INDEPENDENCE AND METHODOLOGY

PHA commissioned an independent third party, Tripp Umbach, to conduct this economic impact study. Tripp Umbach has conducted more than 300 customized economic impact studies for major corporations, healthcare organizations, universities, medical schools, and health insurance companies.

To fully quantify the impact of the homecare and hospice industry within the various geographical areas throughout this study, Tripp Umbach established a comprehensive, yet conservative, methodology to estimate the operational impact based on information compiled using uniform and consistent techniques that could be replicated in the future.

Using IMPLAN (IMpact analysis for PLANning) data and software, Tripp Umbach conducted a classic input-output analysis in combination with regional specific Social Accounting Matrices and Multiplier Models.
dollars within the local economy. This money is recirculated through the local economy, as a result of the organization. Direct impact and the indirect impact generated in the local economy, either through imports or by payments to local companies that provide goods and services to an organization as a result of the industry's direct economic impact. Local companies that provide goods and services to an organization are known as the multiplier effect, includes the re-spending of expenditures undertaken by vendors and suppliers within the industry that are involved in direct and indirect activities.

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INTRODUCTION

HOMECARE AND HOSPICE — DRIVING HEALTHCARE AND THE STATE’S ECONOMY

The future of healthcare is moving “home” as reflected in the Triple Aim of the Affordable Care Act of 2010: better care, affordable care, and improved health are cornerstones of the homecare and hospice industry. Being cared for at home is preferred and home health consumer satisfaction is high. It is cost-effective compared to institutional care, and homecare providers continually demonstrate their effectiveness in managing chronic conditions and reducing hospitalizations.

For the purposes of this report, the term “homecare and hospice industry” will include the three sectors of the industry: private duty homecare - agencies that provide assistance with activities of daily living, such as bathing, dressing, and preparing meals; home health - organizations that provide skilled services, including nursing care and physical, occupational, speech, and respiratory therapy; and hospice - agencies that provide medical and supportive care to a person who has been diagnosed with a terminal disease, as well as their families.

As Pennsylvania’s Baby Boomers age and require medical and personal care assistance, this generation will demand personalized attention and convenience that is best provided at home. Proven time and time again, in-home care, whether it be personal care, medical care, or end-of-life care, is the most cost-effective way to deliver health care. While other care settings, such as hospitals and skilled nursing facilities, are essential in completing the healthcare continuum, the first care option should be at home where people are comfortable, recover more quickly, and are empowered to manage their illnesses.

With three out of every 10 persons receiving home-based care being under the age of 65 (children included), homecare is an option for virtually every Pennsylvanian.

Demand for homecare and hospice care in Pennsylvania has outpaced hospitals and nursing homes every year for more than three decades, and employment is expected to grow by another 70% in the next seven years.

According to the Pennsylvania Department of Health, 6.2% of home health employees are registered nurses. This equates to approximately 8,460 registered nurses in Pennsylvania working in the homecare and hospice industry. There are an additional 67,900 home health aides, and another 38,860 personal care aides within the industry. Pennsylvania ranks third in the nation with the largest employment of home health aides and fifth for employment of personal care aides. The projected employment growth for home health aides and personal care aides in Pennsylvania is 32.3% and 27.9% respectively.

The homecare and hospice industry employs approximately 170,000 registered nurses across the country. Nationally, the number of registered nurses in the homecare and hospice industry is projected to rise to 214,000 by 2020 (a 26% increase). Home health aides and personal care aides are projected to see the largest employment growth of all occupation types across the country. Personal care aide employment is projected to rise by 70.5% by 2020 (approximately 607,000 new jobs) and home health aide employment is projected to rise by 69.4% by 2020 (approximately 706,300 new jobs).

