



**Bowen Center for
Health Workforce**
—Research & Policy—
Indiana University School of Medicine

Data Report

2016 Indiana Physician Assistant Licensure Survey

November 2016



Acknowledgements

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Bowen Center for Health Workforce Research and Policy

The Bowen Center for Health Workforce Research and Policy (Bowen Center) aims to improve population health by informing health workforce policy through data management, community engagement and original research. The Bowen Center has a rich history of collecting, analyzing, and disseminating health workforce data and research for the State of Indiana. Understanding Indiana's health care workforce status is critical to ensuring that Indiana residents have access to high quality care, to developing programs that will train practitioners to meet future needs, and to recruiting and retaining health care professionals in Indiana.



Table of Contents

Acknowledgements	i
Executive Summary	iii
Introduction	1
Methods	1
Survey Administration	1
Dataset Construction	1
<i>Figure 1.1: Physician Assistant Workforce Inclusion and Exclusion Criteria</i>	2
Practice Address Cleaning	3
FTE Assignment	3
<i>Table 1.1: FTE Calculation for Reported Based on Hours per Week in Patient Care</i>	3
Rurality	3
Limitations	4
Supplemental Data Tables	4
Physician Assistant Workforce	
Highlights	5
Demographics Characteristics	5
<i>Table 2.1: Physician Assistant Demographic Characteristics</i>	5
Professional and Practice Characteristics	6
<i>Table 2.2: Physician Assistant Practice Setting/Hours in Direct Patient Care</i>	6
Educational Characteristics	6
<i>Table 2.3: Physician Assistant Education Characteristics</i>	6
Supply and Geographic Distribution Characteristics	7
<i>Table 2.4: Physician Assistant Geographic Distribution (Reported FTE)</i>	7
<i>Map 2.1: Population per Physician Assistant FTE</i>	8
Specialty and Practice Characteristics	9
<i>Table 2.5: Physician Assistant, Post-Graduate Training Specialty</i>	9
<i>Table 2.6: Physician Assistant, Employment Plans</i>	9
<i>Table 2.7: Physician Assistant, Specialty of Supervising</i>	10
Closing Summary	11



Executive Summary

Identifying supply and distribution of the Physician Assistant (PA) workforce is crucial in understanding the capacity to meet health care needs and improve overall population health of Indiana citizens. Data presented in this report provide a snapshot of key demographic and practice characteristics for Indiana's PA workforce.

The 2016 Indiana Physician Assistant Data Report presents information derived from data collected from the PA re-licensure survey administered by the Indiana Professional Licensing Agency (IPLA) during the biennial license renewal period. In 2016, 1,346 PAs renewed their professional licenses. Of these, 806 (59.9%) reported having a verified Indiana practice address and are included in this report.

An uneven geographic distribution of PAs is reflected by the fact that the highest PA full-time equivalent (FTE) was found in Marion County while over one-third of Indiana counties (37.0%) do not have any reported PA FTE. As with other health workforce professions, the greatest need for PAs exists in rural area, as over three-quarters (79.4%) of those counties are absent any reported PA FTE.

This report details important demographic and practice characteristics for the PA workforce, examining these data specifically in relation to PA supply and distribution. The 2016 Indiana Physician Assistant Data Report provides stakeholders with information needed to improve the quality of and accessibility to primary care for Indiana residents through policymaking, workforce development and resource allocation. Additional analyses and reports may be made available through the Bowen Center's website at family.medicine.iu.edu/hws.



Introduction

The 2016 Indiana Physician Assistant Licensure Survey Data Report presents key information and data collected from the PA re-licensure survey administered by the Indiana Professional Licensing Agency (IPLA) during the biennial license renewal period. This report includes data on a sample of PAs that may be used to promote meaningful policy discussion and to inform evidence-based health workforce policy development. The data presented herein describe PA demographic, educational and professional characteristics, as well as essential supply and geographic distribution information.

Methods

Survey Administration

Indiana's PA re-licensure survey was adapted from the PA Minimum Data Set (MDS) created by the Health Resources and Services Administration (HRSA), National Center for Health Workforce Analysis. HRSA has established MDS tools for many licensed health professionals to facilitate the establishment of national databases with consistent core data elements covering demographics, educational, credentialing, and practice characteristics. Indiana's PA re-licensure survey was administered by the IPLA during the biennial licensure renewal period. All PAs who renewed their license electronically (n=1,252) were invited to complete the voluntary survey.

