

# Engaging Health Schools and Residencies Based Upon A National Survey of Current Oral Health Education

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# CIPCOH

Center for Integration of  
Primary Care and Oral Health



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CIPCOH serves as a national resource for systems-level research on oral health integration into primary care training with special emphasis on training enhancements that will train primary care providers to deliver high quality, cost-effective, patient-centered care that promotes oral health, addresses oral health disparities and meets the unique needs of all communities.

#### CIPCOH's Objectives:

- Conduct Systems-Level Research on Primary Care Training
- Disseminate Current Research, Evidence-Based or Best Practices and Evaluation Tools
- Develop a Community of Practice



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- Christine Riedy
- Russell Phillips
- Jane Barrow
- Shenam Ticku
- Judy Savageau
- Robin Harvan
- Erin Sullivan
- Maria Dolce
- Mary Tavares
- Tien Jiang
- Anita Glicker
- Inyang Isong
- Lisa Simon
- Cynthia Lord
- Erin Harnett

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- PAEA (physician asst)
- AACN (Nurse Practitioners)
- PNCB (Nurse Practitioners)
- AAP
- AAPD (pedi prog dir)
- DOME (midwifery)
- ADGAP (geriatrics)
- AACOM (osteopath)

- Bruce Donoff
- Kate Sullivan
- Gail Sawosik
- Lorna Chiasson
- Michelle Dalal
- Renee Samelson
- Alan Douglass
- Russell Maier
- Stephen Shannon
- Ruth Mielke
- Lauren Barone
- Patricia Braun
- Hal Lawrence
- Eileen Reynolds



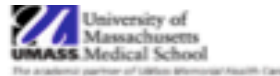
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## Year 1 Projects

- Evaluate the integration of oral health into primary care curricula
- Analyze current competencies in oral health training for primary care providers

## Year 2 Projects

- Qualitatively evaluate the impact of oral health integration on training outcomes among non-dental program/school champions
- Develop an evaluation framework for oral health training programs in primary care



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HRSA Cooperative Agreement: UH1HP29962

# PURPOSE OF SURVEYS

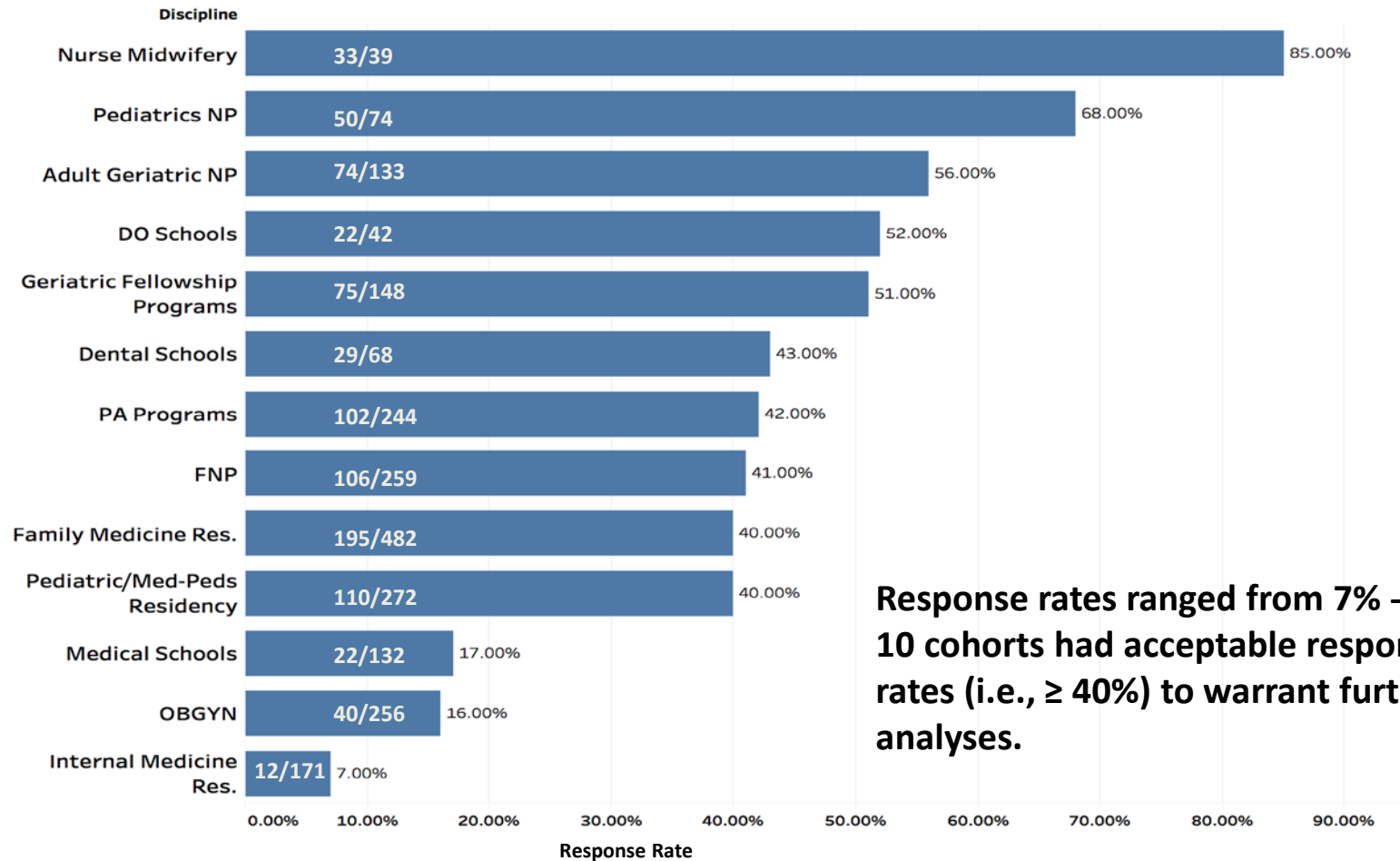
- To assess quantity and quality of oral health and IPE training in primary care education and medical and dental schools
- To identify influences of successful integration, educational resources used, barriers to curriculum development and sustainability, and evaluation methods of learners

