Examining the Effectiveness and Longevity of Placing Dental Sealants

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Introduction

In pediatric dentistry, dental sealants are one of the most commonly used preventive mechanisms for dental caries. Dental sealants are a thin layer of resin placed into the deep grooves and pits of dentition that prevents a physical barrier from bacteria and food. Sealant placements are simple and do not require any type of anesthesia. Current sealant materials include fluoride to help further prevent caries.

The Centers for Diseases Control and Prevention state that sealants protect the chewing surfaces from cavities by covering them with a protective shield that blocks out germs and food. Once applied, sealants protect against 80% of cavities for 2 years and continue to protect against 50% of cavities for up to 4 years.

The purpose of this study is to evaluate the effectiveness and longevity of dental sealants. A retrospective chart review of the existing pediatric dental patient population at Woodhull Medical Center will be analyzed.

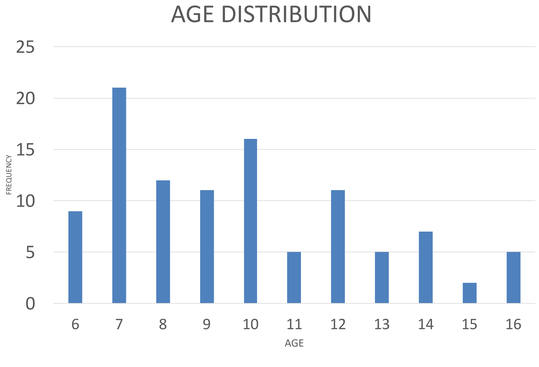
Objectives

- To learn the effectiveness of dental sealants in prevention of dental caries with a high caries risk population such as that of Woodhull Medical Center.
- To see how long (the duration) sealants stay intact before needing to be re-sealed.
- The long term goal is to utilize the analysis to enhance patient care.

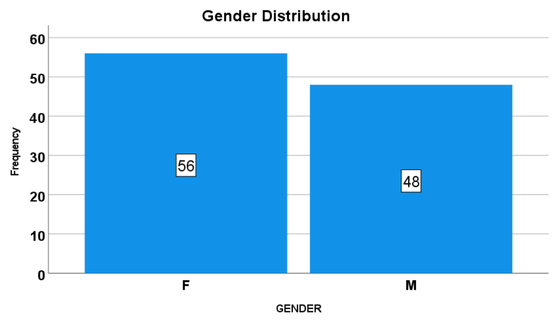
Methods

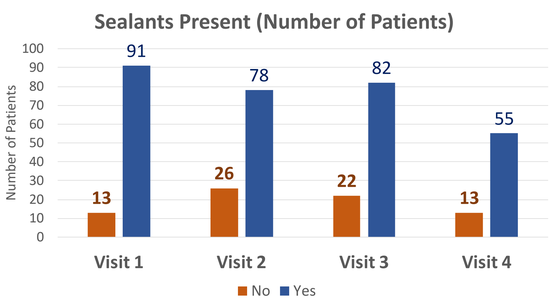
- A retrospective chart review was completed of the children treated in the Pediatric Dental Department at Woodhull Medical Center
- No identifying information
- An analysis was completed of whether or not sealants were present at each recall visit as well as if caries were present
- The data for the present study was collected covering a two-year period from January 2017 to December 2019
- Woodhull Medical Center Pediatric Dental patients 6 to 18 years of age
- ASA I or II
- Presence of permanent first molars
- Frankl behavior of 3 or 4
- 104 charts reviewed

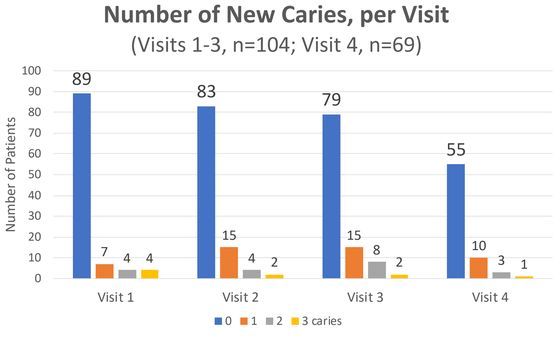
Results

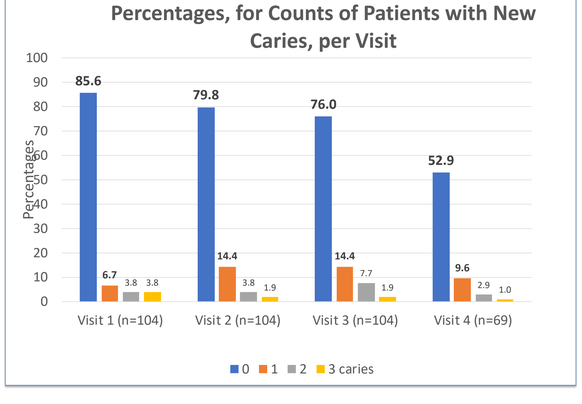


Results









Conclusion

Placement of dental sealants on posterior occlusal pit and fissures allow for less incidence of dental caries in comparison to those without dental sealants. Dental sealants that were placed in the patients at Woodhull Medical Center Pediatric Dental Department last approximately two years and were found to prevent caries formation.

Dental caries is one of the most prevalent chronic childhood conditions across the nation. Placement of dental sealants is an effective treatment modality to prevent and arrest incipient caries. Dental sealants should be placed when pits and fissures can achieve successful isolation and patient is cooperative for treatment.

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