Dataset Construction

The data used for this report were extracted from the PA base license files and the PA survey data files provided by the IPLA. The base license file contains administrative data such as license status, expiration date, license number, and date of birth. These data are important for calculating additional demographic variables such as age and applying the inclusion and exclusion criteria used for this report. The base license files were merged with the survey files by unique license numbers.

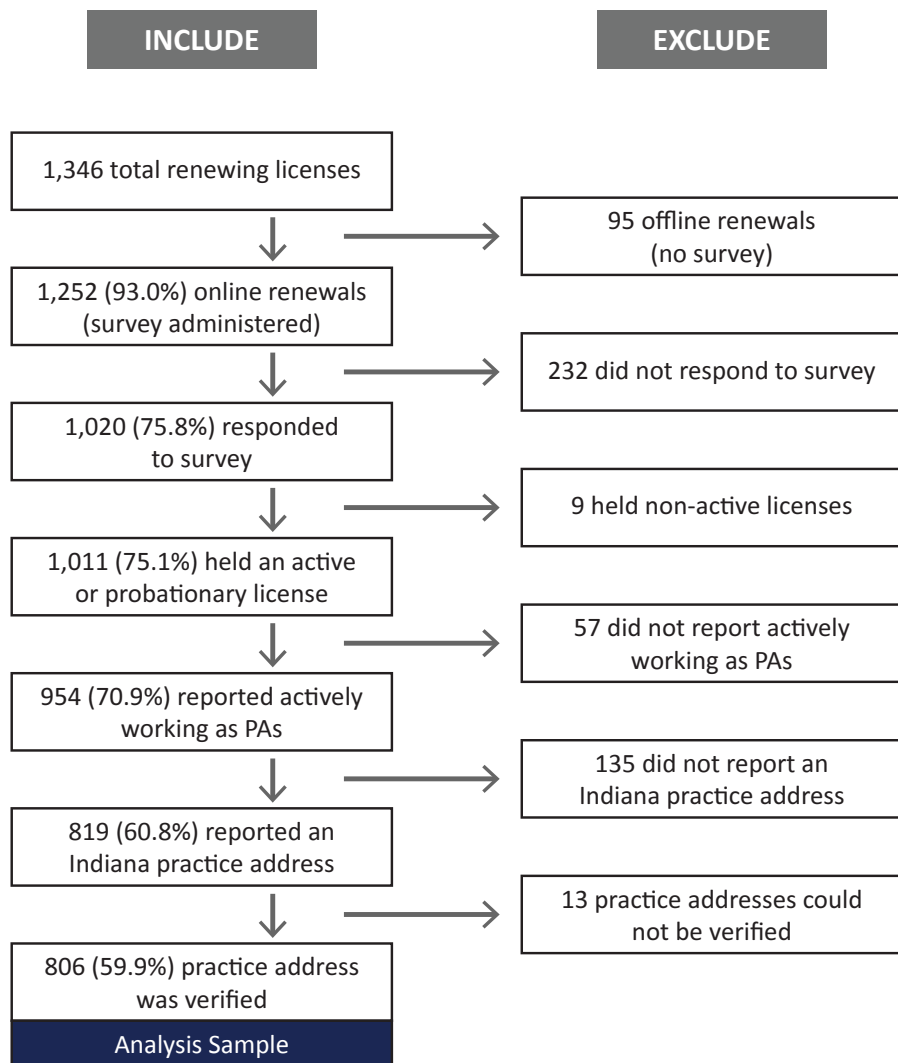
Inclusion and exclusion criteria were applied to the two datasets to determine the samples of PAs actively practicing in Indiana:

1. PA renewed license electronically in 2016;
2. PA responded to the 2016 re-licensure survey;
3. PA holds an active, 'valid to practice while reviewed' or probationary license;
4. PA reported actively working as a PA;
5. PA reported an Indiana practice address; and
6. PA whose practice address could be confirmed.



Physician Assistants who did not meet the inclusion criteria were excluded from the sample. The final sample in this report includes 806 PAs. The inclusion and exclusion criteria applied to the merged datasets for PAs are presented below.

