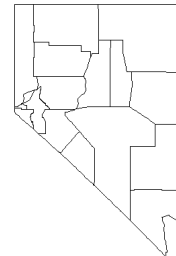


**The Importance of the Health Care Sector  
On the Economy of White Pine County, Nevada**



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## **The Importance of the Health Care Sector**

### **On the Economy of White Pine County, Nevada**

The delivery of health services in rural counties—including White Pine County—is changing rapidly, thus, having the potential to greatly impact the availability of health care services in the future. These changes, positive and negative, include:

- the movement to managed care that may cause (or require) patients to bypass local health care services;
- reductions in Medicare and Medicaid payments to hospitals and providers that may force a reduction in the provision of health care services;
- the creation of provider networks that may substantially change the delivery of and access to local health care services;
- the use of telemedicine that could increase access to primary, consultative and specialty health care services at the county level; and
- the development of critical access hospitals (new licensure care) that could help health care services remain in rural counties.

The health care sector also can have a large economic impact on the local economy. For all of these reasons, therefore, it is imperative that decision-makers in White Pine County become pro-active in maintaining and revitalizing their local health care services.

To help local decision-makers understand this connection and its importance, this report will discuss and demonstrate the relationship between the health sector and economic development in White Pine County.

Specifically, the report:

- discusses the role the health sector plays in rural development;
- presents information about the economic potential of the health sector for White Pine County;
- discusses important trends and changes that are occurring in the health sector; and
- measures the employment, income, retail sales, and sales tax impact of the health sector on the White Pine County economy.

### **Health Care Changes – What These Mean For White Pine County**

The huge changes occurring in the health care sector are having a substantial impact on rural communities. Many rural people find it more difficult to get health care coverage, insurance premiums are higher, and rural providers are reimbursed less than their urban counterparts for doing the same work. At the same time, changes in urban health systems also impact rural health care delivery, with the result that some rural communities are no longer in a position to make decisions about their local health care.

Rapid increases in health care costs have been the main driver behind these changes. For example, in 1970, the average amount spent annually on each person for health care (per capita) was \$350 and the typical family spent \$175 per year on health care. By 1997, however, the annual per individual (per capita) expenditure for health care had risen to nearly \$4,000, and the typical family spent nearly \$1,400 for health insurance premiums, deductibles and co-pays. Health care spending, which made-up seven percent of the gross domestic product (GDP) in 1970, almost doubled to 13.5 percent of the GDP in 1997. The major purchasers of health care services—employers and the federal government (through Medicare, Medicaid, and other programs)—have little choice but to try to slow this rapid growth in health care expenditures.

Typically, rural communities pay little attention to their health care system until they need it. As a result, many rural people have little idea of the non-medical importance

of the health care system to the local communities, such as its importance to the local economy, the number of jobs it currently provides, and its potential to provide more jobs. To ensure that health care services remain available locally, rural communities need to understand these non-medical ramifications. First, rural communities need to learn about their own local health needs and take stock or do an inventory of their local health care system. While the emphasis at the national level is on controlling costs and eliminating duplication and overcapacity in the system (delicensing unused hospital beds, for example), the issues are very different in rural communities.

One of the issues that underlie the differences between health care systems in rural and urban areas is demographics. In rural areas there are proportionately more elderly, more children living in poverty, unemployment is higher and incomes are lower. Rural people report poorer health and more have chronic health conditions. Rural people are more likely to be uninsured and have fewer health services available in the town where they live. Yet, they are more likely to derive part of their income from the health care industry (either directly or indirectly). Another issue that underlies the differences between urban and rural health care systems is the structure of the systems themselves. In general, there are fewer providers and hospitals in rural areas, and these and other providers operate fairly close to the margin. In fact, many rural hospitals operate at a loss, with too few patients to cover daily operating costs. Also, until recently, most health care had been locally operated and controlled. However, managed care has started to change this aspect of the rural system.

Many people believe that managed care has not penetrated rural communities because fewer rural people are enrolled in managed care plans. While this belief is mostly true, it can be misleading. Indeed, managed care is having a significant impact on rural communities. First, reimbursement levels by major payors have declined regardless of where care is delivered. Second, rural providers are directly affected as more and more urban health care systems reach out to rural areas. Whether the vehicle is commercial managed care plans or Medicaid managed care plans, both rural and urban providers are being pushed toward coordination and consolidation of health services. Various types of networks are being formed in rural areas, ranging from loosely formed confederacies of

providers to formal, incorporated entities that may assume risk and act as an insurance company; and many of these networks have urban partners.

The Balanced Budget Act of 1997 (BBA) also contained several provisions that could have positive and negative effects on rural communities. On the positive side, Congress included provisions that gradually increase Medicare reimbursement levels in an effort to attract managed care plans to rural areas and to make it easier for other rural managed care entities to form. The BBA also includes a children's health insurance program which could provide assistance to rural uninsured low-income children. On the down side, however, Congress allows states to implement the children's insurance program in selected geographic areas—a loophole states could use to exclude rural communities or delay implementation of the program in rural areas. Also on the negative side, and in an effort to further contain costs, Congress changed reimbursement policies for nursing homes and home health agencies which may ultimately harm rural patients, and rural nursing home and home health providers.

Pressures outside of the health care system also come into play in rural communities, thereby creating stresses not applicable to urban systems. A re-emergence of the farm crisis—driven primarily by low commodity prices—is undermining the financial viability of family farms and businesses tied to farming, such as farm implement manufacturers and dealers. Businesses located in rural areas tend to be small, often do not provide health insurance, and are highly vulnerable to changing economic conditions. Although these stresses can lead to mental and physical health problems, many people will not seek help for their health problems. Some will say they have little time to seek out health care services, especially if they are working two jobs to make ends meet; but for others, the strong sense of pride and self-reliance inherent among rural people may preclude many from seeking care, especially if they cannot afford it.

What is the ultimate impact of all these changes and stresses on rural communities? Will it be a net gain or net loss, or will it all balance out in the end?

