
Economic Impact Report

The Economic Importance of Teton Valley Health Care to Teton County

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Introduction

Rural hospitals are surviving in an environment filled with uncertainty. External and internal influences threaten their existence, yet the presence of a hospital plays a vital role in the health status, access to health services, and economic well-being of the community which they serve. The purpose of this analysis is to describe and *estimate* the economic impact of Teton Valley Health Care on Teton County, Idaho.

The hospital is a focal point of the health care delivery system. The existence of the hospital is likely to support the presence of other medically related businesses and activities. Most commonly, these are physician services, pharmacies, home health services, and independent allied health professionals such as physical therapists. These businesses or services are connected through the hospital and with each other. It has been asserted the closure of a community hospital would likely result in the flight of these businesses and services from the community.

The presence of a hospital also affects overall economic development opportunities for its community. Health care considerations weigh into community perceptions of quality of life and “livability”. In addition, the availability of health services is highly valued in attracting and retaining businesses and residents. Further, health service quality and availability are major factors for people considering interstate moves for the purposes of retirement living.

Health care jobs, in terms of future local employment and local economic development, should be analyzed closely. A 2010 report from the State of Idaho Department of Labor¹ reported that although the state experienced a large employment decrease from 2008 to 2009, the health care industry did not, and in fact health care employment is projected to increase from 2009 to 2011 by about 5,000. For the 2006-2016 long-term projections, all three health care industry groups – ambulatory health care services, hospitals and nursing and residential care facilities – are in the top 15 Hot Industries. The report projects hospital employment to grow 2.25% annually through 2016.

Perhaps even more important is the fact that these jobs require varying levels of education. These projected occupational opportunities in health care should have an impact on the training and education of youth within the local community. Health service jobs provide one of the few mechanisms for rural youth to return to and work in rural communities after education.

A nationwide cost-benefit analysis released by the American Hospital Association, *The Value of Investment in Health Care*², also underscores the economic importance of health care in the United States. AHA found that every dollar America invests in health care results in a return of \$2.40 to \$3.00. Over the last 20 years, that investment has resulted in a 16 percent decline in

¹ <http://labor.idaho.gov/publications/HealthCareScan.pdf>; accessed 11/25/11

² <http://www.aha.org/research/policy/VoIHC-more-resources.shtml>; accessed 11/25/11

the death rate, added three more years of life expectancy, produced a 25 percent reduction in disability rates for people over 65 years and resulted in a 56 percent reduction in the number of days Americans spend in the hospital.

Community hospitals faced with financial distress need to consider the economic implications of reducing or expanding the scope of services provided. This paper deals exclusively with local economic ramifications of those choices. It does not measure the “social” value one may consider – such as the peace of mind that comes from knowing an effective Emergency Medical System and well staffed hospital emergency room exist within the community. Those types of consideration are normally reflected in voting patterns for publicly supported hospitals and/or contributions to local foundations and levels of volunteerism.

Hospital Economic Effects

The first question in measuring the economic effect of a business on a community is to determine if the spending created by the business is additional spending or simply a re-allocation of existing expenditures³. For example, the addition of a new convenience store or video rental shop would likely add little to the level of spending for the goods they sell or rent. Such additions would merely divide the current level of spending between the competitors.

In a community with a single hospital, this is clearly not the case. If residents cannot purchase the inpatient and outpatient hospital services locally, they will go to another community. This is not to say that patients do not use hospitals in other communities anyway. They do. However, the economic impact of the local hospital is limited to the level of utilization. Hospitals also serve as a mechanism for recapturing dollars sent out of the community to pay for health insurance. These dollars include tax money spent to fund Medicare and Medicaid programs as well as private insurance company programs. If the hospital did not exist, these dollars would continue to be spent, yet they would never be returned to the community when beneficiaries use hospital services elsewhere.

A hospital has a special place in the economic landscape of a community. It is linked in a forward sense as an employer and purchaser of goods and services. In a small community, the hospital is also generally one of the largest employers and usually employs individuals with moderately to very high annual incomes. This report explains the nature and extent of these forward linkages and how hospital spending affects the surrounding community.

³ Baade, R.A. & Dye, R.F., “An Analysis of Economic Rationale for Public Subsidization of Sports Stadiums”, *The Annals of Regional Science*, Volume 22, Number 2, 1988, pp. 37-47.

