

# Overview of Updated and New Rural Health Economic Tools

by  
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## Objectives

### 1. Update on New Tools

- Impact of Nurse Practitioner/Physician Assistant on Rural Economy
- Impact of Nursing Home on Rural Economy
- Impact of Rural Dentist

### 2. Summary of All Economic Impact Tools

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## Economic Impact of a Rural NP/PA

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### Objective of Study

Estimate the economic impact on employment and labor income. Impacts include:

- Clinic employment and labor income.
- Local hospital employment and labor income.

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### Four Scenarios

#### Scenario 1

NP/PA(s) working with physician, generating clinic activity and hospital activity defined as **40 percent** of a primary care physician.

#### Scenario 2

NP/PA(s) working with physician, generating clinic activity and hospital activity defined as **50 percent** of a primary care physician.

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### Four Scenarios

#### Scenario 3

NP/PA(s) working with physician, generating clinic activity and hospital activity defined as **75 percent** of a primary care physician.

#### Scenario 4

**NP(s) working in a rural clinic independently with no hospital activity.**

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| 2012 Direct Impact<br>from Rural Primary Care Physician |             |                    |
|---|-------------|--------------------|
|   | Employment  | Labor Income       |
| Clinic  | 4.0         | \$395,024          |
| Hospital  | <u>13.5</u> | <u>\$704,444</u>   |
| <b>Total</b>  | <b>17.5</b> | <b>\$1,099,468</b> |

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| 2013 Direct Impact from Rural NP/PA |            |                  |
|-------------------------------------|------------|------------------|
|                                     | Employment | Labor Income     |
| Scenario 1 (40 Percent)             |            |                  |
| Clinic                              | 2.2        | \$187,512        |
| Hospital                            | <u>5.4</u> | <u>\$281,778</u> |
| <b>Total</b>                        | <b>7.6</b> | <b>\$469,290</b> |
| Scenario 2 (50 Percent)             |            |                  |
| Clinic                              | 2.5        | \$201,278        |
| Hospital                            | <u>6.8</u> | <u>\$469,290</u> |
| <b>Total</b>                        | <b>9.3</b> | <b>\$553,500</b> |

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| 2013 Direct Impact from Rural NP/PA |             |                  |
|-------------------------------------|-------------|------------------|
|                                     | Employment  | Labor Income     |
| Scenario 3 (75 Percent)             |             |                  |
| Clinic                              | 3.3         | \$235,694        |
| Hospital                            | <u>10.1</u> | <u>\$528,333</u> |
| <b>Total</b>                        | <b>13.4</b> | <b>\$764,027</b> |
| Scenario 4 (Independent NP Clinic)  |             |                  |
| Clinic                              | 3.3         | \$235,694        |
| Hospital                            | <u>0.0</u>  | <u>\$0</u>       |
| <b>Total</b>                        | <b>3.3</b>  | <b>\$235,694</b> |

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| 2013 Employment Impact from Rural NP/PA |            |            |              |
|---|------------|------------|--------------|
|   | Employment | Multiplier | Total Impact |
| Scenario 1 (40 Percent)                 |            |            |              |
| Clinic                                  | 2.2        | 1.33       | 2.9          |
| Hospital                                | <u>5.4</u> | 1.40       | <u>7.6</u>   |
| <b>Total</b>                            | <b>7.6</b> |            | <b>10.5</b>  |
| Scenario 2 (50 Percent)                 |            |            |              |
| Clinic                                  | 2.5        | 1.33       | 3.3          |
| Hospital                                | <u>6.8</u> | 1.40       | <u>9.5</u>   |
| <b>Total</b>                            | <b>9.3</b> |            | <b>12.8</b>  |

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| 2013 Employment Impact from Rural NP/PA |             |            |              |
|---|-------------|------------|--------------|
|   | Employment  | Multiplier | Total Impact |
| Scenario 3 (75 Percent)                 |             |            |              |
| Clinic                                  | 3.3         | 1.33       | 4.4          |
| Hospital                                | <u>10.1</u> | 1.40       | <u>14.1</u>  |
| <b>Total</b>                            | <b>13.4</b> |            | <b>18.5</b>  |
| Scenario 4 (Independent NP Clinic)      |             |            |              |
| Clinic                                  | 3.3         | 1.33       | 4.4          |
| Hospital                                | <u>0.0</u>  | 1.40       | <u>0.0</u>   |
| <b>Total</b>                            | <b>3.3</b>  |            | <b>4.4</b>   |