# METHODOLOGY

- Thirteen nationwide surveys were distributed electronically across multiple disciplines
- Univariate statistics/frequencies were used to describe all survey items
- Sub-analyses assessed influences of OH in the curriculum such as having a faculty oral health champion, program demographics, formal dental faculty teaching, etc.



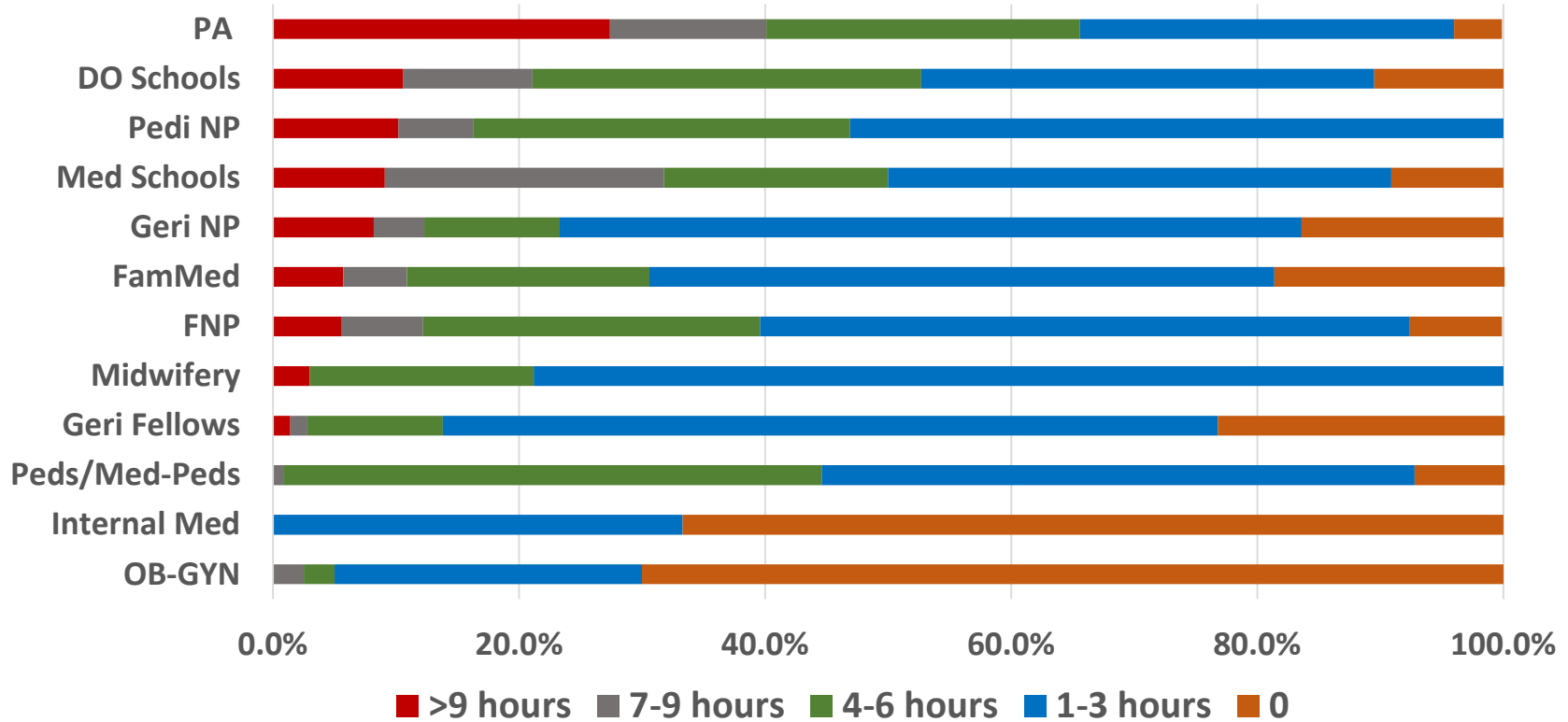
## Survey Response Rate



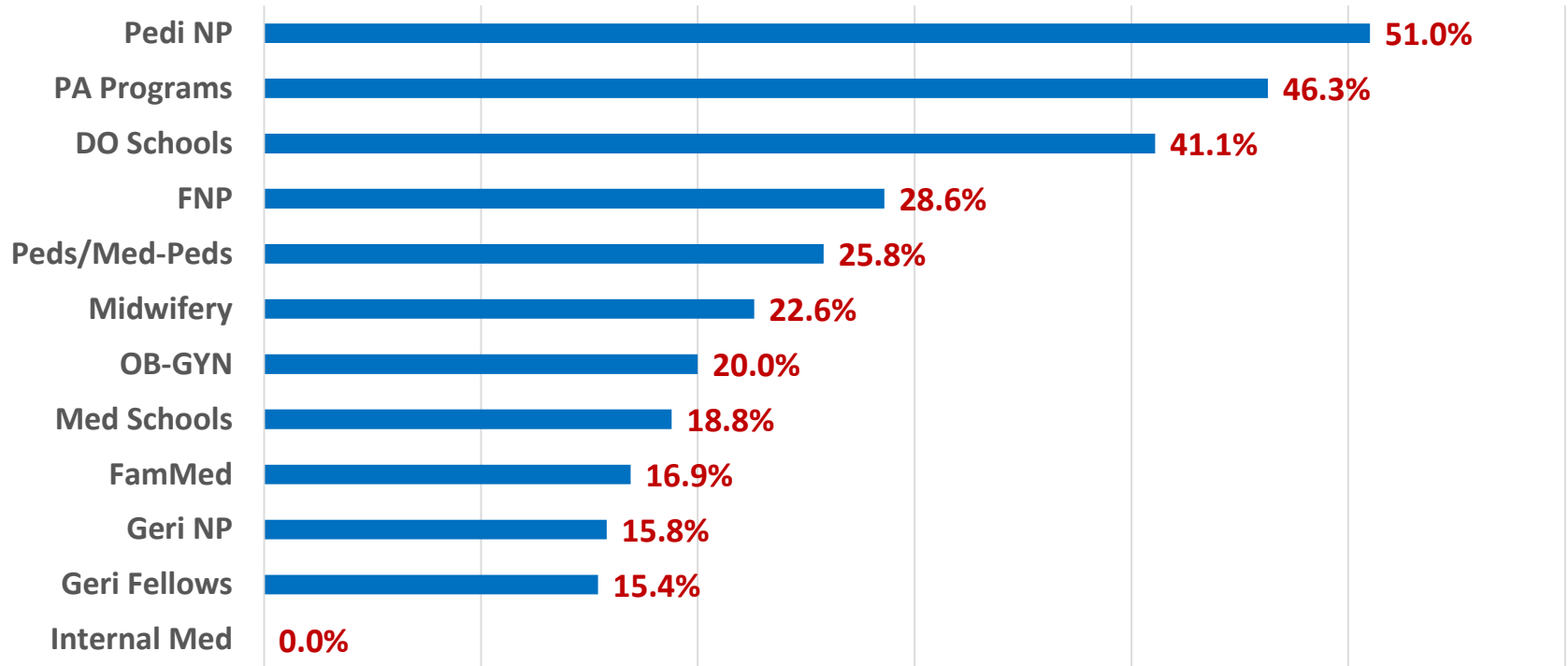
**Response rates ranged from 7% - 85%; 10 cohorts had acceptable response rates (i.e.,  $\geq 40\%$ ) to warrant further analyses.**

