127 |
| Ę | Office-Based SUD Treatment | 0 | 0 | 0 |
| | SBIRT | 18 | 4 | 1 |

^q Analysis included codes that can only be used for behavioral health integration and excluded those that can also be used for other purposes (eg, psychotherapy, interprofessional consultation).

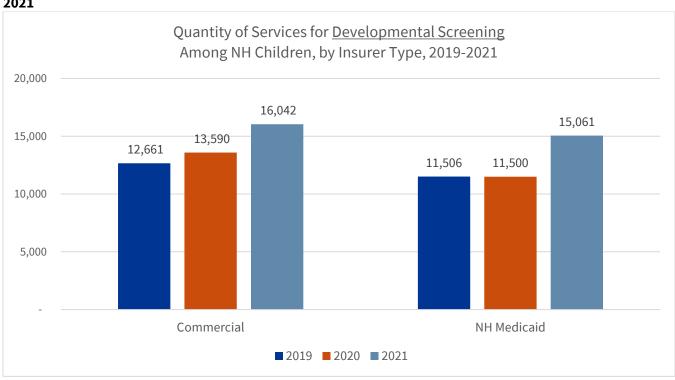
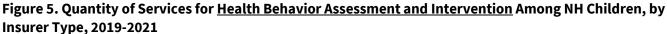
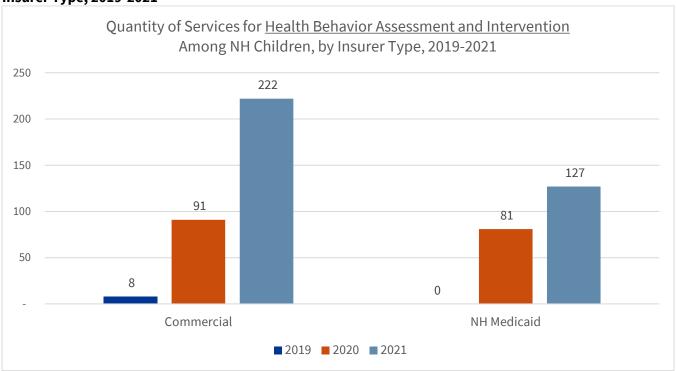


Figure 4. Quantity of Services for <u>Developmental Screening</u> Among NH Children, by Insurer Type, 2019-2021





Results for Utilization of Integrated Behavioral Health Care in Pediatrics, by Providers

Across six integrated care code categories, the majority of services provided were developmental screenings, followed by Health Behavior Assessment and Intervention, for children insured both commercially and by NH Medicaid from 2019 to 2021, as shown in **Table 2**.

There has been an increase in Developmental Screening services and the number of providers rendering the service across insurer types since 2019. As shown in **Figure 4**, there has been an increase in Developmental Screening services provided to commercially insured children compared to children insured by NH Medicaid. Likewise, Health Behavior Assessment and Intervention services and the number of providers rendering the service since 2019 has increased. As shown in **Figure 5**, utilization rose from 8 services among commercially insured children in 2019 to 222 services in 2021 and from zero services among children insured by NH Medicaid in 2019 to 127 in 2021. The number of providers of these services has also risen over the three-year period, increasing by 53 providers among commercially insured children and 61 providers among children insured by NH Medicaid. See **Tables C1-C2** in **Appendix C** for more detail.

There has been relatively low utilization of General Behavioral Health Integration, Collaborative Care Model, and SBIRT services over the three years among both commercial and NH Medicaid insurers. There has been no indication of Office-Based SUD Treatment from 2019 to 2021 among children insured commercially or by NH Medicaid. See **Tables C1-C2** in **Appendix C** for more detail.

Utilization of Integrated Behavioral Health Care in Pediatrics, by Enrollees

Lastly, medical claims were analyzed to determine the utilization, volume, and distribution of specific integrated care codes by enrollee county and age-band, from 2019 to 2021.

Table 3. Integrated Care Codes Utilization and Volume (Quantity of Services) Among NH Children, by

Insurer Type and Enrollee County, 2019-2021

| Insurer | Type and Enrollee County, 2019- | | tity of Integrated Ca | are Services | |
|---------------|---------------------------------|--------|-----------------------|--------------|--|
| Туре | Enrollee County | 2019 | 2020 | 2021 | |
| | Belknap | 287 | 280 | 393 | |
| | Carroll | 444 | 384 | 448 | |
| | Cheshire | 967 | 810 | 909 | |
| | Coos | 115 | 105 | 108 | |
| cial | Grafton | 427 | 331 | 394 | |
| Commercial | Hillsborough | 3,442 | 3,678 | 4,775 | |
| Com | Merrimack | 1,629 | 1,564 | 1,946 | |
|) | Rockingham | 3,953 | 4,818 | 5,191 | |
| | Strafford | 1,112 | 1,373 | 1,678 | |
| | Sullivan | 296 | 341 | 446 | |
| | New Hampshire | 12,672 | 13,684 | 16,288 | |
| | Belknap | 242 | 254 | 433 | |
| | Carroll | 870 | 687 | 843 | |
| | Cheshire | 1,708 | 1,555 | 1,763 | |
| | Coos | 212 | 202 | 231 | |
| NH Medicaid | Grafton | 689 | 510 | 711 | |
| ledi | Hillsborough | 3,132 | 3,184 | 4,749 | |
| ≥ <u>H</u> | Merrimack | 1,004 | 769 | 1,039 | |
| ~ | Rockingham | 2,361 | 2,760 | 3,157 | |
| | Strafford | 835 | 1,114 | 1,386 | |
| | Sullivan | 471 | 550 | 888 | |
| | New Hampshire | 11,524 | 11,585 | 15,200 | |

^r For this analysis, members were assigned a county based on the most recent enrollment record in the analytic period.