ECONOMIC IMPACT STUDY

The Pennsylvania Homecare Association (PHA) contracted with Tripp Umbach to measure the economic, employment, and government revenue impacts of the three sectors providing in-home care: home health (medical care), private duty homecare (personal care), and hospice (end-of-life care). PHA is a statewide trade association representing more than 500 organizations that provide care and support to individuals in their own homes. The association works to educate, advocate, and communicate with legislators, state and federal agencies, and consumers to ensure better and more affordable care. Economic and social impacts outlined in this report are critical to understand the value this growing industry can contribute toward a more effective healthcare system.

To begin the economic impact study process, Tripp Umbach collected and evaluated prior industry research reports and economic impact studies, completed in-depth interviews with key stakeholders across the industry, administered an online survey of PHA agency members on organizational expenditures, and conducted extensive secondary data research of all available data related to the industry. These sources provided valuable feedback and data to assist in forming the basis and assumptions of the economic impact analysis. Tripp Umbach utilized IMPLAN software to complete the economic impact modeling. For more information on the IMPLAN methodology, please see Appendix C.
KEY FINDINGS

STATE IMPACT
The homecare and hospice industry generated $21.7 billion for the Commonwealth in 2012. Based on projected growth trends, this industry will reach $29.2 billion in 2020.

IMPACT OF OTHER PENNSYLVANIA INDUSTRIES:

- Nursing Home Care: $23.5 billion
- All Seven Medical Schools (Combined): $22.2 billion
- Homecare and Hospice: $21.7 billion
- State System of Higher Ed.: $4.5 billion
- Professional Sports: $2.1 billion

CURRENTLY, ONE IN EVERY 18 JOBS IN PENNSYLVANIA IS HELD BY SOMEONE IN THE HOME CARE AND HOSPIICE INDUSTRY.

GROWING INDUSTRY
Personal care aide and home health aide jobs are projected to grow by 70% in the next seven years — the largest employment growth among all occupations in the U.S.

TOUCHING LIVES
Homecare and hospice professionals in Pennsylvania provide care to more than 575,000 consumers per year — that’s 66 new consumers every hour of the day.

EMPLOYMENT
In 2012, the economic impact of the homecare and hospice industry was roughly the same as the nursing home industry ($21.7 billion and $23.5 billion respectively). However, when looking at the employment impact of the industries, the homecare and hospice industry reports a 25% higher employment impact than the nursing home industry.

QUALITY CARE
Accreditation signifies a healthcare organization’s commitment to higher standards above state regulations. More than 54% of hospice agencies are accredited by one or more accrediting bodies, 53.9% of home health agencies are accredited, and 5.6% of private duty homecare agencies are accredited in Pennsylvania. Similarly, 76.7% of hospitals are accredited and 6.9% of nursing homes in the state are accredited.

ON THE ROAD
Homecare and hospice care workers drove more than 224 million miles in 2012, generating more than $35.5 million in gasoline sales. The total tax revenue associated with the sales was more than $3 million.

ROUNLY $1 OF EVERY $30 COLLECTED BY THE COMMONWEALTH OF PENNSYLVANIA COMES FROM THE HOME CARE AND HOSPIICE INDUSTRY.

GOVERNMENT REVENUE
The homecare and hospice industry generates revenue for the state through state and local taxes. The industry contributed more than $925 million in state and local tax revenue in 2012 alone. The industry also pays federal taxes which amounted to more than $2.15 billion.

CHARITABLE WORKFORCE
Homecare and hospice employees donated more than $448 million in volunteer services and direct charitable contributions.

SERVICE TO THE ENTIRE COMMUNITY
Being cared for in the home is not limited to the elderly; many of those receiving care are adults and children. Three out of every 10 homecare consumers are under the age of 65.
**ECONOMIC IMPACT**

The economic impact of the industry’s operations in 2012 on the Commonwealth of Pennsylvania was $21.7 billion (see figure 1). The private duty homecare sector, agencies providing personal care, shows the largest economic impact at more than $15.6 billion. Home health reports more than $5.5 billion and hospice reports more than $6.08 billion invested into the economy of Pennsylvania. Based on projected growth trends, the overall homecare and hospice industry will reach $29.2 billion by 2020.

