



OPRE Report No. 2018-92

# **CAREER PROSPECTS FOR CERTIFIED NURSING ASSISTANTS:**

Insights for Training Programs and Policymakers  
from the Health Profession Opportunity Grants  
(HPOG) Program

August 2018



## **Career Prospects for Certified Nursing Assistants:**

### **Insights for Training Programs and Policymakers from the Health Profession Opportunity Grants (HPOG) Program**

OPRE Report No. 2018-92

**August 2018**

# Career Prospects for Certified Nursing Assistants: Insights for Training Programs and Policymakers from the Health Profession Opportunity Grants (HPOG) Program

OPRE Report 2018-92

**August 2018**

Pamela Loprest and Nathan Sick, Urban Institute

Submitted to:  
Hilary Forster, Project Officer  
Office of Planning, Research, and Evaluation  
Administration for Children and Families  
U.S. Department of Health and Human Services

Contract No. HHSP23320095624WC, Order No. HHSP23337022T  
Project Director:  
Julie Strawn  
Abt Associates  
6130 Executive Blvd.  
Rockville, MD 20852

This report is in the public domain. Permission to reproduce is not necessary. Suggested citation: Loprest, Pamela, and Nathan Sick (2018). Career prospects for certified nursing assistants: Insights for Training Programs and Policymakers from the Health Profession Opportunity Grants (HPOG) Program. OPRE Report 2018-92, Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

## Disclaimer

The views expressed in this publication do not necessarily reflect the views or policies of the Office of Planning, Research, and Evaluation, the Administration for Children and Families, or the U.S. Department of Health and Human Services. This report and other reports sponsored by the Office of Planning, Research, and Evaluation are available at [www.acf.hhs.gov/opre](http://www.acf.hhs.gov/opre).



[Sign-up for the  
ACF OPRE News  
E-Newsletter](#)



Like OPRE on Facebook  
[facebook.com/OPRE.ACF](https://facebook.com/OPRE.ACF)



Follow OPRE on Twitter  
[@OPRE\\_ACF](https://twitter.com/OPRE_ACF)



# Contents

<b>Overview .....</b>	<b>iii</b>
<b>Executive Summary .....</b>	<b>v</b>
<b>Introduction and Background .....</b>	<b>1</b>
What Is the Demand for CNAs? .....	2
What Are the Requirements to Become a CNA? .....	6
What Are Options for Advancement and Career Pathways for CNAs? .....	9
Additional Education in Nursing.....	9
Short-Term Trainings. ....	10
Additional Certifications. ....	11
Work-Based Training.....	11
<b>Characteristics and Outcomes of CNA Participants in HPOG 1.0 .....</b>	<b>13</b>
What Are the Characteristics of HPOG 1.0 CNA Participants? .....	14
Demographics. ....	14
Education and Basic Skills. ....	16
Income and Benefits Receipt.....	18
What Are the Outcomes for HPOG Participants Who Completed CNA Training? .....	20
Receipt of Certifications and Additional Training. ....	21
Employment among CNA Participants after Training Completion. ....	23
Characteristics of CNA Employment among HPOG 1.0 Participants. ....	27
<b>Insights for Training Programs and Policymakers.....</b>	<b>31</b>
Benefits of CNA Training .....	31
Drawbacks of CNA Training .....	32
Strategies to Improve Outcomes .....	33
<b>Notes .....</b>	<b>34</b>

## List of Exhibits

Exhibit 1.	Average Hourly Wages of Nursing Assistants, by State .....	3
Exhibit 2.	Employment and Wages, by Sector/Setting for Nursing Assistants .....	4
Exhibit 3.	Employment Change and Average Annual Job Openings for Top 10 Occupations Requiring Postsecondary Education but No Degree, 2016–2026 .....	5
Exhibit 4.	Hour Requirements for CNA Training, by Number of States.....	7
Exhibit 5.	Potential Career Pathways for Certified Nursing Assistants .....	9
Exhibit 6.	Demographic Characteristics of HPOG Participants Completing CNA or Other Healthcare Training .....	15
Exhibit 7.	Educational Background and Intake Assessments of HPOG Participants Completing CNA or Other Healthcare Training .....	17
Exhibit 8.	Income and Benefits Receipt of HPOG Participants Completing CNA or Other Healthcare Training .....	19
Exhibit 9.	Number of Participants Beginning and Completing the Most Common Occupational Trainings in HPOG 1.0 .....	20
Exhibit 10.	License Receipt and Additional Training by CNA Participants.....	22
Exhibit 11.	Quarterly Employment before Enrollment and after Training Completion among CNA Training Completers .....	24
Exhibit 12.	Quarterly Employment after Training Completion for the Nine Most Common HPOG Healthcare Training Courses .....	25
Exhibit 13.	Quarterly Earnings before Enrollment and after Training Completion among CNA Training Completers .....	26
Exhibit 14.	Quarterly Earnings after Training Completion for the Nine Most Common HPOG Healthcare Training Courses .....	27
Exhibit 15.	Employment Reported in the 15 Months after HPOG Enrollment .....	28
Exhibit 16.	Hourly Wages of those Employed in Different Types of Jobs, Reported at 15 Months after HPOG Enrollment.....	29
Exhibit 17.	Weekly Hours Worked of those Employed in Different Types of Jobs, Reported at 15 Months after HPOG Enrollment.....	30

## Overview

### Introduction

The Health Profession Opportunity Grants (HPOG) Program awards grants to organizations that provide education and training to Temporary Assistance for Needy Families (TANF) recipients and other low-income individuals for healthcare occupations that pay well and are expected to either experience labor shortages or be in high demand. Ninety percent of grantees in the first round of HPOG (the set of grants awarded in 2010, referred to as HPOG 1.0) decided to offer training to become a certified nursing assistant (CNA) and it was the most frequently taken training by HPOG participants.

According to government projections, CNA is one of the fastest growing occupations that requires some postsecondary education but no degree. At the same time, CNAs earn low wages, with annual mean earnings near the poverty level. Because one of the primary purposes of HPOG is to help low-income individuals to secure healthcare employment that pays well, it is important to understand whether CNA training in HPOG can lead to better paying jobs over time. This report summarizes what was learned about CNA training and employment during HPOG 1.0 to provide insights for training programs and policymakers on the benefits and drawbacks of CNA training and career pathway advancement opportunities.

### Research Questions

- What were the characteristics of CNA training and employment in the United States during the last decade, and what are the opportunities for career advancement?
- What were the characteristics of the CNA trainings funded under HPOG 1.0 and the participants that engaged in this training?
- What were the education and employment outcomes of HPOG 1.0 CNA training completers?

### Purpose

The CNA occupation is one of the fastest growing in the healthcare sector. With an average wage of \$13.29 per hour (or \$27,650 annually full-time), it is low paying and can be stressful, resulting in high turnover. However, CNA training is short (on average two months in HPOG 1.0) and has low skill requirements, making it popular among individuals with low basic skills or limited work experience who need or want to get a job quickly. The extensive data collected from multiple sources in HPOG 1.0 can provide training programs and policymakers with clear insights on the benefits and drawbacks of

providing and receiving CNA training, including the potential career pathways available to CNA workers.

### **Key Findings and Highlights**

- Demand for CNAs is high and projected to grow.
- Most participants complete CNA training, and disadvantaged groups might meet academic requirements for CNA training relatively easily.
- Participants completing CNA training can bundle it with other short-term trainings to improve employment opportunities, but beyond these trainings, achieving the next step on the career ladder can be challenging.
- CNAs earn relatively low wages and have high turnover.

### **Methods**

This report uses research literature and other publicly available information to examine CNA training and employment in the United States. Additionally, it uses interviews (conducted under the National Implementation Evaluation of HPOG 1.0) with grantees, training providers, and healthcare employers. For information on healthcare training participants and their outcomes, this report used data from the HPOG 1.0 management information system. For information on quarterly earnings and employment, it relied on data from the National Directory of New Hires. A 15-month follow-up survey of a sample of HPOG 1.0 participants provided information on type of employment and employment characteristics. All data from HPOG 1.0 is based on participants in the 27 non-tribal grantees who provided informed consent to participate in the evaluation.



## Executive Summary

Job skills training is an important way to help low-income individuals improve their labor market opportunities and economic outcomes. Providers need to determine for which occupations and in which industries they should offer, provide funding for, or encourage participants to take training. To be effective, this selection must take into account labor market demand for different jobs, as well as match the skills of the population being served to the requirements of offered training.

The purpose of the Health Profession Opportunity Grants (HPOG) Program is “to conduct demonstration projects that provide eligible individuals with the opportunity to obtain education and training for occupations in the healthcare field that pay well and are expected to either experience labor shortages or be in high demand.”<sup>1</sup> HPOG targets Temporary Assistance for Needy Families (TANF) recipients and other low-income individuals. The Administration for Children and Families (ACF), within the U.S. Department of Health and Human Services, awarded the first round of five-year grants (referred to as HPOG 1.0) in 2010 to 32 organizations across the country; ACF awarded a second round of grants in 2015 (referred to as HPOG 2.0).

As part of HPOG, grantees select the types of healthcare occupational training courses they offer their program participants based on local labor market and target population needs and other factors. In HPOG 1.0, 90 percent of grantees chose to offer nursing assistant training—the training necessary to become a certified nursing assistant (CNA). In HPOG 2.0, 97 percent of grantees are offering this training. In addition, CNA training was the most frequently taken training in HPOG 1.0, with 37 percent of participants electing this training. By the end of the second year of HPOG 2.0, 29 percent of participants had started this training, making it the most common training choice. In addition, according to government workforce projections, CNA is one of the fastest growing occupations in the economy that requires some postsecondary education but not a degree.

At the same time, CNAs earn relatively low wages, with annual mean earnings not far above the poverty level for a family of three. Because the purpose of the HPOG Program is not only to demonstrate ways to help low-income individuals train for high-

---

<sup>1</sup> HPOG was authorized by the Affordable Care Act (ACA), Public Law 111-148, 124 Stat. 119, March 23, 2010, sect. 5507(a), “Demonstration Projects to Provide Low-Income Individuals with Opportunities for Education, Training, and Career Advancement to Address Health Professions Workforce Needs,” adding sect. 2008(a) to the Social Security Act, 42 U.S.C. 1397g(a), and extended by the Bipartisan Budget Act of 2018, Pub. L. 115-123, through fiscal year 2019.



demand jobs, but also to secure healthcare employment that pays well, it is important to understand whether CNA training in HPOG can lead to better paying jobs over time.

Given the popularity of CNA training in HPOG, the growing demand for CNAs, and low wages in the occupation, this report provides training programs and policymakers with information on the benefits and drawbacks of providing and receiving this training. This analysis is part of the portfolio of HPOG federal evaluations.

## **Methodology**

This report uses research literature and other publicly available information (federal workforce data, state and federal regulations) to examine the characteristics of CNA training and employment in the United States. Additionally, it uses results from interviews conducted by HPOG evaluation staff with grantees, training providers, and healthcare employers. These interviews were conducted under the HPOG 1.0 National Implementation Evaluation, one part of a multipronged research and evaluation strategy to assess the implementation, outcomes, and impacts of the HPOG 1.0 Program.

For information on HPOG healthcare training participants and their outcomes, this report relied on data from the HPOG 1.0 management information system, the Performance Reporting System (PRS). For information on quarterly earnings and employment, it relied on data from the National Directory of New Hires. A 15-month follow-up survey of HPOG 1.0 participants provided information on type of employment and employment characteristics. All data from HPOG 1.0 is based on participants who provided informed consent to participate in the evaluation of the 27 non-tribal grantees.

## **Findings**

The report provides information on the benefits and drawbacks of CNA training and employment. The key findings are summarized here.

### **Benefits of CNA Training**

- **Demand for CNAs is high and projected to grow.** There are currently more than 1.5 million CNAs in the United States, and employment is projected to grow by more than 10 percent in the next 10 years, faster than economy-wide employment.
- **CNA training is short.** The federal requirement for training to receive a nursing assistant certification (necessary to work in nursing homes and most hospitals) is 75 total hours (16 of which are in a clinical setting). On average, HPOG CNA training was completed in two months. This means it can be relatively less costly to provide and to participate in than many other trainings. CNA training was by far the most popular healthcare training in HPOG. Of the 27 non-tribal HPOG 1.0 grantees, 96 percent offered CNA training. Of some 30,000 HPOG participants, more than a third

(37 percent) enrolled in CNA training. The next most popular training was taken by only 9 percent of participants.

- **Most participants complete CNA training.** Across a number of different training programs, a high proportion of CNA training participants complete training. In HPOG 1.0, 86 percent of participants who started CNA training completed it, a higher rate than in many other types of healthcare training.
- **Disadvantaged groups might meet academic requirements for CNA training relatively easily.** The basic skills requirements for CNA training are relatively low. Most HPOG participants in CNA training had a high school diploma (or equivalent) or less as their highest level of education prior to training. Though the majority met 8th-grade numeracy and literacy assessment levels, some HPOG programs only required 6th-grade skill levels to enter CNA training.
- **Participants completing CNA training can bundle it with other short-term trainings to improve employment and potentially earnings opportunities.** Learning additional skills through other related short-term trainings—for example, to become a certified medication aide or a patient care technician—can improve job opportunities relatively quickly. At least a quarter of HPOG participants who completed a CNA also completed additional trainings to reach such “CNA-plus” credentials. The earnings gains observed at 15 months after HPOG enrollment for participants with CNA-plus credentials over those with a CNA were small, only 20 cents an hour on average. More evidence on the returns to adding these short-term trainings is needed, including wage differentials after a longer follow-up period.