On the positive side, urban-based specialists may set up periodic office hours in rural clinics, health centers and hospitals; an urgent care center may open; and air medivac helicopters and other emergency medical services may be strategically located in a rural

community. These services, while provided by urban health systems, are convenient for rural residents, and may not be available to rural communities otherwise.

On the negative side, ties with urban and financially strong health care providers can be detrimental to rural providers if the rural providers lose decision-making responsibility. Rural providers may also find themselves aligned with an organization that does not share their mission and values, or the rural provider may be unable to meet the expectations of the larger provider.

Anecdotal evidence suggests that the downsides can be significant and the potential for rural disaster great. Rural clinics and hospitals have been purchased by urban or other outside interests and then closed because they did not provide sufficient profit. Employers have signed contracts with insurance plans that push patients to the city for their health care, bypassing local, more convenient services; emergency medical service providers have changed their service areas or closed their doors. When urban health organizations encourage insured rural residents to spend their health care dollars in the city rather than “buy local,” the economic impact can be astounding. Worse yet, many rural communities are surprised to learn that neither the community nor local health providers have any control over what is happening. The net result is loss of control and loss of health dollars.

Rural communities need to overcome inertia and take stock of local health care. Rural providers should be challenged to organize into systems, whether through formal or informal mechanisms, so they can compete with urban systems and function as a united front to offset dominant urban interests. In general, regional strategies will probably work better than local ones. Providers must be willing to take risk and coordinate services.

Well-positioned rural health systems can meet these challenges head on. Fragmentation is a big problem in health systems, but rural systems, which are smaller and interdependent, have more opportunity to create linkages. The scarce resources available to rural health have yielded innovation and efficiencies simply to survive. Strong local leadership helps sustain these systems. Many rural health organizations are committed to fiscal accountability expressed as quality health care at low cost. It should not be too difficult to remind rural residents of the long-term commitment these rural providers have



made in the communities they serve. In time, rural providers need to offer health care services which best meet community need.

Success in meeting these challenges can be measured in terms of increased local services, more local spending on health care, local control of their own health resources, success in fending off larger urban systems, negotiation of good reimbursement rates and high levels of community satisfaction with local health care.

If rural health providers do not act, they will lose jobs, rural communities will lose health care services, and everybody will lose local control of their health care.

### **Health Services And Rural Development**

The nexus between health care services and rural development is often overlooked. At least three primary areas of commonality exist. A strong health care system can help attract and maintain business and industry growth, and attract and retain retirees. A strong health care system can also create jobs in the local area.

**Table 1. Services that Impact Rural Development**

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Type of Growth	Services Important to Attract Growth
Industrial and Business Retirees	Health and Education Health and Safety

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#### Business and Industry Growth

Studies have found that quality-of-life (QOL) factors are playing a dramatic role in business and industry location decisions. Among the most significant of those QOL variabilities are health care services, which is important for at least three reasons. First, as noted by a member of the Board of Directors of a community economic development corporation, good health and education services were imperative to industrial and business leaders as they select a community for location. Employees and participating management may offer strong resistance if they are asked to move into a community with substandard or inconveniently located health services.

Secondly, when a business or industry makes a location decision, it wants to ensure that the local labor force will be productive, and a key factor in productivity is good health. Thus, investments in health care services can be expected to yield dividends in the form of increased labor productivity.

The cost of health care services is the third factor that is considered by business and industry in development decisions. A 1990 site selection survey concluded that corporations are taking a serious look at health care costs. Sites that provide health care services at a low cost are sometimes given priority. In fact, 17 percent of the respondents indicated that their companies used health care costs as a tie-breaking factor between comparable sites (Lyne, 1990).

#### Health Services and Attracting Retirees

A strong and convenient health care system is important to retirees, a special group of residents whose spending and purchasing can be a significant source of income for the local economy. Many rural areas have environments (e.g., good climate and outdoor activities) that enable them to be in a good position to attract and retain retirees. The amount of spending embodied in this population, including the purchasing power associated with Social Security, Medicare, and other transfer payments, is substantial. Additionally, middle and upper income retirees often have substantial new worth. Although the data are limited, several studies suggest health services may be a critical variable that influences the location decision of retirees. For example, one study found that four items were the best predictors of retirement locations: safety, recreational facilities, dwelling units, and health care. Another study found that nearly 60 percent of potential retirees said health services were in the “must have” category when considering a retirement community. Only protective services were mentioned more often than health services as a “must have” service.

#### Health Services and Job Growth

A factor important to the success of rural economic development is job creation. Nationally, employment in health care services increased by 24 percent from 1990 to

1997, and by more than 200 percent since 1970 (Table 2). In rural areas, employment in health-related services often accounts for 10 to 15 percent of total employment. When adding in secondary benefits, such as expanded retail and service sales, the health sector can account for 15 to 20 percent of total employment. This is reflected in the fact that the hospital is often the second largest employer in a rural community.

It is also important to note that the health sector is a growing sector. Table 2 shows how health services, as a share of gross domestic product (GDP), have increased over time. In 1970, Americans spent \$73.2 billion on health care, which accounted for 7.1 percent of the GDP. In 1997, health care costs ballooned to over \$1.1 trillion, about 13.5 percent of the GDP. If current trends continue, it will not be long before Americans will be spending 20 percent of GDP on health care. Capturing this economic growth can only help a rural community.

**Table 2. National Health Expenditures and Employment Data, 1970-1997**

Year	Total Expenditures (Billions of Dollars)	Per Capita Expenditures (Dollars)	Expenditures as a Percent of GDP	Employment in Health Sector (Thousands of Jobs)
1970	73.2	341	7.1	3,053
1980	247.3	1,052	8.9	5,278
1990	699.5	2,691	12.2	7,814
1996	1,035.1	3,759	13.6	9,477
1997	1,100.0	3,925	13.5	9,710

### **Determining Your Community's Economic Potential for Health Care**

So, how can your community take advantage of the economic benefits of health care? Do you have a strong health care system that is well supported by the community, or are the health care dollars from your community “outmigrating” to the next largest community? Do you want to attract new businesses and residents to your area and expand your economic base? Active participation in the health care decision-making process in

your community by community citizens and leaders can make a huge difference and, hopefully, reap the rewards economically and health-wise for the entire community.

