

***Oklahoma Primary Care Health Care
Workforce Gap Analysis***

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Introduction

The study of health care workforce demand is complex. Most projection models focus on physician supply and demand. These models typically use some estimate of physician to population ratio as a method of predicting workforce demand. The estimates are adjusted for population age and other proxies for anticipated healthcare usage yet the best workforce demand estimates are often inconsistent or change rapidly. For example, the American Association of Medical Colleges (AAMC) recently published an update on physician workforce demand¹ and revised its 2025 estimates of physician shortages downward by 48% or 62,350 physicians over estimates published just three years previously. Another limitation of national projections is that they tend to dilute geographic maldistribution of healthcare providers with persistent shortages in rural and underserved urban areas. Further, it is not well understood how the changing roles of Nurse Practitioners (NPs) and Physician Assistants (PAs) and new models of care including Accountable Care Organizations (ACOs) and Patient Centered Medical Homes (PCMHs) will influence physician supply and demand. These estimates should be interpreted cautiously and revised frequently as more information regarding model assumptions is known.

In spite of wide variation in supply/demand estimates, there is general consensus that physician demand will increasingly exceed supply over the next decade^{1,2} and severe shortages will persist in rural and underserved urban areas. The AAMC recently published a commissioned study¹ on physician supply and demand that projects shortfalls in primary care will range between 12,500 and 31,100 by 2025 and demand for non-primary care physicians will exceed supply by 28,200 to 63,700 physicians. HRSA's National Center for Workforce Analysis (National Center) produced a recent report² that examined projected demand for primary care practitioners. The National Center defines primary care as four physician specialties; family medicine, general pediatrics, general internal medicine, and geriatrics (excluding hospitalists), as well as NPs and PAs who practice in primary care settings. The National Center proposes that effective integration of NPs and PAs into primary care delivery would reduce the physician shortage estimates for 2020 by nearly 70%, from 20,400 to 6,400, due to a projected oversupply of NPs and PAs. Additionally, newer models of workforce demand have been proposed that redefine physician shortages as a demand-capacity mismatch. Bodenheimer and Smith have recently proposed that healthcare systems can increase patient capacity without adding physicians by addressing inefficiencies in provider workflow³. This wide variation in primary care demand estimates, ranging from several thousand to none, illustrate the complexity and uncertainty in supply/demand analysis under new models of healthcare delivery.

¹ IHS Inc., *The Complexities of Physician Supply and Demand: Projections from 2013 to 2025*. Prepared for the Association of American Medical Colleges. Washington, DC: Association of American Medical Colleges; 2015.

² U.S. Department of Health and Human Services, Health Resources and Services Administration, National Center for Health Workforce Analysis. *Projecting the Supply and Demand for Primary Care Practitioners Through 2020*. Rockville, Maryland: U.S. Department of Health and Human Services, 2013.

³ Bodenheimer T., Smith, M. Primary Care: Proposed Solutions to the Physician Shortage Without Training More Physicians. *Health Affairs*. 2013; 32 (11): 1881-1886.

Oklahoma's health care workforce is a story of both shortage and maldistribution. The issue of workforce shortage is brought to the forefront every December when the United Health Foundation releases its annual *America's Health Rankings* and dutifully reports that Oklahoma has one of the lowest rates of primary care physician access in the country.⁴ However, the problems facing Oklahoma's workforce are deeper and more complex than not enough primary care physicians. Compounding the general physician access limitations in Oklahoma is the fact that the physician workforce is older than the national average. Oklahoma ranks 9th nationally for proportion of physicians over 60. As of 2012, 29.7% of the state's active physicians were age 60 or older. The state's health care workforce is also constrained by geography. The vast rural stretches of the state suffer from acute shortages of both health care professionals and health care services (see Figures 2, 3, & 4). However, before the state can begin to formulate policy that tackles the twin problems of shortage and maldistribution, a holistic understanding of the state's health care workforce is needed. Such an understanding is more than just counting the number and types of health care providers in a given location. It begins with assessing the types and quality of data that are available to construct an accurate description of the current workforce and those organizations that serve as the locus for health care delivery.

Background & Data Acquisition

The Oklahoma State Department of Health (OSDH) provided the OSU Center for Rural Health (OSU-CRH) with the health care provider data used to complete this gap analysis. OSDH obtained the data from a variety of sources. Many of these sources are the primary entities responsible for collecting the information. OSDH data analysts cleaned and processed the data prior to distribution to the OSU-CRH. This document represents an initial attempt at a meaningful healthcare workforce gap analysis, however, data limitations will impose restrictions on the types of analysis conducted. Analyses can be expanded or revised as additional data become available. OSU-CRH is prepared to support substantial revisions to the document as we are provided additional data elements, new datasets, or as analysis priorities change.

Methodology

One of the stated goals of the gap analysis is to "...identify and organize health care workforce gaps by: Provider Organization; Provider Types; [and] Geographic areas..." Given the sheer number of different provider organizations and provider types, some limitations must be imposed to keep the gap analysis meaningful. This is not to diminish the contributions of the other organizations or healthcare providers in the delivery of health care in Oklahoma. Future revisions or editions of this gap analysis should include these other entities that are required for a better understanding of the state's health care workforce and/or transformation of the state's health care delivery system. As for the geographic area component, this draft gap analysis will focus on counties. Other units of geography are considered when appropriate for the data. For provider types, this gap analysis will focus on those members of the workforce engaged in the delivery of primary health care services.

⁴ America's Health Rankings (2015, May 10). Retrieved from <http://www.americashealthrankings.org/OK>

Primary Care Provider Supply

Oklahoma faces an acute shortage of primary care physicians. This has been well documented by the United Health Foundation and is one of the issues driving health care policy changes in the state. The importance of a robust primary care workforce in terms of overall population health is well documented.⁵ The lack of primary care providers is limiting access to care which, in turn, is causing Oklahomans to die younger and at a faster rate than national averages.⁶ Currently, the Health Resources Services Administration (HRSA) designates all but 14 counties in the state as complete or partial primary care health professional shortage areas (HPSA) (Figure 1).

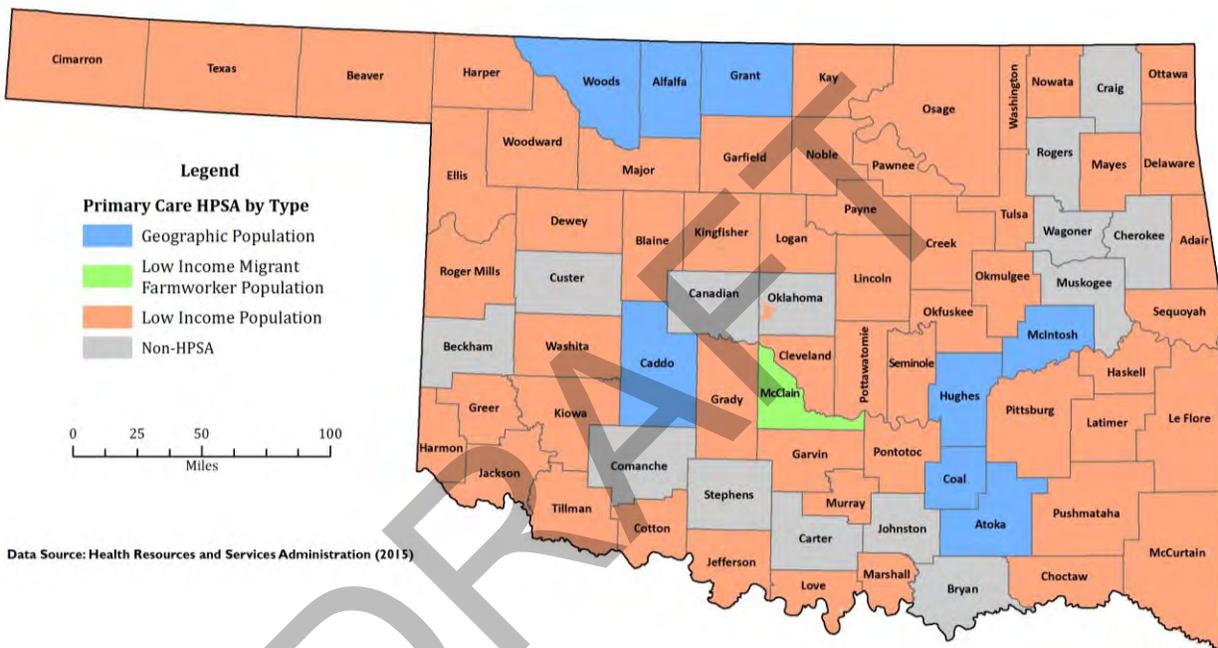


Figure 1. Primary Care Health Professional Shortage Areas in Oklahoma, June 2015

Over 59% of the state’s population lives in a designated primary care HPSA. That is close to double the national rate of 32%.⁷ HRSA’s Bureau of Clinician Recruitment and Services estimates that Oklahoma needs an additional 102 practitioners to remove the primary care HPSA designations. Compounding the current primary care shortage are fears of the future demand for primary care services. A national study listed Oklahoma as one of the least prepared states, workforce wise, for the full implementation of the Affordable Care Act.⁸

⁵ Starfield, B., Shi, L., & Macinko, J. (2005). Contribution of Primary Care to Health Systems and Health. *The Milbank Quarterly*. 83(3): 47-502.

⁶ Healthy Oklahoma 2020 (2015, May 14). Retrieved from <http://ohip2020.com/>

⁷ Basic Health Professional Shortage Area (HPSA) Report for Primary Medical Care (2015, June 28). Retrieved from <http://datawarehouse.hrsa.gov/>

⁸ Ku, L., Jones, K., Shin, P., Bruen, B., & Hayes, K. (2011). The States' Next Challenge - Securing Primary Care for Expanded Medicaid Populations. *New England Journal of Medicine*. 364:493-495

For this gap analysis, we consider primary health care providers as follows:

- 1) Physicians (both allopathic [MD] and osteopathic [DO]) actively practicing in one of the traditional primary care specialties (family/general practice, non-specialized internal medicine, obstetrics & gynecology, and pediatrics);
- 2) Physician Assistants (PAs) actively practicing in one of the aforementioned primary care specialties; and
- 3) Advanced Practice Registered Nurses (NPs) in active practice with a practice role in acute or general adult care, pediatric care, midwifery, women’s health, or public health.