### Drawbacks of CNA Training

- **CNAs earn relatively low wages.** On average, nursing assistants in the United States earn \$13.29 per hour, lower than many other occupations that require some postsecondary training or credential but less than a four-year degree. For HPOG participants completing CNA training, wages were even lower (an average of \$11.97 per hour). However, for those taking these classes, the CNA wage could be an improvement over previous earnings. In HPOG, those completing CNA training earned higher wages on average than they did prior to enrolling in HPOG and higher than HPOG participants in non-healthcare jobs.
- **CNA jobs have high turnover.** In addition to offering low wages, the CNA position can be physically and emotionally demanding. Rates of turnover are high, suggesting working conditions and other factors do not lead workers to want or be able to remain on the job for the long term.
- **The next step on the career ladder can be challenging to reach.** For CNAs seeking advancement, the most commonly cited next step on a nursing career

pathway is to take licensed vocational or licensed practical nurse or registered nurse training, often leading to an academic degree. For some CNAs, making this step may be unrealistic. Each of these nursing occupations takes considerably more training than a CNA, from one to four years or more. Some CNAs may also need to increase their basic skills levels or take academic prerequisites to meet entry requirements. The financial and time commitment can be substantial.

### **Strategies to Improve Outcomes**

Training providers who consider offering CNA training must weigh the needs and abilities of the population they serve and consider the ways they can help those completing CNA training be as successful as possible.

Providers should assist those completing CNA training to attain the certification by helping them prepare to take and pass the examination. Providers can also offer and encourage those interested in CNA training to bundle it with other short-term trainings. Anecdotal evidence suggests this can improve their job opportunities and wages, although the data reported here do not provide evidence of substantially higher wages for workers who did complete these additional short-term trainings; more research is needed. In addition, providers can consider partnering with employers to create CNA apprenticeships or extended programs that offer ways for CNAs to gain additional skills and earn more while working. Finally, programs can work to assist those who would like to move up in the nursing occupation through financial, academic, and other supports that enable low-income individuals to enter and complete these longer-term nursing education programs.

### Introduction and Background

Many policymakers, training providers, and worker advocates agree that increasing skills through training is an important way to improve workers' economic opportunities. Evidence shows that completing skills training (also called technical, vocational, or occupational training) for in-demand occupations can lead to increased earnings.<sup>1</sup>

Programs that provide training (directly or through partnerships) to low-income individuals need to determine what type of training—that is, for which occupations in which industries—they should offer, provide funding for, or encourage participants to take. To be effective, this selection must take into account labor market demand for different jobs, as well as match the skills of the population being served to the requirements of offered training.

The Health Profession Opportunity Grants (HPOG) Program awards grants to organizations that provide education and training to Temporary Assistance for Needy Families (TANF) recipients and other low-income individuals for healthcare occupations that pay well and are expected to either experience labor shortages or be in high demand.<sup>2</sup> In 2010, the Administration for Children and Families (ACF), within the U.S. Department of Health and Human Services, awarded the first round of five-year grants to 32 organizations across the country (referred to as HPOG 1.0). ACF awarded the second round of grants in 2015 (HPOG 2.0).

As part of HPOG, grantees select the types of healthcare occupational training courses they offer their program participants, based on local labor market and target population needs and other factors.<sup>3</sup> Among their course selections, 90 percent of HPOG 1.0 grantees and 97 percent of HPOG 2.0 grantees chose to offer nursing assistant training—the training necessary to become a certified nursing assistant (CNA). In HPOG 1.0, 37 percent of participants elected to take this training, the most frequently taken healthcare training in HPOG 1.0. Similarly, CNA is the most frequently taken training in HPOG 2.0. By the end of the second year of the HPOG 2.0 program, 29 percent of participants had started this training.

Across the country there are many other programs offering CNA training, from community colleges to the Red Cross to employers. In addition, according to government workforce projections, CNA is one of the fastest growing occupations in the economy that requires some postsecondary education but not a degree.<sup>4</sup>

At the same time, CNAs earn relatively low wages, with annual mean earnings not far above the poverty level for a family of three.<sup>5</sup> Because the purpose of the HPOG Program is not only to demonstrate ways to help low income-individuals train for high-

demand jobs, but also to secure healthcare employment that pays well, it is important to understand whether CNA training in HPOG can lead to better paying jobs over time.

This report presents information about CNA training and CNA employment in general, drawing on results from HPOG specifically. It uses information collected under the National Implementation Evaluation of HPOG 1.0, which is one part of a multipronged research and evaluation strategy to assess the implementation, outcomes, and impacts of the HPOG 1.0 Program.<sup>6</sup> The goal of the report is to provide information that can help training programs and policymakers better understand the CNA job, benefits and drawbacks of offering this training, and potential pathways for CNAs to advance along a career pathway over time.

The first section of the report describes the characteristics of nursing assistant jobs and the labor market for these workers. It discusses what is required to become a CNA, including characteristics and requirements of typical training, certification requirements beyond training, and how they vary by geography. It lays out potential career pathways for nursing assistants to advance in the field and opportunities and examples for higher-level training. The report then presents information on CNAs from HPOG 1.0, including the characteristics of nursing assistant training participants and their outcomes. Outcomes include rate of completion, certifications received, employment, earnings, and advancement to additional training. Finally, the report summarizes the findings and provides insights for training providers and policymakers.

### What Is the Demand for CNAs?

Nursing assistants are healthcare support workers who provide basic patient care under direction of nursing staff. They typically feed, bathe, dress, groom, or move patients, or change linens; they may also transfer or transport patients. This job is often referred to by other related job titles, including nursing care attendants, nursing aides, and nursing attendants.<sup>7</sup> Because these workers are required to have state certification for most employment settings, they are also often referred to as certified nursing assistants (CNAs) or in some states as certified nurse aides or state registered nurse aides.

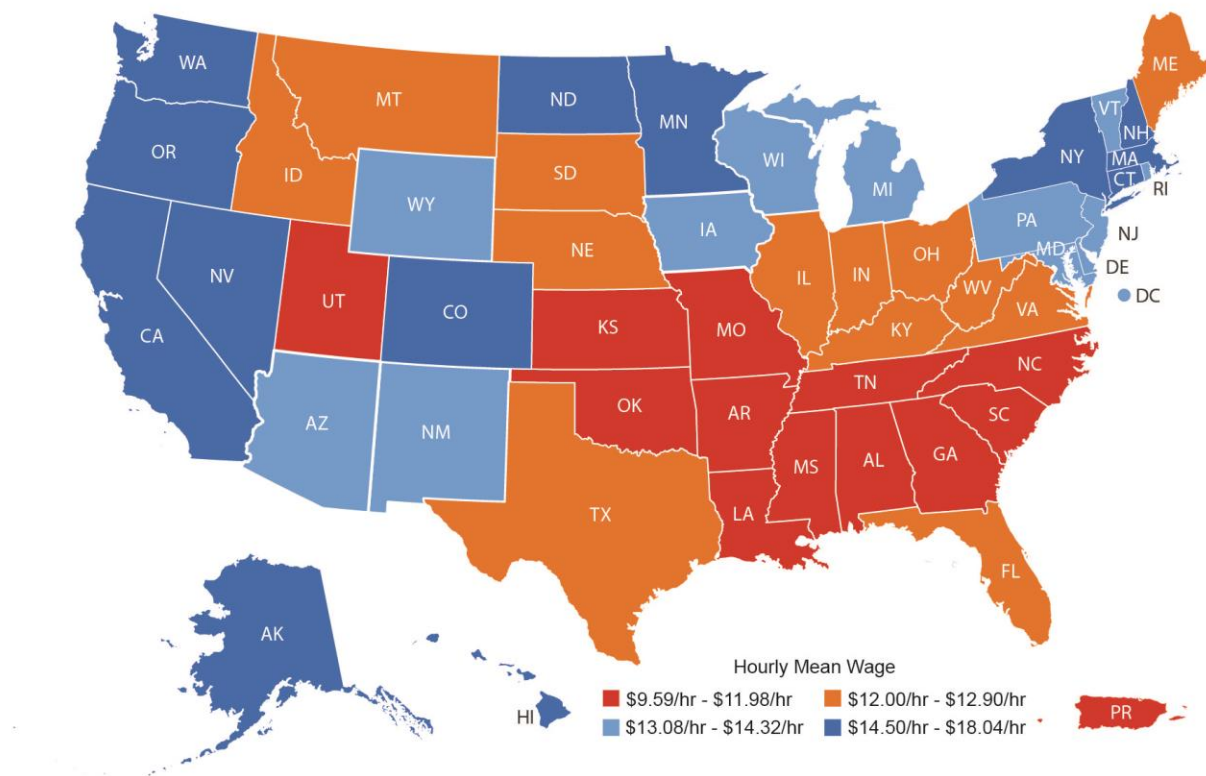
Nursing assistant jobs can be physically and emotionally demanding. CNAs take care of people who are chronically or terminally ill, are elderly, or have disabilities. As with all nursing-related fields, interacting with and assisting patients can be personally rewarding. However, some characteristics of the CNA job make it challenging and can lead to high rates of turnover, discussed further below.

**Demand.** The high demand for nursing assistants makes it a popular training choice for students. In 2016, there were almost 1.5 million people working as nursing assistants in the United States.<sup>8</sup> Demand for CNAs is driven primarily by the aging of the population

and increased demand for residential care for the elderly. Other factors include technological advances that extend the lives of those with chronic ailments, and the greater availability of services in community settings such as in private or group homes. Expansion of health coverage under the Affordable Care Act has also increased demand for health services generally. Meanwhile, broad pressures to lower healthcare costs have created incentives to use healthcare workers who earn lower wages, where possible.<sup>9</sup>

**Wages.** Nursing assistants earned on average \$13.29 per hour in the United States in 2016, equivalent to \$27,650 in annual earnings assuming full-time work.<sup>10</sup> Wages for nursing assistants vary by geographic location and by work setting. **Exhibit 1** shows average hourly wages by state for nursing assistants. States' average hourly wage for CNAs ranges from \$10.39 in Louisiana to \$18.04 in Alaska.<sup>11</sup> Geographic variation is likely due to general differences in cost of living, local labor markets, and local demand for nursing assistants and the settings in which they work.

**Exhibit 1. Average Hourly Wages of Nursing Assistants, by State**



Source: Occupational Employment Statistics, May 2016, <https://www.bls.gov/oes/current/oes311014.htm>



**Work Setting.** Nursing assistants work primarily in nursing and residential care facilities and hospitals but also are employed in home healthcare services and outpatient service settings. **Exhibit 2** lists the industry sectors or settings in which nursing assistants work, the percentage of nursing assistant employment the sector/setting accounts for, and the average hourly wage.

Nursing assistants work primarily in the healthcare and social assistance sector, although about 8 percent work in other sectors such as education. More than half (55 percent) of nursing assistants work in nursing and residential/long-term care facilities, which includes nursing homes, skilled nursing facilities, and assisted living facilities. The average wage in this industry sector is \$12.69, lower than the overall average wage of \$13.29 for all nursing assistants. The second most common sector is hospitals, employing 27 percent of nursing assistants. The average wage in this setting is \$14.32, more than a dollar per hour higher than the overall average wage for all nursing assistants. Another higher-wage setting for nursing assistants is outpatient care centers, which may be affiliated with hospitals, where they can earn an average of \$15.38 per hour. However, only 1 percent of nursing assistants work in this setting.

**Exhibit 2. Employment and Wages, by Sector/Setting for Nursing Assistants**

Industry Sector/Setting	Number Employed	Percentage of All Nursing Assistant Employment	Average Hourly Wage (\$)
Total—Nursing assistants in all sectors	1,443,150	100.0%	13.29
Total—Healthcare and social assistance sector	1,330,030	92.2%	13.18
Nursing and residential care facilities <sup>a</sup>	792,420	54.9%	12.69
Hospitals (including private, state, and local government hospitals)	387,410	26.8%	14.32
Home healthcare services	77,360	5.4%	12.30
Social assistance <sup>b</sup>	32,110	2.2%	11.80
Offices of physicians	19,890	1.4%	13.91
Outpatient care centers	15,280	1.1%	15.38
Other ambulatory care services	610	0.4%	12.51
Other non-healthcare or social assistance sectors	113,120	7.8%	14.66

<sup>a</sup> Includes nursing care facilities and continuing care retirement communities and assisted living facilities for the elderly.

<sup>b</sup> Includes individual and family services for the elderly and people with disabilities and vocational rehabilitation.

Source: U.S. Bureau of Labor Statistics, Occupational Employment Statistics, May 2016, <https://www.bls.gov/oes/current/oes311014.htm>

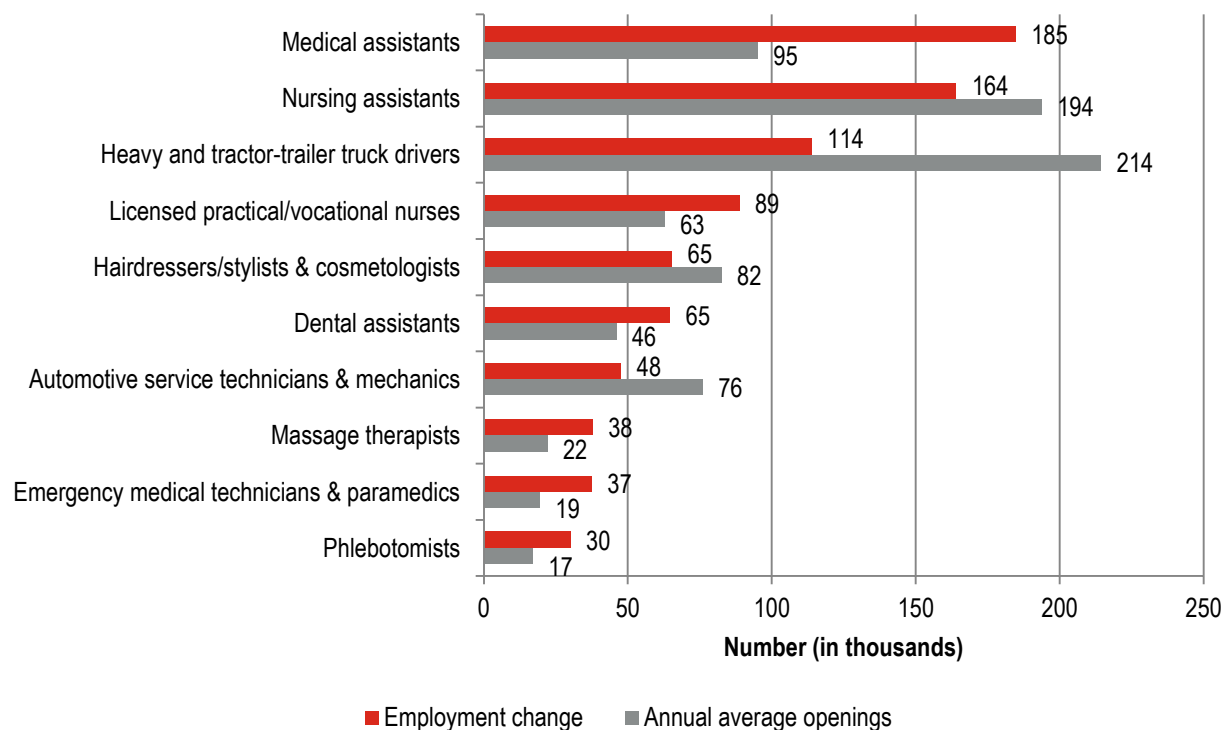
**Projected Demand.** The current high demand for nursing assistants is expected to remain high in the future. According to the U.S. Department of Labor, employment of



nursing assistants is projected to increase 10.9 percent in the next 10 years, faster than the overall projected employment growth in the economy (7.4 percent). The number of nursing assistant jobs will grow over the next 10 years from 1.51 million in 2016 to 1.67 million in 2026, an increase of some 160,000 jobs—the 11<sup>th</sup> largest projected employment change of all U.S. occupations.