# Hours of Oral Health Education

Most disciplines have 1-3 hours of OH; OB and IM more frequently report 0 hours while almost one-third of PA programs include > 9 hours.



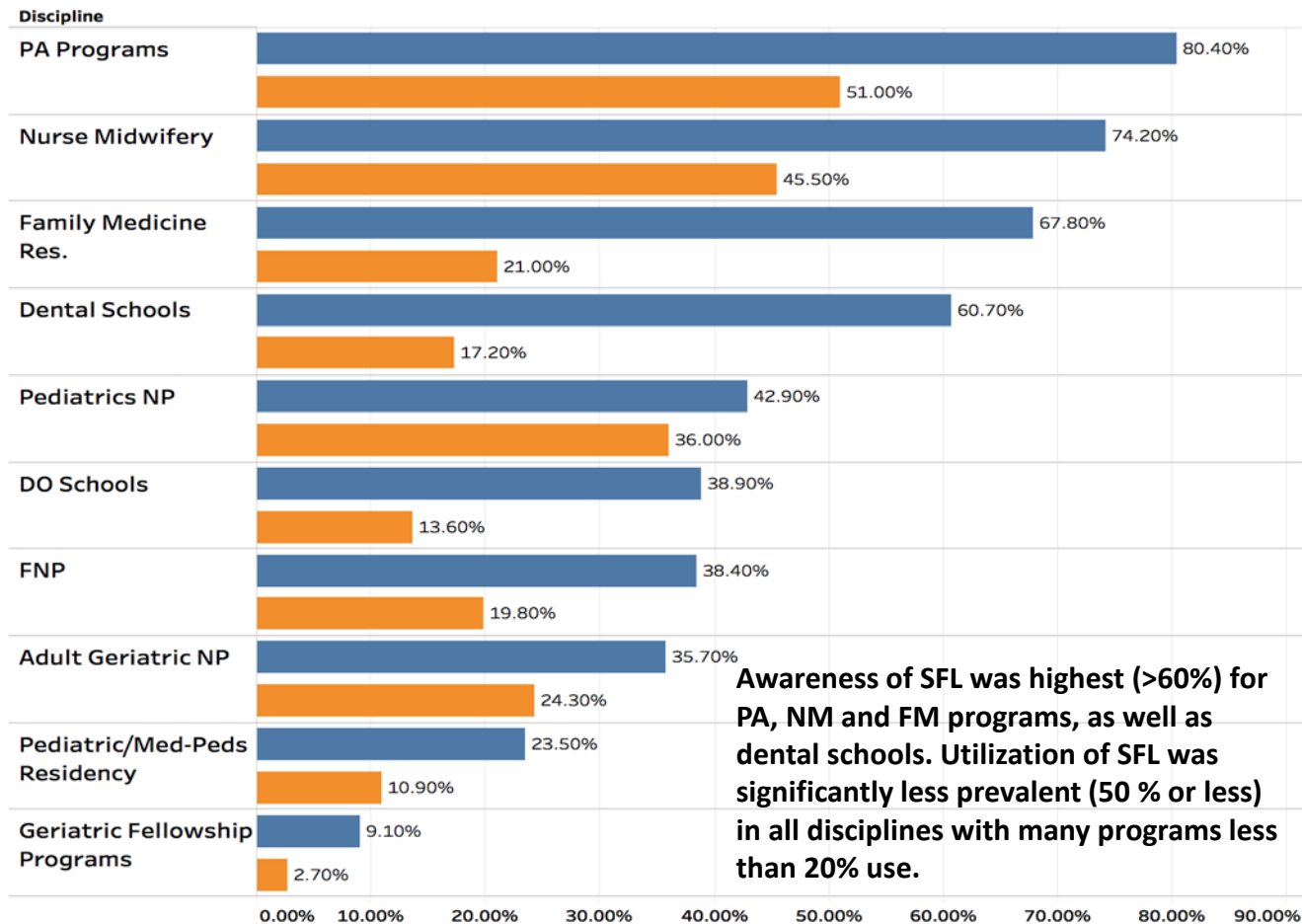
# Program Director's Satisfaction with Graduate Competence in OH