For 1997, the average annual per person expenditure on health care in the U.S. was \$3,923. The amount of this health spending retained by a rural community depends on several factors and may have a potentially large and immediate impact on the local economy, the number of jobs created, and the number of new residents moving into the community. The secondary impact of increased health care spending, such as higher retail sales in non-health areas or new housing starts, may also have a sizeable impact on the community.

### Determining the Potential

How can you determine if health care is important or should be important to your community's economy? The first step is to determine what types of health services are used in your community, and what the expenditures are for those services. Using White Pine County, Nevada as an example, Table 3 shows the 1997 per capita expenditures by major categories of health care. The second column estimates the percent of the health care services that could be provided locally. The third column estimates per capita medical expenditures for your community. Column four shows the potential economic impact of providing those services in the local community. (See Appendix A for a detailed description of how these numbers were derived.)

To achieve the total potential impact (figures shown in column four), multiply the per capita expenditures by the service area's population (White Pine County, Nevada the example used here, has a population of 10,641). By multiplying the hospital per capita expenditure of \$882 by the population of 10,641, the potential hospital expenditures for White Pine County are \$9,385,362. The same procedure is applied to the remaining categories. Therefore, the total potential health expenditures for White Pine County are \$27,932,625.

By comparing the potential impact with actual local data, your community can determine how much health care is provided locally, and if there is an opportunity to expand these offerings, thus bringing more health dollars into the local economy. For

example, the hospital will have an annual estimate of total billings. If this figure is below the potential, there may be room to expand hospital services and retain more dollars in your community. Another example is nursing homes, a service that can be provided completely within the service area. One simple way to determine if local needs are being met is to see if there is a waiting list at the existing facilities or if residents are using facilities outside the service area. If residents are going outside the service area, then there is a potential to expand locally.

These estimates provide a starting point (although a somewhat crude one to be sure) to measure the potential for health spending in rural communities. The most important caveat to remember in this process is that health spending involves the use of goods and services that may not be produced locally. While laboratory and radiology services may be provided locally, particularly if there is a large clinic or hospital in the community, other goods and services are imported and provided little economic wealth to the community. This can include supplies, equipment, drugs, and sub-specialist physicians.

**Table 3. Estimated Potential Health Care Expenditure For White Pine County, Nevada, 1997<sup>1</sup>**

Type of Health Care	1997 U.S. Per Capita	Potential Local Health Care Expenditures	Potential Local Per Capita	White Pine County Potential Local Expenditures
Hospital Care	\$1,445	61% <sup>2</sup>	\$882	9,385,362
Physician Care	808	75% <sup>3</sup>	606	6,448,446
Dental Services	180	75% <sup>3</sup>	135	1,436,535
Other Professional Services	211	75% <sup>3</sup>	158	1,681,278
Home Health	112	100% <sup>4</sup>	112	1,191,792
Drugs and Other Medical				
Non-deductibles	335	75% <sup>3</sup>	251	2,670,891
Vision Products	57	75% <sup>3</sup>	42	446,992
Nursing Home Care	308	100% <sup>5</sup>	308	3,277,428
Other Health Services	94	75% <sup>3</sup>	70	744,870
Net Cost of Insurance and Administration	250	0% <sup>6</sup>	0	0
Government Public Health Activities	123	50% <sup>7</sup>	61	649,101
<b>Total</b>	<b>3,923</b>	<b>70%</b>	<b>2,625</b>	<b>27,932,625</b>

<sup>1</sup> Footnotes are presented in Appendix A.

Very few rural communities have realized the full potential of local health care as an economic and community development tool. Rural communities have an extraordinary opportunity to shift the tide in their local economies and develop health care as a local business. The “warms you twice” adage of chopping wood can also be applied to health care. Every health care service provided locally benefits the rural community twice – first, it improves people’s health and second, it improves the health of the local economy.

What Do You Know About Your County?

To make informed decisions about the economic impact of health care on your community, it is imperative that you understand the “who, what, where, when, and how” about your community. The rest of the information in this report discusses county-specific information that will help your community determine its “health impact.”

## Demographics

Population information detailing race, age, education, and growth for White Pine County and Nevada are presented in Table 4. Between 1990 and 1997, Nevada’s population increased 44.0 percent. Over that same period, White Pine County experienced an increase of 13.1 percent. From 1980 to 1990 population in White Pine County increased by 13.4 percent. In 1997, Native Americans were the second largest ethnic group with 3.7 percent of total population while whites made up 94.0 percent of total White Pine County population. These estimates show slight deviation from the state’s numbers. Population by age estimates revealed that 28.5 percent of the population was age 19 and under, while 13.3 percent were age 65 years or older. Compared to the state’s estimates, White Pine County has an older population.

## Economic Indicators and Personal Income

Data presented in Table 5 give general observations of economic indicators for White Pine County and the state. The 1997 average per capita income was \$18,510 for the county compared to \$26,514 for state. An estimated 11.4 percent of White Pine County’s population had personal incomes below the poverty rate, which was higher than the state rate of 10.5 percent. A more detailed view of personal income is presented in Table 6. The data indicates that 61.8 percent of total personal income for White Pine County came from wages and salary with proprietors’ income and transfer payments contributing 6.8 and 18.7 percent, respectively.

## Employment

Estimated total employment for White Pine County was 3,630 in 1997, with an unemployment rate of 8 percent, which was higher than the state's rate of 4.1 percent (Table 5). The distribution of employment in White Pine County is provided in Figure 1. In 1997, government (24.17%) and trade (21.71%) were the leading employment sectors for White Pine County. Employment in the services excluding health sector is made up of workers at the Nevada Test Site and casino industry.

