

## Design Report



## National Implementation Evaluation of the Health Profession Opportunity Grants (HPOG) to Serve TANF Recipients and Other Low-Income Individuals

OPRE Report No. 2014-02

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## Overview

The Health Profession Opportunity Grants (HPOG) Program was established by the Affordable Care Act of 2010 to provide training programs in high-demand healthcare professions to Temporary Assistance for Needy Families recipients and other low-income individuals. The Administration for Children and Families (ACF) of the U.S. Department of Health and Human Services awarded grants to 32 organizations to develop career pathways programs in healthcare. ACF is using a multi-pronged evaluation portfolio to assess the HPOG demonstration projects that includes the HPOG National Implementation Evaluation (NIE). This report describes the evaluation design for the NIE. The NIE design was developed by Abt Associates in partnership with the Urban Institute under contract to the Office of Planning, Research and Evaluation within ACF. The design focuses on the 27 non-tribal HPOG grantees and addresses four major research questions:

1. How are health professions training programs being implemented across the grantee sites?
2. What changes to the service delivery system are associated with program implementation?
3. What individual-level outputs and outcomes occur (e.g., recruitment, enrollment, retention, completion (accreditation/ certification), job entry, employment retention and advancement, and earnings)?
4. What key components and factors appear necessary or seem likely to contribute to the success of these programs?

The study involves three related analyses: a Descriptive Implementation Study, a Systems Change Analysis, and an Outcome Study. The Descriptive Implementation Study has two distinct but related goals: 1) a comprehensive description of each HPOG grantee as well as of the HPOG initiative overall; and 2) encoded measures of program design and implementation strategies for use in the HPOG Impact Study.

The major goal of the Systems Change Analysis is to examine the HPOG grantees' partnership and organizational network structure and if and how it has changed under HPOG. In particular, this study component will assess the degree to which those changes are associated with the goal of preparing HPOG participants for healthcare jobs that pay well and are in high demand while accommodating the needs of the target populations. The analysis will also examine the extent to which HPOG created or improved accessible entry points into the health professions workforce for the target population, thus impacting the broader local service delivery system.

The Outcome Study will analyze program outputs such as receipt of support services; engagement in employment development activities; receipt and completion of basic skills instruction; receipt and completion of vocational training; and receipt of a certificate, license, or diploma. Key outcomes of interest, both during and after participation, include employment, employment in the healthcare sector or a healthcare job, earnings, and career advancement.

To support the analyses, the NIE will use surveys to collect data from grantee management and staff, stakeholders, employers, and participants. Additionally, the NIE will use data from the HPOG Performance Reporting System, the National Directory of New Hires, HPOG program management materials (e.g., grant applications), and national and local sources on local area labor markets.

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## 1. Introduction: Overview of the National Implementation Evaluation of the Health Profession Opportunity Grants (HPOG)

As part of the Patient Protection and Affordable Care Act (ACA) of 2010, Congress authorized funds “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.”<sup>1</sup> The Administration for Children and Families (ACF) of the U.S. Department of Health and Human Services (HHS) developed and funded the Health Profession Opportunity Grants (HPOG) program to prepare, train and support Temporary Assistance for Needy Families (TANF) program recipients and other low-income individuals for stable, well-paying careers in healthcare. In addition to providing opportunities for economic advancement, the HPOG program was designed to meet the growing labor force needs of an expanding healthcare industry.

The HPOG program is administered by the Office of Family Assistance (OFA) within ACF. In September 2010, OFA awarded \$67 million in grants to 32 postsecondary educational institutions, government agencies, Workforce Investment Boards (WIBs), community-based organizations, and tribal entities in 23 states. Five of the grants were awarded to tribal organizations.<sup>2</sup> The five-year grants may be used for training, education and support services to prepare TANF recipients and other low-income individuals to enter and advance in the healthcare sector in occupations such as nursing, long-term care, allied health, health information technology, and child care health advocate occupations. Education and training programs funded through the five-year HPOG grants are expected to:

- Prepare participants for healthcare sector employment in positions that pay well and are expected either to experience labor shortages or be in high demand.
- Target skills and competencies demanded by the healthcare industry.
- Support career pathways, such as articulated career ladders.
- Result in employer- or industry-recognized, portable educational credentials (e.g., certificates or degrees) and professional certifications and licenses (e.g., a credential awarded by a Registered Apprenticeship program).
- Combine support services with education and training services to help participants overcome barriers to employment.
- Provide training services at times and locations that are easily accessible to targeted populations.

A multicomponent evaluation strategy has been developed and is being overseen by the Office of Planning, Research and Evaluation (OPRE) in ACF that includes implementation and impact studies. This report describes the evaluation design for the HPOG National Implementation Evaluation (NIE). The NIE

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<sup>1</sup> Authority for these demonstrations is included in the 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).

<sup>2</sup> The evaluation described in this report will include 27 HPOG grantees. The five tribal HPOG grantees are being evaluated separately.

design, which was developed by Abt Associates in partnership with the Urban Institute under contract to OPRE, focuses on the 27 non-tribal grantees and addresses four major research questions:

1. How are health professions training programs being implemented across the grantee sites?
2. What changes to the service delivery system are associated with program implementation?
3. What individual-level outputs and outcomes occur (e.g., recruitment, enrollment, retention, completion (accreditation/ certification), job entry, employment retention and advancement, and earnings)?
4. What key components and factors appear necessary or seem likely to contribute to the success of these programs?

A fifth question, “What can be learned about how best to implement these programs for this population (what implementation and/or systems components affect program outputs and outcomes)?” will be answered by the HPOG Impact Study, described below.

This chapter presents the background of the HPOG program and OPRE’s research strategy. It then describes the HPOG program logic model and the conceptual framework for the NIE.

## 1.1 HPOG Background

This section begins with a description of the policy context for the HPOG program. It then provides an overview of how grantees have implemented HPOG and who is participating in HPOG programs.

### 1.1.1 The policy context: A growing need for healthcare workers

The ACA authorized funding for training to create new incentives and opportunities for individuals to enter the healthcare workforce, including greater investments in education, training, and support services. As part of this effort, ACF developed the HPOG program to expand resources to train economically disadvantaged groups for the healthcare workforce. The need for healthcare workers is predicted to grow over the next several decades, as the population ages, medical technology advances, and the number of persons living with chronic medical conditions increases. For example, a recent study found that by 2050 the United States will need 5.7 to 6.5 million long-term care nurses, nursing aides, and home health and personal care workers to meet the needs of baby boomers, a 50 percent increase from current levels.<sup>3</sup>

Moreover, provisions of the Affordable Care Act that expand health insurance coverage are expected to increase the demand for healthcare services further, thus exacerbating existing healthcare workforce shortages (Hofer, Abraham, and Moscovice, 2011). The Congressional Budget Office (CBO) estimates that some 25 million more people will be insured under ACA in 2016 than would otherwise have had coverage (CBO, 2011). As a result, analysts expect substantial growth in demand both for the acute services conventionally covered by health insurance and for the long-term care services covered by Medicaid (CBO, 2010; Holahan and Header, 2010; Dorn, 2010).

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<sup>3</sup> For more information, see Human Resources and Services Administration (2003), Institute for the Future of Aging Services and Paraprofessional Healthcare Institute (2003), Institute of Medicine (2008), Derksen and Whelan (2009), and Bovbjerg et al. (2009).

Finally, a range of additional factors could contribute to the shortage of healthcare workers, including insufficient enrollment in healthcare education and training programs; a lack of financial, academic, and support services for those entering education and training programs; complex credentialing and licensing requirements; geographic differences in demand for healthcare workers; and high rates of worker turnover in some healthcare occupations.

### 1.1.2 Overview of HPOG program administration and participant characteristics

The 32 HPOG grants were funded on September 30, 2010. Exhibits 1.1 and 1.2 summarize selected information about grantees and participants. This information, distilled from the HPOG Performance Reporting System (PRS),<sup>4</sup> reviews of grantee applications and program plan revisions, grantee Program Performance Reports (PPRs), and site visits to 13 grantees, informed the development of the NIE Design Report.

Exhibit 1.1 presents summary information on the non-tribal HPOG grantees for a few select characteristics: state and name of grantee; type of grantee institution (e.g., postsecondary educational institutions, WIBs, other government agencies, and nonprofit institutions); number of grantee sites (locations of service); five-year enrollment goal ranges; and annual grant amount ranges.

As the exhibit shows, the grantees are heterogeneous. Many, but not all, of the 27 grantees are operating HPOG in multiple sites.<sup>5</sup> Total enrollment goals over five years range from fewer than 500 participants to over 2,000. Annual program budgets range from about \$1 million to over \$5 million.

Exhibit 1.2 provides a snapshot of the characteristics of HPOG participants from the 27 non-tribal grantees.<sup>6</sup> Nearly 15 percent are TANF recipients (one of the HPOG target groups). Most are women. Six in ten have children. HPOG serves a relatively large proportion of low-income workers; about 43 percent of participants are employed at program intake. Almost 32 percent of those employed at intake are in a healthcare occupation, while nearly 44 percent overall have worked in a healthcare job in the past. Finally, about 34 percent of HPOG participants are enrolled in school at the time of HPOG intake.

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<sup>4</sup> The PRS is a management information system for HPOG grantee programs developed and operated by Abt Associates and the Urban Institute under contract to ACF. It is described in greater detail in Chapter 2.

<sup>5</sup> Note in this chapter and throughout the Design Report, the terms “grantee,” “site” and “program” are used. Grantees are the lead organizations with overall management responsibility for the HPOG grant. Grantee sites (or just “sites”) are distinct locations where grantees serve participants. A grantee and site may be one and the same or grantees may have multiple service locations (sites). A program is the structure and content of all services and activities available to participants within an administrative unit. Grantees with one or more sites (physical locations for intake and/or case management) that offer a highly standardized blend of services implemented in a highly standardized way across different physical locations (sites) would have one program. On the other hand, grantees that have two or more sites with substantial autonomy in daily operations given to the local administrator and/or provide distinct services and activities and/or serve distinctly different clients would have two or more programs. This means that for dispersed sites to constitute different programs there needs to be either a degree of local autonomy, distinct service blends or different target subgroup of participants.

<sup>6</sup> The PRS is a “live” data system, meaning grantees continue to enter new data. Grantees have the ability to revise or update past data that were incorrect, missing, or had not yet been entered. Results from the PRS presented here are based on data extracted January 31, 2014, and thus are subject to revision.

**Exhibit 1.1: Selected HPOG Grantee Characteristics**

Grantee State and Name	Type of Organization	Number of Grantee Sites	Size/Scope (Based on Total Enrollment Goal)	Year One Funding Level
KS Kansas Department of Commerce	Government Agency	5	2000+	\$2 million – \$3 million
NH New Hampshire DHHS Office of Minority Health	Government Agency	5	1000 – 1999	\$2 million – \$3 million
PA Central Susquehanna Intermediate Unit	Government Agency	5	<500	\$1 million – \$2 million
SC South Carolina Department of Social Services	Government Agency	4	500 – 999	\$2 million – \$3 million
AZ Pima County Community College District	Higher Education Institution	9	1000 – 1999	\$3 million – \$4 million
FL Pensacola State College	Higher Education Institution	1	1000 – 1999	\$1 million – \$2 million
KY Gateway Community and Technical College	Higher Education Institution	2	500 – 999	\$1 million – \$2 million
NE Central Community College	Higher Education Institution	6	1000 – 1999	\$1 million – \$2 million
NJ Bergen Community College	Higher Education Institution	11	2000+	\$4 million – \$5 million
NY Research Foundation of CUNY - Hostos	Higher Education Institution	1	500 – 999	\$1 million – \$2 million
NY Schenectady County Community College	Higher Education Institution	6	1000 – 1999	\$2 million – \$3 million
OH Eastern Gateway Community College	Higher Education Institution	11	1000 – 1999	\$2 million – \$3 million
PA Temple University of the Commonwealth System of Higher education	Higher Education Institution	1	<500	\$1 million – \$2 million
TX Alamo Community College District and University	Higher Education Institution	1	<500	\$1 million – \$2 million
WA Edmonds Community College	Higher Education Institution	2	500 – 999	\$1 million – \$2 million
WI Gateway Technical College	Higher Education Institution	7	<500	\$1 million – \$2 million
IL Southland Health Care Forum, Inc.	CBO	1	<500	\$1 million – \$2 million
OK Community Action Project of Tulsa County, Inc.	CBO	1	<500	\$1 million – \$2 million
CA San Diego Workforce Partnership	WIB	4	2000+	\$5 million – \$6 million
CT The WorkPlace, Inc.	WIB	1	500 – 999	\$1 million – \$2 million
IL WIB of Will County	WIB	5	500 – 999	\$1 million – \$2 million
LA Workforce Development Board (SDA-83)	WIB	11	1000 – 1999	\$2 million – \$3 million
MO Full Employment Council	WIB	1	500 – 999	\$1 million – \$2 million
NY Buffalo and Erie County Workforce Development Consortium, Inc.	WIB	2	1000 – 1999	\$1 million – \$2 million
NY Suffolk County Department of Labor/Suffolk County WIB	WIB	1	500 – 999	\$1 million – \$2 million
WA Workforce Development Council of Seattle-King County	WIB	1	500 – 999	\$2 million – \$3 million
WI Milwaukee Area WIB	WIB	4	1000 – 1999	\$3 million – \$4 million

Source: PRS December 1, 2012 Participant Service Sites.

**Exhibit 1.2: Selected Characteristics of HPOG Program Participants at Intake**

Participant Characteristics	Percentage <sup>a</sup>
<b>Demographic Characteristics</b>	
Gender	
Female	88.71%
Male	11.29%
Race/Ethnicity	
White, Non-Hispanic	38.08%
Black/African-American, Non-Hispanic	35.11%
Asian, Native Hawaiian, or Pacific Islander	2.88%
American Indian or Native Alaskan	4.59%
Hispanic/Latino	16.64%
Two or more races	2.71
Has dependent children	65.48% (average 1.30 children) <sup>b</sup>
Marital status	
Married	17.28%
Divorced/separated	19.48%
Widowed	1.09%
Never married	62.16%
<b>Socioeconomic Characteristics</b>	
Assistance program participation at intake	
Temporary Assistance for Needy Families (TANF)	16.38%
General Assistance	3.12%
Supplemental Nutrition Assistance Program (SNAP)	55.27%
Supplemental Security Income (SSI)	3.58%
Social Security Disability Insurance (SSDI)	2.05%
Refugee Cash Assistance (RCA)	0.25%
Medicaid	38.48%
Unemployment Insurance (UI)	
UI claimant	13.14%
UI exhaustee	3.89%
Participant earnings during past 12 months	
\$0	27.17%
\$1 to \$14,999	52.81%
\$15,000 to \$34,999	18.84%
\$35,000 or more	1.19%
Participant family income from all sources	
\$0	13.81%
\$1 to \$24,999	71.06%
\$25,000 to \$49,999	13.29%
\$50,000 or more	1.84%
Highest level of education	
Less than 12 <sup>th</sup> Grade	5.84%
High School Equivalency or GED	13.18%
High School Graduate	39.36%
1-3 Years of College/Technical School	35.31%
4 Years or More of College	6.32%
Literacy assessed at 8 <sup>th</sup> grade level or higher <sup>c</sup>	83.80%
Numeracy assessed at 8 <sup>th</sup> grade level or higher <sup>c</sup>	72.21%
In school at intake	35.61%
Ever worked for pay	94.77%
Ever worked in a healthcare profession/occupation	44.97%

Participant Characteristics	Percentage <sup>a</sup>
Employed at intake	42.41%
Employed, entering HPOG through Incumbent Worker program <sup>d</sup>	7.87%
Employed, working for healthcare employer <sup>d</sup>	40.55%

Source: Participants ever enrolled in HPOG as of January 31, 2014 from PRS (N = 26707).

<sup>a</sup> Percentages are out of participants with responses for item; no items with less than 80 percent response rates are included.

<sup>b</sup> Average children is calculated out of those participants who report having a child.

<sup>c</sup> Not all grantees test for grade level. Percentage calculated for those grantees that conduct reading and math assessments.

<sup>d</sup> These subcategories are calculated using the universe of participants who are employed at intake in the PRS.

The next section of this report presents an overview of OPRE's HPOG research strategy.

## 1.2 HPOG Research and Evaluation Initiatives

In keeping with HPOG's purpose as a demonstration project,<sup>7</sup> OPRE devised a multicomponent research strategy to describe, evaluate, and draw lessons from HPOG. In addition to describing how grantees implement their HPOG programs and whether the initiative makes a difference in participants' lives, the overall research agenda focuses on determining program features and implementation strategies that best promote participants' completion of training and employment in stable, well-paying healthcare jobs.

To avoid duplicative efforts, maximize the usefulness of collected data, reduce burden on grantees participating in the federal evaluation activities, meet performance management requirements, and promote cross-project learning, OPRE is closely coordinating the components of this research agenda. In addition to the NIE, OPRE-funded projects include:

- *The HPOG Implementation, Systems, and Outcomes Evaluation Design and Performance Reporting.* This initiative includes three main components: the development, maintenance, and operation of the PRS; the design of a study to evaluate implementation, systems change, and outcomes (the National Implementation Evaluation); and the coordination of efforts across all HPOG research projects to avoid duplication and ensure comparability of results.
- *Evaluation of Tribal HPOG.* This evaluation includes an implementation and outcome evaluation of the tribal HPOG grantees. It aims to provide documentation of and lessons about a range of programmatic approaches for health professions training serving this target population.
- *Innovative Strategies for Increasing Self-Sufficiency (ISIS) Project.* The ISIS Project is a multisite, random assignment evaluation of promising career pathways strategies for increasing employment and self-sufficiency among low-skilled, low-income individuals. Three HPOG grantees are participating in ISIS.

<sup>7</sup> The ACA stipulates that grantees must submit both periodic and final reports on activities carried out under the HPOG initiative (H.R. 3590, Title V, Subtitle F, Sec. 5507, sec. 2008, (a)(3)(A)) to support the goals of performance management and program evaluation. The Act also mandates an evaluation of the demonstration projects (H.R. 3590, Title V, Subtitle F, Sec. 5507, sec. 2008, (a)(3)(B)). The Act further indicates that the evaluation will be used to inform the final report to Congress (H.R. 3590, Title V, Subtitle F, Sec. 5507, sec. 2008, (a)(3)(C)).

- *HPOG Impact Study.* The HPOG Impact Study will explore how variations in program services affect program impacts. It will answer questions about overall HPOG program effectiveness as well as about which types of programs or program components are most effective. Twenty HPOG grantees are participating in this study.
- *University Partnership Research Grants for HPOG.* ACF awarded grants to five universities to support research and evaluation that will inform and improve HPOG program performance and complement the other initiatives in ACF's HPOG research strategy.

### 1.2.1 Research questions addressed by the HPOG National Implementation Evaluation

The NIE evaluation design focuses on the 27 non-tribal HPOG grantees. The NIE includes three substudies: Descriptive Implementation Study, Systems Change Analysis, and an Outcome Study. The primary study questions are:

1. How are health professions training programs being implemented by the grantees in the study? This research question is addressed primarily by the Descriptive Implementation Study, which will develop a comprehensive description of the HPOG program as designed and implemented across 27 grantees. The study will cover:
  - Socioeconomic characteristics of local eligible populations
  - Local healthcare sector labor market conditions
  - Grantee institutional context and networks
  - Program management and administration, including staffing structure and background
  - Program grant-related resources and costs
  - Program operations, activities and services, including:
    - Outreach and recruitment
    - Eligibility and intake
    - Assessments
    - Curricular and instructional design and content
    - Supports
    - Employer connections
2. What changes to the service delivery system are associated with program implementation? This research question is addressed primarily by the Systems Change Analysis, which is designed to examine the HPOG grantees' partnership and organizational network structure and if and how it changed under HPOG. In particular, this study component will assess the degree to which changes are associated with the goal of preparing HPOG participants for healthcare jobs that pay well and are in high demand while accommodating the needs of the target populations. The analysis will also examine the extent to which HPOG programs created or improved accessible entry points into the healthcare workforce for their target populations, thus affecting the broader local service delivery system.
3. What are individual-level outputs and outcomes? This research question is addressed by the Outcome Study. The Outcome Study is designed to measure and analyze key participant outputs and outcomes, including:
  - Hours of education and training
  - Completion of basic skills instruction
  - Completion of vocational training

- Receipt of certificates, degrees, or other credentials
  - Post-program employment and earnings
  - Post-program employment and earnings in the healthcare sector
  - Further healthcare career training
  - Career advancement
4. What key components appear necessary or likely to contribute to the success of these programs? This research question will be addressed by all three NIE substudies. Individually and together they will help generate hypotheses about effective program design and implementation strategies. Additional analyses that provide evidence on the association between aspects of the HPOG program and outputs and outcomes are also under consideration. A separate evaluation, the HPOG Impact Study, is designed to test causal hypotheses about how program features affect participant outcomes.

The next section of this design report presents the HPOG logic model, which establishes the conceptual framework for the evaluation design.

### 1.3 Framework for HPOG Career Training

The HPOG programs are based on a career pathways framework. A key feature of career pathways is that “post-secondary training should be organized as a series of manageable and well-articulated steps accompanied by strong supports and connections to employment” (Fein, 2012). These articulated steps provide opportunities for program participants to advance through successively higher levels of education and training, leading to employment along a sectoral career path. The framework also incorporates training customization, supports, and connections to employment. The HPOG NIE design builds on the ISIS Project career pathways theory of change. The logic model is adapted to HPOG programs. Each HPOG grantee designs and implements its own collection of program elements within the broader career pathways framework. Grantees may emphasize some elements more than others or create a constellation of services and supports that are appropriate for their service areas, objectives, and target populations.

Exhibit 1.3 illustrates the career pathways framework as implemented in HPOG programs. Short- and long-term individual outcomes are expected to be influenced by a combination of program components and features which in turn are influenced by contextual factors. Characteristics and needs of participants affect program components, outputs, and outcomes. The logic model depicted is shared by the HPOG Impact Study with one exception: the NIE includes the systems/network change outcomes, which are not a focus of the impact study.

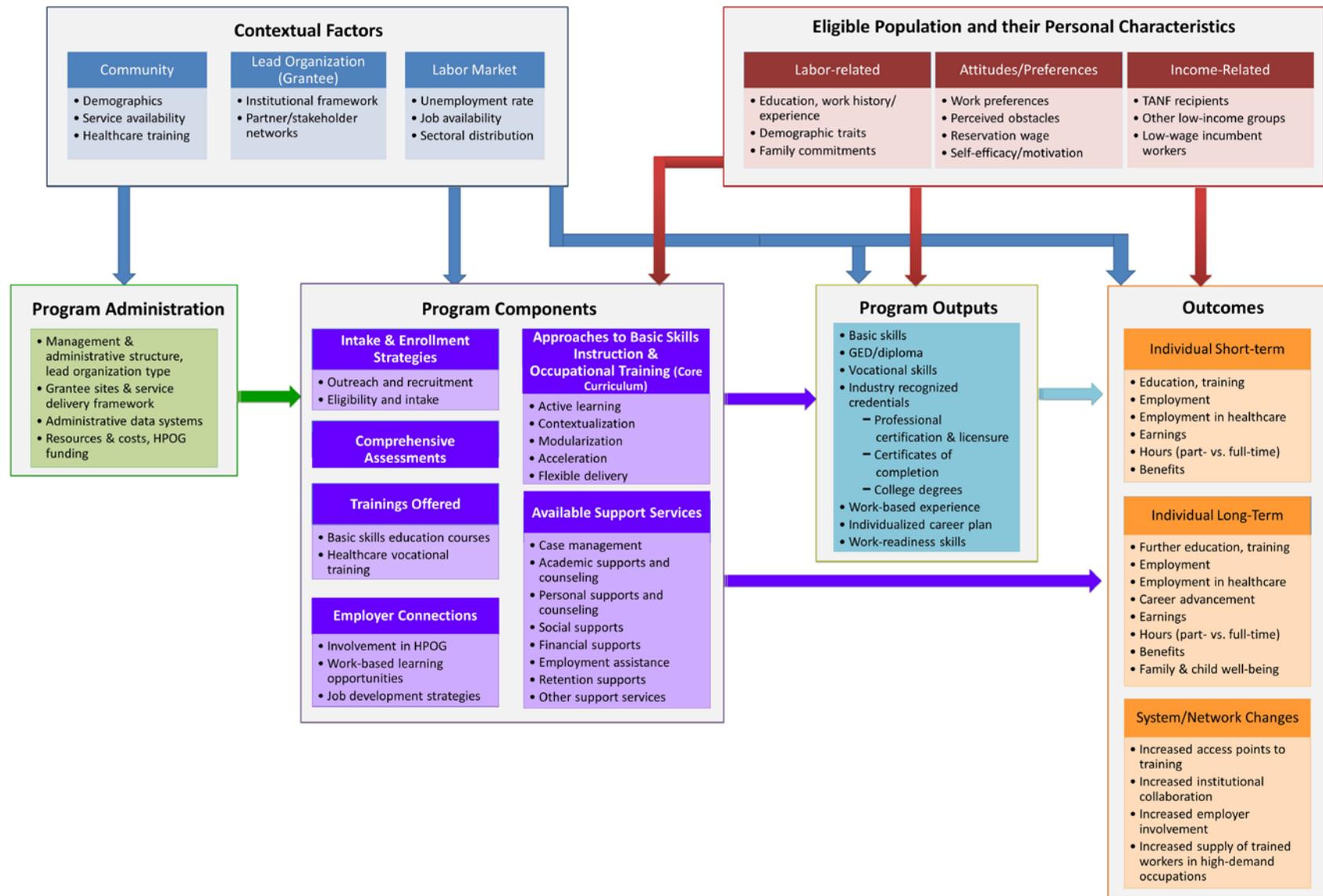
The HPOG logic model provides a framework for specifying the evaluation design’s descriptive and analytic goals: 1) how are the specific elements in the domains of contextual factors, eligible populations and their personal characteristics, program administration, and program components of the logic model realized in the implementation of the HPOG grantees, and 2) how are those elements hypothesized to affect outputs and outcomes? The logic model framework provides the conceptual context for the development of constructs and measures needed to address the core study research questions. This section provides an overview of the major components of the HPOG logic model.