Table 4. Integrated Care Codes Utilization and Volume (Quantity of Services) Among NH Children, by Insurer Type and Enrollee Age-Band, 2019-2021

| | | Total Quantity of Integrated Care Services | | | | | | | |
|--------------|-------------------|--|--------|--------|--|--|--|--|--|
| Insurer Type | Enrollee Age-Band | 2019 | 2020 | 2021 | | | | | |
| | Ages 0-11 | 7,677 | 8,270 | 9,637 | | | | | |
| Commercial | Ages 12-17 | 4,995 | 5,414 | 6,651 | | | | | |
| | Total | 12,672 | 13,684 | 16,288 | | | | | |
| | Ages 0-11 | 8,205 | 8,294 | 10,631 | | | | | |
| NH Medicaid | Ages 12-17 | 3,319 | 3,291 | 4,569 | | | | | |
| | Total | 11,524 | 11,585 | 15,200 | | | | | |

Results for Utilization of Integrated Behavioral Health Care in Pediatrics, by Enrollees

As shown in **Table 3**, commercially insured children living in Rockingham County received the most integrated care services from 2019 to 2021, followed by Hillsborough, Merrimack, and Strafford Counties. Amongst children insured by NH Medicaid, those living in Hillsborough County received the most integrated care services over the three years, followed by Rockingham, Cheshire, and Strafford Counties. See **Tables C3-C4** in **Appendix C** for more detail.

Additionally, as shown in **Table 4**, children ages zero to 11 received more integrated care services than those ages 12 to 17 over the three years and across insurer types. See **Tables C5-C6** in **Appendix C** for more detail.

Chapter 4: Conclusions

Summary of Report Results

Mental health diagnoses among NH children and teens with enrollment in a medical insurance plan were common and have remained stable over a three-year period. Among NH children and teens insured commercially or by NH Medicaid included in this analysis, 17% had at least two medical claims with a diagnosis code for a mental health condition in 2021, mirroring the percentage observed in 2019. Over the three-year period, the percentage of commercially insured children with a mental health condition has increased marginally by 1%, moving from 13% to 14%, while the percentage of children insured by NH Medicaid has slightly decreased by 2%, dropping from 20% to 18%. As discussed in the April 2022 MCAP report, it is important to approach these trends with caution, as the full impact of the COVID-19 pandemic remains unclear. Furthermore, the inclusion of mental health diagnoses in this report relies on the presence of medical claims data; if a child or teen did not visit a doctor during the COVID-19 pandemic in 2020 and 2021, they would not be included in this count, therefore leading to an undercount of the number and percentage of children and teens with mental health diagnoses.

Four medical insurance providers [payers] are responsible for the majority of healthcare coverage of NH children and teens with mental health diagnoses. In 2021, 84% of NH covered children included in this analysis were covered by one of four payers, suggesting a concentration of coverage among these payers. The leading payers amongst NH children with mental health conditions were WellSense (33%) and NH Healthy Families (28%), both of which are NH Medicaid managed care plans, followed by Anthem/Matthew Thornton (16%) and Harvard Pilgrim (7%), which are commercial plans; patterns were consistent in 2019 and 2020. The concentration of health coverage among so few payers highlights the importance of these plans adequately managing and financing mental health services for this population in the years to come.

Primary care providers prescribe about half of the total mental health prescriptions for NH children and teens. While this analysis indicates that mental health related prescriptions were prescribed to NH children and teens in both primary care and non-primary care settings, primary care providers accounted for 49% of the total mental health prescriptions for covered children and teens. Trend data reveals that over the three-year period, the percentage of mental health-related prescriptions by primary care providers increased among children covered by NH Medicaid, from 49% to 51%. However, for commercially insured children, this percentage has remained stable at 46%. Additional analysis indicates that NH children and teens are most likely to be prescribed mental health related drugs by Pediatricians, regardless of insurer type. Furthermore, an examination of the top five provider taxonomies prescribing mental health-related drugs to children shows that commercially insured children are more likely to receive treatment from Psychiatrists, compared to those insured by NH Medicaid.

With the exception of developmental screening, the utilization and billing of integrated behavioral health care was low among NH children and teens. From 2019 to 2021, the utilization of integrated behavioral health care among NH covered children remained consistently low, with four integrated care code categories amounting to 20 services or fewer per year. Over the three-year period, the utilization of health behavior assessment and intervention codes showed considerable growth, increasing from eight services and one billing provider in 2019 among commercially insured children to 222 services and 54 providers in 2021. Similarly, utilization increased among children insured by NH Medicaid from no services or billing providers in 2019 to 127 services and 61 providers in 2021. The utilization of developmental screening codes has consistently increased among both commercially and NH Medicaid-insured children since 2019, with slightly higher usage among commercially insured children. Additional analysis reveals that commercially insured children living in Rockingham and Hillsborough Counties receive the highest quantity of integrated care services, followed by Merrimack and Strafford Counties. Among NH Medicaid insured children, those living in Hillsborough, Rockingham, and Cheshire Counties received the greatest number of services.

Limitations

Limitations of this data analysis mirror those of the April and December 2022 MCAP reports and must continue to be considered. As this analysis focused on only NH children and teens with enrollment in a medical insurance plan from 2019 to 2021, the percentages of NH children and teens with selected mental health conditions are likely underestimates of the true prevalence. Further, not every child or teen with a mental health condition receives medical care for the condition, and in order to be accounted for in this analysis, the child must have at least two medical claims with a mental health diagnosis during the analytic period. Additionally, even if a child or teen does have a medical visit, it does not necessarily mean that a clinician asks about and/or recognizes a mental health concern or records a diagnosis code. In addition, with respect to pharmaceuticals, filling a prescription does not necessarily mean the child or teen actually took the medication. Analysis by race and ethnicity was also not possible due to these fields being unavailable/unreliable in the claims data. Since this study was a descriptive analysis, statistical significance testing over years and between commercial and Medicaid rates was not conducted.

Recommendations for Future Analysis

While this descriptive analysis of pediatric mental health in NH builds upon the April and December 2022 reports, it sheds additional light on more areas for future analysis. There is interest in better understanding the utilization of behavioral health integration-codes, specifically collaborative care model codes. This analysis identified an underutilization of collaborative care model codes in 2019 and 2020 but noted a sharp increase in their usage in 2021. It is recommended for future analysis to monitor the utilization of behavioral health integration-codes to identify potential trends over time.