The industry’s business volume impact can be divided into two parts: direct and indirect/induced impacts. The direct impact of the industry stems from the spending of the following principal groups: agency operational and capital expenditures (salaries, supplies, insurance, rent, etc.). The indirect and induced impacts of the homecare and hospice industry are derived from the direct, first-round expenditures, which are received as income by businesses and individuals in the state and re-circulate through the economy in successive rounds of re-spending, the spending of homecare and hospice employees, and the spending of consumers. The end result is a multiplied economic impact that is a linear result of the industry’s presence and its spending patterns. (For further explanation of direct and indirect economic effects, refer to Appendix A).

The homecare and hospice industry is very important to the state’s gas industry. Driving more than 224 million miles in one year, homecare and hospice employees contribute substantially to the gas industry through the purchase of gasoline. The total gasoline sales associated with the homecare and hospice industry in 2012 were more than $35.5 million (see figure 2).

As a result of expenditures for goods and services by the homecare and hospice industry and its employees, the overall economic impact is significant. Spending by the homecare and hospice industry flows through the economy and impacts other industries outside of just the healthcare sector. Other industries impacted by the spending of homecare and hospice agencies and their employees include real estate, telecommunications, monetary authorities (i.e., banks, credit unions), retail establishments, etc.

One example of the flow of dollars spent is from an agency to the employee (through pay and benefits). The employee is then able to pay their rent or mortgage, purchase food for their families, and other necessities. Another way in which spending occurs is when homecare agencies purchase office supplies (i.e., paper) - the company that produces the paper, the delivery company, and marketing and sales organizations earn revenue as a result of the purchase.

**FIGURE 1: ECONOMIC IMPACT (2012)**

**DIRECT ECONOMIC IMPACT**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Direct Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Health</td>
<td>$10.3 B</td>
</tr>
<tr>
<td>Home Health</td>
<td>$2.7 B</td>
</tr>
<tr>
<td>Total</td>
<td>$12.2 B</td>
</tr>
</tbody>
</table>

**INDIRECT/INDUCED ECONOMIC IMPACT**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Indirect Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Health</td>
<td>$10.6 B</td>
</tr>
<tr>
<td>Home Health</td>
<td>$2.8 B</td>
</tr>
<tr>
<td>Total</td>
<td>$10.5 B</td>
</tr>
</tbody>
</table>

**TOTAL ECONOMIC IMPACT**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Total Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Health</td>
<td>$10.5 B</td>
</tr>
<tr>
<td>Home Health</td>
<td>$15.5 B</td>
</tr>
<tr>
<td>Total</td>
<td>$21.7 B</td>
</tr>
</tbody>
</table>

**FIGURE 2: GAS SALES (2012)**

- **Home Health** $26.7 M
- **Hospice** $5.3 M
- **Private Duty Homecare** $3.6 M

**BY 2020, THE INDUSTRY’S TOTAL ECONOMIC IMPACT WILL SURPASS $29 BILLION.**
Table 1 shows the breakdown of the top 10 industries impacted by homecare and hospice industry spending. This table includes direct dollars spent as well as indirect spending in other industries. Direct spending by homecare and hospice organizations constitutes the majority of the economic impact. The other eight industries, shown in Table 1, are related to spending of employees and vendors of the homecare and hospice organizations. Employees paying for their homes, food, and healthcare as a result of being gainfully employed drive significant increases to the state economy. For example, the telecommunications industry received more than $777 million as a result of the homecare and hospice industry’s direct and indirect spending.

