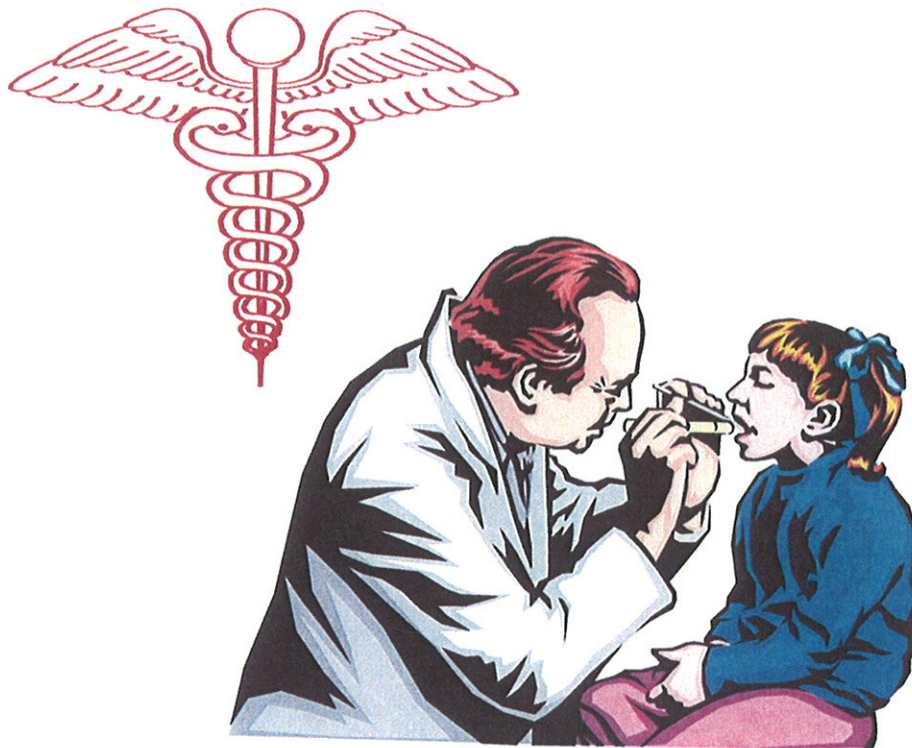


An Analysis of the Demand for Primary Care Physicians in the Idabel, Oklahoma, Medical Service Area



Rural Development
Oklahoma Cooperative Extension Service
Oklahoma State University



Oklahoma Office of Rural Health
OSU Center for Rural Health
Oklahoma State University



September 2011

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

Brian E. Whitacre, Assistant Professor and Extension Economist, OSU, Stillwater
405-744-6083; FAX 405-744-9835

Lara Brooks, Assistant Extension State Specialist, OSU, Stillwater
405-744-6083

Gerald A. Doeksen, Regents Professor and Extension Economist, OSU, Stillwater
405-744-6083

Brad Bain - McCurtain County Extension Director, Idabel
(580)286-7558

Jack Frye - Area Rural Development Specialist, Ada
(580) 332-4100

Corie Kaiser, Assistant Director, Oklahoma Center for Rural Health, Oklahoma City
405-840-6500

Val Schott - Director, Oklahoma Center for Rural Health, Oklahoma City
405-840-6500

Rural Development
Oklahoma Cooperative Extension Service
Oklahoma State University

Oklahoma Office of Rural Health
OSU Center for Rural Health
Oklahoma State University