This report is unable to explain all of the "whys" of the data analysis and findings, including the differences in mental health conditions and treatment by insurance and provider types and the prescription

patterns and frequency of specific pharmaceutical classes. Additional analysis is recommended to further explore the "whys" of this report's findings. Further, utilization of mental health care services does not ensure that children and adolescents are receiving care that is aligned with current care quality standards; research to discern the feasibility of analyzing mental health care service utilization by indicators of quality, such as utilization of treatment monitoring tools or evidence-based practices, is recommended.

While this report attempted to compare 2019 to 2021 claims data to help identify the effects of COVID-19 on pediatric mental health, the full impact of the pandemic is not yet clear. Findings indicate that additional years of data may be beneficial to further analyze how mental health and mental health care are changing over time post-pandemic and as children return to school. Further comparison of 2019 to 2020, 2021, and 2022 data may help illuminate some of these effects. Lastly, there is interest in exploring the presence of telehealth claims data in the future.

Appendix A: Analysis of Pediatric Mental Health Conditions Data Tables

All Pediatric Mental Health Conditions

Table A1. Percent of All NH Covered Children's With an Indication of a Mental Health Condition, by Insurer Type, 2019-2021^{t,u}

| | 1,66,2013 2021 | Perc | ent of All I | NH Covere | d Childrei | n With an II | ndication | of a Menta | al Health C | ondition |
|-------------|---|---------------------|--------------|-----------------------------|------------|--------------|-----------|------------|-------------|----------|
| | | | 2019 | | | 2020 | | | 2021 | |
| Insurer | | | Eligible | | | Eligible | | | Eligible | |
| Туре | Payer | Number ^v | Enrollees | Percent ^w | Number | Enrollees | Percent | Number | Enrollees | Percent |
| | Aetna | 184 | 1,535 | 12% | 222 | 1,922 | 12% | 377 | 2,917 | 13% |
| | Anthem/Matthew Thornton | 4,030 | 27,816 | 14% | 3,843 | 27,485 | 14% | 4,051 | 26,981 | 15% |
| _ | Cigna | 832 | 9,106 | 9% | 832 | 9,107 | 9% | 1,267 | 8,324 | 15% |
| rcia | Harvard Pilgrim | 1,831 | 14,223 | 13% | 1,790 | 13,930 | 13% | 1,787 | 12,924 | 14% |
| me | Health Plans, Inc. | 327 | 2,476 | 13% | 302 | 2,469 | 12% | 352 | 2,453 | 14% |
| Commercial | Tufts | 300 | 2,113 | 14% | 266 | 2,083 | 13% | 250 | 1,908 | 13% |
| | Tufts Health Freedom | 394 | 3,530 | 11% | 332 | 3,156 | 11% | 271 | 2,469 | 11% |
| | United Healthcare | 190 | 1,464 | 13% | 204 | 1,574 | 13% | 260 | 1,707 | 15% |
| | All Commercial | 8,088 | 62,263 | 13% | 7,791 | 61,726 | 13% | 8,615 | 59,683 | 14% |
| | AmeriHealth | 54 | 524 | 10% | 567 | 6,257 | 9% | 1,192 | 11,840 | 10% |
| aid | Fee-For-Service | 205 | 1,297 | 16% | 65 | 422 | 15% | 71 | 428 | 17% |
| NH Medicaid | NH Healthy Families | 7,235 | 35,519 | 20% | 6,847 | 36,009 | 19% | 7,064 | 36,365 | 19% |
| Ξ | WellSense | 8,595 | 43,516 | 20% | 8,026 | 43,117 | 19% | 8,322 | 43,074 | 19% |
| | All NH Medicaid | 16,089 | 80,856 | 20% | 15,505 | 85,805 | 18% | 16,649 | 91,707 | 18% |
| an Indi | ered Children With cation of a Mental Condition¹³ | 24,177 | 143,119 | 17% | 23,296 | 147,531 | 16% | 25,264 | 151,390 | 17% |

⁵ All NH covered children indicates all children insured commercially or by NH Medicaid.

^t The requirement for any indication of a mental health condition was having at least two medical claims with a diagnosis code for a mental health condition.

^u For this analysis, a mental health disorder diagnosis code was not required to be in the primary diagnosis location on a claim. Claims were included if one of the selected mental health disorder diagnosis codes was on a service line for the claim; this is the approach throughout this report, unless otherwise stated.

^v Number of children with a mental health condition.

w Percent of eligible enrollees with a mental health condition.

Table A2. Percent of All NH Covered Children With an Indication of a Mental Health Condition, Covered by Payer, 2019-2021

| | , 2013 2021 | Percent of All NH Covered Children With an Indication of a Mental Health Condition, Covered by Payer | | | | | | | | |
|---|-------------------------|---|----------------------|--------|---------|--------|---------|--|--|--|
| Insurer | | 20 | 19 | 20 | 20 | 2021 | | | | |
| Type | Payer | Number ^x | Percent ^y | Number | Percent | Number | Percent | | | |
| | Aetna | 184 | 1% | 222 | 1% | 377 | 1% | | | |
| | Anthem/Matthew Thornton | 4,030 | 17% | 3,843 | 16% | 4,051 | 16% | | | |
| Commercial | Cigna | 832 | 3% | 832 | 4% | 1,267 | 5% | | | |
| erc | Harvard Pilgrim | 1,831 | 8% | 1,790 | 8% | 1,787 | 7% | | | |
| ππ | Health Plans, Inc. | 327 | 1% | 302 | 1% | 352 | 1% | | | |
| Co | Tufts | 300 | 1% | 266 | 1% | 250 | 1% | | | |
| | Tufts Health Freedom | 394 | 2% | 332 | 1% | 271 | 1% | | | |
| | United Healthcare | 190 | 1% | 204 | 1% | 260 | 1% | | | |
| aid | AmeriHealth | 54 | 0% | 567 | 2% | 1,192 | 5% | | | |
| Medicaid | Fee-For-Service | 205 | 1% | 65 | 0% | 71 | 0% | | | |
| | NH Healthy Families | 7,235 | 30% | 6,847 | 29% | 7,064 | 28% | | | |
| Ĭ | WellSense | 8,595 | 36% | 8,026 | 34% | 8,322 | 33% | | | |
| All Covered Children With an Indication of a Mental Health Condition ² | | 24,177 | 100% | 23,296 | 100% | 25,264 | 100% | | | |

^x Number of children with a mental health condition.

^y Percent of all children with a mental health condition.