Section One: Direct Economic Impact

1A. Wages

Hospitals have a direct economic effect on the economies they serve by making expenditures for goods and services. The most obvious expenditures are payments of wages to hospital employees. In Fiscal year 2011, Teton Valley Health Care paid a total of \$6,252,000 to its employees. However, this amount needs to be reduced in order to calculate TAKE-HOME PAY. Teton Valley Health Care employee taxes and deductions average 29.4%. This means that \$1,838,088 is subtracted from the total wages of \$6,252,000 leaving \$4,413,912 in employees' disposable income.

Because we are trying to determine the economic impact Teton Valley Health Care has on Teton County, Idaho, we must further reduce this amount by eliminating wages paid to Teton Valley Health Care employees who do not live in Teton County. Currently, 106 of the total 115 Teton Valley Health Care full-time equivalent employees are Teton County residents or 92.2%. To arrive at a rough estimate of wages paid to county residents, the total amount of employee disposable income (\$4,413,912) multiplied by the percentage of full-time equivalent hospital employees that reside in Teton County (92.2%) leaves \$4,069,627. \$4,069,627 represents the TAKE-HOME PAY paid by the hospital to its employees who are Teton County residents.

Studies indicate that a typical family spends its take-home pay in a fairly predictable manner⁴. The percent of money spent in 9 categories is listed in Table I. The take-home pay (\$4,069,627) can thus be distributed to estimate potential spending impact Teton Valley Health Care employees have on certain businesses in the community. The total amount represents the total potential spending amounts by hospital wage earners. Of course, we assume that many purchases of these items occur outside the area. A complete review of the personal spending habits of each and every hospital wage earner would be required to determine the specific amounts, which is beyond the scope of this study.

⁴ Consumer Expenditures – 2010. Accessed 11/24/11 at: <http://www.bls.gov/news.release/cesan.nr0.htm>

Direct Amount of Wages Paid by Teton Valley Health Care

Table I
(Average Derivation of Household Expenditures by Percentage)

Food	12.7%	percent of \$4,069,627 =	\$516,843
Housing	34.4%	percent of \$4,069,627 =	\$1,399,952
Transportation	16.0%	percent of \$4,069,627 =	\$651,140
Contributions	3.4%	percent of \$4,069,627 =	\$138,367
Apparel & Services	3.5%	percent of \$4,069,627 =	\$142,437
Healthcare	6.6%	percent of \$4,069,627 =	\$268,595
Entertainment	5.2%	percent of \$4,069,627 =	\$211,621
Insurance & Pensions	11.2%	percent of \$4,069,627 =	\$455,798
All Other	7.0%	percent of \$4,069,627 =	\$284,874
Total	100.0%		\$4,069,627

1B. Direct Purchases by Hospital

Rural hospitals also make purchases of some locally produced goods and services. The goods include items such as vehicle repair, utilities, insurance, postage, advertising, construction materials and services, drugs, food, and office supplies. Many local purchases often are also for medically related services provided by other local health related businesses. For example, the local pharmacists may have their own business, and the hospital may buy medicines from them or contract with them for consulting purposes. This is a direct expenditure to another local business, thus contributing to the local economy. This holds true for consulting or contractual fees paid to local physicians. FY 2011 expenditures by Teton Valley Health Care to other businesses in the area totaled \$710,000. The bulk of which fell into the following categories: maintenance supplies, fuel, food, snow removal, building rent, waste removal, catering, construction, tire/vehicle service, water, lawn care, snow removal, equipment rental, physical therapy professional fees, pharmaceuticals, welding, legal services, plumbing, and advertising.

Some goods and services the hospital needs are not manufactured or sold locally, and the hospital must spend money outside the community to make the purchases. These non-local purchases are referred to as “economic leakage”. These items usually include laboratory

equipment, diagnostic tools, medical supplies, and some professional services. For most rural hospitals (and many urban hospitals), these purchases can be considerable, causing a sizeable but unavoidable economic leakage from the community. In the case of Teton Valley Health Care in Teton County, the distribution of hospital dollars is displayed in Table II.

1C. Direct Purchases to Local Businesses

Table II
(Distribution of hospital dollars and leakage)

Teton Valley Health Care

Local Purchases	5.9 Cents
Wages & Salaries	51.8 Cents
Economic Leakage	42.3 Cents
Total Spending =	\$1.00 (One Dollar)

1D. Exports

In economic terms, exports are goods and services sold outside of the area under consideration. In the case of Teton Valley Health Care, exports would be defined as hospital or nursing home users who are NOT residents of Teton County. In a sense, the hospital is exporting services by bringing outside money into Teton County.

