



## Introduction

The AAPD recommends parents brush their child's teeth with fluoridated toothpaste twice a day once the first tooth erupts. A Cochrane Systematic Review from 2003 reviewed seventy randomized or quasi-randomized control trials and determined fluoridated toothpaste is effective in reducing dental caries.<sup>2</sup> The benefits of fluoride are well accepted within the dental community. Prevident 5000 Plus is a prescription dentifrice with a fluoride concentration of 5000 ppm which has been proven to have a beneficial effect on caries. This is about five times more concentrated than most over-the-counter dentifrice which have fluoride concentrations that range from 600 ppm to 1100 ppm. When comparing Prevident to a dentifrice with 1100 ppm fluoride, one study found Prevident was significantly better at remineralizing primary root caries.<sup>1</sup> The active ingredient of Prevident is 1.1% sodium fluoride. A 2018 meta analysis from the Journal of Dental Research found 5000 ppm (1.1%NaF) toothpaste effective for arresting non-cavitated occlusal and interproximal carious lesions in primary and permanent teeth.<sup>3</sup> While there are several studies focusing on the effectiveness of Prevident clinically, there are few studies that focus on parent and patient compliance in using Prevident as prescribed. While SBH pediatric residents often prescribe Prevident, it is uncertain if parents are actually picking up the toothpaste from the pharmacy and ensuring their children use it as recommended.



## Study Objectives

The aim of this study is to assess the compliance of patients and parents with Prevident use in the SBH population. The hypothesis to be tested will be that most parents pick up the prescription and most patients are using Prevident as prescribed. Results will help providers identify roadblocks to use and common questions which will help providers give more tailored instructions to parents and patients in the future.

## Methods

### Subjects

50 healthy patients between 6-18 years of age met the inclusion/exclusion criteria and took part in the study. Their guardians also took part in the study.

### Patient Selection

**Inclusion Criteria:** Children between 6-18 years of age, ASA I or II. Children who are prescribed Prevident by their pediatric dental resident. Children with at least one carious lesion, incipient or cavitated. Survey to be completed by both child and their guardian.

**Exclusion Criteria:** Children under the age of 6 or above the age of 18. Exclude children who are not ASA I or II. Children without carious lesions. Children who are not prescribed Prevident.

All patients received the same instructions regarding Prevident use. They were asked to brush twice a day with Prevident and floss daily. Patients were also instructed to not rinse after brushing and to wait 30 minutes before eating or drinking. Patients were given 5 refills.