#### 1.3.1 Overview of the logic model

The major components of the HPOG logic model include:

- *Contextual factors.* These are the overall community and healthcare labor market environment as well as the grantee’s institutional framework and network of partners and stakeholders.
- *Eligible populations and their characteristics.* This includes the grantee-specific target populations and the individual characteristics (labor-related, attitudes/preferences, and income-related) that may be associated with: 1) accessing and completing academic and vocational training for good jobs in the healthcare sector; and 2) obtaining and advancing in those jobs. Many individuals among the eligible populations may have barriers to occupational training or employment that require remediation.
- *Program administration.* This includes the management and administrative structure of the lead HPOG grantee organization, grantee sites and service delivery framework, administrative data systems, and resources for funding the HPOG program.
- *Program components.* Program components include intake and enrollment strategies including marketing the program and recruiting target populations; providing comprehensive assessments of participants’ academic and non-academic needs and skills; delivering a core curriculum of basic skills instruction and occupational trainings; providing academic and non-academic supports; and making connections with employers.
- *Program outputs and outcomes.* These are the intended results of program activities and services. “Outputs” are defined as the direct results of program activities or services (such as additional hours of basic skills instruction and vocational training) received by HPOG participants and/or the accomplishments associated with completing a service, including tangible documentation of completion, such as a certificate, license, or diploma. “Outcomes” are defined as the expected results or goals of successful participation in an HPOG program, such as a positive change in employment status, earnings, and/or occupation and career.

Exhibit 1.3: HPOG Career Pathways Framework Logic Model



The remainder of this section presents an overview of these logic model domains and the range of the major elements within each domain.

### **1.3.2 Contextual factors**

Local HPOG programs' content and operations are shaped by the external socioeconomic and demographic context in which the grantees operate, their institutional cultures and networks, and the local labor market. The following subsection further describes these contextual factors.

#### ***Community***

Local HPOG program development and operations are shaped by the community in which a program resides. This includes the demographics of the local population. Also important is the availability of other healthcare training opportunities for the target populations. Finally, the existence and types of support services already available in the community influence HPOG program development.

#### ***Institutional framework***

Grantee design and implementation of programs is shaped partly by the type of institution that received the HPOG grant (e.g., WIBs, other state and local government agencies, postsecondary institutions, and other nonprofit organizations). Although institutional contexts and cultures may vary within these broad categories, different types of grantees may have different institutional resources and experience. For example, some postsecondary institutions offered healthcare training prior to receiving HPOG funding, but some institutions might not have had the financial capacity to provide support services that TANF recipients and other nontraditional students may need. Similarly, some institutions might not have had a reason or incentive to structure and schedule courses to accommodate the needs of low-income adults. For this reason, these grantees 1) may target higher-skilled individuals than other types of grantees, and/or 2) may partner with other entities to provide necessary support services. In contrast, social service agencies or community-based organizations may have more experience delivering services to TANF recipients, but may not have experience designing and facilitating training. These organizations may be able to recruit TANF recipients more effectively than other kinds of grantees, but may need to partner with outside organizations to provide training.

#### ***Partner and stakeholder networks***

To implement HPOG programs that successfully address all the needs of their target populations, grantees had to develop or rely on existing partnerships with other agencies and institutions. Some of these partnerships were mandated by the HPOG Funding Opportunity Announcement (FOA) (ACF, 2010), which required grant applicants to demonstrate that their HPOG program would be implemented by partnerships that include state and local WIBs and state TANF and apprenticeship agencies (p. 7). The FOA also encouraged grantees to cultivate "strategic partnerships" with a variety of key stakeholders and service providers, including employers and labor organizations; social service agencies, nonprofit organizations, and foundations; other organizations implementing projects funded by the American Recovery and Reinvestment Act of 2009; and the education and training community and registered apprenticeship programs (p. 6).

Accordingly, many grantees operate HPOG programs in partnership with these types of organizations. The term "partner" includes entities that participate in HPOG operations, such as by referring prospective HPOG participants, providing data to HPOG programs useful for program recruitment and implementation, offering opportunities for work-based learning or other work-based experiences, and providing other services or trainings.

In addition to active program partners, HPOG grantees also operate within a broader network of other stakeholders, such as advocacy groups, labor unions, local economic development agencies, local healthcare industry professional groups, and others. The term “stakeholder” includes organizations with an active interest in HPOG programs and their results, whether or not they participate directly in program operations.

Partner and stakeholder networks differ across grantees, depending on the specific institutions involved and their culture and community context. HPOG grantees’ networks can differ both in the number of organizations involved and in how active partners are in implementing programs. At some grantees, the lead institution administers all or most aspects of the program, while communicating and cooperating with mandated partners; at other grantees, key partners take responsibility for distinct aspects of service delivery while the grantee lead provides some services and manages the program. Of particular importance and interest to HPOG programs is the connection with employers in the healthcare industry. Some HPOG grantees sought to involve employers and employer organizations in program design, vocational training, credentialing, in-program workplace training placements, and postprogram employment, and/or developed agreements with healthcare employers to train their current employees for career advancement (incumbent worker training).

### ***Labor markets***

Organizations applying for HPOG funds were required to document demand for healthcare occupations in their communities. The variation in local labor markets is expected to influence the kinds of training offered and the ability of participants to get jobs. Grantees in communities that have a variety of in-demand healthcare occupations may offer a wider range of training options. Areas with comparatively fewer employment options may offer a more customized and narrower range of training opportunities.

In addition, the higher the employer demand for entry- and mid-level healthcare workers, the easier it will be to place qualified program graduates. Similarly, in communities with high employer demand for entry- and mid-level healthcare workers, grantees may be more likely to forge partnerships with employers, thereby facilitating training and placement.

### **1.3.3 Eligible populations and their characteristics**

The population grantees target and serve is expected to affect program components as well as outputs and outcomes. As noted earlier, ACF requires HPOG grantees to implement programs that serve TANF recipients and other low-income individuals. Across grantees, the eligible populations vary in terms of their characteristics, assets, and challenges, likely affecting the kinds of services and resources programs offer.

For example, HPOG participants vary in their baseline academic achievement levels, employment-related experiences, attitudes, preferences about work and education, and career knowledge. These characteristics will likely influence participants’ decisions about training (e.g., where on the career pathway to start), as well as completion of the program and ability to obtain and retain good jobs, and the potential for advancement. However, among the eligible population, there are ranges of educational credentials and vocational expertise and experience. Some HPOG programs serve individuals with limited English and math skills; others target more experienced workers who have not completed high school or passed the GED; and still others serve individuals with at least a high school diploma and possibly some postsecondary education. HPOG programs may also serve relatively low-wage incumbent workers in the healthcare industry who require further education and training to advance in their careers.

### **1.3.4 Program administration**

Program administration refers to the overall structures, systems, and resources through which grantees provide program services. Those structures and systems include management and administrative structure, grantee sites and service delivery framework, administrative data systems, and overall program resources and costs.

#### ***Management and administrative structure***

The grantee's management structure is the hierarchy of responsibilities in overseeing program implementation and performance. Some HPOG programs are managed entirely within the grantee organization, while others are managed by multiple partners and service providers. In these cases, the grantee provides oversight and coordinates the work of other organizations, rather than directly supervising their staff. A grantee's management structure can affect the organization and amount of services and the achievement of program performance goals.

The grantee's administrative structure refers to how the HPOG program delivers services. Grantees vary in how they administer and staff programs and in how they are organized to deliver services and training. For example, some HPOG programs are provided in a single site location, while others may have multiple sites and locations for services. Similarly, staff and supervisory functions vary widely across grantees, depending on the range of services and training offered and the extent to which grantees use partners to deliver services. Finally, the competencies and experience sought in staff members can differ a great deal across grantees, as can prevailing organizational cultures and attitudes about work and training.

#### ***Grantee sites and service delivery framework***

Grantees provide HPOG services at distinct locations. At some grantees, particularly the larger ones, HPOG is administered at multiple locations, or sites, and sometimes by partner organizations. In some instances, the programs implemented in different sites may be quite distinct, serving different target populations, offering different services and training programs, and facing different healthcare labor markets even though they are part of the same grantee. In terms of staffing, case management divisions, or the group of case managers or counselors that support and advise HPOG participants, may differ by grantee site, or may serve participants across multiple grantee sites.

#### ***Administrative data systems***

Although all grantees must enter participant data into the PRS, grantees may also use their own data systems. Those data systems vary in complexity and technological sophistication. At HPOG grantees where programs are administered centrally, with most aspects of programming led by one organization and most program operations available in one or two locations, data entry may be centralized, with one or two program staff entering data about program participants. In contrast, in HPOG programs that are run by a number of key partners and/or that have multiple sites, data entry is less likely to be centralized and partner data systems may not be integrated. Overall, the timeliness, completeness, and accuracy of administrative data may affect the efficiency and effectiveness of program administration.

#### ***Resources and costs, HPOG funding***

In making choices about how best to serve their target populations, grantees are constrained by their overall budgets and the portion of their budgets provided by the HPOG grant. Annual HPOG grant awards range from \$1 million to over \$5 million. HPOG grantees that serve comparatively large numbers of participants have a larger budget than those with smaller total enrollment goals. Some grantees may

choose to provide more intensive services (counseling or financial support, for example) to fewer participants, resulting in a relatively higher per-participant cost, while other grantees may choose to provide a more standard level of service to more participants. Based on the projected enrollments over the five years of the grant, grantee-level per-participant costs range from under \$5,000 to more than \$30,000.<sup>8</sup>

### **1.3.5 Program components**

This section discusses the core components of a grantee’s HPOG program, including: intake and enrollment strategies, comprehensive assessments, trainings offered, approaches to basic skills and occupational instruction, available support services, and employer connections. The HPOG FOA states that “successful training programs will prepare participants for employment within the healthcare sector in positions that pay well, are expected to either experience labor shortages or be in high demand and will: (1) target skills and competencies demanded by the healthcare industry; (2) support career pathways, such as an articulated career ladder; (3) result in an employer- or industry-recognized certificate; (4) combine support services with education and training to help participants overcome barriers to employment as necessary; and (5) provide training services at times and locations that are easily accessible to targeted populations” (ACF, 2010, p. 2). Grantees also are required to provide eligible individuals with access to financial aid, child care services, case management, and other support services.

In the generalized logic model, program components are expected to generate participant outputs and outcomes. This subsection begins by describing intake and enrollment activities, which are the tasks intended to generate interest in the program and to enroll eligible participants. The subsection then provides an overview of program activities and services.

#### ***Intake and enrollment activities***

HPOG grantees enroll participants who meet program academic and income eligibility requirements. To do this, grantees must market the program and recruit potential students, determine participant eligibility, and conduct intake. These aspects of program design and implementation ultimately determine the pool of program participants and are critical to understanding who applies for and participates in HPOG.

HPOG grantees were required by ACF to “outline a comprehensive outreach and recruitment strategy that is inclusive of the target populations and that defines a clear process for identifying, referring and retaining individuals in training programs” (ACF, 2010, p. 19). Outreach and recruitment activities are an important part of the HPOG program logic model because those activities help determine the number and types of individuals who apply for the program. HPOG grantees engage in a range of strategies to reach potential participants. Many work through local WIBs and One-Stop Career Centers (“One-Stops”) and/or TANF offices; some partner with local community-based organizations (CBOs) that serve targeted populations; and many directly recruit current community college students who meet program income eligibility requirements. Grantees with strong marketing efforts may be more likely to meet enrollment goals and identify appropriate students for their programs.

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<sup>8</sup> The variation in per-participant costs may also reflect the leveraging of funds and/or services from other agencies or programs.

Although all grantees include TANF recipients and other low-income individuals in their eligibility criteria, they vary in their specification of “low-income” and minimum academic skill levels. Depending on course offerings and applicant choices, eligible participants may be required to demonstrate certain levels of English and math proficiency and/or to have GEDs or high school diplomas. Candidates who meet the eligibility criteria may be required to undergo pre-enrollment intake interviews to gather information about their needs, skills, and interests, to help determine which trainings may be most appropriate and what supports may be needed. Some grantees require potential participants to complete several interviews before enrollment to help to ensure those who enroll have the capacity and motivation to attend and complete training. Eligible candidates may also be required to attend orientation sessions in which staff describe course offerings, support services, and participation requirements. Finally, since many states have policies barring convicted felons and/or substance abusers from working in most direct health care occupations, HPOG program candidates may also have to undergo criminal background checks and substance abuse screenings.

### *Comprehensive assessments*

Many HPOG programs use academic and non-academic assessments to better understand what education and services participants need to succeed in their HPOG programs. Academic assessments may include tests of basic academic skills, learning disabilities, or vocational aptitudes and interests. Non-academic assessments may include tests of psychosocial factors, knowledge of postsecondary educational opportunities, work-readiness skills, and family and personal needs. Assessments often happen before training starts, but may also include ongoing monitoring of education progress and career planning. The breadth and effectiveness of the assessments may be associated with program retention and completion.

### *Approaches to basic skills and occupational instruction (core curriculum)*

After HPOG participants are recruited, complete intake, and are enrolled in the program, they are eligible for program education and training services. In many HPOG programs, grantees have implemented one or more promising approaches to teaching basic educational skills and occupational skills to nontraditional students.<sup>9</sup> Some of these approaches include:

- *Active learning.* “Active learning” coursework avoids traditional “skill and drill” lecture formats; instead, participants are encouraged to engage in group work and participatory learning.
- *Contextualization.* In this strategy, basic academic skills are taught in the context of a vocation, academic discipline, or real-life situation, often making explicit connections between academic and vocational training and occupational skills. An example of contextualization would be a community college course in math (which is a prerequisite for many healthcare courses) that uses mathematical problems derived from healthcare-related tasks, such as calculating prescription dosages or rehabilitation schedules from the weights, ages, other medication dosages of different patients.
- *Modularization.* Many HPOG grantees offer courses in well-articulated and comparatively short curriculum modules. Modularization also allows for stackable certifications and credentials, or

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<sup>9</sup> For further literature on innovative approaches to basic skills and training instruction, see Werner, Dun Rappaport, Bagnell Stuart, and Lewis (2013) and Fein (2012).

for individuals to accrue credits and certificates that can be combined progressively through extended career upgrading.

- *Acceleration.* To facilitate program retention and completion, many HPOG programs reduce the total number of hours required to complete courses.
- *Flexible delivery.* To accommodate students with multiple demands on their time (e.g., parenting, working), many HPOG grantees offer training at times and places that are convenient for working and parenting adults, including nontraditional class schedules and training structures that have multiple entry and exit points.

These strategies help participants to plan and take steps towards achieving their ultimate career goals and may be associated with participants' ability to achieve targeted outputs and outcomes.

### *Available trainings*

HPOG programs provide a range of basic education courses and occupational trainings. Some HPOG programs limit eligibility to those who have requisite academic skills to meet the requirements of vocational courses and offer minimal or no basic education. Other programs have available, or provide access to, basic education courses that are designed to upgrade academic skills so that participants can enroll in vocational trainings.

HPOG grantees offer a wide range of vocational trainings, based on the contextual factors and eligible target populations described above. The trainings vary in length and intensity, depending on the requirements of the target profession. Some certificate programs for entry-level positions may be as short as six weeks, while others, such as training for technical or nursing positions, may require commitments of four years or more. Consistent with the career pathways framework, individuals may complete trainings for entry-level jobs, enter employment, and return to training at a later time for additional credentials needed for higher-level positions.

### *Available support services*

HPOG programs offer academic and non-academic supports to enhance participants' ability to attend and complete education and training while often balancing other demands on their time. Among supports provided by HPOG grantees are:

- *Case management.* Case management includes the monitoring of participant progress, ongoing assessment of needs, and provision of, and/or referrals to, other supports and services. Case managers may or may not be distinct from program counselors (see below).
- *Academic supports and counseling.* These supports encompass the range of services that focus on academic needs and include individual tutoring, group sessions on specific academic or vocational topics, study groups, and self-paced computerized instruction. Some HPOG grantees also offer college-readiness training and counseling. These types of courses or counseling are intended to provide nontraditional participants with an understanding of what they are expected to know and to do in college, how to navigate the physical space of college, how to use student services, and strategies for attaining success in postsecondary education. They also may include instruction in test-taking skills and placement test preparation.
- *Personal supports and counseling.* These supports help maintain connections between participants and program services and activities. They also assist participants in overcoming

personal and practical barriers to program persistence and completion. Some grantees include personal counseling as part of ongoing case management, and others use specialist counselors.

- *Social supports.* These supports aim to cultivate social connections between participants and their peers, as well as with program instructors, case managers, counselors, and other HPOG grantee staff. These strategies may include learning communities, mentors, and peer support groups.
- *Financial support.* These include resources to overcome a variety of practical barriers to program participation and completion, such as tuition assistance or tuition waivers, payments for school supplies and uniforms, and payments for, or waivers of, fees for certifications and licensing exams.
- *Retention supports.* These resources aim to support and motivate participants to persist and complete their programs. One strategy used by some HPOG grantees is the use of non-cash incentives (for example, vouchers to purchase school supplies, uniforms, baby equipment, and food) to encourage participants to reach specific program benchmarks.
- *Other support services.* These include resources to address practical needs that may interfere with participants' ability to attend and complete courses. More common support services are transportation assistance, child care assistance, and services or referrals to address substance abuse, domestic abuse, or mental health issues.

### **Employer connections**

An essential component of successful sectoral employment programs is a focus on facilitating connections with industry-specific employers that ultimately lead to program participant employment. HPOG grantees may engage health industry employers in the following related ways:

- *Involving employers in HPOG program design and operations.* Many grantees involve local healthcare industry employers in HPOG program design, including developing courses and credential criteria, donating supplies and materials, and providing instructors. Some grantees offer incumbent worker programs through special agreements with employers.
- *Work-based learning.* Many HPOG grantees employ both traditional and nontraditional approaches to work-based learning, including work-study placements, internships, visits to local employers, and job shadowing.
- *Job development strategies.* Most HPOG grantees provide job development services to program participants and graduates. These services include job search training and assistance, job search counseling, and job fairs. Many grantees also provide postplacement job retention and advancement counseling.

### **1.3.6 Program outputs and outcomes**

The logic model components described thus far (context, the target population and their characteristics, program administration, program components) are expected to affect outputs and outcomes at the individual and system levels.

#### **Individual-level outputs**

The key individual-level outputs include a range of milestones that indicate that participants were able to address personal barriers (if applicable), to attend and complete planned training, and to obtain related

certifications and credentials. These outputs are grantee- and training program-specific. For example, completing relatively short-term trainings for entry-level positions (e.g., home health aide or certified nurse assistant) and obtaining related credentials takes much less time than completing training for more advanced positions (e.g., licensed practical nurse). In addition, individuals' ability to enroll in and complete specific training will depend on the skill levels and credentials they had prior to enrolling in HPOG. Accordingly, there is not—across programs and across participants—a standard timeframe for achieving these general outputs.

Participant outputs include completion of basic skills instruction and other academic preparation including a GED (as needed); completion of vocational training; and obtaining certificates, licenses and/or diplomas. In addition, individuals may also participate in work-based experience, individualized career planning, and work-based readiness skill training.

### *Individual-level outcomes*

The outputs described are intended to lead to short-term and longer term outcomes. Short-term outcomes for participants include further education, training, and associated credentials; employment; employment in a healthcare job or institution; earnings (or increases in earnings); increased hours of work (i.e., moving from part-time to full-time); and receipt of job benefits. Long-term outcomes include additional training that leads to career advancement; retention of employment, and employment in healthcare; improvement in earnings, hours, and benefits; and improved family and child well-being.

### *Systems/Network change*

A final set of HPOG program outcomes relates to broad-scale changes in the systems around healthcare sector workforce development programs, including changes in relevant provider and stakeholder networks. As noted earlier, the HPOG grant requirements include mandatory partnerships between HPOG programs and related government agencies and encourage partnerships with the healthcare industry with the expectation that such networks will contribute to the program's success. The key changes assessed include:

- *Increased access to training.* Legislation supporting HPOG calls for the identification of successful activities for creating opportunities to develop and sustain a health professions workforce, with an emphasis on accessibility for low-income and other entry-level workers.
- *Increased institutional collaboration.* HPOG is intended to increase collaboration between grantees and mandatory and voluntary partners. In addition, assessing the sustainability of these networks after HPOG funding ceases will be explored.
- *Increased employer involvement.* An important component of the HPOG initiative is buy-in and cooperation of healthcare employers, as partners in program development and training, and as employers of graduates.
- *Increased supply of trained workers in high-demand occupations.* The NIE will explore the degree to which HPOG participants are trained in high-demand occupations and become employed in healthcare. The evaluation will also explore employer satisfaction with HPOG-trained workers.

## 1.4 Organization of the Design Report

The remainder of this report describes the research design to address the four core NIE research questions. Chapter 2 describes the data sources and data collection strategy required for the study. Data collection is described first because each of the interrelated studies comprising this evaluation—the Descriptive Implementation Study, Systems Change Analysis, and Outcome Study—draws on a common set of data sources. Chapters 3, 4, and 5 describe the approach to the implementation, systems, and outcome studies, respectively. These chapters consider, for each of the component studies: the specific information needs; the data and data sources needed to provide that information; the domains, concepts, constructs and measures used to organize the data; the variables developed for use in the relational analysis for core research question 4; and the analysis approaches required to address each question.

## 2. Data Collection Strategy

### 2.1 Overview

This chapter describes the plan for gathering the data needed to address the evaluation research questions. As with many studies, the NIE will use both “primary” data collection (i.e., gathering new information) and “secondary” data collection. Finally, the NIE will be enriched by access to and use of data collected by other related evaluations, namely the HPOG Impact Study and the ISIS Project.

The primary data collection will document: 1) grantee program designs and implementation, 2) HPOG program networks and systems change, 3) participant characteristics and HPOG experiences, and 4) participant outputs and outcomes and the composition and intensity of HPOG services received. The primary data collection efforts are also critical for gathering first-hand feedback about HPOG experiences and operations from program management and staff, major implementation partners, employers, and stakeholders. The evaluation design includes the following primary data collection activities:

- Data collection through the PRS.
- Grantee survey.
- Management and Staff survey.
- Stakeholder/Network survey.
- Employer survey.
- 15-month Follow-Up Participant survey.<sup>10</sup>

The secondary data sources will provide additional information about grantee implementation and program context. These include administrative data on participant employment outcomes; data on grantees’ circumstances and program implementation from HPOG performance management information provided by grantees to ACF; and local labor market data from sources external to the project. The evaluation design includes the following secondary sources of data:

- Data on participant employment and earnings from the National Directory of New Hires (NDNH).
- Data from HPOG program management activities including the original HPOG grantee applications and the semi-annual grantee Performance Progress Reports (PPRs).
- Data from national and local sources on local area labor markets.

