



**Primary Care Advanced Registered Nurse Practitioner
Full-time Equivalency Distribution, Kansas 2009**

**Research
Summary**

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Our Vision – Healthy Kansans Living in Safe and Sustainable Environments

As the state's environmental protection and public health agency, KDHE promotes responsible choices to protect the health and environment for all Kansans. Through education, direct services, and the assessment of data and trends, coupled with policy development and enforcement, KDHE will improve health and quality of life. We prevent illness, injuries and foster a safe and sustainable environment for the people of Kansas.

Primary Care Advanced Registered Nurse Practitioner Full-time Equivalency Distribution, Kansas 2009

Health care professional data are critical to the role state government plays in assuring an adequate health care professional workforce, identifying health care provider shortage areas, evaluating geographic health care professional distribution, public health preparedness, recruitment and resource allocation, and preparation of workforce reports for development and planning. Certain federal and state benefits are linked to the designation of shortage areas, including Medicare and Medicaid payment enhancements, eligibility for scholarships, loan repayment assistance, certification of rural health clinics, grants and other advantages. Federal methodology for determination of Health Professional Shortage Area is expected to change in the near future to add Advanced Registered Nurse Practitioners (ARNPs) to the calculation of full-time equivalency (FTEs) and determination of primary care provider-to-population ratios.

Methodology

The Kansas Department of Health and Environment (KDHE) Office of Health Assessment (OHA) used January 2009 licensure data obtained from the Kansas State Board of Nursing via the Kansas Health Policy Authority (KHPA) and supplemental practice location survey data to prepare the 2009 Primary Care ARNP FTE Report. The report contains information about the total full-time equivalencies (FTEs) (ratio of 40 service hours) provided by ARNPs currently engaged in direct patient care in primary care specialties by county. One FTE is based on a 40 hour work week. In cases where an ARNP's total practice hours for all work sites exceeds 40 hours per week, the value for total hours is set to 40 and the hours are distributed across all sites in proportion to the actual practice hours. Hours per week practiced at each location are used to allocate an ARNP's FTE to multiple locations. Primary care ARNPs are defined as those individuals practicing in one or more of the following specialties and one or more of the following work settings:

Table 1:

Specialties	Work Settings
Adult	Federally qualified health center
Adult/Medical-Surgical	Free standing clinic
Adult Mental Health/Psychiatry	Individual practitioner office
Child Mental Health/Psychiatry	Local health department
Community Health	Partnership/group practice office
Emergency	Rural health clinic
Family Planning	School clinic service environment
Family	Community mental health center
Gerontology	
Gynecology	
Maternal Child	
Maternity/pediatrics	
Medical Surgical	
Mental Health/Psychiatric	
Obstetrics and Gynecology	
Prenatal	
Primary Care	
Women's Health	

square mile. Table 1 indicates that less densely settled counties are more likely to have either no or too few ARNP FTEs to produce a reliable population ARNP FTE ratio. By the same token, the more densely settled counties are more likely to have a higher ARNP FTE/population ratio.

Table 2:

