

The Importance of Being Ready

Lessons from Medicaid and Commercial Dental Claims Data

On April 1, 2020, the American Dental Association (ADA) recommended that “dentists keep their offices closed to all but urgent and emergency procedures” to reduce the spread of what was then called SARS-CoV-2, the virus that causes COVID-19.

As the COVID-19 pandemic continued, beginning in June 2020 the Centers for Disease Control and Prevention (CDC) advised dental offices to resume providing non-urgent care. Upon reopening, offices used different means to support their clinical practice, including processes to screen for COVID-19, [enhanced personal protective equipment \(PPE\)](#), [methods to reduce or eliminate aerosol-producing procedures](#) through minimally invasive techniques, and strategies for social distancing among patients and the dental team. Oral health providers [have described adjusting their clinical practice](#) based on resource availability, but little is known about the frequency of different types of dental procedures delivered during this first disruption to oral health care in the early days of the COVID-19 pandemic

compared with the care delivered during the same time period the year before.

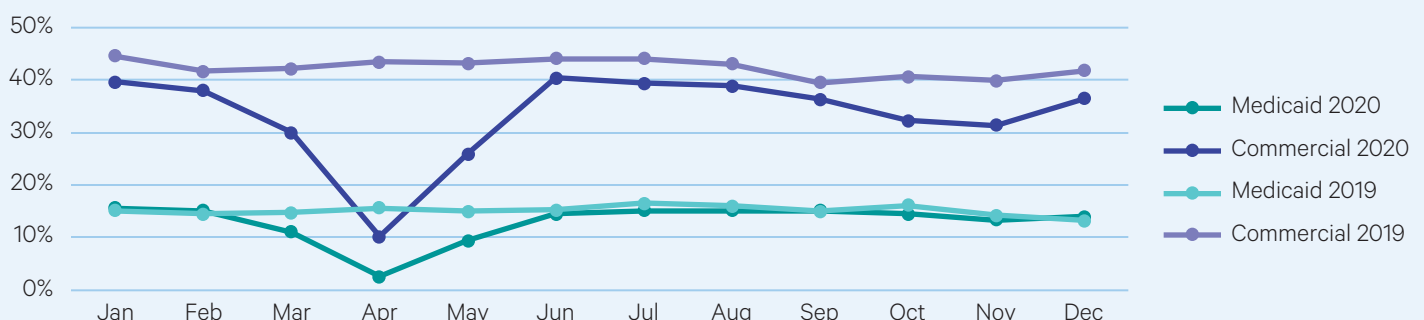
We examined Medicaid and commercial insurance claims data by age and dental procedure type in 2020 and compared these data to claims data from 2019. Medicaid claims data came from the 2019 and 2020 IBM Watson Multi-State Medicaid MarketScan Database, which includes data from all Medicaid claims in 13 de-identified states. Commercial claims data came from the 2019 and 2020 IBM Watson Dental Commercial and Medicare Supplemental Claims Database, which supplies all dental and medical claims from a convenience sample of IBM Watson data contributors.

Overall Dental Care Encounters, Including Preventive and Non-Urgent Care, Dropped in April 2020

In both the Medicaid and commercial cohorts, dental encounters as a proportion of overall outpatient encounters began declining in February 2020, dropping to their lowest

point in April 2020, returning to near-2019 levels by June 2020, and remaining relatively stable through the rest of 2020.

