Success Rate of Sealants Placed by Dentists vs. Dental Hygienists

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INTRODUCTION

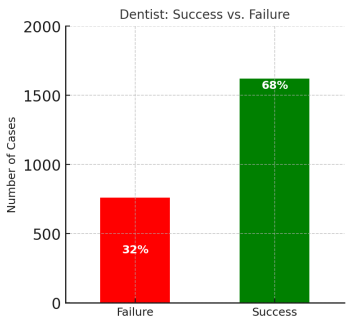
- Dental sealants are an effective preventive measure against cavities, particularly in high-risk populations.
- While sealants are widely regarded as an effective method for preventing dental decay, there is a lack of evidence in assessing the efficacy when placed by hygienists or dental assistants vs. dentists.
- Whether dentist's additional training increases the efficacy of sealants is unclear.
- This retrospective study examines the efficacy of dental sealants placed by dentists vs. hygienists or assistants.

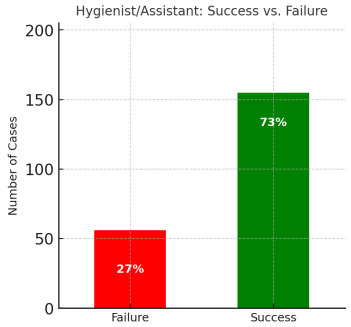
PURPOSE

- The study aims to evaluate the success rates of sealants on permanent 1st molars.

METHODS

- Evaluated records of pediatric patients at CHC of Southeast Kansas (Sept. 2020-2023).
- Sealant status recorded using success/fail criteria:
  Failure defined as sealant being fractured, de-bonded, missing, or presence of caries.
- Collected data on:
  Sealant placement location (Outreach vs. In-office)
  Provider type (attending dentist, dental resident, or hygienist)
- 6-month follow-up, completed by pediatric dental residents or attending faculty.
- Success rate of sealants were evaluated by:
  Provider type (dentist, hygienist, or dental assistant) at 6-month periodic examination.





RESULTS

- Dentists: 1,620 out of 2,381 cases were successful (68%), while 761 (32%) were not.
- Hygienists/Assistants: 155 out of 211 cases were successful (73%), while 56 (27%) were not.
- The difference in success rates between provider types is not statistically significant (p-value > 0.05).
- Most common reason for failure:
- Dentists: Sealant repair (49%). Hygienists/Assistants: Surface composites (61%).

CONCLUSIONS

- There is no significant difference between provider type and overall success rate.
- There is no significant difference in patient gender between success and failed cases.
- Reasons for case failure from most common to least common are as follows: sealant repair (47%), surface composites (35%), extraction (13%), and stainless crowns on permanent tooth (5.5%).

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