

EXPANDING PEDIATRIC ORAL HEALTH ACCESS IN A COMMUNITY HEALTH CENTER

Elizabeth Powell, DDS, MPH; Jayapriyaa Shanmugham, BDS, MPH, DrPH; Keri Discepolo, DDS, MPH **Boston University Department of Pediatric Dentistry**

BACKGROUND & OBJECTIVE

Background

- > The U.S. Surgeon General's landmark 2000 report on Oral Health in America highlighted the inherent unfairness by which the greatest burden of oral disease disproportionately affects those groups of individuals with the fewest resources
 - 36.8% of poor children ages 2-9 have untreated decay compared to 17.3% of non-poor children
 - 6 out of 10 children in the U.S. have one or more decayed or filled primary teeth by age 5
 - 51.6% of children age 5-9 have a cavity or a least one filling in a primary or permanent tooth
- > Data assessed from the MEPS (Medical Expenditure Panel Survey) from 2001-2016 showed the proportion of children being given dental check up advice by their PCP increased from 31.4% in 2001 to 51.8% in 2016, however there was no significant increase in having a dental visit among children. The same low-income children have the highest rates of coverage via Medicaid and SCHIP but the lowest rates of pediatric dental visits
- > Eligible children have difficulty accessing care, but once they have successfully navigated the delivery care system, they receive at least one preventative, diagnostic or treatment service
- More research is needed to better understand how a PCP's advice on dental care can effectively motivate and facilitate dental care for children.

Objectives

- To determine whether a Federally Qualified Health Center (FQHC) oral health integration program can increase dental service utilization among children with an established medical home
- To examine trends and associations in dental service utilization from 2016 through 2021 among children ages 0-20
- >To examine trends and associations in dental service utilization and medical service utilization during the program period to determine if children with an established medical home led to the establishment of a dental home via physician referral and coordinated care

MATERIALS & METHODS

Data Source

- Codman Square Health Center
- > De-identified retrospective chart review of children with a same day medical and dental visit from 2016 through 2021 using EPIC and DENTRIX EMR/EDR systems

Study Population & Retrospective Analysis

- Children ages 0-20
- ➤ Bivariate & Multivariate Logistic Regression Analysis
- Using SAS 9.4 procedures

