



An Overview of Nursing Homes and the Economic Impact of Rural Nursing Homes

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Key Findings

- The Centers for Medicaid and Medicare Services are projecting national total health expenditures and national nursing home expenditures to increase over 75 percent from 2012 to 2022. The aging of the population and increased life expectancies are reflected in these increases and are contributing to the future demand for nursing homes.
- In addition to their medical contributions, nursing homes contribute economically to the local community and surrounding area.
- Given three rural nursing home scenarios, a rural nursing home may have employment impact from 65 to 137 employees, with wages, salaries and benefits (labor income) impact from \$3.0 million to \$6.7 million.
- Tools are now available that enable community leaders to estimate the economic impact of a rural nursing home on their local economy.

Background

Nursing homes are typically one of the large employers in rural communities, particularly in rural communities without a local hospital. Nursing homes supply jobs and labor income to their rural economies. With increasing life expectancies and increasing elderly population (from the aging of the

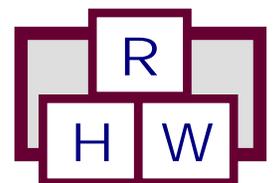
Baby Boomers), demand for nursing homes may increase in the future. This increased demand will drive growth in the nursing home industry, which will, in turn, stimulate additional economic activity. Nursing homes must thrive economically to provide high quality care to residents and good jobs to local workers.

Nursing homes can be stand-alone facilities, part of the local hospital, or a continuum of care facility that includes a variety of long-term care services, such as independent living facilities, adult day care facilities, assisted living facilities, and nursing home facilities. Continuum of care facilities may even include a specialty care nursing home division for the memory-impaired.

Nursing homes may be Medicaid certified, Medicare certified, certified by both, or not certified by either. The majority of nursing homes are reliant on Medicaid and Medicare reimbursement and any changes in Medicaid or Medicare funding may impact the survival of rural nursing homes. Medicare certification provides nursing homes the ability to provide medical, rehabilitative, and therapeutic care to patients following a hospitalization. These nursing homes are certified as skilled nursing facilities (SNF) to provide a level of care that requires the daily involvement of skilled nursing or rehabilitation staff that cannot be provided on an outpatient basis.^{2,3}

Nursing homes are highly regulated by the federal government and state governments. They are

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inspected on a regular basis by state regulatory agencies and are rated based on nurse staffing levels and number of deficiencies. Nursing staff levels are important to the quality of care in nursing homes.

Nursing homes not only provide an essential service for an extremely vulnerable population, but employ a substantial segment of the health care workforce. Rural communities are concerned with the financial viability of their local nursing homes.

Objective

The objective of this study is to provide an overview of nursing homes and to illustrate the economic impact of rural nursing homes on local economies. Three rural nursing home scenarios have been developed with economic impacts measured utilizing a widely recognized input-output analysis model and data from IMPLAN Group, LLC.²⁰ Tools are provided for rural communities to develop the economic impact of their local nursing home. An economic impact study may become very important in illustrating the contributions of a rural nursing home to the local economy.

Nursing Home Literature Review

Nursing homes are part of long-term care.^{26,15} Several studies provided economic impacts of nursing homes/long-term care at the state and national levels.^{4,5,24,34} Only one study provided the impact of an individual nursing home; however, the impact was shown on the state economy but not on the local economy.³⁴ Nursing homes employ a large number of local residents.^{24,34}

Winters (2009)³⁴ measured the economic impact study of all Wisconsin nursing homes on the state economy, illustrating the importance of nursing homes and showing the future need for nursing homes as the age 65+ population is projected to increase. Winters' study also emphasized that the local nursing home may be the most stable employer in the community, supplying jobs,

incomes, and sustainability to other local area businesses.

The economic impact of all Pennsylvania nursing homes on the state economy was prepared by The Lewin Group in 2005.²⁴ The Pennsylvania Health Care Association requested this study due to concern over the future financial viability of nursing homes in Pennsylvania, due to an aging population and an increase in life expectancy. The study states that nursing facilities are predominant employers and important economic entities in many rural communities and that nursing home closures in rural areas could potentially have a devastating effect on the local economy and the residents of the nursing homes.

Several articles discussed future need and future funding for nursing home care.^{4,15,29} Frank (2012)¹⁵ documents the future need for nursing homes from U.S. population projections illustrating aging at an increasing rate. Frank stated that this is significant because the likelihood of experiencing a disability increases sharply with age. An article by Care Context (2011)⁴ provides the economic impact of all nursing homes in the U.S. on the national economy and includes the economic impact of all nursing homes in each state on each state's economy. Care Context states that nursing home employment is increasing faster than total health care employment due to longer life expectancies and a growing elderly population with increasingly complex care needs. Further, Care Context concludes that Medicaid and Medicare will continue to have funding reductions that will have a significant local impact on seniors' care and jobs throughout America in the future. Tripp Umbach Research, Strategy, and Impact (2012)²⁹ projects Medicare cuts through 2021 that will result in significant reductions in health care employment and, in particular, reductions in nursing home employment, from reduced benefits to Medicare beneficiaries.

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Nursing homes are highly regulated by the federal government and state governments.^{16,30} Harrington (2010)¹⁶ provided a listing of states with state standards and their estimated variance from federal standards. The University of Montana, School of Public Health, Health Policy Management, webpage on long term care,³⁰ provides a summary of the state nurse staffing regulations for nursing homes as compared to the federal nurse staffing requirements; these are provided in **Appendix B**. The variations in state regulations for nursing homes are extreme; some variations in nurse staffing requirements are briefly described here. Thirteen states have no numerical ratios for nurse staffing, although some of these states require more licensed and/or RN presence than is required by federal regulation. The remaining states have established a required ratio of nursing staff to residents. In these states, the proportion of nursing time that must be fulfilled by licensed staff is almost always specified and some states further differentiate between RN and other licensed nursing staff. Typically, the state regulation also specifies which licensed nursing personnel cannot count towards the ratio. Some states simply specify the total nurse staff ratio; i.e., 2.0 hours per resident. Several states require different ratios for different levels of care. At least nine states specify or suggest the nurse staffing ratios per shift. Several states add a caveat that notwithstanding the mandated nurse staffing ratios, the state may require additional nursing staff. Some states also allow for lowering the required nurse staffing ratio, given certain circumstances.

Nursing home ownership can impact patient outcomes. Spector et al (1998)²⁸ suggest that non-profit nursing homes reduced adverse outcomes substantially relative to for-profit homes. Harrington et al (2001)¹⁸ concluded that investor-owned nursing homes provide worse care and less nursing care than do not-for-profit or public homes.

Numerous studies have looked at the quality of nursing home care. Quality of care is associated with the level of nurse staffing and the satisfaction

level of the nursing staff. High staff turnover in nursing homes is associated with poor quality.^{8,9,10,12,17,21}

Donoghue (2010)¹² concluded that higher registered nurses (RNs) and certified nurse assistants (CNAs) staffing are the variables most consistent with lower turnover and higher retention. Castle and Engberg (2006)⁹ reported that lower staffing levels, lower quality, for-profit ownership, and higher bed size were associated with higher turnover. Castle et al (2007)¹⁰ concluded that reducing turnover from high to medium levels was associated with increased quality of care. Castle (2008)⁸ conducted another study that showed staffing levels of caregivers, quality of care, and top management turnover were associated with caregiver turnover. Kim et al (2009)²¹ reported that higher RN mix in total staffing mix is a key element to providing quality nursing home care.

Other studies found additional concerns in providing quality care in nursing homes.^{1,6,7,11,13,22,23,26} Aiken (2008)¹ found that the nurse environment needed to change in order to sustain nurses for the future. Briesacher et al (2009)⁷ found little evidence that pay-for-performance programs increase the overall health care quality in nursing homes. O'Neill (2003)²² reported that profit above a given threshold in proprietary homes was associated with a higher number of nursing home deficiencies. Choi et al (2011)¹¹ reported that a supportive environment is significantly associated with higher satisfaction among RNs working in nursing homes and that RNs working in for-profit nursing homes were less satisfied. Anderson et al (2003)⁶ found that management practices that increase connections and interaction among people are needed for better resident outcomes. Donoghue and Castle (2009)¹³ found that nursing home administration leadership style is associated with staff turnover. Park et al (2011)²³ reported that financial performance in for-profit nursing homes is significantly correlated to the quality of health care received in nursing homes.

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Rantz et al (2004)²⁶ concluded that good quality care may cost less than poor quality care and that small facilities of 60 beds were more likely to have good resident outcomes.

Nurse staffing levels are obviously of utmost importance to quality of care in nursing homes. Zhang and Grabowski (2004)³⁵ reported that following the enactment of the Nursing Home Reform Act (NHRA), quality improvements were found in nursing homes nationwide and part of the improvement was due to the quality and staffing regulations within the NHRA.

In summary, literature supports the need for illustrating the economic impact of rural nursing homes on local economies. Economic impact studies are available illustrating the importance of nursing homes at the state and national level, but

none were available showing the economic impact at the local level. Nursing homes are one of the larger employers in rural communities and are increasingly important in the future due to the increasing life expectancies and the aging of the population. Rural nursing homes are critical to these local economies, not only in terms of local jobs and payroll, but in terms of providing quality care for the growing elderly population.

National Health Expenditure Data

A factor important to the success of rural communities is job creation and sustainability. *The health care sector is an extremely fast growing sector, and based on the current demographics, there is every reason to expect this trend to continue.* Data in **Table 1** provide selected expenditure and employment data for the United States. Several highlights from the national health expenditures data are:

Table 1
United States Health Expenditures and Employment Data
1970-2012; Projected for 2016-2022

Year	Total Health Expenditures (\$Billions)	Per Capita Health Expenditures (\$)	Health as % of GDP (%)	Health Sector Employment (0)	Avg Annual Increase in Employment (%)
Historical - Census Years					
1970	\$74.9	\$356	7.0%	3,052	^a
1980	255.8	1,110	8.9%	5,278	^a 7.3%
1990	724.3	2,855	12.1%	8,211	^a 5.6%
2000	1,377.2	4,878	13.4%	10,858	^a 3.2%
2010	2,599.0	8,411	17.4%	13,777	^b 2.7%
Historical - Most Recent Non-Census Years					
2011	2,692.8	8,658	17.3%	14,026	^b 1.8%
2012	2,793.4	8,915	17.2%	14,302	^b 2.0%
				Avg Yrly Increase 2001 to 2012	2.5%
Projections					
2016	3,458.0	10,651	18.4%		
2018	3,889.0	11,771	18.5%		
2020	4,416.0	13,142	19.2%		
2022	5,009.0	14,664	19.9%		

SOURCES: U.S. Department of Labor, Bureau of Labor Statistics (www.bls.gov [June 2014]); U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, National Health Expenditures 1960-2012 and National Health Expenditure Projections 2012-2022 (<http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/index.html> [June 2014]).

^a Based on Standard Industrial Classification (SIC) codes for health sector employment.

