

# Analysis Of Dental Claims to Understand Patterns of Oral Health Care Services in 2017-2019, Fluoridation, and Oral Health Care Patterns During the Covid-19 Pandemic

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AUGUST 2021



**Institute for Health  
Policy and Practice**

UNIVERSITY OF NEW HAMPSHIRE



## **UNH Land, Water, and Life Acknowledgement**

*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

NH Children’s Health Foundation provided funding to IHPP to support the development of an on-line reporting tool and data analysis to better understand the cost and utilization of dental services in NH. The reporting tool incorporates analysis of dental and medical claims data from commercial and Medicaid payers. Many of the reports have been developed and published in the Oral Health Report Suite (available at <https://chhs.unh.edu/institute-health-policy-practice/focal-areas/health-analytics-informatics>).

## Purpose

The analytic plan was developed in cooperation with the NH Oral Health Stakeholder Group to augment the information available in the on-line tool.

## NH Oral Health Stakeholder Group

Member	Organization
Mike Auerbach	NH Dental Society
Patti Baum	NH Children’s Health Foundation
Regina Blaney	NH Oral Health Coalition
Gail Brown	NH Oral Health Coalition
Adam Burch	DHHS, Chronic Disease Pain Management Coordinator
Laural Dillon	NH DPHS, Oral Health Program Manager
Sarah Finne	NH DHHS DMS, Medicaid Dental Director
LeaAnne Haney	Northeast Delta Dental
Judy Nicholson	NH Oral Health Coalition
Myra Nikitas	NH Dental Hygienists Association
Nicole St. Hilaire	AmeriHealth Caritas NH

Members of the NH Oral Health Stakeholder Group were interested in the impact of preventive services. Therefore, the analytic plan focused on exploring the experience of people with and without a history of preventive services. Additionally, the Stakeholder Group was interested in the use of fluoride varnish and supplements. Part two of the analytic plan focused on exploring the use and prescription of fluoride and where it was being provided. Lastly, the Stakeholder Group inquired about the impact of the coronavirus (COVID-19) pandemic on oral health care and the workforce. Part three of the analytic plan focused on exploring dental services provided during 2020 by type of service and provider taxonomy, meaning the type of provider and area of specialization.

## Data

Data for the Oral Health Report Suite and the analysis is 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. Information about NH CHIS can be found on the website:

<https://nhchis.com/>. The table below outlines the data and timeframes used in analysis:

<b>Data</b>	<b>Payer and Source</b>	<b>Timeframe</b>	<b>Notes</b>
Medical claims and eligibility	Commercial (NHCHIS)	January 2017 – December 2019	The analysis is limited to the top Commercial insurers: Anthem, Cigna, Harvard Pilgrim, Tufts, Health Plans, Inc., Matthew Thornton, and Tufts Health Freedom. These carriers generally include more than 80% of the commercial medical claims in NHCHIS.
Medical claims and eligibility	NH Medicaid (NH DHHS EBI)	January 2017 – December 2019	Managed Care Organizations (Well Sense, NH Healthy Families, AmeriHealth) and Fee-For-Service Claims
Dental claims and eligibility	Commercial (NHCHIS)	January 2017 – December 2019	The analysis is limited to the top Commercial dental insurers: Cigna, Delta Dental, Delta Dental of NH, Metropolitan Life, Harvard Pilgrim, and Guardian Life. These carriers generally include more than 85% of the commercial dental claims in NHCHIS.
Dental claims and eligibility	NH Medicaid (NH DHHS EBI)	January 2017 – December 2019	Fee-For-Service Claims
Pharmacy claims and eligibility	Commercial (NHCHIS)	January 2017 – December 2019	The analysis is limited to the top Commercial dental insurers: Cigna, Anthem, Harvard Pilgrim, Tufts Health Freedom, Caremark, Matthew Thornton, and Express Scripts. These carriers generally include more than 80% of the commercial pharmacy claims in NHCHIS.
Pharmacy claims and eligibility	NH Medicaid (NH DHHS EBI)	January 2017 – December 2019	Managed Care Organizations ( Well Sense, NH Healthy Families, AmeriHealth) and Fee-For-Service Claims

### Criteria for member inclusion in the analytic data set:

- Members with enrollment in Commercial or Medicaid insurance policies that originate in NH. Additional specific enrollment requirements are noted with analysis.



- Commercial members ages 0-64
- NH Medicaid members ages 0-21

### Note on Race and Ethnicity:

At this time, data are not analyzed by race and ethnicity. The examination and elimination of health disparities is important; however, at this time, race and ethnicity fields are not available/reliable in the claims data and therefore not included in the analysis. We will continually review the quality of the race and ethnicity data and include it when it is available for reporting.

### Note on NH Medicaid:

At this time, data are not analyzed for Medicaid members over the age of 21 as this age group has emergency-only adult dental Medicaid benefits in New Hampshire.

### Note on Ages 0-4:

Rates for members ages zero to four may be subject to variations due to child's age, eligibility, and tooth development.



## Analysis of Oral Health Care Services from 2017-2019

### Preventive Services Overview

Claims data were analyzed to understand member's history of preventive services like regular dental check-ups and oral exams (see Appendix D for CDT procedure codes included in definition of preventive services). Analysis was done by type of payer (commercial and NH Medicaid) and by age group to determine any variation that may be related to characteristics of the population and age group. For the preventive, restorative, extraction, and oral surgery analyses, see Appendix D for CDT code ranges. Members were included in analysis if they had at least nine months of continuous dental insurance in each of the three years of the analytic period. Age was calculated at the end of the first year (2017). Children who were born in the first year were only required to have enrollment equal to their age in months in that first year. Since the analysis is conducted over a three-year period, children who were not born in the first year (2017) were excluded. For the emergency room visits for dental conditions, members were considered eligible if they had at least nine months of continuous dental and medical insurance in each of the three years of the analytic plan.

The analysis considers members with at least one preventive visit per year in all three of the three years to have a "High" level of prevention. Members with at least one preventive visit per year in only two of the three years have a "Medium" level of prevention, members with at least one preventive visit per year in only one of the three years to have a "Low" level of prevention, and members with no preventive visits during the three years have "None."



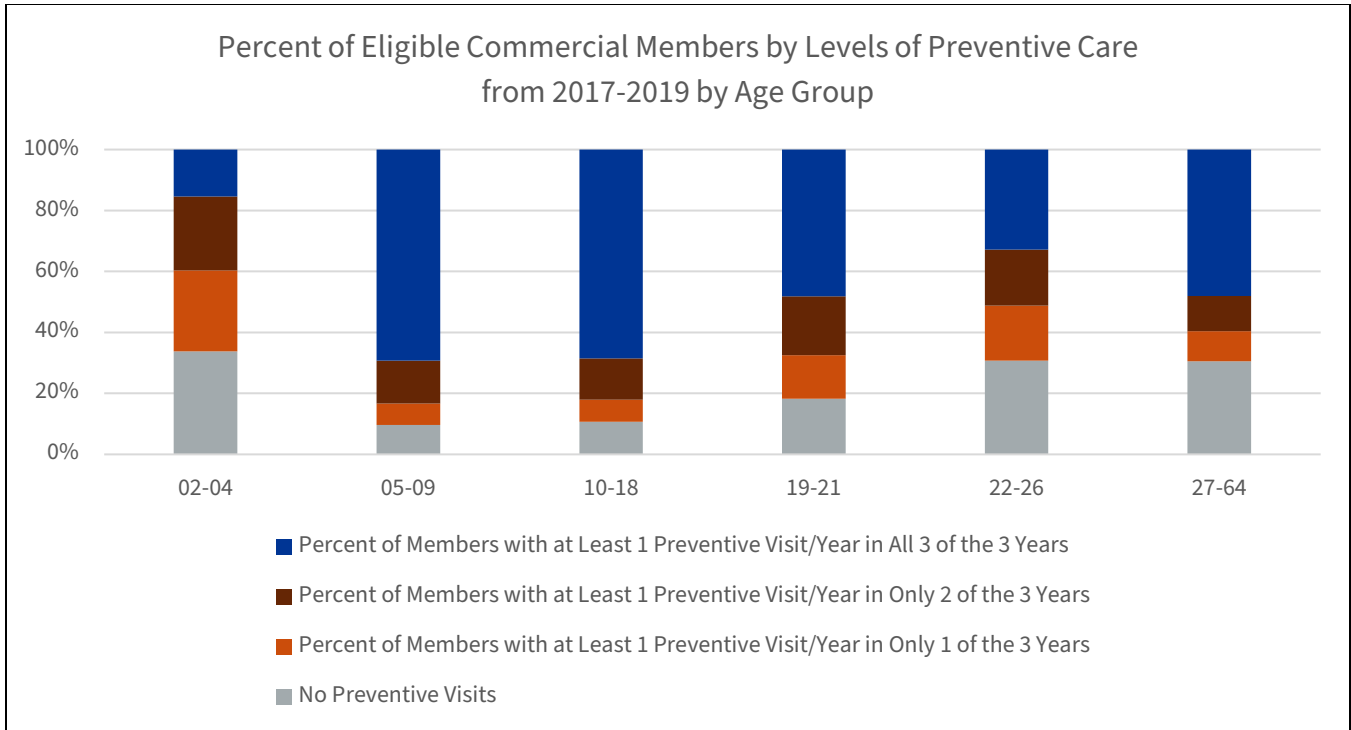


Figure 1: Percent of eligible commercial members at levels of preventive care from 2017-2019 by age group.

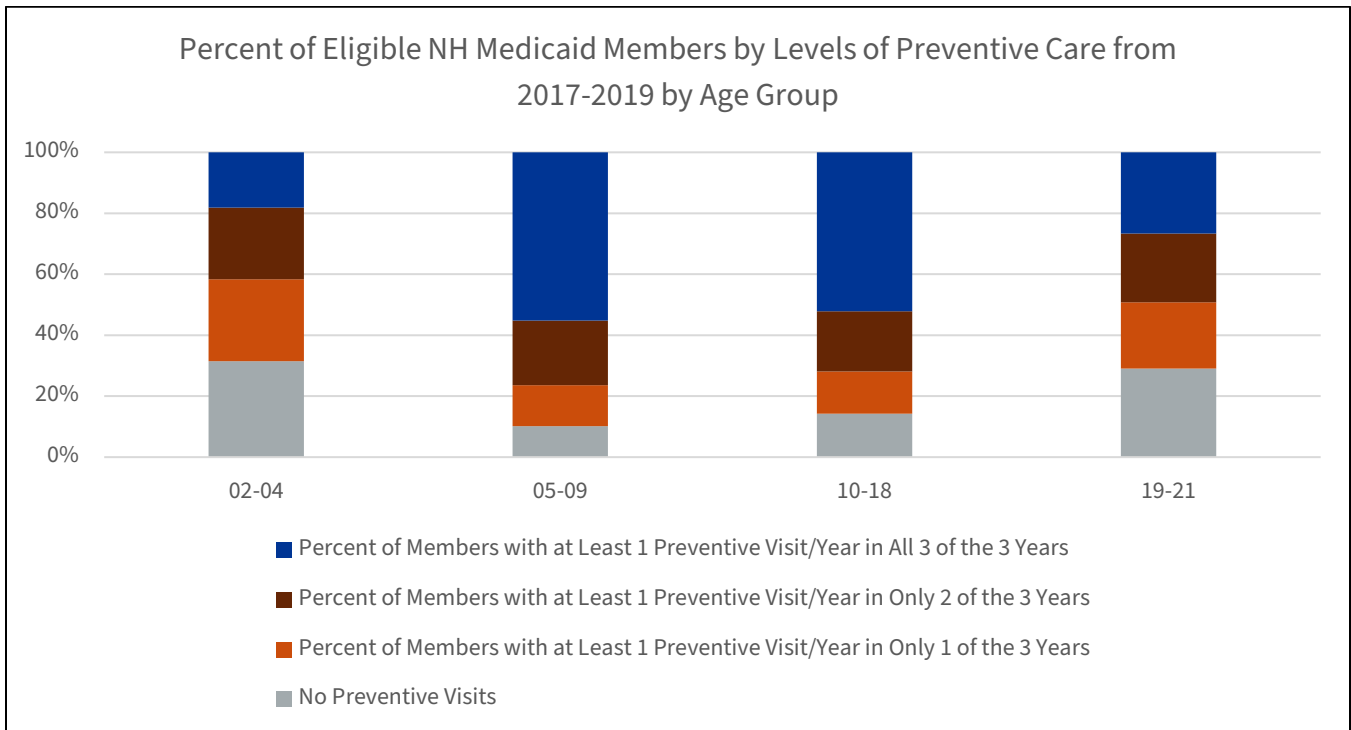


Figure 2: Percent of eligible NH Medicaid members at levels of preventive care from 2017-2019 by age group.



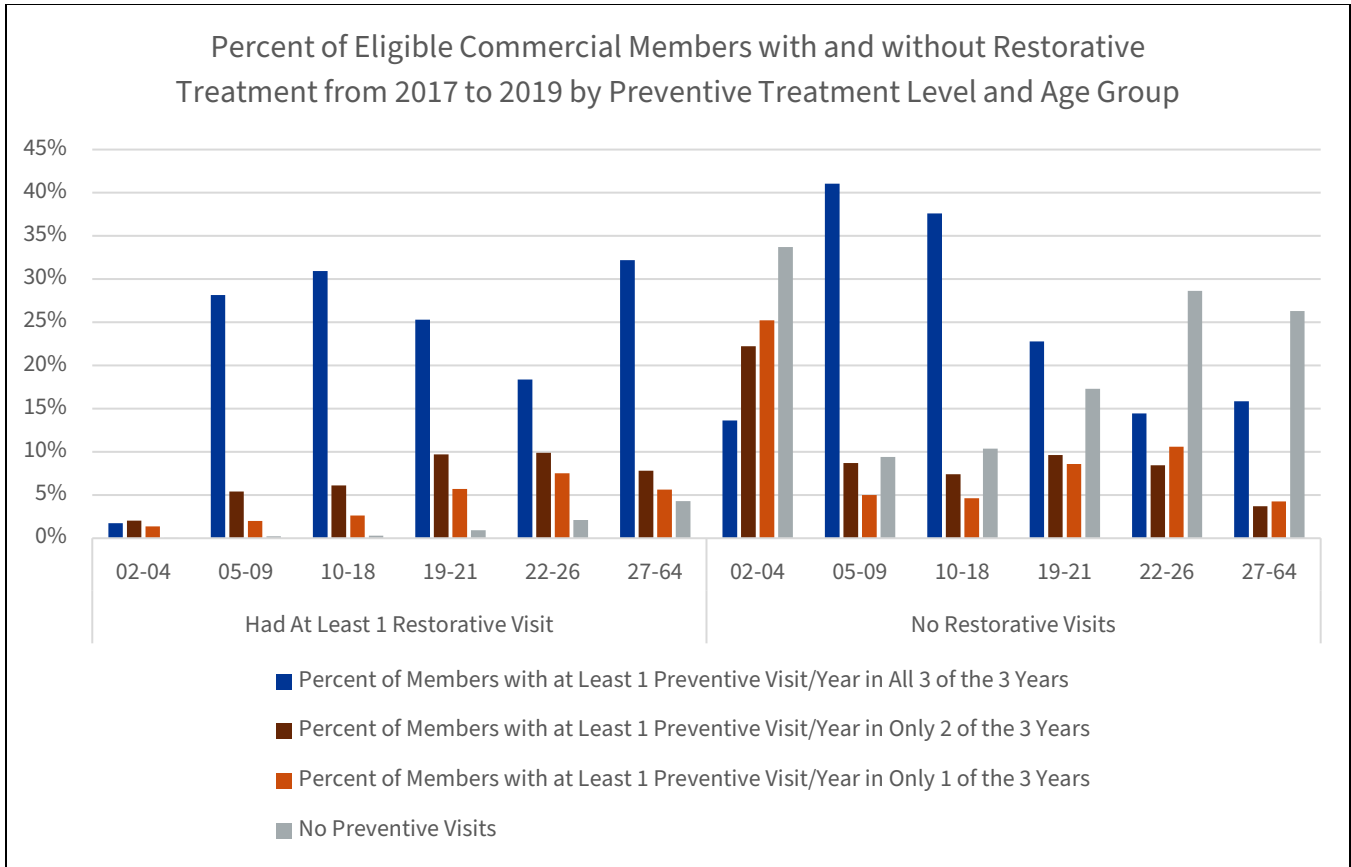
## Results for Preventive Services

Overall, 50% of the commercial population had at least one preventive visit in all three of the three years from 2017 to 2019, while 13% had at least one preventive visit in only two of the three years, 10% had at least one preventive visit in only one of the three years, and 26% had no preventive visits over the three years. Approximately one-third of commercially insured children ages two to four, adults ages 22 to 26 and adults 27- 64 had no preventive visits over the three years. Children ages five to nine had the highest rate of preventive visits among commercially insured individuals, with only 10% of the age group having no preventive visits over the three-year time period; see Figure 1 on page seven.

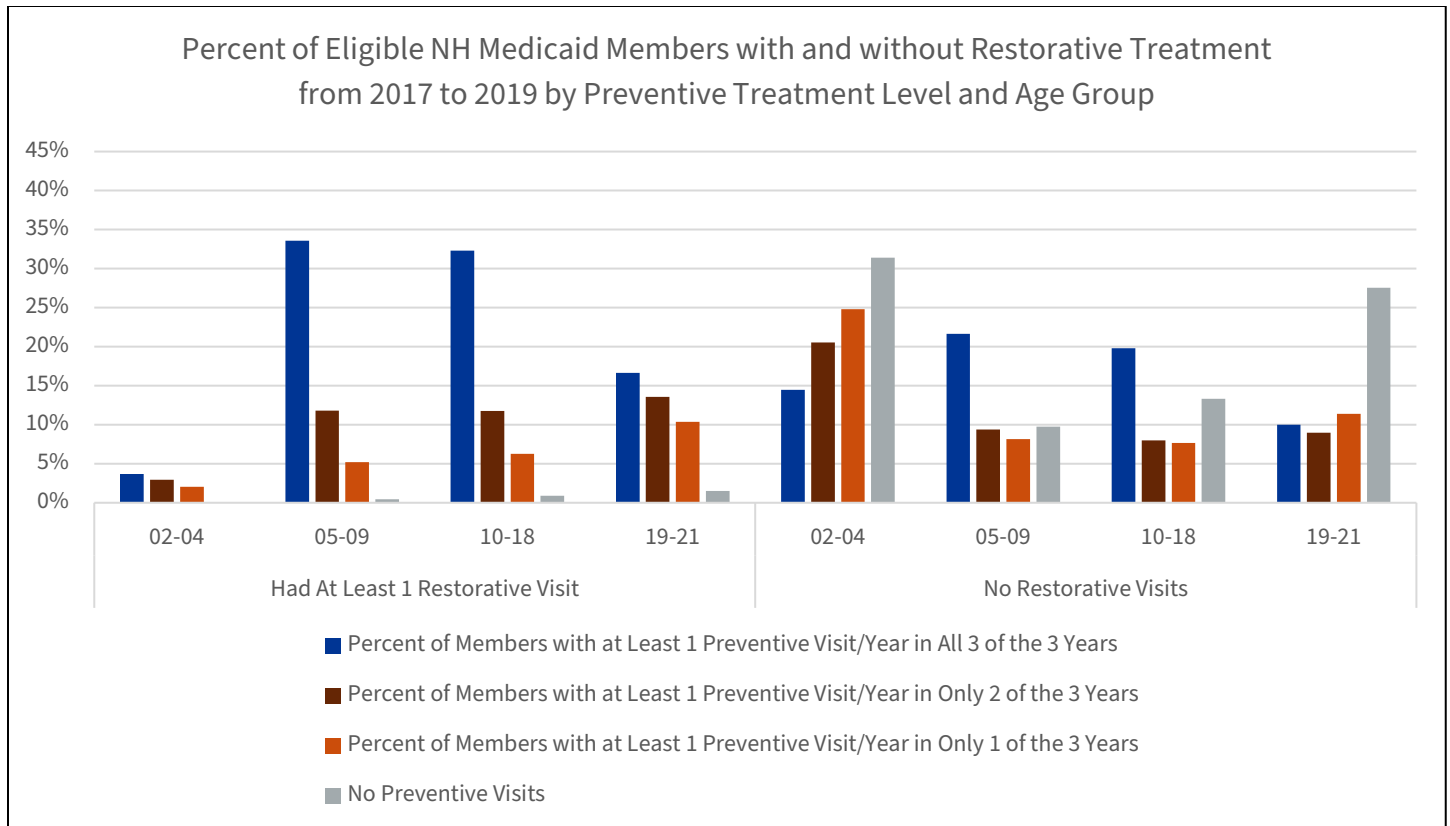
Likewise, 46% of the NH Medicaid population had at least one preventive visit in all three of the three years from 2017 to 2019, while 21% had at least one preventive visit in only two of the three years, 16% had at least one preventive visit in only one of the three years, and 16% had no preventive visits over the three years. Approximately one-third of Medicaid-insured children ages two to four and adults ages 19 to 21 had no preventive visits over the three years. Among NH Medicaid-insured individuals, children ages five to nine had the highest rate of preventive visits, with only 10% of the population having no preventive visits over the three-year period; see Figure 2 above.