**Exhibit 3** shows the 10 occupations with the highest projected employment change (top red bars), defined as the difference in employment between 2016 and 2026, among those occupations requiring some postsecondary education but not a degree. Projected employment change for nursing assistants is second only to that for medical assistants.<sup>12</sup>

**Exhibit 3. Employment Change and Average Annual Job Openings for Top 10 Occupations Requiring Postsecondary Education but No Degree, 2016–2026**



Source: U.S. Bureau of Labor Statistics, Occupational Projections, 2016-2026, [https://www.bls.gov/emp/ep\\_table\\_107.htm](https://www.bls.gov/emp/ep_table_107.htm). For definitions of employment change and annual average openings, see text.

**Turnover.** In addition to the projected increase in employment, nursing assistants are projected to have high levels of annual average job openings (bottom gray bars in **Exhibit 3**). Projected job openings are the combination of newly added jobs created due to increased demand as well as job vacancies due to job exits, including retirement. The

number of job openings for nursing assistants over the next 10 years is projected to be 193,600 annually. For comparison, as shown in **Exhibit 3**, the projected number of annual job openings for medical assistants is smaller, at 95,000, despite higher projected employment change (185,000 over the next 10 years). This suggests that many more nursing assistants will leave their jobs after less than one year (creating multiple openings per year) than will medical assistants.

The characteristics of nursing assistant jobs contribute to this rapid turnover. In addition to low wages, other aspects of the work may lead to high rates of leaving. Workplace injuries, including back problems resulting from lifting or transferring residents, are common. In 2016, nursing and residential care facilities had the highest incidence of non-fatal workplace injuries and illness of any industry, 13.7 per 100 workers, compared with an average of 3.2 across all industries.<sup>13</sup> Increasing demand for residential facility care means patient caseloads for nursing assistants often are large, with pressure to do more in less time resulting in increased job stress and higher rates of injury.<sup>14</sup>

In interviews conducted as part of the HPOG 1.0 Impact Study, program operators and their employer partners uniformly described nursing assistant jobs as having high turnover.<sup>15</sup> Reasons interviewees cited for turnover among HPOG participants mirror the reasons above, including participants realizing once on the job that the nature of the work was not for them, difficulties arranging child care with the varied shift times required, and low wages. Several respondents mentioned that employees were willing to leave a nursing assistant job for even slightly higher pay elsewhere.

One CNA hospital employer underscored the high cost of turnover and the importance of paying competitive wages because “CNAs will move for 25 cents an hour.” He said that the hospital had stressed wage parity and work flexibility in the past year and reduced its CNA loss rate from 135 percent to 44 percent. “It is still outrageous, but wonderful that it came down.”

*Source: HPOG 1.0 Impact Study Interview*

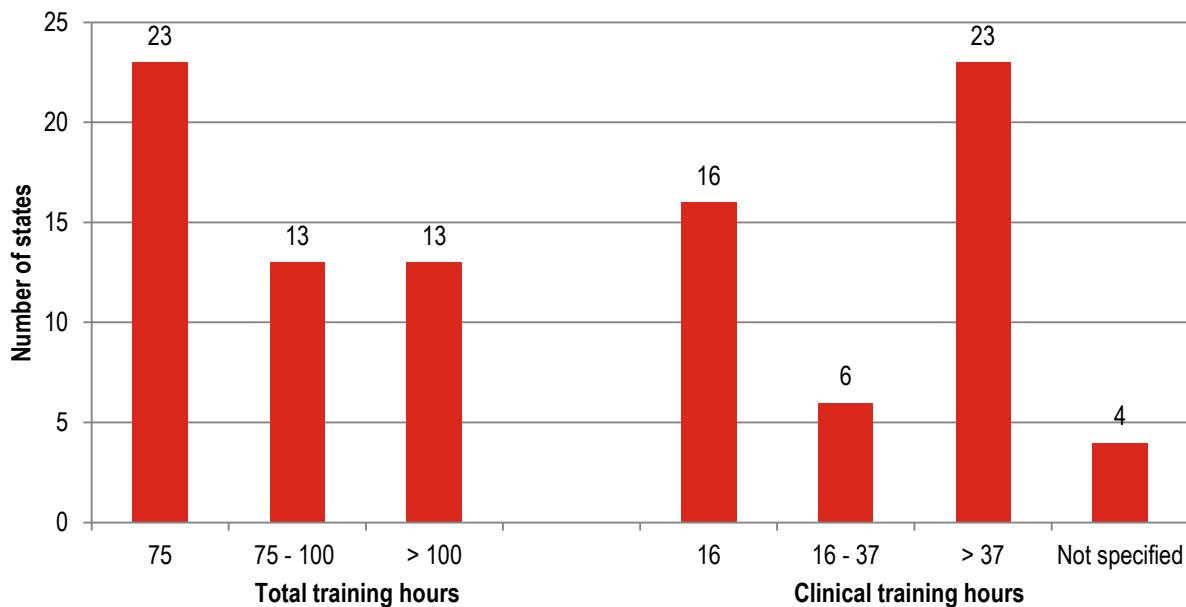
### What Are the Requirements to Become a CNA?

Federal law requires that anyone working as a nursing assistant in a long-term care facility complete a state competency examination and be placed on a state registry of nursing assistants. It also sets minimum competencies for training programs, which must be at least 75 hours, including 16 hours of clinical (practical) skills under supervision of a registered nurse.<sup>16</sup> It is possible for individuals completing nursing assistant training to work in settings and for employers that do not require certification—for example, as caregivers in out-patient or home-based settings—but this is less common (see findings on settings in **Exhibit 2**).

**Curriculum.** Nursing assistant training programs are typically short. Although federal law establishes minimums for hours of training (classroom and clinical) to be certified,

there is some variation across states. As **Exhibit 4** shows, 23 states require only the federal minimum of 75 hours for state-approved programs, whereas 13 states require more than 100 hours of training. Similarly, though 16 states require only the federal minimum of 16 clinical hours, 23 states require more than 37 clinical hours. Fifteen states require at least half of all training hours be clinical hours.<sup>17</sup> For example, California requires at least 60 hours of classroom instruction and 100 hours of clinical training and Missouri requires 75 hours of classroom and 100 hours of clinical training.<sup>18</sup> These are state-required minimums; training programs are free to include more hours. The number of days or weeks to complete these hours varies by individual program.

**Exhibit 4. Hour Requirements for CNA Training, by Number of States**



Note: Includes survey results for 48 states and DC.

Source: HHS Office of Inspector General, Office of Evaluation and Inspections (2002).

**Tuition.** The tuition for nursing assistant programs varies, depending on course length and whether or not training is offered by an employer. Training offered by an employer is usually at no cost to the participant. One advantage of CNA training for training providers is a relatively low cost due to its short duration. However, to meet federal requirements for certification, programs must use a registered nurse instructor and have the appropriate setting to provide the requisite clinical hours.

**Training Providers.** Nursing assistant training is offered in many venues, including community colleges, by local non-profit or for-profit training providers, and by employers such as long-term care facilities. A survey of state agencies responsible for overseeing nursing assistant programs and certification requirements estimated that there were more than 12,500 state-approved nursing assistant training programs in the United

States in 2002. Approximately 60 percent of those are based in long-term care facilities (“facility-based training programs”). Other sources of training include local community colleges and technical schools, labor unions, the Red Cross, and the Department of Veterans Affairs. Providers of state-approved training vary across states, with a few states having no or almost no facility-based training and others having most training taking place in long-term care facilities.<sup>19</sup>

Training programs sponsored by long-term care employers are usually providing training to new recruits or incumbent workers who will work as nursing assistants at the facility. Most states allow individuals who have completed training to work as nursing assistants for a short time while preparing for and taking the certification examination.

**Certification.** The required certification examinations have two parts—a written section on knowledge pertinent to nursing assistant work, and a section requiring demonstration of practical skills in a simulated setting. In most states, the written section can be taken orally and the taker has a choice of an examination in English or Spanish. While the specific test varies across states, some tests are used by multiple states, such as the National Nurse Aide Assessment Program required by 25 states.<sup>20</sup> The fees are typically about \$100 for the examination, but are paid for by the employer at facility-based trainings and in some states are reimbursed by the state for non-facility training completers who go to work in nursing homes. In addition to completing approved training and passing the examination, most states require a criminal background check. An individual meeting these requirements is placed on the state registry of nursing assistants, which employers can use to verify potential hires’ credentials.

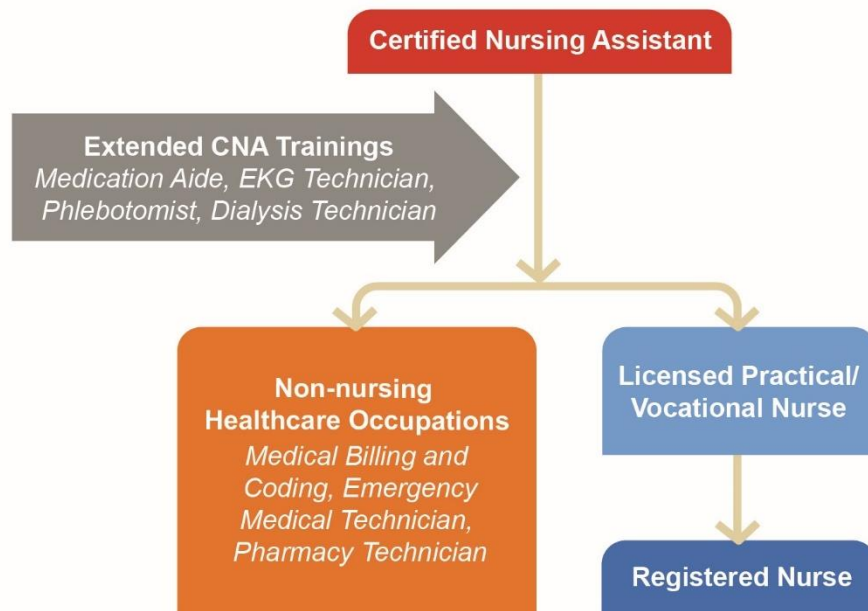
**Prerequisites.** Nursing assistant training programs typically require only a high school diploma or equivalent for entry (although some do not have this requirement) and do not require any prior work in healthcare.<sup>21</sup> CNA jobs are typically seen as entry-level positions in healthcare. That the state certification examination often can be taken orally rather than in writing allows those with limited academic skills to enter the occupation.

Among nursing assistants, about 15 percent have less than a high school diploma, about one-third have earned a high school diploma or equivalent, almost one-third have some college, and the remaining 18 percent have an associate degree or higher. Nursing assistants are typically women in low-income households and include an overrepresentation of black/African American and Hispanic individuals as compared with all healthcare occupations that require some postsecondary education and training less than a four-year degree.<sup>22</sup>

### What Are Options for Advancement and Career Pathways for CNAs?

CNA is generally viewed as an entry-level job in healthcare. Some program operators, education and training providers, and employers have defined career pathways outlining how students can build on training as a nursing assistant to move up to higher-paying jobs through additional education. **Exhibit 5** provides a schematic of potential career pathways from CNA, including additional education in nursing and short-term “extended trainings.”

#### Exhibit 5. Potential Career Pathways for Certified Nursing Assistants



Source: Developed by authors based on review of literature.

**Additional Education in Nursing.** One common career pathway starts with becoming a CNA and moves on to training to become a licensed practical nurse (LPN) or licensed vocational nurse (LVN). Training for these positions typically takes one to two years and in some cases confers an associate degree. LPN/LVNs work in similar settings to nursing assistants and are required to pass state licensing exams. They earn higher wages than nursing assistants, averaging \$21.56 per hour in 2016. The next step in the pathway is to become a registered nurse (RN), through either a two-year associate degree in nursing or a four-year Bachelor of Science in Nursing (BSN) degree, as well as corresponding required licensing exams. RNs earn on average \$34.70 per hour.<sup>23</sup>

Movement along this career pathway can be challenging. It requires time and financial commitment to longer periods of education and higher academic skills than for a CNA position. The jump from a program of several weeks to one of several years is sizeable. Some nursing assistants will need additional time in school (before entering nursing

classes) to improve basic academic skills and/or complete necessary prerequisites. Many nursing assistants need to combine work and additional schooling, which can be difficult in any circumstance but is more so for nursing assistants given variable schedules. For those who are parents, the need for child care can be an additional hurdle.