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<sup>10</sup> The NIE will survey participants served by the four grantees that are not participating in either the HPOG Impact Study or the ISIS Project. This will ensure equivalent participant follow-up data for HPOG participants across all 27 non-tribal grantees. (The HPOG Impact Study and ISIS Project will be collecting similar information for the other 23 grantees.)

At ACF’s option, the data collection approach may also include site visits to support the development of case studies on promising practices.

Finally, as described in Section 1.2, the NIE is one of several related HPOG studies, and can therefore make use of data that will be collected for the primary purpose of addressing the research objectives of the other HPOG studies. Data collected by the HPOG Impact Study on the experiences of HPOG participants through the 15-month Follow-Up Participant survey, and data collected for that study during site visits, will have particular utility.

Data from a single primary and secondary source often will contribute to more than one of the analyses that comprise the NIE. Exhibit 2.1 summarizes the data collection approach and the study or analysis for which each type of data will be used.

**Exhibit 2.1: Study Components and Data Sources**

Data Sources	Study Components		
	Descriptive Implementation Study	Systems Change Analysis	Outcome Study
<b>Primary Data—Collected for HPOG National Implementation Evaluation</b>			
Grantee survey	✓	✓	
Management and Staff survey	✓	✓	
Stakeholder/Network survey	✓	✓	
Employer survey	✓	✓	
Performance Reporting System (PRS)	✓	✓	✓
15-month Follow-Up Participant survey—4 grantees not participating in HPOG Impact Study or ISIS Project			✓
<b>Secondary Data</b>			
NDNH quarterly wage data			✓
Grantee management information (applications, semi-annual PPRs)	✓	✓	
Local labor market information	✓	✓	
<b>Data Collected for HPOG Impact Study and ISIS Project</b>			
15-month Follow-Up Participant survey—23 grantees			✓
HPOG Impact Study site visits	✓	✓	

The number and variety of data sources require a comprehensive data collection approach. This chapter describes primary and secondary data instruments and sources (Section 2.2); instrument development (Section 2.3); the data collection approach (Section 2.4); and a description of the optional case study data collection (Section 2.5).

## 2.2 Instruments and Data Sources

### 2.2.1 Primary data collection

#### Grantee survey

While the PRS provides some program design and grantee/site-level information, the primary source of these data will be a survey of HPOG grantees. This survey is a critical component of the evaluation’s data collection strategy. Specifically, it will gather comprehensive and comparable data across all grantees using primarily closed-form (versus open-ended) questions. Data gathered will include contextual factors, program administration, and program components, including intake and program activities and services.

The Grantee survey will be designed to cover most of the informational data needs of the Descriptive Implementation Study and some of the data needs of the Systems Change Analysis. Data items for those study components are described in more detail in Chapters 3 and 4. Exhibit 2.2 shows the major domains covered by the Grantee survey.

**Exhibit 2.2: Domains Covered by the Grantee Survey**

<b>Program Context and Administration</b>
<ul style="list-style-type: none"> <li>Grantee/site and program information                             <ul style="list-style-type: none"> <li>Grantee perspective on pre-HPOG healthcare sectoral training opportunities</li> <li>Grantee institutional background and experience with similar populations and programs</li> <li>Grantee partner networks (including variations by site)</li> <li>Target populations for HPOG</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>Program administration                             <ul style="list-style-type: none"> <li>Administrative organization, including staffing structure and backgrounds</li> <li>Service delivery structure, including use of other agency services and contracted service providers</li> </ul> </li> </ul>
<b>Intake and Program Activities and Services</b>
<ul style="list-style-type: none"> <li>Intake and enrollment activities                             <ul style="list-style-type: none"> <li>Outreach and recruitment</li> <li>Eligibility and intake</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>Comprehensive assessments                             <ul style="list-style-type: none"> <li>Academic assessments</li> <li>Non-academic assessments</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>Core curriculum                             <ul style="list-style-type: none"> <li>Pre-training offerings                                     <ul style="list-style-type: none"> <li>Basic skills instruction</li> <li>Academic prerequisite</li> <li>Vocational training</li> </ul> </li> <li>Structure and delivery of core curriculum (career pathways principles)                                     <ul style="list-style-type: none"> <li>Modularization</li> <li>Acceleration</li> <li>Flexible delivery</li> </ul> </li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>Academic and non-academic supports                             <ul style="list-style-type: none"> <li>Case management</li> <li>Academic supports and counseling</li> <li>Personal supports and counseling</li> <li>Social supports</li> <li>Financial supports</li> <li>Other support services</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>Employer connections                             <ul style="list-style-type: none"> <li>Employer involvement in HPOG</li> <li>Work-based learning</li> <li>Job development strategies</li> </ul> </li> </ul>

**Management and Staff survey**

To augment descriptions from the Grantee survey of program design and implementation, a Management and Staff survey will be used to characterize the interactions between case managers, counselors, and participants. The social policy research literature has long argued that the “street-level” perspective of worker/client interactions is a major factor in determining the shape and results of policy and program implementation (see the *locus classicus* Lipsky, 1980; see also Brodtkin, 1997). Until relatively recently, most of the evidence for this theory has come from case studies and other qualitative research. However, in a seminal work, researchers used information about how case managers approach their work in

statistical models and found significant relationships between variations in case manager approaches and variations in program impacts (Bloom, Hill, and Riccio, 2003).

In HPOG, management and staff practices and attitudes may similarly affect participant outcomes. For example, in HPOG programs that practice “proactive” case management or counseling, it may be important to learn how individual case managers interpret and practice the policy. In this case, there are questions related to how hard case managers try to contact HPOG participants on a regular basis. Another example is how strict are they in interpreting “mandatory” client check-ins. Accordingly, this survey will explore management and staff approaches to key program services and activities, as well as beliefs and attitudes about the HPOG program and its target population. Selected topic areas to be explored in the survey are provided in Exhibit 2.3.

**Exhibit 2.3: Summary of Topics Included in the Management and Staff Survey**

<b>Program Involvement</b>
Educational and professional background Job benefits and professional development opportunities Staff stability/turnover Opinions about programs Opinions about participants Opinions about staff and managers Job priorities Service philosophy
<b>Intake and Program Activities and Services</b>
Management/supervisory responsibilities Administrative and programmatic responsibilities Recruitment, intake, enrollment responsibilities Case load and advising responsibilities Participant involvement and monitoring Frequency of contact with participants Opinions about programs and participants Nature of service provided

**Stakeholder/Network survey**

A critical element in understanding the social, political, and economic context in which HPOG programs are implemented is their relationship to the network of groups and institutions partnering with HPOG grantees and with an interest in training and hiring low-income workers in the health professions. The networks of local stakeholders differ across HPOG grantees and sites depending on the specific institutions involved and their institutional resources and organizational culture. HPOG grantees differ in the number and level of activity of stakeholders in the design, implementation, and oversight of program activities.

It is important again to distinguish between the evaluation’s definitions of “stakeholder” and “partner.” As discussed in Chapter 1, the term “partner” refers to entities that participate in HPOG operations, such as by referring prospective HPOG participants, providing data to HPOG programs useful for program recruitment and implementation, offering opportunities for work-based learning or other work-based experiences, and providing other services or trainings. The “stakeholder” group includes organizations with an active interest in HPOG programs and their results, whether or not they are “partners,” i.e., they participate directly in program operations. Therefore, as will be discussed in Section 2.4, it may be

appropriate for staff from one organization to provide information for both the Grantee and Stakeholder/Network surveys, depending on roles being played in HPOG.

Across grantees, there is likely to be great variety in the roles played by stakeholders targeted for the Stakeholder/Network survey. Core respondents will include formal and informal partners of HPOG grantees, and mandated HPOG partners such as the state TANF agency and local WIB. Additionally, the survey will collect information from each grantee's identified strategic partners, including relevant social service providers, advocacy groups, training providers, sectoral employer organizations, and service worker unions, for example.

Because stakeholders may be involved in many different ways (e.g., advisory, design, referral), the survey will be designed so that respondents only need to address applicable content. Exhibit 2.4 summarizes the core modules of the survey.

**Exhibit 2.4: Core Modules of the Stakeholder/Network Survey**

- |  |
|--|
| <ul style="list-style-type: none"><li>• Organization characteristics</li><li>• Respondent/grantee relationship</li><li>• HPOG engagement/involvement</li><li>• Resources</li><li>• HPOG partner communication</li><li>• HPOG collaboration</li></ul> |
|--|

Because the Stakeholder/Network survey will be fielded after HPOG grantees began operations, to assess change the survey will be relying on the retrospective recall of respondents to gather information on the time immediately prior to or during HPOG implementation as well as at the time of the survey.

Survey respondents will include one or more individuals at the stakeholder organizations who are well informed about collaboration among network stakeholders, as well as their respective organization's experiences and views regarding the HPOG program's implementation and achievements. While several individuals may contribute information, there will be only one survey response per partner/stakeholder organization. (More information on developing the survey sample frame is included in Section 2.4.1.)

**Employer survey**

The success of HPOG grantees ultimately depends on their ability to meet healthcare employers' needs and hiring standards. As employers are the end users of HPOG services, their perspectives on the programs will provide important insights about the extent to which those emerging from training fully meet their expectations. This is a particularly relevant concern during an economic downturn, when employers have a larger labor pool from which to draw.

This survey will target two types of employers based on the nature of their involvement with HPOG:

- Employers who are part of the partnership network and may have been involved in HPOG program design, development, and implementation.
- Employers not directly involved as partners but active in hiring HPOG graduates or who have been contacted by the program as potential employers of HPOG participants.

The Employer survey will gather feedback on employers' perceptions of the overall healthcare labor market, firm-specific conditions and hiring practices, and their perceptions of and experience with HPOG. Exhibit 2.5 lists questions to be included in the Employer survey.

**Exhibit 2.5: Sample Employer Survey Questions**

<p>Employer specific experiences and practices with respect to hiring healthcare professionals, including:</p> <p>What is the most common healthcare position for which you have hired in the past two years?</p> <p>How have you typically identified the workers you have hired for this position?</p> <p>Would you say it is easy, somewhat challenging, or very challenging to find qualified applicants for this healthcare position at the present time?</p> <p>How important are certificates of training completion when considering hiring someone who has received job related skill training?</p>
<p>Employers' awareness of and involvement with HPOG, including:</p> <p>During the past two years, did your organization hire any healthcare workers referred by [ HPOG grantee institution]?</p> <p>Has your organization had previous experience with job applicants referred by [HPOG grantee institution], for instance, through internships, clinical assignments, job shadowing or other training activities that your organization hosted?</p> <p>How would you rate your overall experience working with [HPOG grantee institution] in placing individuals in jobs in your organization?</p>
<p>Employers perceptions of the HPOG training program, including:</p> <p>Is program effectively meeting area healthcare labor needs?</p> <p>Is program effectively producing graduates with the healthcare skills needed?</p> <p>Have people in your organization have been satisfied with the job-readiness of [name of grantee institution] participants?</p>

**Follow-up surveys of HPOG participants from four additional grantees**

The ISIS Project, the HPOG Impact Study, and the NIE will collect 15-month follow-up data from samples of participants in all 27 non-tribal HPOG grantees. The HPOG Impact Study will field follow-up surveys for 20 of the grantees, the ISIS Project for three, and the NIE for four. The 15-month Follow-Up Participant survey will provide more detailed and complete data about program experiences and satisfaction, as well as preliminary labor market outcomes for individuals in shorter-term training.

**HPOG Performance Reporting System (PRS)**

As described in Chapter 1, the PRS was developed for the HPOG Implementation, Systems, and Outcome Project. The PRS was designed to serve two related purposes: 1) a management information system for documenting program activities and accomplishments against program goals and assisting with program management, and 2) a source of data for research purposes.

The PRS is the primary source of data on the characteristics of program participants as well as a record of their participation in HPOG activities and services and their outputs and outcomes. It has been in operation since September 30, 2011, and therefore does not include data from the first year of HPOG program services. A range of participant socioeconomic and demographic characteristics are entered into the PRS at the time of program application. As individuals enroll in HPOG, engage in program activities, and receive services, grantee staff record participant service receipt, outputs, and outcomes in individual-level records in the PRS.<sup>11</sup> Finally, the PRS records individuals' program completion and employment status at program exit and at six months following exit.<sup>12</sup> The individual-level data collected in the PRS will provide the core data that support the tracking of participant outputs and outcomes (research question 3). In addition these data will provide information on participation in program activities and services received that will contribute to the Outcome Study, described in greater detail in Chapter 5.

<sup>11</sup> An individual is "registered" in the PRS when a record is created; the date of registration is automatically stamped on the record. Similarly, the PRS automatically dates "enrollment" as beginning on the day an individual first receives a service or engages in a substantive activity.

<sup>12</sup> "Exit" may be indicated in a PRS record either when HPOG staff become aware that an individual has left the program or 90 days after an individual last engaged in an activity or was provided a service.

While the PRS is primarily a participant-level database, it also contains some descriptive information about each grantee's organization and service delivery structure, including service delivery vendors, specific service delivery sites, and the identity of case managers. Another way to characterize service delivery by grantees is to aggregate up from the experiences of individual participants included in the PRS case records. Because the PRS includes "drop-down" lists of available education and training courses, it also provides a catalog of each grantee's offerings at the grantee site level, including the duration and hours of the training courses and the credit hours or seat time associated with each course. A complete listing of the data available from the PRS is included as Appendix A, and summarized in Exhibit 2.6.

**Exhibit 2.6: Summary of Data Available from the PRS**

Grantee and Program Information
Grantee information (e.g., name, location, institutional type)
Local program/service delivery sites
Available education and training services <ul style="list-style-type: none"> <li>Occupation training type (Standard Occupational Code [SOC])</li> <li>Vendor/provider of the training or education</li> <li>Total hours required (length/duration)</li> <li>Educational credential opportunities</li> <li>Licensure/certification opportunities</li> <li>Semi-annual Program Performance Reports (PPRs) (grant implementation milestones, outputs, and outcomes)</li> </ul>
Participant Information
Identifying information (name, date of birth, social security number, contact information)
Administrative information <ul style="list-style-type: none"> <li>Program site</li> <li>Case manager</li> </ul>
Characteristics at intake/enrollment <ul style="list-style-type: none"> <li>Demographic characteristics (sex, race/ethnicity, marital status, parental status, citizenship, tribal status, veteran status, homeless status, disability status, ex-offender status)</li> <li>Socioeconomic characteristics (receipt of public assistance, education level, literacy and numeracy, employment status, employment experience, healthcare employment experience, incumbent worker status, earnings, family income)</li> </ul>
Record of basic skills instruction/pre-training activities <ul style="list-style-type: none"> <li>Courses/workshops enrolled</li> <li>Duration and completion status</li> <li>Provider</li> </ul>
Record of occupational/vocational training activities <ul style="list-style-type: none"> <li>Occupation by SOC</li> <li>Intensity, duration and completion status</li> <li>Provider</li> </ul>
Record of employment activities <ul style="list-style-type: none"> <li>Job-readiness workshops</li> <li>Internships, apprenticeships, work-study placements</li> <li>Duration (including hours completed)</li> </ul>
Record of support services <ul style="list-style-type: none"> <li>Training/education-related support services</li> <li>Counseling (academic, career, personal)</li> <li>Personal/family services (provided or referred)</li> <li>Case management</li> <li>Cultural programming</li> <li>Work-retention services</li> </ul>
Record of assessments
Outputs and outcomes <ul style="list-style-type: none"> <li>Training/education completed</li> <li>Educational credentials/degrees received</li> <li>Professional licenses/certifications received</li> <li>Employment, earnings, and healthcare occupational status at program exit and six months following exit</li> </ul>

The completeness and accuracy of the data in the PRS are dependent on grantee staff and service providers. They are responsible for gathering and entering data on a timely basis. To improve the accuracy and completeness of PRS data, the Urban Institute developed a monitoring and quality control plan and is providing extensive training and technical assistance to grantees on PRS use and data entry. The most complete and accurate data items are those that are required for participants to receive services or advance in the program, such as:

- Data that enable or document assistance to participants.
- Data collected while individuals are participating in the program.
- Data associated with individual staff or grantee performance benchmarks.

Items likely to be less complete, accurate or consistent include:

- Information at exit for individuals who drop out of the program without notice.
- Information collected at six months following program exit.

The PRS may provide more accurate data than some other administrative systems because the system is also being used for grant performance monitoring by ACF, which increases grantees' incentives to make as complete and accurate entries as possible on specific performance outcomes such as training enrollment, training completion, and employment. The evaluation will use data from additional extant sources, specifically the NDNH, to provide more complete or accurate information on the employment status over time for all HPOG participants, regardless of their program exit status.

### **2.2.2 Secondary data collection**

In addition to the primary data collection activities discussed previously, secondary data are also important sources of information for the NIE.

A source of information for the Outcome Study and potentially for additional outcome analyses that are under consideration is the NDNH, a federal-state administrative data set that will be used to provide information on the employment and earnings of HPOG participants. Two additional types of secondary data are information about the grantees from HPOG program management reports and information about local labor markets from sources outside of the project. Each of these is described in the following sections.

#### **National Directory of New Hires (NDNH)**

In addition to the PRS, another source of information on participant outcomes will be the NDNH. These data will provide information on participants' employment and earnings. They offer a uniform source of this information over time. The NDNH is maintained by the ACF Office of Child Support Enforcement

(OCSE). The NDNH provides quarterly earnings from state Unemployment Insurance (UI) records, including data from some employers not included in the UI program (e.g., the Federal Government).<sup>13</sup>

While NDNH data are not publicly available to researchers, through arrangements between OCSE and OPRE this evaluation will have access to these data for HPOG participants from 2009 (up to two years prior to HPOG program entry) and for up to 10 years after enrollment of the final HPOG participants. To preserve confidentiality, data records on HPOG participants, including demographic characteristics and program activities, will be sent to NDNH staff, linked to the NDNH data and returned to the evaluation analysts without individually identifiable information. While information in the NDNH is available for employees separately by each employer, data available to the NIE is expected to be a longitudinal series of quarterly information for each HPOG participant, including whether the participant was employed during the quarter, the number of employers in the quarter, and total earnings in the quarter.

An advantage of NDNH data is their accuracy. Relative to self-reports by individuals or program staff, these administrative data come directly from mandatory employer reports as part of the UI system, so have a high degree of accuracy and coverage and provide data in a consistent format. A disadvantage of the data is that they do not contain information on hourly wages or hours worked and do not provide information on employer benefits (and probably not on job tenure or industry). Despite the lack of these data elements, access to the NDNH data for this evaluation will greatly enhance the NIE's ability to answer the research questions on participant outcomes.

### **HPOG program management information**

HPOG grantees provide ACF with information on their programs as part of the management and accountability aspects of the program. Information from the grantees' initial applications and ongoing management reports are a source of secondary information on grantees and circumstances that will be used for the evaluation.

To be considered for HPOG funding, each HPOG program grantee prepared a comprehensive application explaining their proposed program design and their funding justification. These applications used a common set of requirements. These applications provide initial information on common design themes and serve as a benchmark for tracking the evolution of the grant and how it is unfolding relative to the grantee's initial vision and plan. They also provide initial reports on the local healthcare labor market and needs for occupational/vocational training.

In addition, as part of their responsibility to the funding agency, HPOG grantees are required to submit semi-annual performance progress reports (PPRs). These reports are based on information entered in the PRS, which as of program Year 2 are automatically generated by the PRS, and provide a structured overview of program performance and implementation issues. As such, they provide a continuous "real time" opportunity to gauge the evolution of each grant's overall design as well as key functional activities relative to the initial plan. Much like the initial grant applications, the grantee PPRs help to focus and

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<sup>13</sup> For more information on the NDNH see [http://www.acf.hhs.gov/programs/cse/newhire/library/ndnh/background\\_guide.htm](http://www.acf.hhs.gov/programs/cse/newhire/library/ndnh/background_guide.htm). The W-4 and quarterly wage files will be accessed to measure outcomes on employment and earnings for this evaluation.

prioritize the content of primary data collection tools based on issues, challenges, and hypotheses emerging through this required reporting system.

The PPRs include narrative report information from the grantees, as well as quantitative data on their progress to date. In the narrative component of the PPRs, grantees describe their major activities and accomplishments during the past semi-annual period, as well as problems encountered, significant findings and events, dissemination efforts, and other important activities. The PPRs include a section on administrative milestones the grantees expected to achieve over the prior semi-annual period (such as hiring staff, signing Memoranda of Understanding (MOUs), awarding contracts) and associated explanations for any milestones they have not achieved. While this information is all self-reported and not audited, it provides a regular source of input on the grantees' assessment of progress and issues. The PPRs also include quantitative information on each grantee's annual target goals for program outputs and outcomes including support service provision, training activities, employment, and wages, and progress made on these goals.

### **Government sources of labor market data**

In addition to using secondary data on employment and wages and program operations, the NIE will also use secondary data on the grantees' operating environments. Of particular importance are the conditions that shape the labor market and ultimately, the demand for hiring HPOG participants. Changes in the local economic environment can help explain participant outcomes, as well as help to put in context differences in program features or outcomes.

As detailed previously, questions in the Employer and the Stakeholder/Network surveys will capture information on the local labor market generally and the healthcare labor market specifically. Nevertheless, it will be important to supplement these data with secondary sources to quantify the local labor market and labor force more comparably across geographic areas. A labor market profile for each grantee will be developed, summarizing key economic trends and institutional factors that shape the training and placement environment for healthcare professionals targeted by HPOG. Of particular importance will be employment and unemployment patterns, employment growth, and projected demand for key occupations as well as socio-demographic characteristics of the population and workforce. To this end, the research team will assess and selectively draw on several possible sources including published U.S. Census Bureau (e.g., County Business Patterns; <http://www.census.gov/econ/cbp/>) and Bureau of Labor Statistics (BLS) data, as well as information made available through state economic development agencies.

The evaluation will use information from the BLS's Local Area Unemployment Statistics (LAUS) program. LAUS provides consistent monthly information on unemployment and employment for metro areas, local labor market areas, states, and regional areas across the country. Labor force participation and employment to population ratios are provided for selected areas.<sup>14</sup> The evaluation will also use information from the U.S. Census Bureau's Quarterly Workforce Indicators (QWI) through its Local Employment Dynamics partnership program.<sup>15</sup> These data include employment, hires and separations, and earnings by detailed industry at the state, county, and subcounty level. Both of these are excellent

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<sup>14</sup> For additional information on LAUS program see <http://www.bls.gov/lau/home.htm>.

<sup>15</sup> For additional information on the LED and QWI, see <http://lehd.did.census.gov/led/led/led.html>.

sources for providing a picture of the local labor market generally and for healthcare industries. Local healthcare labor market conditions will likely vary across grantees and for HPOG grantee initiatives covering large areas—such as the state of Kansas, for example—conditions may vary across sites within the same grantee.

### **2.2.3 Data collected from related studies**

As described in Chapter 1, OPRE is deploying a multifaceted research strategy in evaluating HPOG. The HPOG Impact Study is closely related to the NIE and, by design, includes several data collections intended to inform NIE analyses. These include follow-up surveys of HPOG participants and site visits.

#### *Follow-up surveys of HPOG participants*

As described in Section 2.1, the NIE plans to make use of the 15-month Follow-Up Participant survey of HPOG participants from the 20 grantees taking part in the HPOG Impact Study, as well as from three HPOG grantees included in the ISIS Project. The survey will provide more detailed and complete data about program experiences and satisfaction, as well as preliminary labor market outcomes for individuals in shorter-term training.

#### *Evaluation Design and Implementation Plans*

Evaluation Design and Implementation Plans (EDIPs) are being developed for each of the 20 grantees involved in the HPOG Impact Study. The EDIPs include detailed information on the grantee's intervention; a description of control conditions (the “counterfactual”) and their contrast with the treatment; eligibility and target populations; enrollment to date and estimated study sample; grantee site and organizational context; evaluation design and procedures; evaluation schedule; and other study-related issues. Information from the EDIPs will be used to customize the Grantee survey for each grantee prior to fielding.