Primary Care ARNP FTE Summary by County - 2009										
A	B	C	D	E	F	G	H	I	J	K
	Total	Primary	Primary	Percent			Percent	Percent	Population	
	ARNP	Care	Care	Primary	2008	2008	Population	Population	to FTE	
	Count	ARNP	FTE	Care	Estimated	Adjusted*	<=100%	<=200%	ARNP	Population Density
County	(Duplicated)	Duplicated	Totals	(C/B)	Population	Population	FPL**	FPL**	(G/D)	Peer Group
ALLEN	4	4	2.36	100.0%	13,319	12,962	19.9%	37.4%	5,432	DENSELY-SETTLED RURAL
ANDERSON	3	3	1.50	100.0%	7,984	7,857	18.3%	34.9%	5,238	RURAL
ATCHISON	1	0	0.00	0.0%	16,481	15,428	16.5%	34.4%	NA	DENSELY-SETTLED RURAL
BARBER	1	1	0.72	100.0%	4,674	4,609	13.2%	30.7%	6,402	FRONTIER
BARTON	13	6	5.18	46.2%	27,703	26,931	17.7%	36.5%	5,200	DENSELY-SETTLED RURAL
BOURBON	5	2	1.62	40.0%	14,851	14,527	18.7%	34.6%	8,968	DENSELY-SETTLED RURAL
BROWN	4	1	0.62	25.0%	10,009	9,807	18.5%	35.6%	15,818	RURAL
BUTLER	7	1	0.70	14.3%	63,562	61,552	10.2%	23.2%	87,932	SEMIURBAN
CHASE	0	0	0.00	NA	2,804	2,691	16.7%	33.6%	NA	FRONTIER
CHAUTAUGU	2	1	0.30	50.0%	3,768	3,614	20.1%	40.3%	12,046	RURAL
CHEROKEE	1	0	0.00	0.0%	21,082	20,747	20.5%	37.6%	NA	DENSELY-SETTLED RURAL
CHEYENNE	0	0	0.00	NA	2,742	2,688	14.2%	37.1%	NA	FRONTIER
CLARK	1	1	0.16	100.0%	2,108	2,062	15.2%	34.0%	12,888	FRONTIER
CLAY	3	2	1.08	66.7%	8,859	8,634	13.1%	30.7%	8,050	RURAL
CLOUD	2	1	0.70	50.0%	9,453	8,791	15.1%	32.7%	12,558	RURAL
COFFEY	1	0	0.00	0.0%	8,409	8,239	10.8%	27.9%	NA	RURAL
COMANCHE	1	1	1.00	100.0%	1,950	1,880	18.4%	34.7%	1,880	FRONTIER
COWLEY	7	3	2.52	42.9%	34,065	32,257	17.7%	33.6%	12,800	DENSELY-SETTLED RURAL
CRAWFORD	20	10	7.00	50.0%	38,868	37,054	21.5%	38.1%	5,294	SEMIURBAN
DECATUR	2	1	1.00	50.0%	2,912	2,791	16.8%	38.6%	2,792	FRONTIER
DICKINSON	3	1	0.90	33.3%	19,328	18,990	11.5%	28.3%	21,100	DENSELY-SETTLED RURAL
DONIPHAN	2	0	0.00	0.0%	7,753	7,362	17.1%	35.8%	NA	DENSELY-SETTLED RURAL
DOUGLAS	36	18	13.32	50.0%	114,748	106,034	20.0%	32.0%	7,960	URBAN
EDWARDS	1	1	0.08	100.0%	3,082	3,021	16.5%	36.3%	37,762	FRONTIER
ELK	2	2	0.94	100.0%	3,047	2,961	20.8%	39.2%	3,150	FRONTIER
ELLIS	22	12	8.58	54.5%	27,801	26,542	17.9%	31.8%	3,094	DENSELY-SETTLED RURAL
ELLSWORTH	2	1	0.10	50.0%	6,250	5,424	11.6%	24.3%	54,240	RURAL
FINNEY	18	13	8.98	72.2%	40,998	40,426	20.2%	33.9%	4,502	DENSELY-SETTLED RURAL
FORD	11	4	3.36	36.4%	33,293	32,511	18.3%	37.1%	9,676	DENSELY-SETTLED RURAL
FRANKLIN	9	7	3.12	77.8%	26,562	25,970	12.1%	26.7%	8,324	SEMIURBAN
GEARY	8	1	1.00	12.5%	31,171	30,560	18.7%	40.2%	30,560	SEMIURBAN
GOVE	0	0	0.00	NA	2,548	2,495	16.0%	33.3%	NA	FRONTIER
GRAHAM	1	0	0.00	0.0%	2,592	2,523	17.4%	36.8%	NA	FRONTIER
GRANT	1	0	0.00	0.0%	7,395	7,324	15.0%	32.8%	NA	RURAL
GRAY	1	1	1.00	100.0%	5,688	5,547	13.7%	30.1%	5,548	RURAL
GREELEY	2	0	0.00	0.0%	1,266	1,239	14.2%	35.1%	NA	FRONTIER
GREENWOOD	2	1	0.76	50.0%	6,861	6,670	18.8%	35.9%	8,776	RURAL
HAMILTON	0	0	0.00	NA	2,631	2,588	19.8%	39.9%	NA	FRONTIER
HARPER	1	0	0.00	0.0%	5,857	5,689	16.5%	34.4%	NA	RURAL
HARVEY	13	10	4.76	76.9%	33,675	32,235	10.7%	24.1%	6,772	SEMIURBAN
HASKELL	1	1	1.00	100.0%	3,919	3,884	16.2%	37.5%	3,884	RURAL
HODGEMAN	1	1	0.90	100.0%	1,948	1,913	16.0%	30.8%	2,126	FRONTIER
JACKSON	3	3	2.92	100.0%	13,240	13,009	12.8%	26.3%	4,456	RURAL
JEFFERSON	1	1	0.80	100.0%	18,421	18,162	9.0%	21.9%	22,702	DENSELY-SETTLED RURAL
JEWELL	1	1	0.80	100.0%	3,142	3,097	17.9%	37.3%	3,872	FRONTIER
JOHNSON	192	78	52.30	40.6%	534,093	529,115	4.8%	10.8%	10,116	URBAN
KEARNY	3	2	1.50	66.7%	4,159	4,114	17.9%	35.9%	2,742	FRONTIER
KINGMAN	4	3	2.92	75.0%	7,719	7,521	14.7%	28.7%	2,576	RURAL