In addition to the personal difficulties to moving along this career pathway, there are indications that demand may be limited for some nursing positions along the pathway. Though demand for LPN/LVNs and RNs across the country is projected to grow at a pace faster than average for all employment over the next 10 years, this growth may not be uniform across geographic areas or within settings. For example, some HPOG 1.0 programs reported that demand for LPN/LVNs is declining in their areas, especially in higher-paying hospital settings, due to changes in healthcare reimbursement policies. In addition, programs reported that demand for nurses with associate degrees may be declining or shifting away from hospitals to long-term care settings (with lower wages) as more hospital employers require a four-year degree. The Institute of Medicine's 2010 report on the future of nursing called for an increase in the percentage of nurses with a bachelor's degree from 50 percent to 80 percent by 2020 to meet changes in healthcare needs and the broadening and more complicated roles of nurses.<sup>24</sup>

To help students use nursing assistant training as a first step toward becoming a nurse or entering other healthcare occupations, some community colleges offer academic credit for these programs. For example, in the HPOG 2.0 program, 12 of 27 non-tribal grantees report offering a nursing assistant training that confers academic credit.<sup>25</sup> In addition, some LPN/LVN programs incorporate nursing assistant training and certification as an early part of their curriculum.

**Short-Term Trainings.** In addition to this longer-term career pathway for nursing assistants, there are shorter-term career pathways or training extensions that can expand nursing assistants' skills and credentials, potentially opening up additional employment opportunities and higher wages. Examples of some common additional short-term trainings include certified medication technician or medication aide, electrocardiogram (EKG) technician, or phlebotomist. CNA training can also serve as a general introduction to healthcare, leading to other short-term trainings for less related healthcare occupations such as emergency medical technicians or medical billing and coding. Some of these examples have associated certifications, and others do not. The Geriatric Nurse Aide (GNA) is a certification in some states, requiring additional training focused on the specific needs of elderly patients.

Several HPOG 1.0 programs encouraged students to take one or more of these short-term additional trainings at the same time as or after completing a CNA. Some offered



training to become a patient care technician, which is typically a combination of nursing assistant, phlebotomist, and EKG technician training. Additional training to become a patient care technician could take two to three months. Other programs reached out to students who went to work after earning their CNA to return to take one of these trainings. In interviews, HPOG 1.0 programs and employer partners reported they expected that completing multiple short-term trainings/credentials in addition to a CNA would lead to higher wages.<sup>26</sup> Later in this report, when discussing HPOG 1.0 program outcomes, we refer to workers who moved along this short-term career pathway with additional training or certifications as “CNA-plus.”

**Additional Certifications.** Some states have multiple levels of nursing assistant certification that serve as steps on a career ladder. Maryland has a lower level of nursing assistant that requires only completion of training but no state examination. These workers cannot work in nursing homes, but could move up to a CNA job after earning certification. North Carolina’s initial nursing assistant certification is Nurse Aide I, which requires state-approved training and a similar examination as for CNAs in other states. The state also has a certification for Nurse Aide II, “a medical professional who assists in providing orientation and direction to CNAs, and acts as a liaison between nurse aides and charge nurses to recommend changes in patient care planning.”<sup>27</sup> Earning this second certification can lead to higher wages.

**Work-Based Training.** In addition to offering and supporting students to take additional trainings and earn additional certifications, some training programs are helping nursing assistants move up by creating on-the-job skill-building opportunities in partnership with employers. These programs can assist employed CNAs to add to their skills while working, leading to advancement and higher earnings opportunities. An example of one such program is the Baltimore Career Ladder project, a partnership between the Baltimore Alliance for Health Care—a healthcare workforce sector partnership—and three local hospitals. In this program, CNAs already working in these hospitals were trained to be “nurse extenders”—gaining skills to administer intravenous therapy, EKGs, and oxygen therapy normally done by RNs. The program involves two months of classroom training followed by three months of supervised work-based learning.<sup>28</sup>

At least three grantee programs participating in either the first or second round of HPOG developed similar work-based training for employed CNAs.<sup>29</sup> HPOG grantees refer to these as “CNA apprenticeships” or “enhanced CNA training.” All of these include additional classroom and work-based training for working CNAs to build their skills and increase wages. One of the programs requires new CNA hires to make a one-year commitment to work for the employer to enter the program. In exchange, apprentice CNAs receive mentoring, additional training, and additional compensation in the form of bonuses during certain phases of the apprenticeship. The goal of this program is to



increase skills and pay for CNAs, as well as reduce turnover for the employer. Though most of these programs are serving relatively small numbers of CNAs, they could be replicated.

## Characteristics and Outcomes of CNA Participants in HPOG 1.0

The remainder of this report uses the experiences of HPOG 1.0 program participants to illustrate who enrolls in nursing assistant training and their outcomes relative to other healthcare training participants.

HPOG 1.0 targeted TANF recipients and other low-income individuals interested in healthcare training. In addition to the training itself, grantee programs provided a variety of support services, which included academic supports (such as career navigation or counseling, study skills workshops, tutoring, peer support, and mentoring), personal/logistical supports (such as assistance with child care and transportation), employment supports to find and retain jobs, and financial assistance for tuition, fees, materials, and certification testing.

Because of the particular structure of the HPOG 1.0 programs, the characteristics of participants who took CNA training under HPOG 1.0 and their outcomes may differ from the characteristics and outcomes of students in other, non-HPOG CNA programs. However, the HPOG results should be relevant to other programs considering providing or currently providing CNA training to low-income individuals.

### Data Sources and Samples Used in This Study

- **Performance Reporting System (PRS)**—the management information system for HPOG 1.0. Grantees recorded in the PRS information on participant characteristics, training and service receipt, and education and training outcomes. The sample of all HPOG 1.0 participants for this study is 29,891. This includes enrolled participants from 2010 to 2015 who gave informed consent to be in the research study from the 27 non-tribal HPOG grantees. Data include duration of participants' enrollment in the training program from September 30, 2010 through March 29, 2016.
- **National Directory of New Hires (NDNH)**—a federal database that collects quarterly employment and earnings reports from employers for all workers covered by the Unemployment Insurance system. It does not include characteristics of work, such as industry sector or hours worked. Data cover 8 quarters prior to a participant's HPOG enrollment and from 4 to 36 quarters after enrollment, depending on date of enrollment.
- **HPOG 1.0 15-month follow-up survey**—online survey administered to HPOG 1.0 participants from the 27 non-tribal HPOG grantees about 15 months after their enrollment to gather information on their training and work experiences over this period. The survey was fielded to participants who enrolled in HPOG between September 30, 2013 and September 30, 2014 and had a 76 percent response rate. This study relies on a sample of 4,304 treatment group members who participated in at least one HPOG training.

### What Are the Characteristics of HPOG 1.0 CNA Participants?

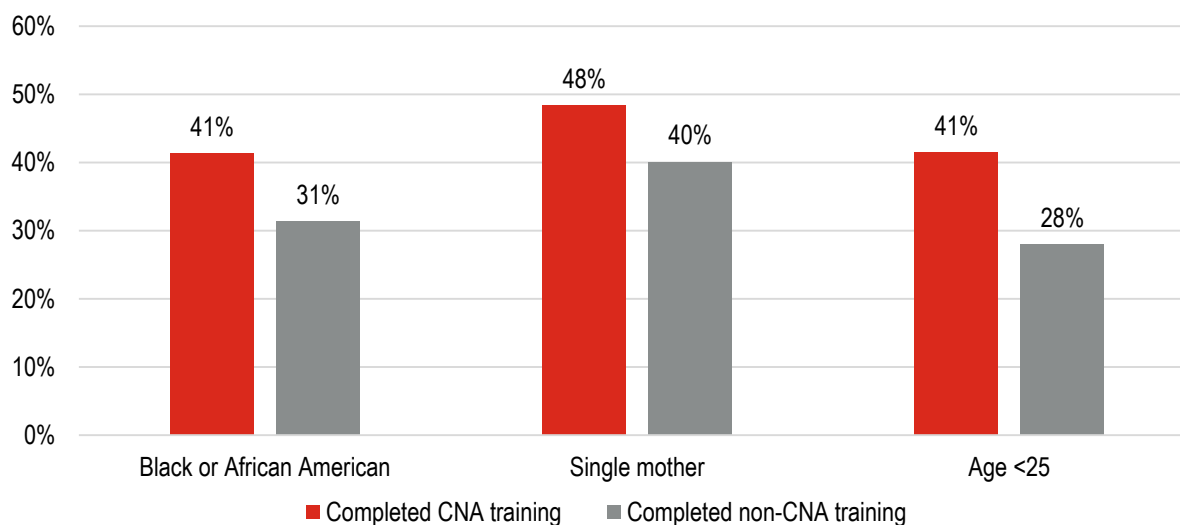
**Demographics.** As shown in **Exhibit 6**, overall HPOG 1.0 participants who completed CNA training were mostly female (91 percent), and many were black/African American (41 percent) or Hispanic/Latino (18 percent).<sup>30</sup> The majority were parents (64 percent) and almost half were single mothers (48 percent).

For context, **Exhibit 6** also reports the characteristics of HPOG 1.0 participants who completed other, non-CNA healthcare trainings such as registered nurse and pharmacist technician that typically lead to higher wages, as well as other entry-level occupations such as home health aide.<sup>31</sup>

The demographic make-up of HPOG 1.0 participants completing trainings other than CNA is similar, although CNA participants were more likely to be female, black/African American, or single mothers. Participants completing CNA training were also younger (under age 25) at program intake than those completing other types of healthcare training (41 percent versus 28 percent). The lower age of CNA participants could reflect the entry-level nature of the position, and that younger participants are less likely to have the prior work or educational experience before taking higher-level healthcare training.

**Exhibit 6. Demographic Characteristics of HPOG Participants Completing CNA or Other Healthcare Training**

Characteristic	Completed CNA Training		Completed Non-CNA Training		Percentage Point Difference
	N	%	N	%	
Gender					
Female	8,807	91	8,369	87	5
Race or ethnicity					
White	3,281	34	3,923	41	−7
Black or African American	3,939	41	2,994	31	10
Hispanic or Latino (any race)	1,753	18	1,960	21	−2
Other	554	6	667	7	−1
Parental status					
Parent of dependent children	6,021	64	5,518	60	5
Single mother	4,668	48	3,862	40	8
Age					
25+	5,642	59	6,939	72	−13
<25	4,000	41	2,699	28	13

**Key differences**

Note: N=9,642 participants completing CNA training and 9,638 participants completing any other healthcare training course. Number of missing ranges from 0 to 327. Participants appear in only one of the two samples. Those who completed a CNA training and a non-CNA training are included in the “Completed CNA Training” sample. Due to rounding, the percentage point difference column may not equal the difference between CNA and non-CNA percent columns.

Source: HPOG PRS. September 30, 2010 through March 29, 2016.

**Education and Basic Skills.** As shown in **Exhibit 7**, participants who completed CNA training had lower education and basic skills levels at intake and were less likely to have had prior healthcare training than those taking other healthcare training courses. More than half of those completing CNA training did not have education beyond high school, with their highest education levels being high school graduate (42 percent), high school equivalency (16 percent), or less than high school (8 percent). CNA participants were 22 percentage points less likely to have any college experience than were other training participants (34 percent versus 57 percent).

CNA participants' literacy and numeracy skill levels assessed at intake were also lower than those participating in other healthcare trainings.<sup>32</sup> Fewer CNA participants were assessed as having an eighth-grade or higher literacy level (70 percent) or numeracy level (54 percent) than participants in other healthcare training (77 and 70 percent, respectively).

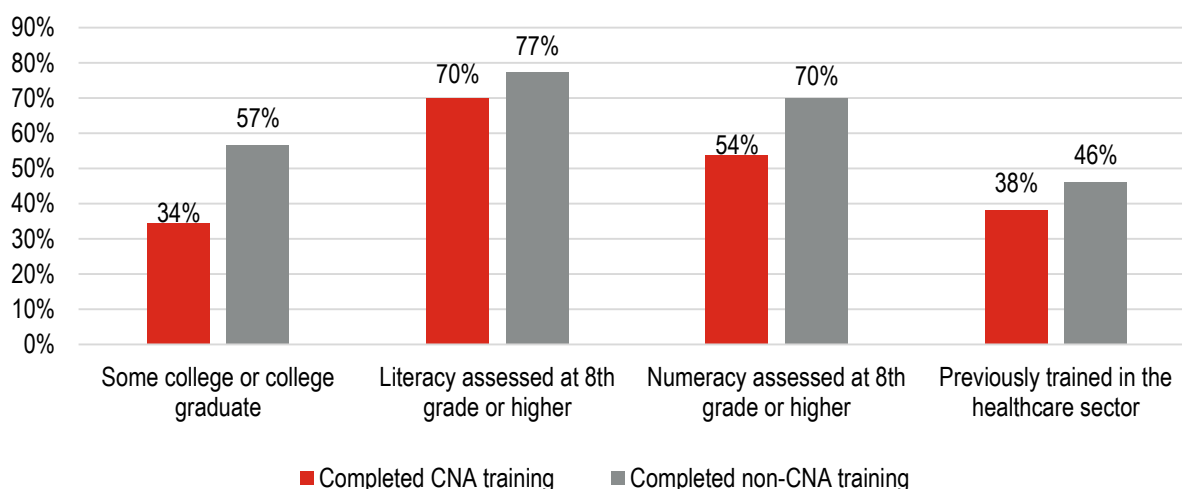
Fewer CNA participants had prior experience in healthcare training (38 percent) than did other healthcare training participants (46 percent).

In general, the lower levels of literacy and numeracy skills, education, and prior training among CNA participants reflect the lower skill requirements to enter CNA training. In interviews with HPOG 1.0 grantees, several noted that an eighth-grade standard was too high for some participants seeking to enter CNA training. A sixth-grade level in one or both of literacy and numeracy scores was more commonly required for CNA training, and in some cases no minimum basic skills score was required.