## Health and Health Sector Statistics

Important medical statistics are summarized in Tables 7 and 8. These statistics demonstrate the size of the health sector, characterize the health status of the community, and indicate the utilization of Medicare and Medicaid. Table 7 details the availability of selected medical providers. The rate of health service providers in the county was less than the state in most categories. Although the rate of EMT's was greater, the number of EMT's are based on residence address rather than work location and so it is not clear how many actually provide services to county residents.

Information concerning hospital admissions, and Medicare and Medicaid enrollment are detailed in Table 8. Critical health statistics such as TAN-F recipients, infant mortality rates, births to teens and child abuse are also contained in Table 8. In 1997 White Pine County had an infant mortality rate of 0. There were 18 births to teen mothers ages 15 to 17 over a three-year period in White Pine County.

## Health Sector Impact

Table 9 reports the impact of the health sector on White Pine County. The most current data available shows that the county's health sector provides 294 jobs. Specifically, hospitals employ 93 people, while the offices of doctors, dentists, and other professionals employ 90 people. Nursing and protective care employ 69 people while other medical and health services provide 16 jobs. Pharmacies in White Pine County provide 26 jobs. Total payroll for these 294 positions is \$9,624,284.



The employment and income levels in the health sector have a significant impact on employment and income throughout other industries in White Pine County, as is demonstrated when using the IMPLAN Type III Multiplier. For example, the employment multiplier for the hospital sector in White Pine County is 1.54. This indicates that for each job created in the hospital sector, another .54 jobs are created in other businesses and industries in White Pine County. The direct impact of the 93 employees of hospitals in White Pine County results in an indirect and induced impact of 50 additional jobs ( $93 \times 0.54 = 50$ ) throughout all businesses and industries in the county. Thus, the hospital sector employment in White Pine County has a total impact on county employment at a level of 143 jobs ( $93 \times 1.54 = 143$ ).

Likewise, the total impact of the \$2,777,713 payroll to hospital employees can be estimated. The income multiplier for the hospital industry in White Pine County is 1.40. This multiplier indicates that for each dollar's worth of income generated in the hospital sector, another \$.40 is generated in other businesses and industries in White Pine County. This means that the estimated total impact on income throughout all businesses and industries in the county is \$3,888,798. ( $\$2,777,713 \times 1.40 = \$3,888,798$ )

Following the same procedures, the total impacts that employment and income levels of the other health sector categories have on income and employment levels throughout the county's economy can be estimated. The total impact of the 294 employees of White Pine County's health sector is an estimated 462 jobs to the county's economy. The health sector income of \$9,624,284 results in a total county income impact of \$13,339,991.

County data indicates that 26.4 percent of personal income is spent in retail stores that collect sales tax. Thus, \$3,521,758 ( $\$13,339,991 \times 26.4\% = \$3,521,758$ ) of retail sales are generated from the health sector. A one-cent sales tax generates \$35,217.58 for the county.

**Table 4. Selected Demographic Data for White Pine County and for the State of Nevada**

	County Number	County Percent	State Percent
Population Growth, 1990-1997	1,230	13.1%	44.1%
Average Annual Growth, 1990-1997	176	1.8%	5.4%
Population by Race, 1997			
White	10,001	94.0%	87.6%
Black	210	2.0%	7.4%
Native American	391	3.7%	1.8%
Asian	39	0.4%	3.3%
Hispanic <sup>a</sup>	1,066	10.0%	12.7%
Population by Age, 1997			
0-4	617	5.8%	7.8%
5-9	763	7.2%	7.7%
10-14	831	7.8%	6.9%
15-19	824	7.7%	6.3%
20-24	705	6.6%	5.6%
25-34	1,329	12.5%	14.5%
35-44	1,771	16.6%	16.9%
45-54	1,366	12.8%	13.4%
55-64	1,023	9.6%	9.0%
65-74	804	7.6%	7.2%
75-84	470	4.4%	3.9%
85 and older	138	1.3%	0.9%
TOTAL	10,641	100.0%	100.0%
Population by Gender 1997 <sup>b</sup>			
Female	4,868	45.8%	49.4%
Male	5,772	54.2%	50.6%
Total	10,640	100.0%	100.0%
Level of Education			
High School Diploma or Higher, ('90)	4,366	73.1%	78.8%
Bachelor's Degree of Higher ('90)	681	11.5%	15.3%

Source of Population Data: Nevada State Demographer's Office, 1998

Source of Level of Education Data: U.S. Bureau of Census, 1990.

<sup>a</sup> Hispanics are an ethnic group, not a race and are included in the races above.

<sup>b</sup> Persons 25 years and older

**Table 5. Economic Indicators for White Pine County, and the State of Nevada and the United States, 1997.**

	<b>White Pine County</b>	<b>Nevada</b>	<b>United States</b>
Total Personal Income, 1997 <sup>1</sup> (in thousands of dollars)	188,894	44,509,568	6,770,650,000
Per Capita Income (dollars)	18,510	26,514	25,288
Employment (1997)	3,630	847,000	129,558,000
Unemployment (1997)	310	36,200	6,739,000
Unemployment Rate (1997)	8.0%	4.1%	4.9%
Poverty Rate (% persons living below poverty level, 1995)	11.4%	10.5%	13.8%
Transfer Dollars (1997)	35,383	6,129,949	1,110,344,000
Transfer Dollars as a Percentage of Total Personal Income (1997)	18.7%	13.8%	16.4%

<sup>1</sup> Definitions are in Appendix B, Glossary of Terms

Source: Bureau of Economic Analysis, Regional Economic Information System, Table CA05.1 and Table CA 35.

U.S. Department of Commerce, Bureau of the Census, "Statistical Abstract of the United States, 1997."

U.S. Department of Commerce, Bureau of the Census, "1990 Census of Population and Housing."