^b Based on North American Industrial Classification System (NAICS) for health sector employment.

Models to Estimate the Economic Impact of a Rural Nurse Practitioner or Physician Assistant

- In 1970, health care services as a share of the national gross domestic product (GDP) were 7.0 percent and increased to 17.2 percent in 2012;
- Per capita health expenditures increased from \$356 in 1970 to \$8,915 in 2012;
- Employment in the health sector increased 368.6 percent from 1970 to 2012; and
- Employment increased an average annual 2.5 percent from 2001 to 2012.

The U. S. Department of Health and Human Services, Centers for Medicare and Medicaid Services (CMS), also projects that health care expenditures will account for 18.5 percent of GDP by 2018 and increase to 19.9 percent of GDP in 2022. Per capita health care expenditures are projected to increase to \$11,771 in 2018 and to \$14,664 in 2022. Total health expenditures are projected to increase to over \$5.0 trillion in 2022.

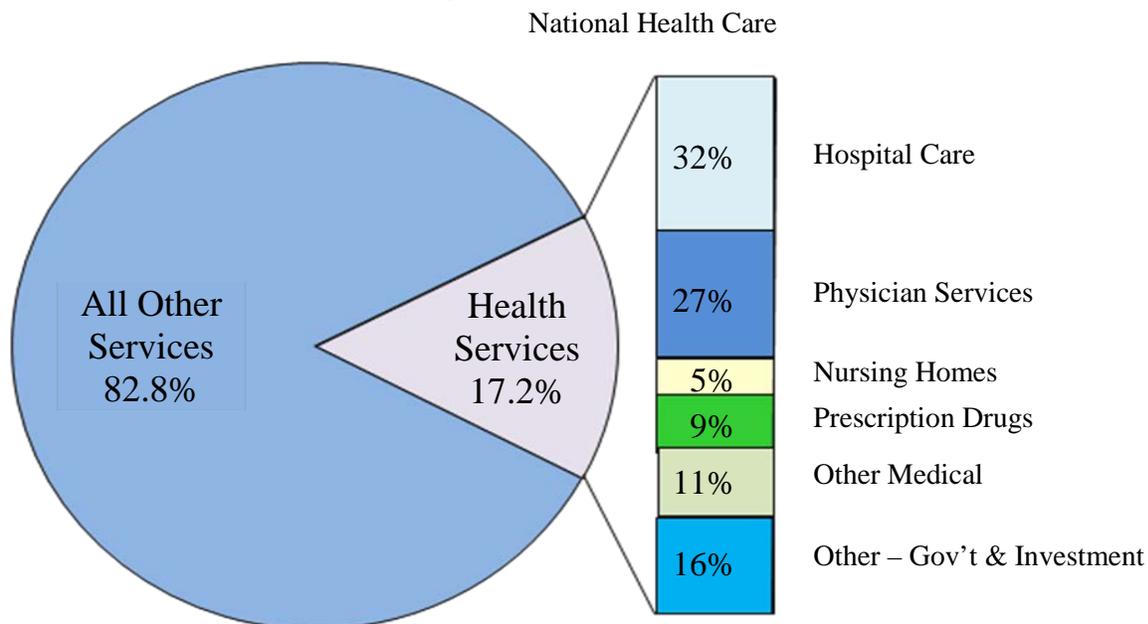
Figure 1 illustrates 2012 health expenditures by percent of GDP and by type of health service. Health services

represented 17.2 percent of national GDP in 2012. The largest category of health services was hospital care, representing 32.0 percent of the total and the second largest category was physician services with 27.0 percent of the total.

Also available from CMS are national expenditures data for nursing care facilities. **Table 2** compares the nursing care facilities expenditures data to the national health expenditures data. Several highlights from the national nursing care facilities data are:

- Per capital nursing care facilities increased from \$19 in 1970 to \$484 in 2012;
- Nursing care facilities expenditures increased from \$4.0 billion in 1970 to \$151.5 billion in 2012. This is 37 times more in 2012 than in 1970 or an increase of 3,687.5 percent.
- Nursing care as a percent of total national health expenditures was 5.3 percent in 1970, increased some through 2001 and slowly decreased back to 5.4 percent in 2012.

Figure 1
National Health Expenditures as a Percent of Gross Domestic Product and by Health Service Type, 2012



SOURCE: U. S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, National Health Expenditures 2012 (<http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/index.html> [June 2014]).

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Table 2
United States Health Expenditures and Employment Data
1970-2012; Projected for 2016-2022

Year	Total Health Expenditure (\$Billions)	Per Capita Health Expenditure (\$)	Health as % of GDP (%)	Total Care Expenditures (\$Billions)	Per Capita Nursing Expenditure (\$)	Nursing Care-of Total Health Expenditures (%)
Historical						
1970	\$74.9	\$356	7.0%	\$4.0	\$19	5.3%
1980	255.8	1,110	8.9%	15.3	66	6.0%
1990	724.3	2,855	12.1%	44.9	177	6.2%
2000	1,377.2	4,878	13.4%	85.1	302	6.2%
2010	2,599.0	8,411	17.4%	143.0	463	5.5%
2011	2,692.8	8,658	17.3%	149.2	480	5.5%
2012	2,793.4	8,915	17.2%	151.5	484	5.4%
Projections						
2016	3,458.0	10,651	18.4%	182.0	562	5.3%
2018	3,889.0	11,771	18.5%	205.4	629	5.3%
2020	4,416.0	13,142	19.2%	231.9	705	5.3%
2022	5,009.0	14,664	19.9%	264.2	797	5.3%

SOURCES: U.S. Department of Labor, Bureau of Labor Statistics (www.bls.gov [June 2014]); U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, National Health Expenditures 1960-2012 and National Health Expenditure Projections 2014-2022 (<http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/index.html> [June 2014]).

The projections for nursing home facilities expenditures are increasing at the same rate as the national health expenditures, with nursing home facilities expenditures remaining at 5.3 percent of national health expenditures through 2022. The increase in expenditures reflects the aging of the population and the increasing life expectancies. These data illustrate the future demand for nursing homes.

Nursing Home Data

Official Nursing Home Compare Data are available from the U.S. Department of Health and Human Services, Centers for Medicare & Medicaid Services, updated June 19, 2014.³¹ The data include nursing homes certified by Medicare, Medicaid, or both. These are the majority of the nursing homes in the U.S., since Medicare and Medicaid are the main funding sources for nursing homes. There are some nursing homes that are certified by their states but that are not certified by Medicaid or Medicare; these nursing homes are not included in these data and are few in number.

The Official Nursing Home Compare Data include 15,646 nursing homes in 2014. Nursing home ownership data from the Official Nursing Home Compare database (hereafter referred to as “database”) are illustrated in **Table 3**. From the database, there are three basic types of nursing home ownership:

- For Profit
- Government
- Non-Profit

Nursing homes that are for-profit represent 69.6 percent of the nursing homes in the database and can be corporations, individuals, partnerships, or limited liability companies. The majority of the for-profit nursing homes in the database are owned by corporations (57.8 percent of the total in the database). Government nursing homes in the database represent 6.0 percent of the total nursing homes and can be city, county, city/county, hospital district, state, or federal. The majority of

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Table 3
Types of Ownership,
Official Nursing Home Compare Data, 2014

	Database Total	
	Number	Percent
OWNERSHIP		
For profit - Corporation	9,045	57.8%
For profit - Individual	550	3.5%
For profit - Partnership	1,167	7.5%
For profit - Limited Liability	122	0.8%
Subtotal - For Profit	<u>10,884</u>	<u>69.6%</u>
Government - City	86	0.5%
Government - County	464	3.0%
Government - City/county	95	0.6%
Government - Hospital district	133	0.9%
Government - State	154	1.0%
Government - Federal	6	0.0%
Subtotal - Government	<u>938</u>	<u>6.0%</u>
Non-profit - Church related	682	4.4%
Non-profit - Corporation	2,846	18.2%
Non-profit - Other	297	1.9%
Subtotal - Non-profit	<u>3,825</u>	<u>24.4%</u>
Totals	15,647	100.0%

SOURCE: U. S. Department of Health and Human Services, Centers for Medicare & Medicaid Services. "Official Nursing Home Compare Data, Updated June 19, 2014." Available at: <https://data.medicare.gov/data/nursing-home-compare>. Accessed: June 2014.

government nursing homes are owned by county governments (3.0 percent of the total in the database). Non-profit nursing homes represent 24.4 percent of the total in the database and can be church-related, corporations, or other. The majority of the non-profit nursing homes are owned by corporations (18.2 percent of the total in the database).

Bed size and occupancy data from the database are presented in **Table 4**. Included are licensed (or certified) beds, occupied beds, occupancy rates, and ranges of occupied bed sizes. There are 1,662,506 total licensed nursing home beds in the database. The minimum licensed bed size is two beds and the maximum licensed bed size is 1,389. The median licensed bed size is 100 and the average licensed bed size is 106.3.

Table 4
Bed Size and Occupancy,
Official Nursing Home Compare Data, 2014

	Database Total	
	Number	Percent
BED SIZE		
Licensed (or Certified)	1,662,506	
Minimum	2	
Maximum	1,389	
Median	100	
Average	106.3	
Occupied Beds	1,368,874	
Minimum	1	
Maximum	955	
Median	80	
Average	87.5	
Occupancy Rate		82.3%
Range of Occupied Beds		
25 and less	846	5.4%
26-50	2,941	18.8%
51-75	3,450	22.0%
76-100	3,421	21.9%
100+	4,989	31.9%
	<u>15,647</u>	<u>100.0%</u>

SOURCE: U. S. Department of Health and Human Services, Centers for Medicare & Medicaid Services. "Official Nursing Home Compare Data, Updated June 19, 2014." Available at: <https://data.medicare.gov/data/nursing-home-compare>. Accessed: June 2014.

There are 1,368,874 total occupied nursing home beds in the database. The minimum occupied bed size is one bed and the maximum occupied bed size is 955. The median occupied bed size is 80 and the average occupied bed size is 87.5.

The occupancy rate from the nursing home database is 82.3 percent. The range of occupied beds per nursing home from the database is broken down into five ranges at the bottom of **Table 4**. The database nursing homes show increasing percentages in the higher ranges of occupied beds. Nursing homes with 75 and less beds represent 46.2 percent of the total database nursing homes.

Table 5 illustrates data on the certification, location in-hospital or out-of-hospital, and overall rating for nursing homes in the database. Nursing homes certified by both Medicaid and

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Table 5
Certification, Location (In-Hospital or Out-of-Hospital), and Overall Rating, Official Nursing Home Compare Data, 2014

	Database Total	
	Number	Percent
Certification		
Medicaid	497	3.2%
Medicare	768	4.9%
Medicaid & Medicare	<u>14,382</u>	<u>91.9%</u>
Total	<u>15,647</u>	<u>100.0%</u>
In-Hospital		
In-Hospital	895	5.7%
Out-of-hospital	<u>14,752</u>	<u>94.3%</u>
Total	<u>15,647</u>	<u>100.0%</u>
Overall Rating		
Total	15,647	
n=	15,520	
Minimum	1	
Maximum	5	
Median	4	
Average	3.39	

SOURCE: U. S. Department of Health and Human Services, Centers for Medicare & Medicaid Services. "Official Nursing Home Compare Data, Updated June 19, 2014." Available at: <https://data.medicare.gov/data/nursing-home-compare>. Accessed: June 2014.

