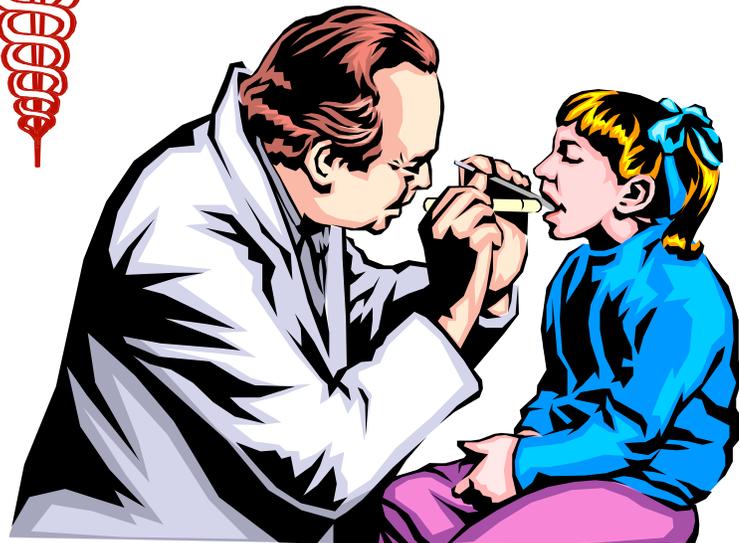


An Analysis of the Demand for Primary Care Physicians in the Sallisaw, Oklahoma, Medical Service Area



Rural Development
Oklahoma Cooperative Extension Service
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in the Sallisaw, Oklahoma, Medical Service Area**

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Introduction

This report will examine the need for primary care physicians in the Sallisaw, Oklahoma, Medical Service Area. Primary care physicians include internal medicine physicians, family practitioners, obstetrics-gynecologists, and pediatricians. Specifically, the study will:

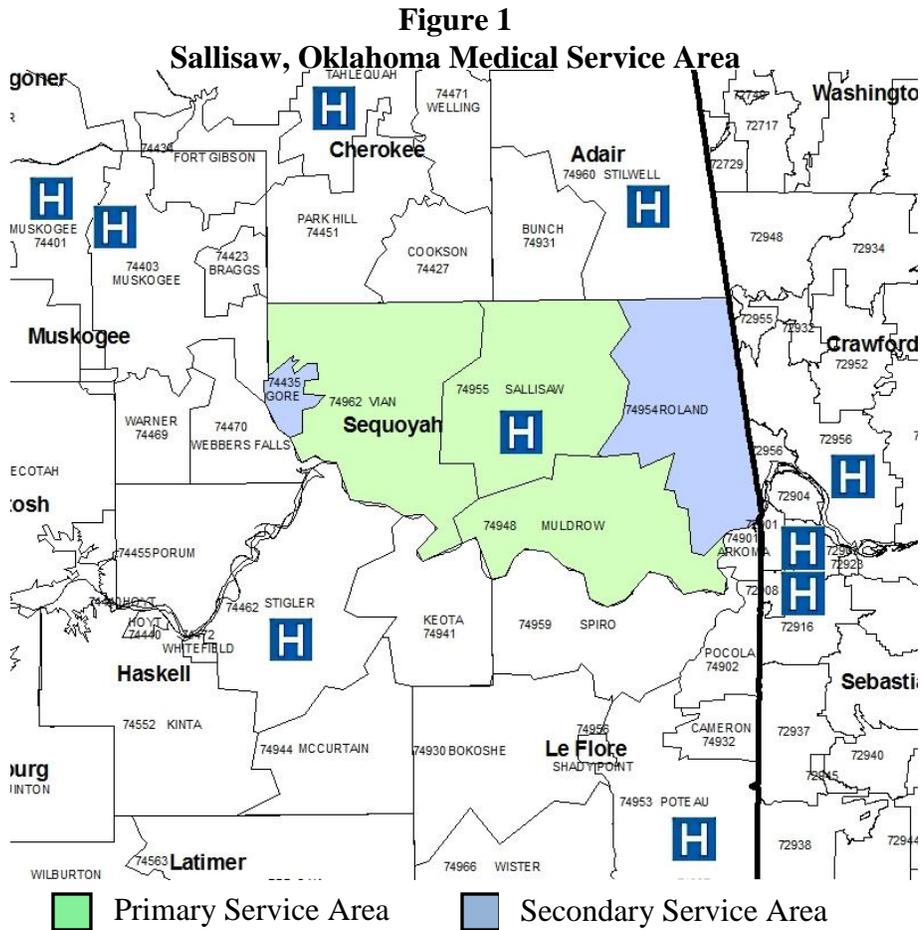
1. Determine the medical service area and population;
2. Estimate primary care physician office visits; and
3. Estimate the total demand for primary care physicians in the medical service area.

No recommendations will be made. The information included in this report is designed to assist local decision-makers in assessing the need and potential for primary care physician services.