**Table 6. Personal Income<sup>1</sup> Data for White Pine County, the State of Nevada and the Nation, 1997**

<b>Source</b>	<b>County Total Dollars (\$1,000)</b>	<b>Percent of County Total</b>	<b>State Percent of Total</b>	<b>Nation Percent of Total</b>
Wages and Salary	116,812	61.8%	61.3%	57.4%
Other Labor Income	12,494	6.6%	5.1%	5.8%
Proprietor's Income <sup>1</sup>	12,765	6.8%	8.2%	8.1%
Dividends, Interest and Rents	24,118	12.8%	17.5%	17.2%
<b>Transfer Payments:</b>	<b>35,383</b>	<b>18.7%</b>	<b>13.8%</b>	<b>16.4%</b>
Retirement and Disability Payments	19,366	10.3%	7.8%	7.8%
Medical Payments	9,611	5.1%	3.8%	5.6%
Other Transfer Payments	6,406	3.4%	2.1%	2.9%
Contribution to <sup>2</sup> Social Security	-7,549	-4.0%	-4.5%	-4.8%
Net Residence <sup>3</sup> Adjustment	-5,129	-2.7%	-1.5%	-0.1%
<b>Total Personal Income</b>	<b>188,894</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

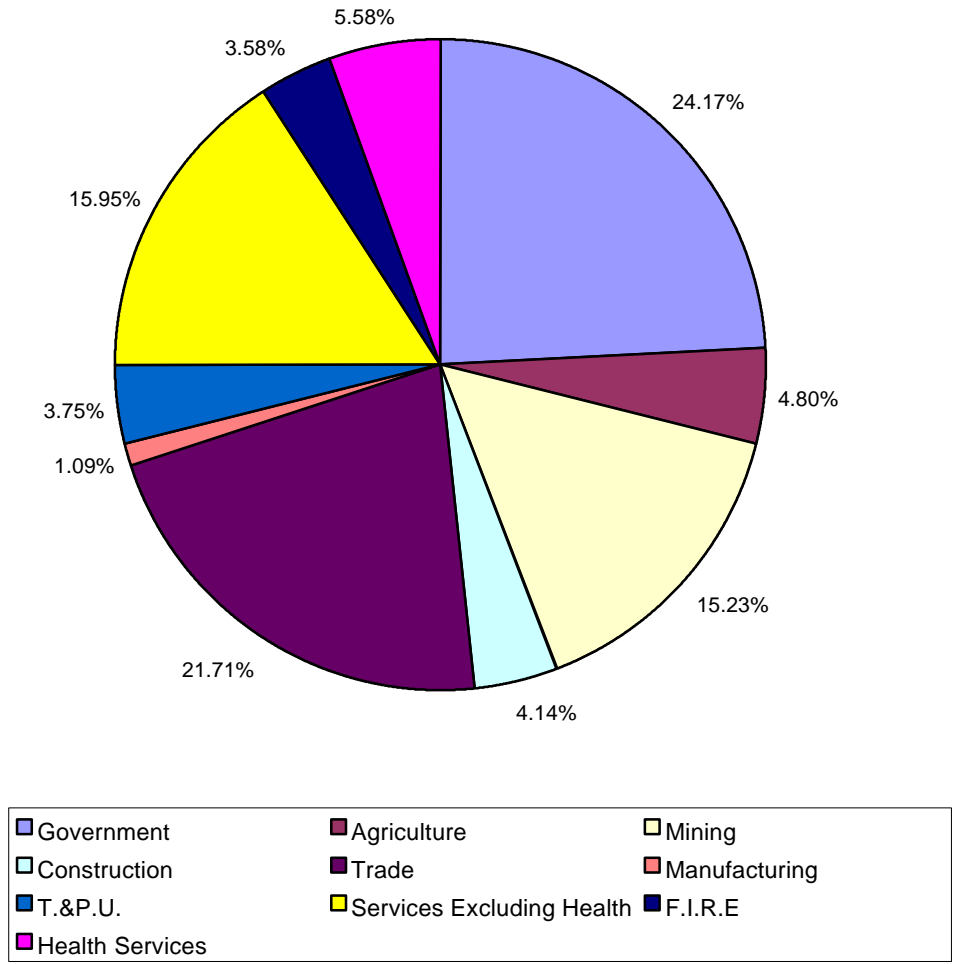
<sup>1</sup> Definitions are in Appendix B, Glossary of Terms.

<sup>2</sup> Adjustment to total personal income to subtract contributions to social security.

<sup>3</sup> This adjusts place of work income to place of residence income.

Source: U.S. Bureau of Economic Analysis

**Figure 1. Employment by Sector in White Pine County, 1997.**



**Table 7. Availability of Selected Medical Providers in White Pine County, Nevada**

Provider	County Number	County Rate/1000*
Licensed Hospital Beds (‘97)	40	4.45
Staffed Hospital Beds (‘97)		
Nursing Home Beds (97)	99	11.01
Health Service Providers (‘97):		
M.D.’s	9	1
D.O.’s	0	0
Primary Care Physicians <sup>1</sup>	8	0.89
Physician Assistant	1	0.11
Dentists	4	0.44
Nurse Practitioners	2	0.22
EMT’s	159	17.49
Nurses	44	4.89
Physical Therapists	2	0.22
Pharmacists	6	0.67

<sup>1</sup> Definitions are in Appendix B, glossary of Terms

\* Rate/1,000 based on 1997 population estimates provided by the U.S. Census Bureau.

\*\* State rates unavailable due to under reporting.

Source: Appendix C.

**Table 8. Health Status and Health Indicator for White Pine County, Nevada**

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Status or Indicator	County Number	County Percent/Rate
Hospital Admissions/Occupancy Rate	544	10.49
Medicare Enrollment ('97) <sup>1</sup> :		
Aged (65 and over)	1,149	0.11
Disabled (Under 65)	153	0.014
Medicaid Enrollment ('97) <sup>1</sup>	633	0.07
Medicare Admissions ('97)	213	39.15
Medicaid Admissions ('97)	100	18.38
TANF Recipients (97) <sup>2</sup>	33.85	1.4
Infant Mortality (1997) <sup>3</sup>	0	0
Births to Teens (1993-1995) <sup>4</sup>	18	3.7
Child Abuse Cases Confirmed (1996) <sup>5</sup>	41	16.9
<hr/> <b>Uninsured Children (1995)</b> <hr/>		

<sup>1</sup> Definitions are in Appendix B, Glossary of Terms

<sup>2</sup> Average monthly number of children under the age of 18; Rates displayed as percent of total children based on 1994 census estimated population.