## Preventive and Restorative Services

In order to better understand the history of preventive and restorative services, claims data were analyzed to estimate the percent of members who did or did not have restorative services by preventive treatment level in the same three-year period. Analysis was done by type of payer (commercial and NH Medicaid) and by age group to determine any variation that may be related to characteristics of the population and age group.



**Figure 3:** Percent of eligible commercial members with and without restorative treatment from 2017 to 2019 by preventive treatment level and age group. Note: Rates for members ages 0-4 may be subject to variations due to child’s age, eligibility, and tooth development.



**Figure 4:** Percent of eligible NH Medicaid members with and without restorative treatment from 2017 to 2019 by preventive treatment level and age group. Note: Rates for members ages 0-4 may be subject to variations due to child’s age, eligibility, and tooth development.

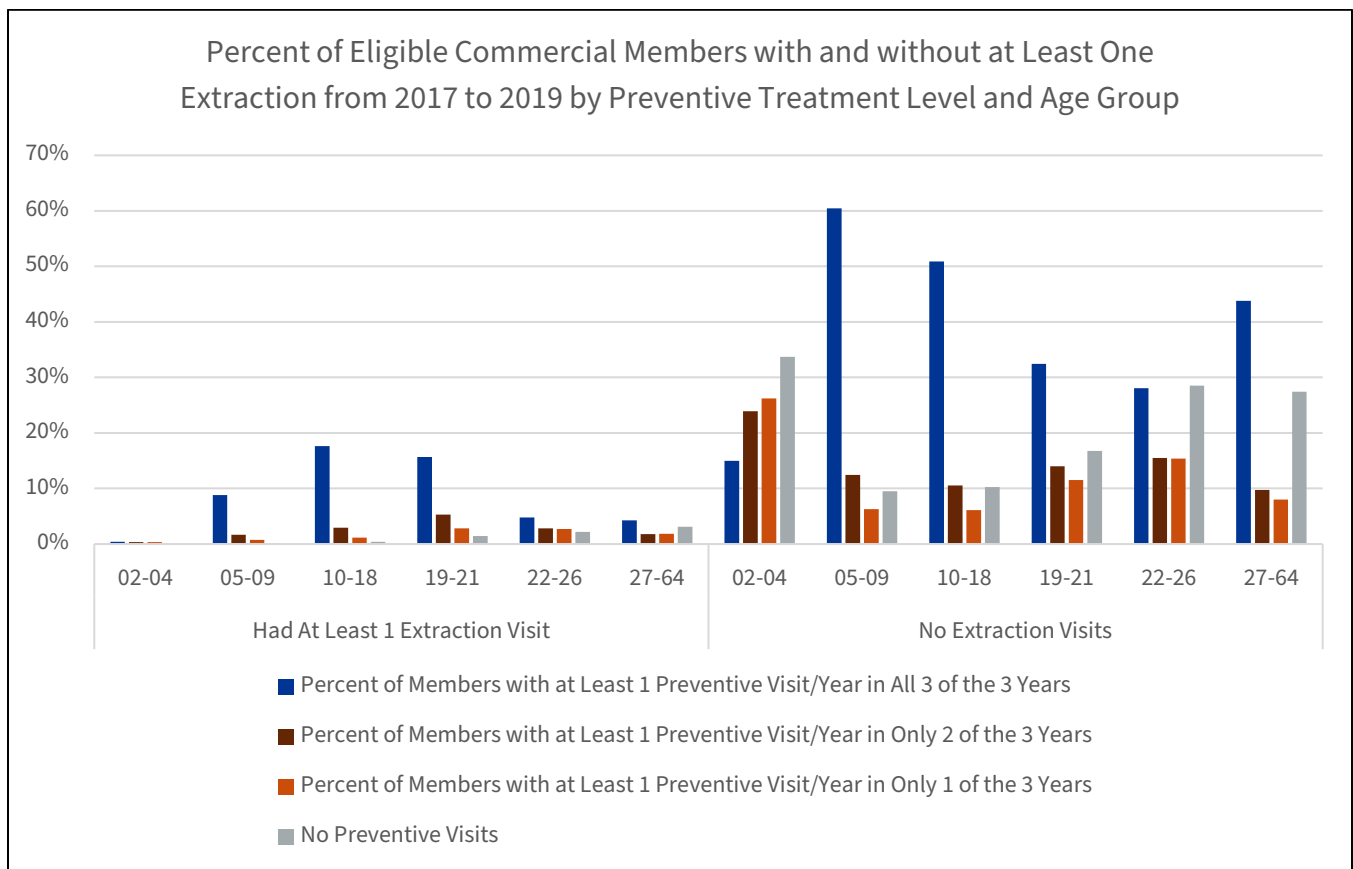
### Results for Preventive and Restorative Services

Overall, 46% of the commercial population had at least one restorative visit during the three-year time period from 2017 to 2019 (3% had no preventive visits; 30% had at least one preventive visit in all three of the three years); see Table A5 in Appendix A. Of the five to nine and 10- to 18-year-olds that did not have any restorative visits, greater than 35% of each age group had at least one preventive visit in all three years; see Figure 3 on page nine.

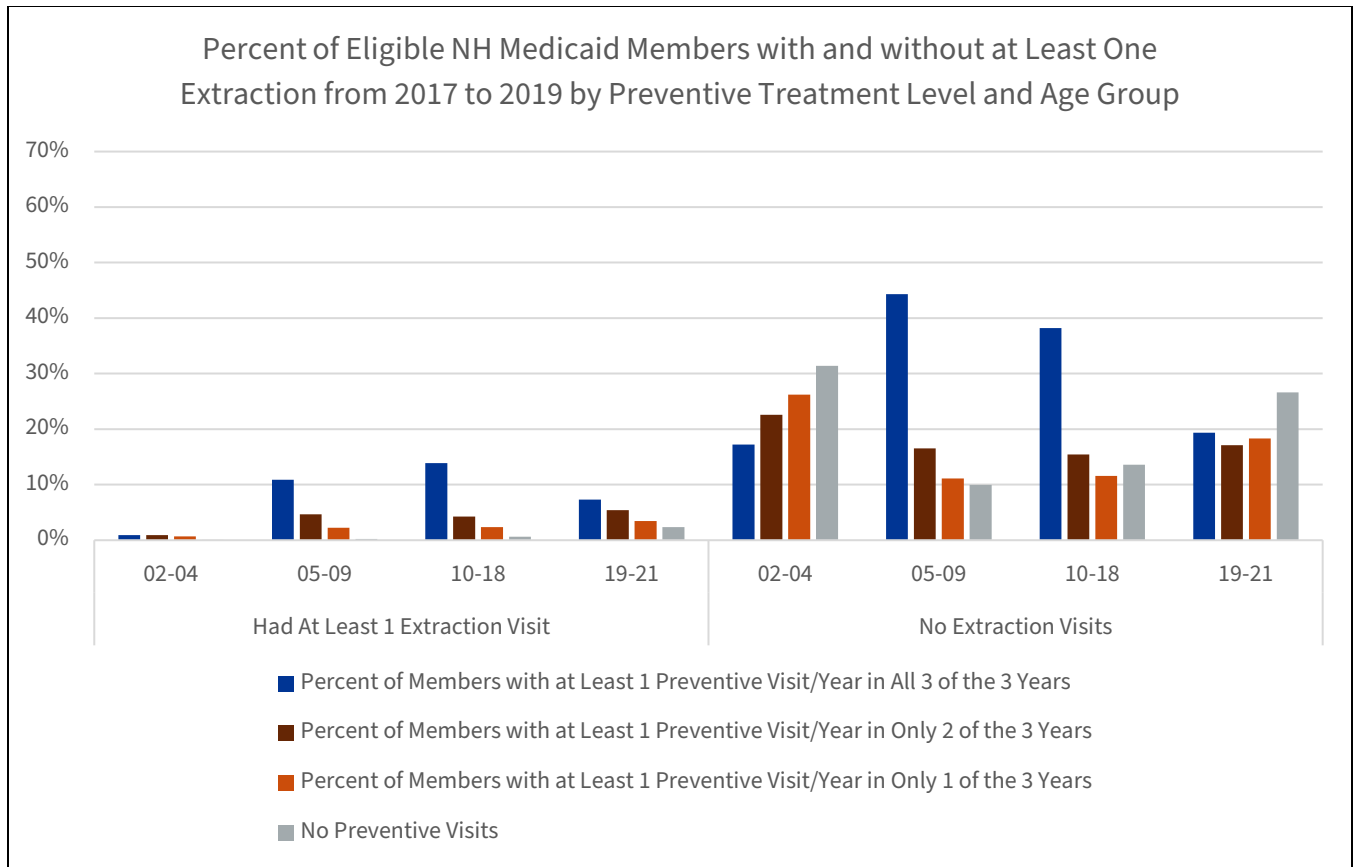
Likewise, 44% of the NH Medicaid population had at least one restorative visit during the three-year time period from 2017 to 2019 (1% had no preventive visits; 27% had at least one preventive visit per year in all three of the three years); see Table A6 in Appendix A. Of the five to nine and 10- to 18-year-olds that did not have any restorative visits, greater than or equal to 20% of each age group had at least one preventive visit in all three years; see Figure 4 above.

## Preventive and Extraction Services

In order to better understand the history of preventive and extraction services, claims data were analyzed to estimate the percent of members who did or did not have extraction services by preventive treatment level in the same three-year period. Analysis was also done by type of payer (commercial and NH Medicaid) and by age group.



**Figure 5:** Percent of eligible commercial members with and without at least one extraction from 2017 to 2019 by preventive treatment level and age group. Note: Rates for members ages 0-4 may be subject to variations due to child’s age, eligibility, and tooth development.



**Figure 6:** Percent of eligible NH Medicaid members with and without at least one extraction from 2017 to 2019 by preventive treatment level and age group. Note: Rates for members ages 0-4 may be subject to variations due to child’s age, eligibility, and tooth development.

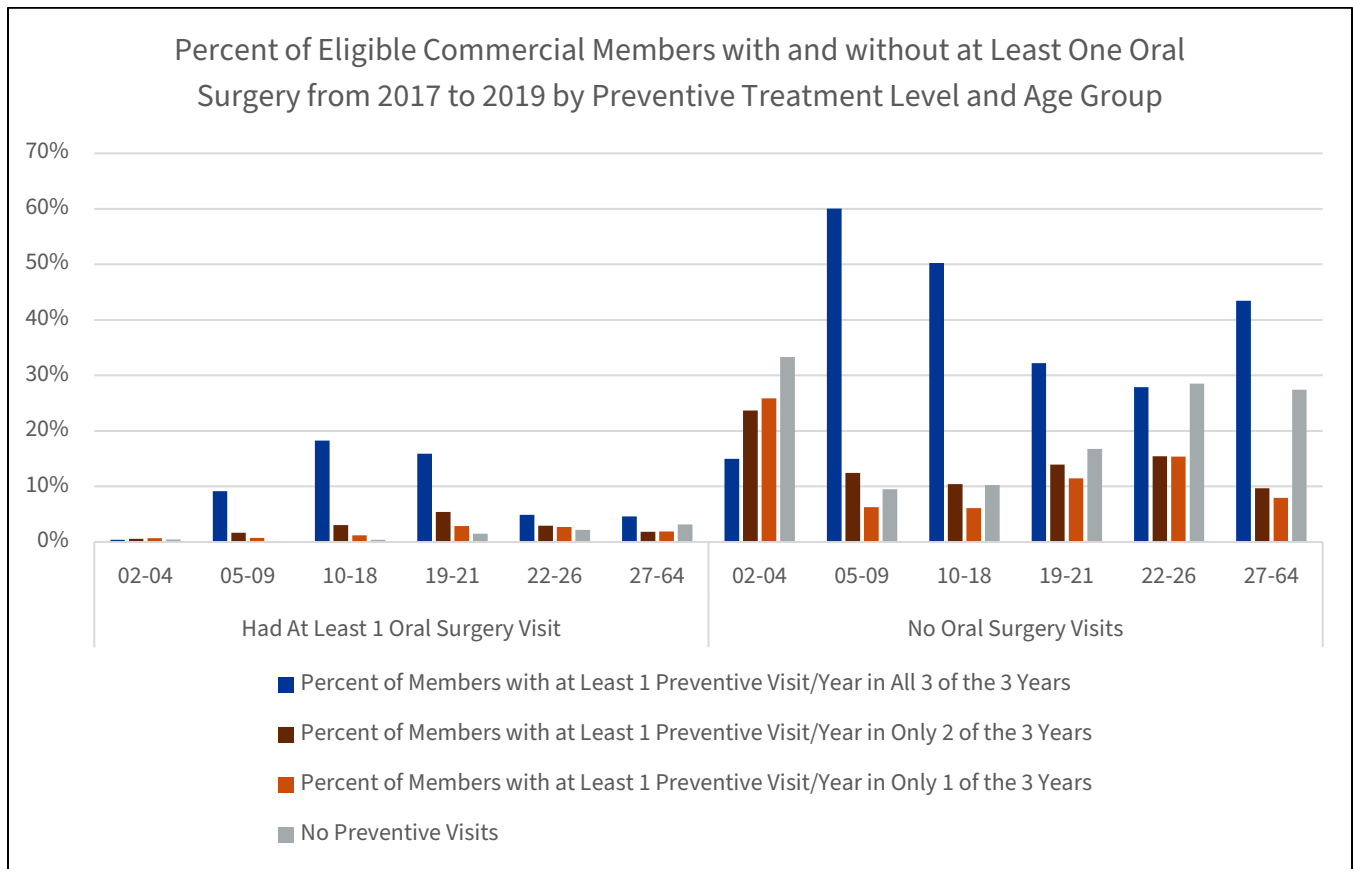
### Results for Preventive and Extraction Services

Overall, 13% of the commercial population had at least one extraction visit during the three-year time period from 2017 to 2019 (2% had no preventive visits; 7% had at least one preventive visit each year in all three of the three years); see Table A7 in Appendix A. Of the five to nine and 10- to 18-year-olds that did not have any extraction visits, greater than 50% of each age group had at least one preventive visit in all three years; see Figure 5 on page 11.

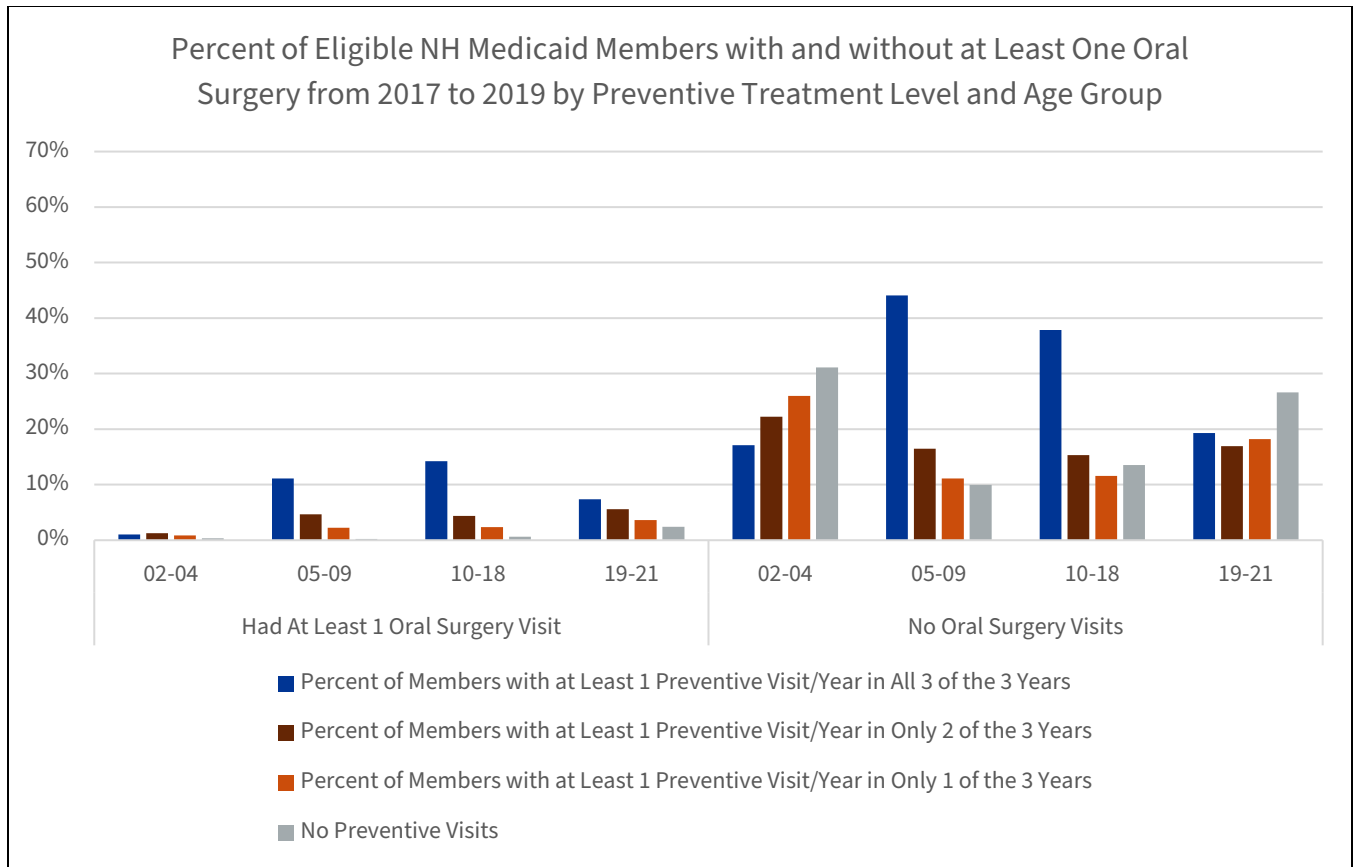
Likewise, 18% of the NH Medicaid population had at least one extraction visit during the three-year time period from 2017 to 2019 (1% had no preventive visits; 11% had at least one preventive visit each year in all three of the three years); Table A8 in Appendix A. Of the five to nine and 10- to 18-year-olds that did not have any extraction visits, greater than 35% of each age group had at least one preventive visit in all three years; see Figure 6 above.