Dental Encounters as a Proportion of Overall Outpatient Encounters, 2019–2020

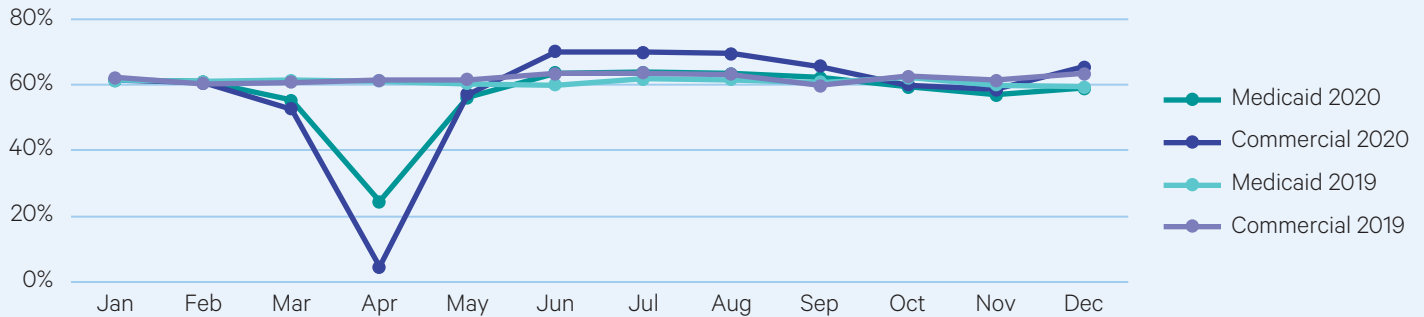


Several specific types of procedures followed this same general pattern of beginning to drop in February 2020, reaching their lowest points in April, then returning to near-2019 levels around June. Utilization by procedure type was calculated as a proportion of all dental encounters. Specifically, preventive care, imaging, diagnostics, minor restorations, scaling and root planing, and other periodontal treatments generally followed this same pattern of utilization drop in April 2020 compared with the same time in 2019, in both the Medicaid

and commercial cohorts. In other words, procedures related to preventing disease and fixing minor problems decreased precipitously in the early days of the pandemic.

In April 2020, the frequency of preventive procedures (e.g., prophylaxis/cleaning, fluoride application) dropped to its lowest point that year, consistent with the ADA's recommendation for dental offices to provide only urgent and emergency procedures. In comparison, the rate of preventive procedures remained consistent throughout 2019.

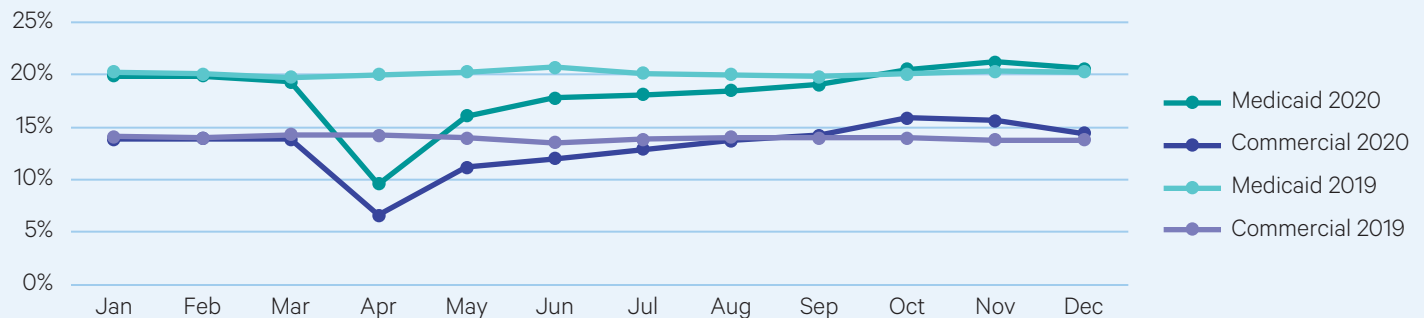
Preventive Care as a Proportion of Overall Outpatient Encounters — Medicaid and Commercial Insurance, 2019–2020



Minor restoration procedures (e.g., fillings) also dropped in frequency in April 2020 compared to April 2019. Similar to preventive care, oral health providers likely chose to postpone

procedures for smaller fillings in the early days of the public health emergency.