### Data Collection

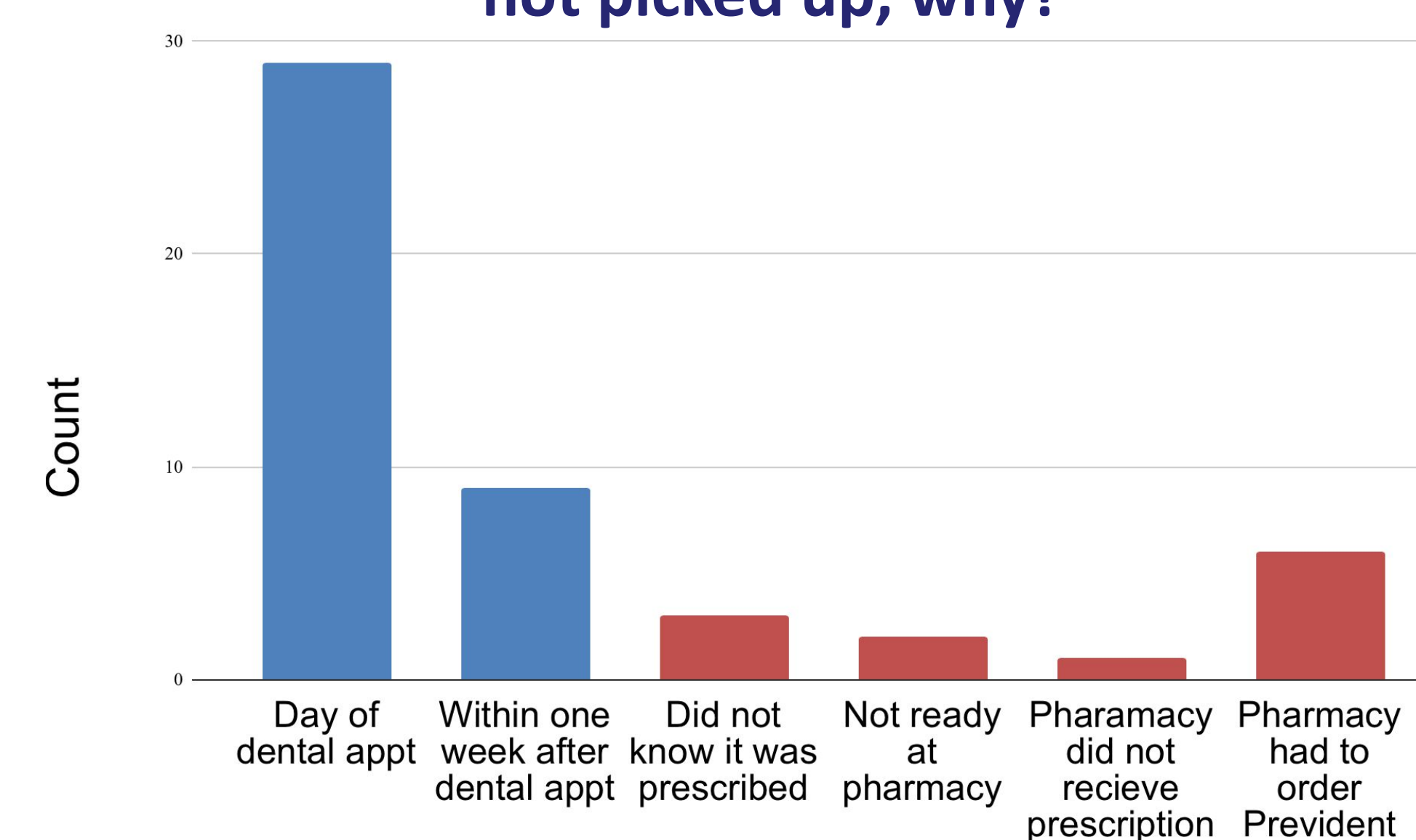
Guardian and children were contacted about 4-6 weeks after the Prevident was prescribed and were asked to complete a survey about their compliance with Prevident use. Guardians were questioned about when they picked up the Prevident and asked to provide the reason if it was not picked up. When parents reported they had not yet picked up the Prevident, they were contacted again after the Prevident was picked up to complete the remainder of the survey. Those with children under 8 were also asked if they assist their child in brushing daily. Patients were asked about their brushing and flossing habits. They were also asked if they followed instructions given, including not rinsing after brushing and waiting 30 minutes to eat or drink. Data was analyzed and key trends were identified.