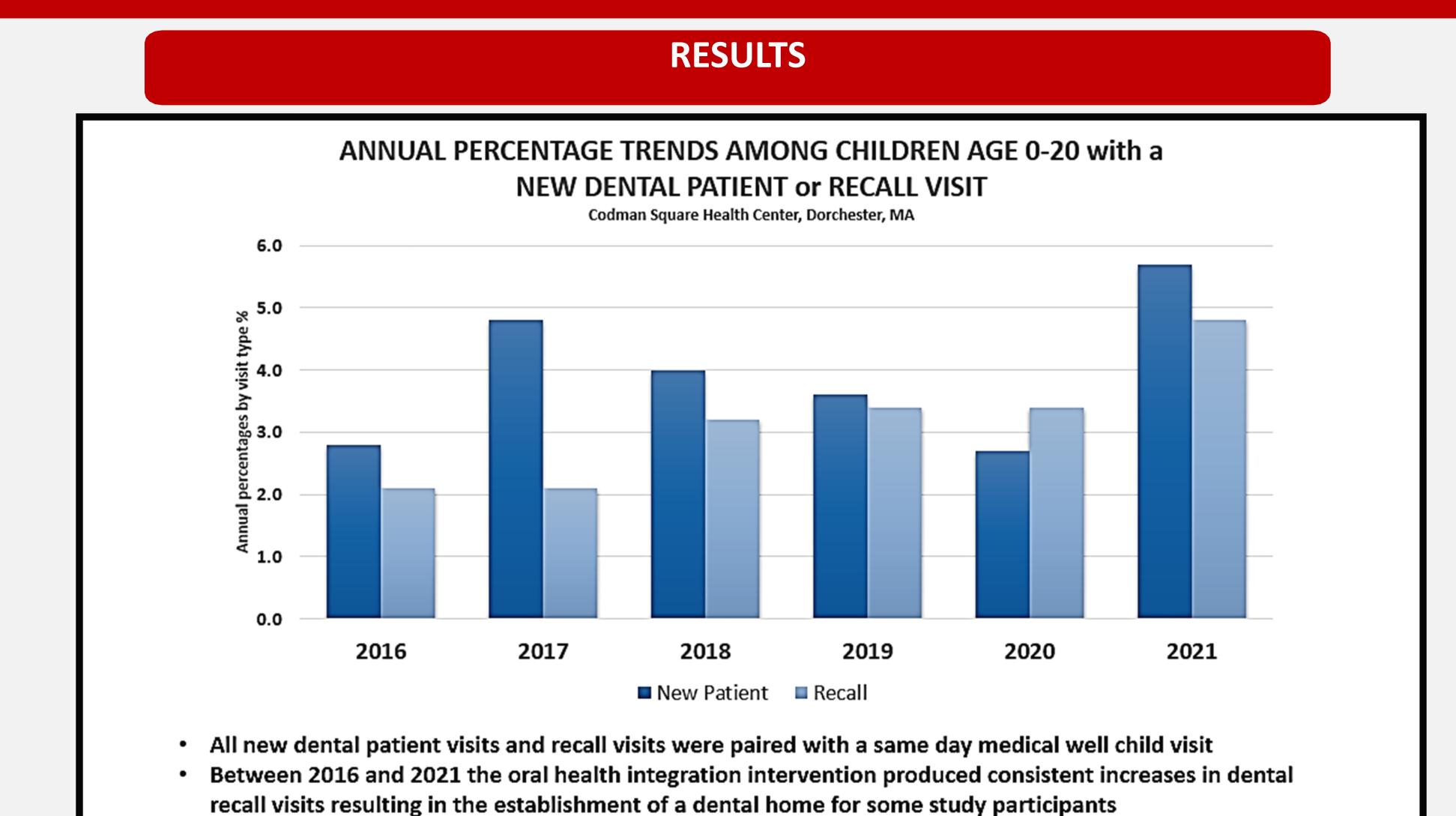
Dependent Variable

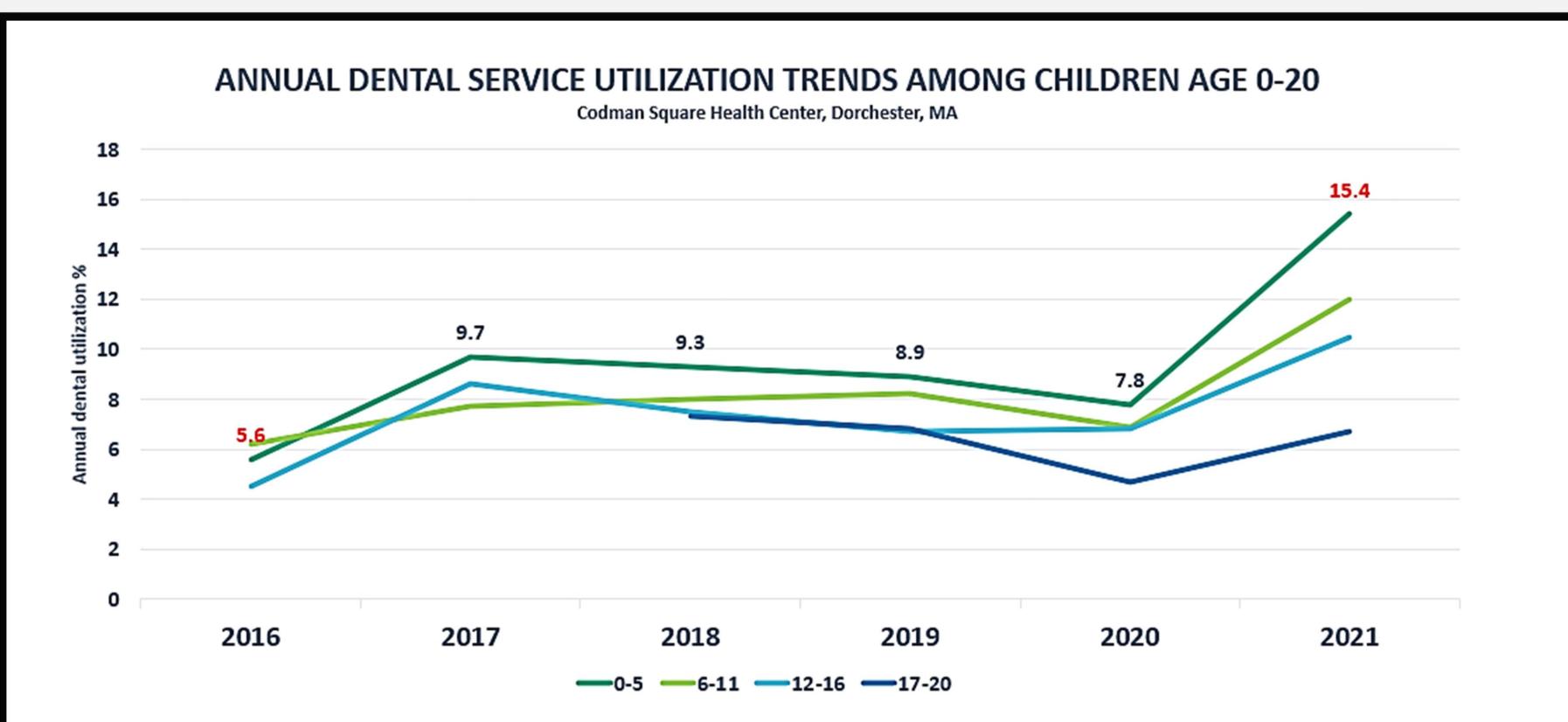
➤ Dental Service Utilization

Independent Variables

- **≻**Age
- **≻**Gender
- ➤ Race/Ethnicity
- >Insurance type
- ➤ Medical Service Utilization

- ➤ Same day medical/dental service utilization due to PCP referral
- ➤ Preventative dental services procedures completed