#### *Site visits to HPOG Impact Study sites*

As part of the HPOG Impact Study implementation evaluation, researchers are making visits to each of the 20 grantees involved in that study. Similarly, ISIS Project researchers will make implementation research visits to three of the HPOG grantees.<sup>16</sup> These site visits will include qualitative interviews with grantee management and staff and key stakeholders. These site visits are particularly relevant to the NIE's research goals for three reasons. First, these visits will help researchers develop detailed accounts of the intake and selection process. Most grantees screen HPOG applicants who are otherwise eligible on income and academic criteria for other factors related to success in training, such as motivation and interest in a health career. Because the selection process tries to screen on the basis of factors related to participant success, its accurate measurement is critical to the interpretation of HPOG-Impact findings.

Second, the site visits will also be used to assess and expand upon the data collected in the Grantee survey. The site visits are scheduled after the Grantee survey is fielded. This allows site visitors to have access to the initial responses to the Grantee survey in order to check the coded survey responses against

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<sup>16</sup> Note that at this point site visits are not planned for the four grantees not included in the HPOG Impact Study or ISIS Project.

more detailed qualitative program descriptions. This exercise will allow researchers important insight into the variability of interpretations of the Grantee survey responses across grantees.

Third, the site visits will be used to collect information about the ongoing partnership network that grantees are using to run their HPOG programs, including the roles of different institutions and how these have developed over time, and the sustainability of partnerships in the future. This information will be used to inform the Systems Change Analysis, expanding upon and supplementing information gathered in the Stakeholder/Network survey.

## 2.3 Instrument Development

The survey instruments were developed in late winter–spring 2013, in accordance with the NIE’s Measurement Plan. This plan provided a systematic blueprint for establishing the analytic domains, measurement constructs and specific data elements that will provide the necessary inputs to support the analytic needs of all aspects of the NIE.

NIE staff coordinated with the staff from the ISIS Project and HPOG-Impact to develop common constructs and survey items that measure key items in the career pathways framework that overlap the three research studies. In addition, where appropriate and available, survey items that have been validated and used successfully in prior research are used. For instance, the case manager survey used for the National Evaluation of Welfare-to-Work Strategies (NEWWS) was used to develop survey content for the Management and Staff survey. That survey was the source for data used in the study cited above (Bloom et al., 2003).

All of the instruments were pre-tested with nine or fewer respondents.

## 2.4 Data Collection Approach

Primary data for the NIE will be collected using three modes:

1. Via the Web (for the PRS, the Grantee survey, the Management and Staff survey, the Stakeholder/Network survey, and, in some cases, the Employer survey).
2. By telephone (for the 15-month Follow-Up Participant survey and, in some cases, the Employer survey).<sup>17</sup>
3. In person for participants who cannot be reached via telephone (for the 15-month Follow-Up Participant survey).

In addition, the team will assemble the secondary data described earlier. This section describes the development of the sample frame for primary data and the specific data collection approaches, the expected sample sizes, and the methods used to maximize response rates. .

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<sup>17</sup> If participants cannot be reached at home for the telephone survey, survey staff will locate them in the field and provide them with cellular telephones to complete the survey.

### 2.4.1 Development of the sample frame

#### PRS

As described previously, the PRS data will include the population of HPOG participants who have given informed consent from the 27 non-tribal grantees for the time period of September 2011 through September 2015.

#### Grantee, Management and Staff, and Stakeholder/Network surveys

To help with the data collection, each of the grantees will be asked to appoint one or two site liaisons to aid with various data collection activities. One of the liaisons' primary tasks is to assist in assembling the sample frame. Since it will be possible for one institution to respond to sections of multiple surveys, the surveys are envisioned as integrated in modular form as described in the following section. Site liaisons will be contacted and asked to provide contact information, including email addresses, of staff from the grantee agency and those connected to them (other service providers, employers, stakeholders, etc.) by function. The plan is to supplement individual telephone calls with site liaisons with one or more Web-facilitated calls to groups of liaisons to provide guidance about the sample frame development process.

- **Grantee survey:** It is expected that in most cases site liaisons will be able to provide an exhaustive list of the staff who oversee major grantee functions (e.g., recruitment and intake, provision of support services, etc.) and many staff that function in management and staffing roles, as previously described. While it is expected that liaisons will be able to identify many employers and stakeholders, these lists are not envisioned as exhaustive. Evaluation staff will be charged with following up directly with other organizations if more information is needed. To do so, they will contact each of the employers and stakeholders identified and ask them to name any other employers or stakeholders associated with HPOG, thus implementing so-called “snowball” sampling.
- **Management and Staff survey:** As part of the development of the sample frame, described in more detail in Section 2.4.3, the study team will make comparisons between the organizational and staffing patterns of the 27 HPOG grantees participating in the NIE to ensure that the survey is capturing a generally consistent set of perspectives from each grantee regardless of the potential diversity in organization, staffing, and job responsibilities. For planning purposes, the survey is anticipated to target intake workers, case managers and supervisors, and other line staff; managers; counselors; job placement staff; and other relevant staff.
- **Stakeholder/Network survey:** For the further identification of stakeholders not initially identified by the site liaisons, evaluation staff will telephone the initial list of partners identified by the liaison and ask each to name any stakeholders not already identified, prompting respondents by listing the types of roles and functions that stakeholders may have in the community, such as postsecondary training institutions serving HPOG participants, advocacy groups for low-wage workers, or healthcare employer associations.

#### Employer survey

As stated in the previous section, the NIE will target two types of employers: those who are part of the partnership network and may have been involved in program design, development, and implementation of HPOG, and employers not directly involved as partners but active in hiring HPOG graduates or having the potential to hire HPOG participants, such as large area healthcare employers.

For this survey, sampling will be done on a purposive basis, depending on the employer grouping and its size. Specifically, the plan is to target the universe of employers in the first group and draw purposive samples of employers in the second group. To do so, the study team will consult grantee administrators and employment developers, and employers who are actively participating in the grant partnership, to help establish the proper scope of the survey in each grantee service area. This input will help to identify the specific employers who are actively engaged in the partnership as well as those who have hired graduates without any formal involvement with HPOG. The study team will develop a sample of employers that meet these criteria and include larger healthcare employers and/or those hiring the most HPOG participants. In addition, employers who were listed in the original grant materials or other promotional materials will be included in the sample for surveying, regardless of whether current grantee administration mentions them as important current employer partners.

The aim is for approximately 200 completed surveys across the 27 grantees, distributed roughly by the size of the local healthcare labor market and the size of the HPOG program. It is anticipated that the instrument will be administered by contacting the appropriate representative of the establishment's human resources or personnel department.

#### **15-month Follow-Up Participant survey**

The sample for the 15-month Follow-Up Participant survey will be drawn from the four HPOG grantees not participating in HPOG-Impact or the ISIS Project. Using PRS data, the sample frame will include all HPOG participants who give consent starting with the period that the other survey instruments are fielded (approximately September 2013–November 2014).

### **2.4.2 Methods for primary data collection**

#### **Web-based surveys**

With the exception of the 15-month Follow-Up Participant and Employer surveys, most of the primary data collection for the NIE will be hosted on the Internet and accessed via a live secure website link. This approach allows respondents to stop and start if they are interrupted, share the link with other respondents, and review and/or modify responses in a previous section. Each of the surveys will include unique, topical modules. A complicating factor for the primary data collection is the fact that grantees have unique organization and staffing structures and operate in very different geographical contexts. Therefore, the data collection approach for the HPOG NIE must be tailored to each individual grantee and its community to ensure that the appropriate staff and other potential respondents are approached for each aspect of the data collection, be it a whole survey or an individual module of a survey.

The following design tools will be used to reduce the burden on respondents and ensure data quality:

- Secure logins and passwords so that respondents can save and complete the survey in multiple sessions.
- Drop-down response categories so that respondents can quickly select from a list.
- Dynamic questions and automated skip patterns so that respondents are only shown those questions that apply to them (including those based on answers provided previously in the survey).

- Logical rules for responses so that respondents' answers are restricted to those intended by the question (e.g., rank ordering rules that restrict respondents to ranking responses numerically with no ties).

Initially, respondents will be contacted by email, given a website link and a password, and asked to log in to complete the appropriate survey. To ensure that questions are answered in a timely manner and that accurate data are collected, an in-house "survey support desk" will be established, with an email address and a toll-free telephone number to assist respondents with completing the survey. The phone number and email address of the support desk will be displayed on the survey website and hard-copy survey forms. The support desk will also serve as a point of contact when respondents have questions. If concerns arise that are applicable to all respondents, emails will be sent to all grantees. The support desk will carefully monitor response rates and data quality on an ongoing basis.

The support desk will be responsible for contacting nonrespondents as the survey deadline approaches. During the survey field period, the support desk will contact respondents by email to encourage them to complete the survey, and/or to ask why some parts of the survey have not been completed. In addition to providing a reminder, this contact also can be used as an opportunity for the respondent to complete the instrument over the phone, if desired.

Despite best efforts in making survey questions clear and unambiguous, it is expected that some of the survey responses will be incomplete and/or provide information that does not appear to be logical. Completed survey modules will be reviewed on an ongoing basis throughout the field period. Respondents will be contacted by phone if there are clarifying questions about their survey responses or if a significant amount of data is missing.

### **Employer survey**

Unlike the Grantee, Management and Staff, and Stakeholder/Network surveys, the Employer survey will be a combination of Web-based and telephone modes. Those employers who are active HPOG partners will be asked to complete modules of the Stakeholder/Network survey as well as the Employer survey via the Web as part of their tailored survey. Other employers, who are not identified to respond to other survey modules, will be given the option of either completing the survey via the Web or by being interviewed by telephone.

### **15-month Follow-Up Participant survey**

The HPOG 15-month Follow-Up Participant survey will be fielded according to procedures described in the data collection approach for the HPOG Impact Study. Namely, primary data collection will occur by telephone, using a Computer-Assisted Telephone Interview (CATI) supplemented by field follow-up for telephone nonrespondents.

#### **2.4.3 Sample sizes and response rates**

Exhibit 2.7 provides information about expected sample sizes for each of the primary data collection activities. Given the requirements that grantees participate in evaluation activities, a 100 percent response rate with the grantees is expected. For other respondents, the study team's experience with prior and similar studies predicts achievement of an 80 percent response rate.

**Exhibit 2.7 Sample Sizes and Response Rates**

	Sample Description	Initial Sample	Final Sample	Expected Response Rate
Grantee survey	Universe	54	54	100%
Management and Staff survey	Universe	675	540	80%
Stakeholder/Network survey	Universe	625	500	80%
Employer survey	Purposive <sup>a</sup>	250	200	80%
Performance Reporting System (PRS)	Universe over 4-year time period	20,000 – 25,000	(same)	100%
15-month Follow-Up Participant survey respondents from 23 grantees participating in HPOG-Impact and ISIS	Universe over 1.5 year time period	Approximately 13,150 (treatment and control)	Approximately 10,520 (treatment and control)	80%
15-month Follow-Up Participant survey respondents from 4 non-Impact, non-ISIS grantees	Universe over 14-month period	Approximately 750	Approximately 600	80%

<sup>a</sup> All of the employers directly involved in HPOG activities will be sampled. The remaining employers will be selected on a purposive basis.

As previously stated, to enhance response rates the survey support desk will send periodic email reminders to respondents, beginning two weeks after the field period begins. The study team will also contact the site liaison, when appropriate, to seek his or her assistance in encouraging respondents to complete their surveys.

**2.4.4 Data collection schedule**

OMB approval was received in August 2013, allowing the study team to contact site liaisons and begin the process of developing the sample frame. Given that this process will take several weeks, as evaluation staff will need to follow up with site liaisons and contact other organizations before the sample frame is completely developed, the first wave of primary data collection is expected to begin in October 2013. The field period for the Web-based surveys will be three months, ending in January 2014. During the field period, the study team will send bi-weekly updates to ACF, indicating for the Web-based surveys the percentage of respondents that have started surveys and completed surveys, and any issues with data quality and actions taken to improve them. The bi-weekly updates will also provide updates on response rates for the Employer survey and any corrective actions that need to be taken to increase response rates.

Data from HPOG participants collected at 15 months after entry into the program—whether collected under the auspices of the HPOG Impact Study, the ISIS Project, or the NIE—will be gathered for the cohort of participants that correspond to the time period during which information is collected with the Grantee survey.

All PRS data available at the time will be included in each analysis. This includes data from all participants in the 27 grantees who have provided informed consent. As discussed further below, for the initial Outcome Study, the evaluation will use PRS data from September 2011 (when the PRS was launched) through March 2013. The subsequent Outcome Study will use additional PRS data collected up to the point at which analysis is taking place.

**2.5 Optional Data Collection****2.5.1 Case studies**

Follow-up case studies focusing on specific program design and implementation strategies that are associated with stronger participant outcomes can provide additional information. While the HPOG

Impact Study will attempt to discern which program, administrative, or management features are associated with better impacts, it cannot determine why or how those better impacts are achieved. Case studies are valuable in understanding the dynamic processes behind associations. In addition, case studies can address questions concerning the potential scalability and replicability of HPOG intervention strategies.

If ACF decides to proceed with this option, the study team recommends that the specific focus of the case studies and grantees covered by the case studies be identified in consultation with ACF after a careful review of the findings from NIE outcome, systems change, and implementation study components. Sites might be selected according to their outcome findings (e.g., what practices underlie HPOG programs that demonstrate strong outcomes?), or according to promising practices hypothesized to be important and identified as important parts of HPOG programs by the NIE surveys (e.g., how the set of social services offered were made available might have been instrumental in achieving relatively high take-up rates by participants), or by some unique partnership organization identified in the surveys (e.g., grantees that have exceptionally strong employer involvement that the evaluation would like to further explore) or some combination of these considerations. For planning purposes the study team recommends that ACF consider conducting a minimum of five case studies if this option is selected.

Such case studies would necessitate site visits to selected grantees implementing promising strategies and components. The central data collection mechanism would be in-depth interviews conducted with key program personnel, such as HPOG managers and staff, instructors, participants, employers, social service providers, and case managers. Specific respondents would be chosen in consultation with grantee leadership to balance the depth of feedback with grantee burden. Any site visits would be prefaced by a careful review of program documents and survey findings to date, to best target the questions to the individual site's circumstances. Interviews would be conducted according to interview protocols developed well in advance and tailored to specific sites and their circumstances. Other site visit activities may include observations of program activities and conducting participant focus groups.

### 3. Descriptive Implementation Study

The Descriptive Implementation Study component of the NIE will address the first major research question, “How are health professions training programs being implemented across the grantee sites?” In addressing this question, the Descriptive Implementation Study has two distinct but related goals: 1) a comprehensive description of each HPOG grantee as well as of the HPOG initiative overall; and 2) encoded measures of program design and implementation strategies for use in the HPOG Impact Study.

This chapter begins with the research questions that the Descriptive Implementation Study will address. Then, in keeping with the dual purposes of the Descriptive Implementation Study, this chapter develops the design for the narrative description and synthesis of HPOG program design and implementation. It then specifies the variables and constructs of program design and implementation and their measures for use in the HPOG Impact Study.

#### 3.1 Descriptive Implementation Study Research Questions

A major goal of implementation research on social programs is to provide a thorough description of the program and its context.<sup>18</sup> A successful account of how grantees have implemented their HPOG programs is important in its own right. In addition, as explained above, the Descriptive Implementation Study has the task of developing descriptive variables for the HPOG Impact Study that encode salient features of program design, structure, and operations. These twin goals imply a set of criteria by which to judge the HPOG Descriptive Implementation Study’s adequacy: 1) it should be guided by an overarching conceptual framework delineating the concepts and constructs that describe the program and how it operates (the logic model); 2) it should be comprehensive, since any specific program feature or contextual element may have a meaningful relationship to participant outputs and outcomes; 3) it should allow the evaluation to develop variables and measures that are uniformly interpreted across all grantees and sites; 4) it should be complete in capturing those variables and measures across all grantees and sites; and 5) it should describe how HPOG has changed over time.<sup>19</sup>

This section introduces the specific research questions and data sources for the Descriptive Implementation Study, as guided by the generalized logic model developed in Chapter 1. The substantive issues have been introduced in the description of the logic model in Chapter 1 and are briefly summarized in this chapter; the data sources were described in Chapter 2.

##### 3.1.1 Describing the program context and administration

As summarized in Exhibits 3.1 and 3.2, this section describes the study domains, research questions, and data sources used to examine the local HPOG grantee context and administration.

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<sup>18</sup> Implementation studies may also assess and explain. In the NIE, the core Descriptive Implementation Study component is largely descriptive, although it will report stakeholders’ assessments of program effectiveness.

<sup>19</sup> An overarching question for each research area described in this chapter is: “Has it changed since HPOG began operations, and, if so, in what ways?” This question is not repeated in this section on the research questions.

## **Grantee context**

### ***Local healthcare labor market***

The HPOG FOA describes HPOG as “an opportunity to develop demonstration projects that will address the needs of the healthcare profession to 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” (ACF, 2010, p. 1). Each grantee’s level of success in enrolling, training, and placing individuals in healthcare industry jobs depends in part on the ongoing level of demand in the labor market, as well as on the relative shortage of alternative training opportunities.

### ***Grantee institutional framework***

Most HPOG programs are administered by grantee institutions (for example, community colleges or WIBs) that have multiple responsibilities and operate multiple programs. The compatibility between HPOG and a grantee’s traditional mission and institutional culture may be important in determining the program’s priority within the grantee’s structure, as well as the degree to which HPOG may become identified with the grantee and/or fit comfortably into the grantee’s network of stakeholders and partner institutions. Moreover, a grantee’s experience with similar populations and programs may help in implementing an HPOG program relatively quickly and in anticipating potential barriers to participation and retention.

### ***Partner and stakeholder networks<sup>20</sup>***

The HPOG FOA specified the state and local institutions and agencies with which HPOG grantees have to sign MOUs and also recommended that grantees establish strategic relationships with other organizations, such as industry employers, the employment and training community, labor unions, and other nonprofits. All grantees have accomplished the formal task of executing the required MOUs and most have also developed partnership relationships with other institutions. However, the level and tenor of working relationships among HPOG partners and stakeholders vary widely. Some grantees have developed programs that rely on other institutions for a substantive program task or activity, either by agreement or contract, while others maintain merely formal relationships with other institutions and agencies.

Exhibit 3.1 list context-related questions and associated data sources.

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<sup>20</sup> Research on stakeholders and partner networks is spread across the Descriptive Implementation Study and the Systems Change Analysis. The Descriptive Implementation Study will identify and describe HPOG stakeholders and partner networks, while the Systems Change Analysis will describe and assess the perspectives of partners and stakeholders on HPOG and the partnership, systems changes in the networks over time, and conduct formal network analyses.

**Exhibit 3.1: Research Questions and Data Sources—HPOG Program Context**

Descriptive Implementation Study Domain and Research Questions	Data Sources
<i>Local Healthcare Labor Market</i>	
<p>What are the local labor market conditions for each HPOG grantee and site? In particular, what is the demand for entry- and mid-level positions in healthcare?</p> <p>Who are the major employers? What is the nature of their business?</p> <p>What are the training opportunities in the local healthcare industry? What support systems exist for low-income workers in vocational training?</p> <p>What is the rationale and perceived need for the HPOG program?</p>	<ul style="list-style-type: none"> <li>● Grantee applications</li> <li>● Grantee survey</li> <li>● Stakeholder/Network survey</li> <li>● Employer survey</li> <li>● Government sources on local labor market</li> </ul>
<i>Grantee Institutional Context</i>	
<p>What is the grantee's institutional identity and mission? How does HPOG fit into the institutional structure and mission?</p> <p>To what degree was the grantee serving similar populations with similar services/programs?</p> <p>What is new about HPOG for the grantee?</p>	<ul style="list-style-type: none"> <li>● Grantee application</li> <li>● Grantee survey</li> <li>● Stakeholder/Network survey</li> <li>● Management and Staff survey</li> </ul>
<i>Partner and Stakeholder Networks</i>	
<p>With which other institutions did the HPOG grantee have a preexisting relationship?</p> <p>With which other institutions does the HPOG grantee have a working relationship? Which other institutions have some operational program responsibility?</p> <p>Which other institutions were active in HPOG's development and grant application?</p> <p>What part do local healthcare employers or service unions play in HPOG?</p>	<ul style="list-style-type: none"> <li>● Grantee application</li> <li>● Grantee survey</li> <li>● Stakeholder/Network survey</li> </ul>

**Program administration**

This section outlines the Descriptive Implementation Study's approach to describing grantees' arrangements for program administration. Specific research questions and data sources are shown in Exhibit 3.2.

**Exhibit 3.2: Research Questions and Data Sources—HPOG Program Administration**

Descriptive Implementation Study Domain and Research Questions	Data Sources
<b>Management and Administrative Structure</b>	
<p>What is the management structure of the HPOG program and how is it integrated into the overall structure of the grantee institution, subgrantees and service providers? How is the program governed? How are implementation and design decisions made?</p> <p>What is the administrative structure of the HPOG program across all program functions and activities, including all staff and supervisory functions and organization? What are staffing patterns and requirements? What are staff and management professional backgrounds?</p> <p>What are the attitudes and opinions of management and staff regarding the HPOG program and the likelihood of success?</p> <p>What are the opinions of management and staff regarding HPOG program sustainability in the absence of federal funding?</p> <p>To what degree did grantees make use of available federally funded technical assistance (TA) on program administration and management? In what areas was TA delivered?</p>	<ul style="list-style-type: none"> <li>● Grantee survey</li> <li>● Stakeholder/Network survey</li> <li>● Management and Staff survey</li> <li>● Grantee-specific technical assistance plans</li> </ul>
<b>Grantee Sites and Service Delivery Framework</b>	
<p>Is the program administered through multiple grantee sites? If so, what are the differences in program design or implementation across sites?</p>	<ul style="list-style-type: none"> <li>● Grantee application</li> <li>● Grantee survey</li> <li>● Management and Staff survey</li> </ul>
<b>Administrative Data Systems</b>	
<p>How are data entered in the PRS? Who is responsible for keeping participant records current?</p> <p>What other administrative data systems support HPOG programming? Who operates those systems and for what purposes?</p> <p>How do organizations/staff share information about program participants?</p>	<ul style="list-style-type: none"> <li>● HPOG-Impact site monitoring calls and implementation site visits</li> </ul>
<b>Overall HPOG Resources and Costs</b>	
<p>What is the total and per participant grantee budget? How are program resources distributed across types of services and activities?</p> <p>What percentage of the program budget is funded through the HPOG grant?</p> <p>What other resources are available for the HPOG program? What efforts has the grantee made in leveraging other sources of funds?</p>	<ul style="list-style-type: none"> <li>● Grantee application</li> </ul>

***Management and administrative structure***

As the organizations receiving federal funds under the HPOG initiative, grantees are responsible for ensuring that funding is used to implement an HPOG program as specified in their grant applications. Grantee management structure refers to the hierarchy of responsibilities in overseeing program implementation and performance. Grantee administrative structure refers to the operational framework through which the HPOG program delivers services and conducts activities. Technical assistance intended to assist HPOG grantees in managing their programs and achieving performance goals is being made available by OFA.

***Grantee sites and service delivery framework***

Another important aspect of HPOG program administration is the issue of grantees with multiple sites. As discussed in Chapter 1, grantees may have more than one physical location serving participants. For

descriptive purposes, it will be important for the study to understand whether and in what ways grantees with multiple sites are implementing multiple program designs.

### *Administrative data systems*

All grantees must use the PRS as the HPOG administrative system. However, many grantees have preexisting institutional data systems which may also link with service provider systems. Understanding how these other data systems are used by HPOG grantee management to aid in performance monitoring and program planning and assessment, as well as by program staff for case management, is important in assessing the contribution of non-PRS data to program effectiveness. The Descriptive Implementation Study will document how grantees use other data systems for program administration and delivery.

### *Overall HPOG resources and costs*

Information about how grantees use HPOG resources and leverage other available resources is critical to understanding grantee decisions about program design and implementation strategies. Describing intake and program activities and services

This section describes the study domains, research questions, and data sources used to describe all HPOG program activities and services, including intake and enrollment activities and program services and activities. Questions are outlined in Exhibits 3.3 and 3.4.