**Exhibit 7. Educational Background and Intake Assessments of HPOG Participants Completing CNA or Other Healthcare Training**

Characteristic	Completed CNA Training		Completed Non-CNA Training		Percentage Point Difference
	N	%	N	%	
Education level at intake					
Some college or college graduate	3,249	34	5,333	57	−22
High school graduate	3,932	42	3,032	32	9
High school equivalency or GED	1,465	16	881	9	6
Less than 12 <sup>th</sup> grade	781	8	150	2	7
Literacy assessed at 8 <sup>th</sup> grade or higher					
No assessment recorded	1,687	17	1,451	15	2
Yes	6,764	70	7,454	77	−7
No	1,191	12	733	8	5
Numeracy assessed at 8 <sup>th</sup> grade or higher					
No assessment recorded	2,145	22	1,542	16	6
Yes	5,187	54	6,758	70	−16
No	2,310	24	1,338	14	10
Previously trained in healthcare sector					
Yes	3,476	38	4,168	46	−8

### Key differences



Note: N=9,642 participants completing CNA training and 9,638 participants completing any other healthcare training course. N missing ranges from 0 to 622. Participants appear in only one of the two samples. Those who completed a CNA training and a non-CNA training are included in the “Completed CNA Training” sample. Due to rounding, the percentage point difference column may not equal the difference between CNA and non-CNA percent columns.

Source: HPOG PRS. September 30, 2010 through March 29, 2016.

**Income and Benefits Receipt.** As shown in **Exhibit 8**, CNA training participants had lower incomes and received more public assistance benefits than other healthcare training participants. CNA participants had very low incomes at program intake, with more than half (51 percent) of their households earning less than \$10,000 annually. Though the HPOG Program required grantees serve low-income individuals, participants in other trainings had somewhat higher incomes, on average.

HPOG 1.0 also targeted Temporary Assistance for Needy Families (TANF) recipients; 17 percent of participants completing CNA training were receiving TANF at intake as compared to 10 percent of participants in other trainings. A prior HPOG study reported that, compared with other HPOG participants, TANF recipients more often needed to take short-term trainings given TANF's work requirements.<sup>33</sup> Additionally, 57 percent of those completing CNA training were receiving Supplemental Nutrition Assistance Program (SNAP) benefits; participants in other HPOG trainings were less likely to receive SNAP at intake (45 percent).

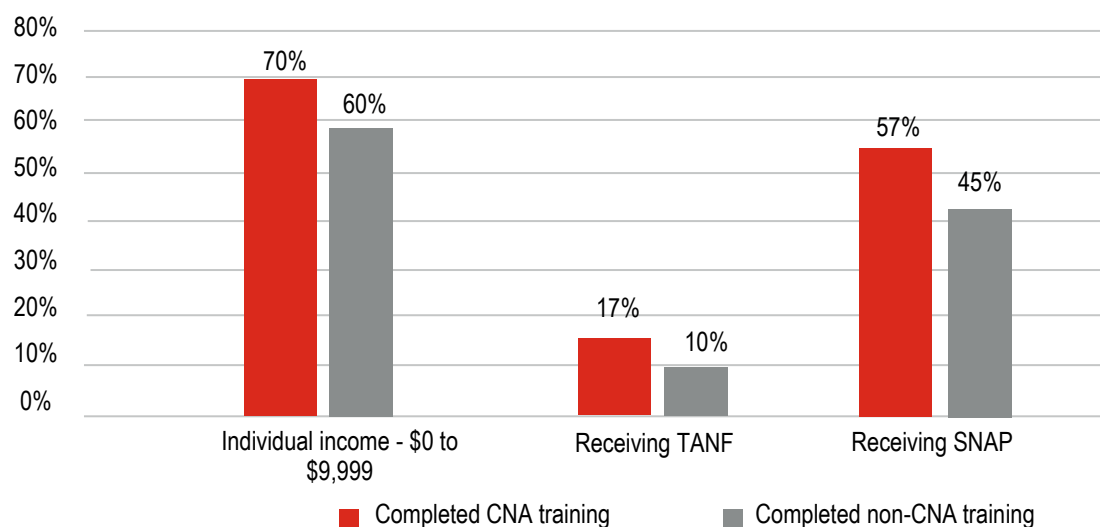
Feedback from HPOG grantees suggest that individuals completing CNA training with the characteristics shown in Exhibits 6, 7, and 8 may be encouraged to engage in entry-level and short-term training activities (usually to obtain employment more quickly), of which CNA training would be a prime example.



**Exhibit 8. Income and Benefits Receipt of HPOG Participants Completing CNA or Other Healthcare Training**

Characteristic	Completed CNA Training		Completed Non-CNA Training		Percentage Point Difference
	N	%	N	%	
Household income					
\$0 to \$9,999	4,277	51	3,384	41	10
\$10,000 to \$19,999	2,268	27	2,382	29	−1
\$20,000 and over	1,836	22	2,580	31	−9
Individual income					
\$0 to \$9,999	6,234	70	5,378	60	10
\$10,000 to \$19,999	1,895	21	2,282	25	−4
\$20,000 or over	831	9	1,295	14	−5
Receiving TANF					
Yes	1,571	17	950	10	7
Receiving SNAP					
Yes	5,331	57	4,152	45	12

### Key differences



Note: N=9,642 participants completing CNA training and 9,638 participants completing any other healthcare training course. N missing ranges from 45 to 1,292. Participants appear in only one of the two samples. Those who completed a CNA training and a non-CNA training are included in the “Completed CNA Training” sample. Due to rounding, the percentage point difference column may not equal the difference between CNA and non-CNA percent columns.

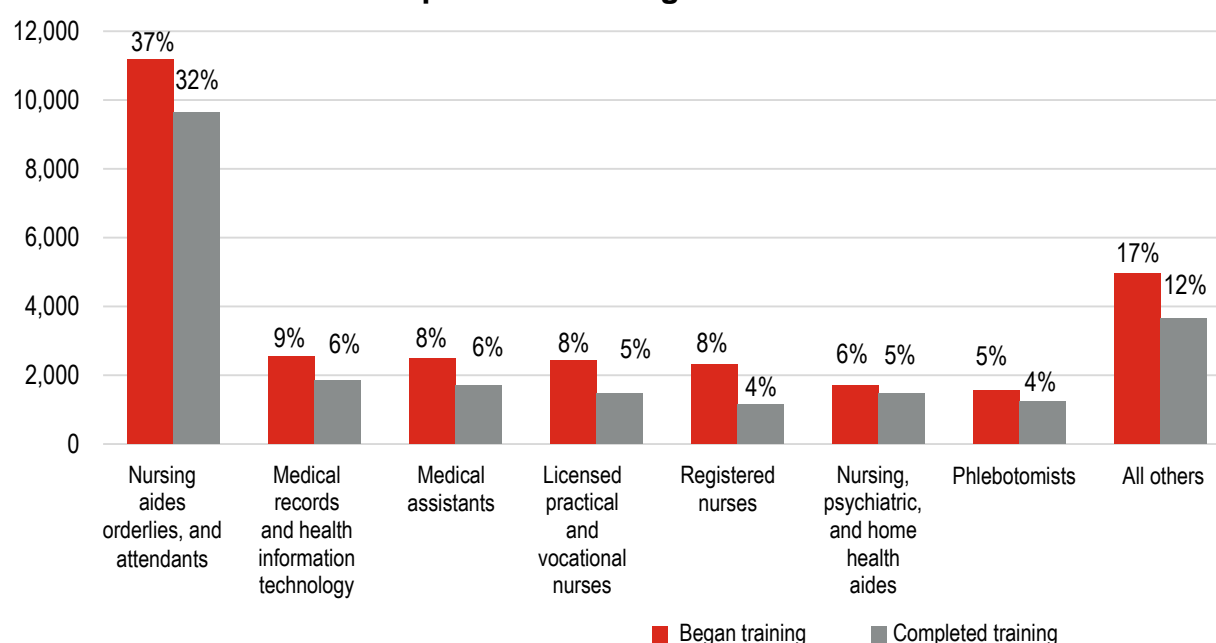
Source: HPOG PRS. September 30, 2010 through March 29, 2016.

## What Are the Outcomes for HPOG Participants Who Completed CNA Training?

In this section, we explore the outcomes of HPOG 1.0 participants who engaged in CNA training courses. Many HPOG 1.0 grantees used CNA training as their primary and most common entry-level offering. Ninety (90) percent of HPOG 1.0 programs offered this training.<sup>34</sup>

**Exhibit 9** shows that 37 percent of all HPOG 1.0 participants (N=11,185) began CNA training (shown in the graphic as Nursing Aides, Orderlies, and Attendants).<sup>35</sup> The next most common training course was in medical records and health information technology, taken by 9 percent of all HPOG participants (N=2,541).

**Exhibit 9. Number of Participants Beginning and Completing the Most Common Occupational Trainings in HPOG 1.0**



Note: Nursing Aides, Orderlies and Attendants is the category which includes nursing assistants. Medical Assistants, and Nursing, Personal, and Home Health Aides are separate occupational categories. Percentages are out of all HPOG participants (N=29,891). A participant may have completed more than one training course and be counted in multiple categories.

Source: HPOG PRS. September 30, 2010 through March 29, 2016.

CNA training was taken by almost as many participants as the next five most popular training courses combined (N=11,484). The higher skill-requirement nursing courses to become an LPN or RN were each taken by 8 percent of participants.

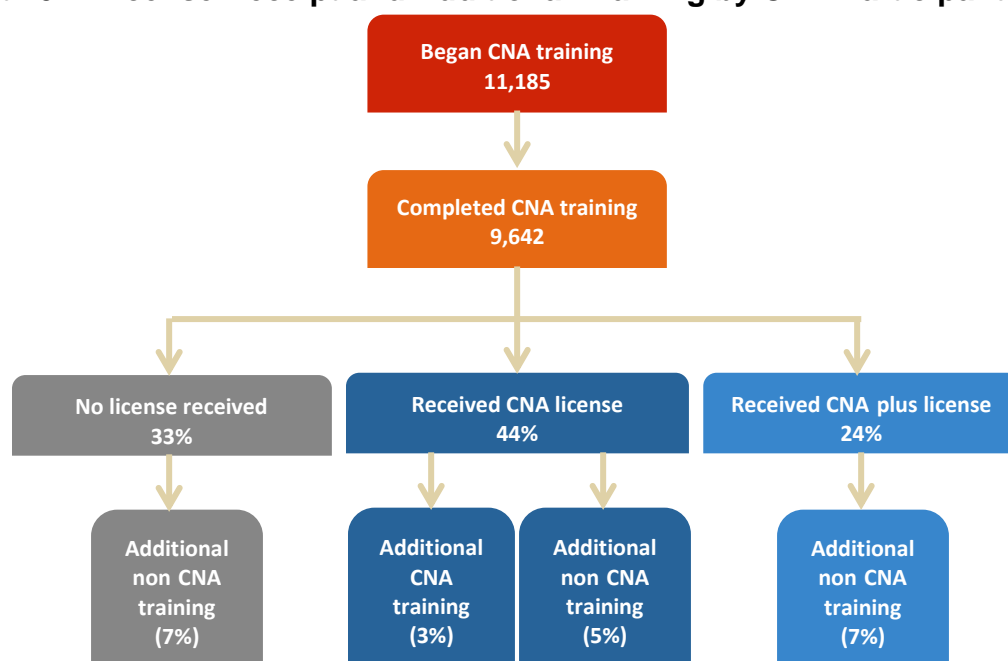
CNA training was completed by 9,642 participants (32 percent of all HPOG 1.0 participants). This is a completion rate of 86 percent, second only to home health aides

(87 percent completion). Other training programs offering training to become a CNA have also reported similarly high or higher completion rates.<sup>36</sup>

The relatively short length of these courses likely contributed to their high completion rates. CNA training courses were the second shortest of any type of healthcare training offered in HPOG 1.0. On average, participants completed them in 1.9 months, consistent with the mandatory training hours reported earlier. The only shorter training course on average was home health aide training, which took 1.7 months to complete on average. The licensed practical and vocational nurse and registered nurse training courses lasted much longer.

**Receipt of Certifications and Additional Training.** CNA training participants in HPOG 1.0 could bolster their credentials in two main ways, as described earlier. First, they could take additional short-term trainings to obtain a skill or certification that extended or complemented skills acquired in CNA training (“CNA-plus”). The second way to enhance CNA credentials is by engaging in an additional (usually longer-term) healthcare training leading to a different job title, such as LVN, LPN, or RN, to move along a career pathway.

HPOG 1.0 grantees were encouraged to use a career pathways approach and engage their program participants in additional trainings that would advance them along a pathway. Participants could have gone on directly to additional training, or worked as a CNA to gain experience and returned later for additional training.<sup>37</sup> Two-thirds of participants who completed a CNA training (68 percent) obtained a certification by the end of HPOG 1.0 (**Exhibit 10**), meaning they passed the required certification examination.

**Exhibit 10. License Receipt and Additional Training by CNA Participants**

Note: All percentages are out of participants who completed CNA training (N=9,642). A total of 19 percent of CNA completers engaged in an additional non-CNA training. Another 3 percent completed additional instances of standard CNA training.

Source: HPOG PRS. September 30, 2010 through March 29, 2016.

The remaining one-third (33 percent) completed a training course but were not recorded in the HPOG PRS as having obtained the CNA certification. These participants might not have taken the required steps to obtain their certification after completing training, given the additional time and effort required. Others might have attempted to obtain their certification but did not pass the examination. Still others might have found employment in healthcare that did not require the certification, or even found a job outside of healthcare. It is also possible that some of them did obtain certification, but it was not recorded in the HPOG PRS because it was received after leaving HPOG 1.0 or due to program data entry error. As expected, CNA training generally did not result in receipt of an academic degree.<sup>38</sup>

Many HPOG participants who completed their CNA training did seek to improve their opportunities by gaining CNA-plus skills. In total, almost one-fourth of participants (24 percent) who completed their CNA training obtained a CNA-plus license.

In addition, 3 percent of those completing CNA training earned their CNA license and completed additional CNA training. In the HPOG PRS, staff could record a participant's completion of multiple instances of CNA training. Though not specified in the data, it is likely that these additional CNA trainings were complementary CNA-plus trainings. Staff did not report that these participants obtained any certifications associated with CNA-

plus training (such as Certified Medication Aide certification), but there are no certifications in some states for some of these additional skills.

Movement along the career pathway to higher nursing training was relatively uncommon for HPOG participants. **Exhibit 10** shows the percentage of those completing a CNA training who went on to any non-CNA training. Altogether, 19 percent went on to a different training course. However, this includes all types of healthcare training, including, for example, home health aide or diagnostic technician that might be seen as lateral occupational moves, rather than advancement.

