

Oral Health Integration Into Physician Assistant Clinical Practice: A National Survey of 2014 Physician Assistant Program Graduates

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ABSTRACT

Purpose of study: Integrating primary health and oral health services is a strategy to increase access to dental care. Physician assistants (PAs) are increasingly educated to provide oral health assessment services in their clinical practices. This study examined whether PA specialty and practice setting were determinants of oral health screening activities and if prior education in oral health competencies impacted PAs' decision to include oral health services in clinical practice.

Methods: This study used an electronic survey of a random sample of 2,500 graduates from 166 ARC-PA accredited PA education programs in the US in 2014 to ask about their education in oral health competencies and about provision of oral health assessment and screening services in their current clinical practices. The sample was weighted by the program size. Of the 2,432 graduates with a valid email address, 304 completed the online questionnaire during the 3-month survey period.

Key Findings: The survey findings suggested that education about oral health in professional education programs is enabling integration of oral health services into clinical practice. Three-quarters of survey respondents (74.5%) reported receiving oral health didactic or clinical instruction in their formative PA education program. In addition, 19.7% had received education from other sources including continuing education and professional conferences. More than a third (35.7%) reported providing any oral health service for patients in their current practices; 21.2% reported always examining and assessing the oral cavity of patients, mainly during annual well visits (40.8%). More than a third (34.3%) of the PAs who provided these services worked in a family or general medicine practice and 29.5% worked in an emergency medicine/urgent care setting. Among PAs who were providing any oral health services, 81.0% indicated their education in oral health was provided by their PA education program.

After controlling for PA specialty and primary employer, PAs who received education in oral health and disease were approximately 2.78 times more likely (95% CI=1.38-5.59, P=0.004) to provide oral health services in their clinical practice, compared to those who received no education in oral health. The likelihood of a PA providing oral health services was 6.94 times higher (95% CI=3.82-12.62, P<0.0001) if the PA was practicing in primary/emergency care vs other medical specialties. PAs who worked in outpatient or private office settings were 35% less likely to provide oral health services than PAs in inpatient settings; however, this finding was not statistically significant.

Implications: While the response rate limits the generalizability of results, PAs' responses about oral health service integration in primary care practice were encouraging. There is general acknowledgement that points of entry to oral health services must be increased to improve access to the dental service delivery system. Primary medicine is especially important because primary care is a gateway to other health services and primary practitioners are, therefore, uniquely positioned to counsel, educate, and refer patients to dental providers. The opportunities for patient triage and referral are numerous and the impacts on access to and utilization of oral health services are potentially substantial.

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OBJECTIVE

- The objectives of this study were to:
 - Assess if prior education in oral health (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.

METHODS

Study Sample

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

Survey Instrument

- The survey was developed based on the insights and suggestions provided by PA educators, researchers, and recent graduates during 12 pre-survey interviews.
- The final survey instrument consisted of 14 questions about:
 - Education and training in OH competencies,
 - Implementation of OH services in clinical practice,
 - Specialty, practice setting, and geography.

Survey Administration

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

RESULTS

In total, 304 PAs of the 2,402 PAs with valid contact emails responded to the survey for a 12.6% response rate.

Nearly 75% of PAs received education in OH from their institution. Almost 20% of PAs indicated they had received education in OH from sources other than their PA program.

Table 1. 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%
Other Sources^a	58	19.7%
Continuing education courses	13	22.4%
Self-study	13	22.4%
On-line education	8	13.8%

RESULTS (cont.)

Over a third (35.7%) of PAs provided any OH services in their current clinical practice. More than half of PAs "often" or "always" referred patients to a dental provider when needed, examined & assesses the oral cavity, and screened patients with dental complaints, smoking, and diabetes.

Table 2. 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 current practice	189	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%

The majority of PAs who provided any OH services in their clinical practice received education in OH competencies and worked in primary medicine or urgent care. Slightly more PAs who provided OH services also worked in inpatient settings and work settings located in urban areas.

Table 3. Characteristics of PA respondents by Integration of OH Services into Clinical Practice (n=294)

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

^a Surgical and sub-surgical specialties, anesthesiology, radiology, etc.

^b Family medicine/general practice, internal medicine, pediatrics, or emergency medicine/urgent care.

The likelihood of a PA providing OH services was 2.8 times higher for PAs who received OH education than those who did not and 6.9 times higher if the PA was practicing in primary/urgent care compared to other specialties.

Table 4. 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	Reference	
Yes	91	2.78	1.38-5.59	0.0043
Practice Specialty				
Other specialty ^b	24	1	Reference	
Primary medicine/urgent care ^c	81	6.94	3.82-12.62	<0.0001
Work Setting Type				
Inpatient	62	1	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, or emergency medicine/urgent care.

RESULTS (cont.)

The **facilitator** most cited as "important" or "very important" was that *medical professionals must feel competent to provide OH services* followed by the *availability of OH education for medical clinicians* and *reimbursement for OH services*.

The **barriers** to integration of OH services most reported as "significant" or "very significant" included *time demands*, *lack of patients' adherence to recommendations about oral health and hygiene*, *lack of access to a dental provider referral system* and *lack of reimbursement for OH services*.

Table 5. 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 survey provides interesting insights about the integration of OH into clinical practice.
- Almost 75% of PAs received education in OH competencies; however, only 36% had incorporated those competencies into their clinical practice.
- PAs who received OH education and PAs practicing in primary/emergency care were more likely to incorporate OH services in their clinical practice than other PAs.
- The results suggest that training in OH competencies during foundational education is important and that misperceptions within the medical community about the importance of screening for oral disease persist.
- The survey results also suggest that despite general interest among policymakers, advocates, and stakeholders in integrating OH with medical services, numerous structural barriers within delivery systems impede integration.

REFERENCE

Langelier M, Surdu S, Gao J, Glicken AD. *Determinants of Oral Health Screening and Assessment in Physician Assistant Clinical Practice*. Rensselaer, NY: Oral Health Workforce Research Center, Center for Health Workforce Studies, School of Public Health, SUNY Albany; December 2016.