The PA source data did not contain data elements delineating specialty choice. The National Commission on the Certification of Physician Assistants (NCCPA) reports that 34.2% of PAs in Oklahoma are certified in a primary care specialty.⁹ To more accurately report the contribution of PAs in Oklahoma’s primary care workforce, we have adjusted the totals presented below to approximate the composition of the current PA workforce.

In sum, 5,399 primary health care providers practice in Oklahoma (Table 1). Physicians comprise the largest share of primary care providers at 67% followed by NPs (25%) and PAs (8%).

Primary Care Provider	Number of Primary Care Providers	% of All Primary Care Providers
Physicians	3,618	67%
NPs	1,373	25%
PAs (estimated)	408	8%
Total	5,399	100%

Table 1. Primary Care Providers in Oklahoma, 2014

On a per capita basis, Oklahoma has 1 primary care provider for every 713 residents (or 14 primary care providers per 10,000 population). It is important to note that this assumes an even areal distribution of providers, the productivity of NPs and PAs are equivalent to that of a physician, and each provider is practicing at a 1.0 FTE rate. We know that these assumptions are flawed in that there are more severe provider shortages in rural and underserved urban areas of Oklahoma. The contribution of NPs and PAs is likely overestimated based on HRSAs standard that uses a .75 FTE weight for NPs and PAs in primary care supply/demand modeling² and may overestimate physician supply as well. The inability of the data to support a reliable and valid baseline measure of primary care workforce capacity is a major limitation of the present analysis.

⁹ 2013 Statistical Profile of Certified Physician Assistants (2015, June 15) Retrieved from <https://www.nccpa.net/Upload/PDFs/2013StatisticalProfileofCertifiedPhysicianAssistants-AnAnnualReportoftheNCCPA.pdf>

The OSDH workforce data contained some provider demographic data, but the information provided is not consistent across datasets. For example, the physician data contained gender and birthday for MDs, but these elements were absent from the DO data. The PA data contained gender, but no age information. Both gender and age data were absent from the NP data. Also, the data contained little to no information about the nature of the provider practice setting (e.g., employed in group practice; employed by a government agency; solo practitioner, etc.). It would not be prudent to construct detailed econometric models forecasting the future supply or productivity of primary care providers without complete and robust datasets. As a result of data limitations, the primary care workforce can only be presented as differences in the number of primary care providers at various levels of geographic detail.

Table 2 shows the distribution of primary care providers in OSDH Health Planning Regions. Notice the high concentration of providers in Oklahoma’s two large urban regions, Region 7 and Region 8. Interestingly, the lowest rate of providers is found in Region 6, the counties contiguous to Oklahoma County with the addition of McClain County. Most of the counties in Region 6 have relatively large populations compared to the rest of the state, however, the provider base in Region 6 is smaller than one might expect given the region’s population. See Table 8 in Appendix A for county level data.

Region	Population	Primary Care Physicians	NPs	Est. PAs	Total Providers	Rate (per 10k Population)
Region 1 Northwest	246,827	165	69	17.8	251.8	10.2
Region 2 Northeast	480,919	290	128	25.3	443.3	9.2
Region 3 Southwest	428,168	301	111	31.7	443.7	10.4
Region 4 East Central	413,262	260	127	23.0	410	9.9
Region 5 Southeast	321,833	208	105	31.1	344.1	10.7
Region 6 Central	581,905	250	148	52.0	450	7.7
Region 7 Tulsa County	622,409	1000	267	79.7	1,346.7	21.6
Region 8 Oklahoma County	755,245	1144	418	147.4	1,709.4	22.6

See Figure 7 in Appendix B for a map of the regions.

Table 2. Primary Care Providers in Oklahoma by OSDH Health Planning Regions, 2014

Table 3 shows primary care providers by metropolitan statistical areas (MSA). MSAs are geographic areas defined by a core urban area with population of 50,000 or more, the county containing the urban core, and adjacent counties that have a high level of

commuting to the urban core for work. Again, the state’s two large metropolitan areas, Tulsa and Oklahoma City, have the largest aggregate number of providers and highest per capita rates. The Ft. Smith, Arkansas. MSA encompasses two counties in Oklahoma, Sequoyah and Le Flore. The large spatial dimensions of the MSA obscures some of the subtle variations in the distribution of primary care providers that was apparent in the OSDH Health Planning Regions.

Metropolitan Statistical Area (MSA)	Population	Primary Care Physicians	NPs	Est. PAs	Total Providers	Rate (per 10k Population)
Ft. Smith, Ark. MSA*	90,992	38	30	5.1	73.1	8.0
Lawton MSA	131,089	116	31	6.5	153.5	11.7
Oklahoma City MSA	1,319,677	1383	554	198.7	2135.7	16.2
Tulsa MSA	961,561	1147	325	92.7	1564.7	16.3
Non-MSA	1,347,249	934	433	105	1472	10.9

*Only two counties in Oklahoma, Sequoyah and Le Flore, are part of the Ft. Smith, Ark. MSA
See Figure 8 in Appendix B for a map of the MSAs

Table 3. Primary Care Providers in Oklahoma by Metropolitan Statistical Area, 2014

The OSU-CRH developed a county-based system to differentiate rural and urban areas in Oklahoma. The counties can be arranged into two distinct categories in order to report aggregate data for rural and urban regions of the state (Table 4). Again, such spatially large aggregations obscure variations the distribution of primary care providers.

OSU Center for Rural Health Designated Area	Population	Primary Care Physicians	NPs	Est. PAs	Total Providers	Rate (per 10k Population)
Rural	1,524,497	1,023	484	117	1,624	10.7
Urban	2,326,071	2,595	889	291	3,775	16.2

See Figure 9 in Appendix B for a map of the designated rural & urban areas.

Table 4. Primary Care Providers by OSU Center for Rural Health Designated Rural Areas, 2014

While regional portrayals do lend themselves to rapid analysis, they can miss the nuances that are associated with the actual distribution of spatial data. Figure 2, Figure 3, and Figure 4 show the spatial distribution of the practice locations of primary care physicians, NPs, and PAs, respectively (note, the PA map includes all PAs and was not adjusted using national primary care estimates for PAs as are the data presented earlier). The three maps clearly show concentrations of providers in Oklahoma County, Tulsa County, and other population centers.