**TABLE 1: TOP 10 INDUSTRIES WHERE THE DOLLARS FLOW**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>TOTAL SPENDING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual and family services (including Homecare)</td>
<td>$8,112,119,469</td>
</tr>
<tr>
<td>Home health care services</td>
<td>$3,088,412,654</td>
</tr>
<tr>
<td>Imputed rental activity for owner-occupied dwellings</td>
<td>$914,426,621</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>$777,245,672</td>
</tr>
<tr>
<td>Real estate establishments</td>
<td>$758,784,211</td>
</tr>
<tr>
<td>Private hospitals</td>
<td>$488,062,509</td>
</tr>
<tr>
<td>Monetary authorities and depository credit intermediation activities</td>
<td>$485,221,164</td>
</tr>
<tr>
<td>Wholesale trade businesses</td>
<td>$432,412,516</td>
</tr>
<tr>
<td>Offices of physicians, dentists, and other health practitioners</td>
<td>$412,411,813</td>
</tr>
<tr>
<td>Restaurants and food services</td>
<td>$408,473,166</td>
</tr>
</tbody>
</table>

**LOWERING HEALTHCARE COSTS**

Home-based healthcare is vital and yet often overlooked as an alternative to institutional care. While home health agencies’ roots go back to the late 1800s with visiting nurse associations, their care has evolved, and today, home health nurses and therapists are highly trained in technology and can provide care that was once only possible in an acute care setting. As healthcare reform takes hold, health systems, physicians, and managed care organizations are looking to in-home care providers to assist them in controlling costs by managing chronic conditions and reducing hospitalizations.

The average Medicare cost per visit for a patient receiving home health care in Pennsylvania is $165, while one day in a hospital costs $1,960.7 To provide hospice care in a person’s home for one day costs $152 compared to $1,960 for one day in a hospital or $252 for one day in a nursing home.8

The homecare and hospice industry has the advantage of lowering healthcare costs, generating more employment, and has approximately the same annual economic impact as the more costly long-term care industry. Compared with hospitals and nursing home care, the homecare and hospice industry reported the lowest healthcare expenditures of all payers (out-of-pocket, private health insurance, Medicare, Medicaid, CHIP, Dept. of Defense, Dept. of Veterans Affairs, and other third party payers and programs) between 2000 and 2009 while also showing the largest average annual percentage growth rate of 8.7% for the U.S. and 7.1% for Pennsylvania.9

**FAMILY CAREGIVER IMPACT**

Unpaid care of the elderly or disabled by family members, referred to as “informal care,” must also be noted in the economic impact analysis of the homecare and hospice industry.10 The economic value of caregiving across the nation in 1997 was estimated at $196 billion; by 2008 the value reached $375 billion.11 Tripp Umbach estimates that this value will continue to grow in the future, surpassing $500 billion by 2025. Across the U.S. there were approximately 34 million informal caregivers, Pennsylvania has approximately 1.37 million. The value of informal caregiving by these 1.37 million individuals in Pennsylvania is estimated at $14.5 billion.12 It is important to remember that without informal caregivers, the cost of homecare and hospice care would be significantly higher.

**ACROSS THE U.S. THERE WERE APPROXIMATELY 34 MILLION INFORMAL CAREGIVERS, PENNSYLVANIA HAS APPROXIMATELY 1.37 MILLION.**
ADVANCING TECHNOLOGY

An additional impact studied within this report was technology usage. Home health agencies are high users of remote vital signs monitoring, which gained momentum when PHA received three consecutive Congressional appropriations to study the value of the use of telehealth in homecare and provided agencies with seed money to purchase telehealth equipment. This funding also triggered PHA to pursue Medicaid funding for telehealth, which was approved as a covered service under the state’s Medicaid Aging Waiver program. Other technology used by in-home providers includes activity sensors, personal emergency response devices and medication dispensing systems. Agencies also use automated time and attendance to verify time in clients’ homes and document tasks performed.

Tripp Umbach estimates the total impact of technology in homecare and hospice agencies to be $667.7 million. This impact comes from spending on hardware such as laptops, smart devices, tablets, etc. as well as software such as electronic medical records (EMRs), health monitoring systems, etc. The spending of these dollars is linked to 2,446 jobs through technology research, design, development, and sales.