Minor Restorations as a Proportion of Overall Outpatient Encounters — Medicaid and Commercial Insurance, 2019–2020



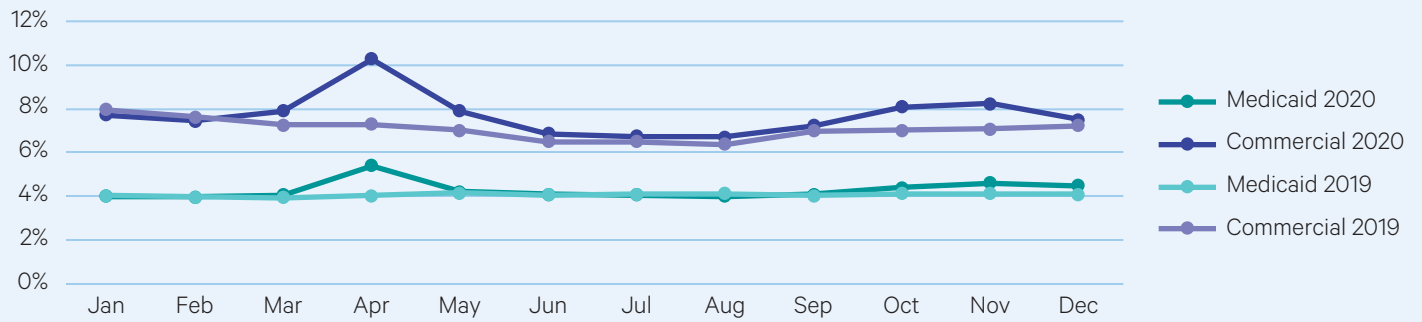
Major Restorative and Surgical Procedures Spiked as a Proportion of All Dental Services in April 2020

At the same time, procedures aimed at resolving pain spiked in April 2020, consistent with the ADA's guidance on focusing only on urgent dental needs in the first stages of the pandemic. Specifically, in both Medicaid and commercial claims, there was a sudden increase in major restorations, oral surgery, endodontic procedures, general anesthesia, and "adjunctive general" services. Interestingly, there was an uptick in orthodontic procedures in April 2020 in both Medicaid and commercial claims. There was also an uptick in prosthodontic treatment in April 2020, more so within the Medicaid cohort than commercial

cohort. Percentages of "other anesthesia" were higher among Medicaid enrollees compared to those with commercial insurance but remained stable across both 2019 and 2020.

Conversely, major restorative procedures (e.g., crowns, bridges, and dentures) increased in frequency in April 2020. As these types of procedures are not always as aerosol-generating as other procedures (e.g., fillings), oral health providers may have continued with these procedures to continue to provide care while still following the ADA's recommendations.

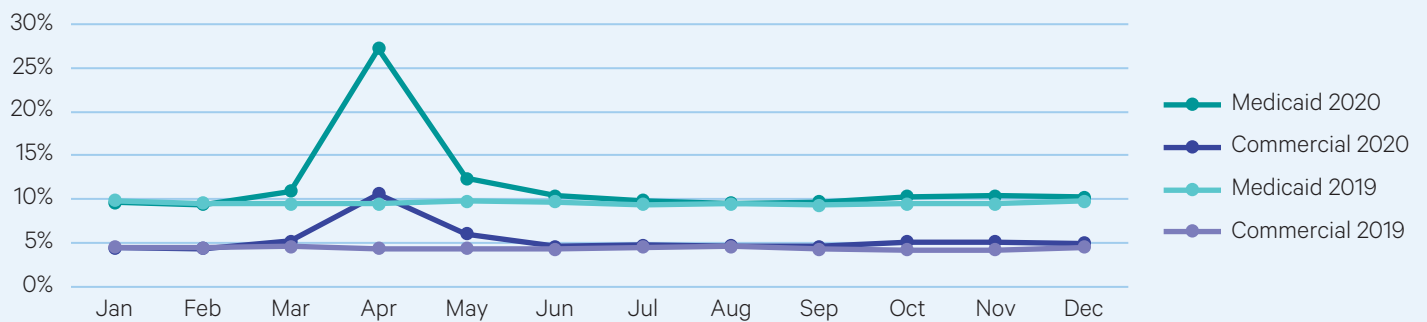
Major Restorations as a Proportion of Overall Outpatient Encounters — Medicaid and Commercial Insurance, 2019–2020



Consistent with recommendations to limit care to urgent and emergency treatments, oral surgery procedures (e.g., extractions) increased in April 2020 compared to the same period in 2019. This was especially true for individuals covered

by Medicaid insurance. As many states' Medicaid programs cover extractions as part of their emergency coverage, oral health providers may have relied more on this type of procedure in emergency situations during the early days of the pandemic.