Determining Need for Primary Care Physicians in the Sallisaw, Oklahoma, Medical Service Area

In order to estimate the number of visits to primary care physicians in Sallisaw, the medical service area was delineated as shown in **Figure 1**. To determine the medical service area, a number of factors were taken into consideration, including the proximity of physician practices in nearby cities and the travel distances faced by residents of nearby communities. In particular, existing physician practices in the surrounding communities, (Stigler, Stilwell, Ft. Smith, AR, Poteau, and Muskogee) likely draw residents of those nearby communities. Therefore, the primary medical service area for Sallisaw includes Sallisaw, Muldrow, and Vian while the secondary medical service area is comprised of Gore and Roland since there is the possibility that some individuals in these towns will choose to go to Sallisaw for their physician needs. The 2009 estimated population of the primary medical service area was 31,457 as shown

in **Table 1**. The 2009 estimated secondary medical area population totals to 10,351. This yields a total population of 41,808 for both the primary and secondary service areas.



Hospital	County	Number of Beds
Memorial Hospital	Adair	46
Tahlequah City Hospital	Cherokee	100
Summit Medical Center	Crawford, AR	103
Haskell County Community Hospital	Haskell	25
Eastern Oklahoma Medical Center	LeFlore	84
Muskogee Community Hospital, LLC	Muskogee	45
Muskogee Regional Medical Center	Muskogee	255
Sparks Regional Medical Center	Sebastian, AR	510
St. Edward's Mercy Medical Center	Sebastian, AR	336

Table 1
Sallisaw, Oklahoma Medical Service Area Population by Zip Code

	Estimated 2009 Population	Totals
Primary Medical Service Area		
74955, Sallisaw	13,689	
74948, Muldrow	10,510	
74962, Vian	7,258	
		31,457
Secondary Medical Service Area		
74435, Gore	1,478	
74954, Roland	8,873	
		10,351
Medical Service Area Total		<u>41,808</u>

Source: ESRI 2009 Community Sourcebook of Zip Code Demographics, 23rd ed., ESRI Business Solutions

The number of physician office visits generated in the Sallisaw, Oklahoma service area was estimated using the service area population data and research on the number of annual physician office visits for a specified age group [1, 2, 3]. Age group breakouts (by gender) and their corresponding number of annual physician office visits are presented in **Table 2**. For instance, for males under age 15, the average number of physician office visits is 2.6 visits per year [3]. Males between 15 and 24, however; make only 1.1 visits per year. Similar estimates are applied to other age groups to derive the total number of physician office visits occurring in the Sallisaw medical service area. Residents in the primary medical service area were estimated

to make 99,227 total physician office visits per year, while residents of the secondary medical service area were estimated to visit physicians 33,172 times annually (**Table 2**). Of these total physician office visits, recent data indicates that 58.3 percent will be made to physicians active in primary patient care while the remainder will be made to specialists [3]. Using the data presented in **Table 2**, the primary medical service area will generate 57,850 primary care physician visits ($58.3\% \times 99,227$), and the secondary medical service area will generate 19,339 visits ($58.3\% \times 33,172$) yielding a total of 77,189 local primary care physician visits per year for the total medical service area.

The total number of primary care physician office visits given various usage rates is presented in **Table 3** for the Sallisaw medical service area. If there is a 90 percent usage of Sallisaw primary care physicians by residents of the primary medical service area and a 10 to 15 percent usage rate from residents in the secondary service area, an estimated 53,999 to 54,966 primary care physician office visits will be made annually in the Sallisaw medical service area. The national average for the number of annual office visits to each primary care physician is 4,870 [4]. Therefore, Sallisaw needs an estimated 11.1 primary care physicians at a 90 percent primary medical service area usage rate coupled with a 10 percent usage rate from the secondary medical service area ($53,999/4,870 = 11.088$). By expanding the secondary usage rate to 15 percent, the need becomes 11.3 total primary care physicians ($54,966/4,870 = 11.287$). Higher usage levels would indicate that more physicians could be supported, while lower usage levels would indicate fewer physicians could be supported.

All assumptions and local conditions, including the actual usage levels in the primary and secondary medical service areas must be taken into consideration by decision-makers before determining if additional physicians could successfully locate in Sallisaw, Oklahoma. Some Sallisaw residents may be hesitant to leave their current physician, even if they are in another

town. Further, the current number of existing primary care physicians is not included in this analysis. Any evaluation of the relative shortage or surplus of primary care physicians must include details about the current levels of practicing physicians. Again, primary care physicians include the physician practices of internal medicine, pediatrics, family medicine, and OB-GYN. All of these types of physicians should be considered when analyzing the usage levels in the medical service area.

Summary

The analysis above presented the methodology and results of estimating the demand for primary care physicians in Sallisaw, Oklahoma. The results suggest that, given a 90% primary service area usage rate and a 10% secondary service area usage rate, an estimated 11.1 primary care physicians can be supported in the Sallisaw area. The actual number of physicians that the Sallisaw medical service area can support will vary based on the usage rates depicted in **Table 3**. Estimates of these usage rates should be used in conjunction with the current status of the primary care industry in Sallisaw to determine the next steps for the community.