<sup>3</sup> Number represents total resident live births and deaths for 5-year period; Rates displayed as average annual rate per 1,000 live births.

<sup>4</sup> Number represents total resident live births to mothers age 15 – 17 for 3-year period; Ratio displayed as births per 1,000 females.

<sup>5</sup> Rates displayed as confirmations per 1,000 children under age 18.

Source: Appendix C.

**Table 9. White Pine County Health Sector Impact on Employment and Income, 1997**

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Health Sectors	Employment	Employment Multiplier	Total Employment Impact	Income	Income Multiplier	Total Income Impact
Hospitals	93	1.54	143	\$2,77,713	1.40	\$3,888,798
Physicians, Dentists and Other Professionals	90	1.72	155	\$4,478,243	1.32	\$5,911,281
Nursing and Protective Care	69	1.48	102	\$1,588,432	1.46	\$2,319,110
Other Medical and Health Services	16	1.56	25	\$3563,529	1.56	\$567,105
Pharmacies	26	1.41	37	\$416,367	1.57	\$653,696
Total	294		462	\$9,624,284		\$13,339,991

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Source: 1997 IMPLAN Data Base, State of Nevada Department of Employment, Training and Rehabilitation, "ES-202 Employment and Income Data," Research Analysis Division, Carson City, Nevada, 1997.



## Next Steps

By documenting the importance of health care in attracting business and industry and retirees, and for creating jobs and generating incomes, this report demonstrates the need for a strong health sector in White Pine County. And, as the county's health care sector continues to change, local decision-makers may find it necessary to seek assistance as they work to evaluate, maintain, or expand the health sector. To this end, a resource team consisting of representatives from the Nevada State Department of Health, the Nevada Office of Rural Health, the Area Health Education Center (AHEC) in the community's area, the Nevada Cooperative Extension Service and the University of Nevada Student Health Center is available to provide education and technical assistance. Two primary types of assistance that may be most beneficial to the communities, both vital to maintaining a viable health sector, are strategic health planning and feasibility studies.

### Strategic Health Planning

Strategic health planning is a process that helps local communities identify their health care needs; examine the social, economic, and political realities affecting the local delivery of health care; determine what is wanted and what realistically can be achieved to meet their identified health care needs; and develop and mobilize an action plan based on their analysis and planning. Strategic health planning involves cooperation among people and organizations to pursue common goals. The process is designed to answer three questions:

- (1) Where is the community now?
- (2) Where does the community want to go?
- (3) How will the community get there?

For the strategic health planning process to be most effective, it must be based in the community and driven by the community. Local residents and their leaders must

participate—a current knowledge of the health care industry is not necessary. This process is about local people solving local problems. The local hospital and health care providers should have input into the decision-making and should support and “trust” the outcomes, but not be the main force behind the process. The community must provide the energy and commitment.

The strategic health planning process begins with a group of citizens of a community becoming interested in reviewing and analyzing their health care system, when community leaders can be mobilized to take action, and when a resource team or facilitating group can be identified to assist the community to carry out the process. The resource team (described above) will provide technical assistance that includes the development, presentation and analysis of data and information, surveys, and health services and facilities. It also includes analytical skills, facilitation skills, and strategic planning skills. Using a resource team can be extremely beneficial to the community as the team is trained in the community development process, has health sector expertise, and can bring in other agencies that may be able to provide special technical assistance and other resources.

Counties and communities in Nevada could be involved in the strategic planning process, which takes about nine months and is fairly labor intensive. The outcome can be worth the efforts—the entire community gets involved in the process and positive changes are occurring.

### Feasibility Studies

The strategic health planning process often identifies the need to provide a new health-related service. For example, the community might determine they need adult daycare services or an assisted living facility. Whatever the identified need, all relevant information must be gathered and analyzed before action is initiated. Again, the resource team can be extremely helpful in completing the feasibility study, which includes estimating the need for the service, projecting capital and operating costs, and estimating profit or loss.

## **Conclusion**

If the local citizens and decision-makers are interested in strengthening their local health care system, they are encouraged to contact a member of their state resource team. The team members will help get the community started on strategic health planning and/or a feasibility study. The resource team members can also provide other information such as other programs available to the local community and other agencies that may be of assistance to the community.

## Selected References

- Chirilos, Thomas N. and Gilbert Nostel (1985). "Further Evidence on the Economic Effects of Poor Health." *Review of Economics and Statistics*. 67(1), 61-69.
- Doeksen, Gerald A., Tom Johnson, Diane Biard-Holmes and Val Schott (1988). "A Healthy Health Sector is Crucial for Community Economic Development." *Journal of Rural Health*. Vol. 14, No. 1, pp. 66-72.
- Lyne, Jack (1988). "Quality-of-Life Factors Dominate Many Facility Location Decision." *Site Selection Handbook*. (33) 868-870.
- Lyne, Jack (1990). "Health Care and Education: Important QOL Factors, But Who's Accurately Measuring Them?" *Site Selection Handbook*. 35(5), 832-838.
- McGuire T. (1986). "On the Relationship Between Infrastructure and Economic Development." Stony Brook: State University of New York.
- Reginer, V. and L.E. Gelwicks (1981). "Preferred Supportive Services for Middle to Higher Income Retirement Housing." *The Gerontologist*. 21(1), 54-58.
- Scott, Loren C., Lewis H. Smith, and Brian Rungeling (1997). "Labor Force Participation in Southern Rural Labor Markets." *American Journal of Agricultural Economics*. 59(2), 266-274.
- Toseland, R., and J. Rasch (1978). "Factors Contributing to Older Persons' Satisfaction with Their Communities." *The Gerontologist*. 18(4), 395-402.