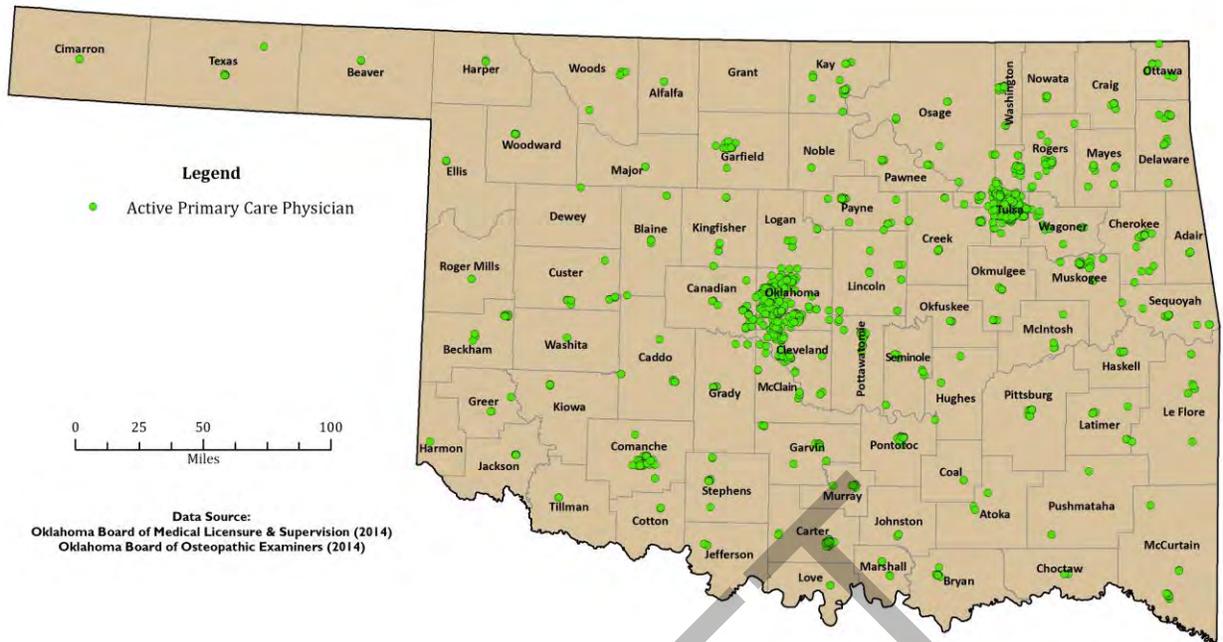


Figure 2. Practice Locations of Active Primary Care Physicians in Oklahoma, 2014

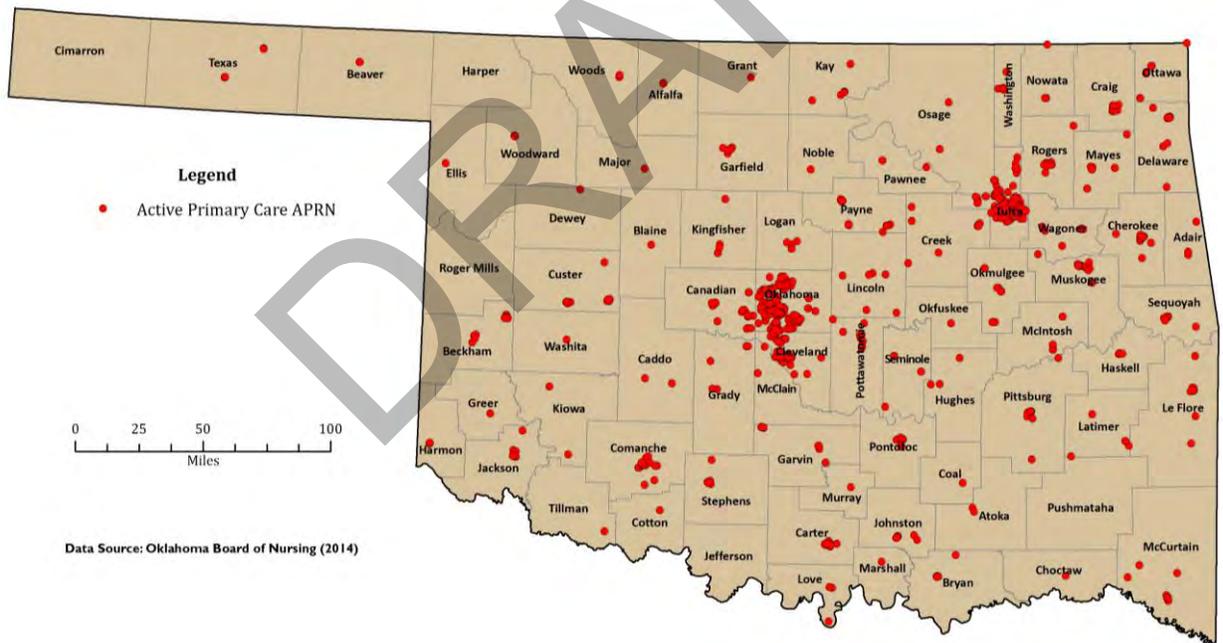


Figure 3. Practice Location of Primary Care NPs in Oklahoma, 2014

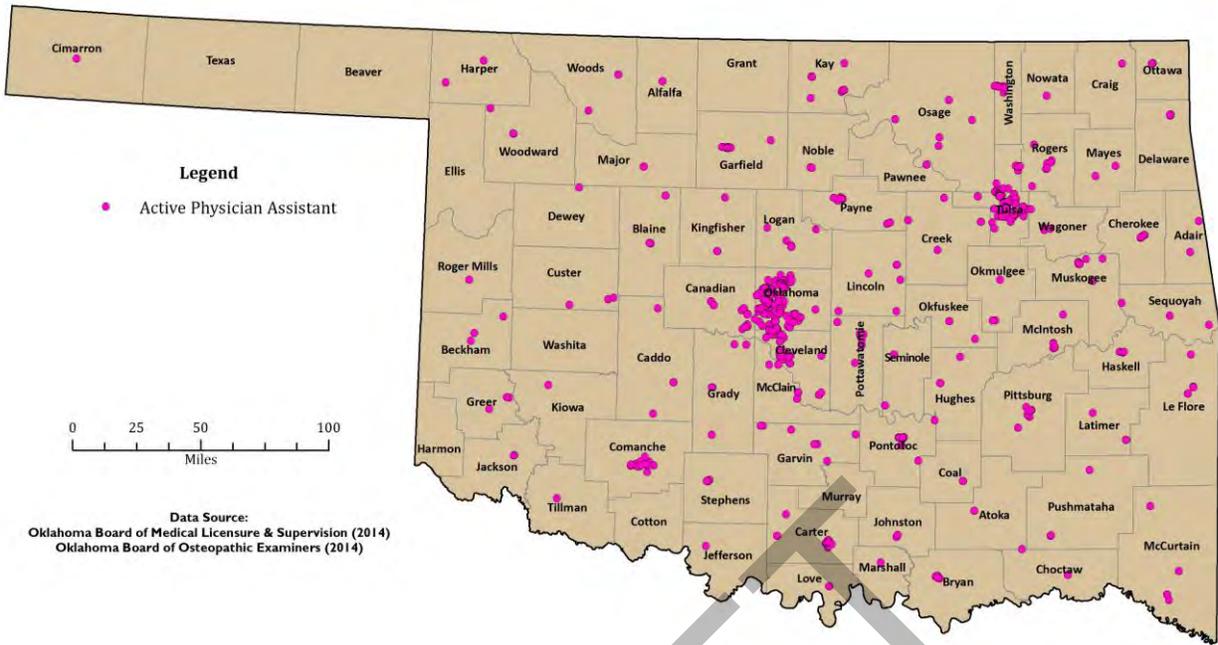


Figure 4. Practice Locations of Active PAs in Oklahoma, 2014

By leveraging geographic information systems technology, more detailed analyses are possible. Rural Urban Commuting Areas (RUCA) are often used in health services research to classify urban and rural areas. RUCAs are based on Census tract-level commuting patterns that are the result of economic relationships between rural areas and urban areas (Figure 5). Because of their relative small geographic scale, and the inclusion of 33 different distinct categories, RUCAs provide a level of detail that is not apparent in larger scale geographies such as those presented in Table 2, Table 3, and Table 4.

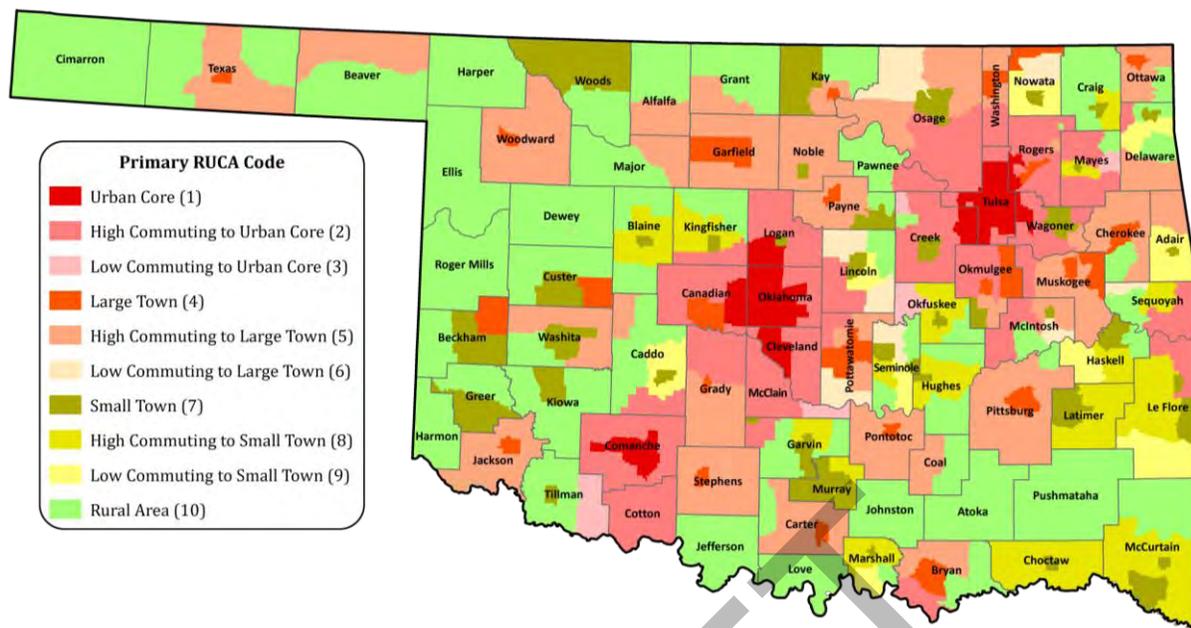


Figure 5. Rural Urban Commuting Areas in Oklahoma, 2010

To facilitate interpretation, the 33 different RUCA categories can be combined into logical categories. Table 5 shows the distribution of primary care providers in Oklahoma across four different categories based on Census tract of each primary care providers practice location. The per capita rates across all four categories mimics those presented above for rural and urban Oklahoma. The dearth of physicians in rural Oklahoma is particularly acute in the state’s small rural towns and isolated rural towns.

RUCA Category	Population	Primary Care Physicians	NPs*	PAs (est.)	Total Providers	Rate (per 10k Population)
Urban	2,732,378	2,881	1,030	324.6	4,235.6	15.5
Large Rural City/Town	561,214	487	193	48.6	728.6	13.0
Small Rural Town	264,028	164	95	18.5	277.5	10.5
Isolated Small Rural Town	193,731	86	54	47.7	187.7	9.7

* Tract-level data was missing for one NP

Table 5. Primary Care Providers by Categorized RUCAs, 2014

As demonstrated by the previous descriptive and spatial analyses the primary care workforce supply is characterized by both shortage and maldistribution. The analyses are severely limited by the characteristics of the data available. The issue of workforce data insufficiency has been noted by other state-level organizations. For example, in May 2013 Oklahoma’s Primary Care Advisory Taskforce (PCAT) made several recommendations regarding primary care data including the following:

- The State should make primary care data more robust and complete
- The State should make primary care data available more rapidly
- The State should pursue the ability and capacity to maintain a State Healthcare Workforce database
- The State should develop and/or strengthen a statewide coalition around primary care data efforts

Oklahoma's ability to craft policy solutions to its health status and healthcare access depend on reliable and valid baseline information. A significant investment in better workforce data collection and management will help ensure that policy makers have the information essential for meaningful decision making.

Primary Care Provider Demand

Modeling healthcare workforce demand is also complex. As previously stated, national primary care physician demand estimates over the next decade vary from several thousand to none. These estimates are driven by assumptions regarding the validity of provider baseline supply, the training pipeline, population demographics, health status indicators, and factors affecting access to care (e.g., insurance rates).

The Robert Graham Center recently published a study that provided state level estimates of primary care physician demand through 2030¹⁰. This study illustrates many of the issues and inconsistencies in supply/demand analyses. The report projects that Oklahoma will have a shortage of 451 primary care physicians by 2030 (see Figure 6). The report is based on a current primary care physician workforce of 2,191 physicians, a number obtained by using the American Medical Association (AMA) Masterfile. More recent AMA Masterfile data from 2013 reports 2,669 active primary care physicians providing patient care. The addition of nearly 500 primary care physicians to Oklahoma's workforce is unlikely. Further, OSDH data presented previously appear to dramatically overestimate primary care physicians (N = 3,618) compared to the AMA Masterfile data used in national models. Generally accepted limitations of the AMA Masterfile (e.g., significant time lag between practice changes and updates in the Masterfile and non-response rate) are considered to overestimate the number of active physicians further exaggerating the discrepancy between Masterfile data and OSDH physician data.