Figure 1.1 Physician Assistant Workforce Inclusion and Exclusion Criteria



Practice Address Cleaning

Self-reported practice addresses were cleaned by correcting spelling of street names and removing suite, building, apartment and room numbers. Addresses were then geocoded using SAS 9.4 to confirm the reported address was a valid practice location. Respondents whose practice address could not be confirmed through geocoding were not included in the analysis sample for this report.

FTE Assignment

A full-time equivalent (FTE) was assigned to each individual based upon the survey response indicating average number of hours per week spent in direct patient care. To accurately map the distribution of the PA workforce throughout Indiana, FTEs were assigned to each individual practitioner. Geographic information system (GIS) maps present the distribution of the PA workforce by FTE in this report. Table 1.1 outlines the FTE assignment to each hourly category.

Table 1.1: FTE Calculation for Reported Based on Hours per Week in Patient

Hours per Week in Patient Care	Assigned FTE
0	0
1 – 4	0.1
5 – 8	0.2
9 – 12	0.3
13 – 16	0.4
17 – 20	0.5
21 – 24	0.6
25 – 28	0.7
29 – 32	0.8
33 – 36	0.9
37 – 40	1
40 or more	1

Rurality

Rurality was determined by whether an area is considered “urban” or “non-urban.” The Office of Management and Budget (OMB) defines an area as a metropolitan statistical area (MSA) with the following definition:

- one city with a population of 50,000 or more; or
- an urbanized area (as defined by the Bureau of the Census) with a population of at least 50,000 and a total MSA population of at least 100,000.¹

¹See census.gov/population/metro for further information.

Each MSA must include the county in which the central city is located and additional contiguous counties, if these are economically and socially integrated with the central county. Any county not included within an MSA is considered non-metro or “rural.”

Limitations

The data presented in this report have several significant limitations that should be taken into account when interpreting and utilizing these data. The information in this report was collected in self-reported response format as part of a voluntary survey. As is the case with all survey research, it is likely there is some level of response bias. In this case, it is possible responses to a question do not reflect the absolute practice characteristics of providers. Although these self-reported data may not be considered absolute, they provide a method of gauging PA practice characteristics. This report should only be used to inform policy discussion.

Additionally, the data presented in this report represent only a sample of the entire PA workforce. Due to missing data, the voluntary nature of the survey and the inclusion criteria many PAs are not represented in the final sample included in this report. Also, survey respondents did not answer every question, therefore the tables in this report include the number of non-respondents where applicable. Although this report contains a sample of PAs who renewed their license, this is a fairly large sample (59.9%) and may be valuable for informing health workforce policies.

Lastly, to meet state of Indiana needs and due to changes in the methodology for administration of the PA re-licensure survey, several updated versions have resulted over the years. Therefore, a conservative approach was taken and data trend analyses are not presented in this report.

Supplemental Data Tables

The primary purpose of the 2016 Indiana Physician Assistant Data Report is to provide an overview of key information pertaining to the PA workforce in Indiana. This report presents only highlights of the re-licensure survey data. Additional data tables may be requested online through the Bowen Center website: family.medicine.iu.edu/hws/workforce-form.

Physician Assistant Workforce

Highlights

- The mean age of the PA survey sample is 38.0 years
- Nearly all (92.8%) of PAs identified as White
- The majority (80.0%) of PAs reported practicing in only one location
- An equal proportion of PAs reported working in a hospital setting (47.0%) or an office setting (47.0%)
- Most (78.0%) PAs reported working at least 29 hours per week
- Almost all (94.9%) respondents qualified for the PA license by having earned a baccalaureate degree or higher level credential; 57.1% earned their credential in Indiana; and most (86.7%) PAs report no post-graduate training
- 34 Indiana counties had no reported PA FTE; an additional 9 counties have less than 1.0 reported PA FTE
- The population-to-PA FTE ratio is greater than 50,000:1 in five Indiana counties (Dearborn, Jasper, LaGrange, La Porte, Noble)
- The most commonly reported specialty for PAs was 'other' (28.0%) followed by Family Medicine/General Practice (18.5%)
- 89.4% of PAs reported having no planned changes in their career