## **Appendix A**

### **Footnotes for Table 3**

## Appendix A

### Footnotes for Table 3

1. See Table 2. The per capita expenditure for health care is developed annually by the Health Care Financing Administration. Excepting for private insurance expenditure data (which is collected by HCFA through a survey), the data are secondary sources which are tabulated for other purposes. National health expenditures reported here include spending by type of expenditure (i.e., hospital care, physician care, dental care, and other professional care; home health; drugs and other medical non-durables; vision products and other medical durables; nursing home care and other personal health expenditures; plus non-personal expenditures for such items as public health, research, construction of medical facilities and administration); and by source of funding (e.g. private health insurance, out-of-pocket payments, and a range of public programs including Medicare, Medicaid and those operated by the Department of Veteran Affairs.)
2. This estimate is extrapolation from Kentucky experience. Kentucky's Medicaid program offers a wider range of services than required by Medicaid. To restrain Medicaid cost increases, Kentucky established a primary care gatekeeper program several years ago. This program is thought to have an impact with respect to appropriate utilization of care, but is not felt to be fully effective. Kentucky Medicaid eligibles may use health care more appropriately than individuals insured through commercial insurance plans. A 1996 study compared local to non-local use by 300,500 Medicaid eligibles who reside in 49 rural counties in Southeast Kentucky. The aggregate of the 49 counties retained 61% of all hospital *expenditures*. Measuring by expenditure is important, particularly in hospital care, because tertiary care is far more expensive. This percent was applied to Table 3. Other examples of hospital expenditure retention include a large (50,000) rural county in the western part of Kentucky with two large hospitals. These hospitals reported an aggregate retention of 96% of all inpatient admissions (expenditure data were not available). A small, 71-bed hospital in a county with 17,000 people retained 64% of all admissions. A very large 288 bed hospital in a county of 30,000 retained 77% of all admissions. This county has as a large sub-specialty complement of physicians.
3. The federal Bureau of Primary health Care (BPHC) required that applicants for Community/Migrant Health Centers (C/MHC) grants (330 clinics) develop a needs assessment to justify staffing of the clinic with physicians, mid-levels, dentists, optometrists, pharmacists, and other providers. To help support the needs assessment and assure consistency in needs assessment assumptions, BPHC provided a formula, based on age and gender of the service area population which derived the total number of all ambulatory care visits. The formula estimates that 75% of all ambulatory care visits would be to primary care physicians. Note that these estimates use visits as the denominator. The problem with applying use rates in Table 2 to estimate expenditure retention is that a visit to a sub-specialist costs more than a visit to the primary care provider. However, the difference in expenditure is not as great as comparing a

hospital stay for a simple appendectomy with a hospital stay for open-heart surgery. The BPHC rate was applied here.

4. Home health care is low technology care and can easily be offered by rural-based providers.
5. Nursing home care is low technology care, yet very expensive. In Kentucky, the average annual cost per patient excluding physician services and drugs is \$35,000 per patient year. Nursing home costs may vary significantly by state. Nursing home care can easily be provided in any rural community.
6. Most insurance companies are located in urban areas. This figure also includes administrative costs of federally financed health programs.
7. This includes the National Health Service Corps, Indian Health Service (IHS), Graduate Medical Education funds, federal dollars which flow to local health departments, grant programs to communities, etc. The 50% potential expenditure retention is an estimate of the total U.S. value of these programs. This estimate could vary significantly in rural western and southwestern U.S. counties where there are large American Indian populations.
8. Potential expenditure retention is an estimate of the total U.S. value of these programs which may be absorbed in rural communities. This estimate could vary significantly in rural western and southwestern states where there are fairly large rural American Indian populations.

**Appendix B**  
**Glossary of Terms**



## Appendix B—Glossary of Terms

The Rural Health Works team recommended that a glossary be included at the end of the county report. The list below is an unformatted draft. The team should review this list and add or delete works as needed. Unless otherwise notes, definitions were adapted from the National Rural Health Association monograph “Rural Health Dictionary of Terms, Acronyms and Organizations 1997. Kansas City, Missouri

**Balanced Budget Act (BBA):** signed in 1997 by President Clinton, this omnibus legislative package was primarily intended to balance the federal budget by 2002. This legislation contains major Medicare and Medicaid reforms, and a number of key rural health provisions. (RUPRI P98-4, August 25, 1998, p.ii)

**Co-pay:** a form of cost sharing in which a fixed amount of money is paid by the insured to a provider practitioner or facility for each health care service provided.

**Critical access hospital (CAH):** a program incorporated in provisions of the BBA which provides options for rural hospital restructuring toward service delivery which more appropriately meets health care needs.

**Deductible:** the amount that an insured must pay before an insurer will assume any liability for all or part of the remaining cost of covered services.

**Gross domestic product (GDP):** the total output of goods and services produced by labor and property located in the United States (Statistical Abstracts of the United States, 1994, U.S. Department of Commerce, p. 441).

**Income multipliers:** the estimated rate of impact each dollars worth of income generated in the health care sector has on business and industries in the community (adapted from page 17 of sample county report).

**Indirect impact:** county jobs and income created in other sectors due to health business spending money locally.

**Induced impact:** county jobs and income created in other sectors due to health employees spending money locally.

**Managed care:** a system of health care delivery that tries to manage the cost of health care, its quality and access.

**Medicaid:** state administered program, funded by state and federal governments, which provides medical assistance to persons meeting local income and other eligibility criteria.

**Medicare:** Federal national insurance program which covers certain health services for persons over age 65 and other selected eligible persons.

Medicare + Choice: a new program where Medicare beneficiaries will have a choice of selecting to obtain Medicare benefits through a variety of health plan options rather than be limited to “traditional” Medicare (consolidated definition)

Personal income: income received by individuals from all sources.

Poverty rate: percent of individuals who live at or below the federal poverty level. In 1998, the federal poverty level of a family of four was \$16,450.