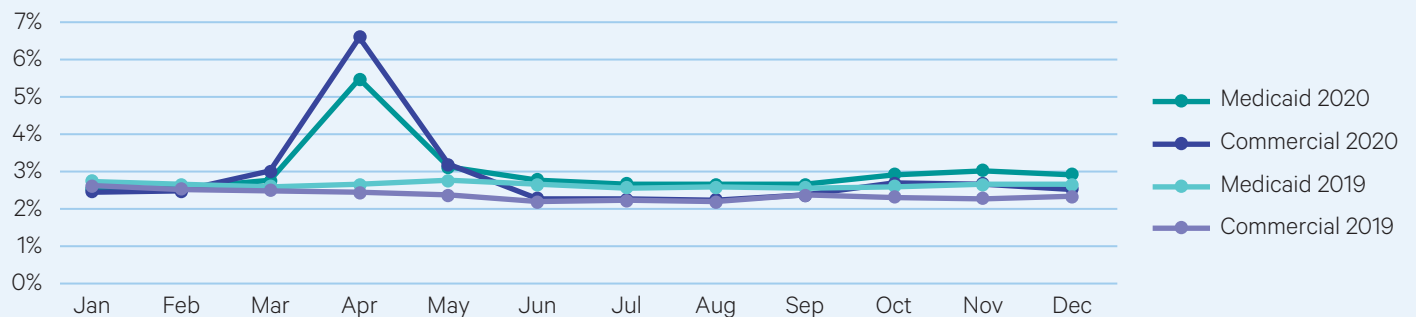
Oral Surgery as a Proportion of Overall Outpatient Encounters — Medicaid and Commercial Insurance, 2019–2020



Endodontic procedures (i.e., root canal treatment) increased in April 2020, more so for individuals with commercial insurance compared to those with Medicaid coverage. Oral

health providers may have chosen to address some dental emergencies using endodontic procedures rather than extractions, particularly for patients with commercial insurance.

Endodontics as a Proportion of Overall Outpatient Encounters — Medicaid and Commercial Insurance, 2019–2020