## Preventive and Oral Surgery Services

In order to better understand the history of preventive services and oral surgery, claims data were analyzed to estimate the percent of members who did or did not have oral surgery by preventive treatment level in the same three-year period. Analysis was done by type of payer (commercial and NH Medicaid) and by age group.



**Figure 7:** Percent of eligible commercial members with and without at least one oral surgery from 2017 to 2019 by preventive treatment level and age group. Note: Rates for members ages 0-4 may be subject to variations due to child's age, eligibility, and tooth development.



**Figure 8:** Percent of eligible NH Medicaid members with and without at least one oral surgery from 2017 to 2019 by preventive treatment level and age group. Note: Rates for members ages 0-4 may be subject to variations due to child’s age, eligibility, and tooth development.

### Results for Preventive and Oral Surgery Services

Overall, 13% of the commercial population had at least one oral surgery visit during the three-year time period from 2017 to 2019 (2% had no preventive visits; 7% had at least one preventive visit per year in all three of the three years); see Table A9 in Appendix A. Of the five to nine and 10- to 18-year-olds that did not have any oral surgery visits, greater than or equal to 50% of each age group had at least one preventive visit in all three years; see Figure 7 on page 13.

Likewise, 18% of the NH Medicaid population had at least one oral surgery visit during the three-year time period from 2017 to 2019 (1% had no preventive visits; 11% had at least one preventive visit per year in all three of the three years); see Table A10 in Appendix A. Of the five to nine and 10- to 18-year-olds that did not have any oral surgery visits, greater than 35% of each group had at least one preventive visit in all three of the years; see Figure 8 above.



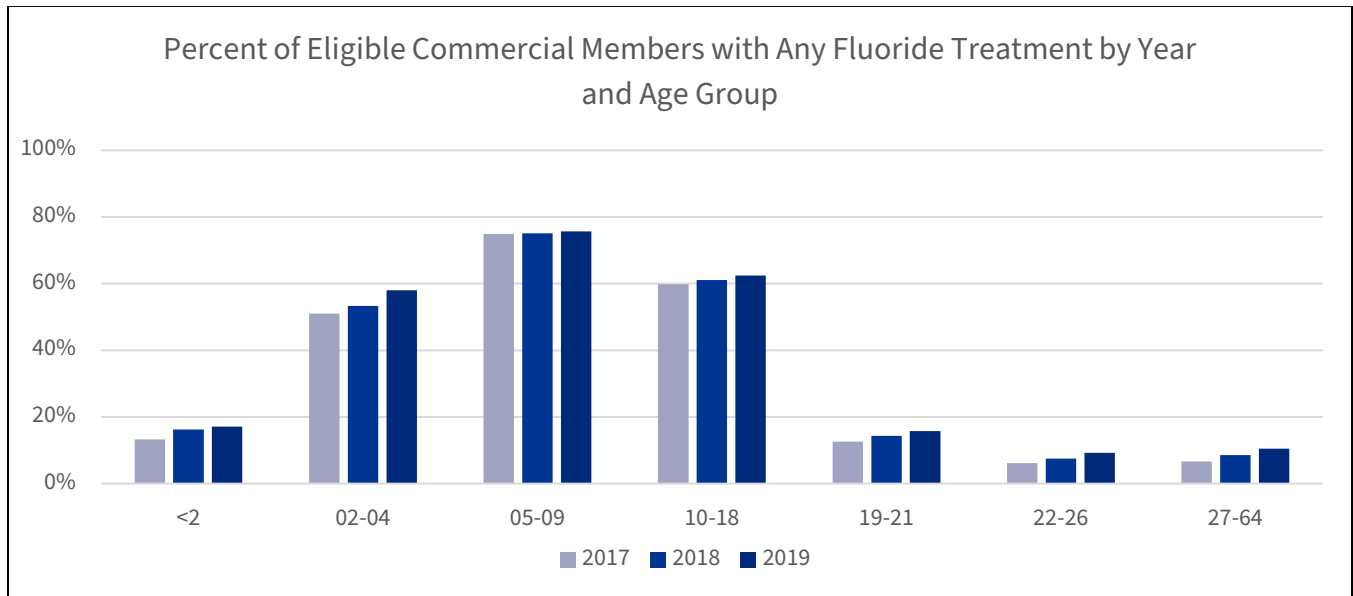
## Preventive Services and Emergency Room Visits for Dental Conditions

In order to better understand the history of preventive services and emergency room visits for dental conditions, claims data were analyzed to estimate the percent of members who had emergency room visits for non-traumatic dental conditions by level of preventive treatment. Analysis was done by type of payer (commercial and NH Medicaid) and by age group. This analysis returned very low counts of emergency room visits and rates for all age groups for both payers and therefore are not shown here. See Appendix A for more information and tables from this analysis.

## Fluoride Varnish and Fluoride Supplements

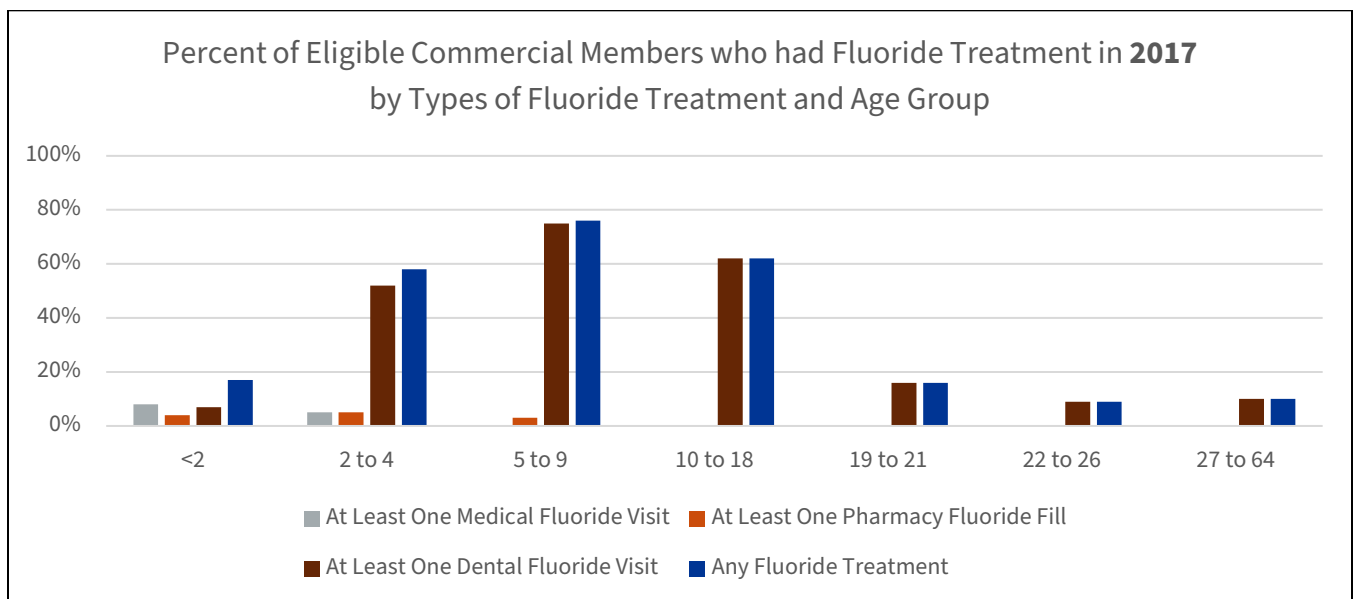
In order to better understand the use of fluoride varnish (see Appendix D for list of fluoride varnish codes) and prescribing of fluoride supplements (see Appendix D for list of NDC codes for fluoride supplement prescriptions), claims data were analyzed to estimate the percent of members who received fluoride varnish or filled a prescription for fluoride supplements over a three-year period. Fluoride varnish is a topical treatment applied onto teeth with the intention of reducing tooth decay. Fluoride varnish is used for children and increasingly for adults in the commercial market. Fluoride supplements are prescription supplements for internal consumption. Fluoride supplements are prescribed to children at high-risk for tooth decay and those whose drinking water has a low fluoride concentration. Analysis was done by type of payer (commercial and NH Medicaid) and by age group to determine any variation that may be related to characteristics of the population and age group. Members were considered eligible for the analysis if they had at least nine months of continuous enrollment in dental, medical and pharmacy during the year of interest. Age was calculated at the end of the year of interest. Children under one year of age were only required enrollment equal to their age in months.

Commercial Members Who Had Any Fluoride Treatment

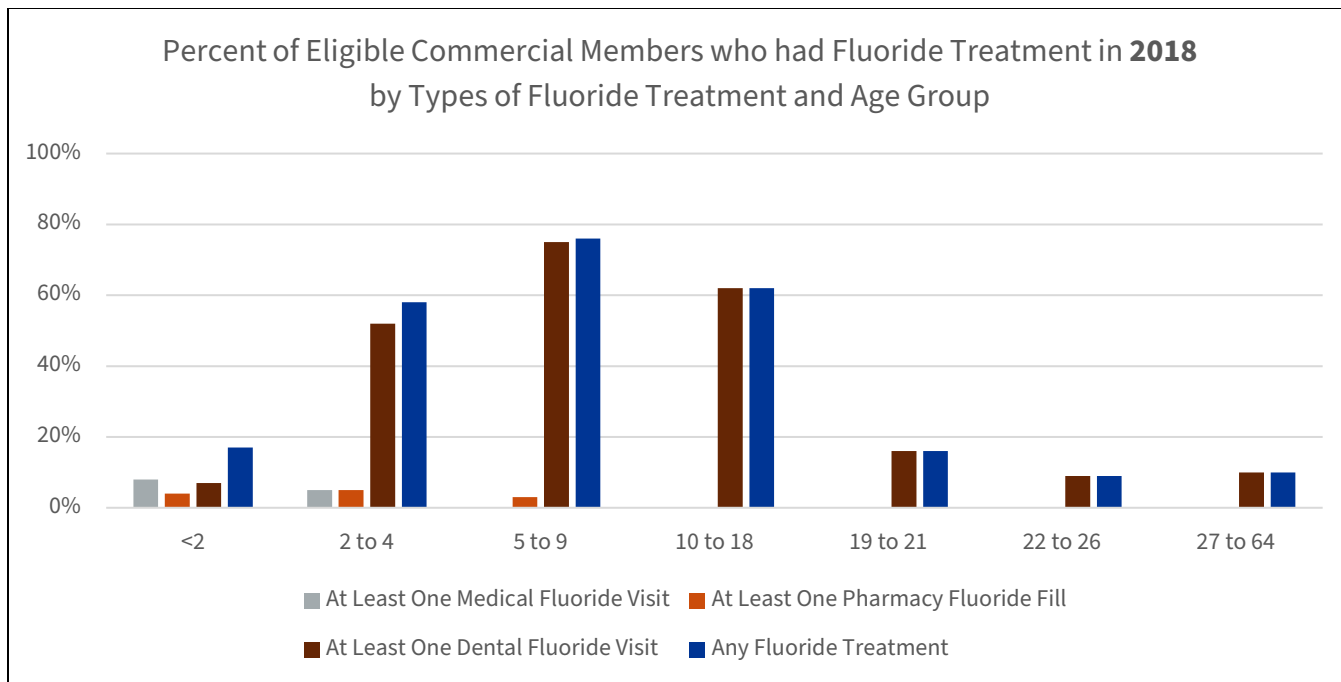


**Figure 11:** Percent of eligible commercial members with any fluoride treatment by year and age group. Note: Rates for members ages <2 may be subject to variations due to child’s age, eligibility, and tooth development.

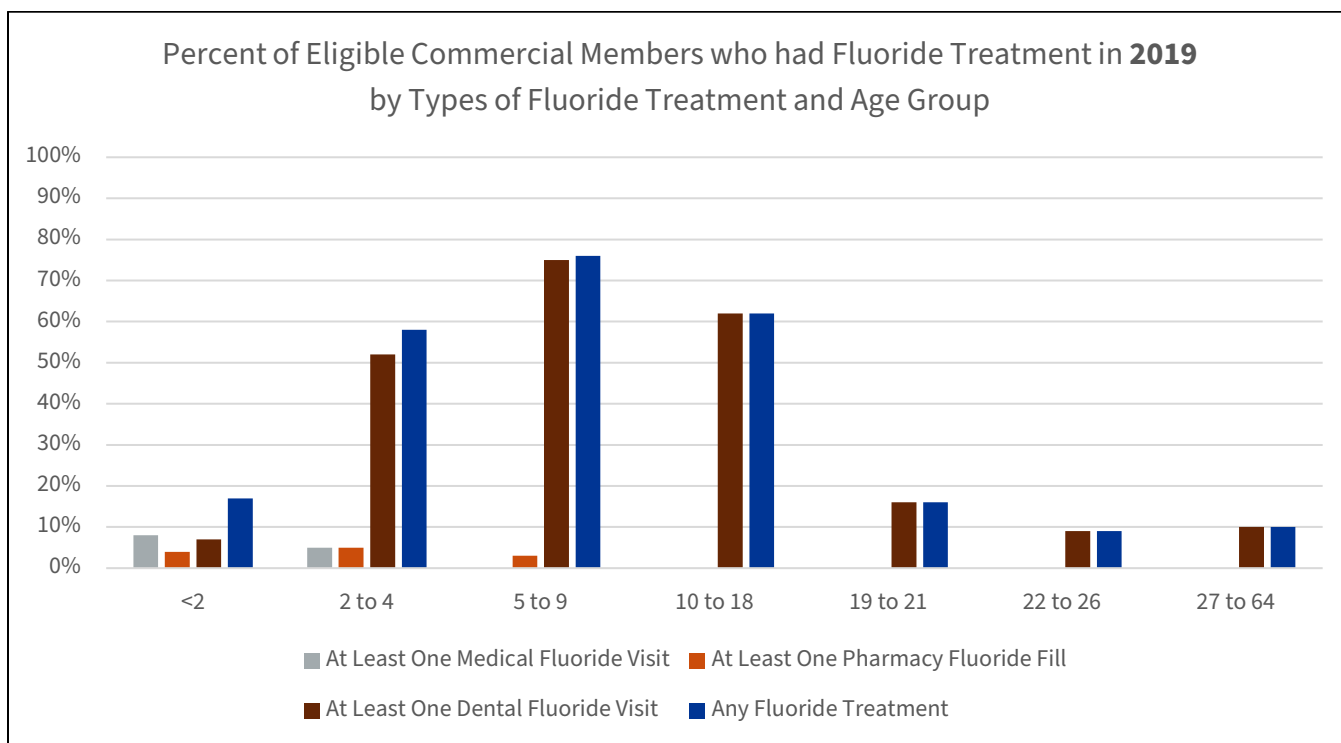
Commercial Members Who Had Fluoride Treatment by Type of Fluoride Treatment



**Figure 12:** Percent of eligible commercial members who had fluoride treatment in 2017 by types of fluoride treatment and age group. Note: Rates for members ages <2 may be subject to variations due to child’s age, eligibility, and tooth development.

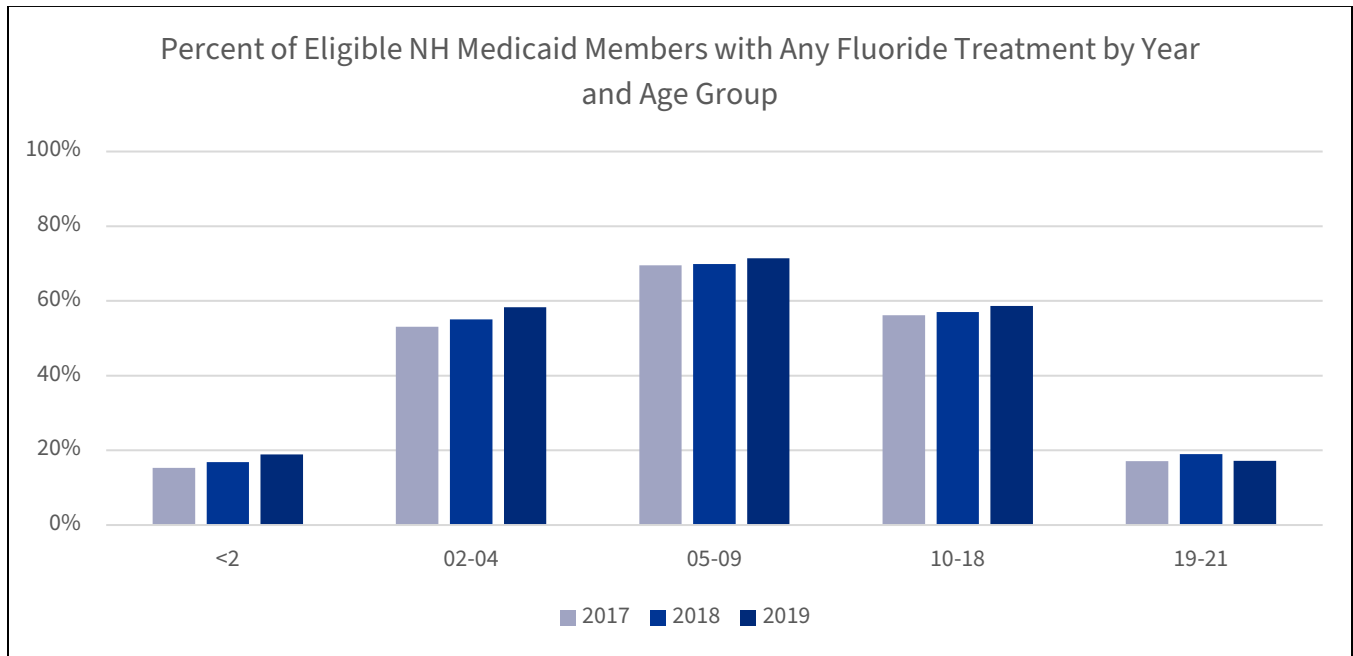


**Figure 13:** Percent of eligible commercial members who had fluoride treatment in 2018 by types of fluoride treatment and age group. Note: Rates for members ages <2 may be subject to variations due to child’s age, eligibility, and tooth development.