Table 2 Continued

Primary Care ARNP FTE Summary by County - 2009										
A	B	C	D	E	F	G	H	I	J	K
County	Total ARNP Count	Primary Care ARNP Count	Primary Care FTE	Percent Primary Care (C/E)	2008 Estimated Population	2008 Adjusted* Population	Percent <-100% FPL**	Percent <-200% FPL**	Population to ARNP Ratio (G/D)	Population Density Peer Group
	(Duplicated)	Duplicated	Total							
KIOWA	1	1	1.00	100.0%	2,541	2,433	15.0%	33.6%	2,434	FRONTIER
LABETTE	6	1	1.00	16.7%	21,871	21,014	17.7%	36.1%	21,014	DENSELY-SETTLED RURAL
LANE	1	0	0.00	0.0%	1,743	1,720	10.5%	31.1%	NA	FRONTIER
LEAVENWORTH	21	6	5.32	28.6%	74,276	67,641	8.9%	19.8%	12,714	SEMIURBAN
LINCOLN	0	0	0.00	NA	3,261	3,185	15.1%	36.4%	NA	FRONTIER
LINN	3	3	1.46	100.0%	9,616	9,485	15.1%	30.7%	6,496	RURAL
LOGAN	1	1	0.56	100.0%	2,593	2,536	10.5%	35.4%	4,528	FRONTIER
LYON	8	5	4.06	62.5%	35,562	33,949	19.5%	37.1%	8,362	SEMIURBAN
MARION	2	1	0.94	50.0%	12,100	11,335	12.9%	32.0%	12,058	DENSELY-SETTLED RURAL
MARSHALL	5	4	3.00	80.0%	10,178	9,934	13.3%	32.9%	3,312	RURAL
MCPHERSON	3	0	0.00	0.0%	29,044	27,407	9.3%	22.7%	NA	RURAL
MEADE	4	1	0.76	25.0%	4,359	4,245	13.4%	34.5%	5,586	FRONTIER
MIAMI	3	0	0.00	0.0%	30,989	30,243	8.1%	18.7%	NA	SEMIURBAN
MITCHELL	3	1	0.02	33.3%	6,292	5,947	14.0%	27.8%	297,350	RURAL
MONTGOMERY	10	7	4.30	70.0%	34,395	33,495	18.4%	35.2%	7,790	SEMIURBAN
MORRIS	1	0	0.00	0.0%	6,037	5,962	14.8%	33.9%	NA	RURAL
MORTON	1	0	0.00	0.0%	2,978	2,921	16.1%	30.2%	NA	FRONTIER
NEMAHA	3	2	1.80	66.7%	10,112	9,614	14.4%	32.2%	5,342	RURAL
NEOSHO	1	1	0.62	100.0%	16,223	15,745	16.6%	38.1%	25,396	DENSELY-SETTLED RURAL
NESS	2	1	0.80	50.0%	2,945	2,866	13.5%	31.0%	3,582	FRONTIER
NORTON	2	0	0.00	0.0%	5,370	4,580	16.1%	36.2%	NA	RURAL
OSAGE	1	0	0.00	0.0%	16,327	16,094	12.2%	26.8%	NA	DENSELY-SETTLED RURAL
OSBORNE	0	0	0.00	NA	3,804	3,685	17.2%	37.3%	NA	FRONTIER
OTTAWA	0	0	0.00	NA	6,026	5,835	12.3%	25.3%	NA	RURAL
PAWNEE	6	2	1.06	33.3%	6,291	5,387	14.5%	31.6%	5,082	RURAL
PHILLIPS	2	2	0.94	100.0%	5,339	5,196	14.4%	30.6%	5,528	RURAL
POTTAWATOMY	4	2	1.60	50.0%	19,695	19,413	13.4%	28.3%	12,134	DENSELY-SETTLED RURAL
PRATT	2	1	0.80	50.0%	9,411	9,086	14.5%	30.1%	11,358	RURAL
RAWLINS	0	0	0.00	NA	2,503	2,447	18.6%	34.1%	NA	FRONTIER
RENO	16	5	1.34	31.3%	63,427	60,174	15.7%	31.3%	44,906	SEMIURBAN
REPUBLIC	1	1	0.80	100.0%	4,812	4,672	14.9%	34.9%	5,840	RURAL
RICE	2	0	0.00	0.0%	10,060	9,181	17.3%	32.8%	NA	RURAL
RILEY	18	7	4.94	38.9%	71,069	61,755	24.9%	40.2%	12,502	SEMIURBAN
ROOKS	2	1	0.90	50.0%	5,136	4,939	15.0%	34.9%	5,488	RURAL
RUSH	0	0	0.00	NA	3,232	3,144	16.0%	35.7%	NA	FRONTIER
RUSSELL	3	3	1.56	100.0%	6,641	6,432	18.2%	36.2%	4,124	RURAL
SALINE	17	9	5.72	52.9%	54,657	53,214	12.9%	27.3%	9,304	SEMIURBAN
SCOTT	0	0	0.00	NA	4,577	4,491	9.0%	28.4%	NA	RURAL
SEDGWICK	197	64	40.46	32.5%	482,863	476,585	12.9%	25.8%	11,780	URBAN
SEWARD	8	5	3.22	62.5%	23,016	22,602	23.0%	42.1%	7,020	DENSELY-SETTLED RURAL
SHAWNEE	100	35	22.72	35.0%	174,709	169,813	12.9%	25.6%	7,474	URBAN
SHERIDAN	1	1	0.76	100.0%	2,510	2,466	18.9%	37.1%	3,244	FRONTIER
SHERMAN	2	2	1.76	100.0%	6,013	5,879	18.7%	35.8%	3,340	RURAL
SMITH	0	0	0.00	NA	3,901	3,792	15.9%	36.6%	NA	FRONTIER
STAFFORD	1	1	0.50	100.0%	4,326	4,247	18.7%	36.4%	8,494	RURAL
STANTON	2	2	0.76	100.0%	2,148	2,093	19.3%	33.5%	2,754	FRONTIER
STEVENS	1	1	1.00	100.0%	5,056	4,996	14.5%	31.8%	4,996	RURAL
SUMNER	1	1	0.80	100.0%	23,616	23,208	13.6%	28.5%	29,010	DENSELY-SETTLED RURAL
THOMAS	2	2	1.18	100.0%	7,277	6,996	13.4%	27.1%	5,928	RURAL
TREGO	2	1	0.70	50.0%	2,882	2,773	16.2%	30.8%	3,962	FRONTIER
WABAUNSEE	1	0	0.00	0.0%	6,922	6,810	10.2%	23.5%	NA	RURAL
WALLACE	1	1	0.38	100.0%	1,404	1,379	20.8%	36.2%	3,628	FRONTIER
WASHINGTON	0	0	0.00	NA	5,791	5,587	16.7%	35.5%	NA	RURAL
WICHITA	0	0	0.00	NA	2,148	2,123	22.4%	40.3%	NA	FRONTIER
WILSON	2	2	1.48	100.0%	9,698	9,460	19.6%	41.1%	6,392	RURAL
WOODSON	2	2	0.86	100.0%	3,285	3,171	18.4%	39.4%	3,688	RURAL
WYANDOTTE	72	23	12.06	31.9%	154,287	152,695	21.6%	38.2%	12,662	URBAN
TOTALS	969	411	270.44	42.4%	2,802,134	2,720,184			10,058	

