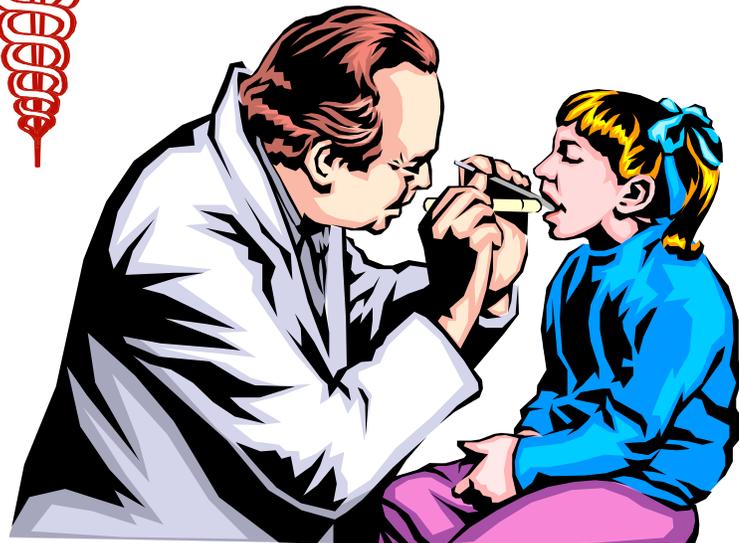


An Analysis of the Demand for Primary Care Physicians in the Wetumka, Oklahoma, Medical Service Area



Rural Development
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Introduction

This report will examine the need for primary care physicians in the Wetumka, 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.

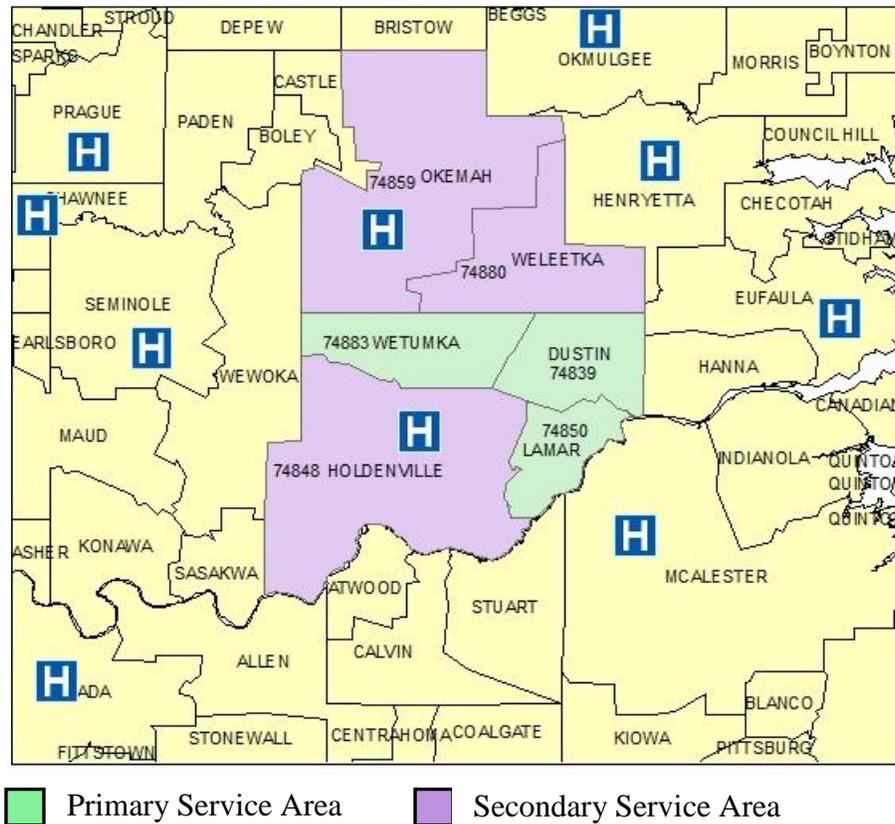
No recommendations will be made. The information included in this report is designed to assist local decision-makers in assessing the need and potential for primary care physician services.

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

In order to estimate the number of visits to primary care physicians in Wetumka, 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, (Holdenville, Seminole, Ada, McAlester, and Okemah) likely draw residents of those nearby communities. Therefore, the primary medical service area for Wetumka includes Wetumka, Dustin, and Lamar while the secondary medical service area is comprised of Holdenville, Okemah, and Weleetka, since there is the possibility that some individuals in these towns will choose to go to Wetumka for their physician needs. The 2009 estimated population of the primary medical service area was 3,094

as shown in **Table 1**. The 2009 estimated secondary medical area population totals to 15,828. This yields a total population of 18,922 for both the primary and secondary service areas.

