

An Evaluation of Bertie County Schools' Oral Health Program

Penister C, Wright W, Yockey A, Moss M, McCarlie Jr VW

Department of Pediatric Dentistry & Orthodontic & Dentofacial Orthopedics, Foundational Sciences, Department of Population and Community Health East Carolina University School of Dental Medicine, University of North Texas Health Science Center

Greenville, North Carolina, United States

Introduction

According to the North Carolina Child Health Report Card, "44% of children live in poor or low-income households." Furthermore, the North Carolina Department of Health and Human Services reports that "during the 2022-2023 school year, 19.9% of kindergarteners had untreated tooth decay."¹. These vulnerable populations lack access to the care they need or face significant obstacles in receiving it ¹. Most patients experiencing dental pain sometimes can have antibiotic treatment temporarily and pain medication⁴. However, the AAP recommends against continual use against antibiotics because long-term liver damage can occur with the continuous use of acetaminophen in young children ^{4,5}. One way to assist in removing barriers in accessing care includes school-based, oral health programs ^{2,6}. In fact, studies show these types of programs can help prevent oral disease and enhance children and adolescent well-being and quality of life 3,6. Our study's aim was to evaluate and highlight the significance and impact of the Bertie County Schools' Oral Health Program.

Methods

- IRB approved, retrospective chart review study from referrals made to ECU SoDM clinics from Bertie County grade schools
- 5.5-year timeline of chart review with exclusion and inclusion criteria
- We reviewed 1,053 charts from children enrolled in Bertie county grade schools.

Table 1. Inclusion and Exclusion Criteria for patient selection Inclusion Criteria **Exclusion Criteria** · Patients that received · Patients with no dental treatment treatment at FCU SoDM needs at comprehensive exam Ahoskie or ECU Health clinic Patients seen at Ahoskie or ECU locations following a referral SoDM for comprehensive exam Patients that established a and then seen at BCS dental home at either ECU · Treatment completed at a private SoDM. Ahoskie or Bertie clinic office

locations following treatment
Patients that received treatment following a referral; coded as a limited exam



Figure 1. Decision tree of referral pattern



Figure 2. Average referral time among locations

Results

Of 1,053 screened, 377 patients with dental needs were identified and referred (35.8%). Of those referred, 50.8% had moderate need while 49.2% had severe need. A two-sample t-test showed no difference between treatment time means of those with moderate need and severe need (P-value= 0.69). Of those referred, 66.4% received treatment and established a dental home, close to 35% higher than a similar 2020 study in another state.



Figure 3. Pie chart of treatment needs based on severity





Discussion

- Of those referred by BCOHP, 66.4% of them received treatment. They also then established a dental home. Parent and patient oral health education during appointments could have aided in this percentage.
- Additional studies are needed to understand what barriers impeded 33.6% of referred pediatric patients from receiving care and establishing a dental home.
- These findings may be used in support of establishing other similar community oral health programs.

Conclusions

- The BCOHP program is effective in identifying substantial dental need and in providing critical referrals.
- Further study is needed to understand what barriers impeded referred pediatric patients from receiving follow up treatment.
- The high follow-up care rate and comparison with a previous study suggest that improvements in dental referral systems and patient management can enhance access to ongoing care.
- The findings suggest that a strong dental care system can address patient needs, promotes continuity of care and improves long-term oral health, supporting the BCOHP and similar programs to enhance access to care.

References

- 1. Ncchild. NCChild.org, (n.d.). https://ncchild.org/wp-content/uploads/2024/04/NC-Child-Strategic-Planning-Document-3.pdf
- Naavaal S, Kelekar U. School hours lost due to acute/unplanned dental care. Health Behav Policy Rev. 2018;5(2);66– 73.
- Righolt AJ, Jevdjevic M, Marcenes W, Listl S. Global-, regional-, and country-level economic impacts of dental diseases in 2015. J Dent Res. 2018;97(5):501–507.
- Webb, M. D., & Moursi, A. M. (n.d.). Children, especially those in rural areas, face long weits for ... American Academy of Pediatrics. https://publications.aap.org/aapnews/news/19599/Children-especially-those-in-ruralareas-face-long
- S. Gerber, J., Jackson, M. A., Tamma, P., & Zaoutis, T. (n.d.). Antibiotic stewardship in Pediatrics | Pediatrics | American Academy of Pediatrics. American Academy of Pediatrics. https://bublications.aao.nc/indeatristar/stricte/1471/16/200040295/33434/Antibiotic-Stewardship-in-Pediatrics

 Matoso, B. da S. M., Gornes, V. E., Marcenes, W., Noronha, K. V. M. de S., Lima, C. A. S. de O., & Ferreira, R. C. (2023, September 28). Cost components of school-based oral health-promoting programs: A systematic review protocol. PIoS one. https://prom.choi.mir.mik.gov/articles/PMC1638792/#sec007

rity Figure 4. Bar chart (%) of dental nome status for