* Adjusted Population equals the total population minus the group quarters population.
 † 2008 is the most recent year for which population data is available.
 ** Figures for columns H and I are for 1999; Source: Population data are from the US Census Bureau.
 Note: All figures for FTEs and hours are subject to the effects of rounding.

Conclusion:

Although the number of and demand for ARNPs services has increased, it remains difficult to obtain data necessary to determine FTE distribution across Kansas counties. Adequate primary care access depends on a sufficient supply of primary health care providers. Adequate data collection for the preparation of reliable reports is critical for determination of adequate health care access. It is crucial that survey return rates provide data sufficient to derive accurate FTE calculations. Mandatory reporting incorporated into the annual licensure renewal process is needed in order to assure accurate data collection and report generation.

With a possible change in federal methodology for determination of HPSAs, the implications of incorporating ARNPs into the mix of health care professionals used in determination of primary care service access for Kansas are great. There is an increased acceptance and reliance on the “mid-level” providers across the state. It is important that FTE calculations be made with accuracy, since these can affect many of the financial advantages and incentives associated with access to medical services and other benefits listed above that Kansans presently enjoy.

References

¹ Population Estimates Program, U.S. Bureau of the Census at <http://www.census.gov/popest/counties/tables/CO-EST2008-01-20.xls>.

² 2009 Primary Care ARNP FTE Report prepared by Kansas Department of Health and Environment Office of Health Assessment and Bureau of Local and Rural Health.