Only 3 percent of CNA training completers went on to train as either an LPN or an RN, and only 1 percent of CNA completers ever obtained an associate degree or above while in the HPOG program. This could reflect the structure of HPOG 1.0; only 60 percent of HPOG grantees offered LPN and RN under HPOG 1.0. Further, some participants might have pursued advanced training after HPOG ended.<sup>39</sup> It could also reflect the difficulties, discussed earlier, for any student to progress from a short CNA training to these longer trainings, including additional time and financial investments, needing to combine work and school, and potential child care needs.

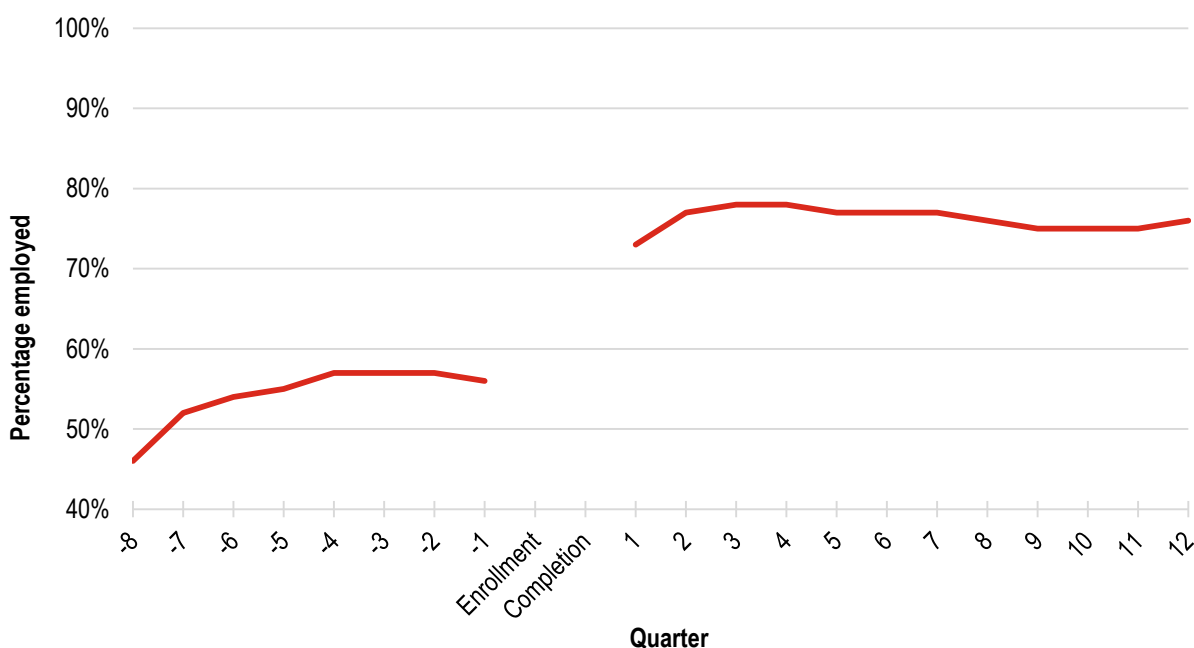
**Employment among CNA Participants after Training Completion.** Employment and earnings are key outcomes for any training program and its participants. HPOG 1.0 participants who completed CNA training had relatively high levels of employment but earnings were low relative to those who completed other common healthcare training courses.<sup>40</sup>

It should be noted that a key question for publicly funded-training programs is whether observed wage increases were a result of the program or whether these individuals would have obtained similar training and jobs on their own. Federal impact evaluations currently underway of HPOG will be able to answer such questions by comparing outcomes for study treatment and control group members rather than pre- and post-training wages.<sup>41</sup>

**Exhibit 11** shows employment in the 8th quarter before HPOG enrollment and the 12th quarter after training completion among participants completing CNA training.<sup>42</sup> In the 8th quarter prior to HPOG program enrollment, 46 percent of CNA training participants were employed. After enrolling in HPOG and completing training, CNA participants experienced higher employment levels. Three-fourths (76 percent) were employed in the 8th quarter after training completion, and the same percentage were employed in the 12th quarter after training completion.

The average employment rate for those who completed CNA training increased in the first few quarters after completion (from 73 to 78 percent), but then remained relatively stable for the next three years.

**Exhibit 11. Quarterly Employment before Enrollment and after Training Completion among CNA Training Completers**

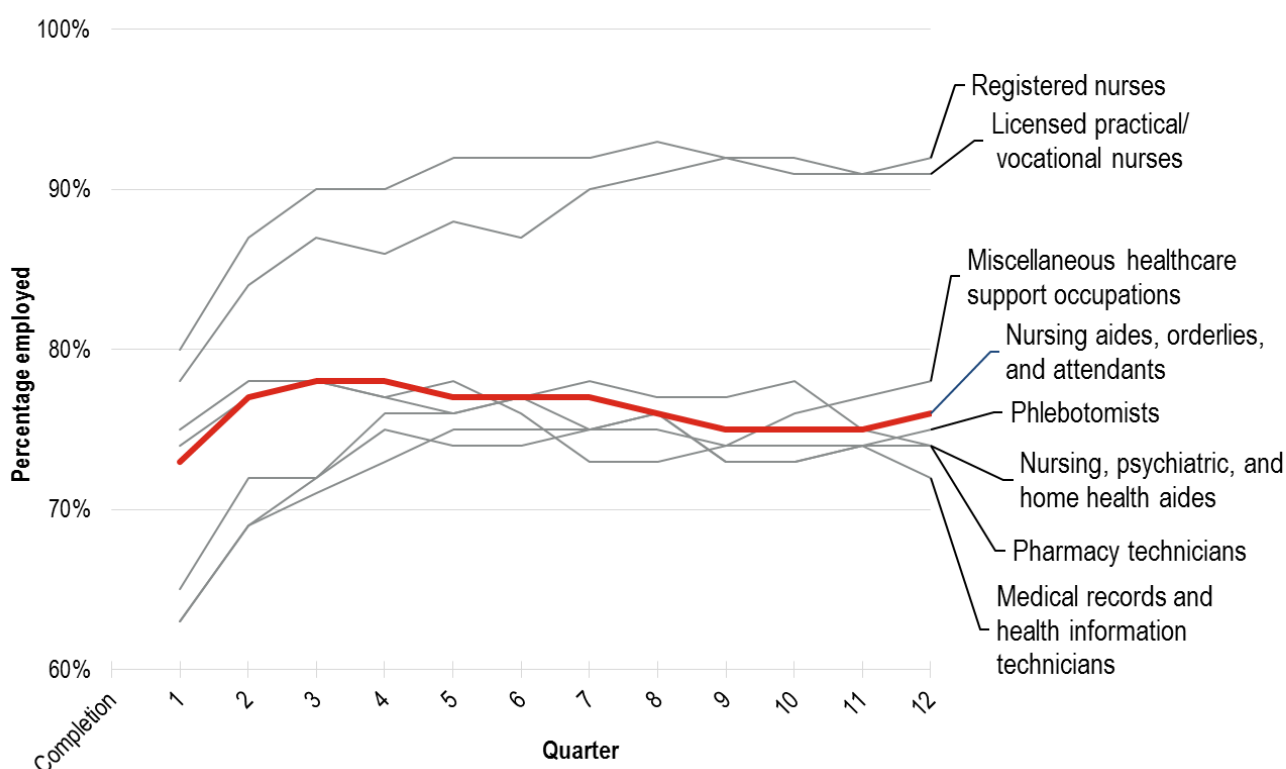


Note: N ranges from 4,159 to 9,421.

Source: NDNH.

Compared with employment of completers of the other eight most common healthcare trainings in HPOG 1.0, employment of CNA training completers fell in the middle—generally much lower than LPN/LVNs and RNs, but similar to the other occupations (**Exhibit 12**).

**Exhibit 12. Quarterly Employment after Training Completion for the Nine Most Common HPOG Healthcare Training Courses**



Note: N ranges from 215 to 7,291. CNA completers shown in red for clarity, all others in gray.

Source: NDNH.

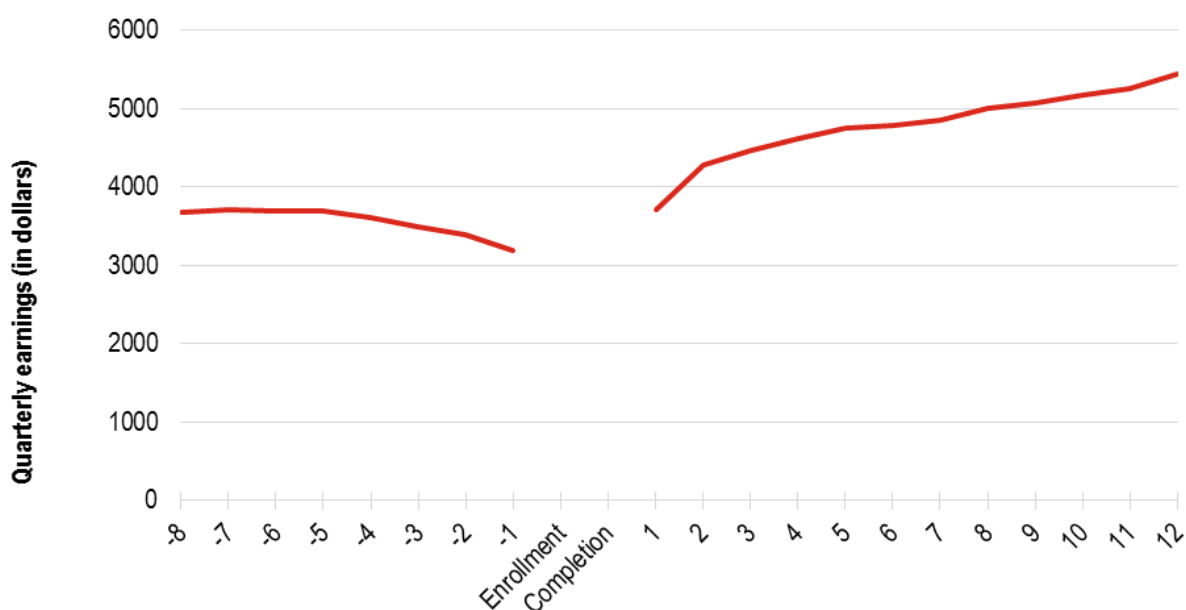
The exception is in the first year after training completion, when CNAs had higher average employment (8 to 12 percentage points higher) than did pharmacy technicians, phlebotomists, medical assistants, and medical records and health information technicians, all higher-paying occupations than CNA.<sup>43</sup> This suggests it may have been easier for CNAs to find employment than those seeking employment in these other occupations.

**Exhibit 13** shows average quarterly earnings in the 8 quarters before HPOG enrollment and the 12 quarters after training completion among participants completing CNA training.<sup>44</sup> In the 8th quarter prior to enrollment, average earnings for those later completing CNA training was \$3,700. By the 12th quarter after CNA training completion, average earnings had increased to \$5,400.

Participants who completed CNA training experienced increases in their quarterly earnings in the three years after completing training.



**Exhibit 13. Quarterly Earnings before Enrollment and after Training Completion among CNA Training Completers**

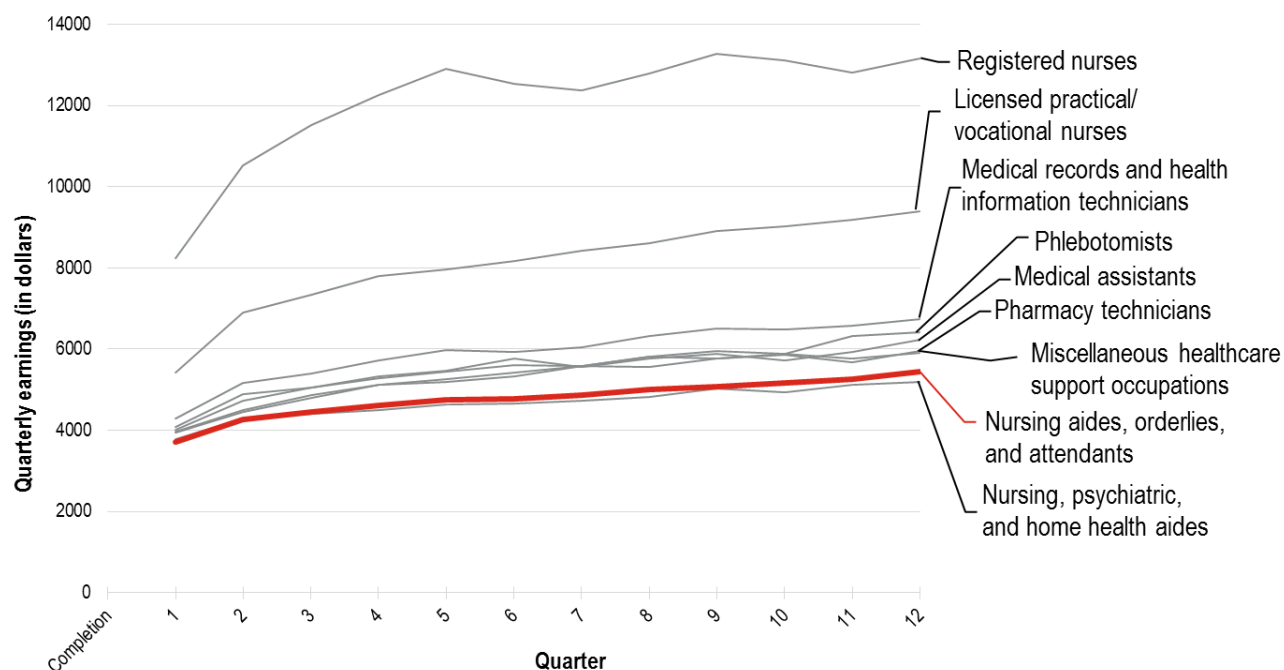


Note: N ranges from 4,926 to 3,961. Earnings calculated for employed participants only.

Source: NDNH.

Participants completing CNA training had consistently lower earnings in the 12 quarters after training completion than those who completed other common HPOG training courses (**Exhibit 14**). Only those completing home health aide training had lower earnings than CNA completers.