Hospice agencies report the highest rate of electronic medical record (EMR) system usage at 49.1%, followed by home health agencies at 38.6% usage, and homecare agencies with 17.1% usage.13 The most common usage of an EMR system by homecare and hospice agencies is to access demographic information concerning consumers (99% report using EMRs for this purpose).15

TABLE 2: TECHNOLOGY IMPACT OF HOMECARE AND HOSPICE IN PENNSYLVANIA

<table>
<thead>
<tr>
<th>JOBS CREATED/SUSTAINED</th>
<th>TOTAL ECONOMIC OUTPUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,446 jobs</td>
<td>$667.7 million</td>
</tr>
</tbody>
</table>

DRIVING QUALITY IN HEALTHCARE

The movement to an EMR system is a part of improving quality in healthcare, while at the same time lowering costs. Home health agencies in Pennsylvania report low hospital re-admissions. Only 17% of home health caregivers patients are re-admitted to a hospital.16 A majority (80%) of home health care patients report that they would recommend their home health agency to their friends or family.

Accreditation signifies a healthcare organization’s commitment to higher standards above state regulations. More than 54% of hospice agencies are accredited by one or more accrediting bodies, 53.9% of home health agencies are accredited, and 5.6% of private duty homecare agencies are accredited in Pennsylvania. Similarly, 76.7% of hospitals are accredited and 6.9% of the nursing homes in the state are accredited.17
EMPLOYMENT IMPACT
DRIVING EMPLOYMENT IN THE COMMONWEALTH

The total employment impact of the homecare and hospice industry is calculated by direct and indirect/induced employment. Direct employment includes all employees directly employed through a homecare, home health, or hospice agency and all support staff. Indirect and induced employment includes any additional jobs created throughout the state as a result of spending by the agencies or their employees (i.e., gas station attendants, medical equipment sales representatives, etc.).

In 2012, the homecare and hospice industry directly supported more than 254,000 jobs and indirectly supported an additional 82,000 jobs. The total employment impact of the homecare and hospice industry on the economy of Pennsylvania in 2012 was nearly 337,000 jobs (see Figure 4).

Pennsylvania ranks third in the number of home health aides employed and fifth in the number of personal care aides employed. Personal care aides and home health aides are projected to see the largest occupational employment increases between 2010 and 2020 across the U.S. compared to all other occupations (projected growth of 70.5% for personal care aides and 69.5% for home health aides). Registered nurses in Pennsylvania are projected to see a more moderate growth of 17% between 2010 and 2020.

In 2010, home health aides accounted for 67,900 employees in Pennsylvania, personal care aides accounted for an additional 38,860 employees. By 2020, it is projected that home health aides’ employment in Pennsylvania will rise by 32.3%, bringing total employment in 2020 to more than 136,000.

The table below shows the top 10 industries impacted by the homecare and hospice industry. This table includes direct employees of the homecare and hospice industry as well as other jobs supported in other industries. Direct employment at homecare and hospice organizations constitutes the majority of the total employment impact. The other eight industries, shown in Table 3, are related to employees and vendors of the homecare and hospice organizations. Employees paying for their homes, food, and healthcare as a result of being gainfully employed drive significant additional employment in many other industries. Table 3 demonstrates that outside of the direct jobs created within the homecare and hospice industry, the restaurant and food service industry realizes the highest number of jobs supported. More than 7,000 restaurant jobs across the state of Pennsylvania can be attributed to homecare and hospice industry employment.

