



October 2016

**Economic Impact of Rural Health Care**  
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Rural health providers deliver health care services to rural residents and rural residents are aware of the importance in having their local health care services available. Access to quality health care is needed by residents, workers and visitors. Retention of local health care services and local health care jobs is a concern in rural areas. Rural areas often have higher unemployment than urban areas.<sup>27</sup> Therefore, retaining local health care jobs becomes even more important. The economic contributions that rural health care provides to the local community are also important. An overview of health care impacts is presented in the next few pages.

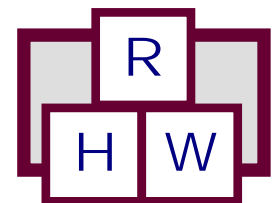
**National Health Impact**

Health services are extremely important in rural areas for their medical contributions as well as their economic contributions. Health services in rural communities are needed to attract business and industry and to attract and retain retirees.<sup>1,2,3,4,5,6</sup> On average, fourteen percent of total employment in rural communities is attributed to the health sector.<sup>7</sup>

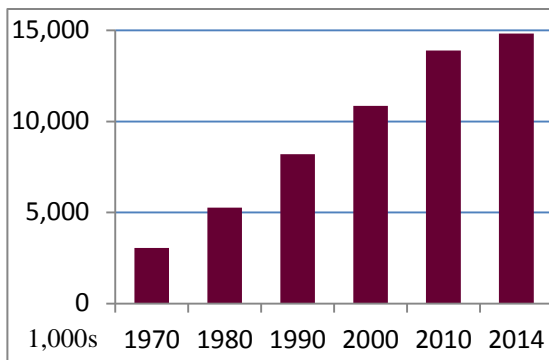
Since rural health data are not available, national health data, adjusted for inflation, are presented:

- National employment increased over 385 percent from 3.1 million in 1970 to 14.8 million in 2014.<sup>8,9</sup>
- In general, health care jobs are higher paying jobs with benefits compared to other industries.<sup>9</sup>
- Per capita health expenditures increased from \$355 per year in 1970 to \$9,523 per year in 2014 and are projected to increase to \$16,032 in 2025.<sup>10</sup>
- Health care expenditures as a percent of gross domestic product increased from 6.9% in 1970 to 13.3% in 2000 to 17.5% in 2014.
- Health care expenditures as a percent of gross domestic product are projected to increase to 20.1 percent in 2025.<sup>10</sup>

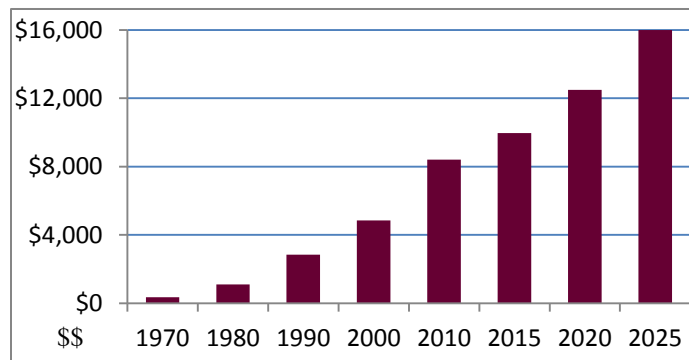
*This work was supported by the Federal Office of Rural Health Policy (FORHP), Health Resources and Services Administration (HRSA), U.S. Department of Health and Human Services (HHS) as an activity under cooperative agreement with the National Rural Health Association U16RH03702. The information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS, or the U.S. Government. For more information, contact National Center. Email: gad@okstate.edu, cheryl@okstate.edu, or eilrich@okstate.edu.*



**Health Care Sector Employment,  
Actual 1970-2014 <sup>8,9</sup>**



**Per Capita Health Care Expenditures,  
Actual 1970-2014 and Projected 2015-2025 <sup>10</sup>**



**Impact of a Critical Access Hospital, 2016 <sup>11</sup>**

Data were collected for 91 critical access hospitals (CAHs) representing 18 states, spanning the years from 2013 to 2016. A CAH directly employs 127 jobs with wages, salaries and benefits of \$6.0 million. After applying the multipliers, the total impact (direct and secondary) of a CAH is 170 jobs with \$7.1 million in wages, salaries, and benefits. The impact from operations occurs annually each and every year the CAH remains operating.