Medicare includes the largest percentage of nursing homes in the database with 91.9%. Only 5.7 percent of nursing homes are located in hospitals. The in-hospital or out-of-hospital designation is not an indication of ownership, but rather an indication of

location.

As stated earlier, nursing homes are inspected on a regular basis by state regulatory agencies and are rated based on nurse staffing levels and number of deficiencies. Out of a rating scale from one (low rating) to five (high rating), the median overall rating of the database nursing homes was four, with an average overall rating of 3.39.

The staffing data available for the database nursing homes are illustrated in **Table 6**. The staffing data from the database illustrates the number of hours of each indicated staff per resident day for the nursing and physical therapy staff. For the reported RNs in the database, the median hours of RNs staffed per resident day is 0.69 and the average hours of RNs staffed per resident day is 0.81 hours. For the reported LPNs in the database, the median hours of LPNs staffed per resident day is 0.81 and the average is 0.83. From the database, certified nursing assistants (CNAs) are the largest component of nurse staffing with median staffing hours per day of 2.4 and an average of 2.47. The total nurse staffing from the database has a median of 3.94 staff hours per resident day and an average of 4.11.

The database also shows licensed nursing staff with median staffing hours per resident day of 1.51 and an average of 1.64. Physical therapist staffing from the database was also included with median hours per resident day of .07 and an average of 0.10

Table 6
Nursing Home Staffing Hours Per Resident Day, Official Nursing Home Compare Data, 2014

	n=	Minimum	Maximum	Median	Average
Staff Hours Per Resident Day					
For Reported RNs	15,255	0.02	10.85	0.69	0.81
For Reported LPNs	15,255	0.00	7.50	0.81	0.83
For Reported CNAs	15,255	0.00	7.59	2.40	2.47
For Total Nurse Staffing	15,255	1.50	14.30	3.94	4.11
For Licensed Nursing Staff	15,255	0.11	10.85	1.51	1.64
For Physical Therapist Staff	15,254	0.00	3.75	0.07	0.10

SOURCE: U. S. Department of Health and Human Services, Centers for Medicare & Medicaid Services. "Official Nursing Home Compare Data, Updated June 19, 2014." Available at: <https://data.medicare.gov/data/nursing-home-compare>. Accessed: June 2014.

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hours. No data were available from the nursing home database³¹ on the staffing hours per resident day for the remainder of the nursing home staff.

Harrington et al (2000)¹⁹ illustrated staffing hours per resident day for all nursing home staff (**Table 7**). These were the only data that could be found that showed the staffing hours per resident day for all personnel categories. The 2000 data are for a representative sample of nursing homes and show data for the nursing staff and the categories of other care staff, administrative staff, and housekeeping and other staff.

Table 7
Nursing Home Staffing Ratios
for All Staff Categories, 2000

Staffing Category	Staffing Hours Per Resident Day
	Sample Nursing Homes with SNFs
	2000 Data
For Reported RNs	0.59
For Reported LPNs	0.67
For Reported CNAs	<u>2.14</u>
For Total Nurse Staffing	3.40
Other care staff	1.26
Administrative Staff	0.28
Housekeeping and other	<u>0.76</u>
Totals	<u>5.70</u>

SOURCE: Harrington et al (2000) "Nursing Home Staffing and Its Relationship to Deficiencies." *Journal of Gerontology* 55B(5): 5278-5287.

Other care staff includes activities director, assistant activities director, transportation-driver, medical director, chaplain, cooks, kitchen aides, physical therapist, assistants, and/or aides, occupational therapist, assistants, or aides, speech therapist, respiratory therapist, and other specialty care staff/aides. Nursing home facilities are required to employ a licensed physician to serve as medical director. The medical director is part of the other care staff with the medical director responsible for implementation of resident medical care policies

and the coordination of medical care in the nursing home facility.

Administrative staff includes director, assistant director, counselor, patient manager, financial staff, secretarial, receptionist, and administrative assistant staff. The housekeeping and other staff includes laundry, housekeeping (custodial workers), and grounds/maintenance/repair staff.

The 2000 study shows 3.40 staffing hours per resident day for all nurse staff; 1.26 for other care staff, 0.28 for administrative staff, and 0.76 for housekeeping and other staff. These data will be utilized to determine a rural staffing pattern in the next section.

Rural Nursing Home Sample

A rural nursing home sample was identified from the Official Nursing Home Compare Data (nursing home database). To determine this rural nursing home sample, a random selection of 20 percent of critical access hospitals (CAHs) was identified from the Critical Access Hospital Locations, Flex Monitoring Team, University of Minnesota, University of North Carolina at Chapel Hill, University of Southern Maine.¹⁴ Utilizing the zip codes of the CAH random selection, all nursing homes with these same zip codes were identified from the nursing home database. This became the rural nursing home sample with 313 identified nursing homes, representing 2.0 percent of the database nursing homes.

The rural nursing home sample is compared to the nursing home database in the next few tables. Nursing home ownership is illustrated in **Table 8**. For the database nursing homes, 69.6 percent are for-profit organizations, 6.0 percent are government and 24.4 percent are non-profit. For the rural sample, 53.0 percent are for profit, 16.0 percent are government, and 31.0 percent are non-profit.

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Table 8
Ownership Data,

	Database Total		Rural Sample	
	Number	Percent	Number	Percent
OWNERSHIP				
For profit – Corporation	9,045	57.8%	139	44.4%
For profit – Individual	550	3.5%	10	3.2%
For profit – Partnership	1,167	7.5%	11	3.5%
For profit - Limited Liability Company	<u>122</u>	<u>0.8%</u>	<u>6</u>	<u>1.9%</u>
Subtotal - For Profit	<u>10,884</u>	<u>69.6%</u>	<u>166</u>	<u>53.0%</u>
Government – City	86	0.5%	4	1.3%
Government – County	464	3.0%	24	7.7%
Government - City/county	95	0.6%	4	1.3%
Government - Hospital district	133	0.9%	15	4.8%
Government – State	154	1.0%	3	1.0%
Government – Federal	<u>6</u>	<u>0.0%</u>	<u>0</u>	<u>0.0%</u>
Subtotal – Government	<u>938</u>	<u>6.0%</u>	<u>50</u>	<u>16.0%</u>
Non-profit - Church related	682	4.4%	14	4.5%
Non-profit – Corporation	2,846	18.2%	74	23.6%
Non-profit – Other	<u>297</u>	<u>1.9%</u>	<u>9</u>	<u>2.9%</u>
Subtotal - Non-profit	<u>3,825</u>	<u>24.4%</u>	<u>97</u>	<u>31.0%</u>
Totals	<u>15,647</u>	<u>100.0%</u>	<u>313</u>	<u>100.0%</u>

SOURCE: U. S. Department of Health and Human Services, Centers for Medicare & Medicaid Services. “Official Nursing Home Compare Data, Updated June 19, 2014.” Available at: <https://data.medicare.gov/data/nursing-home-compare>. Accessed: June 2014; Flex Monitoring Team, University of Minnesota, University of North Carolina at Chapel Hill, University of Southern Maine. “Critical Access Hospital Locations.” Available at: <http://www.flexmonitoring.org/data/critical-access-hospital-locations/>. Accessed: June 2014.

In **Table 9**, bed size and occupancy data are presented. The rural sample licensed beds are 1.4 percent of the total licensed database nursing home beds. The minimum licensed bed size for the database nursing homes is two beds, while the rural sample has a minimum of ten licensed beds. The maximum licensed bed size for the database nursing homes is 1,389 and for the rural sample is 230. The median licensed bed size for the database nursing homes is 100 and for the rural sample is 70. The average licensed bed size for the database nursing homes is 106.3 while the rural sample is 74.5.

The occupied beds for the rural sample are 1.3 percent of the database occupied nursing home beds. The minimum occupied bed size for the database nursing homes is one bed, while the rural sample has a minimum of three occupied beds. The

maximum occupied bed size for the database nursing homes is 955 and for the rural sample is 189. The median occupied bed size for the database nursing homes is 80 while rural is 54. The average occupied bed size for the database nursing homes is 87.5 while rural is 58.4.

The occupancy rate for the database nursing homes is 82.3 percent and the rural sample is 78.4 percent. The range of occupied beds per nursing home is broken down into five ranges at the bottom of **Table 9**. The rural sample shows 75.4 percent of the nursing homes with 75 beds or less, while the database nursing homes show 46.2 percent of the nursing homes with 75 beds or less. The rural sample shows only 24.6 percent of the nursing homes with over 75 beds compared to the database with 53.8 percent.

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Table 9
Bed Size and Occupancy Data,

	Database Total		Rural Sample	
	Number	Percent	Number	Percent
BED SIZE				
Licensed (or Certified) Beds	1,662,506		23,296	<u>1.4%</u>
Minimum	2		10	
Maximum	1,389		230	
Median	100		70	
Average	106.3		74.5	
Occupied Beds	1,368,874		18,266	<u>1.3%</u>
Minimum	1		3	
Maximum	955		189	
Median	80		54	
Average	87.5		58.4	
Occupancy Rate		<u>82.3%</u>		<u>78.4%</u>
Range of Occupied Beds per Nursing Home				
25 and less	846	5.4%	31	9.9%
26-50	2,941	18.8%	106	33.9%
51-75	3,450	22.0%	99	31.6%
76-100	3,421	21.9%	50	16.0%
100+	<u>4,989</u>	<u>31.9%</u>	<u>27</u>	<u>8.6%</u>
	<u>15,647</u>	<u>100.0%</u>	<u>313</u>	<u>100.0%</u>

SOURCE: U. S. Department of Health and Human Services, Centers for Medicare & Medicaid Services. "Official Nursing Home Compare Data, Updated June 19, 2014." Available at: <https://data.medicare.gov/data/nursing-home-compare>. Accessed: June 2014; Flex Monitoring Team, University of Minnesota, University of North Carolina at Chapel Hill, University of Southern Maine. "Critical Access Hospital Locations" Available at: <http://www.flexmonitoring.org/data/critical-access-hospital-locations/>. Accessed: June 2014.

Table 10 illustrates data on the certification, location in-hospital or out-of-hospital, and overall rating. Nursing homes certified by both Medicaid and Medicare are the largest percentage of nursing homes for both the database nursing homes and the rural sample. The rural sample has a larger percent of Medicaid homes than the database nursing homes. The majority of nursing homes for both the database and rural sample are not located in a hospital. However, the rural sample has a much larger percent of nursing homes in the hospital than the database nursing homes. The overall ratings are basically the same for both the database and rural sample.