Demographic Characteristics

Table 2.1: Physician Assistant Demographic Characteristics

	Gender							
	Female		Male		Non-Respondents		Total	
Mean Age	36.1		42.3		38.9		38.0	
	N	%	N	%	N	%	N	%
Age Group								
Under 35	323	57.5	90	37.3	1	33.3	414	51.4
35 - 44	139	24.7	66	27.4	1	33.3	206	25.6
45 - 54	72	12.8	40	16.6	1	33.3	113	14.0
55 - 64	25	4.5	32	13.3	0	0.0	57	7.1
65 and Older	3	0.5	13	5.4	0	0.0	16	2.0
Total	562	100.0	241	100.0	3	100.0	806	100.0
Race								
White	522	92.9	223	92.5	3	100.0	748	92.8
Asian	11	2.0	5	2.1	0	0.0	16	2.0
Black or African American	9	1.6	4	1.7	0	0.0	13	1.6
Multiracial	11	2.0	1	0.4	0	0.0	12	1.5
American Indian or Alaska Native	3	0.5	1	0.4	0	0.0	4	0.5
Non-Respondents	6	1.1	7	2.9	0	0.0	13	1.6
Total	562	100.0	241	100.0	3	100.0	806	100.0
Ethnicity								
Not Hispanic or Latino	509	90.6	209	86.7	2	66.7	720	89.3
Hispanic or Latino	9	1.6	3	1.2	0	0.0	12	1.5
Non-Respondents	44	7.8	29	12.0	1	33.3	74	9.2
Total	562	100.0	241	100.0	3	100.0	806	100.0

Source: Indiana Physician Assistant Re-Licensure Survey, 2016

Notes: Gender was not answered by every survey respondent. Age was calculated by measuring the difference between the survey completion date and the respondent's date of birth provided by IPLA.



Professional and Practice Characteristics

Table 2.2: Physician Assistant Practice Setting/Hours in Direct Patient Care

Practice Setting	Number of Practice Locations					
	One Practice Location		Two Practice Locations		Total	
	N	%	N	%	N	%
Hospital – Emergency Department	136	21.1	41	25.5	177	22.0
Hospital – Inpatient	127	19.7	27	16.8	154	19.1
Hospital – Outpatient	29	4.5	5	3.1	34	4.2
Hospital – Ambulatory Care Center	7	1.1	4	2.5	11	1.4
Office/Clinic – Single Specialty Group	120	18.6	25	15.5	145	18.0
Office/Clinic – Solo Practice	67	10.4	11	6.8	78	9.7
Office/Clinic – Multi Specialty Group	57	8.8	25	15.5	82	10.2
Office/Clinic – Partnership	55	8.5	7	4.4	62	7.7
Other	20	3.1	10	6.2	30	3.7
Federal/State/Community Health Center(s)	6	0.9	2	1.2	8	1.0
Local Health Department	2	0.3	0	0.0	2	0.3
Medical School	2	0.3	0	0.0	2	0.3
Nursing Home or Extended Care Facility	1	0.2	2	1.2	3	0.4
Federal Government Hospital	1	0.2	1	0.6	2	0.3
Research Laboratory	1	0.2	0	0.0	1	0.1
Home Health Setting	1	0.2	0	0.0	1	0.1
Non-Respondents	13	2.0	1	0.6	14	1.7
Total	645	100.0	161	100.0	806	100.0
Hours spent in Direct Patient Care						
0 hours per week	4	0.6	2	1.2	6	0.7
1 – 4 hours per week	4	0.6	2	1.2	6	0.7
5 – 8 hours per week	11	1.7	5	3.1	16	2.0
9 – 12 hours per week	10	1.6	8	5.0	18	2.2
13 – 16 hours per week	20	3.1	11	6.8	31	3.9
17 – 20 hours per week	29	4.5	16	9.9	45	5.6
21 – 24 hours per week	25	3.9	28	17.4	53	6.6
25 – 28 hours per week	37	5.7	11	6.8	48	6.0
29 – 32 hours per week	94	14.6	20	12.4	114	14.1
33 – 36 hours per week	126	19.5	21	13.0	147	18.2
37 – 40 hours per week	183	28.4	22	13.7	205	25.4
41 or more hours per week	96	14.9	14	8.7	110	13.7
Non-Respondents	6	0.9	1	0.6	7	0.9
Total	645	100.0	161	100.0	806	100.0

Source: Indiana Physician Assistant Re-Licensure Survey, 2016

Notes: One and two practice locations are defined as having one or two valid practice addresses in Indiana.