¹⁰ Petterson, S. M., Cai, A., Moore, M., Basemore, A. State-level projections of primary care workforce, 2010-2030. September 2013, Robert Graham Center, Washington, D.C.

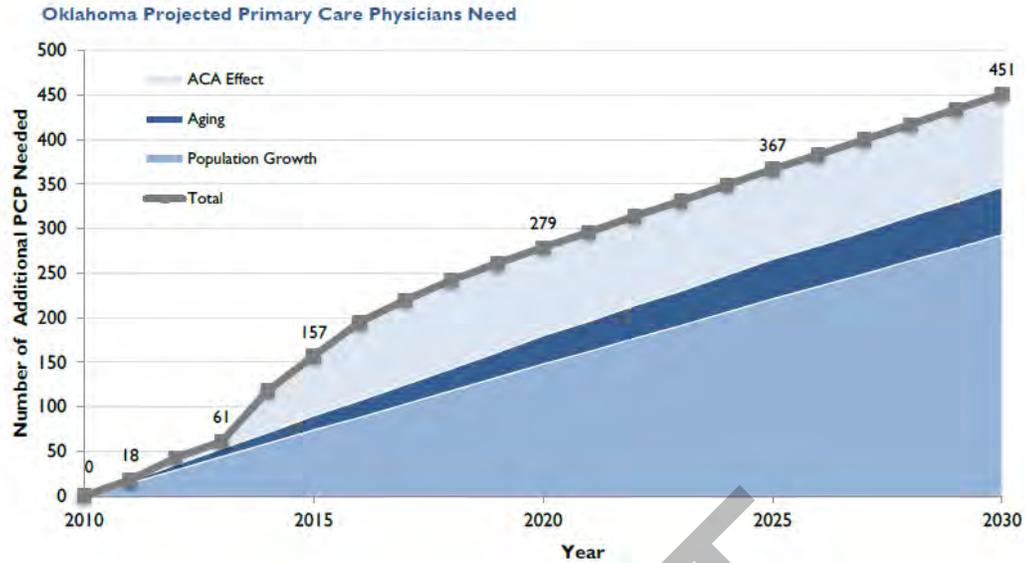


Figure 6. Robert Graham Center Projected PCP Workforce Needed To Maintain Current Primary Care Utilization Rates in Oklahoma.

As previously stated, the National Center projects an oversupply of NPs and PAs by 2020. HRSA has produced national projections for NPs and PAs that show supply increases by 2020 of 30% and 58% respectively over 2010 workforce numbers. These increases in workforce supply are projected to produce a surplus of both NPs and PAs delivering primary care services (see Table 6).

Primary Care Delivery	2020 Projected Workforce		
	Supply	Demand	Surplus
Nurse Practitioners (NPs)	72,100	64,700	7,400
Physician Assistants (PAs)	43,900	32,700	11,200

Table 6. HRSA Workforce Projects for NPs & PAs in the US, 2010-2020²

Although HRSA does not produce state-level estimates for PAs or NPs, HRSA's National Center for Health Workforce Analysis has produced projections for Oklahoma's Nursing workforce indicating a substantial surplus by 2025 (see Table 7). These projections provide an indication that there will be sufficient surplus to encourage development of the NP workforce.

Nursing Workforce	2025 Projected Workforce		
	Supply	Demand	Surplus
Registered Nurse (RN)	55,000	37,300	17,700
Licensed Practical Nurse (LPN)	19,720	17,180	2,540

Table 7. Oklahoma Nursing Workforce Projections 2012-2025¹¹

¹¹ The Future of the Nursing Workforce: National- and State-Level Projections, 2012-2025. December 2014, U.S. Department of Health and Human Services, National Center for Health Workforce Analysis.

Taking these various estimates in total, the demand for additional primary care providers in Oklahoma ranges from several hundred to none. Although the supply analysis presented previously shows clearly that there are severe deficits in primary care access especially in rural and underserved areas it is unclear what level of additional supply will meet the primary care demand during the next decade due to reliability and validity issues in the workforce data and broad variation in the assumptions related to changing models of healthcare delivery and workforce utilization.

Conclusions

A healthcare workforce gap analysis is typically a study that compares current staffing and distribution to a targeted standard. Studies of Oklahoma's healthcare workforce are especially challenging because both the inputs (i.e., current workforce data) and the targeted objective are ill defined, compounding the complexity of workforce analysis. Estimates of supply and demand are based on assumptions associated with practice characteristics and trends, population and provider demographics, population health status, healthcare utilization, technology integration, and workforce transformation associated with value-based healthcare delivery models. These assumptions are often moving targets. For example, the recent SCOTUS ruling on the Affordable Care Act affected the 87,136 Oklahomans currently receiving insurance subsidies. Insurance coverage is an important predictor of primary care demand. ACOs and PCMHs rely on care teams rather than individual providers to provide services. Previous models that focus on provider to population ratios are not sufficient to understand the provider demands under these newer care delivery models. For example, Bodenheimer and Smith³ propose that more efficient use of health care workers and reallocation of care to non-physician clinicians would result in a 24% time savings to physicians, dramatically changing the demand estimates for primary care physicians.

In spite of a lack of precision with regard to demand predictions of healthcare providers, a severe primary care provider shortage persists in Oklahoma. Oklahoma ranks 43rd nationally in the number of active physicians providing primary care services and almost a third are age 60 or older. Oklahoma's rural counties have more severe physician shortages and an older physician workforce compared to the state's urban areas. A more robust analysis of Oklahoma's healthcare workforce will require more comprehensive standardized data elements across professions. Fortunately, solutions for many of these data quality issues do exist. A notable improvement would be practitioner data that met the standards outlined in HRSA's minimum data sets (MDS) for health care professionals (see Appendices C, D, & E). The MDS provide an unambiguous way to collect standardized data that can be collated together into robust analytical inputs. ACOs and PCMHs will play an increasing role in the delivery of primary care services to Oklahomans. More robust data will be required to fully understand how ACOs and PCMHs shift patient care responsibilities and work patterns.

Limitations

This draft gap analysis has a number of limitations. Most of these limitations stem from the source data available for the analysis. First, the lack of standard data elements among the

various datasets required us to make assumptions that may or may not reflect reality. For example, the primary care physician dataset and the APRN dataset contained data elements that described the specialty choice of the practitioners – the PA dataset did not contain such descriptors. This forced us to make certain assumptions about the contribution of PAs to primary care. The assumption used, 34.2% of PAs in Oklahoma are certified in a primary care specialty equates to 34.2% actually practicing in primary care, may or may not adequately reflect the practice patterns of PAs. Other data elements that are missing or incomplete across data sets and impose limitations on the analysis include gender, race/ethnicity, and age. Second, none of the datasets contained elements that described the practitioners' nature of practice. For example, we know that health care professionals do not spend their entire working day in direct patient care, but no information was contained in the data to provide a measure of this information. The lack of information required us to assume a 1.0 FTE practice rate. We also know that some practitioners are employed by federal, state, or tribal agencies that regulate or limit the patient base yet without this information in the data we had to assume that each practitioner was able to provide medical care for anyone. Another important consideration is practitioners' accepted payer source. We assumed that each practitioner accepted all manner of payment and even no payment.

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Appendix A**Table 8. Primary Care Providers in Oklahoma by County, 2014**

Region	Population	Primary Care Physicians	NPs	Est. PAs	Total Providers	Rate (per 10k Population)
Adair	22,194	13	4	0.7	17.7	8.0
Alfalfa	5,847	2	2	0.7	4.7	8.0
Atoka	13,898	4	2	1.0	7.0	5.0
Beaver	5,566	2	4	0.0	6.0	10.8
Beckham	23,637	19	14	1.0	34.0	14.4
Blaine	9,720	5	1	2.1	8.1	8.3
Bryan	44,244	33	9	3.8	45.8	10.4
Caddo	29,594	12	2	1.4	15.4	5.2
Canadian	126,123	47	29	7.2	83.2	6.6
Carter	48,491	45	19	9.6	73.6	15.2
Cherokee	48,017	66	39	2.7	107.7	22.4
Choctaw	15,045	7	1	0.7	8.7	5.8
Cimarron	2,335	2	-	0.3	2.3	9.9
Cleveland	269,340	135	87	32.5	254.5	9.4
Coal	5,867	2	1	1.0	4.0	6.8
Comanche	124,937	112	30	6.5	148.5	11.9
Cotton	6,152	4	1	0.0	5.0	8.1
Craig	14,672	8	11	0.3	19.3	13.2
Creek	70,470	27	9	2.7	38.7	5.5
Custer	29,377	20	15	1.0	36.0	12.3
Delaware	41,377	24	13	1.4	38.4	9.3
Dewey	4,844	1	1	0.3	2.3	4.7
Ellis	4,170	6	1	0.0	7.0	16.8
Garfield	62,267	56	11	6.2	73.2	11.8
Garvin	27,334	18	8	2.4	28.4	10.4
Grady	53,685	27	6	4.4	37.4	7.0
Grant	4,528	-	1	0.0	1.0	2.2
Greer	6,171	4	1	1.0	6.0	9.7
Harmon	2,869	1	3	0.0	4.0	13.9
Harper	3,813	3	-	0.7	3.7	9.7
Haskell	13,052	5	5	1.7	11.7	9.0

