

EVALUATING ACCESS TO PEDIATRIC DENTAL SERVICES VIA CLINIC REFERRALS

Rawle LA¹, Hanson-Dansby AG², Tomar SL¹, Valencia A¹, LeHew CW¹, Hill BJ¹

¹Department of Pediatric Dentistry, UIC College of Dentistry, Chicago, IL, ²UIC College of Dentistry, Chicago, IL

Background

- 1 in 3 children in Illinois are covered by Medicaid¹.
- Over half the state population is in a dental provider shortage area².
- 15% of Illinois dentists participate in Medicaid and CHIP³.
- University of Illinois Chicago College of Dentistry (UIC-COD) is Illinois' largest provider of children's dental services under Medicaid.
- Many pediatric patients referred to UIC-COD need restorative services but have recently received preventive services elsewhere.
- Delivering restorative as well as prophylactic care in the communities where children live is a significant public health need.

Objectives

- Quantify the proportion of pediatric patients referred to UIC-COD needing restorative and preventive care.
- Investigate associations between patient demographic characteristics and referral for restorative care.

Methods

Inclusion Criteria:

- ✓ Children age 1–17 years with ≥1 fully erupted primary or permanent tooth.
- ✓ Seen at UIC-COD for comprehensive oral examination (COE) between January 1, 2019 and December 31, 2021.

Sampling:

- Queried axiUm electronic patient record system.
- Randomly selected 200 charts per year for review.

Data Extracted:

- Age, ASA status, home ZIP code, referral status (referred/not-referred).
- History of dental check-up in preceding 6 months COE/POE (comprehensive/periodic oral exam).
- History of preventive dental treatment in the preceding 6 months.
- Number of decayed teeth, number of teeth present.
- Restorative needs.

Data Analysis:

- Abstracted data was entered into Microsoft Excel (Microsoft Corporation, Redmond, WA) spreadsheet, then exported to SPSS version 28 (IBM Statistics, Armonk, NY) for analysis.
- Calculated the proportion of teeth with untreated decay.
- Calculated distance between home and UIC-COD.
- Univariate descriptive statistics to characterize the sample.
- Bivariate analysis by chi-square and Mann-Whitney U, as appropriate, to test for associations among variables.

Results

- N=600 patient charts selected.
- n=329(55%) were referred to UIC COD by a dentist. n=271(45%) non-referred.
- More non-referred than dentist-referred patients were medically healthy: 90% vs. 85%, p=.045.
- Patients came from 211 different ZIP codes: 43 in Chicago and 168 outside Chicago.
- No difference in travel distance of dentist-referred and non-referred patients. (Table 1)
- No difference in mean age of dentist-referred and non-referred patients.
- Non-referred had a lower percentage of carious teeth than dentist-referred patients.
- Fewer non-referred than dentist-referred patients had received a dental cleaning. (Table 2)
- Fewer non-referred than dentist-referred patients had received fluoride applications.
- Few patients in either group had restorative treatment completed.
- Few patients in either group had fissure sealants placed.
- Fewer non-referred than dentist-referred patients needed restorative treatment.

Table 1. Patient Demographics: Means and Standard Deviations.

Variable	Whole Sample	Dentist-Referred	Not-Referred	p for Referral Status Comparisons
Age in Years (mean +/- SD)	5.7 ± 3.0	5.6 ±2.99	5.5 ±3.23	.415
Distance Travelled (mean +/- SD)	27.6 ± 31.7	29.74±34.37	25±27.99	.131
Number of Teeth (mean +/- SD)	20.9± 3.03	21.04± 2.93	20.74 ± 3.14	.217
Number of Teeth with Caries (mean +/- SD)	6.24±4.44	6.93±4.32	5.41±4.45	<.001
Percent of Teeth with Caries	30%±.22	33% ±.21	27%±.23	<.001

Table 2. Treatments Received and Treatments Needed

Variable	Whole Sample	Dentist-Referred	Not-Referred	χ ² (df)	p for Referral Status Comparisons
POE/COE	56.3% (n=338)	63.8% (n=210)	47.2 % (n=128)	16.64(1)	<.001
Prophy	53.7% (n=322)	60.2% (n=198)	45.8% (n=124)	12.44(1)	<.001
Fluoride Varnish	50.3% (n=302)	56.83%(n=187)	42.4%(n=115)	12.33(1)	<.001
Sealants	11.0% (n=66)	12.5% (n=41)	9.2%(n=25)	1.59(1)	.207*
Restorative work completed	1.5% (n=9)	0.6% (n=2)	2.6% (n=7)	3.92(1)	.086*
Treatment completed	1.5% (n=9)	.30% (n=1)	2.95% (n=8)	7.053(1)	0.013*
Treatment needed	92.5% (n=555)	97.0% (n=319)	87.1% (n=236)	20.89(1)	<.001

*Fisher's Exact Test

Conclusions

Pediatric patients under Medicaid dental insurance at UIC-COD who have been referred by dentists are more likely than non-referred patients to have received prophylactic care and to need restorative care. Illinois dentists demonstrate a tendency to provide prophylactic services for these patients and then refer them to specialty care facilities for needed restorations. Children under Medicaid dental insurance are not receiving sufficient levels of care in their communities. This represents a significant public health problem in Illinois.