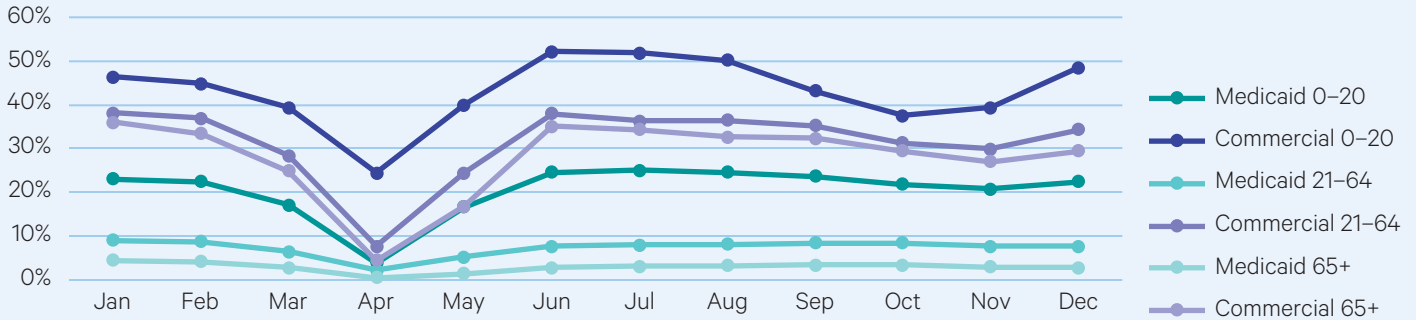


Dental Utilization in 2020 Varied by Age, Procedure Class, and Insurance Type

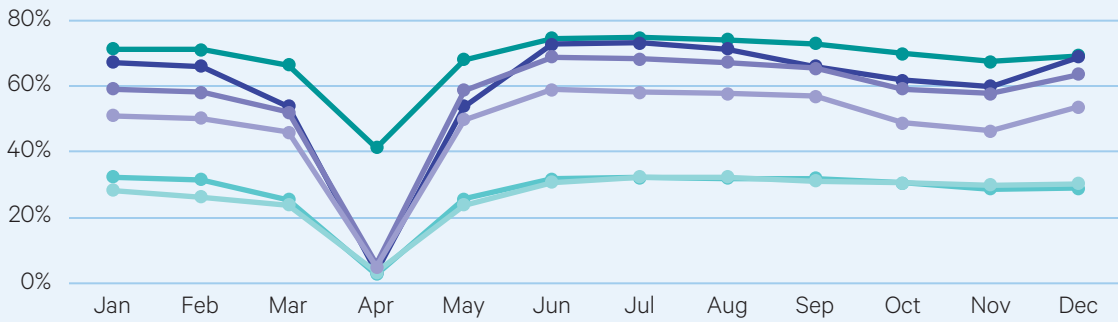
In 2020, utilization of procedure types varied depending on age group and insurance type. Dental encounters as a proportion of overall outpatient encounters dropped sharply in April 2020 for all ages except for those with Medicaid coverage aged 21–64

and 65+, for whom rates remained relatively low and stable. Preventive services and minor restorations (see Appendix) dropped to some extent for all age groups in April and then increased starting in June 2020.

Dental Encounters as a Proportion of Overall Outpatient Encounters — 2020 Medicaid and Commercial Insurance by Age



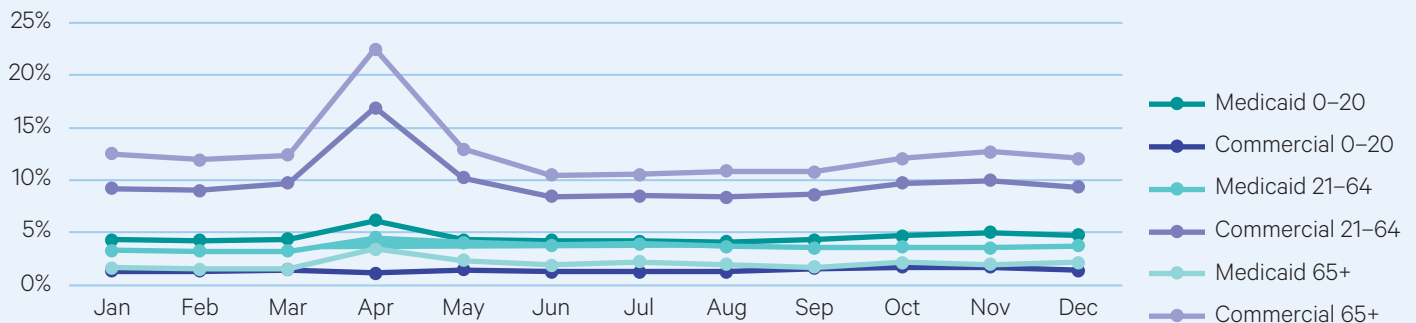
Preventive Care as a Proportion of Overall Outpatient Encounters — 2020 Medicaid and Commercial Insurance by Age



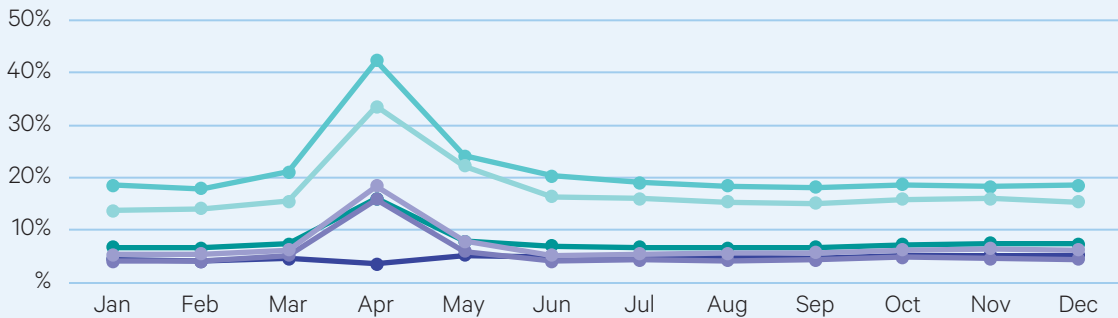
Major restorations increased considerably for commercial enrollees aged 21–64 and 65+ and increased slightly for Medicaid enrollees aged 0–20 and 65+; otherwise, they remained stable throughout the year. There was a spike around