^z All covered children with an indication of a mental health condition serves as the denominator for the calculations displayed in this table.

Appendix B: Analysis of Pediatric Mental Health Prescribing in Primary Care Data Tables

Pediatric Mental Health Prescribing in Primary Care

Table B1. Percent of Total Fills for the Top Mental Health Drug Classes for All NH Covered Children by Primary Care Providers, by Insurer Type, 2019-2021

| | | Percent of Total Fil | lls for the Top Mental H | lealth Drug Classes |
|--------------|---------------------|----------------------|--------------------------|---------------------|
| Insurer Type | Primary Care Status | 2019 | 2020 | 2021 |
| Commercial | Primary Care | 46% | 46% | 46% |
| Commercial | Not Primary Care | 54% | 54% | 54% |
| NH Medicaid | Primary Care | 49% | 49% | 51% |
| Wit Medicala | Not Primary Care | 51% | 51% | 49% |
| All Covered | Primary Care | 48% | 48% | 49% |
| Children | Not Primary Care | 52% | 52% | 51% |

Table B2. Percent of Total Fills for the Top Mental Health Drug Classes Among All NH Covered Children, by the Top Ten Prescribing Provider's Taxonomies and Insurer Type, 2019-2021^{aa,bb}

| Insurer | Tell resembling rovider 3 raxonomics | Primary Care | Percent of To | otal Fills for th alth Drug Clas | - |
|-------------|--|----------------------|---------------|-------------------------------------|------|
| Туре | Prescribing Provider Taxonomy ^{cc} | Status ^{dd} | 2019 | 2020 | 2021 |
| | Pediatricians | Primary Care | 27% | 26% | 26% |
| | Psychiatry | Not Primary Care | 15% | 15% | 17% |
| | Psychiatric Mental Health Nurse Practitioner | Not Primary Care | 10% | 11% | 12% |
| | Psychiatry & Neurology - Child & Adolescent Psychiatry | Not Primary Care | 11% | 11% | 10% |
| Commercial | Psychiatry & Neurology with Special Qualifications in Child Neurology | Not Primary Care | 6% | 6% | 6% |
| шш | Family Medicine | Primary Care | 6% | 6% | 5% |
| ဝ | Pediatric Nurse Practitioner | Primary Care | 4% | 4% | 5% |
| | Family Nurse Practitioner | Primary Care | 4% | 4% | 4% |
| | Neurology | Not Primary Care | 2% | 2% | 2% |
| | Nurse Practitioner | Primary Care | 2% | 2% | 1% |
| | Clinical Nurse Specialist – Psychiatric/Mental Health, Child & Adolescent | Not Primary Care | 2% | 1% | 1% |
| | Pediatricians | Primary Care | 27% | 26% | 26% |
| | Psychiatric Mental Health Nurse Practitioner | Not Primary Care | 17% | 17% | 15% |
| | Psychiatry | Not Primary Care | 13% | 13% | 13% |
| | Psychiatry & Neurology - Child & Adolescent Psychiatry | Not Primary Care | 7% | 7% | 7% |
| NH Medicaid | Psychiatry & Neurology with Special Qualifications in Child Neurology | Not Primary Care | 5% | 6% | 7% |
| Mec | Family Nurse Practitioner | Primary Care | 5% | 6% | 7% |
| Ξ | Pediatric Nurse Practitioner | Primary Care | 4% | 5% | 6% |
| | Family Medicine | Primary Care | 5% | 5% | 5% |
| | Nurse Practitioner | Primary Care | 3% | 3% | 3% |
| | Clinical Nurse Specialist – Psychiatric/Mental Health, Child & Adolescent | Not Primary Care | 3% | 2% | 1% |
| | Physician Assistant | Primary Care | 1% | 2% | 2% |

^{aa} The top 10 prescribing provider taxonomies are analyzed on an annual basis. Combining multiple years of data may result in more than 10 drug classes appearing in the "top 10," due to changes in the top drug classes year over year.

^{bb} If a prescribing provider taxonomy did not appear in the top 10 for all of the consecutive years of data displayed, the corresponding cell has been shaded gray to indicate that drug class did not make up the top 10 in that respective year.

^{cc} Provider taxonomy was assigned based on the provider's primary taxonomy associated with their NPI in the NPPES database.

^{dd} Pediatric primary care status was assigned based on the provider's primary taxonomy.

Appendix C: Analysis of Pediatric Integrated Behavioral Health Care Data Tables

Utilization of Integrated Behavioral Health Care in Pediatrics, by Providers

Table C1. Integrated Care Code Utilization and Volume Among NH Children Insured Commercially, by Provider County and Number of Billing Providers, 2019-2021

| | lig i ovideis | Collaborative Care Model | | Developmental Screening | | General Behavioral Health Integration | | Health Behavior Assessment and Intervention | | Office-Based SUD Treatment | | SBIRT | |
|------|--------------------|-----------------------------|---|----------------------------|--------|--|---|---|---|-------------------------------|---|------------------------|-------------------------|
| Year | Provider County | Number of Providers | | Number of Providers | | Number of Providers | | Number of Providers | | Number of Providers | | Number of Providers | Quantity of Services |
| | Belknap | 0 | 0 | 2 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Carroll | 0 | 0 | 54 | 417 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Cheshire | 0 | 0 | 66 | 583 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Coos | 0 | 0 | 8 | 104 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Grafton | 0 | 0 | 125 | 470 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 019 | Hillsborough | 0 | 0 | 407 | 2,795 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| 20 | Merrimack | 0 | 0 | 242 | 1,835 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Rockingham | 0 | 0 | 201 | 2,140 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Strafford | 0 | 0 | 74 | 793 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sullivan | 0 | 0 | 22 | 134 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Other | 0 | 0 | 979 | 3,384 | 0 | 0 | 1 | 8 | 0 | 0 | 1 | 1 |
| | Total | 0 | 0 | 2,180 | 12,661 | 0 | 0 | 1 | 8 | 0 | 0 | 3 | 3 |