**Exhibit 14. Quarterly Earnings after Training Completion for the Nine Most Common HPOG Healthcare Training Courses**

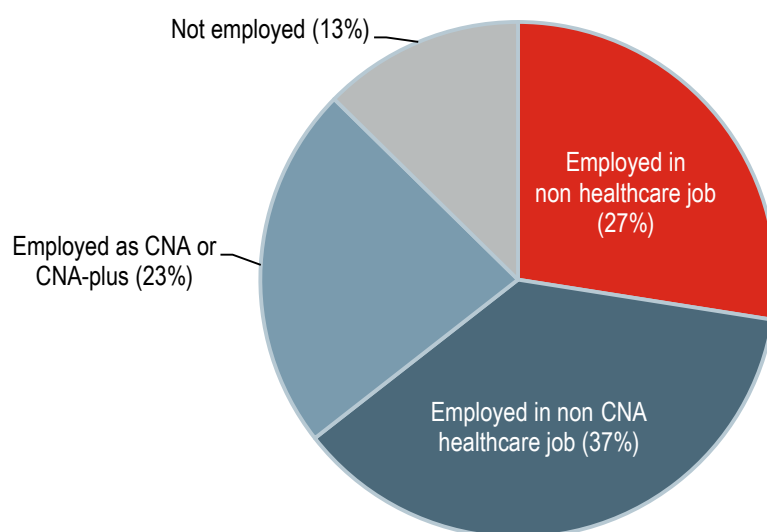


Note: N ranges from 215 to 7,291. CNA participants shown in red for clarity, all others in gray.  
Source: NDNH.

**Characteristics of CNA Employment among HPOG 1.0 Participants.** Many HPOG 1.0 participants were employed as CNAs. In a survey fielded about 15 months after enrollment, responding participants provided information about their employment over the period since starting HPOG and the characteristics of their jobs. These data provide information on how many participants worked as CNAs and the wages, benefits, and hours they worked.<sup>45</sup>

Most HPOG 1.0 participants (87 percent) worked before, during, or after training in the first 15 months after enrollment.<sup>46</sup> **Exhibit 15** shows that more than half of responding participants (60 percent; shown in the two shades of blue) had healthcare job experience during that time. Almost a quarter (23 percent) worked as a CNA or CNA-plus during that period.<sup>47</sup>

Of survey respondents who reported working as a CNA, based on their reported job title, most (84 percent) were classified as a standard CNA or equivalent. The remaining 16 percent of CNAs were classified as working in CNA-plus occupations.

**Exhibit 15. Employment Reported in the 15 Months after HPOG Enrollment**

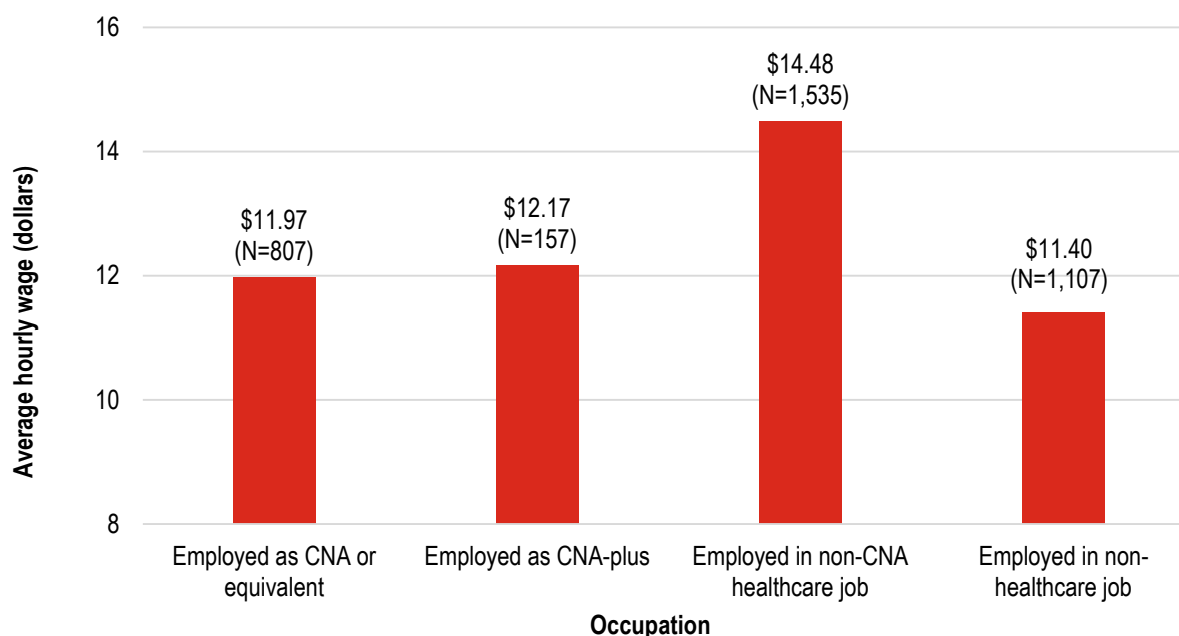
Source: HPOG 15-month participant survey. N=4,304.

Survey respondents working as CNAs reported higher wages on average than respondents working in non-healthcare jobs, but lower wages than other healthcare workers. Participants who reported employment as a CNA or equivalent earned an average of \$11.97 per hour (**Exhibit 16**).<sup>48</sup> This is lower than the average of \$13.29 for all nursing assistants in the United States, reported earlier. That their wages were lower could reflect that HPOG 1.0 participants are newly trained as CNAs, and so might have less work experience in the field than nursing assistants overall. Also, many new CNAs may be finding jobs in nursing homes/skilled nursing facilities which are one of the lowest paid settings (see **Exhibit 2**), as was suggested in a number of interviews with HPOG staff.<sup>49</sup>

The expectation of HPOG programs was that participants gaining skills to work as a CNA-plus would earn higher wages than CNAs, and the survey results show that to be the case. Those employed as a CNA-plus averaged \$12.17 per hour 15 months after HPOG enrollment, only 20 cents more per hour than a CNA. It is possible this wage difference could change with a longer follow-up period.

Participants employed in healthcare in jobs other than a CNA/CNA-plus earned higher wages, \$14.48 per hour on average, in a variety of higher-paying healthcare occupations. Participants employed in non-healthcare jobs earned the least, \$11.40 per hour on average.

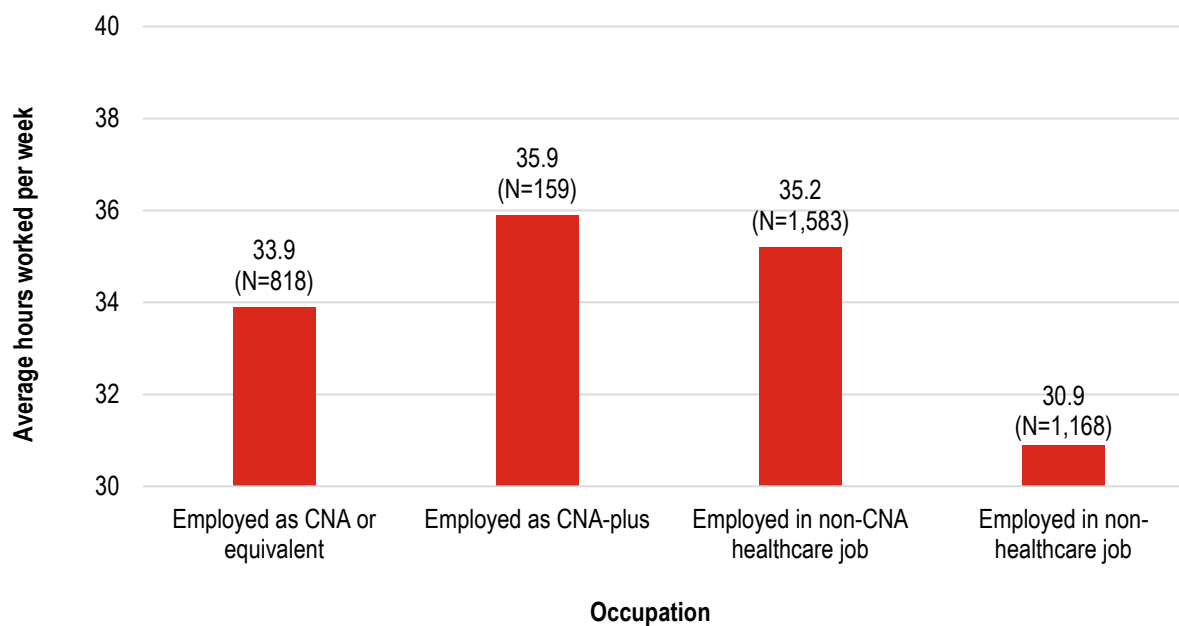
**Exhibit 16. Hourly Wages of those Employed in Different Types of Jobs, Reported at 15 Months after HPOG Enrollment**



Source: HPOG 1.0 15-month participant survey. A small number of employed survey respondents did not report an hourly wage and are not included here.

Responding CNAs worked an average of about 34 hours per week, more than part-time status (**Exhibit 17**). CNA-plus workers worked slightly more, on average about 36 hours per week. Both were similar to surveyed workers in all healthcare fields, suggesting that HPOG participants working as CNAs were not more likely to work part-time hours. Non-healthcare workers had lower average hours worked per week, suggesting fewer full-time jobs among this group.

**Exhibit 17. Weekly Hours Worked of those Employed in Different Types of Jobs, Reported at 15 Months after HPOG Enrollment**



Source: HPOG 1.0 15-month participant survey. A small number of employed survey respondents did not report weekly hours worked and are not included here.

## Insights for Training Programs and Policymakers

Many policymakers, training providers, and worker advocates agree that increasing skills through training is an important way to improve workers' economic opportunities. Programs that provide job skills training to low-income groups need to determine what type of occupational training they should offer, provide funding for, or encourage participants to take. Given the popularity of CNA training in HPOG, the growing demand for CNAs, and low wages for the occupation, this report focuses on certified nursing assistant (CNA) training. This section summarizes the benefits and drawbacks of CNA training.

### Benefits of CNA Training

- **Demand for CNAs is high and projected to grow.** There are currently more than 1.5 million CNAs in the United States, and employment is projected to grow by more than 10 percent in the next 10 years, faster than economy-wide employment.
- **CNA training is short.** The federal requirement for training to receive a nursing assistant certification (necessary to work in nursing homes and most hospitals) is 75 total hours (16 of which are in a clinical setting). On average, HPOG CNA training was completed in two months. This means it can be relatively less costly to provide than many other trainings and serves as an accessible introduction to the healthcare field. CNA training was by far the most popular healthcare training in HPOG. Of the 32 HPOG 1.0 grantees, 90 percent offered CNA training. Of some 30,000 HPOG participants, more than a third (37 percent) enrolled in CNA training. The next most popular training was for medical records and health information technology, with 9 percent of participants enrolled.
- **Most participants complete CNA training.** CNA training is completed at high rates—86 percent of HPOG 1.0 participants who started CNA training completed the training, higher than many other types of healthcare training. This high completion rate may be in part due to the training's short length. The short length combined with the high completion rate of CNA training also make it a potential general introduction to the healthcare sector, leading to training for occupations that are not directly related, such as medical billing and coding or emergency medical technician.
- **Disadvantaged groups might more easily meet academic requirements for CNA training.** The basic skills requirements for CNA training are relatively low. Most HPOG participants in CNA training had a high school diploma (or equivalent) or less as their highest level of education prior to training. Though the majority met 8th-grade numeracy and literacy skills assessment levels, some HPOG programs

only required 6th-grade skills levels to enter CNA training. However, many states also require a criminal background check to earn certification which could be a barrier for some.<sup>50</sup>

- **Participants earning a CNA can bundle this with other short-term trainings to potentially improve employment and earnings opportunities.** Learning additional skills through other related short-term trainings—for example, to become a certified medication aide or a patient care technician—can improve job opportunities relatively quickly. At least a quarter of HPOG participants who completed a CNA also completed additional trainings to reach such “CNA-plus” credentials. However, the earnings gains observed for HPOG participants with CNA-plus credentials over those with a CNA were small, only 20 cents an hour on average. More evidence on the returns to adding these short-term trainings is needed.

### Drawbacks of CNA Training

- **CNAs earn relatively low wages.** On average, nursing assistants in the United States earn \$13.29 per hour, lower than many other occupations that require some postsecondary training or credential but less than a four-year degree. For HPOG participants completing CNA training, wages were even lower (an average of \$11.97 per hour). However, it is important to point out that for those taking these classes, the CNA wage could still be an improvement. In HPOG, those completing CNA training earned higher wages on average than they did prior to enrolling in HPOG and higher than HPOG participants in non-healthcare jobs. Also, CNA average wages are higher in some settings and vary by state; for example, \$14.32 in hospitals relative to \$12.69 in long-term care facilities.<sup>51</sup>
- **CNA jobs have high turnover.** In addition to offering low wages, the CNA position can be physically and emotionally demanding. Rates of turnover are high, suggesting working conditions and other factors do not lead workers to want or be able to remain on the job for the long term.
- **The next step on the career ladder can be challenging.** For CNAs seeking advancement, the most commonly cited next step on a nursing career pathway is to take licensed vocational or licensed practical nurse or registered nurse training, often leading to an academic degree. For some CNAs, making this step may be challenging. Each of these nursing occupations takes considerably more training than a CNA, from one to four years or more compared to less than two months for CNA. Some CNAs may also need to increase their basic skills levels or take academic prerequisites to meet entry requirements. The financial and time commitment can be substantial.



### Strategies to Improve Outcomes

Training providers considering offering CNA training must weigh the needs and abilities of the population they serve and consider the ways they can help those completing CNA training be as successful as possible. Providers should assist those completing CNA training to attain the certification by helping them prepare to take and pass the examination. Providers can also offer and encourage those interested in CNA training to bundle it with other short-term trainings. Anecdotal evidence suggests this can improve their job opportunities and wages, although the data reported here do not provide evidence of substantially higher wages in the short-term for workers who did complete these additional trainings.