Region	Population	Primary Care Physicians	NPs	Est. PAs	Total Providers	Rate (per 10k Population)
Hughes	13,823	3	3	1.7	7.7	5.6
Jackson	26,088	22	9	0.7	31.7	12.2
Jefferson	6,432	4	-	0.3	4.3	6.7
Johnston	10,990	5	11	1.0	17.0	15.5
Kay	45,633	34	8	4.1	46.1	10.1
Kingfisher	15,276	8	5	2.1	15.1	9.9
Kiowa	9,341	4	2	0.3	6.3	6.7
Latimer	10,775	10	1	0.3	11.3	10.5
Le Flore	49,774	24	21	4.1	49.1	9.9
Lincoln	34,351	11	6	2.1	19.1	5.6
Logan	44,422	7	5	2.7	14.7	3.3
Love	9,742	5	3	1.4	9.4	9.6
Major	7,683	4	1	0.7	5.7	7.4
Marshall	15,988	8	1	0.3	9.3	5.8
Mayes	40,804	20	11	0.7	31.7	7.8
McClain	36,511	12	3	2.4	17.4	4.8
McCurtain	33,065	15	11	2.1	28.1	8.5
McIntosh	20,493	6	9	2.1	17.1	8.3
Murray	13,712	7	1	0.0	8.0	5.8
Muskogee	70,303	76	26	7.2	109.2	15.5
Noble	11,446	3	1	0.7	4.7	4.1
Nowata	10,555	5	4	0.3	9.3	8.8
Okfuskee	12,377	4	1	1.4	6.4	5.2
Oklahoma	755,245	1,144	418	147.4	1709.4	22.6
Okmulgee	39,438	27	18	1.4	46.4	11.8
Osage	47,987	11	2	2.4	15.4	3.2
Ottawa	32,245	22	10	2.1	34.1	10.6
Pawnee	16,513	8	4	1.0	13.0	7.9
Payne	79,066	61	22	5.1	88.1	11.1
Pittsburg	44,703	32	18	4.4	54.4	12.2
Pontotoc	37,992	54	29	8.6	91.6	24.1
Pottawatomie	71,158	38	18	5.1	61.1	8.6

Region	Population	Primary Care Physicians	NPs	Est. PAs	Total Providers	Rate (per 10k Population)
Pushmataha	11,233	3	1	1.4	5.4	4.8
Roger Mills	3,743	2	-	0.3	2.3	6.1
Rogers	89,044	52	18	3.4	73.4	8.2
Seminole	25,426	13	7	1.7	21.7	8.5
Sequoyah	41,218	14	9	1.0	24.0	5.8
Stephens	44,919	27	14	2.4	43.4	9.7
Texas	22,081	12	5	0.0	17.0	7.7
Tillman	7,711	4	1	0.3	5.3	6.9
Tulsa	622,409	1,000	267	79.7	1346.7	21.6
Wagoner	75,700	22	7	2.1	31.1	4.1
Washington	51,577	42	24	3.8	69.8	13.5
Washita	11,678	2	1	0.0	3.0	2.6
Woods	9,041	6	3	1.0	10.0	11.1
Woodward	21,221	15	4	1.4	20.4	9.6

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Appendix B

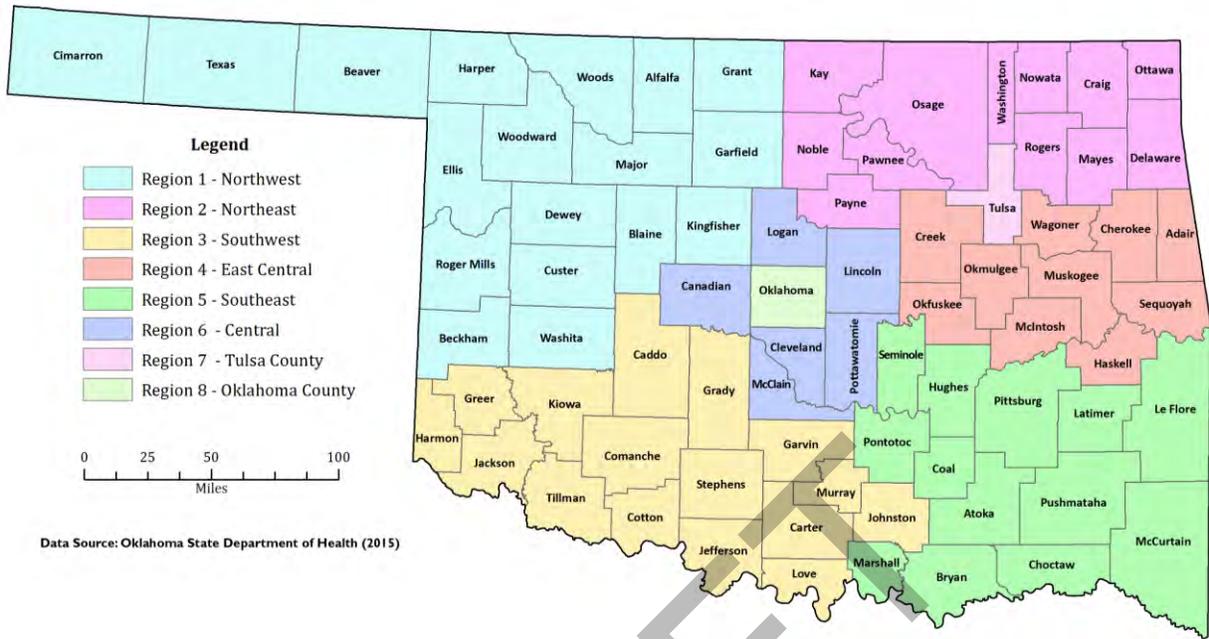


Figure 7. OSDH Health Planning Regions, 2015

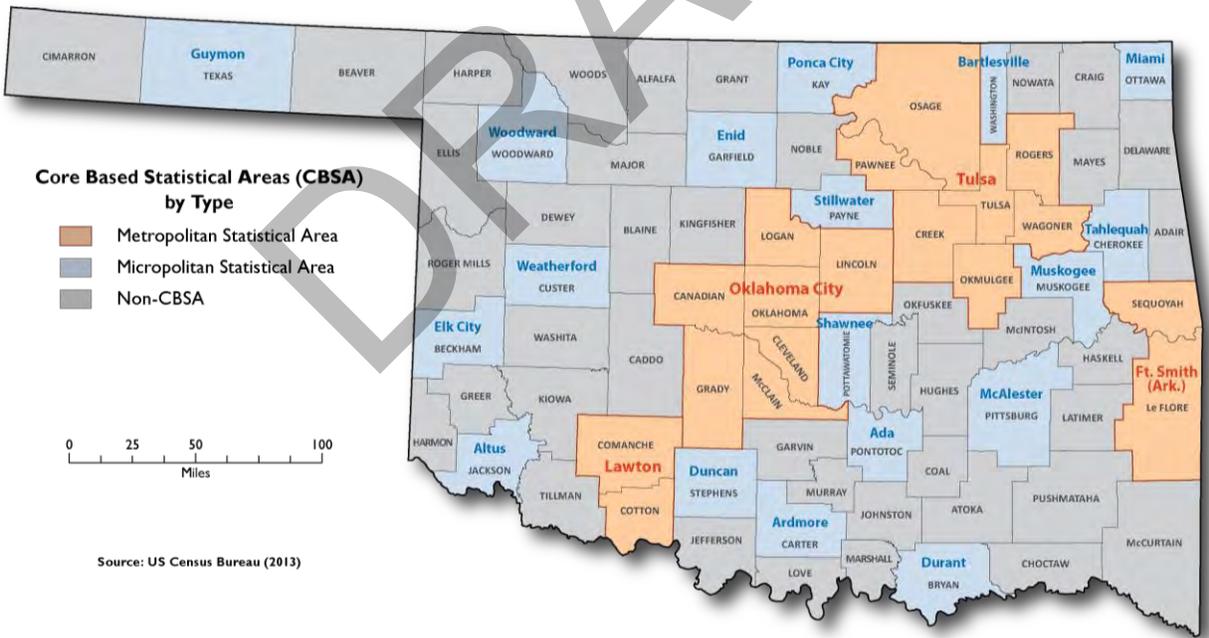


Figure 8. Metropolitan Statistical Areas in Oklahoma, 2013

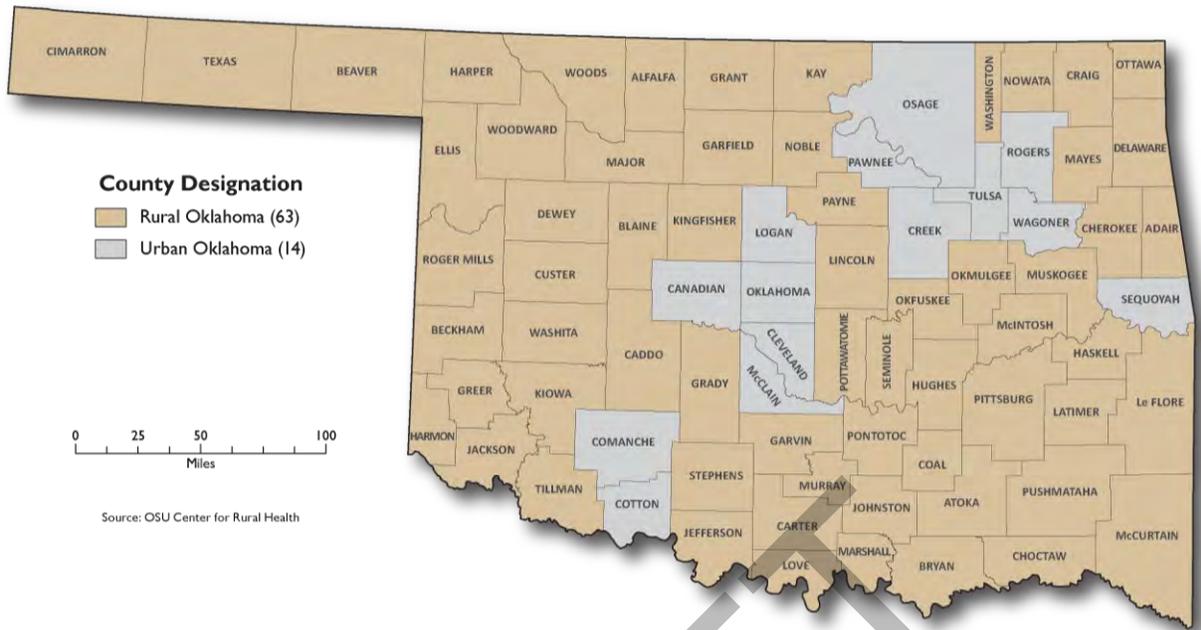


Figure 9. OSU Center for Rural Health Designated Rural Areas in Oklahoma, 2014

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Appendix C

FINAL MDS: Physicians
developed by the Federation for State Medical Boards (FSMB)

MDS: PHYSICIANS

Demographics

1. Birth date **Month** **Day** **Year**

2. Sex: Male Female

3. Race (1 or more categories may be selected)—Recommended as Optional

- White Black or African American
 American Indian or Alaska Native Asian
 Native Hawaiian/Other Pacific Islander Other (specify) _____

The workgroup acknowledges that this is a condensed list and state boards may choose to use more detailed response sets (e.g., HHS Data Standards for Race and US Census Bureau Race Categories).