The staffing data available for the database nursing homes and the rural sample are illustrated in **Table 11**. The staffing data for the database nursing homes are higher than the staffing data for the rural sample, except for the minimum staffing. The rural sample has higher minimum staffing levels. The rural sample shows an average staffing ratio of 0.77 staffing hours per resident day for RNs, 0.73 for LPNs, and 2.47 for CNAs, for a total average nurse staffing ratio of 3.97. The staffing of CNAs is the same for the database nursing homes and the rural sample. No data were available from the Official Nursing Home Compare Data³¹ on the staffing hours per resident day for the remainder of the nursing home staff.

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Table 10
Certification, Location, and Overall Rating,
Official Nursing Home Compare Data and Rural Sample, 2014

	Database Total		Rural Sample	
	Number	Percent	Number	Percent
Certification				
Medicaid	497	3.2%	33	10.5%
Medicare	768	4.9%	3	1.0%
Medicaid & Medicare	<u>14,382</u>	<u>91.9%</u>	<u>277</u>	<u>88.5%</u>
Total	<u>15,647</u>	<u>100.0%</u>	<u>313</u>	<u>100.0%</u>
In-Hospital				
In-Hospital	895	5.7%	73	23.3%
Not In-hospital	<u>14,752</u>	<u>94.3%</u>	<u>240</u>	<u>76.7%</u>
Total	<u>15,647</u>	<u>100.0%</u>	<u>313</u>	<u>100.0%</u>
Overall Rating				
Total	15,647		313	
n=	15,520		311	
Minimum	1		1	
Maximum	5		5	
Median	4		4	
Average	3.39		3.33	

SOURCE: U. S. Department of Health and Human Services, Centers for Medicare & Medicaid Services. "Official Nursing Home Compare Data, Updated June 19, 2014." Available at: <https://data.medicare.gov/data/nursing-home-compare>. Accessed: June 2014; Flex Monitoring Team, University of Minnesota, University of North Carolina at Chapel Hill, University of Southern Maine. "Critical Access Hospital Locations." Available at: <http://www.flexmonitoring.org/data/critical-access-hospital-locations/>. Accessed: June 2014.

Table 11
Staffing Data,
Official Nursing Home Compare Data and Rural Sample, 2014

	n=	Minimum	Maximum	Median	Average
Database Nursing Homes					
Staffing Hours Per Resident Day					
RNs	15,255	0.02	10.85	0.69	0.81
LPNs	15,255	0.00	7.50	0.81	0.83
CNAs	<u>15,255</u>	<u>0.00</u>	<u>7.59</u>	<u>2.40</u>	<u>2.47</u>
Total Nurse Staffing	<u>15,255</u>	<u>1.50</u>	<u>14.30</u>	<u>3.94</u>	<u>4.11</u>
Licensed Nursing Staff	15,255	0.11	10.85	1.51	1.64
Physical Therapist Staff	15,254	0.00	3.75	0.07	0.10
Rural Sample Nursing Homes					
Staffing Hours Per Resident Day					
RNs	306	0.19	4.40	0.68	0.77
LPNs	306	0.00	3.00	0.71	0.73
CNAs	<u>306</u>	<u>0.03</u>	<u>5.02</u>	<u>2.41</u>	<u>2.47</u>
Total Nurse Staffing	<u>306</u>	<u>1.60</u>	<u>9.28</u>	<u>3.80</u>	<u>3.97</u>
Licensed Nursing Staff	306	0.33	5.32	1.39	1.50
Physical Therapist Staffing	306	0.00	2.75	0.03	0.07

SOURCE: U. S. Department of Health and Human Services, Centers for Medicare & Medicaid Services. "Official Nursing Home Compare Data, Updated June 19, 2014." Available at: <https://data.medicare.gov/data/nursing-home-compare>. Accessed: June 2014; Flex Monitoring Team, University of Minnesota, University of North Carolina at Chapel Hill, University of Southern Maine. "Critical Access Hospital Locations." Available at: <http://www.flexmonitoring.org/data/critical-access-hospital-locations/>. Accessed: June 2014.

Data used in **Table 12** for rural staffing patterns

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The Harrington et al (2000)¹⁹ conducted a study that illustrated staffing hours per resident day for all nursing home staff (**Table 7**). These were the only data that could be found that showed the staffing hours per resident data for all personnel categories. 2000 data are for a representative sample of nursing homes and show data for the nursing staff and the categories of other care staff, administrative staff, and housekeeping and other staff.

Harrington et al (2000)¹⁹ data for staffing hours per resident day for all staff categories is shown in the first column of **Table 12**. To adjust the 2014 data for the missing non-nursing staff categories, the percent change in the total nursing staff hours from 2000 to 2014 was calculated at 16.8 percent and then applied to the non-nursing categories from the 2000 data. The results vary due to rounding. This

provides staffing hours for all the nursing home personnel for 2014. These data include skilled nursing staff. The results are a total of 6.66 staffing hours per resident day for all personnel in a rural nursing home with SNF in 2014.

To provide non-SNF staffing hours, the last column of **Table 12** adjusts the other care staff (the category that includes the additional SNF staff) from 1.47 staff hours per resident day to 1.11 staffing hours. This adjusts the 2014 data for a staffing pattern for rural non-SNF nursing homes, which results in a total of 6.3 staff hours per resident day. These results for rural nursing homes will be utilized to estimate nursing home employment and wages, salaries, and benefits (labor income) in the next section.

Table 12
Nursing Home Staffing Ratios for All Staff, 2000 & 2014

Staffing Category	Staffing Hours Per Resident Day			
	Representative Sample with SNFs	Rural Sample with SNFs		Rural Sample NO SNFs
	2000 Data	2014 Data	% change	2014 Data
For Reported RNs	0.59	0.77	30.5%	0.77
For Reported LPNs	0.67	0.73	9.0%	0.73
For Reported CNAs	2.14	2.47	15.4%	2.47
For Total Nurse Staffing	3.40	3.97	16.8% ^a	3.97
Other care staff	1.26	1.47	16.7% ^b	1.11
Administrative Staff	0.28	0.33	17.9% ^b	0.33
Housekeeping and other staff	0.76	0.89	17.1% ^b	0.89
Totals	5.70	6.66	16.8% ^b	6.30

SOURCE: "Nursing Home Staffing and Its Relationship to Deficiencies." (2000) Journal of Gerontology 55B(5), 5278-5287. ; U. S. Department of Health and Human Services, Centers for Medicare & Medicaid Services, "Official Nursing Home Compare Data, Updated June 19, 2014." Available at: <https://data.medicare.gov/data/nursing-home-compare>. Accessed: June 2014.

Data from **Table 11** illustrating average staffing hours per resident day for rural sample.

^a Percent change in total nurse staffing from 2000 to 2014 was 16.8%.

Data are estimated based on the percent increase in total nurse staffing from 2000 to 2014 (16.8 percent). Percents may vary due to rounding.

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Rural Nursing Home Scenarios

After review of the data for the rural nursing homes sample, nursing home scenarios are illustrated in **Table 13**. The occupied bed sizes for the scenarios are based on the occupied bed size data from **Table 9**. Occupied beds are utilized in order to determine the number of resident hours per year. **Scenario 1** is based on 50 occupied beds with no SNF services, **Scenario 2** is based on 100 occupied beds with no SNF services, and **Scenario 3** is based on 100 occupied beds with SNF services.

The staffing ratios from **Table 12** were utilized to determine the FTEs for each scenario. The appropriate staffing ratios (based on SNF or no SNF services) were applied to the annual resident days per year (occupied residents x 365 days/year). The staffing ratios were then multiplied times the total number of annual resident days to result in the total staffing hours. The annual number of staffing hours was then converted to full-time equivalent employees (FTEs). These were calculated for each staffing category and rounded to the next whole number.

The next step was to determine an average salary for each occupation and to allocate the FTEs to each occupation. The average wages for each nursing home occupation were determined from the U. S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, “May 2013 National Occupational Employment and Wage Estimates, United States.”³² Multiplying the number of FTEs times the annual salary results in the annual wages and salaries. All occupations and all staffing categories were calculated to result in the total wages and salaries.

To add benefits to the total wages and salaries, the latest average national benefit rate (for March 2014) from the U. S. Department of Labor, Bureau of Labor Statistics, “Employer Costs for Employee Compensation,”³³ was determined to be 40.3 percent and multiplied times the wages and salaries to result in total wages, salaries, and benefits. The average wages, salaries, and benefits (labor income) per employee are included for each scenario.

Table 13
Rural Nursing Home Scenarios

	Scenario 1	Scenario 2	Scenario 3
Occupied Beds	50	100	100
With/Without SNF	No SNF	No SNF	With SNF
FTEs Staffing			
Nursing Staffing	35	70	70
Other Care Staffing	10	20	26
Administrative Staffing	3	6	6
Housekeeping & Other Staffing	8	16	16
Total Staffing (Employment in FTEs)	56	112	118
Total Labor Income*	\$2,648,401	\$5,245,712	\$5,820,689
Average Labor Income per FTE	\$47,293	\$46,837	\$49,328

SOURCE: Harrington et al (2000). “Nursing Home Staffing and Its Relationship to Deficiencies.” *Journal of Gerontology* 55B(5): 5278-5287; U. S. Department of Health and Human Services, Centers for Medicare & Medicaid Services. “Official Nursing Home Compare Data, Updated June 19, 2014.” Available at: <https://data.medicare.gov/data/nursing-home-compare>. Accessed: June 2014; U. S. Department of Labor, Bureau of Labor Statistics. Occupational Employment Statistics, “May 2013 National Occupational Employment and Wage Estimates, United States.” Available at: http://www.bls.gov/oes/current/oes_nat.htm#29-0000. Accessed: June 2014; U. S. Department of Labor, Bureau of Labor Statistics. News Release, USDL-14-1075. “Employer Costs for Employee Compensation - March 2014. Released June 11, 2014.” Available at: <http://www.bls.gov/news.release/pdf/ecec.pdf>. Accessed: June 2014.

* Labor income includes wages, salaries, and benefits.

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The results are in **Table 13**. For **Scenario 1**, a rural nursing home with 50 beds and no SNF services results in 56 FTEs and \$2.6 million in labor income; this is an average labor income per FTE of \$47,293. For **Scenario 2**, a rural nursing home with 100 beds and no SNF services results in 112 FTEs and labor income of \$5.2 million; this is an average labor income per FTE of \$46,837. For **Scenario 3**, a rural nursing home with 100 beds and SNF services results in 118 FTEs and labor income of \$5.8 million; this is an average labor income per FTE of \$49,328.

The employment (FTEs) and annual labor income are the direct economic activities of the rural nursing home scenarios.