September 2011

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

Introduction

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

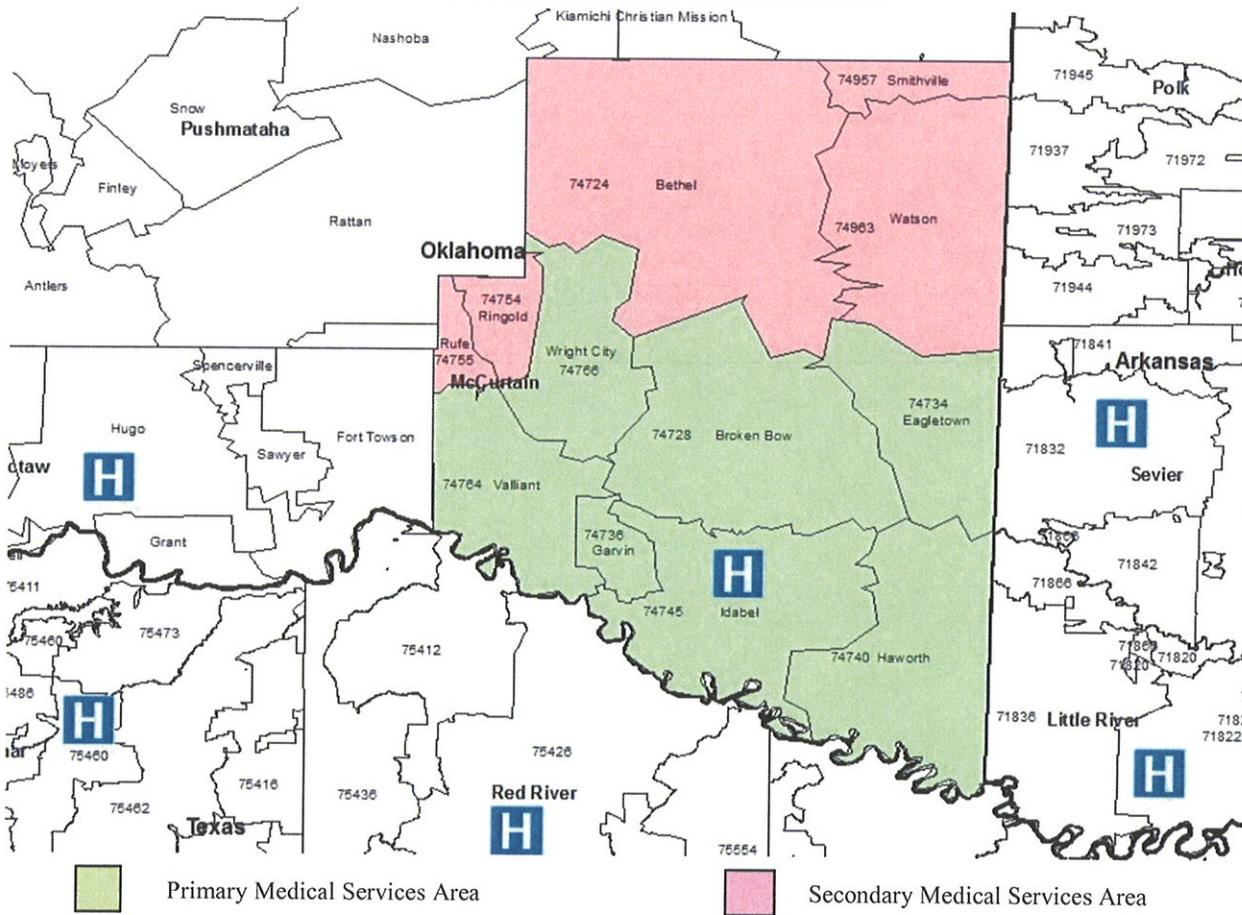
No recommendations will be made. The information included in this report is designed to assist local decision-makers in assessing the need and potential for primary care physician services.

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

In order to estimate the number of visits to primary care physicians in Idabel, 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, (Hugo, Ashdown, AR, DeQueen, AR, Paris, TX, Clarksville, TX, and Texarkana, TX) likely draw residents of those nearby communities. Therefore, the primary medical service area for Idabel includes the zip code areas of Idabel, Haworth, Garvin, Valliant, Wright City, Broken Bow, Eagletown, and Millerton while the secondary medical service area is comprised of Rufe, Bethel, Smithville, Batiest, Ringold, and Watson since there is the possibility that some individuals in these towns will choose to go

to Idabel for their physician needs. The 2010 Census population of the primary medical service area was 31,240 as shown in **Table 1**. The 2010 Census secondary medical area population totals to 2,909. This yields a total population of 34,149 for both the primary and secondary service areas.

Figure 1
Idabel, Oklahoma Medical Service Area



City	County	Hospital	No. of Beds
Hugo	Choctaw	Choctaw Memorial Hospital	34
Idabel	McClain	McClain Memorial Hospital	91
Ashdown	Little River, AR	Little River Memorial Hospital	42
De Queen	Sevier, AR	De Queen Medical Center	25
Texarkana	Bowie, TX	Wadley Regional Medical Center	412
Paris	Lamar, TX	Paris Regional Medical Center	360
Clarksville	Red River, TX	East Texas Medical Center	49

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

	2010 Census Population	Totals
Primary Medical Service Area		
74745, Idabel	9,912	
74740, Haworth	2,288	
74736, Garvin	1,178	
74764, Valliant	3,473	
74766, Wright City	1,595	
74728, Broken Bow	11,343	
74734, Eagletown	1,087	
74750, Millerton	364	
		31,240
Secondary Medical Service Area		
74755, Rufe	83	
74724, Bethel	377	
74957, Smithville	1,170	
74722, Batiest	286	
74754, Ringold	385	
74963, Watson	608	
		2,909
Medical Service Area Total		<u>34,149</u>