4. Ethnicity

Are you Hispanic, Latino/a, or of Spanish origin?

(1 or more categories may be selected)—Recommended as Optional

- No Yes, Mexican, Mexican American, Chicano/a
 Yes, Puerto Rican Yes, Cuban
 Yes, Another Hispanic, Latino/a, or of Spanish origin (specify) _____

5. Do you speak a language other than English at home? (optional)

- Yes
 No

6. What is this language? (if you answered Yes to #5)

- Spanish
 Other Language (identify) _____

Education & Training

6. Medical Education

A. What is your medical degree?

- M.D. D.O. M.B.B.S.

B. What year did you complete your medical degree?

C. Where did you complete your medical degree?

- United States (specify state): _____
Medical School Name _____
 Foreign Country (specify): _____

7. Residency Training/Graduate Medical Education

A. First Specialty Training

- Location (State) _____
- Number of Years of Training _____
- Year Completed _____

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B. Subspecialty Training

- Location (State) _____
- Number of Years of Training _____
- Year Completed _____

C. Additional Training

- Location (State) _____
- Number of Years of Training _____
- Year Completed _____

8. Training and Certification

	Completed Accredited Residency Program / Fellowship	Board Certified
Principal Specialty	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Secondary Specialty	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No

Practice Characteristics

9. What is your employment status?

- Actively working in a position that requires a medical license
- Actively working in a field other than medicine
- Not currently working
- Retired

10. Are you currently providing direct clinical or patient care on a regular basis?

- Yes
- No

11. If no, how many years has it been since you provided clinical or patient care?

- Less than 2 years
- 2 to 5 years
- 5 to 10 years
- More than 10 years

12. Which of the following best describes the area(s) of practice in which you spend most of your professional time:

Area of Practice	Principal	Secondary	Completed Accredited Residency Program or Fellowship
Adolescent Medicine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anesthesiology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Allergy and Immunology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cardiology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Child Psychiatry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Colon and Rectal Surgery	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Critical Care Medicine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dermatology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Endocrinology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emergency Medicine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family Medicine/General Practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gastroenterology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Geriatric Medicine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gynecology Only	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

FINAL MDS: Physicians
developed by the Federation for State Medical Boards (FSMB)

Hematology & Oncology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Infectious Diseases	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internal Medicine (General)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nephrology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Neurological Surgery	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Neurology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Obstetrics and Gynecology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Occupational Medicine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ophthalmology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Orthopedic Surgery	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other Surgical Specialties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Otolaryngology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pathology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pediatrics (General)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pediatrics Subspecialties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physical Med. & Rehab.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plastic Surgery	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Preventive Medicine/Public Health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Psychiatry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pulmonology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Radiation Oncology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Radiology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rheumatology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Surgery (General)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thoracic Surgery	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Urology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vascular Surgery	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other Specialties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. Which of the following categories best describes your primary and secondary practice or work setting(s) where you work the most hours each week?

Practice Setting	Principal	Secondary
Office/Clinic—Solo Practice	<input type="radio"/>	<input type="radio"/>
Office/Clinic—Partnership	<input type="radio"/>	<input type="radio"/>
Office/Clinic—Single Specialty Group	<input type="radio"/>	<input type="radio"/>
Office/Clinic—Multi Specialty Group	<input type="radio"/>	<input type="radio"/>
Hospital—Inpatient	<input type="radio"/>	<input type="radio"/>
Hospital—Outpatient	<input type="radio"/>	<input type="radio"/>
Hospital—Emergency Department	<input type="radio"/>	<input type="radio"/>

Direct patient care hours per week at site: _____

Second Location Address

Number _____ Street _____

City/Town _____ State _____ Zip Code: □□□□□

Direct patient care hours per week at site: _____

Third Location Address

Number _____ Street _____

City/Town _____ State _____ Zip Code: □□□□□

Direct patient care hours per week at site: _____

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Appendix D

FINAL MDS: Physician Assistants
developed by the nccPA Health Foundation and the National Commission on Certification of Physician Assistants
(NCCPA)

MDS: PHYSICIAN ASSISTANTS*

REQUIRED ITEMS

Demographics

1. Birth date **Month** **Day** **Year**

2. Sex

Male Female

3. How would you classify your race?

American Indian or Alaska Native Asian
 Black or African American Native Hawaiian or Other Pacific Islander
 White Other (specify)
 Prefer not to answer

4. Are you Hispanic, Latino/a, or of Spanish origin?

No
 Yes, Mexican, Mexican American, Chicano/a
 Yes, Puerto Rican
 Yes, Cuban
 Yes, another Hispanic, Latino/a, or of Spanish origin
 Prefer not to answer

Education & Training

5. Which of the following describes the degree or certificate you were awarded upon completion of your PA training?

Certificate/Diploma Associate degree
 Bachelor's degree Master's degree
 Military Training Certification Other (specify)

6. What year did you complete your physician assistant education?

7. Where did you complete your physician assistant education?

Physician Assistant School/Program Name _____

8. Training and Certification

Are you Certified by National Commission on Certification of
Physicians Assistants (NCCPA)? Yes No

Have you completed Physician Assistant Post-Graduate Training? Yes No

Have you completed Specialty Certification? Yes No

Practice Characteristics

9. What is your employment status? (mark all that apply)

- Actively working in a position that requires a physician assistant license
- Actively working in a field other than physician assistant
- Not currently working
- Retired

10. Please indicate which of the following best describes the area of practice of your supervising physician(s) in your principal and secondary clinical position(s). (Check all that apply)

	Principal Practice	Secondary Practice
Adolescent Medicine	<input type="radio"/>	<input type="radio"/>
Anesthesiology	<input type="radio"/>	<input type="radio"/>
Critical Care Medicine	<input type="radio"/>	<input type="radio"/>
Dermatology	<input type="radio"/>	<input type="radio"/>
Emergency Medicine	<input type="radio"/>	<input type="radio"/>
Family Medicine/General Practice	<input type="radio"/>	<input type="radio"/>
General Pediatrics	<input type="radio"/>	<input type="radio"/>
Gynecology Only	<input type="radio"/>	<input type="radio"/>
Hospital Medicine (Hospitalist)	<input type="radio"/>	<input type="radio"/>
Internal Medicine – General Practice	<input type="radio"/>	<input type="radio"/>
Internal Medicine – Subspecialties	<input type="radio"/>	<input type="radio"/>
Allergy and Immunology	<input type="radio"/>	<input type="radio"/>
Cardiology	<input type="radio"/>	<input type="radio"/>
Endocrinology	<input type="radio"/>	<input type="radio"/>
Gastroenterology	<input type="radio"/>	<input type="radio"/>
Geriatrics	<input type="radio"/>	<input type="radio"/>
Hematology	<input type="radio"/>	<input type="radio"/>
Infectious Disease	<input type="radio"/>	<input type="radio"/>
Nephrology	<input type="radio"/>	<input type="radio"/>
Oncology	<input type="radio"/>	<input type="radio"/>
Pulmonology	<input type="radio"/>	<input type="radio"/>
Rheumatology	<input type="radio"/>	<input type="radio"/>
Sports Medicine	<input type="radio"/>	<input type="radio"/>
Neurology	<input type="radio"/>	<input type="radio"/>
Obstetrics and Gynecology	<input type="radio"/>	<input type="radio"/>
Occupational Medicine	<input type="radio"/>	<input type="radio"/>
Ophthalmology	<input type="radio"/>	<input type="radio"/>
Otolaryngology	<input type="radio"/>	<input type="radio"/>
Pathology	<input type="radio"/>	<input type="radio"/>
Pediatric Subspecialties	<input type="radio"/>	<input type="radio"/>
Physical Medicine/Rehabilitation	<input type="radio"/>	<input type="radio"/>
Preventive Medicine/Public Health	<input type="radio"/>	<input type="radio"/>
Psychiatry	<input type="radio"/>	<input type="radio"/>
Radiation Oncology	<input type="radio"/>	<input type="radio"/>
Radiology	<input type="radio"/>	<input type="radio"/>
Surgery - General	<input type="radio"/>	<input type="radio"/>

Surgery - Subspecialties	<input type="radio"/>	<input type="radio"/>
Cardiothoracic	<input type="radio"/>	<input type="radio"/>
Colon and rectal	<input type="radio"/>	<input type="radio"/>
Gynecology and obstetrics	<input type="radio"/>	<input type="radio"/>
Gynecologic oncology	<input type="radio"/>	<input type="radio"/>
Neurologic	<input type="radio"/>	<input type="radio"/>
Ophthalmic	<input type="radio"/>	<input type="radio"/>
Oral and maxillofacial	<input type="radio"/>	<input type="radio"/>
Orthopedic	<input type="radio"/>	<input type="radio"/>
Otorhinolaryngology	<input type="radio"/>	<input type="radio"/>
Pediatric	<input type="radio"/>	<input type="radio"/>
Plastic and maxillofacial	<input type="radio"/>	<input type="radio"/>
Urology	<input type="radio"/>	<input type="radio"/>
Vascular	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>

11. Which of the following best describes the type of practice setting in which your principal and secondary clinical PA position(s) are located?