A CAH generates an average of nine direct construction jobs per every million dollars of construction expenditures. Direct construction wages, salaries and benefits average \$322,551. The total impact (direct and secondary) from each million dollars of construction expenditures is 11 jobs with wages, salaries, and benefits of \$403,189. The impact from construction occurs only during the year of construction.

**Impact of a Critical Access Hospital, 2016 <sup>11</sup>**

	<b>Employment</b>	<b>Wages, Salaries &amp; Benefits</b>	<b>Retail Sales</b>
<b>Operations</b>			
Direct Impact	<u>127</u>	<u>\$6.0 million</u>	
Total Impact (Direct & Secondary)	<u>170</u>	<u>\$7.1 million</u>	
Retail Sales Impact			<u>\$1.8 million</u>
<b>Construction Per \$1 Million of Expenditures</b>			
Direct Impact	<u>9</u>	<u>\$322,551</u>	
Total Impact	<u>11</u>	<u>\$403,189</u>	
Retail Sales Impact			<u>\$100,797</u>

A rural hospital is one of the largest employers in a rural economy, typically one of the top two employers. <sup>12</sup> Community members appreciate the role that the hospital plays in providing a first line of defense in a medical emergency. <sup>13</sup> Board members appreciate that they are working to assure access to primary care at the local level. <sup>13</sup>

## Potential Impact of Recent Hospital Closure, 2015 <sup>14</sup>

Data were collected for 16 rural hospital closures from January 2010 to October 2014 representing 13 states. The sample of 16 rural hospital closures is based on hospital closures in the RUCA designated communities of 7 or greater and those hospital closures that had complete Medicare cost report data available.

The average direct loss from a hospital closure was 73 jobs and \$4.4 million in wages, salaries, and benefits. The average total loss impact (direct and secondary) from a hospital closure was 99 jobs and \$5.3 million in wages, salaries, and benefits. The ranges of potential loss impacts are also illustrated.

### Average Potential Loss Impacts and Ranges of Potential Loss Impacts from Rural Hospital Closures, 2015 <sup>14</sup>

	Employment	Wages, Salaries & Benefits
<b>Average Potential Loss Impacts</b>		
Direct Impact	<u><b>73 jobs</b></u>	<u><b>\$4.4 million</b></u>
Total Impact (Direct & Secondary)	<u><b>99 jobs</b></u>	<u><b>\$5.3 million</b></u>
<b>Range of Potential Loss Impacts</b>		
Direct Impact	<u><b>19 jobs to 139 jobs</b></u>	<u><b>\$0.7 million to \$7.9 million</b></u>
Total Impact (Direct & Secondary)	<u><b>26 jobs to 188 jobs</b></u>	<u><b>\$0.9 million to \$9.5 million</b></u>

Increasing costs and decreasing volumes combined with lower federal reimbursement and sequestration cuts have rural hospitals confronting difficult financial challenges. As of March 16, 2016, the North Carolina Rural Health Research Program reports that 71 rural hospitals have closed since January 2010. <sup>15</sup> In February 2016, Ivantage Health Analytics states that another 673 rural hospital are vulnerable or at risk for closure. <sup>16</sup> Of these 673 rural hospitals, 210 were found to be the most vulnerable, with 463 more, deemed to be less, but still very much at risk. <sup>16</sup> A rural hospital is often one of the largest providers of higher-skilled and higher wage employment in a rural community. After a hospital closes, many hospitals/communities may retain some services in the community; i.e. urgent care clinic, physician clinic, etc. The impact of a hospital closure is the net loss of jobs to the community. Once a hospital closes in a rural community, the local economy experiences a severe decline. <sup>17</sup>

### Impact of Representative Prospective Payment System (PPS) Hospitals, 2015 <sup>19</sup>

For the 26-50 bed PPS hospitals, data were collected from a sample of 82 out of 221 total 26-50 bed PPS hospitals (37.1 percent); twelve states were represented in the sample. The average direct impact of a 26-50 bed PPS hospital was 185 jobs with \$11.8 million in wages, salaries, and benefits. The average total impact (direct and secondary) of a 26-50 bed PPS hospital was 259 jobs with \$14.3 million in wages, salaries, and benefits.

For the 51-100 bed PPS hospitals, data were collected from a sample of 49 out of 131 total 51-100 bed PPS hospitals (37.4 percent); seven states were represented in the sample. The average direct impact of a 51-100 bed PPS hospital was 287 jobs with \$19.9 million in wages, salaries, and benefits. The average total impact (direct and secondary) of a 51-100 bed PPS hospital was 413 jobs with \$24.9 million in wages, salaries, and benefits.