### **3.1.2 Intake and enrollment activities**

#### *Outreach and recruitment*

Information about outreach and recruitment strategies and activities is important in understanding how and why certain individuals or groups of individuals apply for program participation. The Descriptive Implementation Study will also collect information about recruitment challenges and successful recruitment strategies.

#### *Eligibility and intake*

Learning about eligibility criteria and intake processes and policies allows important insights into how programs target their program slots, how they select participants, and what applicants must negotiate to enroll. Of particular importance is to document the various requirements applicants must satisfy to move along the intake process including, for example, multiple intake interviews, mandatory orientation sessions, background screenings, academic placement tests, and independent career exploration.

To better understand the HPOG grantee intake processes, the study will also gather information about whether grantees target specific subgroups within those that otherwise meet grantee eligibility criteria.

**Exhibit 3.3: Research Questions and Data Sources—HPOG Intake and Enrollment Activities**

Descriptive Implementation Study Domain and Research Questions	Data Sources
<b>Outreach and Recruitment</b>	
<p>Who is responsible for outreach and marketing HPOG to target populations? How is outreach marketing done and why? What are successful marketing strategies?</p> <p>Who is responsible for program recruitment? What recruitment strategies are used and why? What are successful recruitment strategies?</p> <p>What are the target populations for HPOG? To what extent do they include TANF recipients, incumbent workers, incumbent healthcare workers, incumbent postsecondary students or vocational trainees, single parents, high school dropouts, other target populations? Why were particular target populations chosen?</p>	<ul style="list-style-type: none"> <li>● Grantee survey</li> <li>● Stakeholder/Network survey</li> <li>● Management and Staff survey</li> <li>● HPOG-Impact EDIPs</li> </ul>
<b>Eligibility and Intake</b>	
<p>Who is responsible for accepting applications and determining eligibility?</p> <p>What are the eligibility criteria?</p> <p>What is the process by which individuals apply for HPOG? How and when is an application “filed?” How much information is collected at the point of application?</p> <p>How is intake scheduled (e.g., by college semester, by other regularly scheduled activities or services, continuously throughout the year)?</p> <p>What assessments are conducted, including academic, employability, personality, or other assessments? How are they used?</p> <p>Are program orientations conducted? If so, who conducts them and what is their content?</p> <p>How selective is program intake? What behavioral or other requirements (including literacy/numeracy, GED, etc.) do eligible applicants have to demonstrate before they may become enrolled?</p> <p>Do grantees target specific subgroups within the eligible population?</p> <p>How long does the intake/orientation process take? How many visits to the grantee are required before an individual is “officially enrolled”?</p> <p>Are support services provided during the intake/orientation process? If so, what services are provided?</p>	<ul style="list-style-type: none"> <li>● Grantee survey</li> <li>● Management and Staff survey</li> <li>● Detailed descriptions of grantee intake and selection processes developed for the HPOG Impact Study</li> <li>● HPOG-Impact EDIPs</li> </ul>

**Program activities and services**

*Comprehensive assessments*

Assessments may be conducted during the intake process, as a first step in determining a participant’s course of study and need for supports and/or at various times during the course of instruction to monitor progress. The Descriptive Implementation Study will describe the timing, content, and uses of assessments in each grantee site.

*Core curriculum*

As described in Chapter 1, some HPOG programs have designed and implemented a range of curricular and instructional strategies developed to accommodate the needs of nontraditional postsecondary students. These strategies include active learning, contextualized learning, modularization of coursework, accelerated courses, and flexible scheduling and instructional mode. The Descriptive Implementation Study will describe whether and to what degree each grantee and site has developed and implemented these strategies.

*Academic and non-academic supports*

Given the likely needs of the HPOG target populations, program supports are critical to ensuring program retention and completion. These include case management, academic supports and counseling, personal supports and counseling, social supports, financial supports, incentives for program retention and completion, and other support services (see Chapter 1). The Descriptive Implementation Study will identify and describe the range, intensity, and availability of each type of support service.

*Employer involvement and employment development*

A final component examined in the Descriptive Implementation Study is employer involvement and employment development activities and services. As depicted in the HPOG logic model, there are three types of employment-related program components: employer involvement in program design and operations, work-based learning strategies, and job development strategies. The Descriptive Implementation Study will describe in detail the extent to which and how each grantee and grantee site includes these various employer involvement and employment development strategies in their operations.

**Exhibit 3.4: Research Questions and Data Sources—Program Activities and Services**

Descriptive Implementation Study Domain and Research Questions	Data Sources
<b>Assessments</b>	
<p>What academic assessments are conducted? Who conducts the assessments? How are they used?</p> <p>What non-academic assessments are conducted? Who conducts the assessments? How are they used?</p> <p>When does the grantee conduct assessments?</p>	<ul style="list-style-type: none"> <li>● Grantee application</li> <li>● Grantee survey</li> <li>● Management and Staff survey</li> <li>● PRS</li> </ul>
<b>Core Curriculum</b>	
<p>What pre-training activities are available? For each pre-training activity:</p> <ul style="list-style-type: none"> <li>● What is its goal or purpose? What competencies are targeted? Is it mandatory?</li> <li>● What is its content and structure (curriculum, hours taught, location, etc.), intensity (hours/week; total hours)?</li> <li>● Who conducts the activity?</li> <li>● Was it created for HPOG or adapted from a preexisting model? If from a preexisting source, which models were adapted and how were they changed?</li> <li>● How is it linked to subsequent training and education?</li> <li>● Is it available only to HPOG participants?</li> </ul> <p>What basic skills courses are available? For each basic skills course:</p> <ul style="list-style-type: none"> <li>● What are its content (curriculum), goal and structure (duration, location, hours/week, schedule, etc.)? What competencies are targeted?</li> <li>● Who teaches the course?</li> <li>● What credentials (e.g., degrees, certificates) are awarded? Are they recognized by the healthcare industry?</li> <li>● Was it created for HPOG or adapted from a preexisting course? If from a preexisting source, which models were adapted and how were they changed?</li> <li>● Is it available only to HPOG participants?</li> <li>● How is it linked to, or integrated with, vocational training?</li> </ul> <p>What occupational training courses are available? For each occupational training course:</p> <ul style="list-style-type: none"> <li>● What is its content (curriculum) and structure (duration, location, hours/week, schedule, etc.)? What competencies are targeted?</li> <li>● Who teaches the course?</li> <li>● What credentials (e.g., degrees, certificates, and licenses) are awarded? Are they recognized by the healthcare industry?</li> <li>● Was it created for HPOG or adapted from a preexisting course? If from a preexisting source, which models were adapted and how were they changed?</li> <li>● Is it available only to HPOG participants?</li> <li>● How is it linked to, or integrated with, basic skills instruction?</li> </ul>	<ul style="list-style-type: none"> <li>● Grantee application</li> <li>● Grantee survey</li> <li>● Management and Staff survey</li> <li>● PRS</li> </ul>

Descriptive Implementation Study Domain and Research Questions	Data Sources
<p><b>Academic and Non-Academic Supports</b></p> <p>How is each type of support organized and provided (case management, academic supports and counseling, personal supports and counseling, social supports, financial supports, and other support services)? For example:</p> <ul style="list-style-type: none"> <li>● Are there distinct case managers, and academic and personal counselors? If not, how are those services combined?</li> <li>● Are case managers and counselors assigned to specific participants? If so, how is this done and what are the caseloads for each type of staff?</li> <li>● What are the specific responsibilities and duties of each type of case manager and counselor?</li> <li>● What is the background and training of case managers and counselors?</li> <li>● Are there assigned caseloads and, if so, of what size? At what point are case managers assigned to participants?</li> <li>● What is the content and structure of case management (what are case managers responsible for; what do they do)? Does case management change over the course of participation (for example, after training is completed? After placement into a job?)</li> <li>● Is case management proactive? That is, do case managers attempt to meet with or contact HPOG participants on a regular basis? If not, how are case management meetings arranged and scheduled? Are meetings mandatory for participants?</li> <li>● Does case management continue after training is completed? If so, for how long? What is the structure of case management post-training?</li> <li>● What is the content and structure of academic counseling and supports? What academic counseling or supports are provided individually? To groups of participants?</li> <li>● Is academic counseling proactive? If not, how are counseling sessions arranged and scheduled? Are meetings mandatory for participants?</li> <li>● What is the content and structure of personal counseling and supports? What personal counseling or supports are provided individually? To groups of participants?</li> <li>● Is personal counseling proactive? If not, how are counseling sessions arranged and scheduled? Are meetings mandatory for participants?</li> <li>● What is the content and structure of social supports and who provides them? Are social support activities mandatory?</li> <li>● Does the grantee provide cultural programming? If so, what is the content and structure of cultural programming?</li> <li>● What other support services are available to HPOG participants? Which other support services are provided directly by the HPOG program? Which are provided by referral? If by referral, do HPOG program staff follow up?</li> <li>● What incentives, if any, does the grantee use to motivate program retention and completion?</li> <li>● For what expenses or needs is financial assistance available? How is financial assistance accessed?</li> <li>● Are supports adequate? If not, which supports are missing or in short supply?</li> </ul>	<ul style="list-style-type: none"> <li>● Grantee application</li> <li>● Grantee survey</li> <li>● Management and Staff survey</li> <li>● PRS</li> </ul>

Descriptive Implementation Study Domain and Research Questions	Data Sources
<p><b>Employer Connections</b></p> <p>How have local healthcare industry employers been involved in HPOG? For example:</p> <ul style="list-style-type: none"> <li>• Did employers collaborate or consult on the grant application and/or program design? Are employers involved in HPOG operations or services? If so, in what ways?</li> <li>• Have local employers developed an incumbent worker program with HPOG?</li> </ul> <p>Has the grantee incorporated work-based learning strategies into the HPOG program, including for example:</p> <ul style="list-style-type: none"> <li>• Apprenticeships, work-study placements, internships, visits to local employers, job shadowing, other work-based learning experiences?</li> <li>• For each activity: For which occupations is it available? How do participants gain access? How is each activity or placement structured (duration, hours per week, etc.)? Does the activity lead to a credential?</li> </ul> <p>What employment development services or activities are available, including, for example:</p> <ul style="list-style-type: none"> <li>• Individual and group job search and placement assistance, workplace skills training and counseling, job retention and advancement training and counseling?</li> <li>• For each activity: What is its content and structure? Is it voluntary or mandatory? Who provides the service?</li> </ul>	<ul style="list-style-type: none"> <li>• Grantee application</li> <li>• Grantee survey</li> <li>• Management and Staff survey</li> <li>• Employer survey</li> </ul>

The next section of this chapter describes how the data collected to address these extensive research questions will be organized and analyzed to describe how HPOG is designed and implemented overall and in each of the 27 grantees in the NIE.

### 3.2 Program Description and Narrative Synthesis

A major goal of the descriptive analysis of the Descriptive Implementation Study will be to develop comprehensive answers to the extensive list of research questions about HPOG program contexts, management and administration, and substantive services and activities discussed in Section 3.1. The descriptive analysis of the Descriptive Implementation Study will be organized by sections and subsections following the framework outlined in the logic model. Each domain or topic area will be introduced with a general description of its content, its place in the HPOG framework, and relevant research findings from the literature. Results for each and all grantees will be summarized in tabular form. Each table will be accompanied by a narrative description and interpretation of the findings.

#### 3.2.1 Optional selective case studies

Follow-up case studies focusing on specific program design and implementation strategies that are associated with stronger participant outcomes may be recommended after review of findings from the NIE Outcome and Implementation study components and in consultation with ACF. These case studies could be valuable in understanding the dynamic processes of program implementation behind programs with strong outcomes. Sites might be selected according to their outcomes findings, or according to promising practices hypothesized to be important and identified as important parts of HPOG programs by the NIE surveys, or by some unique partnership organization identified in the surveys, or some combination of these considerations. For each case study proposed, the researchers will develop a sampling strategy, instruments for on-site observations and interviews, and an analysis plan.

### 3.3 Developing Measures of Program Design and Implementation Strategies for the HPOG Impact Study

In addition to fulfilling the goal of providing a comprehensive description of HPOG programs across grantees and sites, the Descriptive Implementation Study will share a dataset with the HPOG Impact

Study. The dataset will include program-specific variables based on responses to the NIE surveys and other data sources. The HPOG Impact Study analysis will use a set of those program (and grantee) variables to address the question of which program components or implementation strategies are associated with better impacts.<sup>21</sup> This section describes the first step in the process: identifying the key sources of variation across grantees and developing variables and constructs and their measures for use in the Impact Study. These variables and constructs and their measures are presented in Exhibit 3.5, which follows the structure of the logic model in the domains addressed.

Independent variables for key program features can be developed separately for each of the domains identified in Exhibit 3.5. Variables can be specified to reflect distinct program features categorically (e.g., “yes” or “no,” or “some,” “all,” “none”) or quantitatively (e.g., size of caseloads for case managers), or as composite measures or indices that combine specific measures (e.g., an index of a program’s fidelity to the career pathways framework by combining measures of specific career pathways framework features). All of these approaches can be used depending on whether the results of the Descriptive Implementation Study show that programs are clustering in groups for some individual measures and the variation is largely across these clusters.

**Exhibit 3.5: Potential Measures for Use in the HPOG Impact Study**

Domain and Variables/Constructs	Measures
<b>Contextual Factors</b>	
Grantee institution type	Local WIB Community college/technical college/university Community-based organization Other state or local agency Other
Grantee experience with similar programs	Grantee has implemented sectoral training (Y/N) for similar populations (Y/N)
Grantee experience with partner institutions	For each partnering institution, did the grantee have a preexisting relationship similar to the relationship developed for HPOG (Y/N)?
What percentage of jobs in the local labor market is in healthcare?	Percentage of jobs in healthcare
Overall labor market conditions	Proxy measures based on secondary government and healthcare industry data, such as the Bureau of Labor Statistics’ Local Area Unemployment Statistics (LAUS) and the Census Bureau’s Quarterly Workforce Indicators (QWI)
Urban/rural	Census measure
Region	Regional location
<b>Program Administration</b>	
Use of other service providers by program activity or service	Other institution is responsible for each core program activity or service (e.g., outreach and recruitment, eligibility and intake, assessments, pre-training activities, development education, vocational training, case management, academic counseling and supports, personal supports and counseling, social supports, other support services, employer involvement strategies and employment development services) (Y/N)

<sup>21</sup> These measures will be further delineated in the HPOG Impact Study’s analysis plan.

Domain and Variables/Constructs	Measures
Identity of other service providers	Grantee partners with (Y/N): <ul style="list-style-type: none"> <li>● Local WIB or One-Stop Career Center</li> <li>● Community college or university</li> <li>● Community-based organization</li> <li>● Other State or local agency</li> <li>● Employer(s)</li> <li>● Trade association or union</li> <li>● Private training institution</li> <li>● Other</li> </ul>
Single vs. multiple site grantee	One vs. multiple administrative locations (Y/N)
Program variability across sites <sup>22</sup>	Grantee differs across sites and/or subgrantees (Y/N)
Management and staff background	Constructs based on staff professional background and educational levels (e.g., educational requirements; experience requirements)
Management and staff attitudes about HPOG and participants	Indices based on management and staff attitudes and beliefs about program efficacy and likelihood of participant success (e.g., high, medium, low)
Staff discretion	Index (e.g., high, medium, low) based on management staff survey responses
Administrative data systems	Grantee and service providers/partners use same or linked administrative data system (Y/N)
Use of PRS	PRS is used for case management (Y/N)
Resources from HPOG grant	Cost categories and HPOG grant amounts used
Other resources	Services or courses supported by non-HPOG resources
Program costs	Projected HPOG grant cost per participant
<b>Intake and Enrollment Strategies</b>	
Do the grantee and/or partners engage in proactive marketing for HPOG?	Is HPOG publicized and marketed to prospective target populations beyond relying on "word of mouth?" (Y/N)
What are the target populations?	Which of the following are target populations (Y/N): <ul style="list-style-type: none"> <li>● TANF recipients</li> <li>● Incumbent workers</li> <li>● Current postsecondary students</li> <li>● Disengaged youth</li> <li>● Other</li> </ul>
How are applications scheduled?	Are intake and enrollment continuous (Y/N) or at specific periods?
Locations for intake and enrollment	One (Y/N) v. multiple intake locations
Financial eligibility criteria	Maximum family income as percentage of poverty line
Academic eligibility criteria (1)	HS degree or GED required (Y/N)
Academic eligibility criteria (2)	8 <sup>th</sup> grade level or higher required in reading and/or math (Y/N)
Applicant burden and selectivity	Index of applicant burden (high, medium, low) based on applicant behavioral requirements (such as independent exploration of academic options, lengthy program orientation, staff assessment of motivation, multiple interviews, etc.)
Number of appointments/visits required for eligibility and intake process	Typical/mean number of application visits

<sup>22</sup> This variable is an overall indication of program differences across sites.

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Domain and Variables/Constructs	Measures
Are mandatory screenings conducted?	Screenings are conducted (Y/N)
Are mandatory orientations conducted?	Orientations are conducted (Y/N)
Support services during intake	Are support services available during the application and intake process? (Y/N)
<b>Program Components</b>	
<i>Comprehensive Assessment</i>	
Academic assessments	Are academic assessments provided? (Y/N) If so, do they include tests of: basic academic skills (Y/N); learning styles/disabilities (Y/N); career aptitude/interest (Y/N)?
Non-academic assessments	Are non-academic assessments provided? (Y/N) If so, do they include tests of: psycho-social skills (Y/N); job-readiness skills (Y/N); coping skills (Y/N); support needs (Y/N)?
<i>Core Curriculum</i>	
Pre-training activities	Are pre-training activities provided (Y/N)?
Basic skills instruction	Is basic skills instruction available in the grantee (Y/N)?
Basic skills instruction goal	Does basic skills instruction lead to: GED (Y/N); high school degree (Y/N); certification of minimal academic requirements for postsecondary training (Y/N)?
Available vocational training courses	Number of different occupational trainings available
Training level required for vocational training course	Does the grantee include training that leads to: certificates (Y/N); licenses (Y/N); associate's degrees (Y/N); bachelor's degrees (Y/N); master's degrees or higher (Y/N)?
Active learning	Does the grantee incorporate principles of active learning (Y/N)?
Contextualization	Does the grantee incorporate principles of contextualized learning (Y/N)?
Modularization	Does the grantee incorporate principles of modularized, stackable credits (Y/N)?
Acceleration	Does the grantee incorporate principles of accelerated learning (Y/N)?
Flexible delivery	Does the grantee incorporate principles of flexible delivery to accommodate nontraditional learner schedules (Y/N)?
<i>Available Support Services</i>	
Case management (1)	Does the grantee use case managers as distinct from counselors/advisors (Y/N)?
Case management approach (2)	Are case managers proactive in making regular contacts with participants (Y/N)?
Case management approach (3)	Do case managers have assigned caseloads (Y/N)?
Academic supports and counseling (1)	Are the following academic supports available (Y/N): college skills training; tutoring, academic counseling, licensing exam preparation, study skills training, other?
Academic supports and counseling (2)	Is academic counseling mandatory (Y/N)? Is it a group activity (Y/N)?
Academic supports and counseling (3)	Are there distinct academic counselors (Y/N)?
Personal supports and counseling (1)	Are the following personal supports available (Y/N): life skills training, personal counseling, career counseling, other?
Personal supports and counseling (2)	Are there distinct personal counselors (Y/N)?
Social supports	Are the following social supports available (Y/N): learning communities, peer support groups, peer mentors, social support network building skills training, other?
Incentive for program retention and completion	Does the grantee offer non-cash incentives to participants for achieving program milestone (Y/N)?
Financial supports (1)	Are the following financial supports or subsidies available (Y/N): funds for training costs/supplies, food (other than SNAP), housing/rent, emergency needs, other?
Financial supports (2)	Which of the available financial supports are provided directly by the grantee?

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Domain and Variables/Constructs	Measures
Other supports (1)	For which of the following are supports available (Y/N): child / dependent care; transportation; addiction and substance abuse services; family preservation services; family engagement services; legal assistance; housing assistance; primary medical care; other?
Other supports (2)	Which of the available supports are provided directly by the grantee?
<b><i>Employer Connections</i></b>	
Employer involvement	In which of the following activities or services have local healthcare industry employers been involved (Y/N): grant application; program design; instruction; curriculum development; work-based training placements, other?
Work-based training (1)	Which of the following work-based training strategies are available (Y/N): apprenticeships; work-study placements; internships; visits to employers; job shadowing; other work-based training strategies?
Work-based training (2)	For which occupations are work-based training activities available (all/some/none)?
Job development strategies	Which of the following employment development services are available (Y/N): job search skills training; individual job search assistance; group job search assistance; job retention and advancement training or counseling?
<b>Overall Integration of Career Pathways Framework</b>	Summary index of degree to which each site implements an element of the career pathways framework for comprehensive assessments, core curricula, supports and employer connections.

## 4. Systems Change Analysis

This analytic component will address the second major research question identified for the evaluation, “What changes to the service delivery system are associated with program implementation?” The major goal of the Systems Change Analysis is to examine the HPOG grantees’ partnership and organizational network structure and if and how it has changed under HPOG. In particular, this study component will assess the degree to which those changes are associated with the goal of preparing HPOG participants for healthcare jobs that pay well and are in high demand while accommodating the needs of the target populations. The analysis will also examine the extent to which HPOG created or improved accessible entry points into the health professions workforce for the target population, thus impacting the broader local service delivery system.

This chapter first presents some context for the system change analysis (Section 4.1), the specific research questions to be addressed by the Systems Change Analysis (Section 4.2) and then the variable measurement and data sources (Section 4.3). It then lays out the plan for the descriptive analysis (Section 4.4). The first step in the analysis is a description of the grantee-specific healthcare labor markets as context for the remaining analyses. Then follow descriptions of how/whether HPOG grantees changed area healthcare job training opportunities for the target population. Next is a description of the network/partnership structure HPOG grantees implemented and how/whether this represents change. This also includes analysis of stakeholders’ perceptions as to whether that change is sustainable and their satisfaction with HPOG. Section 4.5 describes two quantitative analyses: developing indices of systems change based on stakeholder perceptions, and social network analysis. Both of these will help quantify the extent to which the HPOG program as implemented changed the preexisting service delivery system.

### 4.1 Context for Systems Change Analysis

HPOG grantees have reasonable latitude to implement various models to achieve the overall program’s stated objectives. However, the FOA explicitly prescribes that grantees will use approaches built on strategic partnerships and organizational coordination. The importance of partnerships and networks is summarized in this brief synthesis of the systems research literature by Roman et al. (2011):

- When organizations share power and resources, and establish multiple links among agencies within the network, collaboratives are more likely to be successful than those lacking such strong connections.
- The success of partnerships is related to communication among partner agencies, as well as the extent to which each entity can leverage the resources needed to achieve its goals.
- The most effective partnerships appear to develop where community-based and government entities form strong relationships (i.e., achieve horizontal and vertical integration, as defined earlier).

Recognizing the potential importance of strategic partnerships, the HPOG FOA requires HPOG programs coordinate with:

- The state agency responsible for administering the TANF program.
- The local WIB established under the Workforce Investment Act of 1998.

- The state apprenticeship agency (or the Office of Apprenticeship of the U.S. Department of Labor, if no agency has been recognized in the state).

In addition, *recommended partners* include:

- Public and private employers such as healthcare providers and industry-related organizations.
- The education and training community, including the continuum of education providers from secondary schools through community and technical colleges, four-year colleges and universities, and apprenticeship programs, as well as other educational and training entities.
- Nonprofit organizations such as community- and faith-based entities that have direct access to the populations targeted for this initiative.
- Labor organizations, including unions and labor-management entities that represent healthcare workers.
- Organizations using Recovery Act funding in the grantee community to create or support jobs in the healthcare sector.
- National, state, and local foundations focused on assisting project participants.
- State and local service agencies that provide support services to project participants.

Grantees vary in how and whether their partnership networks include these types of organizations. As noted earlier, the evaluation defines “partner” to include entities that participate in HPOG operations, such as by referring prospective HPOG participants, providing data to HPOG programs useful for program recruitment and implementation, offering opportunities for work-based learning or other work-based experiences, and providing other services or trainings. In addition to these partners, HPOG grantees also operate within a broader network of stakeholders. Stakeholders include partners as well as organizations that have an active interest in HPOG programs and their results, but are not participating directly in program operations. The recommended partners from the FOA above may function as partners or stakeholders depending on the grantee.