## Results

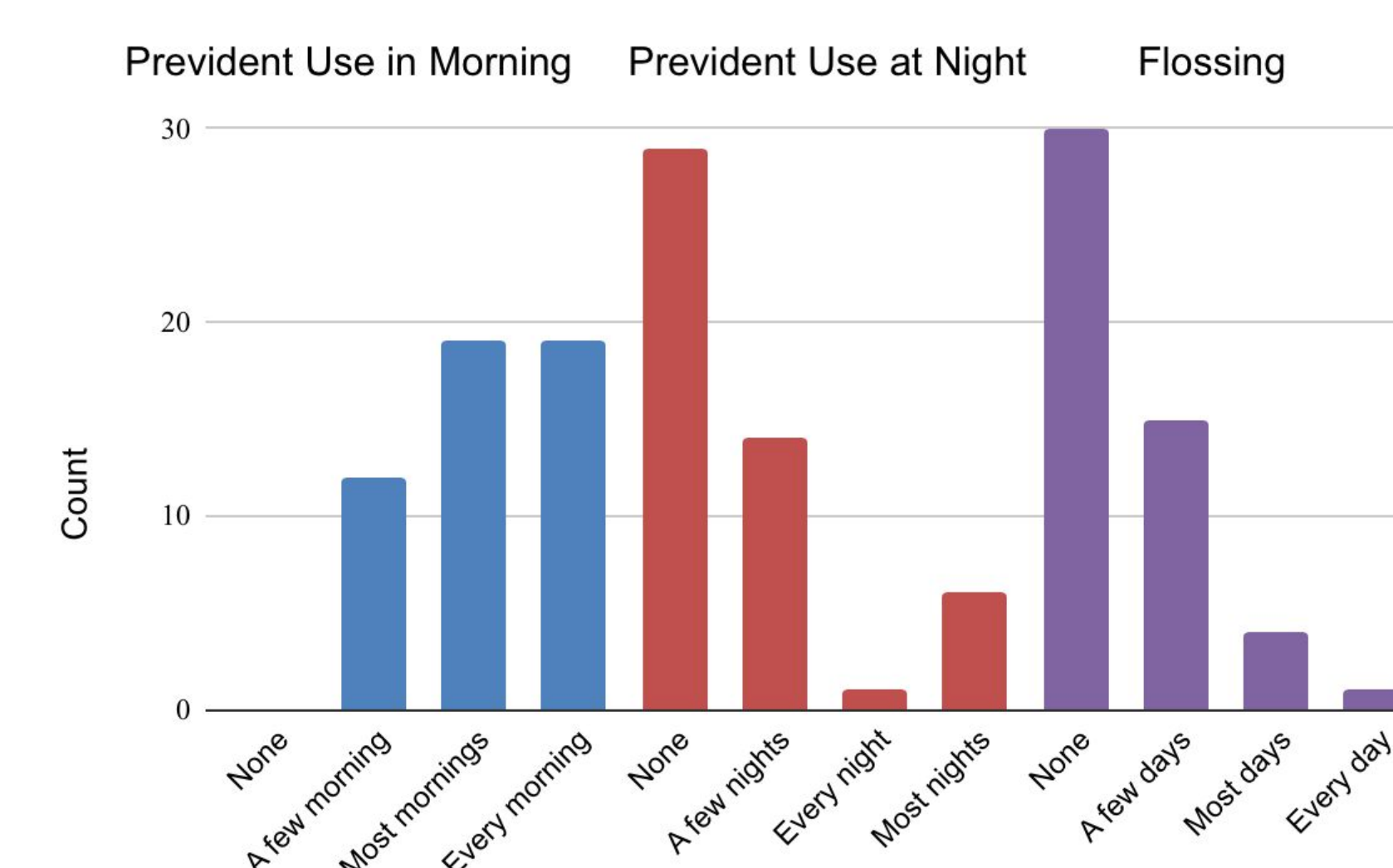
44 out of 50 guardians reported this was the first time their child was prescribed Prevident. 60% percent of patients reported having no difficulty using Prevident. The remaining 40% attributed difficulty to the fact that they forgot. No patients reported difficulty due to taste or texture. Only 30% of patients reported they were more likely to brush now that they have a "special" prescription toothpaste.