**Average Impacts of PPS Hospitals, 2015 <sup>19</sup>**

	<b>Employment</b>	<b>Wages, Salaries, &amp; Benefits</b>
<b>26-50 Bed PPS Hospitals</b>		
Direct Impact	<u><b>185 jobs</b></u>	<u><b>\$11.8 million</b></u>
Total Impact (Direct & Secondary)	<u><b>259 jobs</b></u>	<u><b>\$14.3 million</b></u>
<b>51-100 Bed PPS Hospitals</b>		
Direct Impact	<u><b>287 jobs</b></u>	<u><b>\$19.9 million</b></u>
Total Impact (Direct & Secondary)	<u><b>413 jobs</b></u>	<u><b>\$24.9 million</b></u>

**Impact of Independent Rural Health Clinics, 2016 <sup>20</sup>**

The direct employment and wages, salaries, and benefits of an independent rural health clinic with an FTE (full-time equivalent) employed physician were derived from a sample of 1,261 independent rural health clinics. For the independent rural health clinics *without* an employed physician, the sample included 218 independent rural health clinics. The multipliers were averaged from 414 rural counties with independent rural health clinics and were from 17 states.

The results for the independent rural health clinic with an FTE employed physician were direct impact of 9.7 jobs with wages salaries and benefits of \$0.8 million. The total impact (direct and secondary) of the independent rural health clinics with an FTE employed physician included 12.6 jobs with wages, salaries, and benefits of \$1.0 million.

The results for the independent rural health clinics *without* an employed physician were direct impact of 4.9 jobs with wages, salaries, and benefits of \$0.4 million. The total impact (direct and secondary) of the independent rural health clinics *without* an employed physician included 6.3 jobs and \$0.5 million.

**Impact of an Independent Rural Health Clinic, 2016 <sup>20</sup>**

	<b>Employment</b>	<b>Wages, Salaries, &amp; Benefits</b>
<b>RHCs with an FTE employed physician</b>		
Direct Impact	<u><b>9.7 jobs</b></u>	<u><b>\$827,294</b></u>
Total Impact (Direct and Secondary)	<u><b>12.6 jobs</b></u>	<u><b>\$1,009,299</b></u>
<b>RHCs without an employed physician</b>		
Direct Impact	<u><b>4.9 jobs</b></u>	<u><b>\$372,845</b></u>
Total Impact (Direct and Secondary)	<u><b>6.3 jobs</b></u>	<u><b>\$454,871</b></u>

### **Rural Primary Care Physician Impact from Clinic and Hospital, 2016 <sup>21</sup>**

The physician clinic direct employment and wages, salaries, and benefits were derived from a sample of 1,261 independent rural health clinics. The hospital direct employment and wages, salaries, and benefits were from 102 critical access hospitals in 19 states. The physician clinic multipliers were averaged from 414 rural clinic counties in 17 states. The hospital multipliers were averaged from 115 rural hospital counties in 16 states.

One rural primary care physician (one physician or two NP/PAs) generates direct clinic employment impact of five jobs with \$0.4 million in wages, salaries, and benefits and direct hospital employment impact of 14.5 jobs with \$0.7 million in wages, salaries, and benefits. The total direct impacts of a rural primary care physician are 19.5 jobs with \$1.2 million in wages, salaries, and benefits. The grand total impact (direct and secondary) of a rural primary care physician includes 26.3 jobs with \$1.4 million in wages, salaries, and benefits.

#### **Impact of a Rural Primary Care Physician from Clinic and Hospital, 2016 <sup>21</sup>**

	<b>Employment</b>	<b>Wages, Salaries, &amp; Benefits</b>
<b>Direct Impacts</b>		
From Physician Clinic	<b>5.0 jobs</b>	<b>\$445,473</b>
From Local Hospital	<b><u>14.5 jobs</u></b>	<b><u>\$716,793</u></b>
Total Direct Impacts	<b><u>19.5 jobs</u></b>	<b><u>\$1,162,266</u></b>
<b>Total Impacts (Direct and Secondary)</b>		
From Physician Clinic	<b>6.6 jobs</b>	<b>\$525,658</b>
From Local Hospital	<b><u>19.7 jobs</u></b>	<b><u>\$860,152</u></b>
Total Impacts	<b><u>26.3 jobs</u></b>	<b><u>\$1,385,810</u></b>

Availability of adequate primary care services is essential for a strong health care system. <sup>7</sup> The total impact of a rural primary care physician is greater than the employment and wages, salaries, and benefits created from the physician clinic. A rural primary care physician generates economic impacts at the local hospital from inpatient admissions and outpatient referrals. The employment opportunities and the resulting wages, salaries, and benefits make the health care system an extremely important part of the local economy.