The Systems Change Analysis outlined here gathers information from partners and the broader range of stakeholders to inform the analysis. The literature on organizational studies establishes that it is necessary to distinguish not only the characteristics of system entities, but also the number and types of agencies included in the system (Roman et al., 2011). Also, there is general recognition of the need to answer the questions: 1) what are the system’s boundaries, 2) how complex are the systemic relationships, and 3) how diverse are the purposes or perspectives within the system (Hargreaves, 2010)? The *system boundaries* are typically circumscribed by the entities considered to influence issues targeted by the program intervention; broadly speaking, boundaries define who is considered a stakeholder within the network under evaluation. *Systemic relationships* refer to connections or exchanges within and across network organizations. *Diversity of perspectives* represents an additional measurement dimension in systems change evaluations as network stakeholders may agree about the main objective(s) of their initiatives, but hold varying degrees of consensus around the means for achieving expected results.

Conceptually, systems change studies measure communication, coordination, and collaboration, which Bruner (1991, as cited in Roman, Butts, and Roman, 2011) has described as three levels on a continuum:

- *Communication* can help people do their jobs better by providing more complete information, but it does not require any joint activity among individuals from different organizations. Linkages are limited and usually focused on one task or objective.
- *Coordination* involves joint activity, but allows individuals (and presumably the entities they represent) to maintain their own set of goals, expectations, and responsibilities.
- *Collaboration* requires the creation of joint goals to guide the actions of collaborating individuals/organizations.

The proposed analysis addresses these various dimensions. This study will use: 1) comprehensive interviews or surveys of representatives of all key organizations so that all relevant perspectives are considered; and 2) social network analysis to identify changes in communication, collaboration, and coordination among key agencies identified as partners and stakeholders. Social network analysis typically uses a prospective frame and multiple waves of data collection to measure change over time. However, the NIE cannot document a *real-time baseline for systems change* because HPOG programs will already have been operational for several years when the systems change data collection is implemented. To address this, the Stakeholder/Network survey described in Chapter 2 and discussed again in this chapter will capture respondents' perceptions of current networks, as well as how networks have changed since the implementation of HPOG, and integrate that information with official records to create a history of systems change. Given that collection of retrospective information is being limited to a single time period keyed to a specific event (the implementation of HPOG), the study team is optimistic about the ability to gather accurate information (Tourangeau, Rips, and Rasinski, 2000).

In addition to addressing the question of whether and how HPOG may have affected local systems for training low-income adults for careers in healthcare, the information collected for this research component should be useful for multilevel modeling in terms of providing grantee-level contextual covariates to incorporate with other program-level variables.

## 4.2 Systems Change Analysis Research Questions

The major research questions to be addressed in the Systems Change Analysis have been broken down into a number of subquestions, described in this section. These more specific questions map out the more detailed data collection and analysis requirements for this part of the evaluation.

### 4.2.1 Local economic and healthcare labor market context

*What is the local economic and healthcare labor market context as HPOG was being implemented and did it change during HPOG? To what extent did HPOG train workers for high-demand occupations?*

HPOG provides funds to local grantees to prepare participants for healthcare jobs that pay well and are in high demand. These research questions are aimed at describing the local job market (e.g., unemployment rates) and more specific healthcare labor market characteristics in grantee locales (e.g., healthcare employment types, levels, and changes) as context for understanding the systems changes made in implementing HPOG. This question also addresses whether HPOG programs are supplying workers to the local healthcare industry in the occupations employers describe as being in high demand and difficult to fill and the level of employer satisfaction with these workers and the HPOG program.

#### 4.2.2 Local healthcare training opportunities

*What local healthcare industry training opportunities for low-income populations existed prior to HPOG? Did they expand or change under HPOG?*

This question is intended to describe the nature and extent of healthcare industry training before and after the introduction of HPOG. The evaluation will measure—descriptively and quantitatively, to the extent feasible—whether HPOG expanded the suite of healthcare education and training offerings. The study also will assess the degree to which HPOG programs improved access to training and likelihood of success in completing training for targeted populations by, for example, including components of the career pathways framework<sup>23</sup>—strong personal supports, active learning, contextualization, modularization, accelerated learning, flexible scheduling and delivery, and connections with employers—and creating more opportunities to achieve certificates, licensing, or degrees.

#### 4.2.3 Boundaries, relationships, and stakeholder perspectives of HPOG system

*What are the boundaries, relationships, and stakeholder perspectives of the HPOG system? How did each grantee configure the “HPOG system” (e.g., the number and type of key partners, whether required partners were engaged, which recommended partners were involved)?*

This question addresses the importance of understanding the features of the system or network of partners. In addition to documenting who were the partners and stakeholders, we will gather information on their roles and responsibilities and to what extent were they active in HPOG and represented new partnerships versus ongoing relationships. The study will also address how partnership structure varies across grantees.

#### 4.2.4 Changes to internal structures and procedures

*What changes to internal structures and procedures were made when implementing HPOG within lead agencies, and within partner agencies? To what extent do partners and stakeholders perceive that changes necessary to the HPOG mission were accomplished?*

This set of questions focuses on organizational elements that are facilitators—or conversely, barriers—to system-level reforms; they provide the context for understanding the initiative’s success or failure to produce anticipated individual-level results.

#### 4.2.5 Changes in communication, coordination, and collaboration across systems

*What changes were made in communication, coordination, and collaboration across systems (e.g., postsecondary educational institutions, workforce development agencies, social services agencies, and healthcare employers) when implementing HPOG? To what extent do partners and stakeholders perceive that changes necessary to the HPOG mission were accomplished?*

This set of questions focuses on the necessity of coordinating activities across providers and institutional domains. In addition to capturing information about the types and number of organizational entities

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<sup>23</sup> See Fein (2012).

included in the sharing process, these also focus on changes in the nature and quality of interaction among the network actors/entities.

#### **4.2.6 Coordinating activities across providers and institutional domains**

*What changes occurred in lead or partner institutions with respect to articulation of healthcare career ladders, market-driven education and training programs, support services, and pre-training/basic skills instruction? What factors, if any, hampered systems change? What, if any, unforeseen systemic changes occurred?*

These questions are related to 4.2.1 and 4.2.2 with the emphasis on system-level results in terms of reforms that: 1) generated more market-driven healthcare education and training, 2) increased the supply of trained healthcare workers (intermediate outcome), and 3) contributed to improvements in healthcare provision (long-term outcome).

#### **4.2.7 What systems changes are likely to be sustainable after the demonstration?**

*Are changes in policy and practice introduced into the lead agency and its partners retained after the HPOG demonstration? Are interactions (communication, coordination, and collaboration) among network actors and organizations established under HPOG retained and leveraged?*

These questions address whether, and to what extent, systemic reforms occasioned by the HPOG initiative, with its visibility and federal funding, become standard operating principles and procedures once the demonstration is concluded.

#### **4.2.8 Lead agency, partners', and stakeholders' satisfaction**

*What are the nature and extent of lead agency, partners', and stakeholders' satisfaction? What are their views regarding the effectiveness of HPOG in meeting its goals? Did employer perspectives on low-income workers change as a result of HPOG?*

This question addresses performance quality—not just what activities and products resulted, but whether HPOG met the needs of network entities and stakeholders, TANF recipients and other low-income consumers who were expected to benefit from the program, and healthcare employers. Service quality is an important consideration, as failure to implement programs that meet customer needs can undermine the success of the overall initiative. For example, if new market-driven healthcare curricula are developed and offered, but targeted populations do not enroll or are not retained through graduation, certification, or licensing milestones because the education/training is too expensive, offered at inconvenient times or places, lacking in cultural competence, or is of low quality in other respects, the initiative likely will not achieve its intended results and may not be durable.

### **4.3 Variable Measurement and Data Sources and Collection**

To answer these questions, the evaluation will draw on a variety of data sources: the PRS and the Grantee, Stakeholder/Network, Management and Staff, and Employer surveys, as well as the HPOG Impact Study

field visits.<sup>24</sup> Each of these is described in Chapter 2 of this report. These sources will be supplemented with secondary data on local labor market conditions from public sources such as the BLS, as well as information from HPOG grantee applications and summaries.

The information necessary to conduct the Systems Change Analysis can be categorized into eight domains. Exhibit 4.1 identifies these domains, specific measures to be collected in each of these domains, and the data sources to be used to collect information on these measures.

Data in the first domain, “healthcare labor market/workforce context,” will be used to answer questions on the labor market context in which HPOG programs operate, now and at the time of implementation. Primarily this information is from secondary sources. Additional information from employers on the types of healthcare jobs they need to fill and have faced difficulties in hiring as well as their satisfaction with the training received by HPOG participants will come from the Employer survey.

Data in the remaining domains will be used for the descriptive and quantitative analyses of systems and systems change. The primary source for this information is the Grantee and Stakeholder/Network surveys. Because some important questions for the descriptive analysis of systems change are more easily collected through semi-structured or open-ended interview questions, these close-ended surveys will be supplemented with information from the HPOG Impact Study field visits. In addition, information on accessibility of healthcare education and training opportunities and perceptions of employers hiring HPOG participants will come from the Employer survey.

The design assumes only one wave of each of these surveys. In both the Grantee and Stakeholder/Network surveys and the field interviews, information on change will be elicited through retrospective questions as described above. Respondents will be asked about their roles and responsibilities in the partnership network currently and at the time when HPOG was being implemented.

As discussed in detail in Chapter 2, the sample for the Stakeholder/Network survey will be developed by starting with a listing from grantee site liaisons and grant materials and progressing to screening calls with partners to ask for additional partner names. Based on current information, it is anticipated that for most grantees there will be a single partnership or organizational network. This can hold even when a grantee’s program is large enough to comprise multiple local area labor markets, if the grantee has a strong central organization and autonomy. However, there are some grantees where more than one organizational network exists. The study team will make the final determination for each grantee while creating the sample for the Stakeholder/Network survey.

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<sup>24</sup> The HPOG Impact Study includes implementation study visits to 20 grantees and the ISIS Project includes three implementation study site visits. If resources allow, the study team will conduct targeted telephone interviews for this project with selected respondents in the four grantees not included in the HPOG Impact Study or in the ISIS Project. To assure comparability of information collected, specific sections of the Impact Study’s implementation protocols will be used to guide these interviews.

**Exhibit 4.1: Domains, Measures, and Data Sources for Systems Change Analysis**

Domain	Measures	Data Sources
Healthcare Labor Market/Workforce Context	<ul style="list-style-type: none"> <li>• Unemployment rate</li> <li>• Labor force participation rate</li> <li>• Employment levels</li> <li>• Health industry proportion of labor market</li> <li>• Population density</li> <li>• Healthcare employment demand and hiring difficulties</li> <li>• Healthcare worker quality (employer satisfaction)</li> </ul>	<ul style="list-style-type: none"> <li>• Secondary data on local economic conditions (e.g., BLS, state Department of Labor, etc.)</li> <li>• Employer survey</li> </ul>
Stakeholder Characteristics	<ul style="list-style-type: none"> <li>• Institution Type</li> <li>• Types of program activities or services</li> <li>• History of partnerships</li> </ul>	<ul style="list-style-type: none"> <li>• Grantee survey</li> <li>• Stakeholder/Network survey</li> <li>• Field visits/interviews</li> </ul>
Stakeholder Engagement, Communication, and Resource Sharing	<p>Engagement:</p> <ul style="list-style-type: none"> <li>• Familiarity with HPOG</li> <li>• Rationale for engaging in HPOG activities</li> </ul> <p>Communication/Information Sharing:</p> <ul style="list-style-type: none"> <li>• Forms of communication</li> <li>• Frequency</li> <li>• Perception of Value</li> </ul> <p>Resource Sharing:</p> <ul style="list-style-type: none"> <li>• Cash donations</li> <li>• In-kind donations (e.g. staff, training materials, equipment/space)</li> </ul>	<ul style="list-style-type: none"> <li>• Grantee survey</li> <li>• Stakeholder/Network survey</li> <li>• Field visits/interviews</li> </ul>
Stakeholder Roles and Responsibilities (at time of HPOG implementation and currently)	<ul style="list-style-type: none"> <li>• Role in planning and design of HPOG grant activities</li> <li>• Role in referral of HPOG applicants</li> <li>• Role in marketing outreach</li> <li>• Role in curriculum development</li> <li>• Support for pre-training or vocational/occupational training</li> <li>• Role in providing support services</li> <li>• Role in employment development activities</li> <li>• Job development and placement</li> <li>• Hiring HPOG participants</li> </ul>	<ul style="list-style-type: none"> <li>• Grantee survey</li> <li>• Stakeholder/Network survey</li> <li>• Field visits/interviews</li> </ul>
Perceived Effectiveness of HPOG	<ul style="list-style-type: none"> <li>• Satisfaction with overall HPOG program</li> <li>• Satisfaction with HPOG program components</li> <li>• Perceptions of barriers to success of HPOG participants</li> </ul>	<ul style="list-style-type: none"> <li>• Stakeholder/Network survey</li> <li>• Field visits/interviews</li> <li>• Management and Staff survey</li> </ul>
Partnership Sustainability	<ul style="list-style-type: none"> <li>• Perceptions of sustainability</li> <li>• Specific activities to be continued</li> <li>• Barriers to sustainable partnerships</li> </ul>	<ul style="list-style-type: none"> <li>• Grantee survey</li> <li>• Stakeholder/Network survey</li> <li>• Field visits/interviews</li> </ul>
Accessibility of Healthcare Education and Training (in HPOG program and across local area at the time of HPOG implementation and currently)	<ul style="list-style-type: none"> <li>• Access points to vocational training in healthcare occupations</li> <li>• Adequacy of opportunities for target population</li> <li>• Opportunities/adequacy of pre-training activities</li> <li>• Adequacy of community support resources</li> <li>• Extent to which HPOG had impact on training opportunities</li> <li>• Effectiveness of HPOG design and delivery</li> </ul>	<ul style="list-style-type: none"> <li>• Local secondary data sources</li> <li>• PRS</li> <li>• Grantee survey</li> <li>• Stakeholder/Network survey</li> <li>• Employer survey</li> <li>• Field visits/interviews</li> </ul>

Domain	Measures	Data Sources
Perceptions of Employers Hiring HPOG Participants	<ul style="list-style-type: none"> <li>• Familiarity with HPOG</li> <li>• Characteristics of hiring relationship</li> <li>• Satisfaction with HPOG program</li> <li>• Satisfaction with HPOG participants</li> </ul>	<ul style="list-style-type: none"> <li>• Employer survey</li> </ul>

## 4.4 Descriptive Analyses

This section identifies four different descriptive analyses to be undertaken as part of the Systems Change Analysis: 1) mapping the healthcare labor market, 2) mapping healthcare industry training opportunities, 3) documenting the HPOG network and relationships among partners and stakeholders in each of the grantees, as well as comparing characteristics across grantees, and 4) describing the changes within, and across, grantees’ HPOG networks.

These analyses will use secondary data as previously described: Grantee, Stakeholder/Network, Management and Staff, and Employer survey responses; and information gathered from the HPOG Impact Study field visits. The narrative reporting of these descriptive analyses will be organized along the lines laid out by the specific research questions identified in Section 4.1. The focus will be on generating cross-grantee descriptions of system structural and situational factors, including: 1) formality of partnerships; 2) communication among partners; 3) resources, resource sharing, and resource dependence; 4) support organizational and political climates/context; 5) implementation decision making and changes introduced; as well as perceived effectiveness and sustainability of systemic changes based on stakeholder reports from each of the grantees. Summary tables will be presented, where applicable, to synthesize key findings. The analytic intent is to summarize data across the 27 grantees, identifying specific cases where it makes sense to present specific illustrative information.<sup>25</sup> Each of the analyses is discussed in turn.

### 4.4.1 Mapping the local healthcare labor market (pre- and post-HPOG)

This analysis addresses the questions identified in subsection 4.1.1, and will document the local employment contexts for HPOG grantees for the period immediately preceding and during HPOG implementation, relying primarily on secondary data on local economic conditions (e.g., BLS, state Department of Labor). Additionally, the evaluation will identify the local healthcare employment market by documenting healthcare employers in various settings, the occupational characteristics of their labor needs, and the nature and extent of their difficulties meeting labor needs. This information will come from the Employer survey. The intent is to establish from the perspective of employers that are closely involved in HPOG, have hired HPOG participants, or are one of the larger healthcare employers in the area, information on the types of occupations for which they have the most difficulty hiring. In addition this analysis will describe for those employers who have hired HPOG participants their satisfaction with those hires and the HPOG program. It is beyond the scope of this project to conduct a representative survey of healthcare employers in every HPOG grantee labor market. The information from the Employer survey will provide descriptive context and examples to be used in conjunction with the secondary data, but not a representative depiction of the entire labor market.

<sup>25</sup> Developing 27 case studies reflecting detailed grantee-specific information is beyond the scope of this study.

#### **4.4.2 Mapping healthcare industry training opportunities and access points (pre- and post-HPOG)**

This aspect of the Systems Change Analysis, which addresses the questions identified in subsection 4.1.2, focuses on the nature and extent of healthcare industry training opportunities before and after the introduction of HPOG. The descriptive analysis will document the healthcare training landscape over time, paying particular attention to whether, and how, HPOG grantees added to the opportunities for training in healthcare occupations for the target populations by:

- Providing specific healthcare training or career pathway or articulated career training where it did not exist.
- Making training opportunities accessible to the HPOG target populations through provision of basic skills instruction or other pre-training services or support services (including financial assistance) that were not previously available.
- Expanding the access to, and availability of, existing healthcare training opportunities.

The analysis will report on the partner and stakeholder perspectives on whether the HPOG program has substantially improved access to healthcare training opportunities for the target population.

In addition, data from secondary sources will be used to identify training opportunities for low-income individuals and TANF recipients at the time of HPOG implementation and at the time of the analysis. Several possibilities exist for collecting these data efficiently. Community colleges, technical schools, four-year colleges and universities, healthcare coalitions, and large healthcare employers whose catchment areas coincide with the site-specific locations from which grantees are recruiting their students will be researched online to ascertain healthcare trainings offered before and after HPOG implementation. Information from local area WIBs will also be used to provide a listing of available opportunities pre-HPOG. Additionally, information that HPOG grantees developed as part of their strategic planning efforts to identify training gaps they wanted to address will be incorporated.

#### **4.4.3 Description of HPOG partnerships and variations across grantees**

This analysis will address the questions identified in subsection 4.1.3. The descriptive analysis will identify how each grantee configured its HPOG network, as well as delineate similarities and differences in systems operations across grantees. This work will use Grantee, Stakeholder/Network, and Employer survey data, as well as information gathered from the HPOG Impact Study field visits. The analyses will identify:

- The vision, goals, and objectives established for HPOG (e.g., the grantee's stated focus with respect to healthcare careers and pathways, the number and type of participants the grantee expected to train).
- The nature of the lead agency's preexisting connections to targeted participant populations, network partners, and other stakeholders, such as the larger local healthcare employment sector.
- The entities designated as key partners; how and why they were selected.
- The nature and extent of involvement of mandatory and recommended partners.
- Whether these partnerships represent new alliances or ongoing relationships that existed prior to HPOG.

- The anticipated and actual roles and responsibilities of the lead agencies and their key partners.
- The governance and operational structures used for HPOG program management and administration, including decision support systems within the lead agencies and their respective partner organizations.
- The characteristics and competencies of lead agency and partner staff central to program implementation, whether existing staff was used in new ways or the extent to which new staff was needed to implement the program, and what kinds of staff training and capacity building were needed and undertaken (e.g., staff training and coaching procedures) to implement HPOG.
- Employers who were targeted to hire HPOG participants; whether, and how, they were engaged in HPOG and their experiences in working with the HPOG network.
- The nature and extent to which these relationships are expected to continue beyond the HPOG demonstration.

The description of the stakeholder network is closely related to the Descriptive Implementation Study, where a description of the HPOG partners implementing the program will be included. However, this analysis will cover a broader group, including other partners engaged in the initial development of the program but no longer involved, and stakeholders who are not active implementation partners. It will also provide more depth of information on the roles and responsibilities of these partners. Finally, it will provide information on change in these partnerships from the time prior to HPOG, and stakeholders' perceptions of the sustainability of partnerships going forward.

This descriptive analysis will use information on each grantee partnership structure to report on variation across all grantees on specific dimensions. For example, the variation in the nature and intensity of involvement of specific partner types, such as TANF agencies or employer organizations, could be described.

Using information from grantee applications, the PRS, the Grantee, Stakeholder/Network, and Management and Staff surveys, and field/telephone data collection, analyses will be performed to address the questions identified in subsections 4.1.4 through 4.1.8. In particular, grantee-specific and cross-grantee analyses will address such systems change issues as:

- If and how HPOG vision, goals, and objectives represented a change in the lead agencies' and partners' perspectives before the program was implemented; and to what extent such vision, goals, and objectives were achieved (i.e., systems changes that occurred with respect to healthcare career ladders, market-driven education and training programs, and supply of competent healthcare workers).
- Changes to organizational policies and practices within the lead agencies and their partner entities as a result of HPOG implementation and interactions among network entities.
- How resources (e.g., funding, information, etc.) are shared across the HPOG network; the nature and extent of conjoint activities undertaken to leverage existing local resources, as well as to generate new sources of support; and the ways in which resources are used or shared differently as a result of the alliances formed in conjunction with the HPOG initiative.

Narrative discussions for each of the themes outlined above will consider three overarching topics: 1) barriers that were encountered in HPOG implementation at the network or systems level; 2) activities

used to resolve various barriers, and the extent to which these were seen as successful in mitigating or eliminating the problem; and 3) the likely sustainability of these elements beyond the HPOG demonstration, and how this will be accomplished.

## 4.5 Quantitative Analysis

The Stakeholder/Network survey is anticipated to serve as a basis for two key quantitative analyses of systems change. The first, developing indices of systems change, is described in subsection 4.4.1 and is based on a set of questions in that survey about the effectiveness of the HPOG network's capacity to design and deliver a healthcare occupations training and employment system. The second component, described in subsection 4.4.2, is social network analysis that will be based on a series of questions in the survey asking each stakeholder organization to examine: 1) how often individuals within the HPOG network and local healthcare training and employment systems interact with one another, 2) whether such interactions are helpful to each respondent in performing their respective jobs, and 3) whether the respondent perceives those interactions as being helpful to others in accomplishing their particular jobs.

Typically, stakeholder surveys in a project assessing change are administered in multiple waves (often semi-annually or at least annually) to representatives of the lead agency, key partners, and other critical stakeholders (grantees identify potential respondents based on who they perceive as most informed about the healthcare occupational training and employment systems in the community). When multiple waves are administered, grantees may alter the respondent selections over time to reflect new partners or stakeholders that emerge as instrumental to the success of HPOG, or conversely, to eliminate those who are no longer engaged for a variety of reasons. This kind of survey implementation cannot be achieved for HPOG, largely due to the lag between program implementation and the planned data collection. As a result, the survey will be designed to capture respondents' feedback for multiple time periods; i.e., questions will be designed to capture retrospective information on circumstances prior to or at the inception of HPOG, and then to repeat such items to elicit responses regarding the same items at the time of survey administration.<sup>26</sup> This approach will permit analyses of reported changes over time, subject to study limitations.

### 4.5.1 Indices of systems change—Partner/stakeholder ratings based on survey responses of administrators and key staff of HPOG and partner agencies

This analysis will develop multiple indices of systemic change using responses to stakeholder surveys. Changes in the magnitude and direction of the scales developed will reflect important systemic and program results that can be used in modeling individual outcomes; for example, do participants fare better in systems that demonstrate high degrees of collaboration with respect to partner involvement and commitment to HPOG?

Three constructs used in other similar survey efforts (see Roman et al., 2011) will be used to measure the overall effectiveness of HPOG in developing and strengthening networks to bring about systems change:

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<sup>26</sup> In this case, the instrument format will include distinct sections that clearly reference specific timeframes in the instructions to respondents (e.g., for this set of questions, please respond based on your impressions of these issues in the three months prior to HPOG implementation; for this set of questions, please respond based on your impressions of these issues during the past three months).