Source: Population data from U.S. Bureau of the Census, 2010

The number of physician office visits generated in the Idabel, 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 2.5 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 Idabel medical service area. Residents in the primary medical service area were estimated to make 104,921 total physician office visits per year, while residents of the secondary medical service area were estimated to visit physicians 9,770 times annually (**Table 2**). Of these total physician office visits, recent data indicates that 60.5 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 63,477 primary care physician visits ($60.5\% \times 104,921$), and the secondary medical service area will generate 5,911 visits ($60.5\% \times 9,770$) yielding a total of 69,388 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 Idabel medical service area. If there is a 90 percent usage of Idabel 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 57,721 to 58,016 primary care physician office visits will be made annually in the Idabel medical service area. The national average for the number of annual office visits to each primary care physician is 4,185 [4]. Therefore, Idabel needs an estimated 13.8 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 ($57,721/4,185 = 13.79$). By expanding the secondary usage rate to 15 percent, the need becomes 13.9 total primary care physicians ($58,016/4,185 = 13.86$). 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 Idabel, Oklahoma. Some Idabel 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 Idabel, Oklahoma. The results suggest that, given a 90% primary service area usage rate and a 10% secondary service area usage rate, an estimated 13.8 primary care physicians can be supported in the Idabel area. The actual number of physicians that the Idabel 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 Idabel 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 Idabel, Oklahoma, Medical Service Areas

PRIMARY MEDICAL SERVICE AREA							
Age	Male			Female			Total Visits
	2010 Population	Visit Rate ¹	Visits	2010 Population	Visit Rate ¹	Visits	
	Under 15	3,276	2.5	8,190	3,410	2.3	
15-24	1,944	1.1	2,138	2,023	2.5	5,059	7,197
25-44	3,613	1.5	5,419	3,760	3.3	12,408	17,827
45-64	4,087	3.1	12,670	4,254	4.2	17,867	30,537
65-74	1,378	6.0	8,266	1,434	6.7	9,607	17,873
75+	<u>1,010</u>	<u>7.7</u>	<u>7,779</u>	<u>1,052</u>	<u>7.3</u>	<u>7,676</u>	<u>15,456</u>
Total	15,308		44,462	15,932		60,459	104,921
Primary Medical Service Area - Local Primary Care Physician Office Visits Per Year:							63,477

SECONDARY MEDICAL SERVICE AREA							
Age	Male			Female			Total Visits
	2010 Population	Visit Rate ¹	Visits	2010 Population	Visit Rate ¹	Visits	
	Under 15	305	2.5	763	317	2.3	
15-24	181	1.1	199	188	2.5	471	670
25-44	336	1.5	505	350	3.3	1,155	1,660
45-64	381	3.1	1,180	396	4.2	1,664	2,844
65-74	128	6.0	770	134	6.7	895	1,664
75+	<u>94</u>	<u>7.7</u>	<u>724</u>	<u>98</u>	<u>7.3</u>	<u>715</u>	<u>1,439</u>
Total	1,425		4,140	1,484		5,630	9,770
Secondary Medical Service Area - Local Primary Care Physician Office Visits Per Year:							5,911

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: 2008 Summary," No. 3

Table 3
Primary Care Physician Office Visits Given Usage
By Local Residents in the Idabel, 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%	44,730	47,904	51,077	54,251	57,425	60,599	63,773
	10%	45,025	48,199	51,373	54,547	57,721	60,895	64,068
	15%	45,321	48,495	51,668	54,842	58,016	61,190	64,364
	20%	45,616	48,790	51,964	55,138	58,312	61,486	64,659
	25%	45,912	49,086	52,260	55,433	58,607	61,781	64,955
	30%	46,207	49,381	52,555	55,729	58,903	62,077	65,251
	35%	46,503	49,677	52,851	56,024	59,198	62,372	65,546
	40%	46,798	49,972	53,146	56,320	59,494	62,668	65,842
	45%	47,094	50,268	53,442	56,616	59,789	62,963	66,137
	50%	47,390	50,563	53,737	56,911	60,085	63,259	66,433

If 90% primary medical service area and 10 to 15% secondary medical service area, then the usage would be:
57,721 to 58,016 total primary care physician office visits
for an estimated **13.8** to **13.9** Total Primary Care Physicians
Based on 83.7 average weekly primary care physician visits with a 50 week year [4]