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| | B !! | 0 | 0 | 2 | 16 | 0 | ^ | 0 | _ | 0 | 0 | | 0 |
|------|--------------|---|----|-------|--------|---|---|----|-----|---|---|---|---|
| | Belknap | 0 | 0 | 3 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Carroll | 0 | 0 | 50 | 337 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| | Cheshire | 0 | 0 | 53 | 440 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Coos | 0 | 0 | 6 | 91 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Grafton | 0 | 0 | 129 | 447 | 0 | 0 | 8 | 13 | 0 | 0 | 0 | 0 |
| 2020 | Hillsborough | 0 | 0 | 475 | 3,003 | 0 | 0 | 6 | 19 | 0 | 0 | 0 | 0 |
| 70 | Merrimack | 0 | 0 | 220 | 1,668 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Rockingham | 0 | 0 | 261 | 2,988 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| | Strafford | 0 | 0 | 94 | 1,051 | 0 | 0 | 4 | 12 | 0 | 0 | 0 | 0 |
| | Sullivan | 0 | 0 | 21 | 127 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Other | 0 | 0 | 993 | 3,422 | 0 | 0 | 17 | 46 | 0 | 0 | 1 | 1 |
| | Total | 0 | 0 | 2,305 | 13,590 | 1 | 1 | 36 | 91 | 0 | 0 | 2 | 2 |
| | Belknap | 0 | 0 | 8 | 46 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Carroll | 0 | 0 | 56 | 349 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Cheshire | 0 | 0 | 63 | 499 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| | Coos | 0 | 0 | 1 | 64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Grafton | 4 | 5 | 176 | 622 | 0 | 0 | 23 | 42 | 0 | 0 | 0 | 0 |
| 2021 | Hillsborough | 0 | 0 | 561 | 3,875 | 0 | 0 | 10 | 100 | 0 | 0 | 0 | 0 |
| 70 | Merrimack | 0 | 0 | 278 | 2,181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Rockingham | 1 | 1 | 259 | 2,934 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| | Strafford | 0 | 0 | 108 | 1,248 | 0 | 0 | 5 | 10 | 0 | 0 | 0 | 0 |
| | Sullivan | 0 | 0 | 25 | 189 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Other | 3 | 14 | 1,164 | 4,035 | 0 | 0 | 14 | 68 | 0 | 0 | 3 | 3 |
| | Total | 8 | 20 | 2,699 | 16,042 | 0 | 0 | 54 | 222 | 0 | 0 | 4 | 4 |

Table C2. Integrated Care Code Utilization and Volume Among NH Children Insured by NH Medicaid, by Provider County and Number of Billing Providers, 2019-2021

| | itting Provider | Collaborative Care Model | | Developmental Screening | | Health In | Behavioral tegration | Assessn Interv | Behavior nent and rention | Treat | ased SUD tment | | IRT |
|------|-----------------|-----------------------------|---|----------------------------|--------|------------------------|-------------------------|------------------------|---------------------------------|------------------------|-------------------|------------------------|-------------------------|
| Year | Provider County | | | Number of Providers | | Number of Providers | | Number of Providers | | Number of Providers | | Number of Providers | Quantity of Services |
| | Belknap | 0 | 0 | 2 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Carroll | 0 | 0 | 82 | 867 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Cheshire | 0 | 0 | 83 | 1,180 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| | Coos | 0 | 0 | 12 | 182 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| | Grafton | 0 | 0 | 169 | 662 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2019 | Hillsborough | 0 | 0 | 451 | 3,196 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 12 |
| 70 | Merrimack | 0 | 0 | 225 | 1,064 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| | Rockingham | 0 | 0 | 204 | 2,016 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Strafford | 0 | 0 | 76 | 575 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sullivan | 0 | 0 | 17 | 77 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Other | 0 | 0 | 322 | 1,672 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| | Total | 0 | 0 | 1,643 | 11,506 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 18 |
| | Belknap | 0 | 0 | 5 | 72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Carroll | 0 | 0 | 63 | 625 | 0 | 0 | 3 | 6 | 0 | 0 | 0 | 0 |
| | Cheshire | 0 | 0 | 79 | 1,068 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Coos | 0 | 0 | 6 | 164 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| | Grafton | 0 | 0 | 181 | 637 | 0 | 0 | 14 | 28 | 0 | 0 | 1 | 1 |
| 2020 | Hillsborough | 0 | 0 | 491 | 3,140 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 7 | Merrimack | 0 | 0 | 214 | 825 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Rockingham | 0 | 0 | 240 | 2,331 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Strafford | 0 | 0 | 95 | 933 | 0 | 0 | 4 | 6 | 0 | 0 | 0 | 0 |
| | Sullivan | 0 | 0 | 23 | 201 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| | Other | 0 | 0 | 315 | 1,504 | 0 | 0 | 12 | 39 | 0 | 0 | 0 | 0 |
| | Total | 0 | 0 | 1,712 | 11,500 | 0 | 0 | 35 | 81 | 0 | 0 | 3 | 4 |

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| | Belknap | 0 | 0 | 12 | 159 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|------|--------------|---|---|-------|--------|---|---|----|-----|---|---|---|---|
| | Carroll | 0 | 0 | 67 | 750 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Cheshire | 0 | 0 | 82 | 1,101 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Coos | 0 | 0 | 2 | 174 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Grafton | 0 | 0 | 253 | 937 | 2 | 2 | 38 | 82 | 0 | 0 | 1 | 1 |
| [| Hillsborough | 0 | 0 | 601 | 4,720 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2021 | Merrimack | 0 | 0 | 248 | 1,158 | 0 | 0 | 6 | 10 | 0 | 0 | 0 | 0 |
| | Rockingham | 0 | 0 | 227 | 2,493 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Strafford | 0 | 0 | 102 | 1,194 | 0 | 0 | 4 | 16 | 0 | 0 | 0 | 0 |
| | Sullivan | 0 | 0 | 26 | 369 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 |
| | Other | 3 | 7 | 338 | 2,006 | 1 | 1 | 11 | 17 | 0 | 0 | 0 | 0 |
| | Total | 3 | 7 | 1,958 | 15,061 | 4 | 4 | 61 | 127 | 0 | 0 | 1 | 1 |