Primary care physicians: generally refers to family physicians, general practitioners, obstetricians and gynecologists, and general internists. Primary care physicians provide the first level of comprehensive health care.

Prospective payment: any method of paying hospitals or other health programs in which amounts or rates of payment are established in advance for a defined period.

Provider network: formal affiliations of providers, organized and operated to provide an integrated network of health care providers with which third parties, such as insurance companies, HMOs and others, may contract for health care services to covered individuals.

TAN-F (Transitional Assistance for Needy Families): the name given to the new welfare reform program designed to reduce the number of families and individuals on assistance. This program replaces Aid for Families with Dependent Children (AFDC). (consolidated definition)

Telemedicine: the use of telecommunications to facilitate medical diagnosis, patient care and/or distance learning.

Transfer dollars: dollars flowing to individuals in the community as income or income subsidy from state or federal sources, such as government payments for health care (Medicare and Medicaid), supplemental security income (SSI), social security and other retirement income, and TAN-F.

Type III employment multiplier: indicates total jobs created in the county due to one job in the health sector.

Type III income multiplier: indicates total income generated in the county due to one dollar worth of income in the health sector.

## **APPENDIX C:**

### **Sources for Nevada Medical Data**

### Sources for Nevada Medical Data

<b>Status or Indicator</b>	<b>Information Received From</b>	<b>Date Published</b>
Hospital Admissions Occupancy Rate	State of Nevada Dept of Human Resource, Division of Health Care Financing & Policy	Calendar Year 1997 and Year End 12/31/98
Medicare Enrollment	State of Nevada Dept. of Human Resource, Division of Health Care Financing & Policy	Calendar Year 1997 and Year End 12/31/98
Medicaid Enrollment	State of Nevada Dept. of Human Resource, Division of Health Care Financing & Policy	Calendar Year 1997 and Year End 12/31/98
Medicare Admission	State of Nevada Dept. of Human Resource, Division of Health Care Financing & Policy	Calendar Year 1997 and Year End 12/31/98
Medicaid Admission	State of Nevada Dept. of Human Resource, Division of Health Care Financing & Policy	Calendar Year 1997 and Year End 12/31/98
Infant Mortality	State of Nevada Dept. of Human Resource, Division of Health Care Financing & Policy	1995 - 1997 Table
Children Living in Poverty	<a href="http://www.state.nv.us/health/primary/profile">http://www.state.nv.us/health/primary/profile</a>	
Teen Births	State of Nevada Dept. of Human Resource, Division of Health Care Financing & Policy	Nevada Vital Statistics 1996, 1997
Mortality Age Adjusted	<a href="http://www.state.nv.us/health/primary/profile">http://www.state.nv.us/health/primary/profile</a>	
Licensed Hospital Beds	State of Nevada Dept. of Human Resource, Division of Health Care Financing & Policy	Nevada Health Catalog 1997
Nursing Home Beds	State of Nevada Dept. of Human Resource, Division of Health Care Financing & Policy	Nevada Health Catalog 1997
M.D.'s	Nevada State Board of Medical Examiner's Listing, Northeastern NV AHEC, Julie	Medical Examiner's Listing, 1998
D.O.'s	Nevada State Board of Medical Examiner's Listing, Northeastern NV AHEC, Julie	Medical Examiner's Listing, 1998
Primary Care	Nevada State Board of Medical Examiner's Listing	August 1998 BME Listing

<b>Status or Indicator</b>	<b>Information Received From</b>	<b>Date Published</b>
Physician Assistants	Nevada State Board of Medical Examiner's Licensee Listing	Medical Examiner's Listing, 1998
Dentists	Nevada State Board of Dental Examiner's Listing	Dental Examiner's Listing, 1998
Nurse Practitioners	Nevada State Board of Medical Examiner's Listing, Northeastern NV AHEC, Julie	Medical Examiner's Listing, 1998
EMT's	Medical Examiner's Listing, 1998	Emergency Medical Services List, 1998
Nurses	Nevada State Board of Nursing Licensure/Certification and Education	Nevada State Board of Nursing List, 1998
Physical Therapists	Nevada State Board of Physical Therapists Examiner's Listing, Northeastern NV AHEC, Julie	Medical Examiner's Listing, 1998
Pharmacists	Nevada State Board of Pharmacy	Nevada State Board of Pharmacy List, 1998

**DRAFT**

**SUPPLEMENT TO THE MEDIA PACKET**

**PURPOSE: PROVIDE COMMUNITY SPECIFIC INFORMATION FROM THE COUNTY REPORT FOR BROAD DISTRIBUTION IN A VARIETY OF FORMATS**

**ISSUES FOR GROUP DISCUSSION:**

1. Do we want to develop a template along these lines?
2. Assuming we include just a few facts from the county report, what are most important?
3. What's our message? The draft below focuses on jobs, the multiplier effect of health care, and the strategies for the community.
4. Who's the audience? The draft assumes "man/woman on the street".
5. What format(s)? – flyers, posters, insert in local newspapers

## **HEALTH CARE**

### **WHAT DOES IT DO FOR WHITE PINE COUNTY?**

**Health care** is more than clinics, the hospital and doctors.

#### **White Pine County health care is:**

294 health care jobs

\$9.6 million in worker salaries

These health jobs fuel our local economy

462 total jobs

\$13.3 million in total income impacts

\$3.5 million in retail sales

### **WHY DOES THIS MATTER TO YOU?**

Many residents get their health care outside our county.

Every health dollar spent in another county takes money away from local businesses

White Pine County could lose \$13.3 million in total income.

White Pine County could GAIN more health dollars.

### **WHAT CAN YOU DO?**

Use Local Clinics and Hospitals

Get Involved in Health Care

If You Own a Business and Provide Health Insurance, Make Sure Your Workers Can Use Local Health Care

### **WANT TO LEARN MORE?**

Contact:

Gerald Ackerman  
775/388-3828

Caroline Ford  
775/784-4841

Thomas Harris  
775/784-6499