Approximately 15% of the inpatients at Teton Valley Health Care and 15% of the clinic patients reside outside of Teton County in FY 2011. The average charge per inpatient admission during that same period was \$11,384. Fifteen percent (15%) of 151 total inpatient admissions (23) multiplied by the average charge of \$11,384 equals \$261,832 which represents the estimated amount of money brought into the area by out of area inpatients. Fifteen percent (15%) of the total 16,036 clinic patients (2,470) multiplied by the average clinic charge of \$221 equals \$545,870 which represents the estimated amount of money brought into the area by out of area clinic patients. Total exports equal \$807,702.

To determine the total direct economic impact or effect Teton Valley Health Care has on Teton County add:

Direct Amount of Wages Paid	\$4,069,627
Direct Purchases from Local Businesses	\$ 710,000
Exports	\$ 807,702
TOTAL DIRECT EFFECT	\$5,587,329

Section Two: Induced or Indirect Economic Impact

By affecting the overall level of community activity, organizations such as hospitals have a variety of induced consumption effects on the local economies. When the hospital spends its' money in the community, this spending filters through the local economy, causing much more spending to occur beyond the hospital's initial expenditure. Such increases are known as the "multiplier effect".

The following is an example of the income multiplier effect or induced spending impact:

The hospital pays a pharmacist \$1.00 for a service. The pharmacist in turn uses part of that dollar to buy his groceries from the local grocer who, in turn, uses part of that dollar to pay his building rent to the local landlord who in turn uses the dollar to help buy additional properties in the community, and so on. However, this induced spending does not last forever. A portion of that dollar leaks out of the community during each spending cycle through savings or through purchases made outside the area.

This study estimates the economic multiplier effect for Teton County by using the Type II "value added" multiplier derived from the Regional Input/Output Modeling System⁵. The "value added" multiplier is the total value added per \$1 change in final demand and the Type II multipliers account for the direct and indirect impacts based on the supply of goods and services in the region, and for induced impacts, which are associated with the purchases made by employees. Additionally, these multipliers are developed for a variety of industries including hospitals and are available for each state. The Type II "value added" hospital multiplier for Idaho is 0.9750.

The induced or indirect economic impact is determined by multiplying the TOTAL DIRECT ECONOMIC IMPACT by the MULTIPLIER VALUE.

$$\mathbf{\$5,587,329 \times 0.9750 = \$5,447,646}$$

The total Direct and Induced Impact are added to determine the overall economic impact of Teton Valley Health Care on Teton County.

$$\mathbf{\$5,587,329 + \$5,447,646 = \$11,034,975}$$

⁵ RIMS II multipliers produced by the Regional Product Division of the Bureau of Economic Analysis on 12/3/2011. Analysis developed with these multipliers should be attributed to the study's authors, rather than the Bureau of Economic Analysis.

Conclusions

Teton Valley Health Care plays a vital role in the infrastructure of Teton County. Aside from serving an important portion of the community's health care needs, the hospital employs 153 people, representing 115 full-time equivalents. Based on this study, Teton Valley Health Care contributed \$11,034,975 back to the area in FY 2011.

Teton Valley Health Care received tax revenues totaling \$1,000,000 to help maintain operations. It should also be noted that \$373,000 was received in charitable donations in fiscal year 2011. As community residents, the question should be asked "How much should we tax ourselves or contribute to keep the hospital going? Is it worth that much?"

In economic terms, induced economic impact is the amount of money created by the existence of the hospital. If community taxes and charitable support of the hospital is higher than that amount, the community is paying for the "social value" of having a hospital. If the tax and charitable support is lower, the community is making an investment in the local economy that is paying back a much greater financial return. In the case of Teton Valley Health Care, the amount of levy tax support provided by the community is much lower than the amount contributed by the existence of the hospital (\$1,000,000 versus \$11,034,975).

Any dollar increase of hospital spending creates 57.7 cents in the community. Conversely, if the hospital reduces expenditures, the same amount is withdrawn from the community. A complete closure or even a severe reduction in hospital services could have a serious effect on the entire local economy.

Disclaimer

The analysis was conducted by adapting an accepted input-output modeling practice based on information provided by Teton Valley Health Care management. Operation of any business enterprise is subject to numerous variables beyond the scope of this analysis; thus, no guarantee that the estimated impacts will, in fact occur.