Figure 1
Wetumka, Oklahoma Medical Service Area



Hospital	County	Number of Beds
Holdenville General Hospital	Hughes	25
Prague Community Hospital	Lincoln	25
EPIC Medical Center	McIntosh	33
Creek Nation Community Hospital	Okfuskee	25
Henryetta Medical Center	Okmulgee	41
Okmulgee Memorial Hospital	Okmulgee	66
McAlester Regional Health Center	Pittsburg	171
Valley View Regional Hospital	Pontotoc	156
Solara Hospital Shawnee	Pottawatomie	34
Unity Health Center	Pottawatomie	114

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

	Estimated 2009 Population	Totals
Primary Medical Service Area		
74883, Wetumka	2,001	
74839, Dustin	832	
74850, Lamar	261	
		3,094
Secondary Medical Service Area		
74848, Holdenville	8,232	
74859, Okemah	5,421	
74880, Weleetka	2,175	
		15,828
Medical Service Area Total		<u>18,922</u>

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

The number of physician office visits generated in the Wetumka, 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]. Similar estimates are applied to other age groups to derive the total number of

physician office visits occurring in the Wetumka medical service area. Residents in the primary medical service area were estimated to make 9,760 total physician office visits per year, while residents of the secondary medical service area were estimated to visit physicians 50,724 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 5,690 primary care physician visits ($58.3\% \times 9,760$), and the secondary medical service area will generate 29,572 visits ($58.3\% \times 50,724$) yielding a total of 35,262 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 Wetumka medical service area. If there is a 90 percent usage of Wetumka primary care physicians by residents of the primary medical service area and a 15 to 20 percent usage rate from residents in the secondary service area, an estimated 9,557 to 11,035 primary care physician office visits will be made annually in the Wetumka medical service area. The national average for the number of annual office visits to each primary care physician is 4,870 [4]. Therefore, Wetumka needs an estimated 1.96 primary care physicians at a 90 percent primary medical service area usage rate coupled with a 15 percent usage rate from the secondary medical service area ($9,557/4,870 = 1.9624$). By expanding the secondary usage rate to 20 percent, the need becomes 2.3 total primary care physicians ($11,035/4,870 = 2.266$). 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 Wetumka, Oklahoma. Some

Wetumka 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 Wetumka, Oklahoma. The results suggest that, given a 90% primary service area usage rate and a 20% secondary service area usage rate, an estimated 2.3 primary care physicians can be supported in the Wetumka area. The actual number of physicians that the Wetumka 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 Wetumka 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 Wetumka, Oklahoma,
Medical Service Areas

PRIMARY MEDICAL SERVICE AREA							
	Male			Female			
Age	2009 Population	Visit Rate ¹	Visits	2009 Population	Visit Rate ¹	Visits	Total Visits
Under 15	326	2.6	847	313	2.6	815	1,661
15-24	238	1.1	262	213	2.4	512	773
25-44	405	1.6	648	402	3.2	1,285	1,933
45-64	381	3	1,142	400	3.9	1,560	2,702
65-74	102	5.5	563	120	6.0	721	1,284
75+	74	<u>7.1</u>	523	121	<u>7.3</u>	885	1,407
Total	1,525		3,983	1,569		5,777	9,760
Primary Medical Service Area - Local Primary Care Physician Office Visits Per Year:							5,690

SECONDARY MEDICAL SERVICE AREA							
	Male			Female			
Age	2009 Population	Visit Rate ¹	Visits	2009 Population	Visit Rate ¹	Visits	Total Visits
Under 15	1,666	2.6	4,331	1,603	2.6	4,167	8,498
15-24	1,216	1.1	1,338	1,090	2.4	2,617	3,955
25-44	2,070	1.6	3,313	2,054	3.2	6,574	9,887
45-64	1,947	3	5,841	2,046	3.9	7,979	13,820
65-74	524	6.2	3,246	615	6.7	4,119	7,365
75+	<u>377</u>	<u>7.1</u>	<u>2,674</u>	<u>620</u>	<u>7.3</u>	<u>4,525</u>	7,199
Total	7,800		20,743	8,028		29,982	50,724
Secondary Medical Service Area - Local Primary Care Physician Office Visits Per Year:							29,572

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

**Primary Care Physician Office Visits Given Usage
By Local Residents in Wetumka, 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%	5,462	5,746	6,031	6,315	6,600	6,884	7,168
	10%	6,940	7,225	7,509	7,794	8,078	8,363	8,647
	15%	8,419	8,703	8,988	9,272	9,557	9,841	10,126
	20%	9,897	10,182	10,466	10,751	11,035	11,320	11,604
	25%	11,376	11,660	11,945	12,229	12,514	12,798	13,083
	30%	12,855	13,139	13,424	13,708	13,993	14,277	14,562
	35%	14,333	14,618	14,902	15,187	15,471	15,756	16,040
	40%	15,812	16,096	16,381	16,665	16,950	17,234	17,519
	45%	17,290	17,575	17,859	18,144	18,428	18,713	18,997
	50%	18,769	19,054	19,338	19,623	19,907	20,192	20,476

If 90% primary medical service area and 15 to 20% secondary medical service area, then the usage would be:
 9,557 to 11,035 total primary care physician office visits
 for an estimated 1.776 to 2.103 Total Primary Care Physicians
 Based on 4,870 average annual primary care office visits per physician practice in Oklahoma [4]

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.