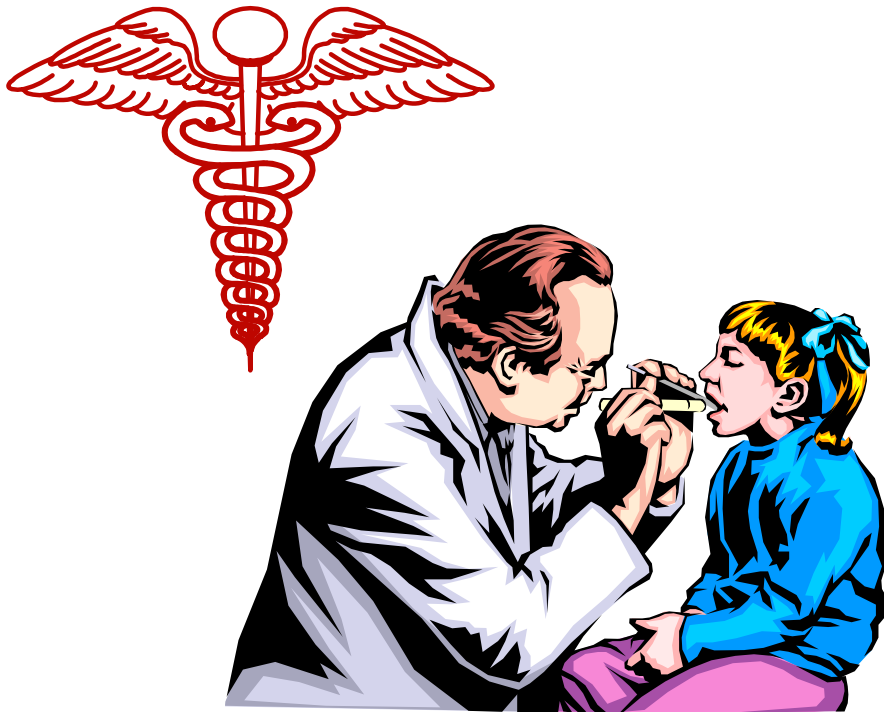


Measuring the Need for Primary Care Physicians in Cimarron County, Oklahoma



Oklahoma State Department of Health,
Office of Rural Health

Oklahoma Cooperative Extension Service,
Oklahoma State University

May 2001

**Measuring the Need for Primary Care Physicians
in Cimarron County, Oklahoma**

Mary K. Lawler - Assistant Extension Specialist, OSU, Stillwater
(405) 744-6081

Gerald A. Doeksen - Extension Economist, OSU, Stillwater
(405) 744-6081

Stanley R. Ralstin - Area Rural Development Specialist, Enid
(580) 233-5295

Scott Grillin – Cimarron County Extension, Boise City
(580) 544-3399

RURAL DEVELOPMENT
COOPERATIVE EXTENSION SERVICE
OKLAHOMA STATE UNIVERSITY

May 2001

Measuring the Need for Primary Care Physicians in Cimarron County, Oklahoma

Introduction

This report will examine the need for primary care physicians in Cimarron County, Oklahoma. Specifically, the study will:

- Determine the need for primary care physicians
 - Determine primary medical service area and population;
 - Estimate primary care physician office visits; and
 - 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.

Determine Need for Primary Care Physicians

To determine an estimate of the number of visits to primary care physicians, the medical service area was delineated as shown in **Figure 1**. The medical service area includes all of Cimarron County. As shown in **Figure 1**, this area includes Boise City, Keyes, and the surrounding rural area in Cimarron County.

The 1999 estimated population of the medical service area is shown in **Table 1**. The estimated 1999 population of the medical service area is 2,922. This estimate is from 1999 U. S. Census Population Estimates [4].

The number of physician office visits generated in the Cimarron County service area is estimated by using the service area population data and the data from state and national research [1,2,3]. Research shows the number of annual office visits for the specified age group breakdowns shown in **Table 2**. For instance, for males under age 15, the average number of physician office visits is 2.4 visits per year [1,3]. The average annual visit rate is applied to the population for each gender by age group. Residents in the Cimarron County medical service

Table 1
Population of Cimarron County, Oklahoma

POPULATION	1990 Population ¹	1999 Estimated Population ²
Boise City	1,514	1,345
Keyes	454	404
Balance of Cimarron County	<u>1,333</u>	<u>1,173</u>
Cimarron County	<u><u>3,301</u></u>	<u><u>2,922</u></u>

¹ SOURCE: Population data from the U.S. Bureau of the Census, 1990.

² SOURCE: Population data from the U.S. Bureau of the Census, Population Estimates Branch, 1999.

Table 2
Total Annual Physician Office Visits and
Total Annual Primary Care Physician Office Visits
Generated in the Cimarron County Medical Service Area

Age	Total Annual Physician Office Visits						Total Annual Physician Office Visits
	MALE			FEMALE			
	1998 Population	Visit Rate	Total Visits	1998 Population	Visit Rate	Total Visits	
<15	346	2.4	830	307	2.2	675	1,505
15-24	195	1.0	195	172	2.4	413	608
25-44	355	1.6	568	320	3.3	1,056	1,624
45-64	324	3.0	972	343	4	1,372	2,344
65-74	143	5.2	744	151	5.8	876	1,620
75+	<u>116</u>	6.5	<u>754</u>	<u>150</u>	6.5	<u>975</u>	<u>1,729</u>
	1,479		4,063	1,443		5,367	9,430

Total Annual Primary Care Physician Office Visits = 5,865

Based on 62.2% of the total physician visits =
Total Annual Primary Care Physician Office Visits

area are estimated to make 9,430 total physician office visits (**Table 2**). Of these total physician office visits, 62.2 percent or 5,865 will be made to physicians active in primary patient care while the remainder will be made to specialists [1].

The total number of primary care physician office visits given various usage rates is presented in **Table 3** for the Cimarron County medical service area. If there is 85 percent usage of Cimarron County primary care physicians by residents of the medical service area, an estimated 4,985 primary care physician office visits will be made annually in Cimarron County. A primary care physician in Oklahoma has an average of 4,976 patient office visits [1] annually and, therefore, it is estimated that Cimarron County needs one primary care physician ($4,985/4,976 = 1$). Given the estimated annual visits, it appears that Cimarron County can support approximately one full-time primary care physician.

Higher usage levels would indicate more physicians could be supported as lower usage levels would indicate fewer physicians. All assumptions and local conditions must be taken into consideration by decision-makers before deciding if additional physicians could successfully locate in the Cimarron County area.

Summary

Many assumptions have been made in the preceding analysis. These include items that may change such as medical service area delineations and number of office visits. For example, the service area depicted here may change due to the exit or entry of physicians from nearby communities. Should this occur, revised estimates of physician office visits should be made.

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 arrive at the most realistic analysis possible. If further analysis is needed, contact your County Extension office listed on the title page.

Table 3
Primary Care Physician Office Visits Given Usage
By Local Residents in Cimarron County, Oklahoma
and Surrounding Medical Service Area

	70%	75%	80%	85%	90%	95%	100%
Usage Level	4,106	4,399	4,692	4,985	5,279	5,572	5,865
Number of Primary Care Physicians	0.8	0.9	0.9	1	1.1	1.1	1.2

If 85% usage level, then **4,985** total primary care physician office visits
for an estimated **1** Total Primary Care Physicians

Based on 4,976 average annual primary care office visits per physician practice in Oklahoma

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: 1997 Summary," No. 305, May 20, 1999.

- [4] U. S. Census of Population, Population Estimates Branch, 1999.