The Economic Impacts of the Rural Nursing Home Scenarios

Multipliers have been derived for 210 rural counties from 18 states across all Census regions in the U.S. Multipliers were derived utilizing an input-output analysis model and data from IMPLAN Group,

LLC.²⁰ **Appendix A** provides more detailed information on IMPLAN Group, LLC. Nursing and residential care is a separate industry sector in the model and the multipliers were all derived for this sector. The nursing and residential care employment multipliers ranged from 1.07 to 1.29, while the nursing and residential care labor income multipliers ranged from 1.08 to 1.31. The majority of the multipliers were for counties with CAHs; however, there were rural counties without hospitals also represented. The average of these county multipliers will be utilized to illustrate the impacts of the three scenarios. The average nursing and residential care employment multiplier was 1.16 and the average nursing and residential care labor income multiplier was 1.15. **Table 14** illustrates the employment and labor income impacts for the three scenarios.

For **Scenario 1**, the nursing home has 50 occupied beds with no skilled nursing. The total direct employment impact is 56 employees. After applying the average nursing and residential care employment multiplier of 1.16, the secondary

Table 14
Employment and Labor Income Impacts

	Scenario 1 50 Beds No SNF	Scenario 2 100 beds No SNF	Scenario 3 100 beds With SNF
EMPLOYMENT IMPACT			
Direct Employment Impact	56	112	118
Employment Multiplier	1.16	1.16	1.16
Secondary Employment Impact	9	18	19
Total Employment Impact	65	130	137
LABOR INCOME IMPACT			
Direct Labor Income Impact*	\$2,648,401	\$5,245,712	\$5,820,689
Labor Income Multiplier	1.15	1.15	1.15
Secondary Labor Income Impact	\$397,260	\$786,857	\$873,103
Total Labor Income Impact	\$3,045,661	\$6,032,569	\$6,693,792

SOURCE: Harrington et al (2000). "Nursing Home Staffing and Its Relationship to Deficiencies." *Journal of Gerontology* 55B(5): 5278-5287; U. S. Department of Health and Human Services, Centers for Medicare & Medicaid Services. "Official Nursing Home Compare Data, Updated June 19, 2014." Available at: <https://data.medicare.gov/data/nursing-home-compare>. Accessed: June 2014; U. S. Department of Labor, Bureau of Labor Statistics. Occupational Employment Statistics, "May 2013 National Occupational Employment and Wage Estimates, United States." Available at: http://www.bls.gov/oes/current/oes_nat.htm#29-0000. Accessed: June 2014; U. S. Department of Labor, Bureau of Labor Statistics. News Release, USDL-14-1075. "Employer Costs for Employee Compensation - March 2014. Released June 11, 2014." Available at: <http://www.bls.gov/news.release/pdf/ecec.pdf>. Accessed: June 2014; IMPLAN Group LLC. Available at: www.implan.com. Accessed: August 2014.

* Labor income includes annual wages, salaries, and benefits.

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employment impact is nine employees ($56 \times 1.06 = 9$) and the total employment impact is 65 employees ($56 \times 1.16 = 65$). The total direct labor income (wages, salaries, and benefits) impact is \$2,648,401. After applying the average nursing and residential care labor income multiplier of 1.15, the secondary labor income impact is \$397,260 and the total labor income impact is \$3,045,661.

For **Scenario 2**, the nursing home has 100 occupied beds with no skilled nursing. The total direct employment impact is 112 employees. After applying the average nursing and residential care employment multiplier of 1.16, the secondary employment impact is 18 employees ($112 \times 1.06 = 18$) and the total employment impact is 130 employees ($112 \times 1.16 = 130$). The total direct labor income (wages, salaries, and benefits) impact is \$5,245,712. After applying the average nursing and residential care labor income multiplier of 1.15, the secondary labor income impact is \$786,857 and the total labor income impact is \$6,032,569.

For **Scenario 3**, the nursing home has 100 occupied beds with skilled nursing. The total direct employment impact is 118 employees. After applying the average nursing and residential care employment multiplier of 1.16, the secondary employment impact is 19 employees ($118 \times 1.06 = 19$) and the total employment impact is 137 employees ($118 \times 1.16 = 137$). The total direct labor income (wages, salaries, and benefits) impact is \$5,820,689. After applying the average nursing and residential care labor income multiplier of 1.15, the secondary labor income impact is \$873,103 and the total labor income impact is \$6,693,792.

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Template to Build Your Own Nursing Home Impact Table

The next table is an example of what the impact table will look like for an individual nursing home. This table is provided for a rural community to build their own nursing home impact on their local economy. The multipliers from this study can be used with the actual nursing home employment and

wages, salaries, and benefits (labor income) or multipliers can be derived to be specific to the local nursing home. The National Center for Rural Health Works can assist an individual community or nursing home in deriving their specific multipliers.

TEMPLATE

EMPLOYMENT IMPACT

Direct Employment Impact ¹	_____	(A)
Employment Multiplier	_____	(B)
Secondary Employment Impact	_____	(C)
Total Employment Impact	=====	(D)
		(A)

LABOR INCOME IMPACT

Direct Labor Income Impact*	_____	(E)
Labor Income Multiplier	_____	(F)
Secondary Labor Income Impact	_____	(G)
Total Labor Income Impact	_____	(H)

(A) Direct employment impact is the latest annual employment for the nursing home. This can be total full-time and part-time employees OR total full-time equivalents.

(B) The rural community (or rural nursing home) can use the average nursing and residential care employment multiplier of 1.16 from this study or can choose to derive their local specific multiplier by contacting the National Center for Rural Health Works

(C) Secondary employment impact is calculated with one of the following formulas:

$$(A) \times [(B) - 1.00] = (C)$$

or

$$(D) - (A) = (C).$$

(D) Total employment impact is calculated with the following formula:

$$(A) \times (B) = (D).$$

(E) Direct labor income impact includes the latest annual wages, salaries, and benefits for the nursing home.

(F) The rural community (or rural nursing home) can use the average nursing and residential care labor income multiplier of 1.15 from this study or can choose to derive their local specific multiplier by contacting the National Center for Rural Health Works

(G) Secondary labor income impact is calculated with one of the following formulas:

$$(E) \times [(F) - 1.00] = (G)$$

or

$$(H) - (E) = (G).$$

(H) Total labor income impact is calculated with the following formula:

$$(E) \times (F) = (H).$$

NOTE: All numbers calculated in this table are rounded to whole numbers with no decimals; EXCEPT the multipliers which are derived and have two decimals.

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An optional “Rural Nursing Home Economic Impact Study” template is provided below for the rural community or rural nursing home to utilize. Rural community or nursing home leadership can change the wording to fit the local situation. This is only an option for a community or nursing home to consider.

Appendix C also includes the “Rural Nursing Home Economic Impact Study” template; however, this document is totally generic and a rural community would only need to fill in the noted blanks; i.e., <name of nursing home>, <number of nursing homes employees>, etc.

Limitations and Other Considerations

The presence of a nursing home in a rural community contributes directly to the local economy and also contributes secondary impacts through the multiplier effects. There can be other significant effects on nearby hospitals. If the nursing home is owned by the hospital, profit from the nursing home can subsidize hospital operations and services that are not financially self-supporting (including primary care, emergency and urgent care services). Further, hospital expenditures could be reduced by sharing services with the nursing home; i.e. dietary and nutrition, food services, housekeeping/janitorial, maintenance/upkeep, etc. The operation of the nursing home can make all health services more robust and more valuable to the community.

Beyond this, the presence of a nursing home may have the following effects:

- 1) Expanded utilization of the hospital associated with referrals of nursing home patients
- 2) Expanded work for local physicians and other primary care providers in the nursing homes, that in turn supports the sustainability of rural practices

- 3) Better ability for the hospital to reduce uncompensated days of care in the hospital (e.g., reduction of days waiting placement)
- 4) Complimentary interaction with a hospital’s swing beds (skilled nursing) to form a better continuum of care
- 5) Improved continuum of care to decrease readmissions
- 6) Contribution to a greater critical mass of locally available health provider talent
- 7) Greater political clout to support the sustainability of the local health care system

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TEMPLATE:

The Economic Impact of XYZ Nursing Home on ABC County

Nursing homes are typically one of the large employers in rural communities, particularly in rural communities without a local hospital. Nursing homes supply jobs and labor income to their rural economies. With increasing life expectancies and increasing elderly population (from the aging of the Baby Boomers), demand for nursing homes may increase in the future. This increased demand will drive growth in the nursing home industry, which will, in turn, stimulate additional economic activity. Nursing homes must thrive economically to provide high quality care to residents and good jobs to local workers.

Nursing homes not only provide an essential service for an extremely vulnerable population, but employ a substantial segment of the health care workforce. With nursing homes' reliance on Medicaid and Medicare funding, any changes in Medicaid and Medicare reimbursement impact the survival of rural nursing homes. Our community is concerned with the financial viability of our local nursing home. Our community wants to emphasize the economic impact of XYZ Nursing Home to our local economy.

Illustration of Community or County Economic System

This study is to illustrate the economic impact of XYZ Nursing Home on ABC County. The XYZ Nursing Home provides 115 jobs to the ABC County economy with \$5,358,425 in wages, salaries, and benefits (labor income).

The direct impacts of XYZ Nursing Home, measured by employment and wages, salaries, and benefits (labor income), are only a portion of the total impact. There are additional economic impacts created as XYZ Nursing Home and its employees spend money. These are known as secondary impacts and are measured by multipliers using an input-output model and data from IMPLAN (the model and data are further discussed in **Appendix A**). This model is widely used by economists and other academics across the U.S.

A brief description of the input-output model and the multiplier effect is included and illustrated in **Figure 1**. **Figure 1** illustrates the major flows of goods, services, and dollars of any economy. The businesses which sell some or all of their goods and services to buyers outside of the community are the foundation of a community's economy. Such a business is a basic industry. The flow of products out of, and dollars into, a community are represented by the two arrows in the upper right portion of **Figure 1**. To produce these goods and services for "export" outside of the community, the basic industry purchases inputs from outside of the community (upper left portion of **Figure 1**), labor from the residents or "households" of the community (left side of **Figure 1**), and inputs from service industries located within the community (right side of **Figure 1**). The flow of labor, goods, and services in the community is completed by households using their earnings to purchase goods and services from the community's service industries (bottom of **Figure 1**). It is evident from the interrelationships shown in **Figure 1** that a change in any one segment of a community's economy will have reverberations throughout the entire economic system of the community.