- *Administration.* This construct will use a series of questions from the Grantee and Stakeholder/Network surveys designed to measure 1) access to services, e.g., the ease with which targeted populations are able to access training and support services; 2) data sharing, e.g., integration and sharing of information systems among stakeholders, information-sharing difficulties due to circumstances such as technological issues, state regulations, or federal policies; 3) systems integration, e.g., the extent of interagency coordination of policies and procedures, minimization of turf issues; and 4) resource management, e.g., sharing of materials (such as curricula) and equipment, conjoint fundraising activities, cross-training or other interagency leveraging of staff.
- *Collaboration.* This construct will use a series of questions covering the degree of shared vision and purpose, cooperation and trust, partner involvement/commitment to HPOG, and the perceived quality of network relationships.
- *Implementation quality.* This construct will measure respondent perceptions, including satisfaction ratings, of items such as appropriateness of healthcare training, availability of a range of culturally appropriate support services, adequacy of recruitment and retention policies and practices, preparedness of targeted populations to meet employer needs in understaffed occupational categories, and expansion of healthcare career pathways.

The survey items will be compiled into multiquestion indices designed to measure specific aspects of systems change. Responses to the Stakeholder/Network survey will be analyzed to develop the indices described above regarding within- and across-grantee stakeholder perceptions of systemic changes. This includes stakeholder perceptions of HPOG programs’ effectiveness in addressing the critical issues associated with providing healthcare education and training for TANF and low-income individuals to improve their economic stability, while filling labor shortages within the healthcare market. The analysis typically involves several steps.<sup>27</sup> These include:

- Conduct analyses to determine how well survey items measured each construct, whether any items overlapped or were superfluous, and if new constructs emerged.
- Conduct confirmatory factor analysis (principal axis factoring) to determine whether variables are loaded on underlying constructs.
- Perform reliability analysis to determine how strongly items held together.
- Perform exploratory factor analysis (principal component analysis).
- Calculate index scores for each measure.

Following prior research, index scores for each measure can be calculated as:

$$\sum_i^n \sum_j^k (R_{ij})/nk$$

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<sup>27</sup> This description is drawn from Roman et al. (2011).

where the mean response is the sum of all responses  $R$  for each of  $i=1 \dots n$  participants summed across all the  $j=1 \dots k$  items in that scale and divided by the product of the number of respondents and the number of items in the scale. Responses on the 5-point scales were scored from  $-10$  (strongly negative),  $-5$  (somewhat negative),  $0$  (neutral),  $5$  (somewhat positive), to  $+10$  (strongly positive). Some questions were originally worded negatively, but all answers were re-coded so that high scores indicated positive opinions. A Wilcoxon Matched-Pairs Signed-Ranks Test was conducted on the changes across successive surveys (e.g., comparing results from wave 1 to wave 2), across all sites and also for within-site comparisons.

#### 4.5.2 Social network analysis to measure changes in the size, density, and cohesiveness of the stakeholder networks

Social network analysis presents a useful methodological approach for studying network and systems changes over time.<sup>28</sup> This analysis allows quantification of the size, density, and cohesiveness of stakeholder networks using data from the Stakeholder/Network survey.

For the NIE, three questions will be included in the Stakeholder/Network survey for each referenced timeframe in the survey:<sup>29</sup>

- In the past three months, how frequently—daily or more often, several times/week, several times/month, less than once/month, never—did you interact with each individual listed below by telephone, email, or in-person meetings for work-related reasons? (Strike your own name from the list.)
- How helpful is each person listed below—extremely helpful, somewhat helpful, not helpful, unsure—to you in doing your job? (Strike your own name from the list.)
- How helpful do you think you are to each person listed below in doing his/her job? (Strike your own name from the list.)

Social network analysis will be used to describe the size and structure of networks, the positions and roles played by network members, the communication and interaction patterns among members, and whether the networks evolved over time. The Stakeholder/Network survey will enable quantification of network properties, including size, density, cohesiveness, power equity, and instrumental equity among network members, and the relational proximity of agencies as measured by the average number of ties required to establish a connection between agency members (see Exhibit 4.3 for definitions).

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<sup>28</sup> See Roman et al. (2011) for examples of how these tools have been used in modeling organizational collaboration and coordination in a variety of contexts.

<sup>29</sup> This portion of the Stakeholder/Network survey is customized to each grantee site. As a result, each of the three questions provides the list of site-specific survey respondents ( $X$ s), together with their individual organizational affiliation, identified by the particular grantee as knowledgeable about its local network/system.

**Exhibit 4.3: Definition of Statistical Concepts Used in Social Network Analyses**

Statistic	Definition	Range
Size	Number of member agencies in the network, regardless of whether each agency was represented by one individual respondent or several respondents.	N
Proximity	Average minimum number of ties needed to establish a relationship between any one member agency and another. A proximity score of 1 means that two agencies communicated directly with each other. Proximity is the only network statistic where smaller figures indicated greater performance. Note that proximity captures "interaction," but not necessarily collaboration.	1 to (N-1)
Density	Network ties as a percentage of all possible ties. Density (like cohesion) is similar to proximity; it refers to the proportion of all possible interactions in a network that are present (regardless of direction).	0 to 100%
Cohesion	Reciprocal network ties as a percentage of all possible reciprocal ties.	0 to 100%
Power Equity	Equity in the distribution of incoming ties, where 0% indicates that just one agency is responsible for all of the helpful interactions reported by network members, and 100% indicates that credit for helpful interactions is spread equally among all agencies.	0 to 100%
Instrumental Equity	Equity in the distribution of outgoing ties, where 0% indicates only one agency reports having helpful interactions with other agencies, and 100% indicates that helpful interactions are reported equally by all agencies.	0 to 100%

Source: Adapted from Roman et al. (2011).

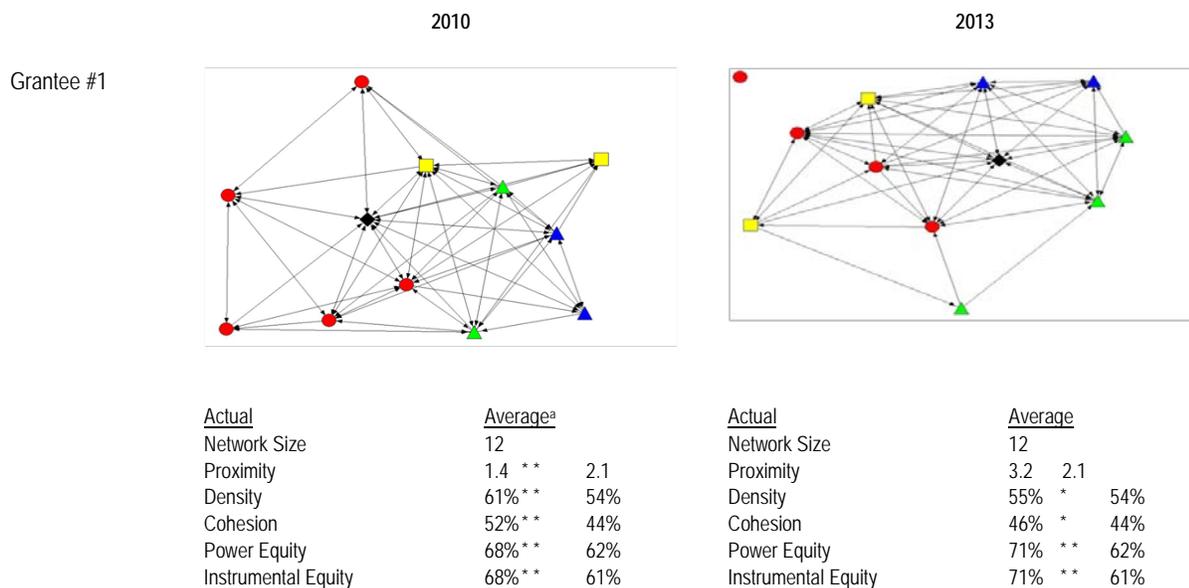
We will also attempt to measure vertical and horizontal integration. The ability to do this depends on the specific size and organizational make-up of each network. Both horizontal and vertical integration refer to characteristics of the collaboration among entities within the social network. *Horizontal integration* occurs as communication and collaboration take place across sectors or across different areas within the same sector, generally involving groups at the same level, moving toward systems change by reducing service fragmentation, for example, when different educational or training organizations work together to implement an HPOG program. *Vertical integration* typically is used with reference to communication and collaboration across different levels of government and community-based or nongovernmental organizations; such alliances may permit nongovernmental organizations to secure goods or services from the more traditional players in the network. For HPOG, an example of vertical integration is a community-based organization actively partnering with a state or county TANF program or the local WIB.

As noted earlier, depending on resources and organization size and type, one or more individuals will be asked to respond to the survey from each identified partner organization. The Stakeholder/Network survey sample will be comprised of individuals whom grantees identify as having the best information on the relevant issues. Although network data will be collected from individual respondents, where responses from multiple individuals within an organization are collected, these will be aggregated into organizational groups for reporting purposes. Thus, the analyses will assume that individual responses, when aggregated within organizations, reflect each organization’s communication and collaboration patterns.

The analysis will also generate sociograms for each HPOG network. Symbols within the sociograms will identify particular entities, with the shape and color of the symbol indicating each type of entity (e.g., lead agency, education and training partner, agency administering the state TANF program, local WIB, state apprenticeship agency, support services provider, healthcare employer). For example, in the sample sociogram displayed in Exhibit 4.4, the black dot could be the HPOG grant holder organization, the red

dots could indicate HPOG partner sites offering training, the yellow dots employers involved in HPOG program development or execution, the green dots partner organizations providing support services, and the blue dots government-agency partners such as the TANF agency. The shape of the dot (either a circle, triangle, or square in this example) could indicate the nature of the partnership, such as whether there is a formal MOU, a contract, or a more informal relationship with the particular partner. The location of each entity within the sociogram (in the middle or the periphery) suggests the extent of the organization’s relationships with others.

**Exhibit 4.4: Sample Sociograms and Network Statistics, Hypothetical Example for HPOG, 2010–2013**



Source: Graphics and statistics taken from Roman et al. (2011).

The value of social network analysis derives from careful interpretation of the sociograms in terms of the program’s intent. Networks are dynamic; they evolve and change over time. Some get stronger; others do not. The HPOG analysis will use the sociograms to inform whether the types of systems changes anticipated for this initiative were realized. This will include addressing such issues as: 1) whether the network attracted more partners over time, 2) which of the required partners played central roles, and 3) whether and to what extent employers were key players in the HPOG network. Additionally, these data can be used in statistical analyses to ascertain whether systems with particular characteristics are associated with better participant outcomes. For example, in systems where the state TANF administrator, WIB, or state apprenticeship agency partners are relatively inactive in HPOG (as depicted by their location at the outer edges of the network sociogram), do participants fare better or worse than in systems where these required partners occupy more central roles in the system? Similarly, do participants have better outcomes in systems where employers are central to the network? Do participants in dense systems (where density is the proportion of helpful interactions among partners/stakeholders) achieve better results?

## 5. Outcome Study

This analytic component will address the major research question, “What individual-level outputs and outcomes occur?” This chapter describes the specific outputs and outcomes the NIE addresses, the data the evaluation will use to measure them, and the analyses that will be employed to describe them.<sup>30</sup> “Outcomes” are defined as the expected goals of participation in HPOG, such as employment in healthcare, increased earnings, and career advancement. “Outputs” are defined as completion of an intermediate step toward these program goals, such as completing vocational training activities and receiving a certificate, license, or degree. The measures and analysis discussed in this chapter build on the data collection described in Chapter 2.

The chapter is organized as follows. Section 5.1 presents the specific research questions to be addressed by the Outcome Study. Section 5.2 describes the individual output and outcome measures that will be used to address the research questions. Section 5.3 lays out the sources of data for these measures and Section 5.4 discusses the descriptive analyses to be conducted, including examining caseload flow and subgroup analyses.

### 5.1 Research Questions

The research design proposes to analyze the outputs and outcomes presented and defined in Chapter 1. The outputs include: receipt of support services and engagement in employment development activities; receipt and completion of basic skills instruction; receipt and completion of vocational training; and receipt of a certificate, license, or diploma. The key outcomes of interest, both during and after participation, are employment, employment in the healthcare sector or a healthcare job, earnings, and career advancement. Both outputs and outcomes will be presented across key subgroups as well, including socioeconomic characteristics of participants, program target populations (such as TANF recipients), and grantee characteristics (such as institution type).

The Outcome Study will answer a number of research questions, listed in Exhibit 5.1. The exhibit presents the research questions by outputs and outcomes and lists the primary data source for answering each research question.

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<sup>30</sup> The logic model also includes systems change as an HPOG outcome. The evaluation’s approach to the measurement and analysis of systems change is presented in Chapter 3.

**Exhibit 5.1: Research Questions for Outputs and Outcomes**

Research Questions	Data Source
<b>Outputs</b>	
How many and what percentage of participants:	
Received support services, overall and by type of service? Participated in employment development activities overall and by type of activity?	PRS
Participated in employment development activities overall and by type of activity?	PRS
Completed a basic skills education or pre-training activity overall and by type of basic skills instruction or pre-training activity?	PRS
Received an educational degree or certificate of completion for basic skills instruction or a pre-training activity?	PRS
Began a basic skills instruction or pre-training activity and did not complete it?	PRS
Completed vocational/occupational training? By specific Standard Occupational Code (SOC)?	PRS
Obtained the credential/license associated with their training?	PRS
Began vocational/occupational training and did not complete? By specific SOC?	
Received a postsecondary academic degree?	PRS
Completed multiple trainings in a career pathways framework?	PRS
<b>Outcomes</b>	
How many and what percentage of participants:	
Were employed in the quarters after enrollment (for all participants and for training completers)?	NDNH
Were employed in a healthcare occupation or industry after intake, at exit, at six months after program exit?	PRS
Were employed in a job that gave access to health insurance after intake, at exit, at six months after program exit?	PRS
Worked full-time in a job after intake, at exit, at six months after program exit?	PRS
Experienced increases in earnings over time after enrolling in the program?	NDNH
Experienced increases in hourly wages after enrolling in the program?	PRS
What were the average quarterly earnings of participants in the quarters after intake (for all participants and for training completers)?	NDNH
What were average hourly wages for employed participants? In healthcare sector/occupation? What percentage of participants experienced increases in hourly wages?	PRS

**5.2 Data Sources and Collection Methods**

The Outcome Study will use two complementary data sources to measure the outputs and outcomes identified above: the PRS and the NDNH. Chapter 2 includes a description of each source. This section discusses how both will be used in the Outcome Study and the strengths and limitations of each.

**5.2.1 HPOG Performance Reporting System (PRS)**

The PRS is a valuable resource for this study, containing detailed individual-level data on participants' program participation. The PRS includes data on program participation, pre-training activities, vocational/occupational training, and receipt of support services. As noted earlier, the PRS records program-related information on individuals enrolled in HPOG from enrollment date to six months after

program exit.<sup>31</sup> For all pre-training and training activities, the data include the entry date, exit date, status of activity completion, degree/certificate obtained, and license/certificate obtained. The specific occupational category of vocational training is also recorded. The PRS also includes data on employment and wages at program intake, as well as during the program, at program exit, and at six months after exit.

The PRS will be the source of important information on the nature of participants' employment that is not available in NDNH earnings data. Information such as whether the employment is in the healthcare sector or a healthcare occupation will likely only be available to the evaluation through the PRS. In addition, information on hourly wages, hours (to identify part-time and full-time employment), benefits, and self-employment will come from the PRS.<sup>32</sup>

The PRS records a variety of participant characteristics at program intake. This information will allow an assessment of outcomes by demographic characteristics such as gender, race, age, marital status, presence of children in the household, family income level, educational level, degree or certificate attainment, literacy and numeracy assessment level, employment status, receipt of public benefits, and special student characteristics such as veteran status, disability status, and offender status.

A limitation of the PRS data is their reliance on data entry by multiple individual program staff across grantees. This could lead to inconsistencies or incompleteness in data entry which could vary across data elements and across HPOG programs. Quality control procedures and grantee training and support in using the PRS have been instituted to limit potential issues. In addition, information on employment that is entered into the PRS based on self-reports from participants will be checked for accuracy and completeness against the NDNH data. These checks will allow the research team to determine if missing data in the PRS are random or more common for particular grantees or types of participants.<sup>33</sup>

### **5.2.2 National Directory of New Hires (NDNH)**

The NDNH, maintained by OCSE, will be used to measure participant employment and earnings over time. The NDNH maintains files with quarterly earnings and UI benefits of all employees whose wages are reported by employers to state Wagner-Peyser agencies. This evaluation will have access to data from the NDNH from late 2009 (up to two years prior to HPOG entry) for up to 10 years after final enrollment of participants.

## **5.3 Defining Outputs and Outcomes of Interest**

Outputs and outcomes are divided into four categories: receipt of support services and employment development activities, completed basic skills instruction, completed vocational/occupational training (including additional postsecondary education), and employment and earnings. This section describes each group.

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<sup>31</sup> The PRS calculates a participant's enrollment date as the date of first receipt of services or program-related activity.

<sup>32</sup> The evaluation will be able to assess directly the completeness and accuracy of employment-related data in the PRS by matching it against NDNH quarterly wage reports.

<sup>33</sup> The PRS is also the source of data for grantee progress reports to the federal government, and as such, may be more complete and accurate than if the data system was only being used for grantee purposes.

### **5.3.1 Receipt of support services and employer involvement and employment development activities**

It is important for the evaluation to present quantitative information on the HPOG program services and activities that participants received. Receipt of support services and employer involvement and employment development activities are not depicted as outputs in the logic model. However, because receipt of these services could be instrumental in reaching the goals of employment and increased earnings, it is important to document the extent to which participants received them. The Descriptive Implementation Study (Chapter 3) will describe how HPOG grantees incorporate these support services and employment development activities into their programs. It is important to supplement this description with quantitative information on the services provided to obtain a full picture of the HPOG grantees.

In addition to support services and employment development activities, HPOG activities also include basic skills instruction and pre-training activities, as well as vocational occupational training. Completions of these activities are considered outputs and described separately below. In addition to these services and activities, the evaluation will report on the number of enrollees by grantee.

HPOG program activities include a range of activities and services including intake and enrollment activities, case management and counseling activities, employment development activities, and financial, social, and other support services. The receipt of these services and activities is captured in the HPOG PRS. Exhibit 5.2 lists the program services and activities organized by the categories in the logic model and presented as they are recorded in the PRS. Individual-level PRS data can be tabulated to provide information on the unduplicated number and percentage of participants receiving any HPOG program services or activities as well as each of these program service and activity types.

**Exhibit 5.2: HPOG Program Activities and Services as Recorded in the PRS, by Logic Model Category**

<b>Intake and Enrollment Activities</b>	
• Pre-employment screening services	• Initial literacy and numeracy skills assessment
<b>Assessments</b>	
• Initial literacy and numeracy skills assessment	• Comprehensive assessment
<b>Curricular and Instructional Design</b>	
• Basic education/pre-training activity	• Basic education/pre-training degree
• SOC of training program	• Health/vocational training degree
• Hours of training	
<b>Support Services</b>	
<i>Case management</i>	
• Career counseling/job coach/navigator	• Case management services
<i>Academic supports and counseling</i>	
• Academic counseling/advising	• Tutoring
• Comprehensive assessment	• Initial literacy and numeracy skills assessment
<i>Personal supports and counseling</i>	
• Other counseling services	• Other skills/life skills/work-readiness training
• Career counseling/job coach/navigator	
<i>Social supports</i>	
• Mentoring/peer support	• Cultural programming
<i>Financial supports</i>	
• Tuition assistance or waivers	• Car insurance
• Books	• Food and shelter
• Exam/exam preparation hours or fees (for certification or licensing)	• Utilities assistance
• Licensing and certification fees	• Other emergency assistance
• Work/training uniforms, supplies, tools	• Housing security deposit
• Computer/technology	• First month's rent
• Home heating assistance	• Funds for housing program
• Car repair	• Food assistance (non-SNAP)
<i>Other social supports</i>	
• Other housing support services	• Legal assistance
• Child/dependent care assistance	• Primary/medical care
• Transportation assistance	• Family preservation services
• Driver's license assistance	• Family engagement services
• Short-term/temporary housing program	• Addiction and substance abuse services
<b>Employer Involvement and Employment Development Activities</b>	
• On-the-job-training (OJT)	• Job-readiness workshops
• Transitional job or subsidized employment	• Job search/placement assistance
• Paid employment/job	• Job retention services
• Job shadowing	• Other employment development activity
• Work experience (subsidized or not) that is not part of any occupational education or training program	• Career counseling/job coach/navigator

**5.3.2 Basic skills instruction and pre-training activities**

Many HPOG programs offer basic skills instruction and pre-training activities as an initial step for participants. Not all participants will need or take part in these activities, but completion of basic skills instruction can be a key output for some participants.

Some participants will enter the HPOG program without the preparation needed to enroll in vocational training offered. Many HPOG programs begin with an assessment of the literacy, numeracy, and/or

English language competency levels of program applicants to determine if they will be able to comprehend the curricula used in their program(s) of interest. Their testing level determines if they will directly enter vocational/occupational training, or be required to attend some kind of basic skills instruction program first. These basic skills instruction options include: General Educational Development (GED) classes, pre-GED classes, English as a Second Language (ESL) instruction, adult basic education instruction. They may also be required to take prerequisite subject courses (e.g., biology) for occupational training. In addition, grantees offer other pre-training activities. These include orientation or introduction to health careers, or college skills training to prepare new or returning students for college-level training coursework.

These outputs measure whether or not individuals judged to need basic skills instruction or a pre-training activity complete the activity to which they have been assigned. The research questions to be answered are: how many or what percentages of participants complete basic skills instruction and other pre-training activities, overall and by type of activity?

In addition, some of these activities can lead to degrees or certificates including a GED certificate, high school diploma, or certificate of completion. These outputs will also be measured in the evaluation.

### **5.3.3 Vocational/occupational training**

Participation in vocational/occupational training in a healthcare profession is the primary HPOG activity. If program applicants demonstrate in the assessment process a competency level sufficient for comprehending curricula in their desired program area, they may begin training immediately. Each HPOG program offers a menu of certification, credentialing, and degree programs in an assortment of approved healthcare fields represented by Standard Occupational Code (SOC). Each training activity has its own requirements for completion. In addition to completing particular educational coursework, many healthcare occupations require a licensing or certification exam before employment. After completing a set of coursework, some participants may receive an academic degree, such as an associate's degree.

This outcome measures the completion of any individual training activity in which a participant has enrolled, the receipt of licensing or certification related to the course, and the receipt of any academic degree, referring to occupations by SOCs.

Grantees also report the credit hours associated with specific training activities. Credit hours are the reported hours associated with that particular training course, not the actual hours of attendance for each participant. Credit hours can be used in combination with participant training activity completion to obtain a measure of additional hours of training received. Counting "seat" or credit hours provides a nuanced measure of completion that indicates course "intensity," or the amount of time required to complete it. Since training activity start and end dates are recorded in the PRS, it is also possible to measure the number of weeks of actual participation.

The evaluation will also examine the number of participants that complete multiple training activities. Completion will be measured in aggregate and by type of vocational occupational training. Given the importance of the development of career pathways in the HPOG program, the evaluation will also measure the percentage of participants that complete a defined career pathway. The evaluation will identify a set of career pathways, defined as combinations of vocational occupational trainings, which are used across grantees and provide information on the percentage of participants completing these pathways. For example, researchers can measure the percentage of participants completing a CNA training, and subsequently also an LPN training. Since it requires more time to complete multiple

trainings and there is a fixed time frame for analysis, it is possible the findings will underestimate the numbers who eventually complete a pathway.

Another important measure of participation that plays a part in understanding the individual HPOG grantees' programs is the number of participants that grantees describe as not completing the HPOG program at exit. The PRS is designed to record the reasons for "early exit" including: got a job, moved out of program area, found out that the healthcare occupation was not to his/her interest, did not like the program, dropped out/unable to locate, institutionalized, health or medical reason, deceased, family care, reserve force member called to active duty, relocated to mandated residential program, or other reason. Documenting the percentage of enrollees who exit early and for each of these reasons provides contextual information for understanding the other outcomes. Use of these data will depend on the completeness and quality of the reporting. The evaluation will present information on reasons for not completing the HPOG program by grantee.