April 2020 in oral surgery and endodontic care (see Appendix) for all age groups except for the youngest (0–20 years old) commercial insurance enrollees, whose rates remained flat across all 12 months.

Major Restorations as a Proportion of Overall Patient Encounters — 2020 Medicaid and Commercial Insurance by Age



Oral Surgery as a Proportion of Overall Patient Encounters — 2020 Medicaid and Commercial Insurance by Age



While utilization of preventive care, periodontal care, and minor restorations dropped in April 2020, the frequency of other types of dental care increased during the same time, depending on age and insurance. Both general anesthesia and other anesthesia increased in April 2020 for all ages except those aged 0–20 with commercial insurance, for whom rates decreased in April and then rebounded in May. Adjunctive general procedures increased in April 2020 for all age groups except for those aged 0–20 years with either Medicaid or commercial coverage.

Other dental procedures showed mixed utilization patterns during the first half of 2020 based on age group and insurance. Diagnostic services increased for adults with

Conclusions

This analysis of Medicaid and commercial insurance claims found noticeable changes in dental procedure utilization surrounding April 2020, when dental offices were strongly recommended to provide only urgent care and avoid aerosol-producing procedures, if possible, to prevent the spread of COVID-19. Specifically, claims for procedures focused on prevention, minor restorative care, and periodontal treatment dropped in April 2020 compared to the same period in 2019 and then started to rebound throughout the year. Conversely, claims for procedures aimed at pain relief (e.g., major restorations, endodontics, oral surgery) increased sharply in April 2020 and then returned to levels more consistent with the same period in 2019. These findings suggest that dental providers were following guidance to limit elective treatments and focus on emergent care.

Examining trends by age and insurance type revealed interesting findings. For example, orthodontic treatment spiked significantly in April, but only for commercially insured individuals aged 0–20; this increase was less pronounced for older commercial enrollees (21–64) and even less so for the youngest Medicaid enrollees (0–20). While orthodontic treatment typically is not considered to be an urgent treatment need, this increase may be due to dental offices moving away from aerosol-generating procedures, along with the fact that many children and adolescents were not attending school in person, making the scheduling of orthodontic appointments more flexible. Meanwhile, prosthodontic care (e.g., dentures) claims were highest for adults aged 65+ enrolled in Medicaid, followed by the same age group with commercial insurance. As prosthodontic care may avoid producing the same amount of aerosols as other procedures, it may be that dental providers encouraged their patients needing prosthodontic care to come in for adjustments in place of other procedures.

Medicaid coverage aged 21–64 and 65+ in April 2020, while these services dropped at least somewhat for all other ages. Similarly, imaging increased for adults aged 21–64 and 65+ with Medicaid coverage as well as adults aged 65+ with commercial insurance, while dropping for those aged 0–20 in both insurance cohorts, and otherwise staying stable. Orthodontic treatment increased in April for individuals aged 0–20 in both cohorts and for younger adults aged 21–64 with commercial insurance and remained stable for all other age groups. Conversely, prosthodontic treatment increased for adults aged 65+ in both insurance cohorts, decreased slightly for younger adults aged 21–64 with Medicaid insurance, and remained stable for all other age groups.