### **Impact of Rural Nurse Practitioner or Physician Assistant (NP/PA), 2014 <sup>22</sup>**

Data are based on CMS and HRSA productivity estimates to characterize alternative scenarios and address the regulation differences across states. <sup>23,24</sup> The impact of an NP/PA is based on the rural primary care physician study completed in 2013. <sup>25</sup> The ranges represent different patient visits of NP/PAs practicing rural primary care. Average multipliers were based on IMPLAN data for the county locations of 31 rural hospitals located in 13 states.

The four sample scenarios had direct employment impact ranging from 3.3 to 13.4 jobs and wages, salaries, and benefits impact ranging from \$235,694 to \$764,027. The total impact (direct and

secondary) from a rural NP/PA providing primary care to local residents ranged from 4.4 to 18.5 local jobs and from \$280,476 to \$940,892 in wages, salaries and benefits impact.

**Impact of a Rural Nurse Practitioner or Physician Assistant, 2014 <sup>22</sup>**

	<u>Employment</u>	<u>Wages, Salaries, &amp; Benefits</u>
Direct Impact	<u>3.3 to 13.4 jobs</u>	<u>\$235,694 to \$764,027</u>
Total Impact (Direct and Secondary)	<u>4.4 to 18.5 Jobs</u>	<u>\$280,476 to 940,892</u>

There is increased consideration to utilize NP/PAs for primary care delivery to address the increasing demands for health care services.

**Rural General Surgeon Impact, 2010 <sup>26</sup>**

Data were obtained from the 2008 Medical Group Management Association Physician Compensation and Production Survey, <sup>27,28</sup> U. S. Department of Labor, Bureau of Labor Statistics, <sup>29</sup> and from ten hospitals in three states.

A rural general surgeon generates direct revenues of \$2.0 million, direct employment of 19 jobs, and direct wages, salaries, and benefits of \$1.2 million. A rural general surgeon generates total impact (direct and secondary) of \$2.7 million in revenue, 26 jobs, and \$1.4 million in wages, salaries, and benefits.

**Impact of a Rural General Surgeon, 2010 <sup>26</sup>**

	<u>Revenues</u>	<u>Employment</u>	<u>Wages, Salaries, &amp; Benefits</u>
Direct Impact	<u>\$2.0 million</u>	<u>19 jobs</u>	<u>\$1.2 million</u>
Total Impact (Direct & Secondary)	<u>\$2.7 million</u>	<u>26 jobs</u>	<u>\$1.4 million</u>

Specialty physician services such as general surgery can significantly impact the financial stability of the hospital. <sup>30</sup> In addition to inpatient visits, general surgeons generate significant outpatient activity that increases hospital net revenue. <sup>30</sup>

**Impact of a Rural Dentist, 2014 <sup>31</sup>**

Data were collected from 13 dental clinics including 24 dentists from four states. The data were used to estimate the number of direct jobs and wages, salaries, and benefits per dentist.

The average direct impact of a rural dentist was five jobs with wages, salaries, and benefits of \$338,797. When the secondary benefits are included, the total average employment impact will be seven jobs with total average wages, salaries, and benefits impact of \$401,084.

## Impact of a Rural Dentist, 2014 <sup>31</sup>

	Employment	Wages, Salaries, & Benefits
Direct Impact	<u>5 jobs</u>	<u>\$338,797</u>
Total Impact (Direct & Secondary)	<u>7 Jobs</u>	<u>\$401,084</u>

### Conclusion

The economic contribution of rural health care can be measured for any particular health care service or activity. Other areas that impacts have been measured include community health centers, nursing homes, etc. The specific economic impact of your facility or health care agency can be measured by multipliers specific to your geographic area. Be sure to call for more information or see the website: [www.ruralhealthworks.org](http://www.ruralhealthworks.org).

**For additional information on the economic contribution of rural health care, go to the National Center for Rural Health Works website: [www.ruralhealthworks.org](http://www.ruralhealthworks.org) or email: [gad@okstate.edu](mailto:gad@okstate.edu), [cheryl@okstate.edu](mailto:cheryl@okstate.edu), or [eilrich@okstate.edu](mailto:eilrich@okstate.edu).**

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