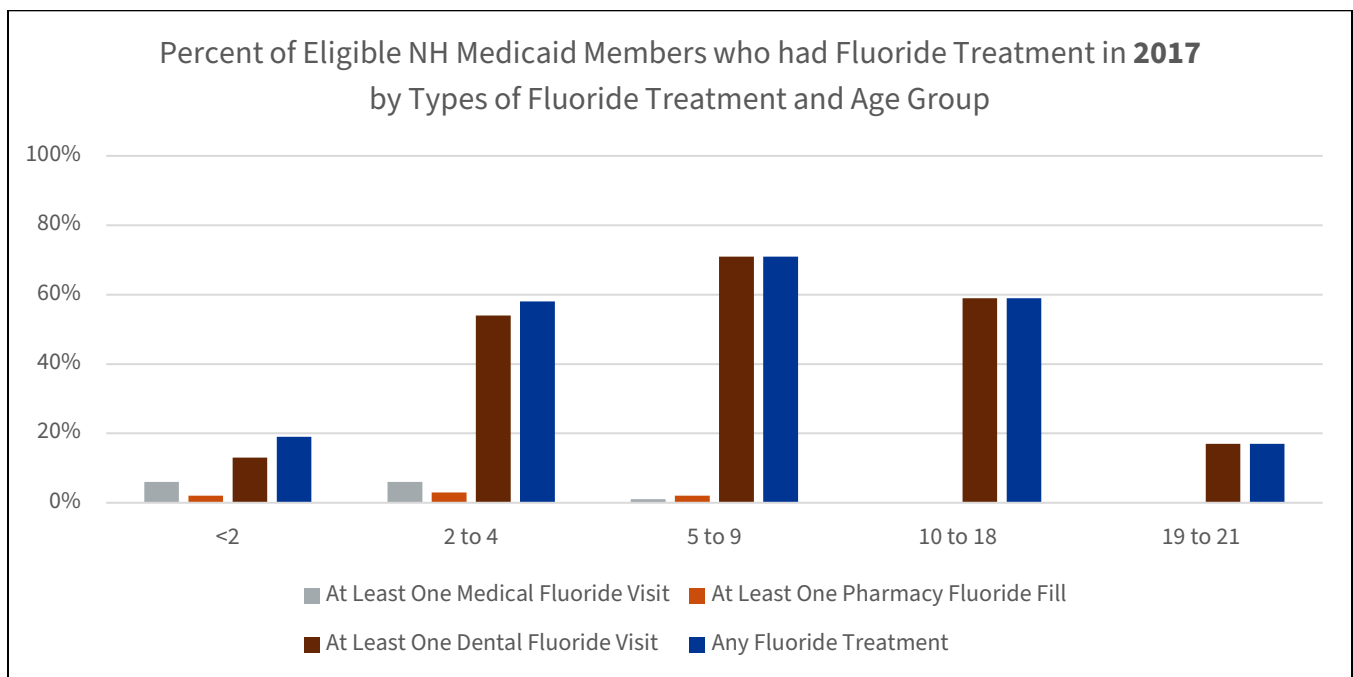
**Figure 14:** Percent of eligible commercial members who had fluoride treatment in 2019 by types of fluoride treatment and age group. Note: Rates for members ages <2 may be subject to variations due to child’s age, eligibility, and tooth development.

**NH Medicaid Members Who Had Any Fluoride Treatment**

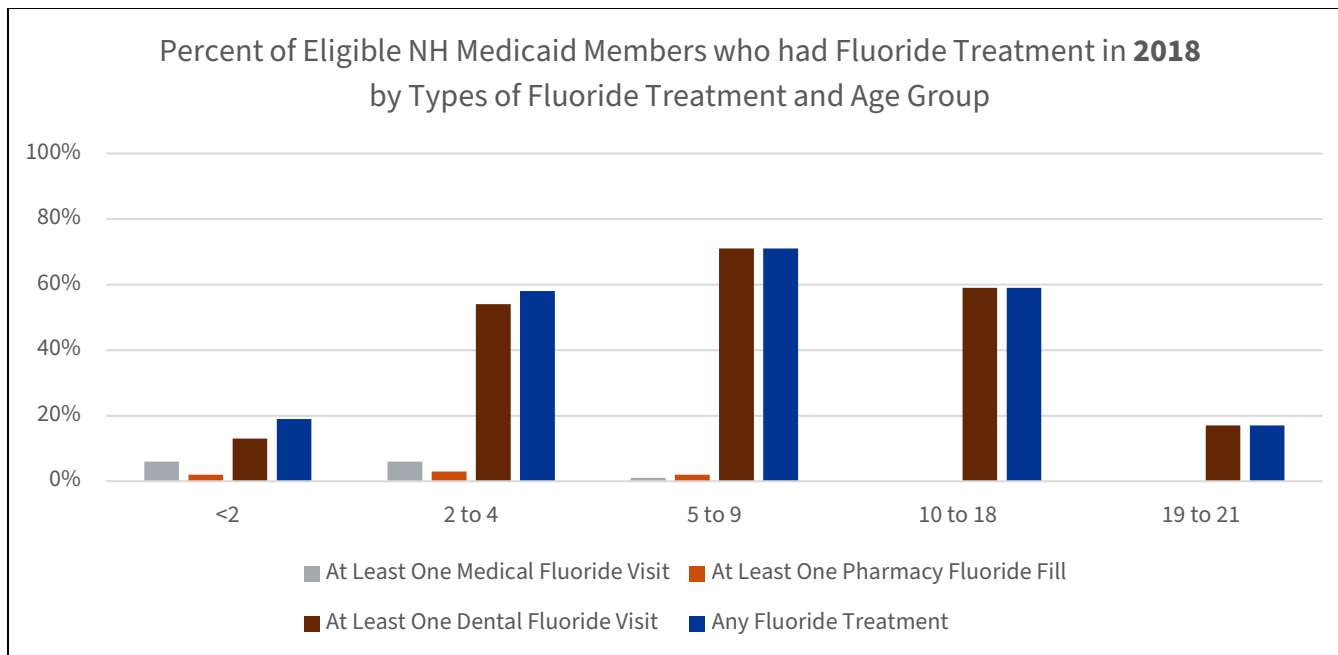


**Figure 15:** Percent of eligible NH Medicaid members with any fluoride treatment by year and age group. Note: Rates for members ages <2 may be subject to variations due to child’s age, eligibility, and tooth development.

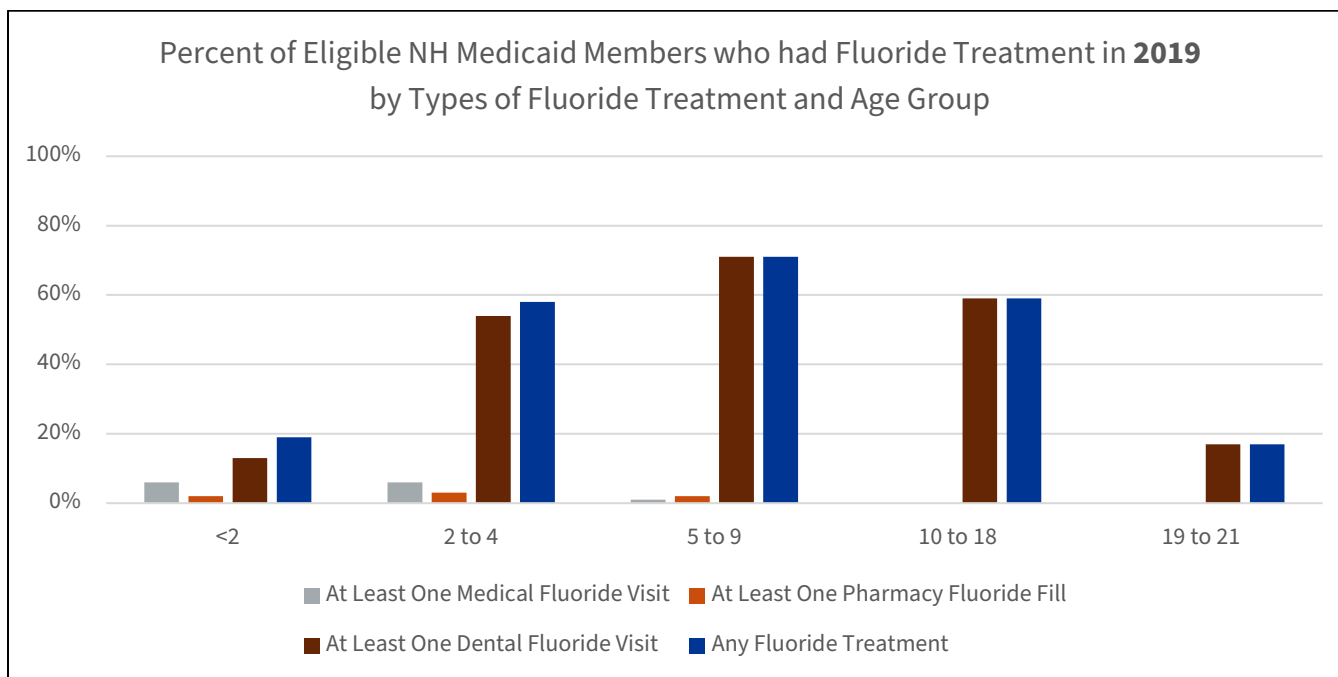
**NH Medicaid Members Who Had Fluoride Treatment by Type of Fluoride Treatment**



**Figure 16:** Percent of eligible NH Medicaid members who had fluoride treatment in 2017 by types of fluoride treatment and age group. Note: Rates for members ages <2 may be subject to variations due to child’s age, eligibility, and tooth development.



**Figure 17:** Percent of eligible NH Medicaid members who had fluoride treatment in 2018 by types of fluoride treatment and age group. Note: Rates for members ages <2 may be subject to variations due to child’s age, eligibility, and tooth development.



**Figure 18:** Percent of eligible NH Medicaid members who had fluoride treatment in 2019 by types of fluoride treatment and age group. Note: Rates for members ages <2 may be subject to variations due to child’s age, eligibility, and tooth development.

## Results for Fluoride Varnish and Fluoride Supplements

### *Commercial*

Over the three-year period from 2017 to 2019, the percent of commercially insured members with any fluoride treatment (varnish or supplements) increased slightly each year across all age groups. Fluoride treatments were primarily provided to members ages two to 18, with fewer fluoride treatments provided to members under two years old, as well as those 19 years and older; see Table B3 in Appendix B.

Fluoride treatments were most often provided during dental visits. However, some fluoride varnish and supplements were also provided during medical visits and through pharmacy fluoride fills, respectively. Fluoride treatments through medical and pharmacy were primarily provided to children under two to nine years of age, and nearly stops after age 10. Over the three-year period, the percent of fluoride treatment being provided during medical visits increased in the under two and two- to four-year-old age groups; see Figures 12-14 on pages 16 and 17.

### *NH Medicaid*

Over the three-year period from 2017 to 2019, the percent of NH Medicaid insured members with any fluoride treatment (varnish or supplements) has increased each year for age groups under two to 18-years-old. Fluoride treatments were primarily provided to members ages two to 18, with some treatment being provided in lower volumes to members under two years old, as well as those 19- to 21-years-old. The highest percentage of fluoride treatment was provided to members five- to nine-years old across all three years; see Table B4 in Appendix B.

Fluoride treatments were most often provided during dental visits. However, some fluoride varnish and supplements were also provided during medical visits and through pharmacy fluoride fills, respectively. Fluoride treatments through medical and pharmacy fills were provided only to children under two to nine-years-old. From 2017 to 2019, the percentage of medical fluoride treatments increased for members under two to nine-years-old. The percentage of pharmacy fills, however, decreased for members of these age groups; see Figures 16-18 on pages 18 and 19.

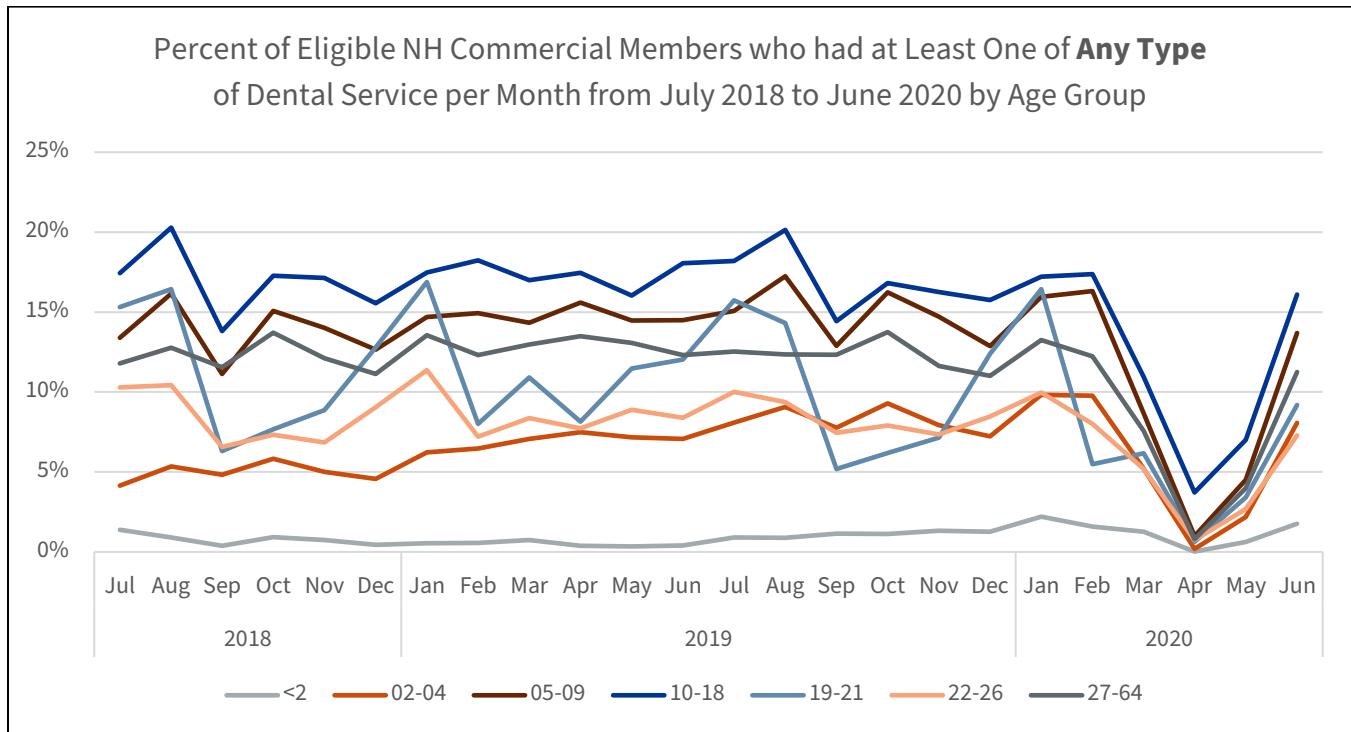
Of note, Medicaid pays for fluoride varnish to kids in the medical setting through age 5 in conjunction with well-child visits. Commercial coverage for fluoride treatment is not standard across all plans.

## Oral Health Care and COVID-19

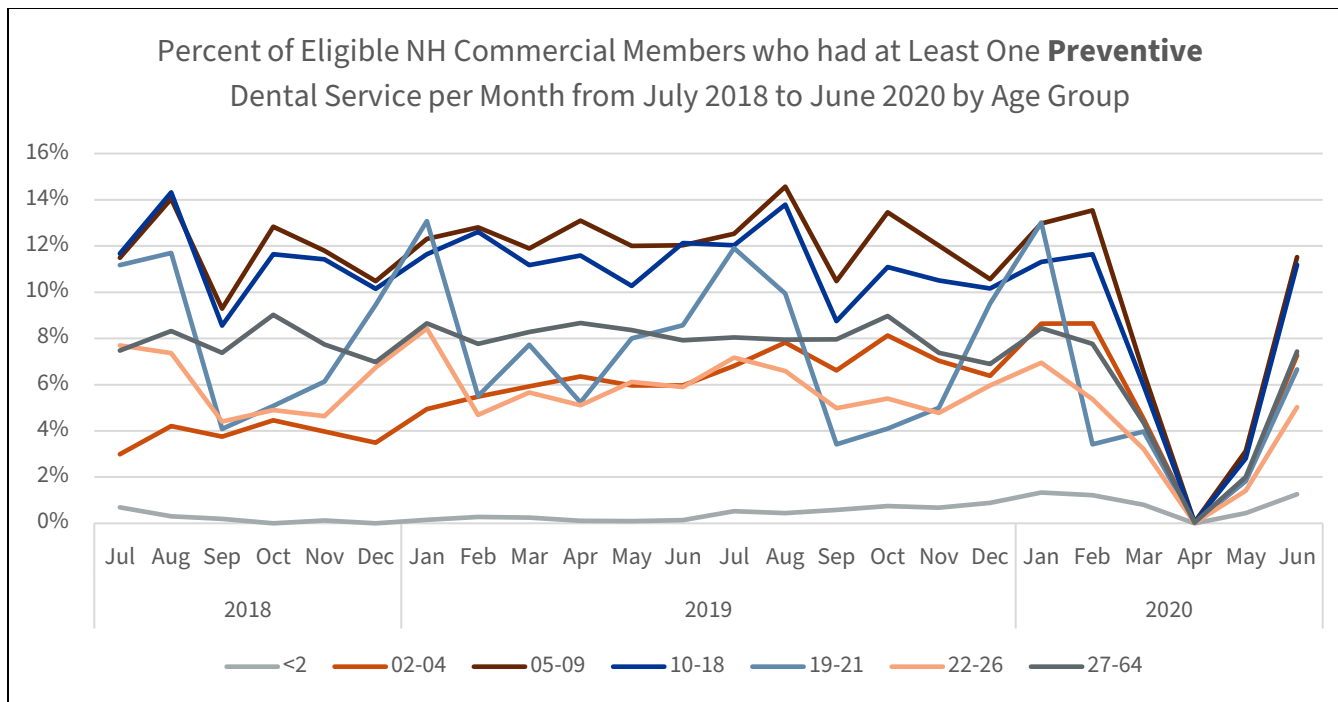
In order to better understand the impact of the coronavirus (COVID-19) pandemic on oral health care, claims data were analyzed to estimate the percent of members who received dental services, specifically preventive or restorative services, during the period from July 2018 to June 2020. Analysis was done by type of

payer (commercial and NH Medicaid) and by age group to determine any variation that may be related to characteristics of the population and age group. Members were considered eligible for analysis if they had an enrollment during the month of interest.