\*Percent of combined responses to "agree and strongly agree" in one question

# Smiles for Life Curriculum Awareness and Utilization

Measure Names  
■ Awareness of SFL  
■ Utilization of SFL



**Awareness of SFL was highest (>60%) for PA, NM and FM programs, as well as dental schools. Utilization of SFL was significantly less prevalent (50% or less) in all disciplines with many programs less than 20% use.**

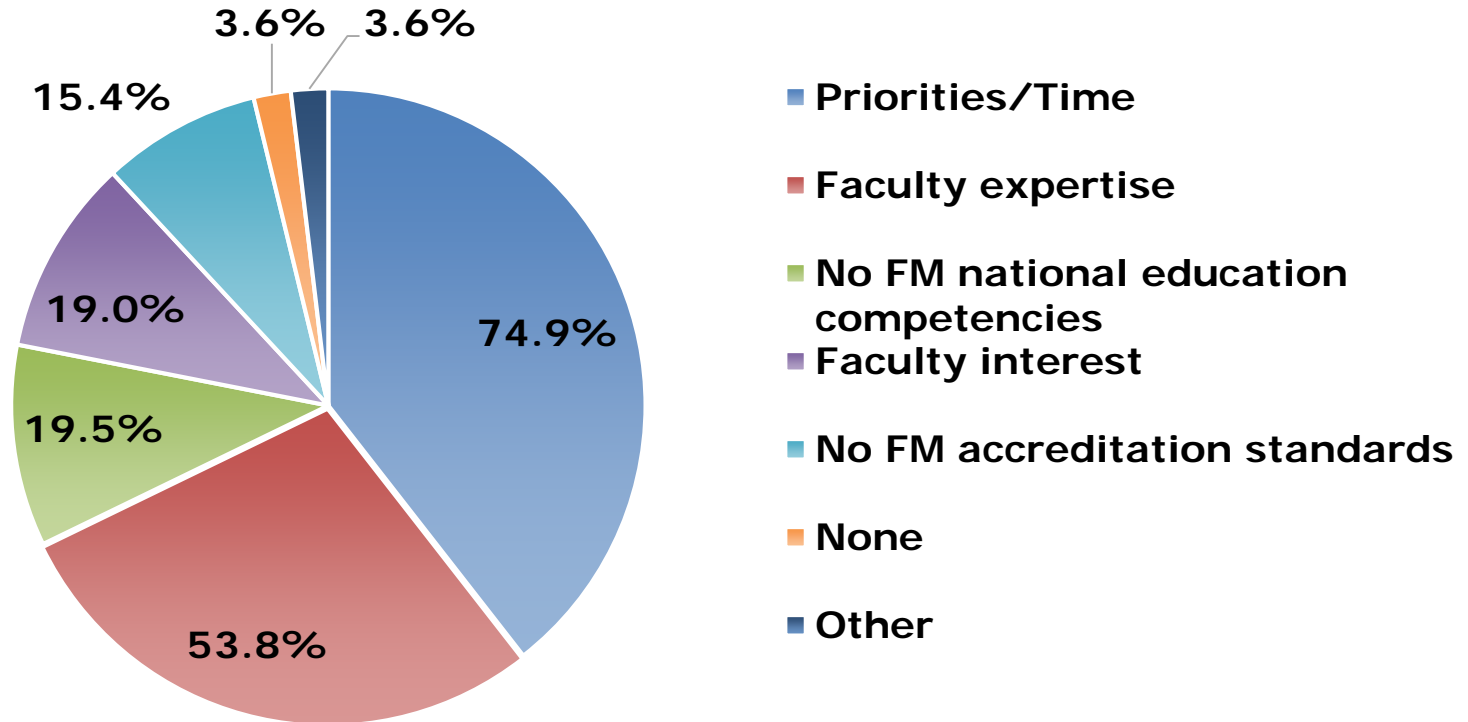
	N (%)
<b>RISK ASSESSMENT:</b>	
• Medical conditions that impact oral health (e.g., diabetes)	130 (76)
• Oral cancer	113 (67)
• Urgent/emergent oral health issues (e.g., infections, trauma)	111 (66)
• Caries/cavity risks and causes	111 (65)
• Oral conditions that impact overall health (e.g., periodontitis)	108 (64)
• Impact of medications on oral health	83 (49)
• Assessment of the impact of oral health on patient quality of life	64 (39)
<b>ORAL HEALTH EVALUATION:</b>	
• Pediatric/infant oral screening exam (including teeth)	122 (71)
• Adult/adolescent oral screening exam	69 (41)
<b>PREVENTION INTERVENTION:</b>	
• Fluoride risks, benefits, and promotion	130 (75)
• Fluoride varnish indications and applications	95 (56)
<b>COMMUNICATION AND EDUCATION:</b>	
• Oral disease prevention/Anticipatory guidance (inc. brushing and flossing)	115 (68)
<b>INTERPROFESSIONAL COLLABORATIVE PRACTICE</b>	
• Interprofessional education with oral health component	44 (27)
<b>OTHER TOPICS:</b>	
• Adult oral lesions (e.g., lichen planus, mouth ulcers)	101 (59)
• Pregnancy oral health issues	63 (38)
• Disparities in oral health/social determinants of health	56 (34)
• Geriatric oral health issues	51 (31)
• Oral anatomy	47 (28)