Utilization of Integrated Behavioral Health Care in Pediatrics, by Enrollees

Table C3. Integrated Care Code Utilization and Volume Among NH Children Insured Commercially, by Enrollee County, 2019-2021

| | | Collaborative Care Model | | General Behavioral Health Integration | | Office-Based SUD Treatment | SBIRT | Total |
|------|---------------|-----------------------------|-------------------------|--|-------------------------|-------------------------------|-------------------------|-------------------------|
| Year | County | Quantity of Services | Quantity of Services | Quantity of Services | Quantity of Services | Quantity of Services | Quantity of Services | Quantity of Services |
| | Belknap | 0 | 279 | 0 | 8 | 0 | 0 | 287 |
| | Carroll | 0 | 444 | 0 | 0 | 0 | 0 | 444 |
| | Cheshire | 0 | 967 | 0 | 0 | 0 | 0 | 967 |
| | Coos | 0 | 115 | 0 | 0 | 0 | 0 | 115 |
| | Grafton | 0 | 427 | 0 | 0 | 0 | 0 | 427 |
| 2019 | Hillsborough | 0 | 3,440 | 0 | 0 | 0 | 2 | 3,442 |
| 7 | Merrimack | 0 | 1,628 | 0 | 0 | 0 | 1 | 1,629 |
| | Rockingham | 0 | 3,953 | 0 | 0 | 0 | 0 | 3,953 |
| | Strafford | 0 | 1,112 | 0 | 0 | 0 | 0 | 1,112 |
| | Sullivan | 0 | 296 | 0 | 0 | 0 | 0 | 296 |
| | New Hampshire | 0 | 12,661 | 0 | 8 | 0 | 3 | 12,672 |
| | Belknap | 0 | 273 | 0 | 7 | 0 | 0 | 280 |
| | Carroll | 0 | 381 | 0 | 3 | 0 | 0 | 384 |
| | Cheshire | 0 | 809 | 0 | 1 | 0 | 0 | 810 |
| | Coos | 0 | 104 | 0 | 1 | 0 | 0 | 105 |
| | Grafton | 0 | 301 | 0 | 30 | 0 | 0 | 331 |
| 2020 | Hillsborough | 0 | 3,655 | 1 | 21 | 0 | 1 | 3,678 |
| | Merrimack | 0 | 1,563 | 0 | 1 | 0 | 1 | 1,565 |
| | Rockingham | 0 | 4,804 | 0 | 13 | 0 | 0 | 4,817 |
| | Strafford | 0 | 1,360 | 0 | 13 | 0 | 0 | 1,373 |
| | Sullivan | 0 | 340 | 0 | 1 | 0 | 0 | 341 |
| | New Hampshire | 0 | 13,590 | 1 | 91 | 0 | 2 | 13,684 |

| | Belknap | 0 | 387 | 0 | 6 | 0 | 0 | 393 |
|------|---------------|----|--------|---|-----|---|---|--------|
| | Carroll | 0 | 448 | 0 | 0 | 0 | 0 | 448 |
| | Cheshire | 0 | 906 | 0 | 3 | 0 | 0 | 909 |
| | Coos | 0 | 101 | 0 | 7 | 0 | 0 | 108 |
| ١ | Grafton | 4 | 379 | 0 | 11 | 0 | 0 | 394 |
| 2021 | Hillsborough | 0 | 4,684 | 0 | 91 | 0 | 0 | 4,775 |
| | Merrimack | 0 | 1,909 | 0 | 36 | 0 | 1 | 1,946 |
| | Rockingham | 14 | 5,123 | 0 | 51 | 0 | 3 | 5,191 |
| | Strafford | 1 | 1,663 | 0 | 14 | 0 | 0 | 1,678 |
| | Sullivan | 1 | 442 | 0 | 3 | 0 | 0 | 446 |
| | New Hampshire | 20 | 16,042 | 0 | 222 | 0 | 4 | 16,288 |

Table C4. Integrated Care Code Utilization and Volume Among NH Children Insured by NH Medicaid, by Enrollee County, 2019-2021

| | | Collaborative Care Model | Developmental Screening | General Behavioral Health Integration | Health Behavior Assessment and Intervention | Office-Based SUD Treatment | SBIRT | Total |
|------|---------------|-----------------------------|----------------------------|--|---|-------------------------------|-------------------------|-------------------------|
| Year | County | Quantity of Services | Quantity of Services | Quantity of Services | Quantity of Services | Quantity of Services | Quantity of Services | Quantity of Services |
| | Belknap | 0 | 241 | 0 | 0 | 0 | 1 | 242 |
| | Carroll | 0 | 870 | 0 | 0 | 0 | 0 | 870 |
| | Cheshire | 0 | 1,706 | 0 | 0 | 0 | 2 | 1,708 |
| | Coos | 0 | 211 | 0 | 0 | 0 | 1 | 212 |
| | Grafton | 0 | 688 | 0 | 0 | 0 | 1 | 689 |
| 2019 | Hillsborough | 0 | 3,121 | 0 | 0 | 0 | 11 | 3,132 |
| 7 | Merrimack | 0 | 1,004 | 0 | 0 | 0 | 0 | 1,004 |
| | Rockingham | 0 | 2,359 | 0 | 0 | 0 | 2 | 2,361 |
| | Strafford | 0 | 835 | 0 | 0 | 0 | 0 | 835 |
| | Sullivan | 0 | 471 | 0 | 0 | 0 | 0 | 471 |
| | New Hampshire | 0 | 11,506 | 0 | 0 | 0 | 18 | 11,524 |