Educational Characteristics

Table 2.3: Physician Assistant Education Characteristics

Qualifying Degree	Indiana		Contiguous States		Other US States		Non-Respondents		Total	
	N	%	N	%	N	%	N	%	N	%
Certificate/Diploma	7	1.5	6	4.0	10	5.5	1	7.1	24	3.0
Associate's Degree	1	0.2	14	9.3	0	0.0	0	0.0	15	1.9
Bachelors	138	30.0	22	14.7	44	24.2	8	57.1	212	26.3
Masters	312	67.8	108	72.0	128	70.3	4	28.6	552	68.5
Other	2	0.4	0	0.0	0	0.0	0	0.0	2	0.3
Non-Respondent	0	0.0	0	0.0	0	0.0	1	7.1	1	0.1
Total	460	100.0	150	100.0	182	100.0	14	100.0	806	100.0

Source: Indiana Physician Assistant Re-Licensure Survey, 2016

Notes: Contiguous states include Illinois, Kentucky, Michigan, and Ohio.



Supply and Geographic Distribution Characteristics

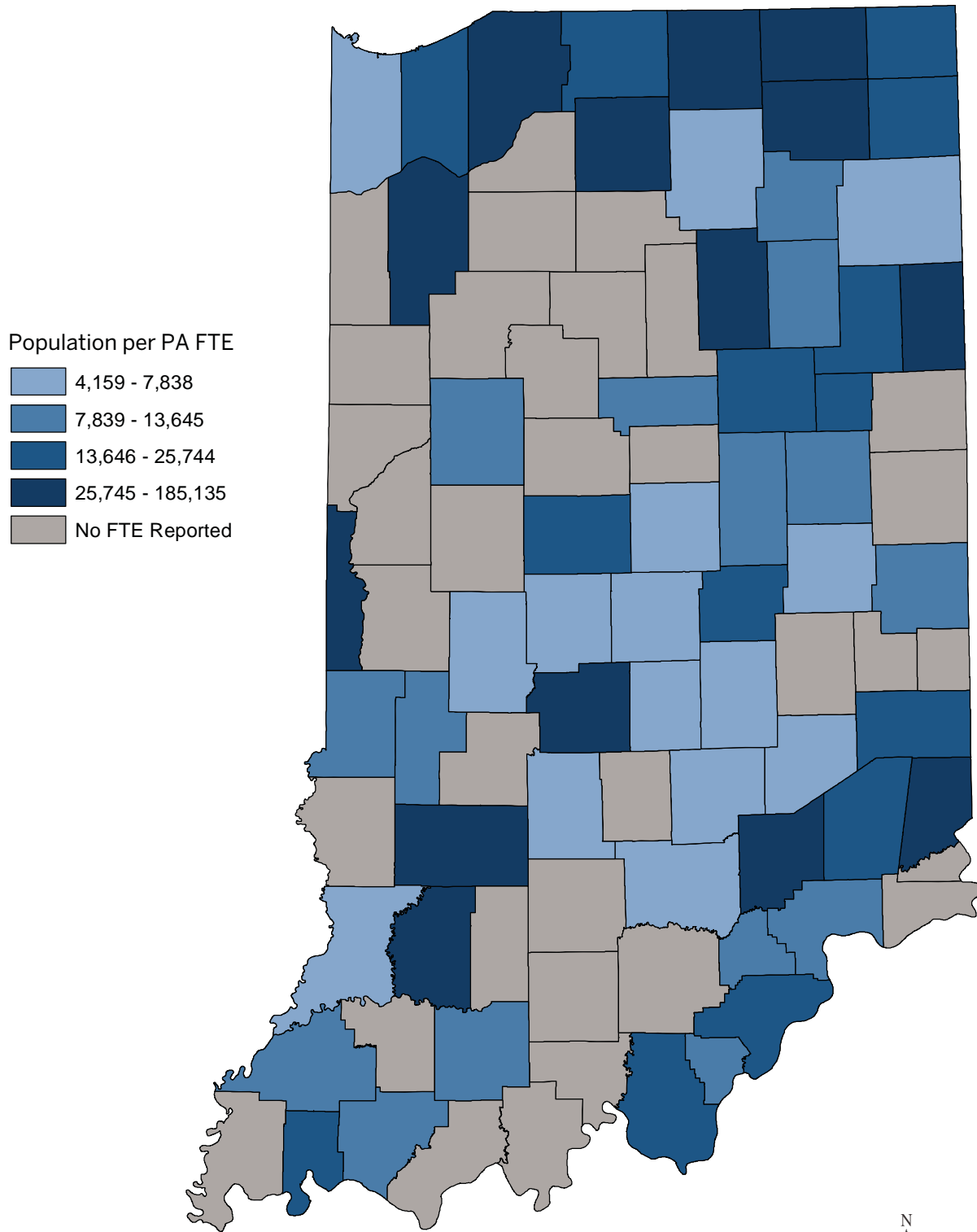
Table 2.4: Physician Assistant Geographic Distribution (Reported FTE)