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| 2013 Labor Income Impact from Rural NP/PA |                  |            |                  |
|---|------------------|------------|------------------|
|   | Labor Income     | Multiplier | Total Impact     |
| Scenario 1 (40 Percent)                   |                  |            |                  |
| Clinic                                    | \$187,512        | 1.19       | \$223,139        |
| Hospital                                  | <u>\$281,778</u> | 1.25       | <u>\$352,223</u> |
| <b>Total</b>                              | <b>\$469,290</b> |            | <b>\$575,362</b> |
| Scenario 2 (50 Percent)                   |                  |            |                  |
| Clinic                                    | \$201,278        | 1.19       | \$239,521        |
| Hospital                                  | <u>\$352,222</u> | 1.25       | <u>\$440,278</u> |
| <b>Total</b>                              | <b>\$469,290</b> |            | <b>\$679,799</b> |

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| 2013 Labor Income Impact from Rural NP/PA |                  |            |                  |
|---|------------------|------------|------------------|
|   | Labor Income     | Multiplier | Total Impact     |
| Scenario 3 (75 Percent)                   |                  |            |                  |
| Clinic                                    | \$235,694        | 1.19       | \$280,476        |
| Hospital                                  | <u>\$528,333</u> | 1.25       | <u>\$660,416</u> |
| <b>Total</b>                              | <b>\$764,027</b> |            | <b>\$940,892</b> |
| Scenario 4 (Independent NP Clinic)        |                  |            |                  |
| Clinic                                    | \$235,694        | 1.19       | \$280,476        |
| Hospital                                  | <u>\$0</u>       | 1.25       | <u>\$0</u>       |
| <b>Total</b>                              | <b>\$235,694</b> |            | <b>\$280,476</b> |

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**Economic Impact of Rural  
Nursing Homes**

By:  
 Cheryl F. St. Clair  
 Gerald A. Doeksen  
 Fred C. Eilrich

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- Objective of Study
- Provide overview of nursing home data.
  - Illustrate economic impact of rural nursing homes on local economies.
  - Three nursing homes scenarios developed with economic impacts.
  - Tools provided for rural communities to develop an economic impact study of their local nursing home.

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## Rural Nursing Home Sample

- Took random sample of 20 % of critical access hospitals.
- Utilized zip codes of CAH random sample and identified all nursing homes with same zip codes from the "Official Nursing Home Compare Database" (database).
- Rural nursing home sample includes 313 identified rural nursing homes, representing 2.0 % of the database nursing homes.

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### PRELIMINARY RESULTS: Rural Nursing Home Scenarios

| 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 FTE's Staffing                            | 56          | 112         | 118         |
| Total Wages, Salaries & Benefits (Labor Income) | \$2,648,401 | \$5,245,712 | \$5,820,689 |
| Average Wages, Salaries, & Benefits per FTE     | \$47,293    | \$46,837    | \$49,328    |

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### PRELIMINARY RESULTS: Economic Impacts of Rural Nursing Home Scenarios

| Table 12<br>Employment and Labor Income Impacts<br>for the Three Nursing Home Scenarios, 2014 |             |             |             |
|---|-------------|-------------|-------------|
|   | Scenario 1  | Scenario 2  | Scenario 3  |
|   | 50 Beds     | 100 beds    | 100 beds    |
|   | No SNF      | No SNF      | With SNF    |
| <b>EMPLOYMENT IMPACT</b>  |             |             |             |
| 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         |
| <b>LABOR INCOME IMPACT</b>  |             |             |             |
| 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 |