Consider, for instance, the closing of a hospital. The services sector will no longer pay employees and the dollars going to households will stop. Likewise, the hospital will not purchase goods from other businesses, and the dollar flow to other businesses will stop. This decreases income in the "households" segment of the

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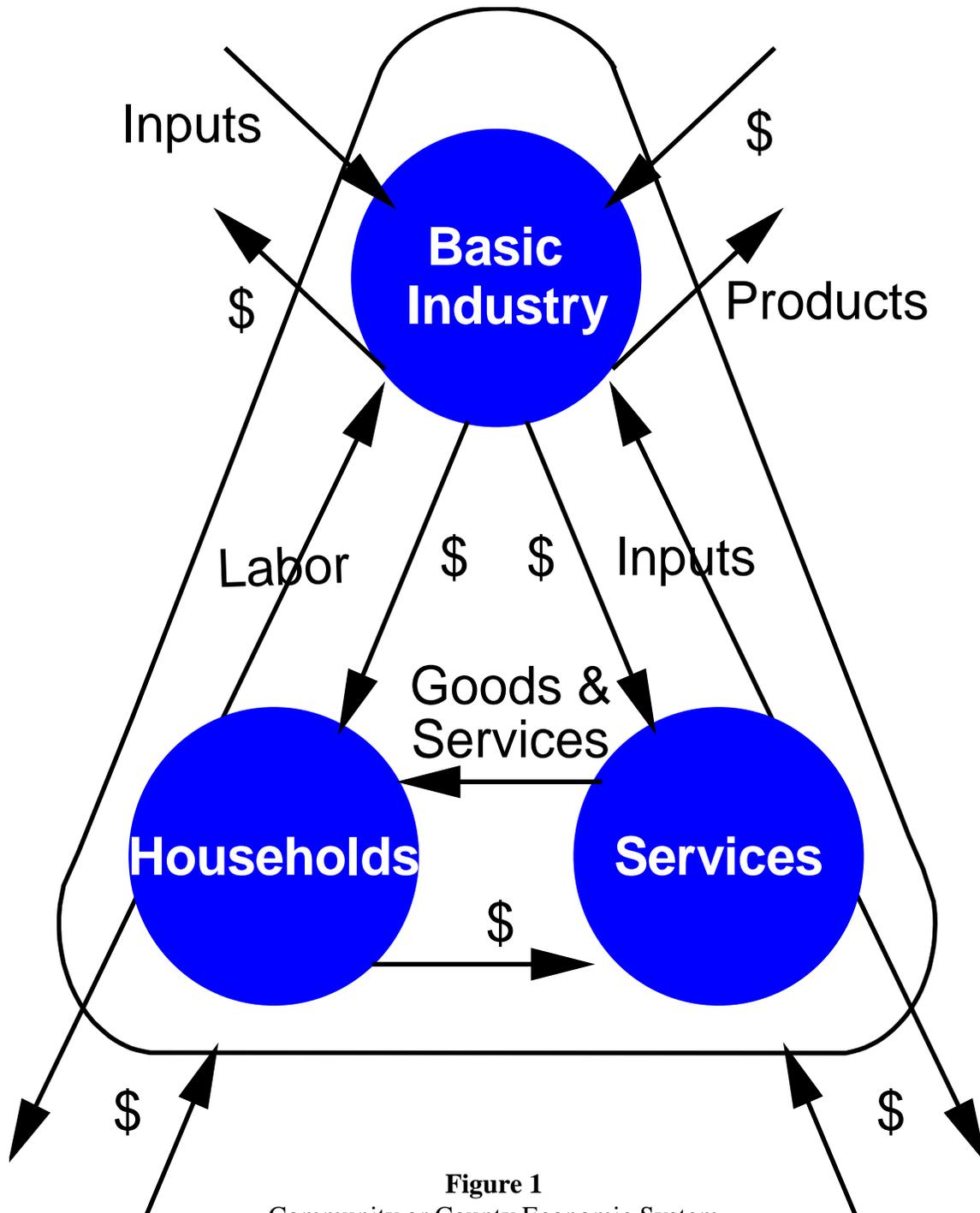


Figure 1
Community or County Economic System

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economy. Since earnings would decrease, households decrease their purchases of goods and services from businesses within the "services" segment of the economy. This, in turn, decreases these businesses' purchases of labor and inputs. Thus, the change in the economic base works its way throughout the entire local economy.

The total impact of a change in the economy consists of direct, indirect, and induced impacts. Direct impacts are the changes in the activities of the impacting industry, such as the closing of a hospital. The impacting business, such as the hospital, changes its purchases of inputs as a result of the direct impact. This also produces an indirect impact in the business sectors. Both the direct and indirect impacts change the flow of dollars to the community's households. The households alter their consumption accordingly. The effect of this change in household consumption upon businesses in a community is referred to as an induced impact.

A measure is needed that yields the effects created by an increase or decrease in economic activity. In economics, this measure is called the multiplier effect. Multipliers are used in this report. An employment multiplier is defined as:

“...the ratio between direct employment, or that employment used by the industry initially experiencing a change in final demand and the direct, indirect, and induced employment.”

An employment multiplier of 1.90 indicates that if one job is created by a new industry, 0.90 jobs are created in other sectors due to business (indirect) and household (induced) spending. The same concept applies to labor income and output multipliers.

The Economic Impact of XYZ Nursing Home

The economic impact of XYZ Nursing Home is illustrated in the table. *(add a few sentences about XYZ Nursing Home here, if applicable).*

The direct employment impact is 115 employees; these are the employees that work directly for XYZ Nursing Home. The average nursing and residential care employment multiplier is 1.16. After applying the average nursing and residential care employment multiplier of 1.16, the secondary employment impact is 18 employees ($115 \times [1.16 - 1.00] = 18$) and the total employment impact is 133 employees ($115 \times 1.16 = 133$).

The total direct labor income (wages, salaries, and benefits) impact is \$5,358,425. After applying the average nursing and residential care labor income multiplier of 1.15, the secondary labor income impact is \$803,764 and the total labor income impact is \$6,162,189.

Summary

XYZ Nursing Home employs a significant number of people in our local community. The total employment impact is 133 employees and the total labor income impact is \$6,162,189. These impacts are from the operation of XYZ Nursing Home occur every year and will continue to occur each and every year that XYZ Nursing Home remains in operation in the future. These are long term economic benefits of XYZ Nursing Home.

With the longer life expectancies and the projected increase in elderly population, XYZ Nursing Home is increasingly important to ABC County. The impacts of XYZ Nursing Home contribute to the local economy of ABC County. XYZ Nursing Home employs a significant number of employees. The nursing home and its employees spend money in ABC

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County. This generates a secondary impact in the economy. If XYZ Nursing Home decreases in size, XYZ Nursing Home may no longer be able to meet the needs of the increasing elderly population and this may also adversely impact the economic health of ABC County.

Quality nursing home services are important, because they not only contribute to the overall economic health of ABC County, but they also contribute to the overall health and welfare of the residents of ABC County.

Economic Impact of XYZ Nursing Home on ABC County

EMPLOYMENT IMPACT	
Direct Employment Impact (FTEs)	115
Employment Multiplier	1.16
Secondary Employment Impact	<u>18</u>
Total Employment Impact	<u>133</u>
LABOR INCOME IMPACT	
Direct Labor Income* Impact	\$5,358,425
Labor Income Multiplier	1.15
Secondary Labor Income Impact	<u>\$803,764</u>
Total Labor Income Impact	<u>\$6,162,189</u>

* Labor income includes annual wages, salaries, and benefits.

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Appendix A

IMPLAN Software and Data from IMPLAN Group, LLC:

Model and Data Used to Derive Multipliers

An Overview of Nursing Homes and the Economic Impact of Rural Nursing Homes

APPENDIX A IMPLAN Software and Data from IMPLAN Group, LLC: Model and Data Used to Derive Multipliers

A Review of Input-Output Analysis

Input-output (I/O) (Miernyk, 1965) was designed to analyze the transactions among the industries in an economy. These models are largely based on the work of Wassily Leontief (1936). Detailed I/O analysis captures the indirect and induced interrelated circular behavior of the economy. For example, an increase in the demand for health services requires more equipment, more labor, and more supplies, which, in turn, requires more labor to produce the supplies, etc. By simultaneously accounting for structural interaction between sectors and industries, I/O analysis gives expression to the general economic equilibrium system. The analysis utilizes assumptions based on linear and fixed coefficients and limited substitutions among inputs and outputs. The analysis also assumes that average and marginal I/O coefficients are equal.

Nonetheless, the framework has been widely accepted and used. I/O analysis is useful when carefully executed and interpreted in defining the structure of an area, the interdependencies among industries, and forecasting economic outcomes.

The I/O model coefficients describe the structural interdependence of an economy. From the coefficients, various predictive devices can be computed, which can be useful in analyzing economic changes in a state, an area or a county. Multipliers indicate the relationship between some observed change in the economy and the total change in economic activity created throughout the economy.

The basis of IMPLAN was developed by the U. S. Forest Service to construct input/output accounts and models. The complexity of this type of modeling had hindered practitioners from constructing models specific to a community requesting an analysis. The University of Minnesota utilized the U.S. Forest Service model to further develop the methodology and expand the data sources to form the model known as IMPLAN. The founders of IMPLAN, Scott Lindall and Doug Olson, joined the University of Minnesota in 1984 and, as an outgrowth of their work with the University of Minnesota, entered into a technology transfer agreement with the University of Minnesota that allowed them to form Minnesota IMPLAN Group, Inc. (MIG).

In 2013 Minnesota IMPLAN Group, Inc. was purchased by IMPLAN Group, LLC and relocated to:

IMPLAN Group, LLC
16740 Birkdale Commons Parkway Suite 206
Huntersville, NC 28078

Support hours are 8 am – 7 pm Eastern time and can be reached by email at info@implan.com or by phone at 651-439-4421 or 704-727-4141

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IMPLAN Software and Data

At first, IMPLAN focused on database development and provided data that could be used in the Forest Service version of the software. In 1995, IMPLAN took on the task of writing a new version of the IMPLAN software from scratch that extended the previous Forest Service version by creating an entirely new modeling system – an extension of input-output accounts and resulting Social Accounting Matrices (SAM) multipliers. Version 2 of the new IMPLAN software became available in May of 1999. The latest development of the software is now available, IMPLAN Version 3 Software System, the new economic impact assessment software system.

With IMPLAN Version 3 software, the packaging of products has changed. Version 3 utilizes 2007 or later data. When data are ordered, the data cost plus shipping are the only costs. Version 3.0 software and the new IMPLAN appliance are included in the cost of the data. There are no additional fees to upgrade to IMPLAN Version 3.0. Data files are licensed to an individual user. Version 2 is no longer compatible with 2008 and later data sets.

Version 3 allows the user to do much more detailed analyses. Users can continue to create detailed economic impact estimates. Version 3.0 takes the analysis further, providing a new method for estimating regional imports and exports is being implemented - a trade model. IMPLAN can construct a model for any state, region, area, county, or zip code area in the United States by using available national, state, county, and zip code level data. Impact analysis can be performed once a regional input/output model is constructed.

IMPLAN Multipliers

Five different sets of multipliers are estimated by IMPLAN, corresponding to five measures of regional economic activity. These are: total industry output, personal income, total income, value added, and employment. Two types of multipliers are generated. Type I multipliers measure the impact in terms of direct and indirect effects. Direct impacts are the changes in the activities of the focus industry or firm, such as the closing of a hospital. The focus business changes its purchases of inputs as a result of the direct impacts. This produces indirect impacts in other business sectors. However, the total impact of a change in the economy consists of direct, indirect, and induced changes. Both the direct and indirect impacts change the flow of dollars to the households. Subsequently, the households alter their consumption accordingly. The effect of the changes in household consumption on businesses in a community is referred to as an induced effect. To measure the total impact, a Type II (or Type SAM) multiplier is used. The Type II multiplier compares direct, indirect, and induced effects with the direct effects generated by a change in final demand (the sum of direct, indirect, and induced divided by direct).

