Determinants of Oral Health Assessment and Screening in Physician Assistant Clinical Practice

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OHWRC
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Background

- Integration of oral health (OH) with primary care was a theoretical goal in the Surgeon General's Report, *Oral Health in America*, 2000.
- This has resulted in calls for medical professionals to incorporate OH assessment, counseling, and early intervention into their routine clinical activities.
- A recent Health Resources and Services Administration (HRSA) report, *Oral Health Strategic Framework 2014-2017*, describes the challenges of and offers a "framework" for integrating OH with primary health care.
- Educating physician assistant (PA) students about the relations between systemic health and OH, and providing them with clinical competencies in OH screening, assessment, and referral services is consistent with the goals of the framework.
- Although OH education is now more available to PAs than in the past, no study has yet explored whether training in OH during professional education translates to actual provision of OH services.

Hypothesis & Objectives

- **The hypothesis** for this study was that PAs who were educated about OH assessment were more likely than others to provide assessments in their clinical practice.
- **The objectives** of this study were to:
  - Assess if prior education in OH competencies impacted PAs' decision to include OH services in clinical practice
  - Evaluate whether PA specialty and setting was a determinant of OH screening activities
- This study was conducted by the Oral Health Workforce Research Center (OHWRC) in cooperation with the American Academy of Physician Assistants (AAPA).
- The research for this work was supported by funding from the Health Resources and Services Administration (HRSA).

Methods

Study Sample

- The study sample consisted of 2,500 PAs who had graduated from a PA professional education program in 2014.
- The sample was drawn from a database supplied by AAPA that included 6,100 PAs who graduated from one of the 166 PA accredited professional education programs in the US in 2014.
- The number of PAs selected for inclusion in the sample from each education program was weighted by the number of graduates from a program relative to the total number of PAs nationally.

Methods (Cont')

Survey Instrument

- The survey was developed based on the insights and suggestions provided by PA educators and researchers, as well as recent graduates of PA education programs during 12 pre-survey interviews.
- The interviews were conducted using a small number of key questions to elicit opinions about the facilitators and barriers to integration of OH services into a PA's clinical practice.
- The final survey instrument consisted of 14 questions about PA's:
  - Education and training in OH competencies,
  - Implementation of OH screening activities in clinical practice,
  - General inquiries into specialty, practice setting, and geography.

Survey Administration

- The survey was web-based (built on the Qualtrics platform) and was open for 3 months.

Data Analysis & Response Rate

Data Analysis

- Survey data was cleaned and analyzed using SAS 9.4 software.
- Descriptive statistics and multivariable logistic regression models were used to identify predictors of integration of OH services into PA clinical practice.

Survey Response Rate

- Despite efforts to encourage survey participation, including frequent email reminders, an incentive for participation, and leaving the survey open for 3 months, the response rate was quite low.
- In total, 304 PAs of the 2,402 PAs with valid contact information responded to the survey for a 12.6% response rate.

Results

PAs Education in OH Competencies (n=294)

Sources of PAs' Education in OH	n	%
PA Education Program[a]	**219**	**74.5%**
Integrated into one or several curriculum topics	123	56.2%
Stand-alone lectures	116	53.0%
Inter-professional OH training	36	16.4%
Completion of an online curriculum	20	9.1%
Service learning activities	17	7.8%
Other Sources[a]	**58**	**19.7%**
Continuing education courses	13	22.4%
Self-study	13	22.4%
On-line education	8	13.8%
In-service training	6	10.3%
Professional conferences	6	10.3%

[a] n=46 PAs received OH education from both PA Education Program & other sources; n=63 reported no OH education.