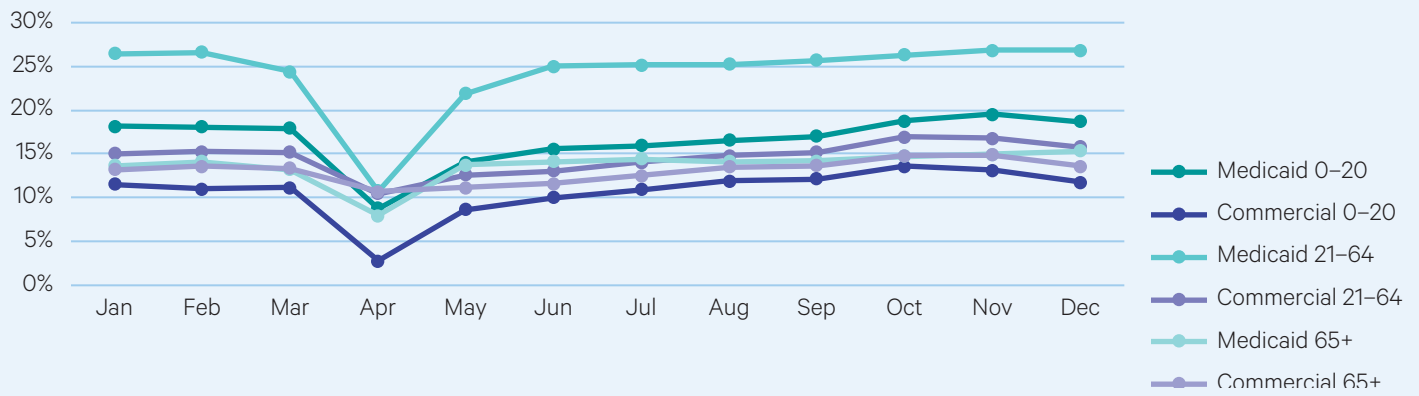
An analysis of dental encounters as a proportion of overall outpatient encounters found that those with commercial insurance across all ages had more dental claims in 2020 than those with Medicaid coverage. Furthermore, dental claims for adults (21 and older) with Medicaid remained low throughout 2020 compared with claims for children with Medicaid and for all individuals with commercial insurance. During the first stages of the COVID-19 public health emergency, dental providers focused on providing care for the most urgent treatment needs, yet inequities in oral health care remained for adults with Medicaid coverage, both during the pandemic and during the same time period the year before.

These results suggest a need for the oral health profession to maintain a state of emergency readiness to be able to provide consistent care in the face of future public health emergencies. While delivering more urgent care was important during the early days of the COVID-19 pandemic, the ability to maintain routine and non-emergent care decreased as dental offices adapted to local and federal recommendations for clinical practice. By ensuring that practices have and maintain high-quality ventilation systems, adequate supplies of PPE, and clear policies regarding delivery of emergent and routine care during a public health emergency, the oral health profession will be positioned to continue to deliver consistently high-quality care to their communities.

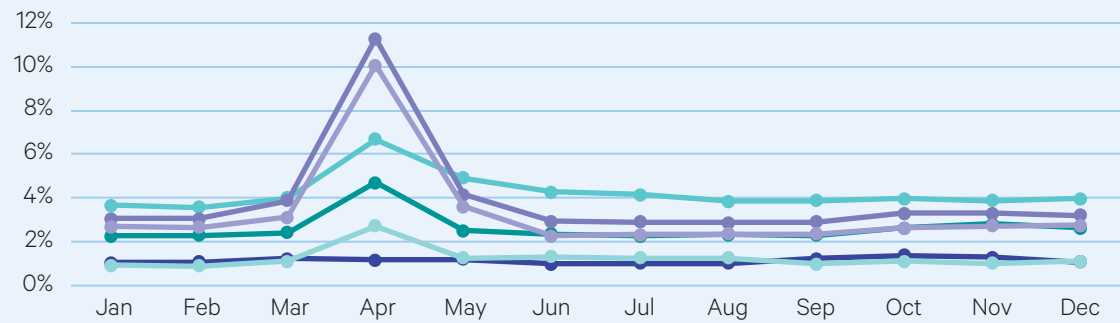
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Appendix: Dental Utilization of Minor Restoration and Endodontic Procedures in 2019–2020

Minor Restorations as a Proportion of Overall Outpatient Encounters — 2020 Medicaid and Commercial Insurance by Age



Endodontics as a Proportion of Overall Outpatient Encounters — 2020 Medicaid and Commercial Insurance by Age



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