	Principal	Secondary
<u>Office-based private practice</u>		
Solo practice	<input type="radio"/>	<input type="radio"/>
Single specialty physician group	<input type="radio"/>	<input type="radio"/>
Multi-specialty physician group	<input type="radio"/>	<input type="radio"/>
<u>Hospital (non-VA, non-government)</u>		
Inpatient department	<input type="radio"/>	<input type="radio"/>
Outpatient department	<input type="radio"/>	<input type="radio"/>
Emergency department	<input type="radio"/>	<input type="radio"/>
Ambulatory surgical center	<input type="radio"/>	<input type="radio"/>
Behavioral/mental health facility	<input type="radio"/>	<input type="radio"/>
Community Health Center (Federally Qualified Health Center)	<input type="radio"/>	<input type="radio"/>
<u>Federal Government facility/hospital/unit</u>		
Bureau of Prisons (BOP)	<input type="radio"/>	<input type="radio"/>
Indian Health Service (IHS)	<input type="radio"/>	<input type="radio"/>
Public Health Service (PHS)	<input type="radio"/>	<input type="radio"/>
United States Military	<input type="radio"/>	<input type="radio"/>
Veterans Administration (VA)	<input type="radio"/>	<input type="radio"/>
Rural health clinic	<input type="radio"/>	<input type="radio"/>
Home health care agency	<input type="radio"/>	<input type="radio"/>
Extended care facility (non-hospital)/nursing home	<input type="radio"/>	<input type="radio"/>
Hospice	<input type="radio"/>	<input type="radio"/>
Occupational health setting	<input type="radio"/>	<input type="radio"/>
Public or community health clinic (non-federally qualified)	<input type="radio"/>	<input type="radio"/>
Rehabilitation facility	<input type="radio"/>	<input type="radio"/>
School-based or college-based health center or school clinic	<input type="radio"/>	<input type="radio"/>
Free clinic	<input type="radio"/>	<input type="radio"/>
Other setting (specify): _____	<input type="radio"/>	<input type="radio"/>

12. Please enter the zip code and the number of hours you work in a typical week at your principal and secondary clinical position(s).

<u>Principal practice site</u>	<u>Secondary Practice Site (if applicable)</u>
Zip Code of practice site: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Zip Code of practice site: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Hours worked at site: <input type="text"/> <input type="text"/>	Hours worked at site: <input type="text"/> <input type="text"/>

ALTERNATE 12

12. Direct Patient Care: Practice Locations
Please enter the location of the sites of your principal and secondary clinical positions:

Principal Practice Site

Number _____ Street _____

City/Town _____ State _____

Zip Code

Secondary Practice Site (if applicable)

Number _____ Street _____

City/Town _____ State _____

Zip Code

13. During the regular hours of a typical work week, what number of hours do you spend on the following activities at your principal and secondary clinical position(s)? (Totals should add to hours worked as provided for question 12.)

	Principal	Secondary
Direct, face-to-face patient care (inpatient)	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>
Direct, face-to-face patient care (outpatient)	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>
Indirect (collateral) patient care (e.g., phone calls, reviewing labs, charting)	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>
Administration (e.g., of own practice, hospital committees)	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>
Teaching/precepting	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>
Continuing education (e.g., courses, journal reading, video)	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>

and audiotapes

Research

Activities related to quality
improvement or patient safety

Volunteerism

Other activities (please specify:
_____)

14. Do you have a National Provider Identification (NPI) number?

No

Yes

If yes, NPI number:

15. Are you planning to leave your principal clinical PA position in the next 12 months?

Yes

No

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and audiotapes

Research

Activities related to quality
improvement or patient safety

Volunteerism

Other activities (please specify:
_____)

14. Do you have a National Provider Identification (NPI) number?

No

Yes

If yes, NPI number:

15. Are you planning to leave your principal clinical PA position in the next 12 months?

Yes

No

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RECOMMENDED, BUT OPTIONAL ITEMS

A. Which of the following best describes your current employment arrangement at your principal practice location?

- Self employed
- Salaried employment
- Hourly employment
- Locum tenens
- Other (specify): _____

B. Number of Physicians at each practice location:

Principal Secondary

C. Do you personally communicate with patients in a language other than English?

- Yes
- No

If yes – What language(s)? _____

*Note: This MDS reflects the incorporation of MDS-based questions approved by and used in the NCCPA Professional Profile.

Appendix E

MDS: Nursing
developed by the National Forum of State Nursing Workforce Centers and the National Council of State Boards of
Nursing (NCSBN)

Nursing Supply Minimum Data Set

1. Jurisdiction
2. License Number
3. First Name _____
4. Last Name _____
5. What is your gender?
 - a. Male
 - b. Female
6. What is your race/ethnicity? (Mark all that apply)
 - a. American Indian or Alaska Native
 - b. Asian
 - c. Black/African American
 - d. Native Hawaiian or Other Pacific Islander
 - e. White/Caucasian
 - f. Hispanic/Latino
7. What is your date of birth?

				1	9		
--	--	--	--	---	---	--	--

Month Day Year
8. What type of nursing degree/credential qualified you for your first U.S. nursing license?
 - a. Vocational/Practical certificate-nursing
 - b. Diploma-nursing
 - c. Associate degree-nursing
 - d. Baccalaureate degree-nursing
 - e. Master's degree-nursing
 - f. Doctoral degree-nursing
9. What is the name of the school (education program) you graduated from that qualified you for your first U.S. RN license?

10. In what city and state was this education program located?

City	State
11. What is your highest level of education?

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- a. Vocational/Practical certificate-nursing
 - b. Diploma-nursing
 - c. Associate degree-nursing
 - d. Associate degree-other field
 - e. Baccalaureate degree-nursing
 - f. Baccalaureate degree-other field
 - g. Master's degree-nursing
 - h. Master's degree-other field
 - i. Doctoral degree-nursing
 - j. Doctoral degree-other field
12. What type of license do you currently hold?
- a. RN
 - b. LPN
 - c. Advanced Practice RN license (include all advanced license statuses in your state)
13. What is the status of the license currently held?
- a. Active
 - b. Inactive
14. Are you currently licensed/certified as a...
- a. Nurse Practitioner
 - b. Clinical Nurse Specialist
 - c. Certified Registered Nurse Anesthetist
 - d. Certified Nurse Midwife
 - e. Not licensed/certified as any of the above
15. What is your employment status? (Mark all that apply)
- a. Actively employed in nursing
 - i. Yes
 1. Full-time
 2. Part-time
 3. Per diem
 - ii. No
 - b. Actively employed in a field other than nursing
 - i. Yes
 1. Full-time
 2. Part-time
 3. Per diem
 - ii. No
 - c. Working in nursing only as a volunteer
 - d. Unemployed
 - i. Seeking work as a nurse
 - ii. Not seeking work as a nurse
 - e. Retired
16. If unemployed, please indicate the reasons.

- a. Taking care of home and family
- b. Disabled
- c. Inadequate Salary
- d. School
- e. Difficulty in finding a nursing position
- f. Other

17. In how many positions are you currently employed as a nurse?

- a. 1
- b. 2
- c. 3 or more

18. How many hours do you work during a typical week in all your nursing positions?

--	--

19. Please indicate the state and zip codes of your primary and secondary employer and total hours worked at each position.

Primary Practice Site

--	--	--	--	--

Secondary Practice Site

--	--	--	--	--

Total Hours Worked this Site

--	--

Total Hours Worked this Site

--	--

20. Please identify the type of setting that most closely corresponds to your primary nursing practice position.

- a. Hospital
- b. Nursing Home/Extended Care/Assisted Living Facility
- c. Home Health
- d. Correctional Facility
- e. Academic Setting
- f. Public Health
- g. Community Health
- h. School Health Service
- i. Occupational Health
- j. Ambulatory Care Setting
- k. Insurance Claims/Benefits
- l. Policy/Planning/Regulatory/Licensing Agency
- m. Other

21. Please identify the position title that most closely corresponds to your primary nursing

practice position.

- a. Consultant/Nurse Researcher
- b. Nurse Executive
- c. Nurse Manager
- d. Nurse Faculty
- e. Advanced Practice Nurse
- f. Staff Nurse
- g. Other-Health Related
- h. Other-Not Health Related

22. Please identify the employment specialty that most closely corresponds to your primary nursing practice position.

- a. Acute care/Critical Care
- b. Adult Health/Family Health
- c. Anesthesia
- d. Community
- e. Geriatric/Gerontology
- f. Home Health
- g. Maternal-Child Health
- h. Medical Surgical
- i. Occupational health
- j. Oncology
- k. Palliative Care
- l. Pediatrics/Neonatal
- m. Public Health
- n. Psychiatric/Mental Health/Substance Abuse
- o. Rehabilitation
- p. School Health
- q. Trauma
- r. Women's Health
- s. Other

23. Please identify the type of setting that most closely corresponds to your secondary nursing practice position.

- a. Hospital
- b. Nursing Home/Extended Care/Assisted Living Facility
- c. Home Health
- d. Correctional Facility
- e. Academic Setting
- f. Public Health
- g. Community Health
- h. School Health Service
- i. Occupational Health
- j. Ambulatory Care Setting
- k. Insurance Claims/Benefits
- l. Policy/Planning/Regulatory/Licensing Agency
- m. Other

n. No Secondary Practice Position

24. Please identify the position title that most closely corresponds to your secondary nursing practice position.

- a. Consultant/Nurse Researcher
- b. Nurse Executive
- c. Nurse Manager
- d. Nurse Faculty
- e. Advanced Practice Nurse
- f. Staff Nurse
- g. Other-Health Related
- h. Other-Not Health Related
- i. No Secondary Practice Position

25. Please identify the employment specialty that most closely corresponds to your secondary nursing practice position.

- a. Acute care/Critical Care
- b. Adult Health/Family Health
- c. Anesthesia
- d. Community
- e. Geriatric/Gerontology
- f. Home Health
- g. Maternal-Child Health
- h. Medical Surgical
- i. Occupational health
- j. Oncology
- k. Palliative Care
- l. Pediatrics/Neonatal
- m. Public Health
- n. Psychiatric/Mental Health/Substance Abuse
- o. Rehabilitation
- p. School Health
- q. Trauma
- r. Women's Health
- s. Other
- t. No Secondary Practice Position

26. Please list all states in which you hold an active license to practice as an RN or LPN/VN:

27. Please list all states in which you are currently practicing:

28. In what country did you receive your entry-level education?

29. **If you are licensed/certified/recognized as a Nurse Practitioner or Nurse Midwife,** indicate the specialty of the physicians(s) with whom you have a practice. If you have your own practice, please select the specialty that best describes your practice.