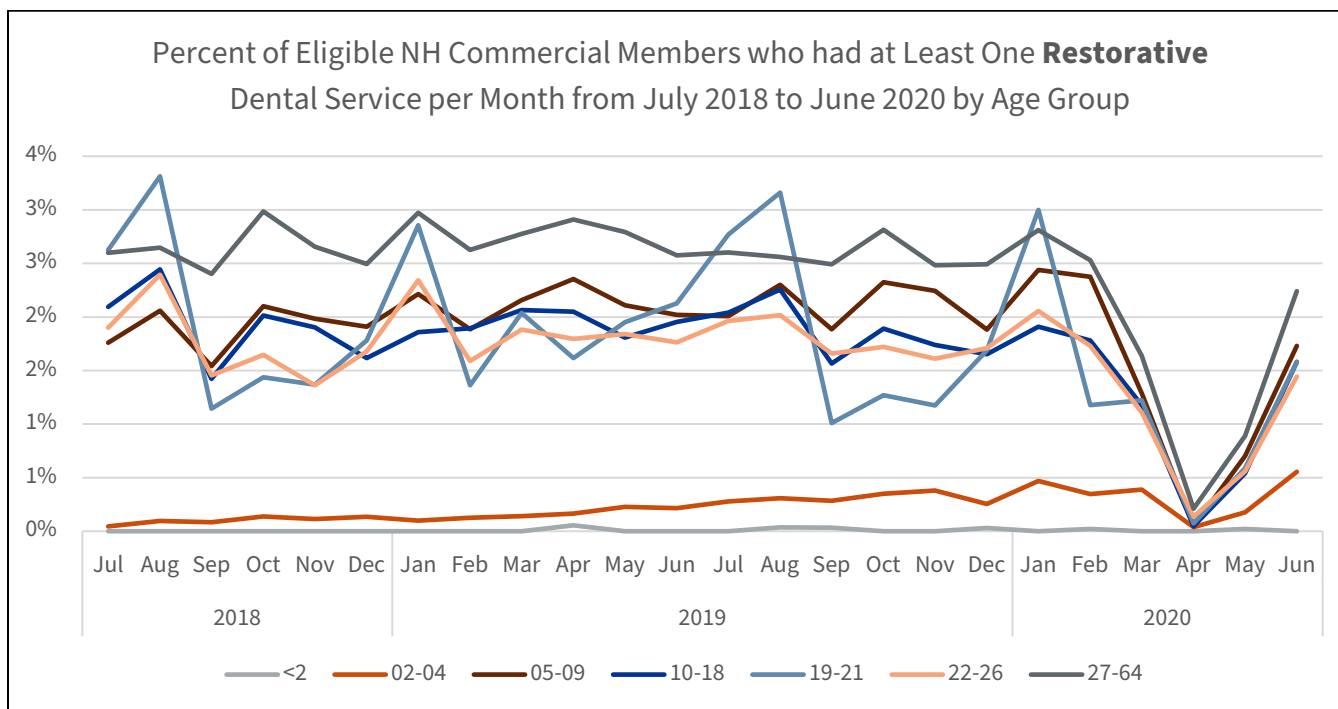
Commercial Members Dental Services from July 2018 to June 2020



**Figure 19:** Percent of eligible commercial members who had at least one of any type of dental service per month from July 2018 to June 2020 by age group. Note: Rates for members ages 0-4 may be subject to variations due to child’s age, eligibility, and tooth development.



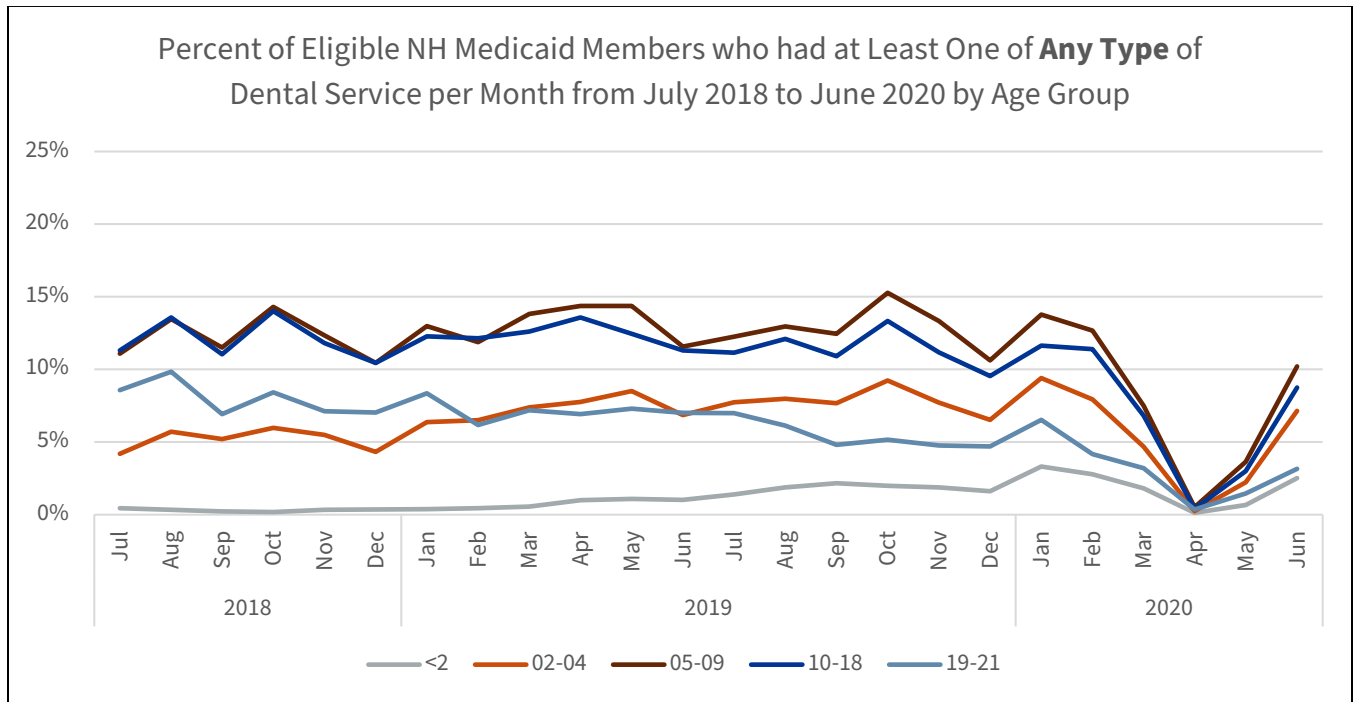
**Figure 20:** Percent of eligible commercial members who had at least one preventive dental service per month from July 2018 to June 2020 by age group. Note: Rates for members ages 0-4 may be subject to variations due to child’s age, eligibility, and tooth development.



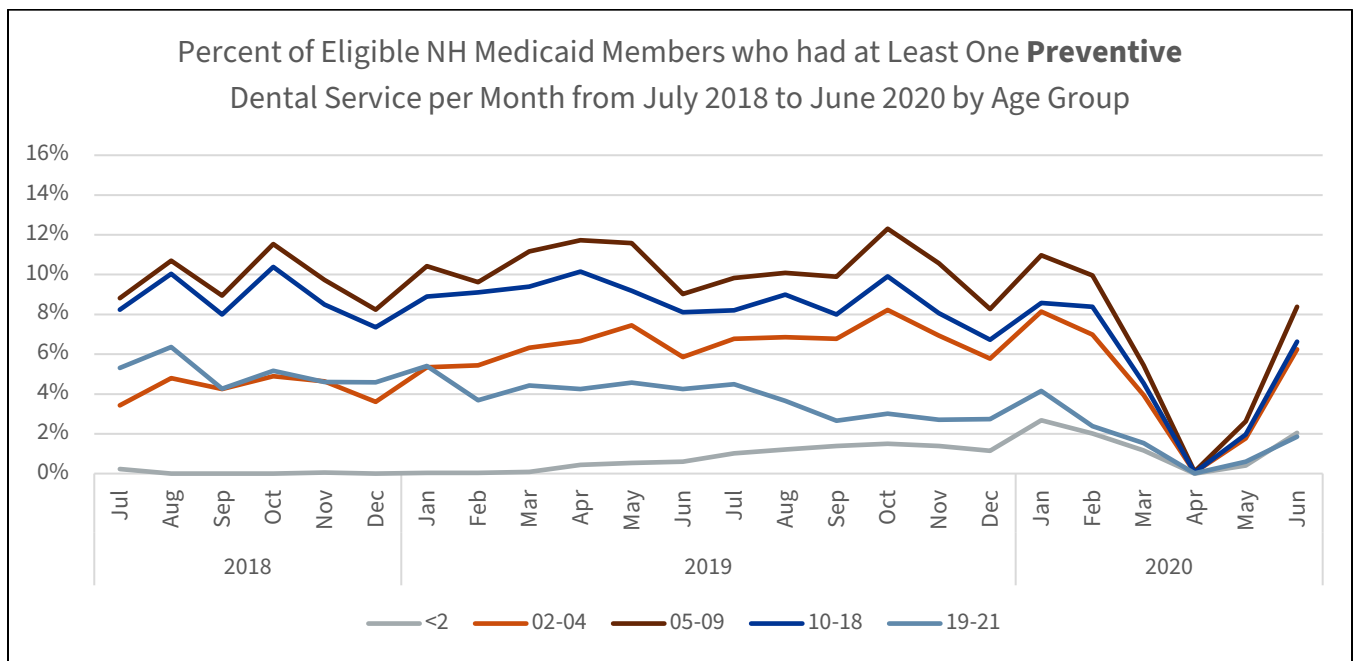
**Figure 21:** Percent of eligible commercial members who had at least one restorative dental service per month from July 2018 to June 2020 by age group. Note: Rates for members ages 0-4 may be subject to variations due to child’s age, eligibility, and tooth development.



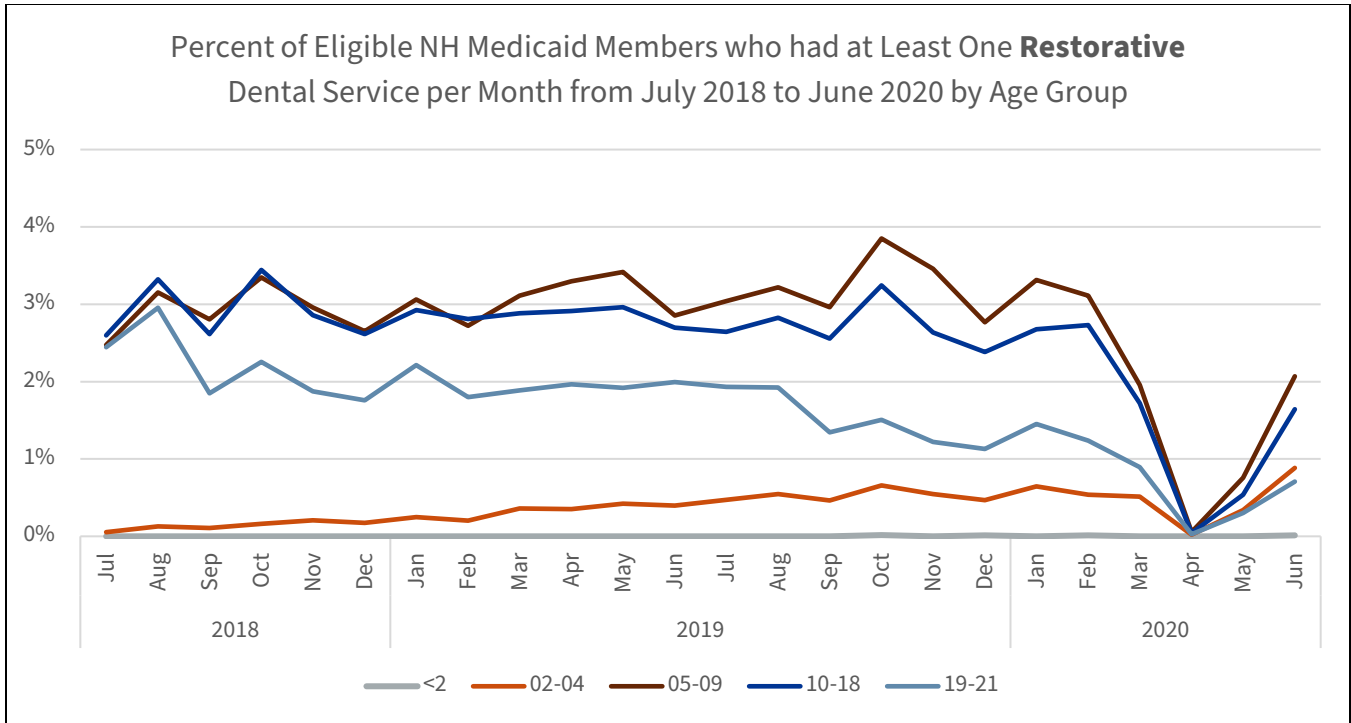
NH Medicaid Members Dental Services from July 2018 to June 2020



**Figure 22:** Percent of eligible NH Medicaid members who had at least one of any type of dental service per month from July 2018 to June 2020 by age group. Note: Rates for members ages 0-4 may be subject to variations due to child’s age, eligibility, and tooth development.



**Figure 23:** Percent of eligible NH Medicaid members who had at least one preventive dental service per month from July 2018 to June 2020 by age group. Note: Rates for members ages 0-4 may be subject to variations due to child’s age, eligibility, and tooth development.



**Figure 24:** Percent of eligible NH Medicaid members who had at least one restorative dental service per month from July 2018 to June 2020 by age group. Note: Rates for members ages 0-4 may be subject to variations due to child’s age, eligibility, and tooth development.

**Results for Oral Health Care and COVID-19**

*Commercial*

For the commercial population, there is some seasonal variation in the percent of services over the two-year analytic period with a higher percent of dental visits occurring in the summer and on winter breaks than during the spring and fall months for school-aged children. In March 2020, there was a steep decrease in the percent of members visiting the dentist across all age groups.

*NH Medicaid*

In the NH Medicaid population, the percent of eligible members who had any treatment increased over the two-year analytic period for the age groups under age five, while the percent of members with any treatment decreased over time for the older age groups. In March 2020, there was a steep decrease in the percent of members visiting the dentist across all age groups due to the COVID-19 pandemic and executive orders put in place at the time.

Dental Visits by Provider Taxonomy

Additional analysis was conducted to estimate the total number of dental visits by provider taxonomies over a two-year time period from July 2018 to June 2020. Analysis was done by type of payer (commercial and NH Medicaid) to determine any variation that may be related to characteristics of the population. Members were considered eligible for analysis if they had an enrollment during the month of interest.

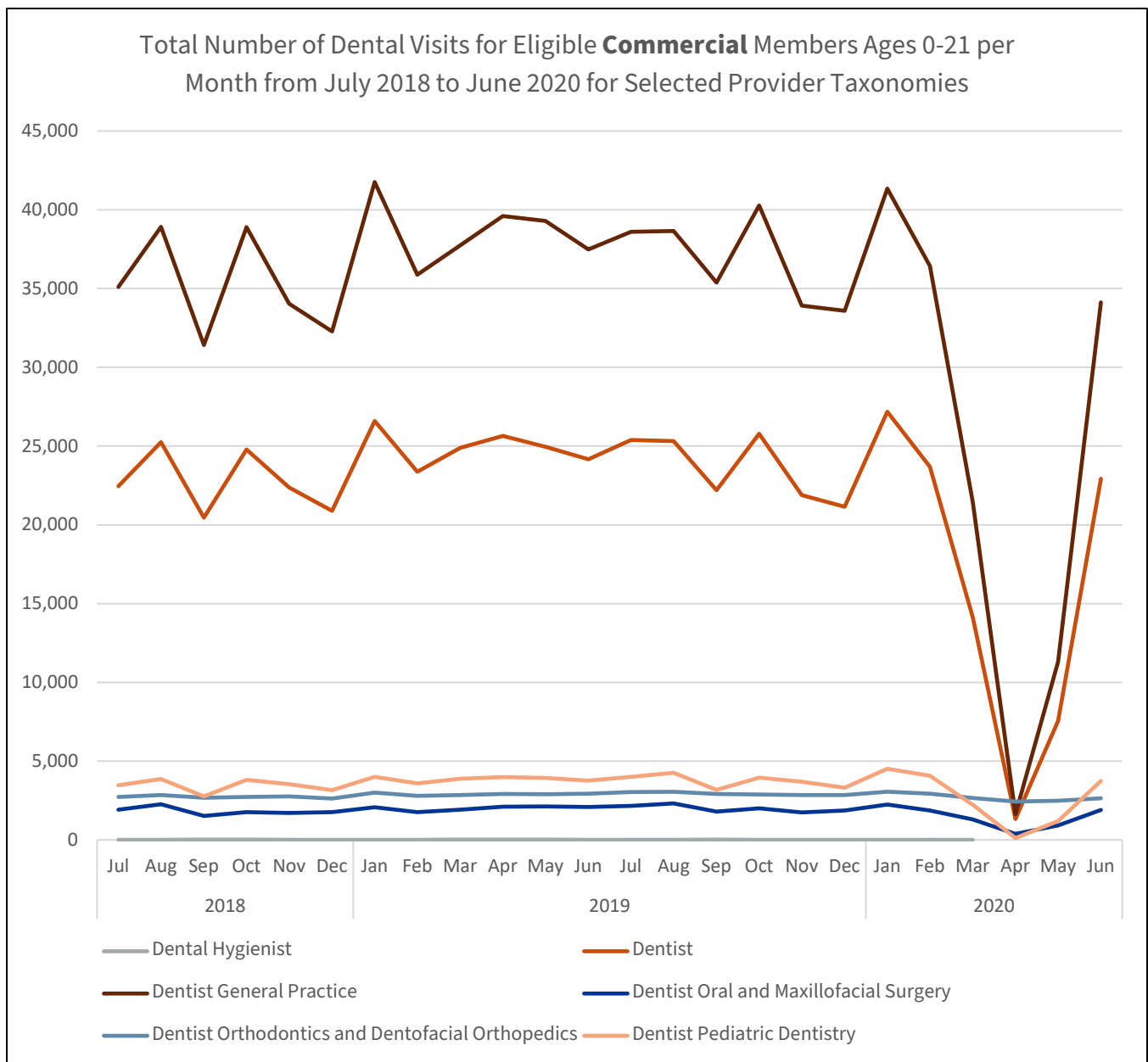
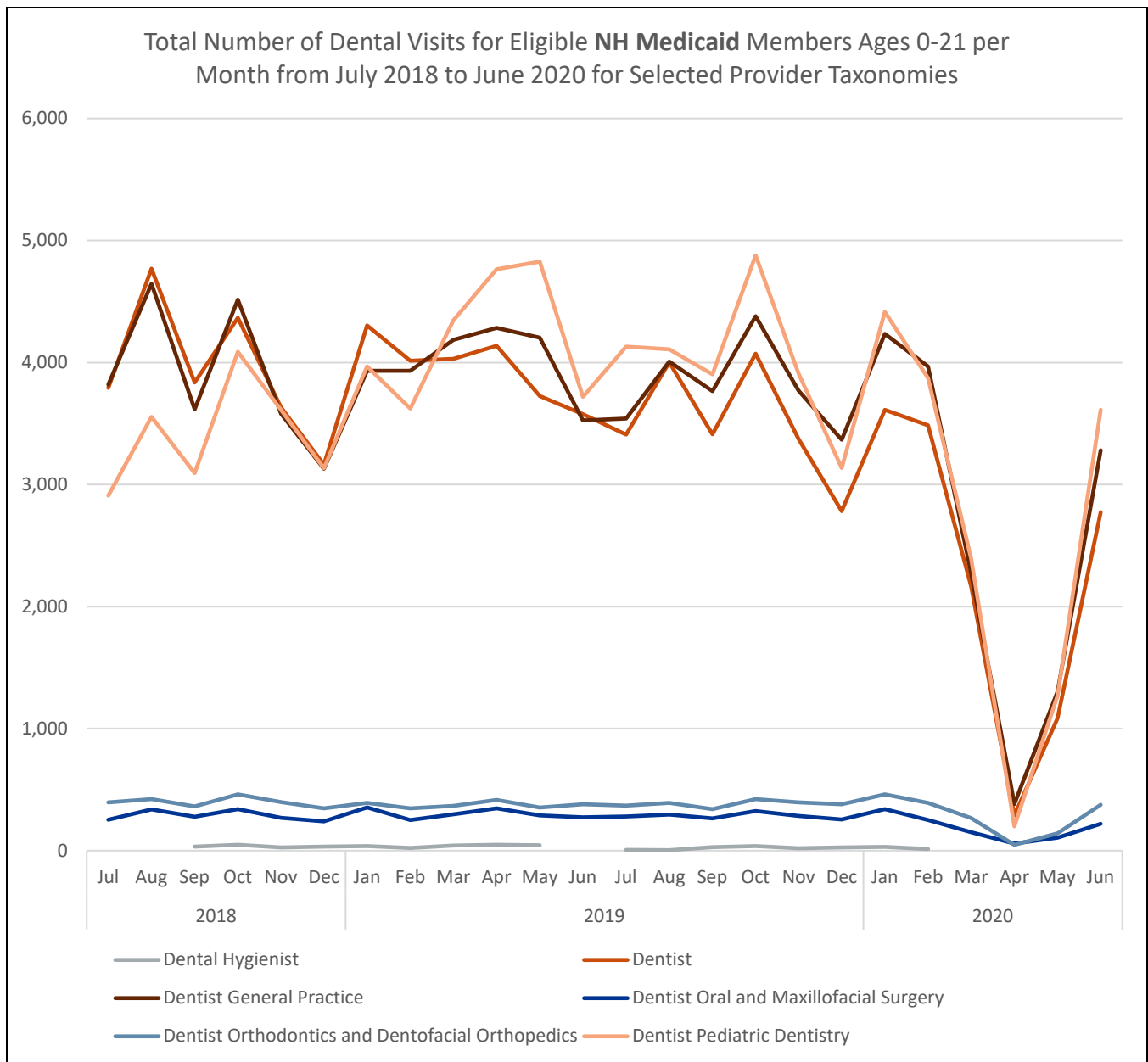


Figure 25: Total dental visits for all dental services per month for eligible commercial members from July 2018 to June 2020 by provider taxonomy.



