



Impact of COVID-19 on Dental Care for Pediatric Patients

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BACKGROUND

- The COVID-19 pandemic brought about numerous changes that affected the economics of the dental industry and impacted patient access to care.
- On March 16, 2020, the ADA released guidelines limiting dental care to only emergency treatment
 - These guidelines expired on April 30, 2020.
- The purpose of this study is to evaluate quantitative changes in dental visits and financial trends affecting the pediatric population caused by the COVID-19 pandemic.

METHODS

- Commercial dental insurance claims for patients in the U.S. under age 18 were obtained and analyzed.
- Over 50 commercial insurance plans were represented with a total of 10,718,936 CDT codes.
- The claims dates ranged from January 1, 2019 to August 31, 2020.
- Total claims paid, average amount per visit, and number of visits were compared between provider specialties and patient age groups from 2020 to 2019.
- Age groups were subdivided between 0-5, 6-12, and 13-18 years.
- Provider type was divided between: general dentists, pediatric dentists, orthodontists, and "other" specialties.
- Generalized linear models with a Tweedie distribution was used.

FIGURES

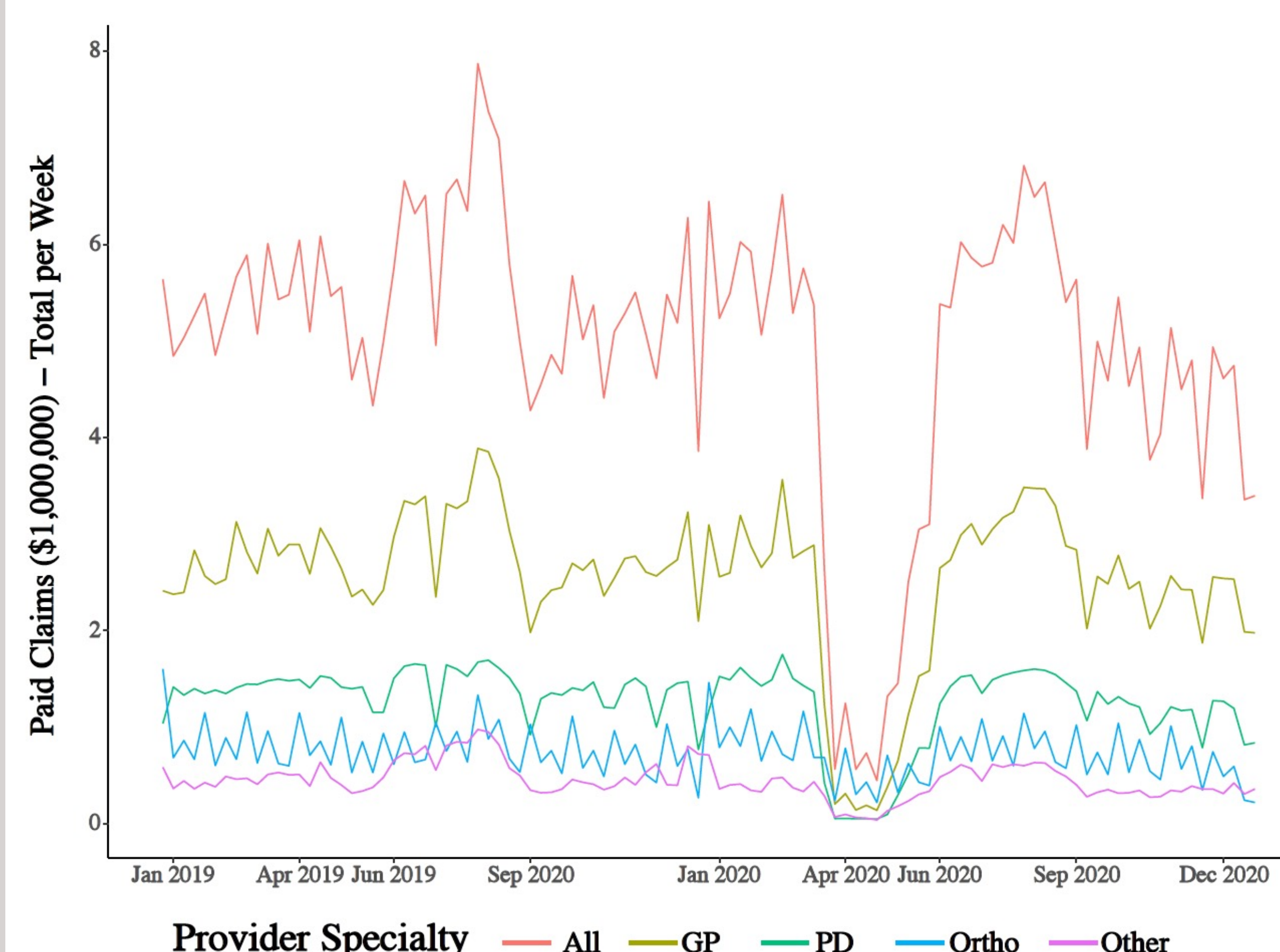


Figure 1. Total paid claims per week compared between provider specialties

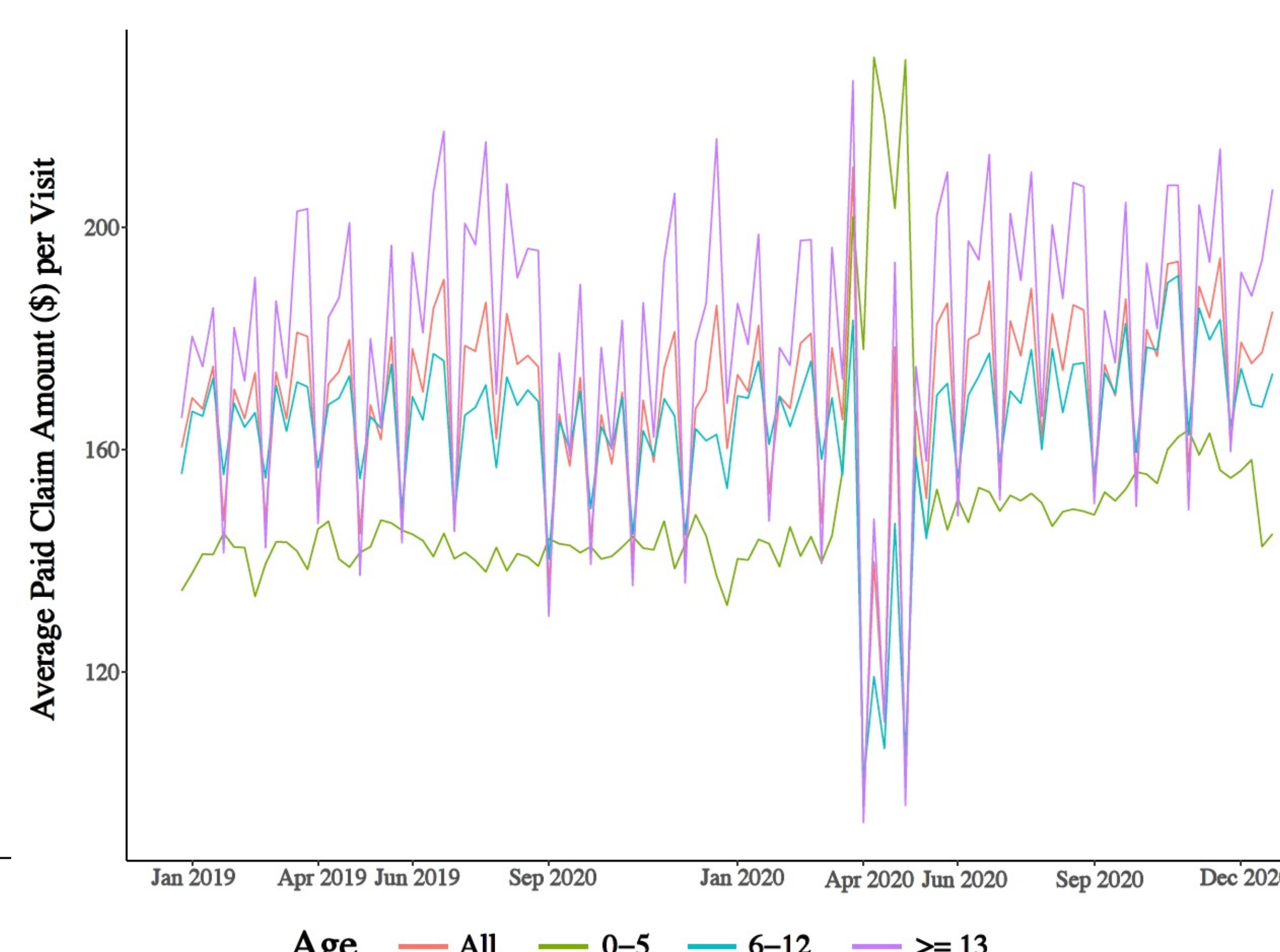


Figure 2. Average paid amount per visit compared between age groups

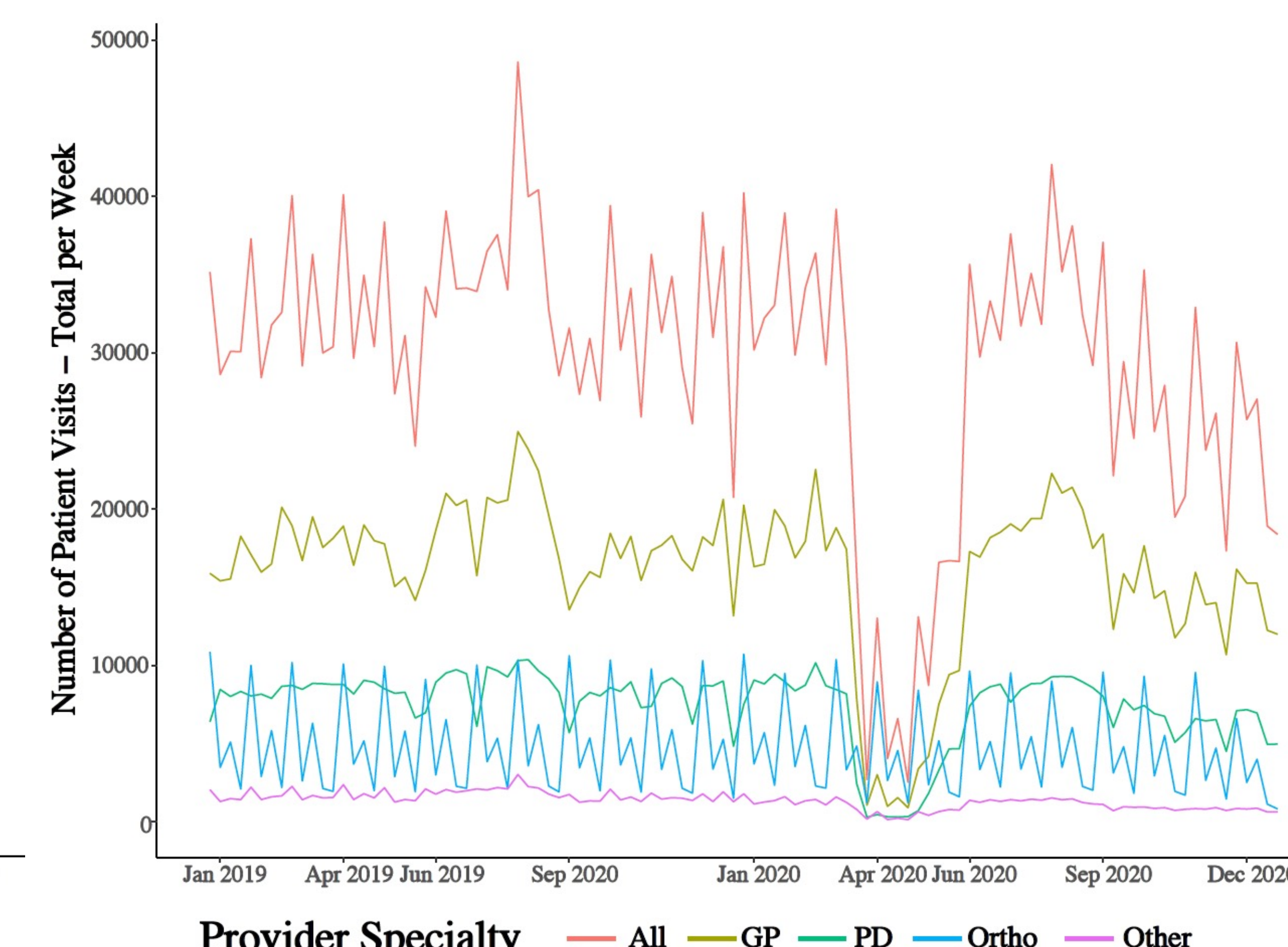


Figure 3. Number of patient visits per week compared between specialties

RESULTS

- Total claims paid per week and total visits per week during the period of the COVID-19 shutdown was drastically lower than the same timeframe in 2019 ($p < 0.001$). (Figure 1)
- There was a significant increase in the claims paid per visit for patients between ages 0-5 years old during the shutdown period ($p < 0.001$), whereas that number decreased for all other age groups when compared to the previous year ($p < 0.001$). (Figure 2)
- Orthodontists did not see a significant decrease in the number of patient visits during the COVID-19 shutdown ($p = 0.728$). (Figure 3)
- Oral surgeons, periodontists, endodontists, and prosthodontists were slower to recover from the COVID-19 shutdown when compared to general dentists and pediatric dentists ($p < 0.005$). (Figures 1 and 3)

DISCUSSION

- This research is consistent with additional studies that have been published recently that also show steep decreases in dental treatment provided during the COVID-19 shutdown period.^{1, 2}
- Most orthodontic procedures are non-aerosolizing and delays in regular orthodontic recare can have impact on treatment outcomes.
 - This reasoning may have contributed to orthodontists continuing to see a normal number of patients throughout the COVID-19 shutdown.
- Children under age 5 had more expensive emergency visits which may be related to how caries affect the primary dentition.
 - Primary teeth have thinner and less mineralized enamel and larger pulp horns, which can lead carious lesions to become pulpally involved more quickly than in permanent dentition.³
- The dual role of a pediatric dentist as both a primary and a specialty care provider likely contributed to their quicker recovery when compared to other specialists.⁴
- Some limitations of this study are exclusion of patients covered by Medicaid and inability to differentiate between region, as many states had different COVID-19 restrictions.

REFERENCES

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