- In 2016, only 5.6% of children ages 0-5 who had a well child visit also had a same day dental visit. This age group experienced the highest trends in dental service utilization, tripling their use of dental services to 15.4% by 2021.
- Overall children of all age groups experienced an increase in dental service utilization during the project period
- Coordinated care and targeted oral health integration efforts started in early 2016 and continue to date

Multivariate Logistic Regression Results (Dental Service Utilization) Codman Square Health Center, Dorchester, MA		
Dental Service Utilization Model	Recall Dental Visit	
Variable	OR and 95% CI	P-Value
Med Year 2017 vs 2016	1.04(0.78-1.37)	0.8105
Med Year 2018 vs 2016	1.59(1.22-2.07)	0.0006
Med Year 2019 vs 2016	1.69(1.31-2.18)	<.0001
Med Year 2020 vs 2016	1.71(1.31-2.21)	<.0001
Med Year 2021 vs 2016	2.40(1.88-3.05)	<.0001

CONCLUSIONS & DISCUSSION

CONCLUSIONS

- > Our most significant results are depicted in the multivariate logistic regression model and shows an association between increased dental service utilization (recall visits) and medical year. Children who utilized medical services demonstrated increasing odds of completing a dental recall exam in 2019 1.69(1.31-2.18); 2020 1.71(1.31-2.21); and **2021** 2.40(1.88-3.05) indicated by their OR's and 95% CI compared to **2016** 1.04 (0.78-
- > PCP referral for pediatric dental visits in conjunction with coordinated care leads to increased dental service utilization in FQHC settings
- > The major finding of our study demonstrates that children with an established medical home at an FQHC can strongly influence the establishment of a dental home

DISCUSSION

- > Early access to care in conjunction with connecting Medicaid eligible children to dental providers who deliver the appropriate preventive intervention and treatment has a greater impact on positive oral health outcomes
- > There would be added benefit to exploring the impact of dental care coordination since just having access to dental coverage has not been demonstrated to reduce disparities or disease rates.

ACKNOWLEGEMENTS

Supported by Boston University Goldman School of Dental Medicine, Boston Medical Center, and Codman Square Health Center

Ethics Approved by Boston Medical Center #H-41888

REFERENCES

- L. "Surgeon General's Report on Oral Health in America | Data & Statistics | National Institute of Dental and Craniofacial Research." Accessed October 6, 2019. https://www.nidcr.nih.gov/research/data-statistics/surgeon-general. 2. "Oral Health | Healthy People 2020." Accessed October 6, 2019. https://www.healthypeople.gov/2020/leading-health-indicators/2020-lhi-topics/Oral-Health.
- 3. Benjamin, Regina M. "Oral Health: The Silent Epidemic." Public Health Reports 125, no. 2 (2010): 158–59.
- 4. Biordi, D. L., Heitzer, M., Mundy, E., DiMarco, M., Thacker, S., Taylor, E., ... Fitzgerald, K. (2015). Improving access and provision of preventive oral health care for very young, poor, and low-income children through a new interdisciplinary partnership. American Journal of Public Health, 105 Suppl 2, e23-29. https://doi.org/10.2105/AJPH.2014.302486
- 5. Chalmers, Natalia I., Joseph S. Wislar, Matt Hall, Cary Thurm, and Man Wai Ng. "Trends in Pediatric Dental Care Use." Dental Clinics of North America, Dental Public Health, 62, no. 2 (April 1, 2018): 295-317.e12.
- https://doi.org/10.1016/j.cden.2017.11.008. 6. Curi DSC, Figueiredo ACL, Jamelli SR. Factors associated with the utilization of dental health Fisher-Owens, S. A., Soobader, M. services by the pediatric population: an integrative review. Cien Saude Colet. 2018 May;23(5):1561-
- 7. Dye, B. A., Mitnik, G. L., Iafolla, T. J., & Vargas, C. M. (2017). Trends in dental caries in children and adolescents according to poverty status in the United States from 1999 through 2004 and from 2011 through 2014. The Journal of
- the American Dental Association, 148(8), 550-565.e7. https://doi.org/10.1016/j.adaj.2017.04.013 8. Heidenreich, J. F., Kim, A. S., Scott, J. M., & Chi, D. L. (2015). Pediatric dentist density and preventive care utilization for Medicaid children. Pediatric Dentistry, 37(4), 371–375.
- 9. Ku, L., Sharac, J., Bruen, B., Thomas, M., & Norris, L. (2013). Increased Use of Dental Services by Children Covered by Medicaid: 2000–2010. Medicare & Medicaid Research Review, 3(3). https://doi.org/10.5600/mmrr.003.03.b01 10. Luo H, I Garcia R, Moss ME, Bell RA, Wright W, Wu B. Trends of children being given advice for dental checkups and having a dental visit in the United States: 2001-2016. J Public Health Dent. 2020 Jun;80(2):123-131. doi:
- 10.1111/jphd.12356. Epub 2020 Jan 17. PMID: 31951026; PMCID: PMC7299770.