Evaluation of Follow-Up Care After Dental Rehabilitation: Alaska Native Children

Alex J. Olson, DMD[a], Kayla Carver, DDS[b]
[a]PGY-2 pediatric dental resident, [b]Attending faculty/research mentor
NYU Langone Hospitals-Advanced Education in Pediatric Dentistry, Brooklyn, NY
Alaska Site, hosted by Southcentral Foundation/Alaska Native Medical Center, Anchorage, AK

NYU Langone Health

NYU Langone Dental Postdoctoral Residency Programs

INTRODUCTION

Dental caries is the most common chronic childhood disease in the United States.[1] Among Alaska Native children, the prevalence of dental caries is more than four times greater than for white non-Hispanic children.[2] For many, the extent of dental caries requires full mouth dental rehabilitation (FMDR) under general anesthesia (GA). Post-operatively, consistent follow-up care is desirable to help the child improve and maintain good oral health while preventing relapse that could potentially lead to repeat FMDR years later.

Each year, many of these children travel from remote villages across the state of Alaska to undergo FMDR under GA at the Alaska Native Medical Center, while children who reside locally also receive this service. Although previous research has been done at various locations in the United States to evaluate the success of follow-up care after GA, follow-up care for the pediatric Alaska Native population has not yet been assessed.

PURPOSE

The purpose of this study was to evaluate the success of follow-up care in Alaska Native children ages 0-10 years old who received full mouth dental rehabilitation under general anesthesia at the Alaska Native Medical Center from 2012 to 2017.

METHODS

Data was collected retrospectively from medical and dental records of Alaska Native children who met the specified inclusion criteria. Additional data was collected to track each patient's follow-up visits after GA. Follow-up was evaluated at 6-, 12-, 24-, and 36-month intervals following rehabilitation, and DEFT scores were calculated at each return visit following the procedure. Successful follow-up was defined as returning to the dental clinic within at least three of the four designated evaluation intervals. Other demographic data collected includes specific age group categorization, sex, and geographically-based residence in Alaska (Anchorage, ASU, non-ASU) to identify possible associations between these variables and successful post-operative follow-up.

FIGURE 1

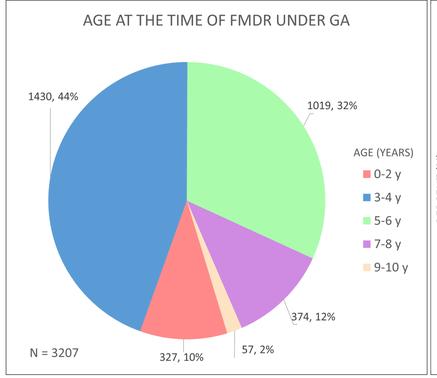


FIGURE 2

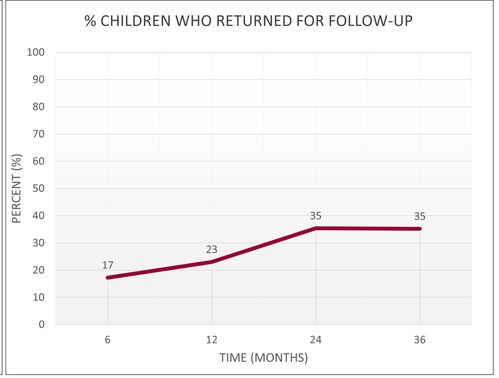


FIGURE 3

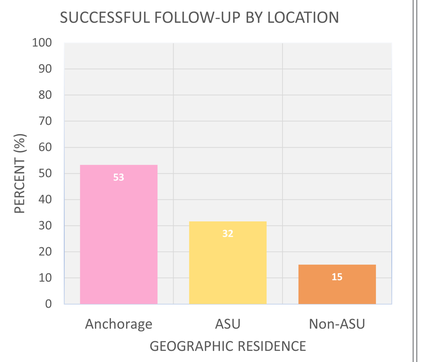
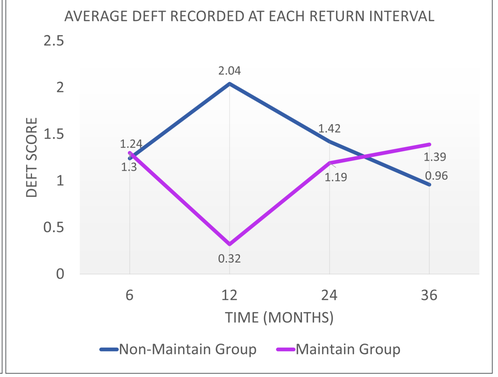


FIGURE 4



RESULTS

- 3,207 Alaska Native children ages 0-10 years old received FMDR under GA from 2012 to 2017.
- Average age was 4.49 years old (SD 1.70); majority were 3-4 years old (45%) and 5-6 years old (32%).
- 1,671 children (52%) were male, 1,536 (48%) were female.
- 552 children (17%) returned within 6 months, 737 (23%) returned by 12 months, 1,134 (35%) returned by 24 months, and 1,128 (35%) returned by 36 months.
- Of those who returned, 1,631 (84%) presented for regular recall for their first visit, and 315 (16%) returned for emergency or problem-focused care.
- Only 543 children (17%) maintained regular follow-up over the 36-month period based on this study's defined parameters.
- 1,456 children (45%) never returned during the study period.
- Geographic residence was statistically significant for all study outcomes (P<.001). Sex was not significant. Age was significant (P<.001) only for those who returned at 6 months. DEFT scores were significant (P<.001) for children who returned at 12, 24, and 36 months.

CONCLUSIONS

- Follow-up care was not regularly maintained for most Alaska Native children who underwent FMDR under GA between 2012 and 2017 at the Alaska Native Medical Center.
- Patient and parent education should emphasize the importance of attending regular recall visits to maintain adequate oral health, especially following FMDR.
- The data suggests that, at minimum, annual recall/follow-up is important in order to minimize the occurrence of new or recurrent dental caries.
- More research is needed to assess and improve post-operative dental care in the pediatric Alaska Native population.

REFERENCES

1. US Surgeon General. Oral health in America: a report of the Surgeon General. J Calif Dent Assoc 2000; 28:685-695.
2. Phipps KR. The oral health of American Indian and Alaska Native children aged 1-5 years; results of the 2014 IHD oral health survey. Indian Health Service data brief. Rockville, MD: Indian Health Service; 2015

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