**Figure 26:** Total dental visits for all dental services per month for eligible NH Medicaid members from July 2018 to June 2020 by provider taxonomy.



## Results for Dental Visits by Provider Taxonomy

### *Commercial*

Among commercially insured members, general practice dentists had the highest volume of dental visits, followed by dentists, for all months of analysis. Respectively, pediatric dentists, orthodontics and dentofacial orthopedic dentists, oral and maxillofacial surgery dentists, and dental hygienists followed, for the majority of months, with the exception of March through May of 2020. Orthodontic and dentofacial orthopedic dentists were the only provider taxonomy to not experience a decrease in total number of dental visits from March through May of 2020.

### *NH Medicaid*

Among NH Medicaid insured members, pediatric dentists had the highest volume of dental visits, followed by general practice dentists and dentists, for the majority of months of analysis. Respectively, orthodontics and dentofacial orthopedic dentists, oral and maxillofacial surgery dentists, and dental hygienists followed. All provider taxonomies experienced a decrease in total number of dental visits from March through May of 2020, including orthodontics and dentofacial orthopedic dentists.

## Discussion

### Patterns in Oral Health Care Services

#### Preventive and Restorative Services

In analyzing the patterns of preventive care of both commercial and NH Medicaid eligible members who had at least one restorative visit, it appeared that members who had the greatest number of preventive visits over the three-year period (i.e., the percent of members with at least one preventive visits per year in all three of the three years) also had the greatest number of restorative visits. Such that, among commercial members, 30% of members with at least one preventive visit per year in all three of the years had at least one restorative visit, while only 8% of members with at least one preventive visit per year in only two of the years had at least one restorative visit, 5% of members with at least one preventive visit per year in only one of the years had at least one restorative visit, and only 3% of those with no preventive visits had at least one restorative visit. A similar pattern appears in the NH Medicaid population.

Gail Brown, a member of the Oral Health Stakeholder Group and Director of the NH Oral Health Coalition, suggested that these findings “indicate a need for care and identifying an access point for care.” Furthermore, Dr. Sarah Finne, NH DHHS Dental Director, states, “Particularly in dentistry, someone could regularly be going in for preventive visits, but could break a tooth and need to go in for a restorative visit.”

#### Preventive and Extraction Services

Similarly, to findings of preventive services and restorative visits, in analyzing the patterns of care of preventive care in both commercial and NH Medicaid eligible members who had at least one extraction visit, it appeared that members who had the greatest number of preventive visits over the three-year period also had the greatest need for extraction visits. For example, among commercial members, 7% of members with at least one preventive visit per year in all three of the years had at least one extraction visit, while only 2% of members with at least one preventive visit per year in only two of the years had at least one extraction visit, 2% of members with at least one preventive visit per year in only one of the years had at least one extraction visit, and 2% of members with no preventive visits had at least one extraction visit. A similar pattern appears in the NH Medicaid population.

The Oral Health Stakeholder Group suggested that extraction codes do not differentiate between primary teeth, commonly known as baby teeth, and permanent teeth. That being said, members in the five- to nine-year-old age group often need teeth extracted to help the tooth come out; members in the 10- to 18-year-old age group often have orthodontic-related extractions; and individuals up to 18 years of age often have third

molar extractions. Furthermore, Dr. Finne informed the group that NH Medicaid, while restrictive, does cover wisdom teeth extraction, when the criterion for such procedure is met.

### Preventive and Oral Surgery Services

When analyzing the patterns of preventive care of both commercial and NH Medicaid eligible members who had at least one oral surgery visit, findings were very similar to restorative and extraction findings. Interpretation of these findings by the Oral Health Stakeholder Group circled back to identifying need and an access point for care. Furthermore, stakeholders questioned the reflection of workforce issues, particularly among oral surgeons, dental assistants, and dental hygienists. Additionally, it is important to note that the oral surgery type of service includes extraction services, reflected in the prior section.

It is important to note that New Hampshire is one of the few states that has Medicaid utilization rates fairly close to commercial utilization rates, with a few exceptions. The Oral Health Stakeholder Group suggests that these exceptions highlight where an increased emphasis in programming is needed.

### Fluoride Varnish and Fluoride Supplements

The percentage of commercial members receiving any fluoride treatment has slightly increased across all age groups from 2017 to 2019. The percentage of eligible commercial members ages two to four with any fluoride treatment increased from 51% in 2017 to 58% in 2019. Likewise, the five- to nine-year old age group increased from 75% in 2017 to 76% in 2019 and the 10- to 18-year-old age group increased from 60% in 2017 to 62% in 2019.

The percentage of NH Medicaid members receiving any fluoride treatment has increased across the age groups from 2017 to 2019. The percentage of eligible NH Medicaid members ages two to four with any fluoride treatment increased from 53% in 2017 to 58% in 2019. Likewise, the five- to nine-year-old age group increased from 70% in 2017 to 71% in 2019 and the 10- to 18-year-old age group increased from 56% in 2017 to 59% in 2019. Dr. Finne suggested that this increase is indicative of the success of school-based oral health programs across the state.

Analysis detected increases in dental and medical fluoride visits, but a decrease in pharmacy fluoride fills for both commercial and Medicaid. The Oral Health Stakeholder Group suggested that this decrease in pharmacy fluoride fills may be related to concerns about too much fluoride exposure given the increased access to fluoridated water in homes.



## Oral Health Care and COVID-19

In April of 2020, there was a significant decrease in percent of eligible members with any dental visits for all age groups in commercial and NH Medicaid. This was not surprising, given the nature of the emerging COVID-19 pandemic and Executive Orders issued in response that limited oral health care to emergency services only. It is also important to note that the COVID-19 pandemic resulted in the closing of schools and school-based oral health programs for several months, resulting in a significant loss of access to oral health care, especially for children covered by NH Medicaid.

This decrease was across all provider taxonomies, with the exception of orthodontic and dentofacial orthopedic dentists among commercially insured members. The Oral Health Stakeholder Group suggested this exception was due to monthly payment plans that continued throughout the COVID-19 pandemic.

The provider taxonomy data indicates a very small number of dental hygienist visits in both commercial and NH Medicaid data. Furthermore, the data does not reflect dental assistants among the provider taxonomies at all. The Oral Health Stakeholder Group suggested that both dental assistants and hygienists in New Hampshire typically bill under dentists' National Provider Identifier (NPI) numbers and therefore are indistinguishable in the claims data.

Lastly, in regard to the workforce shortage issues discussed by the Oral Health Stakeholder Group, it is important to note that the COVID-19 pandemic exacerbated the shortage of oral health care providers, specifically oral surgeons, dental assistants, and dental hygienists, as schools closed down and parents had to stay home to care for and school children in the home setting.



## Recommendations for Future Analysis

Future research and analysis are needed to address a number of unanticipated findings of this analysis. This may include further analysis of patterns of care and relationships between specific oral health care services (i.e., caries treatment, root canals, etc.). Recommendations from the Oral Health Stakeholder Group include differentiating between baby teeth and permanent teeth in analysis of extraction services. These analyses require tooth number to be adequately reported and may require longer analytic time periods. Additional analysis may include the cost of oral health services at the three levels of preventive care used in the current analysis to determine if prevalence of preventive services reduces the utilization (and therefore, cost) of future oral health care services.

Furthermore, in an analysis of emergency room visits for dental conditions, we concluded that there were many limitations to our findings. One limitation was the inclusion criteria, which required members to have both medical and dental insurance to be captured in the analysis. Recommendation for future analysis includes the use of hospital discharge data, which captures data on all emergency room visits, whether the patient is insured or not. This would widen our population of study to include uninsured individuals. Please see data tables in Appendix A for more information on the analysis of emergency room visits for dental conditions.

In terms of fluoridation, future analysis may include identifying school-based oral health care programs within the NH Medicaid claims data by identifying providers NPI numbers, as well as the impact of COVID-19 on these school-based programs. Such analysis would require further run out of data to include data from July 2020 forward.

In terms of the COVID-19 and oral health analysis, including that on provider taxonomies, the Oral Health Stakeholder Group stated, “The cutoff date of June 2020 does not allow us to show the whole story of the recovery of the dental profession after several months of nearly complete shutdown, from March to June 2020. It will be interesting to see how things look when we have another full year of data.” Considering additional 2020 data, the Oral Health Stakeholder Group also recommends analysis of the types of claims coming out of the COVID-19 months during 2020. Such claims may include those for emergency services and aerosol vacuum systems related to COVID-19 protection<sup>1</sup>.

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<sup>1</sup> AlkeDental, *Dental Aerosol Vacuum System* <http://www.aerosol-vacuum.com/-:~:text=S-prosident%20aerosol%20vacuum%20device%20The%20dental%20aerosol%20vacuum,guardian%20for%20protecting%20doctors%2C%20assistant%20and%20your%20patients>



While the analysis of provider taxonomies did not detect any patterns of oral health care services provided by dental assistants or dental hygienists, the Oral Health Stakeholder Group thought that this type of analysis may be a useful tool to detect workforce shortages in the future (e.g., oral surgeons).



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## Funding

Funding provided by NH Children's Health Foundation

## Appendix A

### Analysis of Oral Health Care Services from 2017-2019: Data Tables

#### Counts of Eligible Members: Commercial

**Table A1:** *Count of eligible commercial members from 2017-2019 by age group*

<b>Age Group</b>	<b>Total Number of Members in Demographic Categories who Meet Eligibility Criteria</b>
2-4	4,214
5-9	15,084
10-18	38,980
19-21	14,153
22-26	20,626
27-64	187,641

#### Counts of Eligible Members: NH Medicaid

**Table A2:** *Count of eligible NH Medicaid members from 2017-2019 by age group*

<b>Age Group</b>	<b>Total Number of Members in Demographic Categories who Meet Eligibility Criteria</b>
2-4	10,084
5-9	18,308
10-18	32,562
19-21	3,014

**Preventive Services Overview: Commercial**
**Table A3: Percent of eligible commercial members at levels of preventive care from 2017-2019 by age group**

<b>Age Group</b>	<b>Percent of Members with at Least 1 Preventive Visit/Year in All 3 of the 3 Years</b>	<b>Percent of Members with at Least 1 Preventive Visit/Year in Only 2 of the 3 Years</b>	<b>Percent of Members with at Least 1 Preventive Visit/Year in Only 1 of the 3 Years</b>	<b>Percent of Members with No Preventive Visits</b>
Total	50%	13%	10%	26%
2-4*	15%	24%	27%	34%
5-9	69%	14%	7%	10%
10-18	69%	14%	7%	11%
19-21	48%	19%	14%	18%
22-26	33%	18%	18%	31%
27-64	48%	11%	10%	31%

\* Rates for members ages 2-4 may be subject to variations due to child's age, eligibility, and tooth development. Values may not always total to 100% due to rounding.

**Commercial**
**Commercial, Children ages 2 – 4**

Of children ages two to four, 15% had at least one preventive visit in all three of the three years, while 24% had at least one preventive visit in only two of the three years, 27% had at least one preventive visit in only one of the three years, and 34% had no preventive visits during the three years.

**Commercial, Children ages 5 – 9**

Of children ages five to nine, 69% had at least one preventive visit in all three of the three years, while 14% had at least one preventive visit in only two of the three years, 7% had at least one preventive visit in only one of the three years, and 10% had no preventive visits during the three years.

**Commercial, Children ages 10 – 18**

Of children ages 10-18, 69% had at least one preventive visit in all three of the three years, while 14% had at least one preventive visit in only two of the three years, 7% had at least one preventive visit in only one of the three years, and 11% had no preventive visits during the three years.

**Preventive Services Overview: NH Medicaid**
**Table A4: Percent of eligible NH Medicaid members at levels of preventive care from 2017-2019 by age group**

<b>Age Group</b>	<b>Percent of Members with at Least 1 Preventive Visit/Year in All 3 of the 3 Years</b>	<b>Percent of Members with at Least 1 Preventive Visit/Year in Only 2 of the 3 Years</b>	<b>Percent of Members with at Least 1 Preventive Visit/Year in Only 1 of the 3 Years</b>	<b>Percent of Members with No Preventive Visits</b>
Total	46%	21%	16%	16%
2-4*	18%	24%	27%	31%
5-9	55%	21%	13%	10%
10-18	52%	20%	14%	14%
19-21	27%	23%	22%	29%

\* Rates for members ages 2-4 may be subject to variations due to child's age, eligibility, and tooth development. Values may not always total to 100% due to rounding.

**NH Medicaid**
**NH Medicaid, Children ages 2 – 4**

Of children ages two to four, 18% had at least one preventive visit in all three of the three years, while 24% had at least one preventive visit in only two of the three years, 27% had at least one preventive visit in only one of the three years, and 31% had no preventive visits during the three years.

**NH Medicaid, Children ages 5 – 9**

Of children ages five to nine, 55% had at least one preventive visit in all three of the three years, while 21% had at least one preventive visit in only two of the three years, 13% had at least one preventive visit in only one of the three years, and 10% had no preventive visits during the three years.

**NH Medicaid, Children ages 10 – 18**

Of children ages 10-18, 52% had at least one preventive visit in all three of the three years, while 20% had at least one preventive visit in only two of the three years, 14% had at least one preventive visit in only one of the three years, and 14% had no preventive visits during the three years.

**Preventive and Restorative Services: Commercial**

**Table A5:** Percent of eligible commercial members with and without restorative treatment from 2017 to 2019 by preventive treatment level and age group

Restorative Treatment Level	Preventive Services Level			
	Percent of Members with at Least 1 Preventive Visit/Year in All 3 of the 3 Years	Percent of Members with at Least 1 Preventive Visit/Year in Only 2 of the 3 Years	Percent of Members with at Least 1 Preventive Visit/Year in Only 1 of the 3 Years	Percent of Members with No Preventive Visits
Age Group				
Had At Least 1 Restorative Visit	30%	8%	5%	3%
2-4*	2%	2%	1%	0%
5-9	28%	5%	2%	0%
10-18	31%	6%	3%	0%
19-21	25%	10%	6%	1%
22-26	18%	10%	8%	2%
27-64	32%	8%	6%	4%
No Restorative Visits	20%	5%	5%	23%
2-4*	14%	22%	25%	34%
5-9	41%	9%	5%	9%
10-18	38%	7%	5%	10%
19-21	23%	10%	9%	17%
22-26	14%	8%	11%	29%
27-64	16%	4%	4%	26%

\* Rates for members ages 2-4 may be subject to variations due to child's age, eligibility, and tooth development. Values may not always total to 100% due to rounding.

**Commercial**
**Commercial, Children ages 2 – 4**

Of children ages two to four, 5% had at least one restorative visit over the three-year time period (2% had at least one preventive visit in all three of the three years; 2% had at least one preventive visit in only two of the three years; 1% had at least one preventive visit in only one of the three years; less than 1% had no preventive visits during the three years).

**Commercial, Children ages 5 – 9**

Of children ages five to nine, 35% had at least one restorative visit over the three-year time period (28% had at least one preventive visit in all three of the three years; 5% had at least one preventive visit in only two



of the three years; 2% had at least one preventive visit in only one of the three years; less than 1% had no preventive visits during the three years).

Commercial, Children ages 10 – 18

Of children ages 10-18, 40% had at least one restorative visit over the three-year time period (31% had at least one preventive visit in all three of the three years; 6% had at least one preventive visit in only two of the three years; 3% had at least one preventive visit in only one of the three years; less than 1% had no preventive visits during the three years).



**Preventive and Restorative Services: NH Medicaid**

**Table A6:** Percent of eligible NH Medicaid members with and without restorative treatment from 2017 to 2019 by preventive treatment level and age group

Restorative Treatment Level	Preventive Services Level			
	Percent of Members with at Least 1 Preventive Visit/Year in All 3 of the 3 Years	Percent of Members with at Least 1 Preventive Visit/Year in Only 2 of the 3 Years	Percent of Members with at Least 1 Preventive Visit/Year in Only 1 of the 3 Years	Percent of Members with No Preventive Visits
Age Group				
Had At Least 1 Restorative Visit	27%	10%	6%	1%
2-4*	4%	3%	2%	0%
5-9	34%	12%	5%	0%
10-18	32%	12%	6%	1%
19-21	17%	14%	10%	1%
No Restorative Visits	19%	10%	11%	16%
2-4*	14%	21%	25%	31%
5-9	22%	9%	8%	10%
10-18	20%	8%	8%	13%
19-21	10%	9%	11%	28%

\* Rates for members ages 2-4 may be subject to variations due to child's age, eligibility, and tooth development. Values may not always total to 100% due to rounding.

### NH Medicaid

#### NH Medicaid, Children ages 2 – 4

Of children ages two to four, 9% had at least one restorative visit over the three-year time period (4% had at least one preventive visit in all three of the three years; 3% had at least one preventive visit in only two of the three years; 2% had at least one preventive visit in only one of the three years; less than 1% had no preventive visits during the three years).

#### NH Medicaid, Children ages 5 – 9

Of children ages five to nine, 51% had at least one restorative visit over the three-year time period (34% had at least one preventive visit in all three of the three years; 12% had at least one preventive visit in only two of the three years; 5% had at least one preventive visit in only one of the three years; less than 1% had no preventive visits during the three years).