## OH Topics Covered in Family Medicine Residency Programs

	Hours of Oral Health in Curriculum			
	0 Hours	1-3 Hours	4+ Hours	X <sup>2</sup> ; p value
Does your program have a faculty oral health champion?				
Yes	1 (3%)	10 (32%)	20 (65%)	19.54; p<.001
No	34 (23%)	76 (52%)	37 (25%)	
Does your program have a relationship with a state/national oral health project?				
Yes	1 (2%)	19 (45%)	22 (52%)	16.04; p<.001
No	34 (25%)	67 (50%)	34 (25%)	
Does your program have routine teaching from a dental professional?				
Yes	3 (6%)	22 (44%)	25 (50%)	13.89; p=0.001
No	32 (25%)	64 (50%)	32 (25%)	
Does your program have routine teaching from a non-dental oral health expert?				
Yes	1 (2%)	10 (26%)	28 (72%)	37.41; p<0.001
No	34 (24%)	76 (55%)	29 (21%)	
Does your program have a formal relationship with a dental program?				
Yes	2 (6%)	16 (50%)	14 (44%)	5.27; p=0.072
No	33 (23%)	70 (48%)	43 (29%)	
Are you aware of the Smiles for Life?				
Yes	16 (13%)	61 (51%)	43 (36%)	10.28; p=0.006
No	19 (33%)	25 (44%)	13 (23%)	

## Hours of OH in Curriculum by Family Medicine Program Characteristics

# Barriers to Teaching More Oral Health Topics to Family Medicine Residents



4+ Hours of OH in Curriculum vs 0-3 Hours (Referent Group)	Unadjusted OR (95% CI)	Adjusted OR (95% CI) (Forward / stepwise entry)
NP Type Pediatric NP FNP (referent)	1.80 (0.95–3.42)	0.63 (0.26-1.52)*
NP Type Adult-gerontology NP FNP (referent)	0.42 (0.22–0.79)	0.31 (0.14-0.72)
Oral Health Champion Yes No (referent)	<b>7.48 (3.74–14.95)</b>	<b>4.13 (1.78-9.59)</b>
Department Support for Oral Health Yes No (referent)	1.97 (1.12–3.49)	NS**
Routine Teaching by Dental Professional Yes No (referent)	<b>9.83 (4.22-22.88)</b>	<b>4.92 (1.82-13.31)</b>
Routine Teaching by Non-Dental Oral Health Expert Yes No (referent)	<b>3.85 (2.13-6.97)</b>	<b>2.52 (1.22-5.20)</b>
Relationship with Dental School, Residency, Hygiene Program Yes No (referent)	<b>5.35 (2.52-11.35)</b>	NS**
Important for NPs to Address Basic Oral Health Needs Yes No (referent)	1.14 (0.48-2.70)	NS**
Type of OH evaluation of students Evaluate with any method(s) Do not evaluate (referent)	<b>5.75 (2.47–13.40)</b>	<b>3.32 (1.14-9.69)</b>