| | Belknap | 0 | 254 | 0 | 0 | 0 | 0 | 254 |
|------|---------------|---|--------|---|-----|---|---|--------|
| | Carroll | 0 | 676 | 0 | 11 | 0 | 0 | 687 |
| | Cheshire | 0 | 1,553 | 0 | 2 | 0 | 0 | 1,555 |
| | Coos | 0 | 195 | 0 | 6 | 0 | 1 | 202 |
| | Grafton | 0 | 509 | 0 | 1 | 0 | 0 | 510 |
| 2020 | Hillsborough | 0 | 3,149 | 0 | 32 | 0 | 3 | 3,184 |
| | Merrimack | 0 | 769 | 0 | 0 | 0 | 0 | 769 |
| | Rockingham | 0 | 2,759 | 0 | 1 | 0 | 0 | 2,760 |
| | Strafford | 0 | 1,103 | 0 | 11 | 0 | 0 | 1,114 |
| | Sullivan | 0 | 533 | 0 | 17 | 0 | 0 | 550 |
| | New Hampshire | 0 | 11,500 | 0 | 81 | 0 | 4 | 11,585 |
| | Belknap | 0 | 428 | 0 | 5 | 0 | 0 | 433 |
| | Carroll | 0 | 831 | 0 | 12 | 0 | 0 | 843 |
| | Cheshire | 0 | 1,752 | 0 | 11 | 0 | 0 | 1,763 |
| | Coos | 0 | 229 | 0 | 2 | 0 | 0 | 231 |
| | Grafton | 0 | 690 | 1 | 19 | 0 | 1 | 711 |
| 2021 | Hillsborough | 0 | 4,733 | 0 | 16 | 0 | 0 | 4,749 |
| `` | Merrimack | 0 | 1,018 | 0 | 21 | 0 | 0 | 1,039 |
| | Rockingham | 7 | 3,143 | 2 | 5 | 0 | 0 | 3,157 |
| | Strafford | 0 | 1,362 | 0 | 24 | 0 | 0 | 1,386 |
| | Sullivan | 0 | 875 | 1 | 12 | 0 | 0 | 888 |
| | New Hampshire | 7 | 15,061 | 4 | 127 | 0 | 1 | 15,200 |

Table C5. Integrated Care Code Utilization and Volume Among NH Children Insured Commercially, by Age-Band, 2019-2021

| | | Collaborative Care Model Quantity of | Developmental Screening Quantity of | General Behavioral Health Integration Quantity of | Health Behavior Assessment and Intervention Quantity of | Office-Based SUD Treatment Quantity of | SBIRT Quantity of | Total Quantity of |
|------|------------|--|-------------------------------------|---|--|--|--------------------|----------------------|
| Year | Age-Band | Services | Services | Services | Services | Services | Services | Services |
| | Ages 0-11 | 0 | 7,669 | 0 | 8 | 0 | 0 | 7,677 |
| 2019 | Ages 12-17 | 0 | 4,992 | 0 | 0 | 0 | 3 | 4,995 |
| 7 | Total | 0 | 12,661 | 0 | 8 | 0 | 3 | 12,672 |
| (| Ages 0-11 | 0 | 8,218 | 0 | 52 | 0 | 0 | 8,270 |
| 2020 | Ages 12-17 | 0 | 5,372 | 1 | 39 | 0 | 2 | 5,414 |
| ,, | Total | 0 | 13,590 | 1 | 91 | 0 | 2 | 13,684 |
| | Ages 0-11 | 15 | 9,447 | 0 | 175 | 0 | 0 | 9,637 |
| 2021 | Ages 12-17 | 5 | 6,595 | 0 | 47 | 0 | 4 | 6,651 |
| ., | Total | 20 | 16,042 | 0 | 222 | 0 | 4 | 16,288 |

Table C6. Integrated Care Code Utilization and Volume Among NH Children Insured by NH Medicaid, by Age-Band, 2019-2021

| | | Collaborative Care Model | Developmental Screening | General Behavioral Health Integration | Health Behavior Assessment and Intervention | Office-Based SUD Treatment | SBIRT | Total |
|------|------------|-----------------------------|----------------------------|--|---|-------------------------------|-------------------------|-------------------------|
| Year | Age-Band | Quantity of Services | Quantity of Services | Quantity of Services | Quantity of Services | Quantity of Services | Quantity of Services | Quantity of Services |
| | Ages 0-11 | 0 | 8,205 | 0 | 0 | 0 | 0 | 8,205 |
| 2019 | Ages 12-17 | 0 | 3,301 | 0 | 0 | 0 | 18 | 3,319 |
| | Total | 0 | 11,506 | 0 | 0 | 0 | 18 | 11,524 |
| | Ages 0-11 | 0 | 8,272 | 0 | 22 | 0 | 0 | 8,294 |
| 2020 | Ages 12-17 | 0 | 3,228 | 0 | 59 | 0 | 4 | 3,291 |
| | Total | 0 | 11,500 | 0 | 81 | 0 | 4 | 11,585 |
| | Ages 0-11 | 7 | 10,546 | 3 | 75 | 0 | 0 | 10,631 |
| 2021 | Ages 12-17 | 0 | 4,515 | 1 | 52 | 0 | 1 | 4,569 |
| | Total | 7 | 15,061 | 4 | 127 | 0 | 1 | 15,200 |

Appendix D: Diagnosis Code Ranges for Mental Health Conditions

Condition and Code(s) or Code Ranges

ADHD

F90*

Adjustment Disorder

F43.20-F43.29

Anxiety

F41*

Conduct Disorders

F91*

Depression

F32*-F33*

Disruptive Mood Dysregulation Disorder

F34.81

Mania and Bipolar

F30*-F31*

Personality Disordersee

F60*

PTSD

F43.10, F43.11, F43.12

Schizophrenia, Schizotypal and Delusional Disorders

F20*-F29*

Substance Use Disorder

F10*-F16*, F18*, F19*

Suicidal Ideation

R45.851, T14.91, T14.91X, T40.0X2A, T40.0X2D, T40.0X2S, T40.1X2A, T40.1X2D, T40.1X2S, T40.2X2A, T40.2X2D, T40.2X2B, T40.3X2A, T40.3X2D, T40.3X2S, T40.4X2A, T40.4X2D, T40.4X2S, T40.5X2A, T40.5X2D, T40.5X2S, T40.5X2A, T40.5X2A, T40.5X2B, T40.5X2B, T40.7X2D, T40.7X2S, T40.8X2A, T40.8X2D, T40.8X2S, T40.412A, T40.412D, T40.412S, T40.422A, T40.422D, T40.422S, T40.492A, T40.492D, T40.492S, T40.602A, T40.602D, T40.602S, T40.692A, T40.692D, T40.692S, T40.902A, T40.902D, T40.902S, T40.992A, T40.992D, T40.992S

Other Mental Health Disorder (F34.81 Excluded)

F34.0, F34.1, F34.8, F34.9, F39*, F40*, F42*, F43.8, F43.9, F44*, F45*, F48*, F50*-F55*, F59*, F63*, F64*, F65*, F66*, F68*, F93*-F95*, F98*, F99*

