Burden of Dental Anomalies at a University Pediatric Dental Clinic

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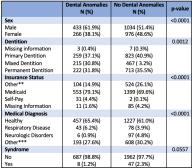**UNIVERSITY of WASHINGTON**

Objectives

- Determine the burden of simple and complex dental anomalies in children and adolescents in a large university pediatric dental clinic database

- Identify specific treatments utilized by children with and without dental anomalies
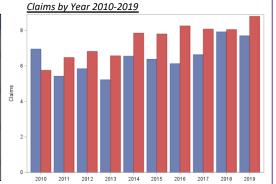
Methods

- Data from electronic charts of patients 0-18y seeking care at the UW Center for Pediatric Dentistry (2010-2019)
- Word recognition via Info Manager report builder in axiUm
- 3 controls matched to each anomaly by date of first visit (+/- 1 month)
- Descriptive statistics, t-test, and chi squared test (p<0.05)

Type of Dental Anomaly	N (%)
Amelogenesis Imperfecta (AI)	26 (3.7%)
Dentinogensis Imperfecta (DI)	17 (2.4%)
Dentin Dysplasia (DD)	1 (0.1%)
Hyperdontia	570 (81.8%)
Hypodontia	34 (4.9%)
Oligodontia	13 (1.9%)

Results

Demographics

	Dental Anomalies N (%)	No Dental Anomalies N (%)	p-value
Sex			<0.0001
Male	433 (61.9%)	1034 (51.4%)	
Female	266 (38.1%)	976 (48.6%)	
Dentition			0.0012
Missing information	3 (0.4%)	7 (0.3%)	
Primary Dentition	259 (37.1%)	823 (40.9%)	
Mixed Dentition	215 (30.8%)	467 (3.2%)	
Permanent Dentition	222 (31.8%)	713 (35.5%)	
Insurance Status			<0.0001
Other**	104 (14.9%)	524 (26.1%)	
Medicaid	553 (79.1%)	1399 (69.6%)	
Self-Pay	31 (4.4%)	2 (0.1%)	
Missing Information	11 (1.6%)	85 (4.2%)	
Medical Diagnosis			<0.0001
Healthy	457 (65.4%)	1227 (61.0%)	
Respiratory Disease	43 (6.2%)	78 (3.9%)	
Neurologic Disorders	6 (0.9%)	97 (4.8%)	
Other***	193 (27.6%)	608 (30.2%)	
Syndrome			0.0557
No	687 (98.8%)	1962 (97.7%)	
Yes	8 (1.2%)	47 (2.3%)	

Claims by Year 2010-2019

Significant Types of Restorative Treatment

Control Group
- Restorative treatment overall
- Sealants and SDF
- Indirect Pulp Cap and Pulpotomies
- 1 and 2 surface Anterior Composites
- 1, 2, 3+ surface Posterior Composites
- Stainless steel crowns

Anomalies Group
- Zirconia Crowns
- Orthodontics and Surgery

Cost of Treatment in US Dollars 2010-2019

Dental Anomalies Demographics

- 699 Cases
- **Males** (61.9%), **primary dentition** (37.1%), and with **Medicaid insurance** (79.1%). Most subjects with dental anomalies were otherwise **healthy** (65.4%). **Mean Age = 8.6 years** (SD 3.7)

Conclusions

1. No significant difference in the number of appointments between groups

2. Dental anomaly group had significantly **fewer dental insurance claims** (6.3 vs 7.6, p<0.0001)

3. No statistical difference in cost of dental treatment between our groups

4. No significant difference between the groups with the use of nitrous, oral conscious sedation, or general anesthesia

5. Children with dental anomalies **require more** esthetic crowns, surgical treatment and orthodontic treatment compared to more restorative treatment in the control group

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