**Nurse  
Practitioner  
Factors Related  
to Number of  
OH Hours in  
Curriculum**



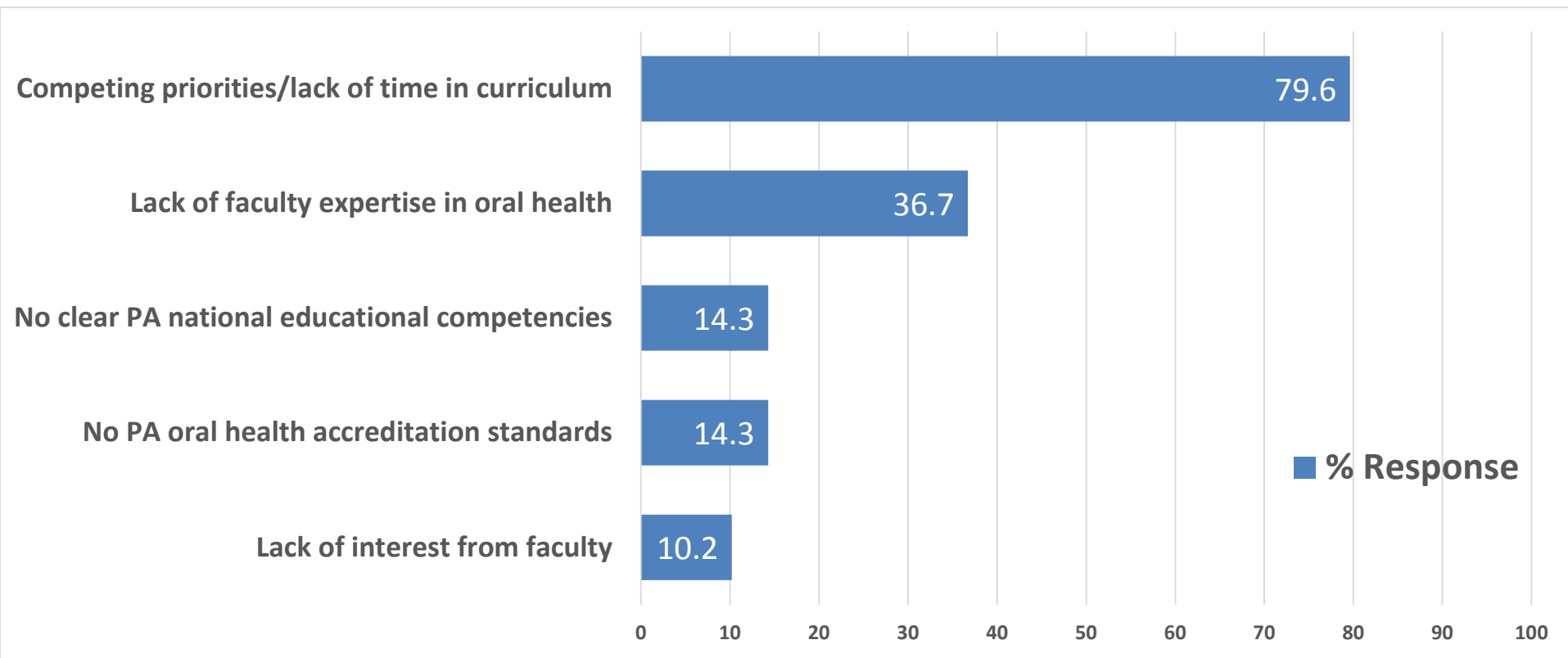
	Unadjusted OR (95% CI)	Adjusted OR (95% CI) (Forward / stepwise entry)
NP Program Type Pediatric NP FNP (referent)	3.43 (1.77–6.86)	1.63 (0.72-3.67)*
NP Type Adult-gerontology NP FNP (referent)	0.33 (0.16–0.69)	0.43 (0.18-0.99)
Oral Health Champion Yes No (referent)	2.94 (1.53–5.66)	NS**
Department Support for Oral Health Yes No (referent)	4.61 (2.34–9.07)	3.16 (1.52-6.57)
Routine Teaching by Dental Professional Yes No (referent)	4.01 (1.93-8.31)	2.40 (1.06-5.44)
Routine Teaching by Non-Dental Oral Health Expert Yes No (referent)	3.35 (1.80-6.23)	2.12 (1.05-4.28)
Relationship with Dental School, Residency, Hygiene Program Yes No (referent)	2.64 (1.28-5.44)	NS**
Important for NPs to Address Basic Oral Health Needs Yes No (referent)	3.56 (1.03-12.33)	NS**
Type of Oral Health evaluation of students Evaluate with any method(s) Do not evaluate (referent)	7.65 (2.27–25.74)	3.43 (0.95–12.41)