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**Template to Build Economic Impact  
of Your own Local Nursing Home**

| TEMPLATE<br>The Economic Impact of OUR NURSING HOME<br>on OUR LOCAL ECONOMY, YEAR |       |     |
|---|-------|-----|
| <b>EMPLOYMENT IMPACT</b>  |       |     |
| Direct Employment Impact <sup>1</sup>   | _____ | (A) |
| Employment Multiplier   | _____ | (B) |
| Secondary Employment Impact   | _____ | (C) |
| Total Employment Impact   | _____ | (D) |
|   |       | (A) |
| <b>LABOR INCOME IMPACT</b>  |       |     |
| Direct Labor Income Impact*   | _____ | (E) |
| Labor Income Multiplier   | _____ | (F) |
| Secondary Labor Income Impact   | _____ | (G) |
| Total Labor Income Impact   | _____ | (H) |

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**Template to Build Economic Impact  
of Your own Local Nursing Home**

(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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**TEMPLATE – Rural Nursing Home Economic Impact**

**The Economic Impact of XYZ Nursing Home on the ABC County Economy**

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.

..... *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.*

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**Preliminary Results**

- These are preliminary results.
- “An Overview of Nursing Homes and the Economic Impact of Rural Nursing Homes” is in the final stages of completion and will be available in the near future.

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**Economic Impact of a Rural Dentist**

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**Objective of Study**

Estimate the economic impact to employment and labor income. Impacts include:

- Clinic employment and labor income (wages, salaries and benefits).

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Impact Data

Direct Employment and Income Data

- 24 dentists in rural Oklahoma, West Virginia, Pennsylvania and Nevada.

Secondary Impact

- Employment and labor income multipliers from IMPLAN.

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Average Direct Impacts of a Rural Dentist

| Employees         | Full-time equivalent Employees | Labor Income     |
|-------------------|--------------------------------|------------------|
| Dentist           | 1                              | \$185,603        |
| Dental Hygienist  | 1                              | \$60,482         |
| Dental Assistants | 1.5                            | \$44,192         |
| Office/Receptions | <u>1.5</u>                     | <u>\$48,520</u>  |
| <b>Total</b>      | <b>5</b>                       | <b>\$338,797</b> |

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Average Employment Impact of a Rural Dentist

| Health Sector Component | Direct Impact | Employment Multiplier | Secondary Impact | Total Impact |
|-------------------------|---------------|-----------------------|------------------|--------------|
| Dentist                 | 5             | 1.36                  | 2                | <b>7</b>     |

Average Labor Income Impact of a Rural Dentist

| Health Sector Component | Direct Impact | Income Multiplier | Secondary Impact | Total Impact     |
|-------------------------|---------------|-------------------|------------------|------------------|
| Dentist                 | \$338,797     | 1.18              | \$62,286         | <b>\$401,084</b> |

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### Rural Dentist Summary

Rural Dentist has a huge economic impact:

- Seven jobs.
- \$401,000 in labor income (wages, salaries and benefits).

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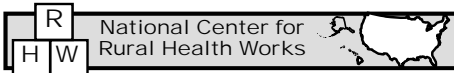
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### Summary - Economic Impact Studies

- Impact of Health Sector on State Economy
- Impact of Hospitals on a State Economy
- Impact of Medicaid on a State Economy
- Impact of a Medical School on a Community, Regional, and/or State Economy



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### Summary - Economic Impact Studies

- Impact of Telehealth on a Community, Regional, and/or State Economy
- Impact of Health Sector on Community Economy
- Impact of FQHC on a Community Economy
- Impact of Social Services Agencies on a Community Economy

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**Summary - Economic Impact Studies**

- Impact of Replacement Hospital on a Community Economy
- Impact of Rural Physician on Community Economy
- Impact of a Physician Shortage on a Community Economy
- Impact of a Specialty Physician on a Community Economy

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**Summary - Economic Impact Studies**

- Impact of a Pharmacy on a Community Economy
- Impact of a Rural General Surgeon on a Community Economy
- Impact of a Health Network on a Regional Economy
- Impact of an Individual Health Network Provider on a County Economy

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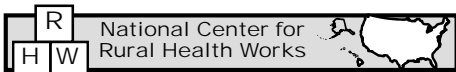
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**Summary - Economic Impact Studies**

- Impact of a Veterinarian Practice on a Community, Regional, and/or State Economy
- Impact of a Dental Practice on a Community, Regional, and/or State Economy
- Impact of Nurse Practitioner/Physician Assistant on a Rural Economy
- Impact of Nursing Home on Rural Economy



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### Contact Information

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