## Results

### Guardian: When did you pick up the toothpaste? If not picked up, why?

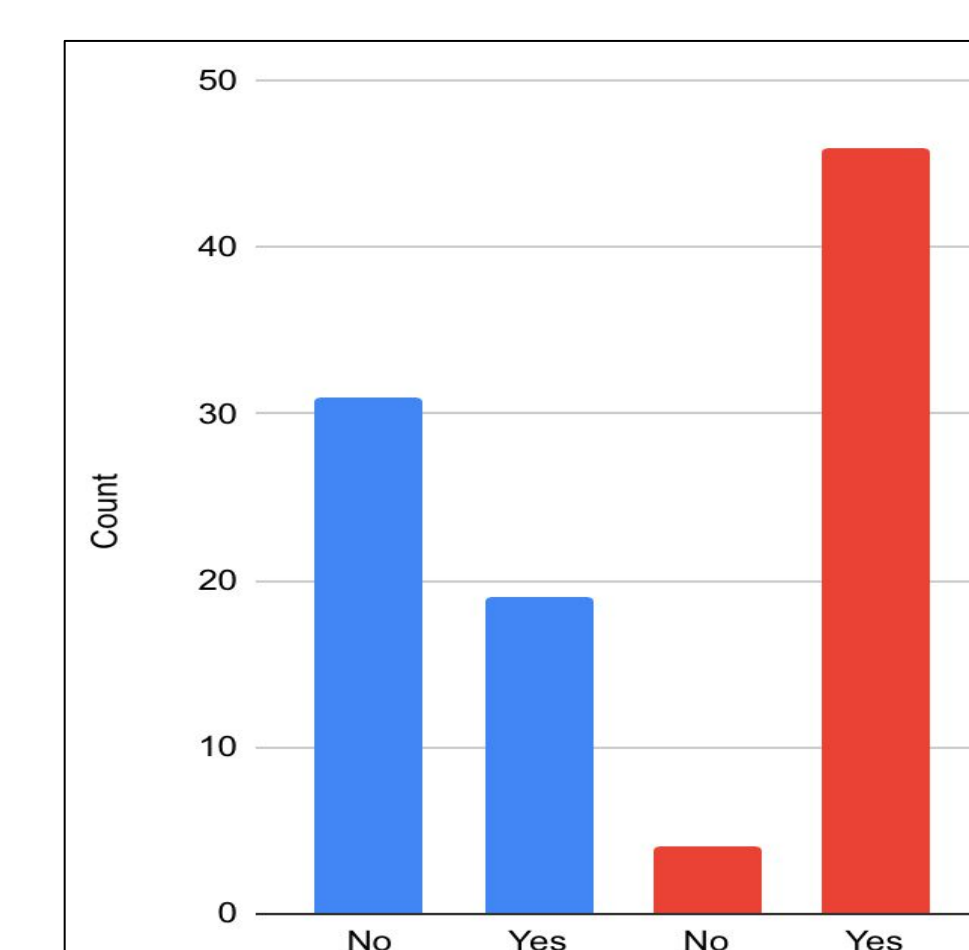


### Prevident Use and Flossing Habits



### Guardian:

Are you aware you have refills?