NH Medicaid, Children ages 10 – 18

Of children ages 10-18, 51% had at least one restorative visit over the three-year time period (34% had at least one preventive visit in all three of the three years; 12% had at least one preventive visit in only two of the three years; 5% had at least one preventive visit in only one of the three years; 1% had no preventive visits during the three years).

**Preventive and Extraction Services: Commercial**

**Table A7:** Percent of eligible commercial members with and without at least one extraction from 2017 to 2019 by preventive treatment level and age group

Extraction Level	Preventive Services Level			
	Percent of Members with at Least 1 Preventive Visit/Year in All 3 of the 3 Years	Percent of Members with at Least 1 Preventive Visit/Year in Only 2 of the 3 Years	Percent of Members with at Least 1 Preventive Visit/Year in Only 1 of the 3 Years	Percent of Members with No Preventive Visits
<b>Age Group</b>				
Had At Least 1 Extraction Visit	7%	2%	2%	<b>2%</b>
2-4*	0%	0%	0%	0%
5-9	9%	2%	1%	0%
10-18	18%	3%	1%	0%
19-21	16%	5%	3%	1%
22-26	5%	3%	3%	2%
27-64	4%	2%	2%	3%
No Extraction Visits	44%	11%	9%	24%
2-4*	15%	24%	26%	34%
5-9	60%	12%	6%	9%
10-18	51%	11%	6%	10%
19-21	32%	14%	12%	17%
22-26	28%	16%	15%	29%
27-64	44%	10%	8%	27%

\* Rates for members ages 2-4 may be subject to variations due to child's age, eligibility, and tooth development. Values may not always total to 100% due to rounding.

**Commercial**

Commercial, Children ages 2 – 4

No children in the two to four age group had any extraction visits over the three-year time period from 2017 to 2019.

Commercial, Children ages 5 – 9

Of children ages five to nine, 12% had at least one extraction visit over the three-year time period (9% had at least one preventive visit in all three of the three years; 2% had at least one preventive visit in only two of the three years; 1% had at least one preventive visit in only one of the three years; less than 1% had no preventive visits during the three years).



Commercial, Children ages 10 – 18

Of children ages 10-18, 22% had at least one extraction visit over the three-year time period (18% had at least one preventive visit in all three of the three years; 3% had at least one preventive visit in only two of the three years; 1% had at least one preventive visit in only one of the three years; less than 1% had no preventive visits during the three years).

**Preventive and Extraction Services: NH Medicaid**

**Table A8:** Percent of eligible NH Medicaid members with and without at least one extraction from 2017 to 2019 by preventive treatment level and age group

Extraction Level	Preventive Services Level			
	Percent of Members with at Least 1 Preventive Visit/Year in All 3 of the 3 Years	Percent of Members with at Least 1 Preventive Visit/Year in Only 2 of the 3 Years	Percent of Members with at Least 1 Preventive Visit/Year in Only 1 of the 3 Years	Percent of Members with No Preventive Visits
<b>Age Group</b>				
Had At Least 1 Extraction Visit	11%	4%	2%	1%
2-4*	1%	1%	1%	0%
5-9	11%	5%	2%	0%
10-18	14%	4%	2%	1%
19-21	7%	5%	3%	2%
No Extraction Visits	36%	17%	14%	16%
2-4*	17%	23%	26%	31%
5-9	44%	17%	11%	10%
10-18	38%	15%	12%	14%
19-21	19%	17%	18%	27%

\* Rates for members ages 2-4 may be subject to variations due to child's age, eligibility, and tooth development. Values may not always total to 100% due to rounding.

### NH Medicaid

#### NH Medicaid, Children ages 2 – 4

Of children ages two to four, 3% had at least one extraction visit over the three-year time period (1% had at least one preventive visit in all three of the three years; 1% had at least one preventive visit in only two of the three years; 1% had at least one preventive visit in only one of the three years; less than 1% had no preventive visits during the three years).

#### NH Medicaid, Children ages 5 – 9

Of children ages five to nine, 18% had at least one extraction visit over the three-year time period (11% had at least one preventive visit in all three of the three years; 5% had at least one preventive visit in only two of the three years; 2% had at least one preventive visit in only one of the three years; less than 1% had no preventive visits during the three years).



NH Medicaid, Children ages 10 – 18

Of children ages 10-18, 21% had at least one extraction visit over the three-year time period (14% had at least one preventive visit in all three of the three years; 4% had at least one preventive visit in only two of the three years; 2% had at least one preventive visit in only one of the three years; 1% had no preventive visits during the three years).

**Preventive Services and Oral Surgery: Commercial**

**Table A9:** Percent of eligible commercial members with and without at least one oral surgery from 2017 to 2019 by preventive treatment level and age group

Oral Surgery Level	Preventive Services Level			
	Percent of Members with at Least 1 Preventive Visit/Year in All 3 of the 3 Years	Percent of Members with at Least 1 Preventive Visit/Year in Only 2 of the 3 Years	Percent of Members with at Least 1 Preventive Visit/Year in Only 1 of the 3 Years	Percent of Members with No Preventive Visits
<b>Age Group</b>				
Had At Least 1 Oral Surgery Visit	7%	2%	2%	2%
2-4*	0%	1%	1%	0%
5-9	9%	2%	1%	0%
10-18	18%	3%	1%	0%
19-21	16%	5%	3%	1%
22-26	5%	3%	3%	2%
27-64	5%	2%	2%	3%
No Oral Surgery Visits	43%	11%	9%	24%
2-4*	15%	24%	26%	33%
5-9	60%	12%	6%	9%
10-18	50%	10%	6%	10%
19-21	32%	14%	11%	17%
22-26	28%	15%	15%	29%
27-64	43%	10%	8%	27%

\* Rates for members ages 2-4 may be subject to variations due to child's age, eligibility, and tooth development. Values may not always total to 100% due to rounding.

**Commercial**

Commercial, Children ages 2 – 4

Of children ages two to four, 2% had at least one oral surgery visit over the three-year time period (0% had at least one preventive visit in all three of the three years; 1% had at least one preventive visit in only two of the three years; 1% had at least one preventive visit in only one of the three years; less than 1% had no preventive visits during the three years).

Commercial, Children ages 5 – 9

Of children ages five to nine, 12% had at least one oral surgery visit over the three-year time period (9% had at least one preventive visit in all three of the three years; 2% had at least one preventive visit in only two



of the three years; 1% had at least one preventive visit in only one of the three years; less than 1% had no preventive visits during the three years).

Commercial, Children ages 10 – 18

Of children ages 10-18, 22% had at least one oral surgery visit over the three-year time period (18% had at least one preventive visit in all three of the three years; 3% had at least one preventive visit in only two of the three years; 1% had at least one preventive visit in only one of the three years; less than 1% had no preventive visits during the three years).



**Preventive Services and Oral Surgery: NH Medicaid**

**Table A10:** Percent of eligible NH Medicaid members with and without at least one oral surgery from 2017 to 2019 by preventive treatment level and age group

Oral Surgery Level	Preventive Services Level			
	Percent of Members with at Least 1 Preventive Visit/Year in All 3 of the 3 Years	Percent of Members with at Least 1 Preventive Visit/Year in Only 2 of the 3 Years	Percent of Members with at Least 1 Preventive Visit/Year in Only 1 of the 3 Years	Percent of Members with No Preventive Visits
<b>Age Group</b>				
Had At Least 1 Oral Surgery Visit	11%	4%	2%	1%
2-4*	1%	1%	1%	0%
5-9	11%	5%	2%	0%
10-18	14%	4%	2%	1%
19-21	7%	6%	4%	2%
No Oral Surgery Visits	36%	17%	14%	16%
2-4*	17%	22%	26%	31%
5-9	44%	17%	11%	10%
10-18	38%	15%	12%	14%
19-21	19%	17%	18%	27%

\* Rates for members ages 2-4 may be subject to variations due to child's age, eligibility, and tooth development. Values may not always total to 100% due to rounding.

### NH Medicaid

#### NH Medicaid, Children ages 2 – 4

Of children ages two to four, 3% had at least one oral surgery visit over the three-year time period (1% had at least one preventive visit in all three of the three years; 1% had at least one preventive visit in only two of the three years; 1% had at least one preventive visit in only one of the three years; less than 1% had no preventive visits during the three years).

#### NH Medicaid, Children ages 5 – 9

Of children ages five to nine, 18% had at least one oral surgery visit over the three-year time period (11% had at least one preventive visit in all three of the three years; 5% had at least one preventive visit in only two of the three years; 2% had at least one preventive visit in only one of the three years; less than 1% had no preventive visits during the three years).



NH Medicaid, Children ages 10 – 18

Of children ages 10-18, 21% had at least one oral surgery visit over the three-year time period (14% had at least one preventive visit in all three of the three years; 4% had at least one preventive visit in only two of the three years; 2% had at least one preventive visit in only one of the three years; 1% had no preventive visits during the three years).

**Preventive Services and Emergency Room Visits for Dental Conditions: Commercial**

**Table A11:** Percent of eligible commercial members with and without at least one ER visit for a dental condition from 2017 to 2019 by preventive treatment level and age group

<b>Emergency Visit for a Dental Condition Level</b>	<b>Preventive Services Level</b>			
	<b>Percent of Members with at Least 1 Preventive Visit/Year in All 3 of the 3 Years</b>	<b>Percent of Members with at Least 1 Preventive Visit/Year in Only 2 of the 3 Years</b>	<b>Percent of Members with at Least 1 Preventive Visit/Year in Only 1 of the 3 Years</b>	<b>Percent of Members with No Preventive Visits</b>
<b>Age Group</b>				
Had At Least 1 ER Dental Visit	1%	0%	0%	1%
2-4*	1%	1%	1%	1%
5-9	1%	0%	0%	0%
10-18	1%	0%	0%	0%
19-21	1%	0%	0%	0%
22-26	1%	0%	1%	1%
27-64	2%	0%	0%	1%
No ER Dental Visits	52%	12%	9%	24%
2-4*	14%	22%	26%	34%
5-9	70%	13%	6%	10%
10-18	69%	12%	6%	11%
19-21	49%	19%	13%	17%
22-26	33%	18%	17%	29%
27-64	50%	10%	8%	28%

\* Rates for members ages 2-4 may be subject to variations due to child's age, eligibility, and tooth development. Values may not always total to 100% due to rounding.

**Preventive Services and Emergency Room Visits for Dental Conditions: NH Medicaid**

**Table A12:** Percent of eligible NH Medicaid members with and without at least one ER visit for a dental condition from 2017 to 2019 by preventive treatment level and age group

<b>Emergency Visit for a Dental Condition Level</b>	<b>Preventive Services Level</b>			
	<b>Percent of Members with at Least 1 Preventive Visit/Year in All 3 of the 3 Years</b>	<b>Percent of Members with at Least 1 Preventive Visit/Year in Only 2 of the 3 Years</b>	<b>Percent of Members with at Least 1 Preventive Visit/Year in Only 1 of the 3 Years</b>	<b>Percent of Members with No Preventive Visits</b>
<b>Age Group</b>				
Had At Least 1 ER Dental Visit	1%	1%	1%	1%
2-4*	1%	2%	2%	2%
5-9	2%	1%	0%	0%
10-18	1%	1%	0%	0%
19-21	1%	1%	2%	2%
No ER Dental Visits	45%	20%	15%	16%
2-4*	17%	22%	25%	30%
5-9	53%	20%	13%	10%
10-18	51%	19%	13%	14%
19-21	25%	21%	20%	27%

\* Rates for members ages 2-4 may be subject to variations due to child's age, eligibility, and tooth development.  
Values may not always total to 100% due to rounding.

## Appendix B

### Fluoride Varnish and Fluoride Supplements: Data Tables

#### Counts of Eligible Members: Commercial

**Table B1:** Count of eligible commercial members for years 2017, 2018 and 2019 by age group

Age Category	Number of Eligible Members in 2017	Number of Eligible Members in 2018	Number of Eligible Members in 2019
<2	1,406	1,466	1,609
2-4	4,459	4,529	4,908
5-9	10,119	10,199	10,697
10-18	23,410	23,372	24,820
19-21	8,389	8,420	8,870
22-26	13,345	13,438	14,009
27-64	117,242	118,229	126,650

#### Counts of Eligible Members: NH Medicaid

**Table B2:** Counts of eligible NH Medicaid members for years 2017, 2018 and 2019 by age group

Age Category	Number of Eligible Members in 2017	Number of Eligible Members in 2018	Number of Eligible Members in 2019
<2	9,454	8,969	8,509
2-4	14,217	13,839	13,427
5-9	24,893	24,185	23,390
10-18	41,141	40,875	40,177
19-21	2,798	2,777	6,112

**Fluoride Varnish and Fluoride Supplements: Commercial**

**Table B3:** Percent of eligible commercial members who had fluoride varnish or prescription for fluoride supplements by age group by year (2017, 2018 and 2019)

<b>Age Group</b>	<b>Percent of Members with Any Fluoride Treatment</b>	<b>Percent of Members who Had At Least One Medical Fluoride Visit</b>	<b>Percent of Members who Had At Least One Pharmacy Fluoride Fill</b>	<b>Percent of Members who Had At Least One Dental Fluoride Visit</b>
<b>2017</b>				
<2*	13%	5%	5%	5%
2-4	51%	2%	6%	47%
5-9	75%	0%	5%	74%
10-18	60%	0%	1%	60%
19-21	13%	0%	0%	13%
22-26	6%	0%	0%	6%
27-64	7%	0%	0%	7%
<b>2018</b>				
<2*	16%	7%	4%	7%
2-4	53%	4%	6%	48%
5-9	75%	0%	4%	74%
10-18	61%	0%	1%	61%
19-21	14%	0%	0%	14%
22-26	8%	0%	0%	8%
27-64	9%	0%	0%	9%
<b>2019</b>				
<2*	17%	8%	4%	7%
2-4	58%	5%	5%	52%
5-9	76%	0%	3%	75%
10-18	62%	0%	0%	62%
19-21	16%	0%	0%	16%
22-26	9%	0%	0%	9%
27-64	10%	0%	0%	10%

\* Rates for members ages <2 may be subject to variations due to child's age, eligibility, and tooth development. Values may not always total to 100% due to rounding.

**Fluoride Varnish and Fluoride Supplements: NH Medicaid**
**Table B4: Eligible NH Medicaid members who had fluoride varnish or prescription for fluoride supplements by age group**

<b>Age Group</b>	<b>Percent of Members with Any Fluoride Treatment</b>	<b>Percent of Members who Had At Least One Medical Fluoride Visit</b>	<b>Percent of Members who Had At Least One Pharmacy Fluoride Fill</b>	<b>Percent of Members who Had At Least One Dental Fluoride Visit</b>
<b>2017</b>				
<2*	15%	3%	3%	11%
2-4	53%	2%	4%	51%
5-9	70%	0%	3%	69%
10-18	56%	0%	0%	56%
19-21	17%	0%	0%	17%
<b>2018</b>				
<2*	17%	5%	2%	11%
2-4	55%	4%	3%	52%
5-9	70%	1%	2%	69%
10-18	57%	0%	0%	57%
19-21	19%	0%	0%	19%
<b>2019</b>				
<2*	19%	6%	2%	13%
2-4	58%	6%	3%	54%
5-9	71%	1%	2%	71%
10-18	59%	0%	0%	59%
19-21	17%	0%	0%	17%

*\* Rates for members ages <2 may be subject to variations due to child's age, eligibility, and tooth development. Values may not always total to 100% due to rounding.*

## Appendix C

### Oral Health Care and COVID-19: Data Tables

#### Eligible Members: Commercial

**Table C1:** Counts of eligible commercial members for each month from July 2018 to June 2020 by age group

Month/Year	<2	02-04	05-09	10-18	19-21	22-26	27-64
07/2018	144	9,141	24,363	58,274	22,272	39,112	305,381
08/2018	329	9,283	24,469	58,507	22,308	39,303	306,372
09/2018	511	9,401	24,577	58,612	22,258	39,390	306,185
10/2018	656	9,519	24,560	58,527	22,180	39,233	305,680
11/2018	812	9,568	24,558	58,544	22,159	39,203	304,944
12/2018	922	9,640	24,566	58,448	22,109	39,226	304,246
01/2019	1,269	10,982	25,526	60,116	22,717	40,449	318,049
02/2019	1,441	11,170	25,851	60,831	22,993	40,805	317,402
03/2019	1,623	11,275	25,789	60,709	22,816	40,742	319,759
04/2019	1,812	11,437	25,966	60,988	22,876	40,990	321,101
05/2019	2,002	11,503	26,044	61,065	22,868	40,995	320,999
06/2019	2,201	11,636	26,128	61,222	22,891	41,093	321,179
07/2019	2,460	11,896	26,133	61,380	22,898	41,059	320,857
08/2019	2,721	11,975	26,085	61,204	22,844	40,734	319,614
09/2019	2,899	11,975	25,939	60,764	22,661	40,214	316,930
10/2019	3,105	12,031	26,019	60,843	22,742	40,076	317,295
11/2019	3,249	12,068	26,023	60,756	22,744	39,786	316,328
12/2019	3,398	12,123	26,020	60,572	22,676	39,432	315,822
01/2020	4,354	13,182	27,059	62,480	23,573	41,081	329,137
02/2020	4,508	13,249	27,046	62,371	23,506	40,786	328,261
03/2020	4,639	13,088	26,692	61,548	23,174	40,012	323,974
04/2020	4,800	13,121	26,594	61,407	23,076	39,476	321,918
05/2020	5,010	13,125	26,573	61,363	23,056	39,133	321,237
06/2020	5,185	13,164	26,482	61,212	22,968	38,720	320,041



**Eligible Members: NH Medicaid**
**Table C2: Counts of eligible NH Medicaid members for each month from July 2018 to June 2020 by age group**

<b>Month/Year</b>	<b>&lt;2</b>	<b>02-04</b>	<b>05-09</b>	<b>10-18</b>	<b>19-21</b>
07/2018	447	14,847	25,764	45,015	9,566
08/2018	895	14,871	25,774	45,030	9,307
09/2018	1,295	14,848	25,679	44,898	8,916
10/2018	1,714	14,798	25,605	44,783	8,607
11/2018	2,097	14,858	25,673	44,743	8,329
12/2018	2,449	14,851	25,681	44,752	8,312
01/2019	2,852	14,822	25,670	44,650	9,897
02/2019	3,213	14,741	25,600	44,563	9,674
03/2019	3,588	14,654	25,486	44,262	9,488
04/2019	3,950	14,566	25,331	44,011	9,207
05/2019	4,317	14,507	25,334	43,942	9,004
06/2019	4,681	14,393	25,184	43,605	8,768
07/2019	5,128	14,392	25,170	43,583	8,587
08/2019	5,518	14,487	25,256	43,685	8,414
09/2019	5,889	14,454	25,177	43,453	8,186
10/2019	6,280	14,433	25,142	43,329	8,033
11/2019	6,621	14,474	25,193	43,409	7,948
12/2019	7,019	14,505	25,342	43,626	7,883
01/2020	7,391	14,568	25,399	43,481	7,788
02/2020	7,670	14,459	25,233	43,042	7,595
03/2020	8,029	14,442	25,187	42,959	7,507
04/2020	8,379	14,496	25,309	43,101	7,531
05/2020	8,836	14,654	25,502	43,440	7,647
06/2020	9,300	14,814	25,735	43,745	7,759