TABLE 3: TOP 10 INDUSTRIES WHERE JOBS ARE SUPPORTED

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>TOTAL EMPLOYMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual and family services (including Homecare)</td>
<td>208,216 jobs</td>
</tr>
<tr>
<td>Home health care services</td>
<td>48,091 jobs</td>
</tr>
<tr>
<td>Restaurants and food services</td>
<td>7,190 jobs</td>
</tr>
<tr>
<td>Real estate establishments</td>
<td>5,556 jobs</td>
</tr>
<tr>
<td>Employment services</td>
<td>4,779 jobs</td>
</tr>
<tr>
<td>Private hospitals</td>
<td>3,411 jobs</td>
</tr>
<tr>
<td>Offices of physicians, dentists, and other health practitioners</td>
<td>3,153 jobs</td>
</tr>
<tr>
<td>Retail Stores – Food and beverage</td>
<td>2,301 jobs</td>
</tr>
<tr>
<td>Wholesale trade businesses</td>
<td>2,293 jobs</td>
</tr>
<tr>
<td>Securities, commodity contracts, investments, and related activities</td>
<td>2,108 jobs</td>
</tr>
</tbody>
</table>
GOVERNMENT REVENUE IMPACT
GENERATING GOVERNMENT REVENUE THROUGHOUT THE COMMONWEALTH

Taxes created as a result of homecare and hospice agencies include: payroll, spending in the state’s economy, and gas taxes. The total state tax revenue related to the operations of homecare and hospice in 2012 was more than $925 million; this includes corporate taxes, payroll taxes, income taxes, sales taxes, property taxes, etc. The total federal tax revenue in 2012 was more than $2.15 billion; and includes corporate profit tax, excise tax, social insurance tax, income tax, etc.

In addition to the local and state taxes generated by the industry, the employees who work in the home health sector depend greatly on transportation. A vast majority of the employees rely on their personal vehicles for transportation to and from patient homes, driving more than 224 million miles in one year; these employees purchase gasoline and pay the taxes associated with the gas. In 2012 alone, homecare and hospice workers generated more than $3 million in taxes associated with gasoline sales in Pennsylvania.

<table>
<thead>
<tr>
<th>GASOLINE TAXES</th>
<th>STATE AND LOCAL TAXES</th>
<th>FEDERAL TAXES</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3 million</td>
<td>$925 million</td>
<td>$2.15 billion</td>
</tr>
</tbody>
</table>

VOLUNTEERISM AND CHARITABLE GIVING IMPACT

It is the experience of Tripp Umbach, through many studies, that employees at healthcare organizations are among the most generous workers in terms of contributions to local charities and provision of volunteer services. According to the Points of Light Foundation, the value of volunteer services per employee is $21.25 per hour. In addition to donating their time, homecare and hospice employees make charitable monetary donations; the average amount per employee of actual dollar donations is $700 per year. Tripp Umbach estimates through benchmark data that, in 2012, employees of homecare and hospice agencies donated more than $448 million in value of volunteer services and direct charitable contributions.

The impacts outlined in this analysis include those provided by direct employees, but from the in-depth interviews and PHA member survey, Tripp Umbach acknowledges that homecare and hospice agencies donate additional time, money, and care to their local communities through activities such as food drives, health fairs, flu clinics, and special events.

One such event is the PA Vent Camp which is a summer camp staffed entirely by volunteers for children four to 18 who are dependent on ventilators. This is a free camp for children who otherwise would not be able to enjoy such an experience.

Other charitable efforts include family caregiver support and education, flu clinics, bereavement support for children, special Alzheimer’s education sessions, and holiday programs for low-income seniors and families.
APPENDIX A: DEFINITION OF ECONOMIC IMPACT TERMS

**Study Year**
Fiscal Year 2012 (FY ’12)

**Multiplier Effect**
The multiplier effect is the additional economic impact created as a result of the industry's direct economic impact. Local companies that provide goods and services to an organization increase their purchasing by creating a multiplier.

**Direct Impact**
Direct impact includes all direct effects the industry has on the study area due to industry operations. These items include direct employees, company spending, and employee spending, and spending by visitors.