**Nurse Practitioner Factors Related to Program Directors' Satisfaction with Current Level of OH Competence of NP Graduates**

# Physician Assistants

	Presence of Faculty OH Champion		
	Yes	No	X <sup>2</sup> ; p value
<b>Presence of an OH Student Interest Group or community OH project</b>			
Yes	75.0%	25.0%	4.24; 0.040
No	43.2%	56.8%	
<b>Does your program have a relationship with a state or national OH project or coalition?</b>			
Yes	75.0%	25.0%	5.94; 0.015
No	41.6%	58.4%	
<b>Use of Any SFL Modules/Materials?</b>			
None	29.4%	70.6%	4.80; 0.028
At least 1	59.6%	40.4%	

# Percent Distribution of **PA Program** Respondents by Reasons that Prevent Integrating Additional Oral Health Topics (2017)



## OH Analysis of Relationships within Programs of Having an OH Champion and: Satisfaction with OH Competence of Graduates, # of Hours of OH in Curriculum, and Existence of Relationship between Program and Dental School, Residency or Hygiene Program

	Fam Medicine	<u>Peds/Med- Peds</u>	Geriatric Fellowships	Midwifery	PNP	AGPCNP	FNP	PA Schools	DO Schools
OH Champion x Satisfaction w/ OH Competence of Graduates	√	√	√				√		
OH Champion x # Hours of OH in Curriculum	√	√	√	Borderline	√	√	√	√	
OH Champion x Existence of Relationship between Program and Dental School, Residency or Hygiene Program		√	√		√	√	√		

\* √ indicates a p value significance of <.05

- 4 of the 9 disciplines that had an OH champion also had significantly more satisfaction w/ OH competence of graduates
- 7 of the 9 disciplines that had an OH champion also had significantly more hours of OH in their curriculum
- 5 of the 9 disciplines that had an OH champion also had a formal relationship between the program and a dental school, residency or hygiene program

# Total Quality Score for Each Discipline

	DO Schools (N=22) (52%)	Peds/ Med-Peds (N=110) (40%)	Fam Med (N=195) (40%)	Geriatrics (N=75) (51%)	Physician Assistant (N=102) (42%)	Midwifery (N=33) (85%)	Adult Geri NP (N=74) (56%)	Pedi NP (N=50) (68%)	FNP (N=106) (41%)	MAXIMUM # OF POSSIBLE POINTS
<b>INPUTS</b> Champion/etc. Department support	6	10	1	4	7	2	2	9	1	10
<b>INPUTS</b> Documents	1	0	0	0	1	0	1	1	1	1
<b>PROCESS</b> Hours/Day	2	3	3	2	3	2	2	3	2	3
<b>PROCESS</b> Topics: Risk Assessment Oral Health Education	2	2	0	0	4	4	2	4	4	4
<b>PROCESS</b> Topics: Prevention/intervention Communication Interprofessional Collab Other	4	6	2	1	7	3	2	7	7	7
<b>SFL</b>	0	0	0	0	1	1	0	1	0	1
<b>OUTPUTS</b> Evaluation	2	1	0	0	2	2	1	2	1	2
<b>Perceived Competence</b>	3	3	0	0	6	0	0	6	0	6
<b>TOTAL SCORE</b>	<b>20</b>	<b>25</b>	<b>6</b>	<b>7</b>	<b>31</b>	<b>14</b>	<b>10</b>	<b>33</b>	<b>16</b>	<b>34</b>

# Lessons Learned

- Champions are important for # of hours, competence, and creating relationships
- Time and lack of faculty expertise are major barriers
- Physician Assistants and Nurse Practitioners are leading the way; family medicine and geriatrics need more effort/support

# Next Steps

- Work with NIIOH and SFL to focus with specialties that are lagging (must promote SFL)
- Bend time – use flip classroom with on-line modules like Smiles for Life
- Be creative – work with national organizations to create “visiting oral health professorships” and “oral health champion institutes”