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of Rural Nursing Homes**

APPENDIX B

**State Regulations Concerning Nursing Home Staffing Ratios
as Compared to Federal Nursing Home Staffing Regulations**

SOURCE:

**University of Minnesota, School of Public Health, Health Policy Management.
“Long Term Care”**

Website:

<http://www.hpm.umn.edu/nhregsplus/NH%20Regs%20by%20Topic/Topic%20Nursing%20Services%20-%20Staffing%20Ratios.html#descriptionfed>

August 2014

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APPENDIX B		
State Regulations Concerning Nursing Home Staffing Ratios as Compared to the Federal Nursing Home Staffing Regulations		
State	Goes beyond Federal Regulations?	Subjects Addressed: How State Differs From or Expands On Federal Regulations
Alabama	No	Alabama regulations do not contain specific content for staff ratios.
Alaska	Yes	Nursing and medical services requirements for registered nurse.
Arizona	No	Arizona regulations do not contain specific content for staff ratios.
Arkansas	Yes	(1) Day Shift - 1 licensed nurse to every forty (40) residents. Night Shift - (1) licensed nurse to every eighty (80) residents. Minimum direct-care staffing requirements; resident care needs and increases in staffing; posting; staffing home-style facilities.
California	Yes	3.0 nursing hours per patient day; if resident is certified for special treatment program, facility provides 2.3 nursing hours per patient day; extensive staffing requirements.
Colorado	Yes	2.0 hours of nursing time per resident day not counting DON, staff developer, and supervisors not providing direct nursing staff; exceptions.
Connecticut	Yes	In chronic and convalescent nursing homes: at least .47 per resident per day licensed nursing 7 a.m. to 9. p.m. and .17 licensed nursing per resident per day 9 p.m. to 7 a.m.; at least 1.40 total nursing per resident per day 7 a.m. to 9 p.m. and .50 total nursing pr resident per day 9 Op.m. to 7 a.m. ; in rest homes, at least .23 licensed nursing per resident per day from 7 a.m. to 9. p. m and .08 licensed nursing per resident per day from 9 p.m. to 7 a.m., and at least .70 total nursing per resident per day 7 a.m. to 9. p.m, and .17 total nursing per resident per day from 9 p.m. to 7 a.m.
Delaware	Yes	2.5 hours total direct care and treatment staff per-resident-day
District of Columbia	Yes	A minimum of 2 nursing staff employees per unit per shift and one licensed nurse per shift at all times; however no ratio linked to number of residents.
Florida	Yes	Minimum CNA staffing of 2.3 hours of direct care per resident per day beginning January 1, 2002, increasing to 2.6 hours of direct care per resident per day beginning January 1, 2003, and increasing to 2.9 hours of direct care per resident per day beginning July 1, 2006. Beginning January 1, 2002, no facility shall staff below one CNA per 20 residents, and a minimum licensed nursing staffing of 1.0 hour of direct resident care per resident per day but never below one licensed nurse per 40 residents.
Georgia	Yes	2 hours direct nursing per patient day; for every 7 total nursing staff, 1 must be RN or licensed nurses. Dining assistants do not count.
Hawaii	Yes	Nursing service requirements.
Idaho	Yes	SNF with 59 or less residents: 2.4 hours nursing services per resident day, and Supervising Nurse may be counted; in SNF with 60 + beds, 2.4 ratio but cannot count Supervising Nurse.
Illinois	Yes	In SNFs, there must be 2.5 hours nursing staff per resident day, 20% of which is licensed nurses; in ICF regular, 1.7 hours nursing staff per resident day, 20% of which is licensed nurses; for ICF light, 1 hour

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		nursing staff per resident day, 20% of which is licensed; staff must be deployed at least 40% of minimum hours on day shift; at least 25% on evening shift; at least 15% on night shift; additional elaborate instructions on how to calculate; additional staffing requirements.
Indiana	No	0.5 licensed nurse hour/resident/day averaged over a 1-week period; hours working as DON do not count to licensed staff hours; waiver exceptions.
Iowa	Yes	2 hours per resident day, 20% of which is licensed staff.
Kansas	Yes	Minimum of weekly average of 2.0 hours of direct care staff/resident and a daily average of no less than 1.85 hours/24 hour period. 1 licensed nurse staff member for 30 residents, but must have as many licensed nurses as nursing stations; DON may count if under 60 beds.
Kentucky	No	Kentucky regulations do not contain specific content for staff ratios.
Louisiana	Yes	Minimum of 1.5 total nursing services hours per resident per day
Maine	Yes	Day shift: 1 direct care provider/5 residents; Evening shift: 1 direct care provider/10 residents; Night shift: 1 direct care provider/15 residents. Requirements for multi-storied facilities.
Maryland	Yes	2.0 hours bedside care per licensed bed per day, 7 days per week. Ward clerk hours computed at 50% of time provided in nursing unit; DON included if provision of bedside care is documented. No less than 1 nursing personnel to 25 residents.
Massachusetts	Yes	Level I: minimum of 2.6 total hours per resident/day, at least 0.6 hours of licensed nurses. Level II: minimum of 2.0 hours per resident day, at least 0.6 hours by licensed nurses; Level III: minimum of 1.4 hours/resident/day, at least 0.4 hours by licensed nurses.
Michigan	Yes	Not less than 2.25 hours of total nursing care per resident day. Ratios by shift: Morning shift: 1:8; Afternoon shift: 1:12; Night shift 1:15.
Minnesota	Yes	Provide at least 2.0 total nursing hours per resident each 24 hours.
Mississippi	Yes	Provide at least 2.8 total nursing hours per resident each 24 hours. Alzheimer's care unit staffing.
Missouri	Yes	Minimum of 1 staff member is required for safety and protective oversight to residents at all times (around the clock); 1 additional staff person is required during specific periods when the number of residents require it.
Montana	Yes	Table provided for number of RNs, LPNs, and CNAs required for each shift by size of facility. The number of RNs required exceeds the federal minimums, and specific numbers of CNAs and LPNs are also required for various shifts and facility sizes.
Nebraska	Yes	2.8 hours total nursing per resident per day
Nevada	Yes	Nevada regulations do not contain specific content for staff ratios.
New Hampshire	Yes	New Hampshire regulations do not contain specific content for staff ratios.
New Jersey	Yes	Calculate staff by number of residents x 2.5 hours, plus add-ons for each resident receiving the following extra services: tracheotomy, 1.25 hours per day; use of respirator, 1.25 hours/day; head trauma stimulation or advanced neuromuscular/orthopedic care, 1.5 hours/day; Intravenous therapy, 1.5 hours/day; nasogastric feedings or gastronomy, 0.1 hours per day; wound care, 0.75 hours per day; and oxygen, 0.75 hours per day. 20% of total hours required must be provided by licensed nurses.
New Mexico	Yes	If any SNF care is offered, 2.5 total nursing staff required per resident per

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		day; in ICFs 2.3 hours per resident day; both calculated on 7 day average. Suggestion that for SNFs, actual staffing might approximate 1.8 hours per resident on day shift, 1.1 on evening and 1.13 on nights. For ICF, 1.7 for days, 1.1 for evenings, and 1.12 for nights is suggested.
New York	No	New York regulations do not contain specific content for staff ratios.
North Carolina	Yes	At least 2.1 total nursing hours per resident per day.
North Dakota	No	North Dakota regulations do not contain specific content for staff ratios.
Ohio	Yes	Personnel requirements, ratios, staffing schedules.
Oklahoma	No	Oklahoma regulations do not contain specific content for staff ratios.
Oregon	Yes	Each resident has CNA assigned. Maximum CNA assignments by shift: Day shift: (7am to 3pm, 10 residents; Swing shift: (3pm to 11pm), 15 residents; Night shift: (11pm to 7am), 25 residents; no less than 1 RN hour per resident per week.
Pennsylvania	Yes	Total nursing staff hours per resident per 24 hour period will be at least 2.7 hours.
Rhode Island	No	Rhode Island regulations do not contain specific content for staff ratios.
South Carolina	Yes	Non-licensed staff ratios by shift: days, 9 residents to 1 staff; evenings, 13 residents to 1 staff; and nights, 22 residents to 1 staff. If 12 hour shifts are used, staffing for day shift applies to day 12 hour shift, and staffing for night shift applies to night 12 hour shift.
South Dakota	No	Rhode Island regulations do not contain specific content for staff ratios.
Tennessee	Yes	2 hours total nursing per resident per day; ratio must include .4 hours licensed nurse per resident per day.
Texas	Yes	1 licensed staff per 20 residents in 24 hour period, and at least .4 hours licensed nurse staff per resident per day;
Utah	Yes	Staffing requirements for small health care facilities.
Vermont	Yes	3.0 hours total care staff per resident day, calculated weekly, including nursing care, personal care and restorative nursing care, but not including administration or supervision of staff. Of the three hours of direct care, no fewer than 2 hours per resident per day must be assigned to provide standard LNA care (sic) (such as personal care, assistance with ambulation, feeding, etc.) performed by LNAs (sic) or equivalent staff and not including meal preparation, physical therapy or the activities program.
Virginia	No	Virginia regulations do not contain specific content for staff ratios.
Washington	No	Washington regulations do not contain specific content for staff ratios.
West Virginia	Yes	Table provided for hours per day total nursing and FTEs of nursing personnel by size of facility. For example, a nursing home of 60-69 beds must have 135 nursing hours per day and 17 FTEs per day.
Wisconsin	Yes	2.25 total hours per day for residents in need of skilled nursing care; 2.0 total hours for resident in need of intermediate nursing care; 1.25 hours of nursing personnel/day/resident in need of limited nursing care, 20% provided by licensed nurses; 0.5 hours of patient care personnel/day/resident in need of personal care.
Wyoming	Yes	2.25 total nursing for resident needing skilled care; and 1.5 for those needing only non-skilled care.

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SOURCE: University of Minnesota, School of Public Health, Health Policy Management. "Long Term Care." Available at: <http://www.hpm.umn.edu/nhregsplus/>. Accessed: August 2014.

**Models to Estimate the Economic Impact of a
Rural Nurse Practitioner or Physician Assistant**

APPENDIX C

TEMPLATE:

Rural Nursing Home Economic Impact Study (Fill-In the Blanks)

An Overview of Nursing Homes and the Economic Impact of Rural Nursing Homes

The Economic Impact of <name of nursing home> on <name of county or community medical service area>

Nursing homes are typically one of the large employers in rural communities, particularly in rural communities without a local hospital. Nursing homes supply jobs and labor income to their rural economies. With increasing life expectancies and increasing elderly population (from the aging of the Baby Boomers), demand for nursing homes may increase in the future. This increased demand will drive growth in the nursing home industry, which will, in turn, stimulate additional economic activity. Nursing homes must thrive economically to provide high quality care to residents and good jobs to local workers.