Results (Con't)

PAs Integration of OH Services into Clinical Practice and Frequency of Providing OH Services (n=105)

PA's Providing OH Services	n	%
Providing OH services in their clinical practice: Yes/No	105/189	35.7%/64.3%
Type of services *"often/always"* provided to patients		
Refer to a dental provider when needed	76	72.4%
Examine and assess the oral cavity	71	67.6%
Assess for oral manifestations of systemic disease	53	50.5%
Educate about personal oral hygiene	52	49.5%
Type of patients *"often/always"* examined and assessed		
Patients with a complaint about oral cavity	85	81.0%
Patients who smoke	54	51.4%
Patients with diabetes	53	50.5%
Patients who indicate no usual dental provider	51	48.6%

Results (Con't)

Characteristics of PA respondents by Integration of OH Services into Clinical Practice (n=294)

Characteristics of PAs	Providing OH Services				χ^2 Test
	Yes (n=105)		No (n=189)		
	n	%	n	%	P-value
Education in OH Competencies					**0.0118**
No	14	13.3%	49	25.9%	
Yes	**91**	**86.7%**	140	74.1%	
Practice Specialty					**<0.0001**
Other specialty[a]	24	22.9%	117	61.9%	
Primary medicine/urgent care[b]	**81**	**77.1%**	72	38.1%	
Work Setting Type					0.63
Inpatient	62	59.1%	105	56.2%	
Outpatient/office practice	43	41.0%	82	43.9%	
Work Setting Location					0.79
Urban	45	42.9%	77	40.7%	
Suburban	38	36.2%	81	42.9%	
Rural	22	21.0%	31	16.4%	

[a] Surgical and sub-surgical specialties, anesthesiology, radiology, etc.
[b] Family medicine/general practice, internal medicine, pediatrics, obstetrics/gynecology, or emergency medicine/urgent care.

Results (Con't)

Associations Between Delivery of OH Services in Clinical Practice and PAs' Education in OH, Specialty, and Work Setting (n=292)

Predictor[a]	n	OR	95% CI	P-value
Education in OH Competencies				
No	14	1.00	*Reference*	
Yes	**91**	**2.78**	**1.38-5.59**	**0.0043**
Practice Specialty				
Other specialty[b]	24	1.00	*Reference*	
Primary medicine/urgent care[c]	**81**	**6.94**	**3.82-12.62**	**<0.0001**
Work Setting Type				
Inpatient	62	1.00	*Reference*	
Outpatient/office practice	43	0.65	0.36-1.15	0.14

[a] Odds Ratios (OR) and 95% Confidence Intervals (CI) adjusted for all other variables in the table.
[b] Surgical and sub-surgical specialties, anesthesiology, radiology, etc.
[c] Family medicine/general practice, internal medicine, pediatrics, obstetrics/gynecology, or emergency medicine/urgent care.

Results (Con't)

Relative Importance of Facilitators and Barriers to Integration of OH Services into PAs' Clinical Practice

Opinions and Attitudes	n	%
Facilitators Perceived as *"Important/Very Important" (n=105)*		
Medical professionals must feel competent to provide services	96	91.4%
Education for medical clinicians must be available	95	90.5%
Commercial insurance plans must reimburse services	93	88.6%
Medicaid program must reimburse for oral health services	89	84.8%
Barriers Perceived as *"Significant/Very Significant" (n=296)*		
Time demands	167	56.8%
Lack of patient adherence to recommendations about oral health and oral hygiene limit effectiveness	146	49.7%
Lack of access to a dental provider referral system	134	45.6%
Lack of reimbursement for oral health services	124	42.2%

Conclusions

- While these results are difficult to generalize due to the low participation rate, the study provides interesting insights about the integration of OH assessment into clinical practice.
- The study results suggest that PAs training in OH competencies during their education is important and may increase the likelihood of providing OH services. The results also suggest that misperceptions within the medical community about the importance of OH screening persist, especially in medical and surgical specialties.
- Continuing education would be an appropriate vehicle for instruction in OH. While online resources providing both didactic and clinical instruction in OH screening (eg, Smiles for Life) already exist, it may be that PAs are unaware of their availability.
- While *lack of patient adherence to recommendations about OH* is an important barrier, it is also a primary reason why provision of OH services in medical practice is important. PAs are well positioned to inform their patients about why OH matters.
- The survey results also suggest that despite general interest of policymakers, advocates, and stakeholders in integrating OH with medical services, numerous structural barriers within delivery systems impede integration.
- Ongoing education within the medical community and changes in reimbursement policies, medical record design, and referral networks will be needed to foster further adoption of OH screening by medical providers.

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Questions?

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