Other Mental Health Disorders include: persistent mood disorders, unspecified mood disorders, phobic anxiety disorders, obsessive-compulsive disorders, other reactions to severe stress, reaction to severe stress unspecified, dissociative and conversion disorders, somatoform disorders, eating disorders, sleep disorders, sexual dysfunction (not due to substance or known physiological condition), abuse of non-psychoactive substances, unspecified behavioral syndromes associated with physiological disturbances and physical factors, impulse disorders, gender dysphoria, paraphilias, other sexual disorders, emotional disorders with onset specific to childhood, disorders of social functioning with onset specific to childhood and adolescence, tic disorder, other behavioral and emotional disorders with onset usually occurring in childhood and adolescence, and mental disorder, not otherwise specified

^{ee} A diagnosis of personality disorder before the age of 18 may be considered invalid or a misdiagnosis. However, it does represent that a provider identified symptoms characteristic of a mental health disorder. Therefore, diagnosis codes F60* and F68* have been included in this analysis.

Appendix E: Mental Health-Related Drug Classes

The mental health prescribing analysis uses First Data Bank drug classes. Drugs were flagged as mental health-related if they were in the following classes:

| Mental Health-Related Drug Classes |
|---|
| Alternative Therapy - Sedative/Hypnotics |
| Anorexic Agents |
| Antianxiety Agents |
| Anticonvulsants |
| Antidepressants |
| Antihypertensive Therapy Agents |
| Antipsychotics (Neuroleptics) |
| Attention Deficit-Hyperactivity Disorder (ADHD) Therapy |
| Bipolar Therapy Agents |
| CNS Stimulants |
| Sedative-Hypnotics |
| Smoking Deterrents and Combinations |

Appendix F: Integrated Behavioral Health Care Codes

| Integrated Behavioral | Health Care Codes |
|------------------------------|--|
| Collaborative Care Mode | el e e e e e e e e e e e e e e e e e e |
| 99492-99494 | |
| G0511-G0512 | |
| G2214 | |
| Developmental Screen | ning |
| 96110 | |
| 96112-96113 | |
| 96127 | |
| 96160-96161 | |
| General Behavioral He | ealth Integration |
| 99484 | |
| Health Behavior Asses | sment and Intervention |
| 96156 | |
| 96158-96159 | |
| 96164-96165 | |
| 96167-96168 | |
| 96170-96171 | |
| Office-Based SUD Trea | ntment |
| G2086-G2088 | |
| SBIRT | |
| 99408-99409 | |
| G0396-G0397 | |
| H0049-H0050 | |

Appendix G: Taxonomy Codes for Primary Care

| Taxonomy | | Taxonomy | Taxonomy | |
|------------|-------------------------------------|---------------------|-------------------------|--|
| Codes | Taxonomy Type | Classification | Specialization | |
| 207Q00000X | Allopathic & Osteopathic Physicians | Family Medicine | A 1 1 | |
| 207QA0000X | Allopathic & Osteopathic Physicians | Family Medicine | Adolescent Medicine | |
| 207QA0401X | Allopathic & Osteopathic Physicians | Family Medicine | Addiction Medicine | |
| 207QA0505X | Allopathic & Osteopathic Physicians | Family Medicine | Adult Medicine | |
| 207QB0002X | Allopathic & Osteopathic Physicians | Family Medicine | Obesity Medicine | |
| 207R00000X | Allopathic & Osteopathic Physicians | Internal Medicine | | |
| 207RA0000X | Allopathic & Osteopathic Physicians | Internal Medicine | Adolescent Medicine | |
| 207RA0401X | Allopathic & Osteopathic Physicians | Internal Medicine | Addiction Medicine | |
| 208000000X | Allopathic & Osteopathic Physicians | Pediatrics | | |
| 2080A0000X | Allopathic & Osteopathic Physicians | Pediatrics | Adolescent Medicine | |
| | | | Public Health & General | |
| 2083P0901X | Allopathic & Osteopathic Physicians | Preventive Medicine | Preventive Medicine | |
| 208D00000X | Allopathic & Osteopathic Physicians | General Practice | | |
| 261QC1500X | Ambulatory Health Care Facilities | Clinic/Center | Community Health | |
| | | | Federally Qualified | |
| 261QF0400X | Ambulatory Health Care Facilities | Clinic/Center | Health Center (FQHC) | |
| 261QP2300X | Ambulatory Health Care Facilities | Clinic/Center | Primary Care | |
| 261QR1300X | Ambulatory Health Care Facilities | Clinic/Center | Rural Health | |
| | Physician Assistants & Advanced | | | |
| 363A00000X | Practice Nursing Providers | Physician Assistant | | |
| | Physician Assistants & Advanced | | | |
| 363AM0700X | Practice Nursing Providers | Physician Assistant | Medical | |
| | Physician Assistants & Advanced | | | |
| 363L00000X | Practice Nursing Providers | Nurse Practitioner | | |
| | Physician Assistants & Advanced | | | |
| 363LA2100X | Practice Nursing Providers | Nurse Practitioner | Acute Care | |
| | Physician Assistants & Advanced | | | |
| 363LC1500X | Practice Nursing Providers | Nurse Practitioner | Community Health | |
| | Physician Assistants & Advanced | | | |
| 363LF0000X | Practice Nursing Providers | Nurse Practitioner | Family | |
| | Physician Assistants & Advanced | | | |
| 363LP0200X | Practice Nursing Providers | Nurse Practitioner | Pediatrics | |
| | Physician Assistants & Advanced | | | |
| 363LP2300X | Practice Nursing Providers | Nurse Practitioner | Primary Care | |
| | Physician Assistants & Advanced | | | |
| 363LW0102X | Practice Nursing Providers | Nurse Practitioner | Women's Health | |

Appendix H: Supplemental Data Sources and Uses

- American Medical Association (AMA): Procedure codes and descriptions
- American Hospital Association (AHA): Revenue codes
- Centers for Medicare and Medicaid Services (CMS): ICD-10 procedure codes
- National Uniform Claim Committee (NUCC): Provider taxonomies
- National Plan & Provider Enumeration System (NPPES): Provider information