



Introduction

Early childhood caries (ECC)

- “The presence of 1 or more decayed (noncavitated or cavitated lesions), missing (due to caries), or filled tooth surfaces in any primary tooth in a child 71 months of age or younger.”<sup>1</sup>
  - Causes pain and infection if untreated.<sup>2</sup>
  - Nearly 100% preventable<sup>3</sup>
- 18% of 2-5 year olds have had caries.<sup>2</sup>
- Higher risk for children living at or below the federal poverty level (FPL).<sup>2</sup>
- Non-dental healthcare professionals can prevent ECC by providing oral health services (OHS) for young children.<sup>4</sup>

Purpose

To Identify variables associated with federally qualified health center (FQHC) medical providers’ provision of oral health services (OHS) and confidence in delivering these services.

Methods

- IRB approval was obtained.
- A 62-item online survey was distributed to FQHC medical providers nationwide.
- Respondents were asked:
  - If they received any oral health training in professional school;
  - If they provided 6 OHS; and
  - To rate their confidence in providing 4 OHS.
- Descriptive and bivariate analyses using Chi-square and Fisher’s exact tests were conducted (alpha=0.05).

Results

Respondents (N=80)

- Provider Types
  - 25.0% Medical Assistant (MA)/ Nursing Assistant (NA)
  - 28.8% Assistant/Associate Physician (AP), Nurse Practitioner (NP), Physician Associate/Assistant (PA)
  - 30.0% Family Medicine/Practice, Pediatrician, Resident (MD)
  - 16.2% Registered Nurse (RN) / Licensd Practical Nurse (LPN)
- 67.5% received oral health training
- 56.0% graduated within past 20 years
- 91.0% Female
- 58.8% reported children constitute less than 25% of their patients
- 63.6% reported >50% of their child patients are on Medicaid

Table 1. Primary Clinical Roles and Provided Oral Health Services

	PRIMARY CLINICAL ROLE				
	MA/NA	AP/NP/PA	MD	RN/LPN	p-value
Oral Health Service	n = 20 (25.0%)	n = 23 (28.8%)	n = 24 (30.0%)	n = 13 (16.3%)	
Refer to dentists					
Yes (n=65)	14 (70.0)	19 (86.4)	23 (100.0)	9 (75.0)	0.018
No (n=12)	6 (30.0)	3 (13.6)	0 (0.0)	3 (25.0)	
Dietary counseling					
Yes (n=56)	11 (55.5)	20 (90.9)	20 (87.0)	5 (41.7)	<0.001
No (n=21)	9 (45.5)	2 (9.1)	3 (13.0)	7 (58.3)	
Educate on preventive oral care					
Yes (n=54)	6 (30.0)	20 (90.9)	22 (95.7)	6 (50.0)	<0.001
No (n=23)	14 (70.0)	2 (9.1)	1 (4.3)	6 (50.0)	
Ask about dental home					
Yes (n=53)	8 (40.0)	19 (86.4)	21 (91.3)	5 (41.7)	<0.001
No (n=24)	12 (60.0)	3 (13.6)	2 (8.7)	7 (58.3)	
Evaluate teeth					
>50% of the time (n=45)	2 (10.0)	19 (86.4)	20 (87.0)	4 (33.3)	<0.001
≤50% of the time (n=32)	18 (90.0)	3 (13.6)	3 (13.0)	8 (66.7)	
Apply fluoride					
Yes (n=27)	2 (10.0)	9 (40.9)	14 (60.9)	2 (16.7)	0.002
No (n=50)	18 (90.0)	13 (59.1)	9 (39.1)	10 (83.3)	
Oral Health Services Score					
Many [5-6] (n=44)	1 (5.0)	19 (86.4)	20 (87.0)	4 (33.3)	<0.001
Few [0-4] (n=33)	19 (95.0)	3 (13.6)	3 (13.0)	8 (66.7)	

Table 2. Primary Clinical Roles and Confidence Providing Oral Health Services

	PRIMARY CLINICAL ROLE				
	MA/NA	AP/NP/PA	MD	RN/LPN	p-value
OHS Confidence	n = 20 (25.0%)	n = 23 (28.8%)	n = 24 (30.0%)	n = 13 (16.3%)	
Providing nutritional guidance					
More confident (n=51)	5 (33.3)	19 (90.5)	19 (90.5)	8 (66.7)	<0.001
Less confident (n=18)	10 (66.7)	2 (9.5)	2 (9.5)	4 (33.3)	
Advising About Child’s Oral Care					
More confident (n=48)	3 (20.0)	18 (85.7)	19 (90.5)	8 (66.7)	<0.001
Less confident (n=21)	12 (80.0)	3 (14.3)	2 (9.5)	4 (33.3)	
Identifying Tooth Decay					
More confident (n=37)	4 (26.7)	15 (71.4)	15 (71.4)	3 (25.0)	0.004
Less confident (n=32)	11 (73.3)	6 (28.6)	6 (28.6)	9 (75.0)	
Applying fluoride varnish					
More confident (n=26)	2 (13.3)	9 (42.9)	13 (61.9)	2 (16.7)	0.009
Less confident (n=43)	13 (86.7)	12 (57.1)	8 (38.1)	10 (83.3)	
Overall Confidence					
More confident (n=28)	2 (10.5)	12 (54.5)	13 (56.5)	1 (8.3)	<0.001
Less confident (n=48)	17 (89.5)	10 (45.5)	10 (43.5)	11 (91.7)	

Additional bivariate results:

Oral Health Training (OHT):

- Respondents with OHT were more likely than those without OHT to:
  - Educate on preventive oral care (77% vs 54%, p = 0.041)
  - Evaluate teeth > 50% of the time (66% vs 42%, p=0.046)
- There were no significant differences between OHT and confidence in providing OHS.

% of Children with Medicaid:

- Respondents who treated >50% children with Medicaid were more likely than respondents who treated fewer children with Medicaid to:
  - Refer to dentists (92% vs 74%, p=0.049)
  - Educate on preventive oral care (79% vs 56%, p=0.032)
  - Provide many oral health services (67% vs 41%, p=0.030)
- There were no significant differences between the percentage of children with Medicaid and confidence in providing OHS.

Years Since Graduation and Gender:

- Neither years since graduation nor gender were significantly associated with providing OHS or confidence in providing OHS.

Discussion

- APs/NPs/PAs and MDs were more likely than MAs/NAs and RNs/LPNs to provide OHS and express more confidence in doing so.
  - This may be partially due to scope of practice law variability across states.
- Respondents with OHT were more likely to provide some OHS compared to respondents without OHT.
- Respondents who treated more children with Medicaid were more likely to provide OHS compared to respondents who treated fewer children with Medicaid.

Limitations

- Small sample size
- Non-responder bias

Conclusion

- The provision of OHS and confidence varied among providers based on their clinical role and oral health training.
- Primary clinical role was more likely to show differences among groups than oral health training.
- The majority of respondents did not apply fluoride varnish, nor did they feel confident applying it.
- Additional and/or different training modalities may be necessary to increase the provision of OHS.

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