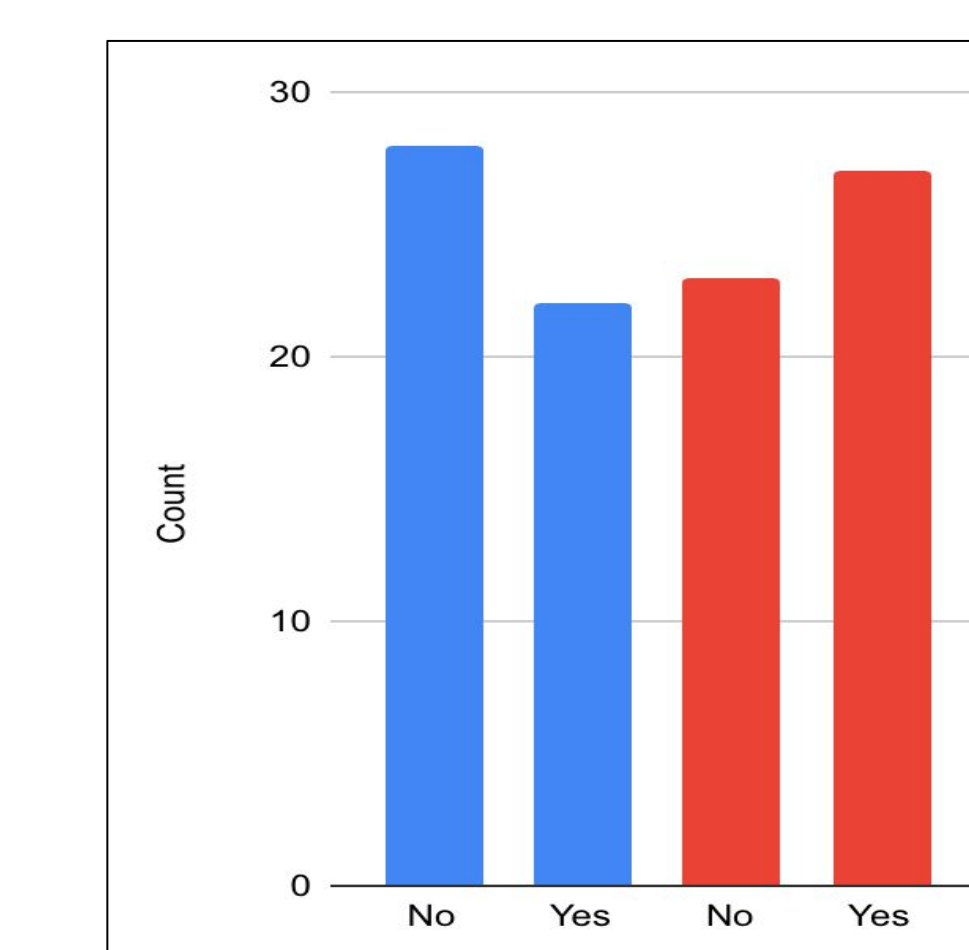


Will you refill?

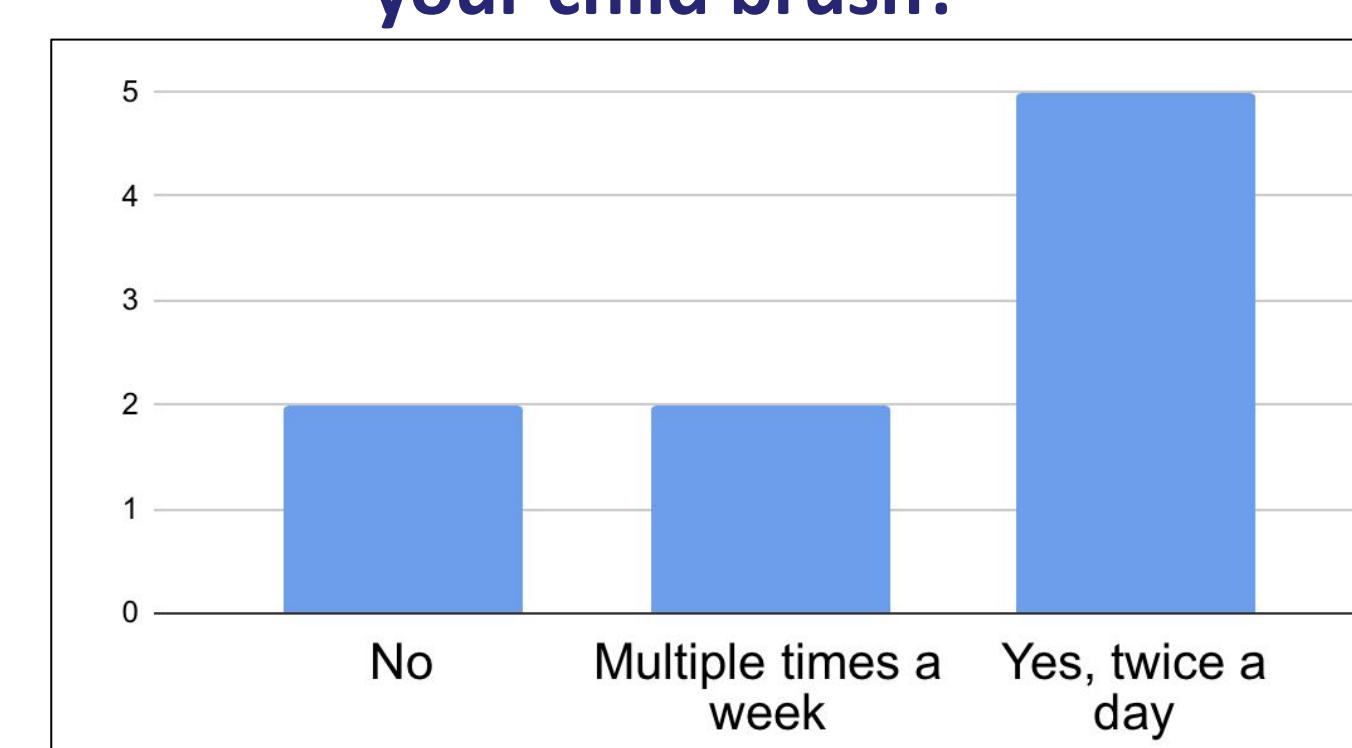
### Child:

Do you rinse after use?

Do you wait 30 min to eat or drink?



### Guardians of children under 8: Do you supervise or help your child brush?



## Discussion

Parents are highly motivated to pick up Prevident prescriptions as 94% of parents either acquired the prescription or attempted to. 6% of parents were unaware it was prescribed and 62% were unaware they had refills. At the end of the appointment, residents can use the teach-back method with parents to confirm they understand that Prevident has been prescribed and that they have five refills available.

The most common reason patients were unable to pick up the prescription is that the pharmacy had to order it. Residents can reach out to commonly used pharmacies in the area to confirm that Prevident is regularly stocked. Additionally, residents can follow up with patients about one week after the initial prescription to check if they have picked up their prescription and address any issues they may have encountered.

While patients are using the Prevident at least once a day, 44% rinse after use and 46% do not wait the full 30 min prior to eating and drinking. Using the teach-back method with patients to reinforce proper usage instructions can ensure patients fully understand use instructions.

Since forgetting to use Prevident, especially at night, is a common challenge for patients, encouraging adherence by recommending strategies such as using a tooth brushing chart for younger patients and the Oral-B brushing app or setting a phone reminder for older patients.

Lastly, given that most parents of children under eight are heavily involved in their child's oral hygiene routine, it is important to ensure that they receive thorough reinforcement of use instructions to support their child's compliance at home.

## Conclusions

Most parents do succeed in picking up Prevident and the remainder are highly motivated. Reaching out to pharmacies to confirm that Prevident is regularly stocked and with minimal reinforcement, such as a one week check up reminder, Prevident acquisition could approach 100%. Compliance with use and instructions are a larger barrier to benefiting from the prescription. Reinforcing instructions with parents and patients after acquisition could help address this issue, either through reminders or discussions during patient encounters. Future studies should focus on finding the most effective method of use instruction reinforcement.

## Study Limitations

- Small sample size
- The need to contact the patient after initial prescription, 14 guardians were unable to be contacted and were removed from the research project
- Self-report bias: Participants may over-report their oral hygiene habits to align with what they assume is the "correct" answer rather than the truth
- Recall bias: Participants may not actually remember the honest answers to survey questions

## References

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3. Urquhart, O., Tampi, M. P., Pilcher, L., Slayton, R. L., Araujo, M. W. B., Fontana, M., ... Carrasco-Labra, A. (2018). Nonrestorative Treatments for Caries: Systematic Review and Network Meta-analysis. *Journal of Dental Research*, 002203451880001. doi:10.1177/0022034518800014
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