In addition, providers can consider partnering with employers to create CNA apprenticeships or extended programs that offer ways for CNAs to gain skills and earn more while working.

Programs can also work to assist those completing CNA training to pursue other healthcare trainings. For those CNAs who would like to remain in the nursing occupation, programs could provide financial, academic, and other supports to assist low-income individuals to enter and complete these longer-term (usually two to four year) education programs. For example, programs could seek ways to shorten the time CNA students with low basic skills must spend in developmental education before moving forward with training.

In addition, programs should be flexible in their thinking about how to help CNA training completers move forward in their careers by considering additional training in other healthcare professions. Some of these occupations may require shorter training than the next step on the nursing career ladder, including emergency medical technicians and medical billing. Completing a CNA could be a first step toward a career in healthcare, helping individuals to build on that experience and move into higher paying or in-demand healthcare jobs.

## Notes

<sup>1</sup> Philip Oreopoulos and Uros Petronijevic, “Making College Worth It: A Review of Research on the Returns to Higher Education,” National Bureau of Economic Research Working Paper No. 19053 (Cambridge, MA, 2013). Christopher Jepsen, Kenneth Troske, and Paul Coomes, “The Labor Market Returns to Community College Degrees, Diplomas, and Certificates,” *Journal of Labor Economics* 32 (2014): 95-121.

<sup>2</sup> HPOG was authorized by the Affordable Care Act (ACA), Public Law 111-148, 124 Stat. 119, March 23, 2010, sect. 5507(a), “Demonstration Projects to Provide Low-Income Individuals with Opportunities for Education, Training, and Career Advancement to Address Health Professions Workforce Needs,” adding sect. 2008(a) to the Social Security Act, 42 U.S.C. 1397g(a), and extended by the Bipartisan Budget Act of 2018, Pub. L. 115-123, through fiscal year 2019.

<sup>3</sup> HPOG 1.0 programs often provided access to education and training courses by financing the costs of and supporting participants in receiving training from existing providers, such as community colleges and technical schools. Some HPOG 1.0 programs provided training directly by creating new training courses for HPOG students. For more information, see Alan Werner, Robin Koralek, Pamela Loprest, Radha Roy, Deena Schwartz, Ann Collins, and Allison Stolte, *Descriptive Implementation and Outcome Study Report: National Implementation Evaluation of the Health Profession Opportunity Grants (HPOG) to Serve TANF Recipients and Other Low-Income Individuals*, OPRE Report # 2016-30. (Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2016).

<sup>4</sup> Based on projected employment statistics from the U.S. Bureau of Labor Statistics, Occupational Projections and Worker Characteristics, 2016-2026, Table 1.7, [https://www.bls.gov/emp/ep\\_table\\_107.htm](https://www.bls.gov/emp/ep_table_107.htm). Detailed results are discussed later in this report.

<sup>5</sup> This and all wage data in the report are from U.S. Bureau of Labor Statistics Occupational Employment Statistics data for May 2016 for occupation 31-1014. <https://www.bls.gov/oes/current/oes311014.htm>. This is equivalent to 146 percent of the 2016 federal poverty guideline for a family of three. 2016 Poverty Guidelines can be found at <https://aspe.hhs.gov/computations-2016-poverty-guidelines>.

<sup>6</sup> The Department of Health and Human Services’ Office of Planning, Research, and Evaluation is using a multipronged research and evaluation strategy to assess the outcomes of the HPOG 1.0 and 2.0 Programs. See <https://www.acf.hhs.gov/opre/research/project/evaluation-portfolio-for-the-health-profession-opportunity-grants-hpog> for a description of the evaluation efforts and results to date.

<sup>7</sup> From the U.S. Department of Labor’s O\*NET database of occupations in the United States, <https://www.onetonline.org/>.

<sup>8</sup> Bureau of Labor Statistics, Occupational Employment Statistics data.

<sup>9</sup> Randall Bovbjerg and Erin McDonald, *Literature Review: Healthcare Occupational Training and Support Programs under the ACA—Background and Implications for Evaluating HPOG*, OPRE Report #2014-29 (Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2014).

<sup>10</sup> As noted earlier this is equivalent to 146 percent of the 2016 federal poverty guideline for a family of three.

<sup>11</sup> Puerto Rico has the lowest average hourly wage on the map, \$9.59.

<sup>12</sup> Statistics in this paragraph and the next on projected employment from the U.S. Bureau of Labor Statistics, Occupational Projections and Worker Characteristics, 2016-2026, Table 1.7, [https://www.bls.gov/emp/ep\\_table\\_107.htm](https://www.bls.gov/emp/ep_table_107.htm).

<sup>13</sup> From the U.S. Bureau of Labor Statistics, 2016 Survey of Occupational Injuries and Illnesses, Table SNR01, [https://www.bls.gov/iif/oshsum.htm#16Summary\\_News\\_Release](https://www.bls.gov/iif/oshsum.htm#16Summary_News_Release).

<sup>14</sup> National Center for Health Workforce Analyses, *Nursing Aides, Home Health Aides, and Related Health Care Occupations—National and Local Workforce Shortages and Associated Data Needs* (Washington, DC: Bureau of Health Professions, Health Resources and Services Administration, 2004). Alison M. Trinkoff, Meg Johantgen, Carles Muntaner, and Rong Le. 2005. “Staffing and Worker Injury in Nursing Homes,” *American Journal of Public Health* 95 (2004): 1220-1225.

<sup>15</sup> As part of the HPOG 1.0 Impact Study, a set of interviews were conducted by the evaluation team in person for each non-tribal HPOG 1.0 program. Respondents included leadership and staff for the program operator and service provider partners, and partner employers. Interviews took place in 2014. For more information see Peck, Laura R., Alan Werner, Eleanor Harvill, Daniel Litwok, Shawn Moulton, Alyssa Rulf Fountain, and Gretchen Locke. (2018). Health Profession Opportunity Grants (HPOG 1.0) Impact Study Interim Report: Program Implementation and Short-Term Impacts, OPRE Report 2018-16a. Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

<sup>16</sup> The Omnibus Budget Reconciliation Act of 1987 established the Nurse Aide Training and Competency Evaluation Program requiring that each state establish state-approved nurse aide training programs that include certain minimum competencies. It also required that all nurse aides working in nursing homes take a state-approved training course and complete a state certification exam within 120 days of training.

<sup>17</sup> From a 2002 survey of states conducted by the U.S. Department of Health and Human Services, Office of Inspector General, Office of Evaluation and Inspections, <https://oig.hhs.gov/oei/reports/oei-05-01-00031.pdf>.

<sup>18</sup> From NursingLicensure.org, which has a 50-state database of nursing assistant program and examination requirements, <https://www.nursinglicensure.org/cna/nursing-assistant.html#states>.

<sup>19</sup> See footnote 16.

<sup>20</sup> See footnote 17.

<sup>21</sup> From the U.S. Department of Labor’s O\*NET database, <https://www.onetonline.org/link/summary/31-1014.00>.

<sup>22</sup> Martha Ross, Nicole Prchal Svajlenka, and Jane Williams, *Part of the Solution: Pre-Baccalaureate Healthcare Workers in a Time of Health Systems Change* (Washington, DC: Brookings Institution, 2014).

<sup>23</sup> U.S. Bureau of Labor Statistics Occupational Employment Statistics data for May 2016 for occupation 29-1141 <https://www.bls.gov/oes/current/oes291141.htm>.

<sup>24</sup> Institute of Medicine, *The Future of Nursing: Leading Change, Advancing Health* (Washington, DC: National Academies of Sciences, Engineering, and Medicine, 2010). <http://www.nationalacademies.org/hmd/Reports/2010/The-Future-of-Nursing-Leading-Change-Advancing-Health.aspx>.

<sup>25</sup> Whether credits were conferred was not reported as part of HPOG 1.0 data collection.

<sup>26</sup> Alan Werner, Pamela Loprest, Deena Schwartz, Robin Koralek, and Nathan Sick, *Final Report: National Implementation Evaluation of the First Round Health Profession Opportunity Grants (HPOG 1.0)*, OPRE Report #2018-09 (Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2017).

<sup>27</sup> See footnote 17.

<sup>28</sup> Rebecca Klein-Collins and Rebecca Starr, *Advancing in Health and Health Care Careers—Rung by Rung Applying a Work-Based Learning Model to Develop Missing Rungs on a Nursing Career Ladder* (Boston, MA: Jobs for the Future, 2007).

<sup>29</sup> The evaluation visits did not specifically gather information on these programs. Additional grantees may have similar programs not captured in our data collection.

<sup>30</sup> Participant characteristics were collected by program staff at intake prior to receipt of any HPOG 1.0 services or training activities. Only participants who were found eligible, participated in the program, and gave their consent to have their data included in evaluation research are included in this analysis.

<sup>31</sup> Participants appear in only one of the two samples. Those who completed both a CNA training and a non-CNA training are included in the “Completed CNA Training” sample.

<sup>32</sup> Recording intake assessment levels, such as TABE testing, was not mandatory among HPOG 1.0 grantees and response levels are therefore lower than with other intake questions. The missing response rate was 17 percent for literacy and 22 percent for numeracy.

<sup>33</sup> Rulf Fountain, Alyssa, Alan Werner, Maureen Sarna, Elizabeth Giardino, Gretchen Locke, and Pamela Loprest, *Training TANF Recipients for Careers in Healthcare: The Experience of the Health Profession Opportunity Grants (HPOG) Program*, OPRE Report #2015-89 (Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2015).

<sup>34</sup> See footnote 24. CNA was one of 76 types of occupational training grantees offered.

<sup>35</sup> The category used to analyze CNA training in HPOG was called “Nursing Aides, Orderlies, and Attendants.” It was a grouping of minor training categories sourced from the Bureau of Labor Statistics (BLS) that were available in the PRS and which included Nursing Aides, Orderlies, and Attendants; Nursing Assistants; Orderlies; and Patient Care Technicians. Interviews with grantees and other data in the PRS suggest that the majority of training in this category was for nursing assistant.

<sup>36</sup> As part of the High Growth Job Training Initiative, Mid-Columbia Community College reported a 94 percent completion rate for its CNA training at the time of the evaluation. Carreras en Salud, a program offered by Instituto del Progreso Latino (later a sub-grantee in HPOG who’s training data is included in this analysis), reported a 95 percent completion rate for its CNA training as of August 2009. Nightingale, Demetra, Lauren Eyster, John Trutko, Carolyn O’Brine, Kate Chambers (2008). “Implementation Analysis of High Growth Job Training Initiative (HGJTI) Programs.” Urban Institute, Washington, DC.

<https://www.urban.org/research/publication/implementation-analysis-high-growth-job-training-initiative-hgjti-programs>. Estrada, Ricardo. (2010). “How to Build Bridge Programs That Fit into a Career Pathway: A Step-by-Step Guide Based on the Carreras en Salud Program in Chicago.” Instituto del Progreso Latino. [http://cccie.org/wp-content/uploads/2010/08/Instituto2010\\_HowToBuildBridgePrograms\\_final.pdf](http://cccie.org/wp-content/uploads/2010/08/Instituto2010_HowToBuildBridgePrograms_final.pdf)

<sup>37</sup> Some HPOG 1.0 participants who completed CNA training might have gone on to more training *outside* of the HPOG program, which was not captured in the program administrative data and thus are not considered in this analysis.

<sup>38</sup> Four participants completing CNA training were reported to have earned a degree.

<sup>39</sup> HPOG 1.0 lasted five years and most participants were engaged for shorter durations, enrolling throughout the five-year period. Given that higher-level nursing trainings generally require one to four years to complete, many participants might not have had time to complete a CNA *and* one of these courses of advanced training prior to the end of HPOG 1.0.

<sup>40</sup> The outcomes are from NDNH data matched with PRS data. For each HPOG 1.0 participant, the study has 8 quarters of NDNH earnings data prior to their enrollment and up to 12 quarters after training completion, depending on the timing of training completion and the number of post-enrollment quarters of data available. A participant with at least \$58 in earnings for that quarter was counted as employed. NDNH data do not include job titles or industry sectors, so we cannot identify whether employment is in the healthcare sector.

<sup>41</sup> See ACF’s HPOG Impact Evaluation website for more information <https://www.acf.hhs.gov/opre/research/project/health-profession-opportunity-grants-hpog-impact-studies>.

<sup>42</sup> The number of participants completing CNA training in the NDNH sample was 9,421. This is lower than the corresponding PRS sample of 9,642 because of small percentages of administrative errors during the matching process such as invalid Social Security numbers.

<sup>43</sup> Bureau of Labor Statistics, May 2016 Occupational Employment Statistics, [https://www.bls.gov/oes/current/oes\\_nat.htm](https://www.bls.gov/oes/current/oes_nat.htm).

<sup>44</sup> Average quarterly earnings were calculated for employed participants only.

<sup>45</sup> Only a subset of all HPOG participants were surveyed. This discussion is based on the sample of 4,304 HPOG 1.0 respondents.

<sup>46</sup> Employment includes work at any time in the 15 months since enrollment. The majority of respondents were employed at the time of the survey (73 percent).

<sup>47</sup> Healthcare jobs were categorized into non-CNA occupation, CNA or equivalent, or CNA-plus using respondents' reports of job titles. We categorized these open text field responses. We identified a total of 38 different CNA-related job titles that fall under the umbrella of CNA-related occupations identified by the Department of Labor's O\*NET database.

<sup>48</sup> Hourly wages were reported directly by participants or calculated by us from participants' reports of daily, weekly, biweekly, monthly, or annual earnings.

<sup>49</sup> The interviews were part of site visits undertaken as part of the HPOG 1.0 Impact Study, mentioned earlier.

<sup>50</sup> Most HPOG grantees anticipated this potential barrier and conducted criminal background checks as part of program intake. Therefore, most CNA training completers were likely pre-screened for this potential employment barrier.

<sup>51</sup> A key question for publicly funded-training programs is whether these wage increases were a result of the program or whether these individuals would have obtained similar training and jobs on their own. Federal impact evaluations currently underway of HPOG will be able to answer such questions by comparing outcomes for study treatment and control group members rather than pre- and post-training wages.