

Visiting the Dentist More Frequently Than Pediatricians- Integrated Care Implications

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DENVER HEALTH
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Background

- Denver Health Medical center (DH) is a safety net healthcare system that primarily serves publicly insured and uninsured patients.
- These patients are less likely to utilize primary care and dental services due to barriers to care.
- Patients at DH have access to both medical and dental providers to achieve their healthcare goals.
- Understanding utilization trends can help healthcare providers leverage their unique expertise to work together as a team to bridge gaps in their patient's care.

Objective

To understand trends of primary care and dental utilization to inform medical and dental providers of their role in addressing dental and overall health concerns in children, and to determine if dental utilization differs from primary utilization for different ages and patient demographics at DH.

Methods

- We conducted a retrospective cohort study of patients aged 6 months-18 years with a primary care visit or dental examination from 01/01/23 to 12/31/24.
- Within each year cohort, average number of dental visits and average number of well-child visits were compared. We assessed associations between societal factors and number of dental visits and well-child visits using zero-inflated Poisson and Quasipoisson regression models, respectively.

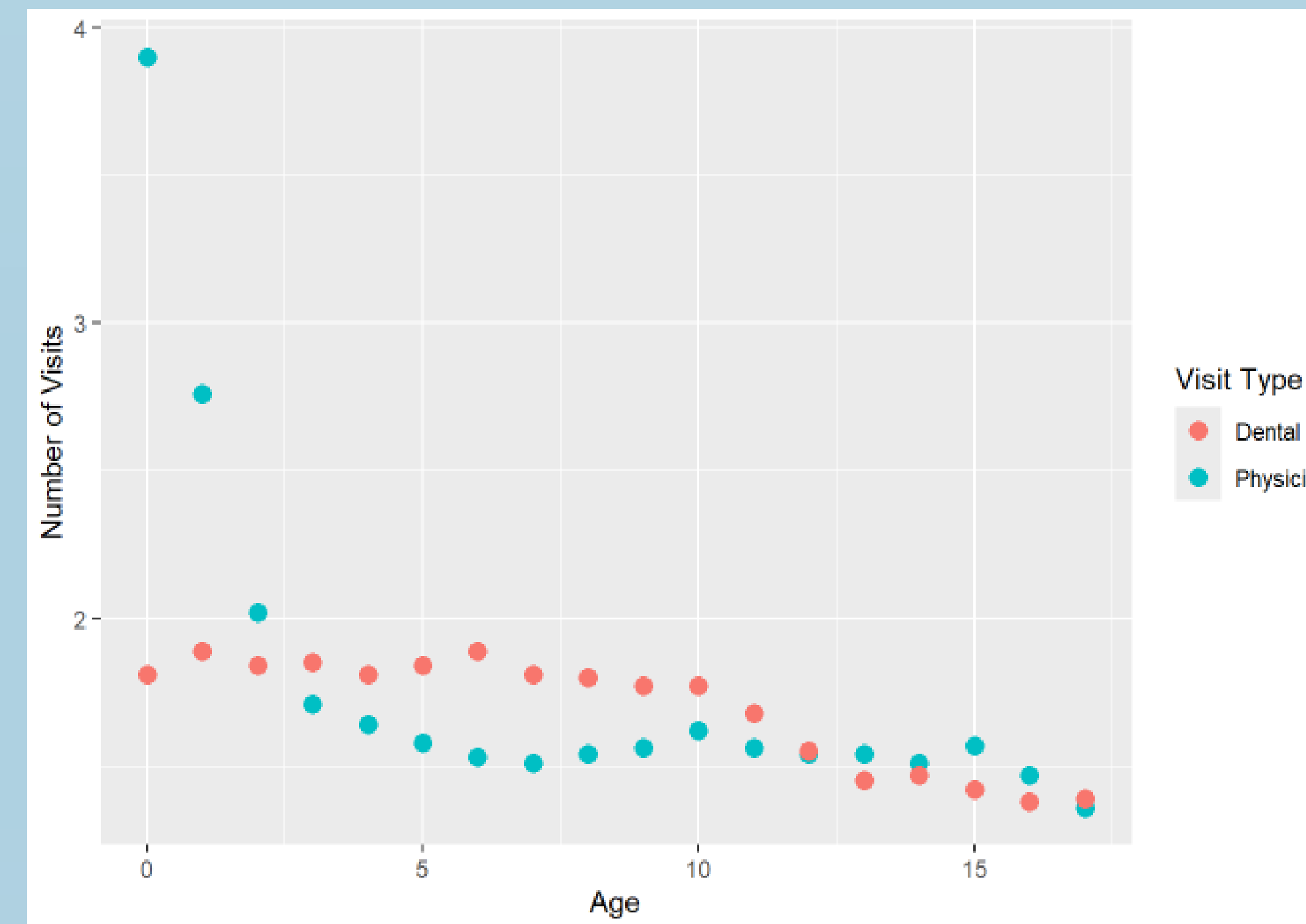


Fig 1: Dental and Medical Visits at Denver Health

	At Least one DH Dental Visit (N=17845)	No DH Dental Visits (N=56978)	Overall (N=73923)
Sex			
Female	8785 (49.2%)	28200 (50.3%)	36985 (50.0%)
Male	9060 (50.8%)	27878 (49.7%)	36938 (50.0%)
Age on 01-Jan-2023			
Mean (SD)	6.65 (4.51)	9.45 (5.02)	8.78 (5.04)
Median [Min, Max]	6.00 [0, 17.0]	10.0 [0, 17.0]	9.00 [0, 17.0]
Race/Ethnicity			
Asian	999 (5.6%)	1591 (2.8%)	2590 (3.5%)
Hispanic	11063 (62.0%)	37337 (66.6%)	48400 (65.5%)
White, NH	1360 (7.6%)	7192 (12.8%)	8552 (11.6%)
Black, NH	3399 (19.0%)	7115 (12.7%)	10514 (14.2%)
Another Race/Multiple Races, NH	1024 (5.7%)	2843 (5.1%)	3867 (5.2%)
Preferred Language			
English	8709 (48.8%)	36031 (64.3%)	44740 (60.5%)
NENS	2206 (12.4%)	2583 (4.6%)	4789 (6.5%)
Spanish	6930 (38.8%)	17464 (31.1%)	24394 (33.0%)
Insurer			
Medicaid	12637 (70.8%)	39264 (70.0%)	51901 (70.2%)
Commercial	896 (5.0%)	5739 (10.2%)	6635 (9.0%)
Self-Pay	2712 (15.2%)	9263 (16.5%)	11975 (16.2%)
Discount/Other/Medicare	1600 (9.0%)	1812 (3.2%)	3412 (4.6%)
Number of Encounters (in 2 year period)			
Mean (SD)	4.28 (2.76)	2.42 (2.05)	2.87 (2.38)
Median [Min, Max]	4.00 [1.00, 39.0]	2.00 [1.00, 61.0]	2.00 [1.00, 61.0]
Number of Dental Encounters (in 2 year period)			
Mean (SD)	1.66 (0.929)	0 (0)	0.401 (0.845)
Median [Min, Max]	1.00 [1.00, 8.00]	0 [0, 0]	0 [0, 8.00]
Number of Well-Child Encounters (in 2 year period)			
Mean (SD)	1.35 (1.15)	1.06 (0.941)	1.13 (1.00)
Median [Min, Max]	1.00 [0, 8.00]	1.00 [0, 7.00]	1.00 [0, 8.00]

Table 1: Which Denver Health Patients utilize Dental services

AGE	Prevalence	Incidence	2-5yr	6-11mo	12mo	24mo	36mo	48mo	60mo	72mo	84mo	96mo	108mo	120mo	132mo	144mo	156mo	168mo	180mo	192mo	204mo	216mo	228mo	240mo	252mo	264mo	276mo	288mo	300mo	312mo	324mo	336mo	348mo	360mo					
MEASUREMENTS																																							
Length/Height and Weight	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*			
Head Circumference	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