Many assumptions have been made in this analysis. These include items that may change, such as the population of the service area or service area delineation. For example, the service area depicted here may change due to the exit or entry of physicians from nearby communities. If this does occur, revised estimates of physician office visits should be made. The number of existing primary care physicians is not addressed in this study. A close examination of current practicing primary care physicians will be imperative to accurately assess whether or not the current population base can in fact support additional primary care physicians.

All assumptions should be closely examined by local decision-makers to verify that they reflect local conditions. If additional local data are available, they should be included to derive the

most realistic conclusion possible for the current situation. If further analysis is needed, contact your county extension office listed on the title page of this document.

Table 2
Annual Primary Care Physician Office Visits Generated in the Sallisaw, Oklahoma, Medical Service Areas

PRIMARY MEDICAL SERVICE AREA							
Age	Male			Female			Total Visits
	2009 Population	Visit Rate ¹	Visits	2009 Population	Visit Rate ¹	Visits	
	Under 15	3,311	2.6	8,608	3,185	2.6	
15-24	2,418	1.1	2,659	2,167	2.4	5,201	7,860
25-44	4,115	1.6	6,584	4,083	3.2	13,065	19,649
45-64	3,869	3.0	11,608	4,066	3.9	15,858	27,467
65-74	1,041	5.5	5,723	1,222	6.0	7,332	13,055
75+	748	<u>7.1</u>	5,314	1,232	<u>7.3</u>	8,993	14,307
Total	15,502		40,497	15,955		58,731	99,227
Primary Medical Service Area - Local Primary Care Physician Office Visits Per Year:							57,850

SECONDARY MEDICAL SERVICE AREA							
Age	Male			Female			Total Visits
	2009 Population	Visit Rate ¹	Visits	2009 Population	Visit Rate ¹	Visits	
	Under 15	1,089	2.6	2,833	1,048	2.6	
15-24	796	1.1	875	713	2.4	1,711	2,586
25-44	1,354	1.6	2,166	1,344	3.2	4,299	6,466
45-64	1,273	3.0	3,820	1,338	3.9	5,218	9,038
65-74	342	6.2	2,123	402	6.7	2,694	4,817
75+	<u>246</u>	<u>7.1</u>	<u>1,749</u>	<u>405</u>	<u>7.3</u>	<u>2,959</u>	4,708
Total	5,101		13,565	5,250		19,607	33,172
Secondary Medical Service Area - Local Primary Care Physician Office Visits Per Year:							19,339

Source: U. S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center of Health Statistics, "National Ambulatory Medical Care Survey: 2006 Summary," No. 3, August, 2008

Table 3
Primary Care Physician Office Visits Given Usage
By Local Residents in Sallisaw, Oklahoma Medical Service Areas

		Usage by Residents of Primary Service Area						
		70%	75%	80%	85%	90%	95%	100%
Usage by Residents of Secondary Service Area	5%	41,462	44,354	47,247	50,139	53,032	55,924	58,817
	10%	42,429	45,321	48,214	51,106	53,999	56,891	59,783
	15%	43,396	46,288	49,181	52,073	54,966	57,858	60,750
	20%	44,363	47,255	50,148	53,040	55,932	58,825	61,717
	25%	45,330	48,222	51,114	54,007	56,899	59,792	62,684
	30%	46,297	49,189	52,081	54,974	57,866	60,759	63,651
	35%	47,263	50,156	53,048	55,941	58,833	61,726	64,618
	40%	48,230	51,123	54,015	56,908	59,800	62,693	65,585
	45%	49,197	52,090	54,982	57,875	60,767	63,660	66,552
	50%	50,164	53,057	55,949	58,842	61,734	64,627	67,519

<p align="center">If 90% primary medical service area and 10to 15% secondary medical service area, then the usage would be: 9,557 to 11,035 total primary care physician office visits for an estimated 11.1 to 11.3 Total Primary Care Physicians Based on 4,870 average annual primary care office visits per physician practice in Oklahoma [4]</p>

References

- [1] "Family Medicine – A Systematic Approach to the Planning and Development of a Community Practice," Doeksen, G., Miller, K.A., Shelton, P.J., and Miller, D.A., University of Oklahoma Health Sciences Center, 1990.
- [2] "Internal Medicine - A Systematic Approach to the Planning and Development of a Community Practice - A Step-by-Step Guide," Miller, K.A., Doeksen, G., Miller, D., Campbell, J., and Shelton, P.J., University of Oklahoma Health Sciences Center, 1993.
- [3] U. S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center of Health Statistics, "National Ambulatory Medical Care Survey: 2006 Summary," No. 3, August, 2008.
- [4] Physician Socioeconomic Statistics. American Medical Association, Center for Health Policy Research. Eds Wassenaar, JD, and SL Thran. 2003. American Medical Association: United States.
- [4] ESRI 2009 Community Sourcebook of Zip Code Demographics, 23rd ed., ESRI Business Solutions.