Nursing homes not only provide an essential service for an extremely vulnerable population, but employ a substantial segment of the health care workforce. With nursing homes' reliance on Medicaid and Medicare funding, any changes in Medicaid and Medicare reimbursement impact the survival of rural nursing homes. Our community is concerned with the financial viability of our local nursing home. Our community wants to emphasize the economic impact of <name of nursing home> to our local economy.

Illustration of Community or County Economic System

This study is to illustrate the economic impact of <name of nursing home> on <name of county or community medical service area>. The <name of nursing home> provides <number of direct nursing home employees> to the <name of county or community medical service area> economy with <amount of direct nursing home wages, salaries, and benefits> in wages, salaries, and benefits (labor income).

The direct impacts of <name of nursing home>, measured by employment and wages, salaries, and benefits (labor income), are only a portion of the total impact. There are additional economic impacts created as <name of nursing home> and its employees spend money. These are known as secondary impacts and are measured by multipliers using an input-output model and data from IMPLAN (the model and data are further discussed in **Appendix A**). This model is widely used by economists and other academics across the U.S.

A brief description of the input-output model and the multiplier effect is included and illustrated in **Figure 1**. **Figure 1** illustrates the major flows of goods, services, and dollars of any economy. The businesses which sell some or all of their goods and services to buyers outside of the community are the foundation of a community's economy. Such a business is a basic industry. The flow of products out of, and dollars into, a community are represented by the two arrows in the upper right portion of **Figure 1**. To produce these goods and services for "export" outside of the community, the basic industry purchases inputs from outside of the community (upper left portion of **Figure 1**), labor from the residents or "households" of the community (left side of **Figure 1**), and inputs

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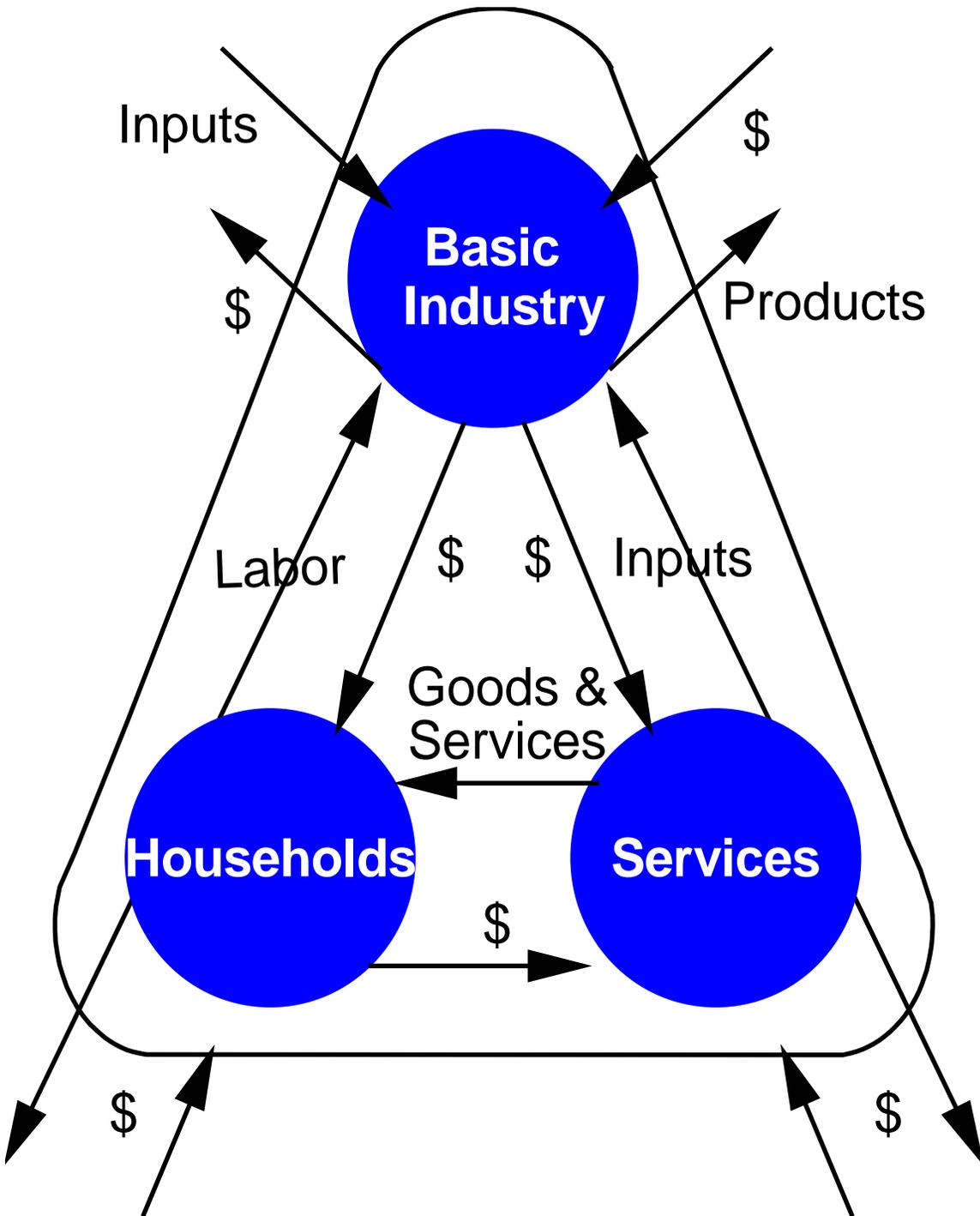


Figure 1
Community or County Economic System

An Overview of Nursing Homes and the Economic Impact of Rural Nursing Homes

from service industries located within the community (right side of **Figure 1**). The flow of labor, goods, and services in the community is completed by households using their earnings to purchase goods and services from the community's service industries (bottom of **Figure 1**). It is evident from the interrelationships shown in **Figure 1** that a change in any one segment of a community's economy will have reverberations throughout the entire economic system of the community.

Consider, for instance, the closing of a hospital. The services sector will no longer pay employees and the dollars going to households will stop. Likewise, the hospital will not purchase goods from other businesses, and the dollar flow to other businesses will stop. This decreases income in the "households" segment of the economy. Since earnings would decrease, households decrease their purchases of goods and services from businesses within the "services" segment of the economy. This, in turn, decreases these businesses' purchases of labor and inputs. Thus, the change in the economic base works its way throughout the entire local economy.

The total impact of a change in the economy consists of direct, indirect, and induced impacts. Direct impacts are the changes in the activities of the impacting industry, such as the closing of a hospital. The impacting business, such as the hospital, changes its purchases of inputs as a result of the direct impact. This also produces an indirect impact in the business sectors. Both the direct and indirect impacts change the flow of dollars to the community's households. The households alter their consumption accordingly. The effect of this change in household consumption upon businesses in a community is referred to as an induced impact.

A measure is needed that yields the effects created by an increase or decrease in economic activity. In economics, this measure is called the multiplier effect. Multipliers are used in this report. An employment multiplier is defined as:

“...the ratio between direct employment, or that employment used by the industry initially experiencing a change in final demand and the direct, indirect, and induced employment.”

An employment multiplier of 1.90 indicates that if one job is created by a new industry, 0.90 jobs are created in other sectors due to business (indirect) and household (induced) spending. The same concept applies to labor income and output multipliers.

The Economic Impact of <name of nursing home>

The economic impacts of <name of nursing home> are illustrated in the table. <(add a few sentences about local nursing home here, if applicable).>

The direct employment impact is <number of direct nursing home employees> employees; these are the employees that work directly for <name of nursing home>. The average nursing and residential care employment multiplier is <nursing and residential care employment multiplier>. After applying the average nursing and residential care employment multiplier of <nursing and residential care employment multiplier>, the secondary employment impact is <number of

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secondary impact employees> employees (<number of direct nursing home employees> x [<nursing and residential care employment multiplier>-1.00] = <number of secondary impact employees>) and the total employment impact is <number of total impact employees> employees (<number of direct nursing home employees> x <nursing and residential care employment multiplier> = <number of total impact employees>). The total direct labor income (wages, salaries, and benefits) impact is <amount of direct nursing home wages, salaries, and benefits>. After applying the average nursing and residential care labor income multiplier of <nursing and residential care labor income multiplier>, the secondary labor income impact is <amount of secondary labor income impact> and the total labor income impact is <amount of total labor income impact>.

Economic Impact of <name of nursing home> on the <name of county or community medical service area>

EMPLOYMENT IMPACT	
Direct Employment Impact (FTEs)	<number of direct nursing home employees>
Employment Multiplier	<nursing and residential care employment multiplier>
Secondary Employment Impact	< number of secondary impact employees>
Total Employment Impact	<number of total impact employees>
LABOR INCOME IMPACT	
Direct Labor Income* Impact	<amount of direct nursing home wages, salaries, and benefits>
Labor Income Multiplier	<nursing and residential care labor income multiplier>
Secondary Labor Income Impact	<amount of secondary labor income impact>
Total Labor Income Impact	<amount of total labor income impact>

* Labor income includes annual wages, salaries, and benefits.

An Overview of Nursing Homes and the Economic Impact of Rural Nursing Homes

Summary

<name of nursing home> employs a significant number of people in <name of county or community medical service area>. The total employment impact is <number of total impact employees> and the total labor income impact is <amount of total labor income impact>. These impacts are from the operation of <name of nursing home> and occur every year and will continue to occur each and every year that <name of nursing home> remains in operation in the future. These are long term economic benefits of <name of nursing home>.

With the longer life expectancies and the projected increase in elderly population, <name of nursing home> is increasingly important to <name of county or community medical service area>. The impacts of <name of nursing home> contribute to the local economy of <name of county or community medical service area>. <name of nursing home> employs a significant number of employees. The nursing home and its employees spend money in <name of county or community medical service area>. This generates a secondary impact in the economy. If <name of nursing home> decreases in size, <name of nursing home> may no longer be able to meet the needs of the increasing elderly population and this may also adversely impact the economic health of <name of county or community medical service area>.

Quality nursing home services are important, because they not only contribute to the overall economic health of <name of county or community medical service area>, but they also contribute to the overall health and welfare of the residents of <name of county or community medical service area>.

Models to Estimate the Economic Impact of a Rural Nurse Practitioner or Physician Assistant

Fields Needed to Complete Template

<name of nursing home>

<name of county or community medical service area>

<number of direct nursing home employees>

<amount of direct nursing home wages, salaries, and benefits>

<*add a few sentences about local nursing home here, if applicable*>

<nursing and residential care employment multiplier>

<number of secondary impact employees>

<number of total impact employees>

< nursing and residential care labor income multiplier>

<amount of secondary labor income impact>

<amount of total labor income impact>