

PRIMARY CARE ANALYSIS CARIBOU COUNTY

PHYSICIAN SERVICES – ESTIMATING DEMAND AND SUPPLY

Demand:

National statistics (2000 data published in June 5, 2002) show an individual visits the doctor 3.0 times per year. This is an estimate for ALL visits to ALL types of physicians. Multiplying this average by the total population of your service area will provide you an estimate of all the physician office visits generated by local residents each year or the local DEMAND for all physician services. However, it is useful to estimate the demand by physician specialties and particularly by primary care specialties (family/general physicians, internists, pediatricians, and obstetricians/gynecologists) to better approximate a rural communities demand. Data is available that allows for this computation. Advance Data from Vital and Health Statistics of the Centers for Disease Control and Prevention, National Center for Health Statistics (<http://www.cdc.gov/nchswww/products/pubs/pubd/ad/ad.htm>) issue reports that provide early release of data from the National Center for Health Statistics' health and demographic surveys. Many of these releases are followed by detailed reports in the Vital and Health Statistics series. The attached worksheets "Estimated Annual Physician Visits for Caribou County, Idaho" utilize this data in combination with current population estimates for Caribou County.

On each of the physician demand spreadsheets, there is a column labeled "primary care adjuster" – one is labeled .65 for communities with a mix of specialties and one labeled .80 for smaller communities where only primary care physicians typically practice. This figure adjusts for those visits made to only primary care physicians. A general rule of thumb is if your total service area population is less than 20,000 people, and then use the .80 adjuster.

Based upon the same national data, we know that for every 100 office visits to all doctors, 61 of those visits will be to primary care physicians (GP/FP/IM/PD/OB/GS). Further, we know that of the 61 visits to primary care physicians about 24 will be to family practice physicians. The distribution of physician visits by specialty is reflected in the following table.

SPECIALTY	PERCENT DISTRIBUTION OF ALL VISITS
General and Family Practice	24.1
Internal Medicine	15.2
Pediatrics	12.6
Obstetrics and Gynecology	7.9
Ophthalmology	5.6
Orthopedic Surgery	5.2
Dermatology	4.2
Otolaryngology	3.5
Psychiatry	2.6
General Surgery	2.3
Cardiovascular Diseases	2.1
Urology	2.0
Neurology	1.0
All Others	11.7

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This data is incorporated into the Excel spreadsheets along with service area population by age and sex. The right hand column "Distribution by Specialty" is a distribution of estimated visits for Caribou County by specialty.

There were a total of 22,227 estimated physician visits, of which 17,782 were to primary care specialties. The 80% primary care adjuster was used because of the rurality of Caribou County.

NOTE OF CAUTION: This estimate of 17,782 visits was not adjusted for market share. This number assumes that all residents within Caribou County would seek primary care in the county. According to the last market survey completed in 1999, 28% of all reported visits to physicians or mid-levels were to local physicians and 62% of reported outpatient visits were to the local hospital. There is also sufficient anecdotal information to conclude that a sufficient number of individuals do seek primary care out of area.

Supply:

This data can then be used to estimate the numbers and types of providers your community can support. The American Medical Association suggests that family physicians can handle 5,400 office visits each year or 28 patients per day. The U.S. Department of Health and Human Services standard for primary care physicians is 4,200 patient visits and about 2,100 visits per physician assistant or nurse practitioner. Many contend the AMA number is too high and DHHS's is too low. Respecting the arguments for and against the AMA and DHHS figures, let's settle on a mid-range office visit number to determine office supply and demand of 4,800 visits per family physician and 3,000 visits per midlevel provider. To determine the potential supply of office visits available through your primary care provider, simply complete the following table. The operative word here is "potential". Some providers may want to see more patients than this average while others may prefer a lighter load. Also, community utilization patterns play an important part of this mix. For instance, the presence of physicians locally doesn't mean all people will use their services. They may prefer to leave the community for physician services. The best way to upgrade "potential" to "actual" is to get an annual office visit count from you local physicians and plug these figures into the supply side of the formula. The local physicians' piece of the total local visits is their market share. There are 3 family/general practitioners in Soda Springs (Bules,

Franson, and Young), one half-time physician assistant (Smith) and one general surgeon (Obray) who does practice some general practice (estimated at .75 FTE). Dr. Young practices part-time and is estimated at a .5 FTE.

The following chart shows the estimated supply based on 2.75 FTE family/general physicians and .5 FTE physician assistant. This is the “potential” supply.

Type of Provider	Number in Service Area	Multiply by	Patient Visits per Year	Total Potential Office Visits (Supply)
Family Physician	3.25	X	4,800	15,600
Internal Medicine		X	3,300	
Pediatrician		X	4,500	
Obstetrics/Gynecology		X	4,000	
Physician Assistant/Nurse Practitioner	.5	X	3,000	1,500
Total Office Visits (Supply)				17,100

To estimate the “actual” supply, we know that for FY 2001, Dr. Bules provided 3,514 visits. Dr. Franson has seen 451 patients in slightly less than 2 months and is expected to provide another 3,500 visits annually. Dr. Young is projected to provide 2,000 visits annually. Dr. Obray sees 15 to 20 patients per day and assuming 150 workdays could provide between 2,250 and 3,000 visits of which maybe 75% would be primary care or 2,250 at most. Smith is expected to provide 750 visits the initial year. The estimate of “actual” supply based on information about each provider would be 12,014.

The next step is to compare your total primary care supply to demand. This will determine the degree of physician shortage or surplus in your community. This is done by subtracting the supply number from the demand number. If the number of unmet visits is greater than 4,800, you may want to consider recruiting additional primary care physicians. If it is less than 4,800, but greater than 2,500, you may want to consider recruiting a physician assistant or nurse practitioner. If the number is above zero but less than 2,500, you may want to consider part-time provider options or looking to your current provider supply to determine if there is an underutilized practice. Of course, if the result is a negative number, your supply exceeds your demand.

In the case of Caribou County, the estimated demand is 17,782 primary care visits. The estimated “potential” supply is 17,100 visits resulting in an estimated need for at .14 FTE primary care provider. This assumes all providers actually schedule 4,800 visits each year. If you base it on the “actual” supply, the need is for 1.2 FTE (again assuming that each provider schedules 4,800 visits each year).

Estimated Demand	=	17,782	17,782
Estimated Supply	=	<u>17,100</u>	<u>12,014</u>

Difference	=	682/4,800 = .14 FTE	5,768/4,800 = 1.2 FTE
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