County Name	Rurality	FTE	Resident per FTE
Adams	Rural	0.7	48,396
Allen	Urban	74.5	4,723
Bartholomew	Urban	9.9	7,726
Benton	Rural	-	-
Blackford	Rural	0.8	15,405
Boone	Urban	3.4	16,876
Brown	Rural	-	-
Carroll	Rural	-	-
Cass	Rural	-	-
Clark	Urban	5.7	19,220
Clay	Rural	2.4	10,978
Clinton	Rural	-	-
Crawford	Rural	-	-
Daviess	Rural	0.9	34,756
DeKalb	Rural	2.4	17,411
Dearborn	Rural	0.9	54,639
Decatur	Rural	3.9	6,544
Delaware	Urban	9.1	12,008
Dubois	Rural	3.6	11,441
Elkhart	Urban	3.9	49,973
Fayette	Rural	-	-
Floyd	Urban	7.9	9,360
Fountain	Rural	-	-
Franklin	Rural	1.0	22,910
Fulton	Rural	-	-
Gibson	Rural	3.3	9,881
Grant	Urban	4.7	13,656
Greene	Rural	0.9	36,229
Hamilton	Urban	48.8	5,756
Hancock	Urban	2.7	25,744
Harrison	Rural	1.8	21,438
Hendricks	Urban	23.2	6,257
Henry	Rural	8.5	5,407
Howard	Urban	8.7	9,341
Huntington	Rural	3.1	11,493
Jackson	Rural	6.5	6,410
Jasper	Rural	0.2	161,670
Jay	Rural	-	-
Jefferson	Rural	3.3	9,166
Jennings	Rural	1.0	27,866
Johnson	Urban	18.9	7,319
Knox	Rural	5.5	6,434
Kosciusko	Urban	9.7	7,838
LaGrange	Rural	0.2	185,135
LaPorte	Urban	4.0	122,056
Lake	Urban	24.7	4,159
Lawrence	Rural	-	-
Madison	Urban	14.1	8,794
Marion	Urban	203.8	4,383
Marshall	Rural	1.0	46,293
Martin	Rural	-	-
Miami	Rural	-	-
Monroe	Urban	20.7	6,042
Montgomery	Rural	-	-
Morgan	Urban	1.9	36,003
Newton	Rural	-	-
Noble	Rural	0.9	51,620
Ohio	Rural	-	-
Orange	Rural	-	-
Owen	Rural	-	-
Parke	Rural	-	-
Perry	Rural	-	-
Pike	Rural	-	-
Porter	Urban	7.5	21,500
Posey	Rural	-	-
Pulaski	Rural	-	-
Putnam	Rural	4.8	6,697
Randolph	Rural	-	-
Ripley	Rural	2.0	14,074
Rush	Rural	-	-
Scott	Rural	1.9	12,414
Shelby	Rural	8.7	5,011
Spencer	Rural	-	-
St Joseph	Urban	16.8	15,141
Starke	Rural	-	-
Steuben	Rural	1.9	17,249
Sullivan	Rural	-	-
Switzerland	Rural	-	-
Tippecanoe	Urban	14.3	11,308
Tipton	Rural	-	-
Union	Rural	-	-
Vanderburgh	Urban	12.1	14,314
Vermillion	Rural	0.5	31,434
Vigo	Urban	7.4	13,308
Wabash	Rural	1.0	30,709
Warren	Rural	-	-
Warrick	Urban	5.4	10,921
Washington	Rural	-	-
Wayne	Urban	6.3	10,447
Wells	Rural	1.9	14,214
White	Rural	-	-
Whitley	Rural	2.4	13,645

Source: Indiana Physician Assistant Re-Licensure Survey, 2016

Notes: Urban and rural are defined by the United States Office of Management and Budget (OMB). Population to provider ratio could not be counted in counties where there was no reported FTE.