Weight for Length	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Body Mass Index	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Blood Pressure	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
DENVER SCREENING																																							
Vision	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
DEVELOPMENTAL/SOCIAL/BEHAVIORAL/MENTAL HEALTH																																							
Maternal Depression Screening	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Developmental Screening	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Autism Spectrum Disorder Screening	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Developmental Surveillance	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Behavioral/Social/Emotional Screening	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Tobacco, Alcohol, or Drug Use Assessment	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Depression and Suicide Risk Screening	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
PHYSICAL EXAMINATION																																							
PROCEEDURES																																							
Head and Neck	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Head and Neck Exam	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Central Computerized Axial Tomography	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Aspirin	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Lead	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Tuberculosis	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Chlamydia	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Sexually Transmitted Infection	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
HIV	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Hepatitis B Virus Infection	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Hepatitis C Virus Infection	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Hepatitis C Virus Infection	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Stable Carbon Isotope Ratio	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Genital Dysplasia	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
ORAL HEALTH																																							
Fluoride Varnish	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Fluoride Supplementations	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
ANTICIPATORY GUIDANCE																																							

Figure 2: Bright Futures/AAP Recommendations for Preventative Pediatric Care

Results

- The average number of visits for pediatric patients at DH from 2023-2024 can be referenced in Figure 1.
- Comparisons showed that, while children of ages 6 months-2 years attended more well-child visits than dental visits, after age 2, the number of dental visits exceeded well-child visits ($P < 0.01$)
- Age, race/ethnicity, primary language, and insurance type were influential ($P < 0.05$) in determining the number of dental visits and number of well-child visits a child received.

Conclusion

- For patients age 2 and younger, pediatricians should consider integrating dental health principles into their well child visits, include oral hygiene instructions and fluoride varnish applications.
- For patients age 2 and older, dental providers should consider identifying patients who are eligible for vaccinations, and refer to medical colleagues to address health concerns and preventative medical care.
- Understanding utilization trends can help medical and dental providers work together to achieve better oral and overall health outcomes for our patients.