**COVID-19 and Any Type of Dental Service: Commercial**

**Table C3:** Total dental visits for any type of dental service per month for eligible commercial members from July 2018 to June 2020 by age group

<b>Month/Year</b>	<b>&lt;2</b>	<b>02-04</b>	<b>05-09</b>	<b>10-18</b>	<b>19-21</b>	<b>22-26</b>	<b>27-64</b>
07/2018	1%	4%	13%	17%	15%	10%	12%
08/2018	1%	5%	16%	20%	16%	10%	13%
09/2018	0%	5%	11%	14%	6%	7%	12%
10/2018	1%	6%	15%	17%	8%	7%	14%
11/2018	1%	5%	14%	17%	9%	7%	12%
12/2018	0%	5%	13%	16%	13%	9%	11%
01/2019	1%	6%	15%	17%	17%	11%	14%
02/2019	1%	6%	15%	18%	8%	7%	12%
03/2019	1%	7%	14%	17%	11%	8%	13%
04/2019	0%	7%	16%	17%	8%	8%	13%
05/2019	0%	7%	14%	16%	11%	9%	13%
06/2019	0%	7%	14%	18%	12%	8%	12%
07/2019	1%	8%	15%	18%	16%	10%	13%
08/2019	1%	9%	17%	20%	14%	9%	12%
09/2019	1%	8%	13%	14%	5%	7%	12%
10/2019	1%	9%	16%	17%	6%	8%	14%
11/2019	1%	8%	15%	16%	7%	7%	12%
12/2019	1%	7%	13%	16%	12%	8%	11%
01/2020	2%	10%	16%	17%	16%	10%	13%
02/2020	2%	10%	16%	17%	5%	8%	12%
03/2020	1%	5%	9%	11%	6%	5%	8%
04/2020	0%	0%	1%	4%	1%	1%	1%
05/2020	1%	2%	5%	7%	3%	3%	4%
06/2020	2%	8%	14%	16%	9%	7%	11%

**COVID-19 and Any Type of Dental Service: NH Medicaid**

**Table C4:** Total dental visits for any type of dental service per month for eligible NH Medicaid members from July 2018 to June 2020 by age group

<b>Month/Year</b>	<b>&lt;2</b>	<b>02-04</b>	<b>05-09</b>	<b>10-18</b>	<b>19-21</b>
07/2018	0%	4%	11%	11%	9%
08/2018	0%	6%	13%	14%	10%
09/2018	0%	5%	12%	11%	7%
10/2018	0%	6%	14%	14%	8%
11/2018	0%	5%	12%	12%	7%
12/2018	0%	4%	10%	10%	7%
01/2019	0%	6%	13%	12%	8%
02/2019	0%	6%	12%	12%	6%
03/2019	1%	7%	14%	13%	7%
04/2019	1%	8%	14%	14%	7%
05/2019	1%	8%	14%	12%	7%
06/2019	1%	7%	12%	11%	7%
07/2019	1%	8%	12%	11%	7%
08/2019	2%	8%	13%	12%	6%
09/2019	2%	8%	12%	11%	5%
10/2019	2%	9%	15%	13%	5%
11/2019	2%	8%	13%	11%	5%
12/2019	2%	7%	11%	10%	5%
01/2020	3%	9%	14%	12%	7%
02/2020	3%	8%	13%	11%	4%
03/2020	2%	5%	7%	7%	3%
04/2020	0%	0%	1%	0%	0%
05/2020	1%	2%	4%	3%	1%
06/2020	3%	7%	10%	9%	3%

**COVID-19 and Preventive Services: Commercial**

**Table C5:** Total dental visits for preventive services per month for eligible commercial members from July 2017 to June 2020 by age group

<b>Month/Year</b>	<b>&lt;2</b>	<b>02-04</b>	<b>05-09</b>	<b>10-18</b>	<b>19-21</b>	<b>22-26</b>	<b>27-64</b>
07/2018	1%	3%	11%	12%	11%	8%	7%
08/2018	0%	4%	14%	14%	12%	7%	8%
09/2018	0%	4%	9%	9%	4%	4%	7%
10/2018	0%	4%	13%	12%	5%	5%	9%
11/2018	0%	4%	12%	11%	6%	5%	8%
12/2018	0%	3%	10%	10%	9%	7%	7%
01/2019	0%	5%	12%	12%	13%	8%	9%
02/2019	0%	5%	13%	13%	6%	5%	8%
03/2019	0%	6%	12%	11%	8%	6%	8%
04/2019	0%	6%	13%	12%	5%	5%	9%
05/2019	0%	6%	12%	10%	8%	6%	8%
06/2019	0%	6%	12%	12%	9%	6%	8%
07/2019	1%	7%	13%	12%	12%	7%	8%
08/2019	0%	8%	15%	14%	10%	7%	8%
09/2019	1%	7%	10%	9%	3%	5%	8%
10/2019	1%	8%	13%	11%	4%	5%	9%
11/2019	1%	7%	12%	11%	5%	5%	7%
12/2019	1%	6%	11%	10%	10%	6%	7%
01/2020	1%	9%	13%	11%	13%	7%	8%
02/2020	1%	9%	14%	12%	3%	5%	8%
03/2020	1%	5%	7%	6%	4%	3%	4%
04/2020	0%	0%	0%	0%	0%	0%	0%
05/2020	0%	2%	3%	3%	2%	1%	2%
06/2020	1%	7%	12%	11%	7%	5%	7%

**COVID-19 and Preventive Services: NH Medicaid**

**Table C6:** Total dental visits for preventive services per month for eligible NH Medicaid members from July 2017 to June 2020 by age group

<b>Month/Year</b>	<b>&lt;2</b>	<b>02-04</b>	<b>05-09</b>	<b>10-18</b>	<b>19-21</b>
07/2018	0%	3%	9%	8%	5%
08/2018	0%	5%	11%	10%	6%
09/2018	0%	4%	9%	8%	4%
10/2018	0%	5%	12%	10%	5%
11/2018	0%	5%	10%	8%	5%
12/2018	0%	4%	8%	7%	5%
01/2019	0%	5%	10%	9%	5%
02/2019	0%	5%	10%	9%	4%
03/2019	0%	6%	11%	9%	4%
04/2019	0%	7%	12%	10%	4%
05/2019	1%	7%	12%	9%	5%
06/2019	1%	6%	9%	8%	4%
07/2019	1%	7%	10%	8%	4%
08/2019	1%	7%	10%	9%	4%
09/2019	1%	7%	10%	8%	3%
10/2019	1%	8%	12%	10%	3%
11/2019	1%	7%	11%	8%	3%
12/2019	1%	6%	8%	7%	3%
01/2020	3%	8%	11%	9%	4%
02/2020	2%	7%	10%	8%	2%
03/2020	1%	4%	5%	5%	2%
04/2020	0%	0%	0%	0%	0%
05/2020	0%	2%	3%	2%	1%
06/2020	2%	6%	8%	7%	2%

**COVID-19 and Restorative Services: Commercial**

**Table C7:** Total dental visits for restorative services per month for eligible commercial members from July 2018 to June 2020 by age group

<b>Month/Year</b>	<b>&lt;2</b>	<b>02-04</b>	<b>05-09</b>	<b>10-18</b>	<b>19-21</b>	<b>22-26</b>	<b>27-64</b>
07/2018	0%	0%	2%	2%	3%	2%	3%
08/2018	0%	0%	2%	2%	3%	2%	3%
09/2018	0%	0%	2%	1%	1%	1%	2%
10/2018	0%	0%	2%	2%	1%	2%	3%
11/2018	0%	0%	2%	2%	1%	1%	3%
12/2018	0%	0%	2%	2%	2%	2%	2%
01/2019	0%	0%	2%	2%	3%	2%	3%
02/2019	0%	0%	2%	2%	1%	2%	3%
03/2019	0%	0%	2%	2%	2%	2%	3%
04/2019	0%	0%	2%	2%	2%	2%	3%
05/2019	0%	0%	2%	2%	2%	2%	3%
06/2019	0%	0%	2%	2%	2%	2%	3%
07/2019	0%	0%	2%	2%	3%	2%	3%
08/2019	0%	0%	2%	2%	3%	2%	3%
09/2019	0%	0%	2%	2%	1%	2%	2%
10/2019	0%	0%	2%	2%	1%	2%	3%
11/2019	0%	0%	2%	2%	1%	2%	2%
12/2019	0%	0%	2%	2%	2%	2%	2%
01/2020	0%	0%	2%	2%	3%	2%	3%
02/2020	0%	0%	2%	2%	1%	2%	3%
03/2020	0%	0%	1%	1%	1%	1%	2%
04/2020	0%	0%	0%	0%	0%	0%	0%
05/2020	0%	0%	1%	1%	1%	1%	1%
06/2020	0%	1%	2%	2%	2%	1%	2%

**COVID-19 and Restorative Services: NH Medicaid**

**Table C8:** Total dental visits for restorative services per month for eligible NH Medicaid members from July 2018 to June 2020 by age group

<b>Month/Year</b>	<b>&lt;2</b>	<b>02-04</b>	<b>05-09</b>	<b>10-18</b>	<b>19-21</b>
07/2018	0%	0%	2%	3%	2%
08/2018	0%	0%	3%	3%	3%
09/2018	0%	0%	3%	3%	2%
10/2018	0%	0%	3%	3%	2%
11/2018	0%	0%	3%	3%	2%
12/2018	0%	0%	3%	3%	2%
01/2019	0%	0%	3%	3%	2%
02/2019	0%	0%	3%	3%	2%
03/2019	0%	0%	3%	3%	2%
04/2019	0%	0%	3%	3%	2%
05/2019	0%	0%	3%	3%	2%
06/2019	0%	0%	3%	3%	2%
07/2019	0%	0%	3%	3%	2%
08/2019	0%	1%	3%	3%	2%
09/2019	0%	0%	3%	3%	1%
10/2019	0%	1%	4%	3%	2%
11/2019	0%	1%	3%	3%	1%
12/2019	0%	0%	3%	2%	1%
01/2020	0%	1%	3%	3%	1%
02/2020	0%	1%	3%	3%	1%
03/2020	0%	1%	2%	2%	1%
04/2020	0%	0%	0%	0%	0%
05/2020	0%	0%	1%	1%	0%
06/2020	0%	1%	2%	2%	1%

## Appendix D

### CDT Codes Category of Service categories and CDT code ranges:

Type of Service	Code Range
Diagnostic	D0100-D0999
Preventive	D1000-D1999
Restorative	D2000-D2999
Endodontics	D3000-D3999
Periodontics	D4000-D4999
Prosthodontics, removable	D5000-D5899
Maxillofacial Prosthetics	D5900-D5999
Implant Services	D6000-D6199
Prosthodontics, fixed	D6200-D6999
Oral/Maxillofacial Surgery*	D7000-D7999
Orthodontics	D8000-D8999
Adjunctive	D9000-D9999

\***Extraction Codes:** D7111, D7140, D7210, D7220, D7230, D7240, D7241, D7250, and D7251

### Fluoride Varnish and Sealant Codes

Code	Formatted Code	Description
CPT	99188	Application of topical fluoride varnish by a physician or other qualified health care professional
CDT	D1206	Topical application of fluoride varnish
CDT	D1208	Topic application of fluoride – excluding varnish
CDT	D1351	Sealant – per tooth
CDT	D1353	Sealant repair – per tooth
ICD10	Z29.3	Encounter for prophylactic fluoride administration



### NDC Codes for Fluoride Supplement Prescription

•00288110601	•00288110602	•00288110610	•00288220301	•00288220302
•00288220310	•44946100803	•44946100903	•44946100909	•44946101003
•44946103208	•58223051724	•58223067801	•58223067901	•58657016012
•58657016110	•58657016112	•58657016212	•58657032250	•59088010473
•59088010564	•59088010573	•59088010664	•59088010673	•61269016550
•63629113001	•63629113101	•63629113201	•63629113301	•81542074450

### ICD 10 Diagnosis Codes for Non-Traumatic Dental Related Conditions

•A69.0	•K00.0	•K00.1	•K00.2	•K00.3	•K00.4
•K00.5	•K00.6	•K00.7	•K00.8	•K00.9	•K01.0
•K01.1	•K02	•K02.3	•K02.5	•K02.51	•K02.52
•K02.53	•K02.6	•K02.61	•K02.62	•K02.63	•K02.7
•K02.9	•K03	•K03.0	•K03.1	•K03.2	•K03.3
•K03.4	•K03.5	•K03.6	•K03.7	•K03.8	•K03.81
•K03.89	•K03.9	•K04	•K04.0	•K04.01	•K04.02
•K04.1	•K04.2	•K04.3	•K04.4	•K04.5	•K04.6
•K04.7	•K04.8	•K04.9	•K04.90	•K04.99	•K05
•K05.0	•K05.00	•K05.01	•K05.1	•K05.10	•K05.11
•K05.2	•K05.20	•K05.21	•K05.211	•K05.212	•K05.213
•K05.219	•K05.22	•K05.221	•K05.222	•K05.223	•K05.229
•K05.3	•K05.30	•K05.31	•K05.311	•K05.312	•K05.313
•K05.319	•K05.32	•K05.321	•K05.322	•K05.323	•K05.329
•K05.4	•K05.5	•K05.6	•K06	•K06.0	•K06.01
•K06.010	•K06.011	•K06.012	•K06.013	•K06.02	•K06.020
•K06.021	•K06.022	•K06.023	•K06.1	•K06.3	•K06.8
•K06.9	•K08	•K08.0	•K08.1	•K08.10	•K08.101
•K08.102	•K08.103	•K08.104	•K08.109	•K08.12	•K08.121
•K08.122	•K08.123	•K08.124	•K08.129	•K08.13	•K08.131



•K08.132	•K08.133	•K08.134	•K08.139	•K08.19	•K08.191
•K08.192	•K08.193	•K08.194	•K08.199	•K08.2	•K08.20
•K08.21	•K08.22	•K08.23	•K08.24	•K08.25	•K08.26
•K08.3	•K08.4	•K08.40	•K08.401	•K08.402	•K08.403
•K08.404	•K08.409	•K08.42	•K08.421	•K08.422	•K08.423
•K08.424	•K08.429	•K08.43	•K08.431	•K08.432	•K08.433
•K08.434	•K08.439	•K08.49	•K08.491	•K08.492	•K08.493
•K08.494	•K08.499	•K08.5	•K08.50	•K08.51	•K08.52
•K08.53	•K08.530	•K08.531	•K08.539	•K08.54	•K08.55
•K08.56	•K08.59	•K08.8	•K08.81	•K08.82	•K08.89
•K08.9	•K09	•K09.0	•K09.1	•K09.8	•K09.9
•K11	•K11.0	•K11.1	•K11.2	•K11.20	•K11.21
•K11.22	•K11.23	•K11.3	•K11.4	•K11.5	•K11.6
•K11.7	•K11.8	•K11.9	•K12	•K12.0	•K12.1
•K12.2	•K12.3	•K12.30	•K12.31	•K12.32	•K12.33
•K12.39	•K13	•K13.0	•K13.1	•K13.2	•K13.21
•K13.22	•K13.23	•K13.24	•K13.29	•K13.3	•K13.4
•K13.5	•K13.6	•K13.7	•K13.70	•K13.79	•K14
•K14.0	•K14.1	•K14.2	•K14.3	•K14.4	•K14.5
•K14.6	•K14.8	•K14.9	•K20	•K20.0	•K20.8
•K20.9	•K21	•K21.0	•K21.9	•K22	•K22.0
•K22.1	•K22.10	•K22.11	•K22.2	•K22.3	•K22.4
•K22.5	•K22.6	•K22.7	•K22.70	•K22.71	•K22.710
•K22.711	•K22.719	•K22.8	•K22.9	•K23	•M26
•M26.0	•M26.00	•M26.01	•M26.02	•M26.03	•M26.04
•M26.05	•M26.06	•M26.07	•M26.09	•M26.1	•M26.10
•M26.11	•M26.12	•M26.19	•M26.2	•M26.20	•M26.21
•M26.211	•M26.212	•M26.213	•M26.219	•M26.22	•M26.220
•M26.221	•M26.23	•M26.24	•M26.25	•M26.29	•M26.3
•M26.30	•M26.31	•M26.32	•M26.33	•M26.34	•M26.35
•M26.36	•M26.37	•M26.39	•M26.4	•M26.5	•M26.50
•M26.51	•M26.52	•M26.53	•M26.54	•M26.55	•M26.56
•M26.57	•M26.59	•M26.6	•M26.60	•M26.601	•M26.602



•M26.603	•M26.609	•M26.61	•M26.611	•M26.612	•M26.613
•M26.619	•M26.62	•M26.621	•M26.622	•M26.623	•M26.629
•M26.63	•M26.631	•M26.632	•M26.633	•M26.639	•M26.69
•M26.7	•M26.70	•M26.71	•M26.72	•M26.73	•M26.74
•M26.79	•M26.8	•M26.81	•M26.82	•M26.89	•M26.9
•M27	•M27.0	•M27.1	•M27.2	•M27.3	•M27.4
•M27.40	•M27.49	•M27.5	•M27.51	•M27.52	•M27.53
•M27.59	•M27.6	•M27.61	•M27.62	•M27.63	•M27.69
•M27.8	•M27.9	•R68.2	•R68.84	•S00.5	•S00.502
•S00.502A	•S00.502D	•S00.502S	•S00.512	•S00.512A	•S00.512D
•S00.512S	•S00.52	•S00.522	•S00.522A	•S00.522D	•S00.522S
•S00.53	•S00.532	•S00.532A	•S00.532D	•S00.532S	•S00.54
•S00.542	•S00.542A	•S00.542D	•S00.542S	•S00.55	•S00.552
•S00.552A	•S00.552D	•S00.552S	•S00.57	•S00.572	•S00.572A
•S00.572D	•S00.572S	•S01.401	•S01.401A	•S01.401D	•S01.401S
•S01.402	•S01.402A	•S01.402D	•S01.402S	•S01.409	•S01.409A
•S01.409D	•S01.409S	•S01.5	•S01.50	•S01.501	•S01.501A
•S01.501D	•S01.501S	•S01.502	•S01.502A	•S01.502D	•S01.502S
•S03.0	•S03.00	•S03.00XD	•S03.00XS	•S03.01	•S03.01XA
•S03.01XD	•S03.01XS	•S03.02	•S03.02XA	•S03.02XD	•S03.02XS
•S03.03	•S03.03XA	•S03.03XD	•S03.03XS	•S03.0XXA	•S03.0XXD
•S03.0XXS	•S03.2	•S03.2XXA	•S03.2XXD	•S03.2XXS	•S03.4
•S03.40	•S03.40XA	•S03.40XD	•S03.40XS	•S03.41	•S03.41XA
•S03.41XD	•S03.41XS	•S03.42	•S03.42XA	•S03.42XD	•S03.42XS
•S03.43	•S03.43XA	•S03.43XD	•S03.43XS	•S03.4XXA	•S03.4XXD
•S03.4XXS	•S09.93	•S09.93XA	•S09.93XD	•S09.93XS	•Z01.2
•Z01.20	•Z01.21	•Z46.3	•Z46.4		