Indicate ONE primary practice specialty and ONE secondary practice specialty, if applicable, from the list below:

Primary practice	Secondary practice	
<input type="checkbox"/>	<input type="checkbox"/>	Primary Care Specialties (General IM, Family Medicine/GP, General Peds, Geriatrics)
<input type="checkbox"/>	<input type="checkbox"/>	Internal Medicine Subspecialties
<input type="checkbox"/>	<input type="checkbox"/>	Pediatric Subspecialties
<input type="checkbox"/>	<input type="checkbox"/>	Obstetrics & Gynecology
<input type="checkbox"/>	<input type="checkbox"/>	General Surgery
<input type="checkbox"/>	<input type="checkbox"/>	Surgical Specialties
<input type="checkbox"/>	<input type="checkbox"/>	Psychiatry (Adult and Child)
<input type="checkbox"/>	<input type="checkbox"/>	Anesthesiology, Pathology, Radiology and Emergency Medicine
<input type="checkbox"/>	<input type="checkbox"/>	Other Specialty

Glossary of Operational Definitions

Active – a license that is up to date on all licensure and/or renewal requirements

Certified Nurse Midwife (CNM) – an RN who through a formal post-basic education program has developed expertise in the specialty area of midwifery and who possesses evidence of certification according to the requirements of the American College of Nurse-Midwives.

Certified Registered Nurse Anesthetist (CRNA) – an RN who through a formal post-basic education program has developed expertise in the specialty area of anesthesiology and who possesses evidence of certification according to the requirements of the Council on Certification of Nurse Anesthetists or its predecessor

Clinical Nurse Specialist (CNS) - an RN who through a formal post-basic education program has developed expertise within a specialty area of nursing practice. In addition to the delivery of direct patient/client care, the role may include consultative, educational, research, and/or administrative components. Certification and/or state recognition may be required for practice as a CNS.

Employed in nursing – A nurse who receives compensation for work that requires licensure and/or educational preparation as a nurse.

Full-time – An individual employed for a full work week as defined by the employer.

Highest level of education – the highest degree obtained; in the event that a person holds the same level of education in two different fields (ex. a master's in nursing and a master's in education) the nursing degree should be selected

Inactive (in regard to licensure) - A license that was not renewed or a license placed on inactive status at the request of the licensee.

LPN – (or LVN) Licensed Practical Nurse or Licensed Vocational Nurse – An individual who holds a current license to practice as a practical or vocational nurse in at least one jurisdiction of the United States.

Nurse Practitioner - an RN prepared in a formal, post-basic nurse practitioner program, who functions in an independent primary health care provider role addressing the full range of patient's/client's health problems and needs within an area of specialization. Certification and/or state recognition may be required for practice as an NP.

Part-time - An individual employed less than full time or less than a full work week, as defined by the employer.

Per diem – an arrangement wherein a nurse is employed directly on an as needed basis, less than part-time as defined by the facility and usually has no benefits.

Primary Position – The position at which you work the most hours during your regular work year.

RN – Registered Nurse (RN) An individual who holds a current license to practice within the

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scope of professional nursing in at least one jurisdiction of the United States.

Secondary Position – The position at which you work the second greatest number of hours during your regular work year.

Employment Setting - The setting in which nursing personnel provide nursing services. See examples below:

Hospital (Exclude nursing home units in hospitals but include all clinics and other services of the hospital)

- Non-federal, short-term hospital (for example, acute care hospital)
- Non-federal, long-term hospital
- Non-federal psychiatric hospital (for example, state mental hospital)
- Federal government hospital
- Other type of hospital

Nursing Home/Extended Care Facility

- Nursing home unit in hospital
- Freestanding skilled nursing facility (nursing home)
- Facility for mentally retarded
- Inpatient hospice
- Other type of extended care facility

Home Health

Health care (including hospice care) provided in the patient's home

Correctional Facility

Jail or prisons

Academic Setting

- LPN/LVN program
- Diploma program (RN)
- Associate degree program (RN)
- Baccalaureate and/or higher degree nursing program (RN)
- Other

Public Health

- Official state health department
- Official state mental health agency
- Official city or county health department

Community Health

- Combination (official/voluntary) nursing service
- Visiting nurse service (VNS/VNA)
- Other home health agency
- Community mental health center
- Community/neighborhood health center
- Planned parenthood/family planning center
- Day care center

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Rural health center
Retirement community center

School Health Service
Board of education (public school system)
Private or parochial elementary or secondary school
College or university
Other

Occupational Health (Employee Health Service)
Private industry
Government
Other

Ambulatory Care Setting Employee (e.g., Physician/Dentist office)
Solo practice (physician)
Solo practice (nurse)
Partnership (one or more physicians)
Partnership (one or more nurses)
Group practice (physicians)
Group practice (nurses)
Partnership or group practice (mixed group of professionals)
Freestanding clinic (physicians)
Freestanding clinic (nurses)
Ambulatory surgical center (non-hospital-based)
Dental practice
Health Maintenance Organization (HMO)

Insurance Claims/Benefits
Insurance Company

Policy/Planning/Regulatory/Licensing Agency
Central or regional office of Federal agency
State Board of Nursing
Health planning agency
Nurse Workforce Center

Other
Nursing or health professional membership association
Medical supplier (e.g., Drug Company, equipment, etc.)
Other

Employment position/position title – the position an individual holds at their place of
employment

Advanced Practice Nurse - An umbrella classification (not an intended title, per se) for the
purpose of regulation. Individuals are licensed as Advanced Practice Nurses in the categories of
Nurse Practitioner, Certified Registered Nurse Anesthetist, Certified Nurse-Midwife and Clinical
Nurse Specialist. Each individual who practices nursing at an advanced level does so with

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substantial autonomy and independence and a high level of accountability. The scope of practice in each of the advanced roles is distinguishable from the others. Each jurisdiction establishes the legal scope of practice for each role.

Consultant/Nurse Researcher – An individual who conducts research in the field of nursing

Nurse Executive - involved with management and administration concerns. They provide leadership roles in the designing of care, the planning and developing of procedures and policies, and administration of budgets in hospitals, health clinics, nursing homes, and ambulatory care centers.

Nurse Manager - An individual who has line management position with 24-hour accountability for a designated patient care services which may include operational responsibility for patient care delivery, fiscal and quality outcomes.

Nurse Faculty – An individual employed by a school of nursing or other type of nursing education program; nurse faculty are generally involved in teaching, research and service.

Staff Nurse – a nurse in direct patient care who is responsible for the treatment and well-being of patients

Employment Specialty – the specific area in which a nurse is specialized or practices

Acute care/Critical Care – nurses in this specialty provide care to patients with acute conditions. They also provide care to pre- and post-operative patients

Anesthesia – nurses in this specialty provide care to patients receiving anesthesia during operative procedures

Community – nurses in this specialty provide health care services that focus on both treatment and prevention for all members of the community.

Geriatric/Gerontology – nurses in this specialty provide the special care needed in rehabilitating and maintaining the mental and physical health of the elderly.

Home Health - nurses in this specialty provide care for people in their homes, such as those recovering from illness, an accident, or childbirth

Maternal-Child Health – nurses in this specialty provide medical and surgical treatment to pregnant women and to mother and baby following delivery

Medical/Surgical – nurses in this specialty provide diagnostic and therapeutic services to acutely ill patients for a variety of medical conditions, both surgical and non-surgical

Occupational health - nurses in this specialty provide on-the-job health care for the nation's workforce, striving to ensure workers' health, safety, and productivity

Oncology – nurses in this specialty provide care and support for patients diagnosed with cancer.

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Palliative Care - nurses in this specialty provide sensitive care and pain relief to patients in the final stages of life. They protect patients from unnecessary, painful therapies, and often provide care at home, in order to maximize meaningful time patients can spend with family and loved ones.

Pediatrics/Neonatal – nurses in this specialty provide care and treatment to young patients ranging in age from infancy to late teens; provide care and support for very sick or premature newborn babies

Public Health – nurses in this specialty provide population -based community services

Psychiatric/Mental Health/Substance Abuse - nurses in this specialty aid and support the mental health of patients with acute or chronic psychiatric needs.; pain management nurses who help regulate medications and provide care for those addicted to drugs or alcohol, or who are suffering from other types of substance abuse.

Rehabilitation – nurses in this specialty provide physical and emotional support to patients and the families of patients with illnesses or disabilities that affect their ability to function normally and that may alter their lifestyle.

School Health – nurses in this specialty are dedicated to promoting the health and well being of children of all ages in an academic environment.

Trauma - nurses in this specialty provide emergency care to patients of all ages. These nurses work to maintain vital signs and prevent complications and death.

Women’s Health – nurses in this specialty provided care for women across the life cycle with emphasis on conditions that are particular to women

Sources: “Definitions” Interagency Collaborative on Nursing Statistics (ICONS)
<http://www.iconsdata.org/definitions.htm>

“Nursing Careers” Discover Nursing.
<http://www.discovernursing.com/nursing-careers>

Healthy People 2010, “Healthy People in Healthy Communities.”
<http://www.healthypeople.gov/Publications/HealthyCommunities2010/healthycom0hk.pdf>