**Indirect Impact**
The impact of local industries buying goods and services from other local industries. The cycle of spending works its way backward through the supply chain until all money leaks from the local economy, either through imports or by payments to value added. The impacts are calculated by applying direct effects to the Type I Multipliers.

**Induced Impact**
The response by an economy to an initial change (direct effect) that occurs through re-spending of income received by a component of value added. IMPLAN’s default multiplier recognizes that labor income (employee-compensation and proprietor-income components of value added) is not leakage to the regional economy. This money is recirculated through the household spending patterns, causing further local economic activity.

**Indirect Tax Payments**
Government revenue that is collected by governmental units in addition to those paid directly by an organization, including taxes paid directly by employees of the organization, visitors to the organization, and vendors who sell products to the organization.

**Indirect Employment**
Indirect employment is the additional jobs created, as a result of the industry’s economic impact. Local companies that provide goods and services to an organization increase their number of employees as purchasing increases, thus creating an employment multiplier.

**Total Economic Impact**
The total economic impact of an industry includes both the direct impact and the indirect impact generated in the economy, as a result of the organization. Direct impact includes items such as organizational spending, employee spending, and spending by visitors. Indirect impact, also known as the multiplier effect, includes the re-spending of dollars within the local economy.

APPENDIX B: DEFINITION OF INDUSTRY SECTORS

The homecare and hospice industry encompasses the three sectors of in-home care:

**Private Duty Homecare**
Personal care/private duty homecare agencies provide assistance with activities of daily living, such as bathing, dressing, and preparing meals.

**Home Health**
Home health organizations provide skilled services, including nursing care and physical, occupational, speech, and respiratory therapy. Licensed professionals assess needs, develop care plans in connection with the doctor, and assist patients in managing chronic conditions. These services are usually short-term, as in the case of a person recovering from surgery or other health issues.

**Hospice**
Hospice agencies provide medical and supportive care to a person who has been diagnosed with a terminal disease. Hospice care focuses on comfort and quality of life, rather than cure. Hospice also provides respite and bereavement services to families.
APPENDIX C: METHODOLOGY

Tripp Umbach conducted a comprehensive, yet conservative, estimate of the homecare and hospice industry’s impact. The study team also sought to develop a reproducible methodology, assuring that subsequent studies could build upon the information and knowledge gained through this effort.

Tripp Umbach determined that the use of the IMPLAN Pro, economic impact model software, was most appropriate for this analysis. The IMPLAN econometric model operates by estimating the direct impact, indirect impacts, and induced impacts of specific economic activity. Direct economic impacts are those attributable to the initial economic activity. For example, an operation with 10 full-time employees creates 10 direct jobs. Indirect economic impacts are those economic activities undertaken by vendors and suppliers within the supply chain of the direct activity because of the initial economic activity. For example, suppliers of goods, materials, and services used in the direct activities produce indirect economic impacts. Induced economic impacts result from the spending of wages paid to employees in local industries involved in direct and indirect activities.

IMPLAN data files include information for 528 different industries (generally three- or four-digit SIC code breakdown) and 21 different economic variables. IMPLAN sources its employment data from ES202 employment security data supplemented by county business patterns and REIS data. Employment data utilized in the analysis includes full-time and part-time positions.

It should be noted that, at the time of performing the homecare and hospice industry assessment, the most recent IMPLAN data files for the state were for 2011. While the data is not current, it is unlikely that the fundamental economic structure of Pennsylvania’s economic fabric has changed to an extent that would invalidate the analysis. IMPLAN data and accounts closely follow the accounting conventions used in the “Input/Output Study of the U.S. Economy” by the U.S. Bureau of Economic Analysis and the rectangular format recommended by the United Nations.

REFERENCES

1. Home Health Care Patients: Data from the 2000 National Home and Hospice Care Survey. CDC.
8. CMS/CSP and Bureau of the Census
17. Data Provided by Pennsylvania Homecare Association (PHA)
20. GivingUSA.com
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