Map 2.1 Population per Physician Assistant FTE



Source: Indiana Physician Assistant Re-Licensure Survey, 2016



Specialty and Practice Characteristics**Table 2.5: Physician Assistant, Post-Graduate Training Specialty**

Physician Assistant Specialty	N	%
No Post-Graduate Training Completed	340	42.2
Other	18	2.2
Family Medicine	8	1.0
Emergency Medicine	5	0.6
Orthopedic Surgery	4	0.5
Surgery	4	0.5
Internal Medicine	3	0.4
Neonatology	3	0.4
Cardiothoracic	2	0.3
Hospitalist	2	0.3
Urgent Care	1	0.1
Psychiatry	1	0.1
Pediatrics	1	0.1
Non-Respondents	414	51.4
Total	806	100.0

Source: Indiana Physician Assistant Re-Licensure Survey, 2016

Table 2.6: Physician Assistant, Employment Plans

Employment Plans	N	%
No planned change	701	87.0
Increase hours in the physician assistant field	54	6.7
Decrease hours in the physician assistant field	27	3.4
Leave employment in the field of physician assistant	2	0.3
Non-Respondents	22	2.7
Total	806	100.0

Source: Indiana Physician Assistant Re-Licensure Survey, 2016

Table 2.7: Physician Assistant, Specialty of Supervising Physician

Supervising Physician Specialty	N	%
Other	224	27.8
Family Medicine/General Practice	148	18.4
Surgery – Orthopedic	128	15.9
Hospital Medicine (Hospitalist)	46	5.7
Surgery – Cardiothoracic	38	4.7
Critical Care Medicine	34	4.2
Internal Medicine – General Practice	31	3.9
Surgery – General	16	2.0
Occupational Medicine	12	1.5
Internal Medicine – Cardiology	12	1.5
Internal Medicine – Gastroenterology	10	1.2
Pediatric Subspecialties	9	1.1
Physical Medicine/Rehabilitation	8	1.0
Psychiatry	7	0.9
Neurology	7	0.9
Surgery – Neurologic	6	0.7
Obstetrics & Gynecology	6	0.7
Radiology	6	0.7
General Pediatrics	5	0.6
Otolaryngology	5	0.6
Surgery – Urology	5	0.6
Internal Medicine – Nephrology	4	0.5
Surgery – Vascular	4	0.5
Surgery – Otorhinolaryngology	4	0.5
Internal Medicine – Pulmonology	4	0.5
Surgery – Plastic & Maxillofacial	4	0.5
Internal Medicine – Hematology	4	0.5
Internal Medicine – Geriatrics	2	0.3
Internal Medicine – Endocrinology	2	0.3
Internal Medicine – Oncology	2	0.3
Surgery – Obstetrics & Gynecology	2	0.3
Adolescent Medicine	1	0.1
Radiation Oncology	1	0.1
Internal Medicine – Infectious Disease	1	0.1
Pathology	1	0.1
Gynecology Only	1	0.1
Internal Medicine – Allergy & Immunology	1	0.1
Non-Respondent	5	0.6
Total	806	100.0

Source: Indiana Physician Assistant Re-Licensure Survey, 2016



Closing Summary

The data presented in this report provided information on demographics and practice characteristics for the PA workforce of Indiana. Of the total PA workforce that renewed their license, 59.9% reported a verified Indiana employment address and were included as this report's data analysis sample.

The sample included in this report demonstrated that most PAs (79.0%) are younger than 45 years of age. Indiana's PA workforce lacks in diversity as 92.8% identified as White.

Regarding practice characteristics, most PAs (80.0%) reported working in a single practice location, typically in the hospital or office setting (47.0% each). Over three-quarters (78.0%) of PAs reported working at least 29 hours per week. The geographic distribution of reported PA FTE demonstrates that the majority of PA effort (89.2%) is in an urban setting.

Implications and recommendations from the data provided in this report are provided in the 2016 Physician Assistant Policy Report.