#### **5.3.4 Employment and earnings**

One of HPOG's major goals is to launch participants into healthcare careers. Employment in a healthcare job and increased earnings are important measures for assessing whether HPOG is achieving this goal. Employment and earnings are standard outcomes for training programs. Beyond this, HPOG has the special focus of increasing the supply of health profession workers. The evaluation will therefore also focus on employment and increased earnings in healthcare occupations.

The evaluation will track quarterly employment and earnings using data from the NDNH. The NDNH file will include information for two years prior to entry into HPOG through multiple quarters after entry (tentatively 40 quarters or 10 years).<sup>34</sup> These data can be used to measure employment and earnings at different points in time including prior to enrollment, during participation, and after completing training and exiting the program.

From the NDNH, the evaluation will create measures of quarterly employment and earnings. In addition to measuring employment in each quarter after enrollment, the study will use data to measure outcomes such as the stability of employment over time (e.g., percentage of quarters worked over a given time period at any employer). The study will also present measures of the percentage of participants who experience increases in earnings over time, the path of earnings, as well as the average increase in those earnings. Since it has been shown that most training program participants join after experiencing a decline in earnings, for example from unemployment, it is important not to attribute earnings gains to the HPOG program when examining pre- and postprogram earnings. Although this study is presenting descriptive results, appropriate caveats to interpretation will be given.<sup>35</sup>

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<sup>34</sup> Currently, HPOG participant quarterly earnings will be tracked through September 2025.

<sup>35</sup> This reduction in earnings at the time of program entry is known as the "Ashenfelter Dip," named after the economist who first presented this issue in evaluating training programs. This study will provide descriptive results on the path of participant earnings with appropriate caveats on interpreting results. A discussion of this issue and descriptive results for one evaluation can be found in Heinrich, Mueser, and Troske (2008). The HPOG Impact Study will address whether HPOG led to increases in earnings.

Other measures of employment and earnings using the PRS data supplement this information from NDNH, recording the nature of employment at HPOG enrollment, during participation, at exit, and six months after exit. These PRS data identify whether an individual is in a healthcare job or a job with a healthcare employer, the specific occupation if in a healthcare job (by SOC), hourly wage, hours worked per week, and receipt of health insurance benefits.

This additional information allows tracking of increases in hourly wages, which is not possible with the quarterly earnings data.<sup>36</sup> In addition, combined with information on employment, the PRS hourly wage data allow measurement of career advancement through tracking increases in hourly wages in a healthcare occupation or sector or between non-healthcare employment and healthcare employment.

It is likely that the NDNH data, reported by employers as a legal requirement, will be more accurate and complete than PRS information, which is entered by program staff from self-reports of participants. However, the PRS provides richer information on employment. Together they provide a relatively detailed portrait of individuals' employment experiences.

## 5.4 Analysis and Reporting

The output and outcome measures described will be used to conduct descriptive analyses that answer the specific research questions listed in Exhibit 5.1. This section describes the specific descriptive analyses that the evaluation will present. The first set of analyses focus on HPOG activity completion outputs and employment and earnings outcomes. The next subsection describes the comparative analyses by the potential subgroups of interest. Finally, subsection 5.4.3 describes the participant flow analysis that will provide information on how participants move through the HPOG program.

### 5.4.1 Descriptive analysis of outputs and outcomes

The univariate and bivariate analysis of the outputs and outcomes of interest for the HPOG program will provide a rich description of the training and employment outcomes of participants. To best answer each research question presented, the study team recommends developing summary tables with narrative explanations of outcomes reported.

The first set of descriptive analyses are univariate presentations of activity completion by specific activity. How many and what percentage of participants completed basic skills instruction and pre-training activities? How many and what percentage completed each type of basic skills instruction or pre-training activity? How many and what percentage of participants completed vocational/occupational training? How many and what percentage earned a certificate or academic degree or received a license or credential through HPOG participation? What were the average total credit hours per participant in training activities? Sample Table 5-1 provides one example of a descriptive analysis of participants earning educational credentials.<sup>37</sup> Descriptive results would necessarily aggregate results across the different types of vocational occupational training programs. Where possible, descriptive results will be

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<sup>36</sup> Increases in quarterly earnings over time can come from an increase in hours worked in a quarter at the same wage or an increase in hourly wage rate for the same hours.

<sup>37</sup> This table and similar analyses would take into account participants who entered HPOG already with each educational credential.

provided for individual types of training, for example those receiving a credential who participated in Certified Nursing Assistant training.<sup>38</sup>

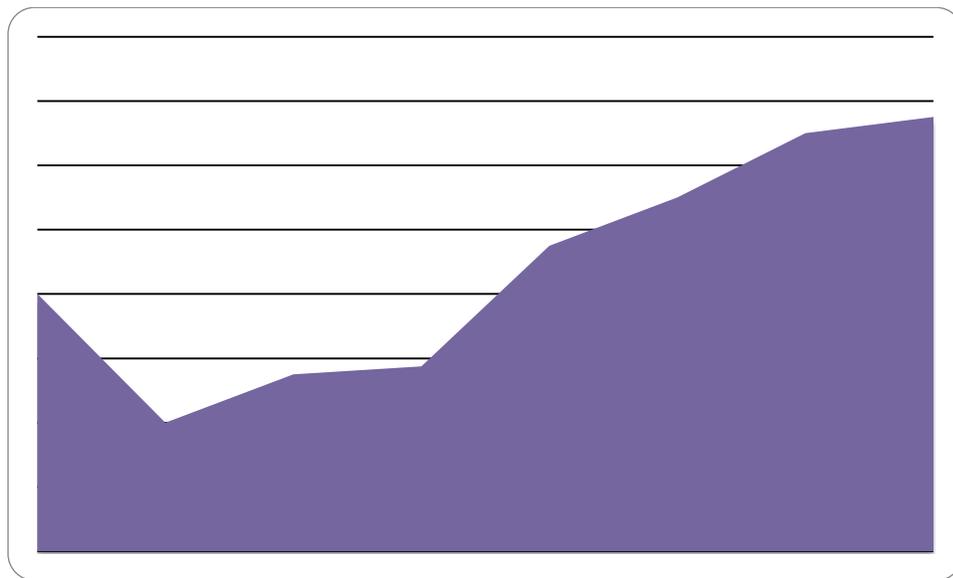
**Sample Table 5-1: Percentage of HPOG Participants Earning Educational Credentials by Grantee**

	Any Credential Earned	Certificate	Associate Degree	Bachelor Degree	Number of Participants
All participants	XX%	XX%	XX%	XX%	28,000
Grantee 1	XX%	XX%	XX%	XX%	250
Grantee 2	XX%	XX%	XX%	Not offered	1200

The descriptive analyses can also provide these measures across different samples and subgroups. For example, the analysis can show the percentage of all HPOG participants that completed a training activity or the percentage of all HPOG participants that completed a training activity among those who started a training activity. The latter is more of a completion rate for training activities. The former includes those who do not enter a training activity. These results can be presented across training in different SOCs.

The second set of descriptive analyses is univariate presentations of the key outcome measures of employment and earnings. For outcome measures using NDNH data, the results will be presented by quarters. Measures of how many and what percentage of participants were employed, average earnings in each quarter, and average annual earnings after intake will be presented. Sample Figure 5-1 provides one example of how this information can be presented.

**Sample Figure 5-1. Average Post-Intake Quarterly Earnings of All HPOG Participants**



Additional measures based on NDNH quarterly employment and earnings data will be presented to show outcomes for increases in earnings over time. These include percentage of participants with continuous

<sup>38</sup> The evaluation’s ability to break out specific training types will depend on the numbers of participants aggregated across HPOG grantees.

employment over quarters after intake or training completion and percentage of participants with increases in earnings over time. The above graphic could be altered to include pre-intake earnings and reflect the path or earnings of participants over time.

In addition to measures of quarterly employment and earnings, descriptive analyses of the nature of participants' employment after program intake, at exit and six months after exit will be presented based on PRS data. These measures include percentage of participants employed after intake (or at exit or six-month follow-up) by health occupation SOC, which will show the primary health occupations in which HPOG participants found employment. Descriptive analyses of the average hours worked on the job, average hourly wage on the job, and whether the job offers health insurance benefits, both for healthcare and non-healthcare employment, will be provided.

Measures of career advancement using PRS data will also be presented. These include the percentage of participants that have an increase in the hourly wage over time (from intake to program exit or at six-month follow-up) and the average increase in the hourly wage. In addition, a measure of the percentage of participants that move from non-healthcare or no employment to healthcare employment and the associated average increase in hourly wage will be described.

#### **5.4.2 Subgroup analysis**

Additional analyses will be conducted to compare results for all of the above measures by participant subgroups of interest. The information on subgroups is drawn from the characteristics of individuals recorded in the PRS at intake and from receipt of HPOG services, also recorded in the PRS. Three categories of subgroups of interest are discussed here.

1. *Socioeconomic characteristics*, including sex, age group, race/ethnicity, marital status, number of children, pregnant, employment status at entry, household income, school status at entry, education level at entry, credential attainment at entry, literacy/numeracy levels, public benefit receipt.
2. *Target populations*, including TANF participants, veterans, individuals with disabilities, foster care youth, homeless individuals, individuals with limited English language proficiency at intake, ex-offenders, recipients of unemployment insurance compensation, incumbent workers, and participants who are "low income."
3. *Grantee characteristics*, including enrollment size, region, and type of grantee organization (postsecondary institution, government agency, WIB, nonprofit organization).

Comparative analyses of output and outcome measures will present descriptive results across a set of subgroups for all grantees combined. Statistical tests will be conducted of whether results across different subgroups are significantly different. Sample Table 5-2 shows an example of comparative analysis of percentage employed in each quarter after intake by target subgroups.

**Sample Table 5-2. Percentage Employed in Quarters after Intake by Target Population**

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	N
All participants	XX%								
TANF participants	XX%								
Foster youth	XX%								
English language learners	XX%								
Veterans	XX%								

### 5.4.3 Participant flow analysis

Another important analysis describes participation patterns for each grantee and across grantees using data from the PRS. Participant flow analysis describes the number and percentage of participants at each stage of the program, such as enrollment, basic skills instruction, training, and employment. This analysis can answer the question of what percentage of participants progressed to each specific stage of the HPOG program and what percentage completed each component conditional on having reached that stage.<sup>39</sup> Sample Table 5-3 provides an example.

**Sample Table 5-3. Percent of Participants by Stage of HPOG Program: High School Dropouts in Grantee X Program**

Percentage of Row Title:	Enrolled in HPOG (%) (n = 350)	Entered Developmental Education (%) (n = 300)	Completed Developmental Education (%) (n = 215)	Entered Training (%) (n = 175)	Completed Training (%) (n = 87)
Eligibles	78	67	48	39	19
Enrolled		86	61	50	25
Entered basic skills instruction			72	58	29
Completed basic skills instruction				81	40
Entered training					50

Note: Base sample for table is 450 eligible registered participants.

The analysis starts with the sample of eligible participants registered for HPOG (that is, with an intake entry record in the PRS data), which is 450 in this example. The HPOG stages included (listed as columns) are enroll in the program, enter basic skills instruction, complete basic skills instruction, enter training, and complete training. Additional stages could include specific entry point into program, further training, employment, or complete a defined career pathway. The table is read as follows: the percentage of eligibles (row title) that enrolled in HPOG (column title) is 78 percent. The table allows for comparison of the percentages reaching a specific stage of the HPOG program conditional on how far they progressed in the program. For example, this table shows that 50 percent of those who enrolled in HPOG entered training, but 81 percent of those who completed a basic skills instruction activity entered training.

<sup>39</sup> For an example of participant flow analysis used to report actual training program results, see Frees and Finkel (1991, p. 23).

The participant flow analysis can be completed for all participants and subgroups of participants, as well as for all grantees, each grantee separately, and subgroups of grantees, using the subgroups defined above. For example, this sample table includes only the subpopulation of high school dropouts. Subpopulation participant flow analyses can be conducted for individual grantees, if sample sizes allow.

Participant flow analysis can be a valuable tool for program designers and operators. It offers the opportunity to detect potential bottlenecks and obstacles to program retention and completion. Moreover, it can help program managers focus on populations most at risk of dropping out of the program before completing it.

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## Appendix A: Summary of Data Available from the PRS

PRS Data Item	Available Values
<b>Eligible Populations and Deficits</b>	
<b><i>Participant demographics at intake/enrollment</i></b>	
Date of birth	MM/DD/YYYY
Sex	Male Female
Race (more than one may apply)	White Asian Native Hawaiian or other Pacific Islander American Indian or Alaska Native
Hispanic / Latino	Yes/No
Refugee status	Yes/No/Not reported
Citizenship	Does not self-identify Born in the United States Born in Puerto Rico, Guam, the U.S. Virgin Islands, or Northern Marianas Born abroad of American parent or parents U.S. citizen by naturalization Not a citizen of the United States
Tribal member	Yes/No/Not reported
Tribal affiliation (primary if more than one)	Narrative
Lives on reservation	Yes/No/Not reported
Spouse of Tribal member	Yes/No/Not reported
Marital status	Currently Married Divorced or Separated Widowed Never Married Don't Know
Head of household	Yes/No/Not reported
Number living in household	Number
Number of dependent children	Number
Age of youngest child	Number
Number of children for which noncustodial parent	Number
Pregnant and/or expectant	Yes/No/Not reported
If pregnant/expectant, due date	MM/DD/YYYY
Approximate total earnings for individual participant from work, including tips and overtime pay during the past 12 months	\$0 \$1 to \$4,999 \$5,000 to \$9,999 \$10,000 to \$14,999 \$15,000 to \$19,999 \$20,000 to \$24,999 \$25,000 to \$29,999 \$30,000 to \$34,999 \$35,000 or over Don't know Refused

PRS Data Item	Available Values
Household TOTAL family income including participant's earnings and other income and earnings and other income of all household members for the past 12 months	\$0 \$1 to \$9,999 \$10,000 to \$14,999 \$15,000 to \$19,999 \$20,000 to \$24,999 \$25,000 to \$29,999 \$30,000 to \$34,999 \$35,000 to \$39,999 \$40,000 to \$44,999 \$45,000 to \$49,999 \$50,000 to \$59,999 \$60,000 to \$69,999 \$70,000 or over Don't know Refused
<b>Participant education history at intake/enrollment</b>	
Highest level of education completed	1st grade 2nd grade 3rd grade 4th grade 5th grade 6th grade 7th grade 8th grade 9th grade 10th grade 11th grade 12th grade 1 Year of college 2 Years of college 3 Years of college Bachelor's degree or equivalent Education beyond bachelor's degree Don't Know
Degrees received (more than one may apply)	High school diploma GED or equivalent Certificate of attendance/completion Other postsecondary degree or certificate Baccalaureate degree Occupational skills license or certification
First generation college student?	Yes/No/Not reported
Currently in school?	Yes/No/Not reported
Ever trained in healthcare profession/occupation?	Yes/No/Not reported
Literacy Assessed at 8th Grade Level or Higher?	Yes/No/Not reported
Numeracy Assessed at 8th Grade Level or Higher?	Yes/No/Not reported
<b>Participant employment history at intake/enrollment</b>	
Ever worked for pay?	Yes/No/Not reported
Ever worked for healthcare profession/occupation?	Yes/No/Not reported
Specify most recent health profession (using SOC)	SOC
Are you currently employed?	Yes/No
If employed, participant entering through an HPOG incumbent worker program?	Yes/No/Not reported
If employed, does participant work for healthcare employer?	Yes/No/Not reported

PRS Data Item	Available Values
If employed, participant employment in healthcare occupation?	Yes/No/Not reported
If yes, identify healthcare occupation SOC	SOC
If employed, is participant self-employed?	Number
Hourly wage per hour for last week of employment	Number
If not currently employed at the time of HPOG enrollment, reason for leaving last position	Laid-off Fired Left voluntarily Other reason, specify
If not currently working, number of hours worked for most recent job (for last week of employment)	Number
If not currently working, hourly wage per hour for most recent job (for last week of employment)	Number
<b>Participant characteristics at intake/enrollment</b>	
Veteran	Yes/No/Not reported
Individual with disability	Yes/No/Not reported
Foster care youth	Yes/No/Not reported
Homeless individual	Yes/No/Not reported
Individual with limited English proficiency	Yes/No/Not reported
Ex-offender	Yes/No/Not reported
<b>Public assistance recipient</b>	
Unemployment Insurance Compensation Recipient	UI claimant UI exhaustee Not a UI claimant or exhaustee
Temporary Assistance for Needy Families (TANF)	Yes/No/Not reported
General Assistance (GA)	Yes/No/Not reported
Supplemental Nutrition Assistance Program (SNAP) / Food Stamps	Yes/No/Not reported
Social Security Insurance (SSI)	Yes/No/Not reported
Social Security Disability Insurance (SSDI)	Yes/No/Not reported
Refugee Cash Assistance (RCA)	Yes/No/Not reported
Medicaid	Yes/No/Not reported
Subsidized Child Care / Voucher	Yes/No/Not reported
Section 8 / Public Housing	Yes/No/Not reported
Low Income Home Energy Assistance Program (LIHEAP)	Yes/No/Not reported
Other Public Benefits Received at Time of Enrollment	Yes/No/Not reported
<b>Program Context and Administration</b>	
Grantee organization name	Narrative
Total grant award	Narrative
Title of grant program	Narrative
Grant Director (name, contact)	Narrative
Grantee address	Narrative
Grantee site / Location number	PRS generated
Name of staff assigned	Narrative
<b>Intake and Program Services and Activities</b>	
<b>Intake and Enrollment Activities</b>	
Participant read and signed consent form	Yes/No/NA (participant enrolled in HPOG before September 30th, 2011)
Date of HPOG program registration	MM/DD/YYYY
Participant contact information	Narrative
Record of pre-employment screening services	Yes

PRS Data Item	Available Values
No pre-enrollment/intake assessment services received	
Literacy assessed at 8 <sup>th</sup> grade level or higher	Yes/No/Not reported
Numeracy assessed at 8 <sup>th</sup> grade level or higher	Yes/No/Not reported
Record of orientation or introduction to healthcare	Yes
<b>Assessments</b>	
Literacy assessed at 8 <sup>th</sup> grade level or higher	Yes/No/Not reported
Numeracy assessed at 8 <sup>th</sup> grade level or higher	Yes/No/Not reported
Record of assessment	Yes
Record of comprehensive assessment	Yes
<b>Curricular and Instructional Design</b>	
Vender name	Narrative
Vender location	Narrative
Program type	Pre-training Programs Health/Vocational Training Programs
Available pre-training activity	GED classes Pre-GED classes ESL instruction Adult basic education Orientation or introduction to healthcare careers or occupations College skills training Prerequisite subject courses prior to entering occupational program Other pre-training activity
Available basic education/pre-training degree	GED High School Diploma Certificate of Completion No degree required
Available healthcare vocational/occupational activity	SOC
Available healthcare vocational/occupational training degree	Certificate of Completion Associates Degree Bachelor's Degree Master's Degree
Total program hours required (length/duration)	Numeric
Types of program hours	Credit Contact
<b>Support Services</b>	
Case management/ Career Advisor / Navigator	Yes
If any service in case management was received for the first time in the current period, enter the first date of service	MM/DD/YYYY
Mentoring/peer support	Yes
Academic Counseling / Advising	Yes
Comprehensive Assessment	Yes
Tutoring	Yes
Other counseling services	Yes
No counseling services received	Yes
If any service in counseling was received for the first time in the current period, enter the first date of service	MM/DD/YYYY
Cultural programming	Yes
If any service in cultural programming was received for the first time in the current period, enter the first date of service	MM/DD/YYYY

PRS Data Item	Available Values
Home heating assistance	Yes
Car repair	Yes
Car insurance	Yes
Food and shelter	Yes
Utilities assistance	Yes
Other emergency assistance	Yes
No social and family services received	Yes
If any service in social and family services was received for the first time in the current period, enter the first date of service	Yes
Housing security deposit	Yes
First month's rent	Yes
Funds for housing program	Yes
Short-term/temporary housing program	Yes
Other housing support services	Yes
No housing services received	Yes
If any service in housing support services was received for the first time in the current period, enter the first date of service	Yes
Child/dependent care assistance	Yes
Transportation assistance	Yes
Driver's license assistance	Yes
Food assistance (non-SNAP)	Yes
Addiction and substance abuse services	Yes
Family engagement services	Yes
Family preservation services	Yes
Legal assistance	Yes
Primary/medical care	Yes
No social support benefits received	Yes
If any service in social support benefits received for the first time in the current period, enter the first date of service	MM/DD/YYYY
Books	Yes
Exam/exam preparation hours or fees (for certification or licensing)	Yes
Licensing and certification fees	Yes
Work/training uniforms, supplies, tools	Yes
Computer/technology	Yes
No training or work related benefits received	Yes
If any service in training and work related benefits received for the first time in the current period, enter the first date of service	MM/DD/YYYY
Tuition assistance from HPOG funds	Yes
Tuition assistance from Pell grant	Yes
Tuition assistance from employer	Yes
ITA	Yes
No tuition assistance received	Yes
If any tuition assistance received for the first time in the current period, enter the first date of service	MM/DD/YYYY
Other support services received in this period?	Yes
If applicable, describe other support service received in this period.	Narrative

PRS Data Item	Available Values
If any service in other support services received for the first time in the current period, enter the first date of service	MM/DD/YYYY
<b>Employment Activities</b>	
Career counseling/job coach/navigator	Yes
Job search/placement assistance	Yes
Job retention services	Yes
No employment services received	Yes
If any employment service was received for the first time in the current period, enter the first date of service	MM/DD/YYYY
New employment development activity	On-the-job training OJT Job readiness workshop Work experience subsidized or not subsidized part of any occupational education or training program Transitional job or subsidized employment Other skills/life skills / work readiness training Other employment development activity Paid employment/job Job Shadowing
Other employment development activity, specify	Narrative
Job position type	New job Promotion or raise in a current job
Does the participant work for healthcare employer	Yes/No/Not reported
Employment in healthcare occupation	Yes/No/Not reported
If yes, identity healthcare occupation SOC	SOC
Current hours worked for week	Numeric
Current wage per hour	Numeric
<b>Program Outputs and Outcomes</b>	
<b>Outputs</b>	
Pre-training activities enrolled	GED classes Pre-GED classes ESL instruction Adult basic education Orientation or introduction to healthcare careers or occupations College skills training Prerequisite subject courses prior to entering occupational program Other pre-training activity
Pre-training education degree or certificate received	GED High School Diploma Certificate of Completion No degree required
Pre-training begin date	MM/DD/YYYY
Pre-training end date	MM/DD/YYYY
Pre-training successfully completed	Yes/No
Pre-training vendor	Narrative
Health occupation for which the participant will be trained	SOC
Vocational training education degree or certificate received	Certificate of Completion Associates Degree Bachelor's Degree Master's Degree

PRS Data Item	Available Values
Vocational training regulatory license or certification received	No degree or certificate Received degree or certificate
Vocational training begin date	MM/DD/YYYY
Vocational training end date	MM/DD/YYYY
Vocational training activity successfully completed	Yes/No
Vocational training vendor	Narrative
<b>Outcomes (at program exit)</b>	
PRIMARY reason for early HPOG exit reason for early HPOG program exit (prior to expected completion)	Got a job Moved out of program area Found out healthcare occupation was not to his/her interest Did not like the program Participant dropped out / Unable to locate Institutionalized Health/Medical Deceased Family Care Reserve Forces Called to Active Duty Relocated to Mandated Residential Program Other reason
HPOG exit date	MM/DD/YYYY
Participant has exited	Yes/No
HPOG training program completed at exit	Yes/No/Not reported
Employed at time of HPOG program exit date	Yes/No/Not reported
Individual works for a healthcare employer	Yes/No/Not reported
Individual is self-employed	Yes/No/Not reported
Employed in healthcare occupation?	Yes/No/Not reported
Participant is a tribal organization employee	Yes/No/Not reported
Participant is provided access to health insurance through employer	Yes/No/Not reported
HPOG program reentry date (first through fourth)	MM/DD/YYYY
SOC code employment at exit	SOC
<b>Outcomes (at six month follow-up)</b>	
Date follow-up was completed	MM/DD/YYYY
Follow-up due date	MM/DD/YYYY
Employed at time of HPOG program follow-up date	Yes/No/Not reported
Employed in healthcare occupation	Yes/No/Not reported
Participant has been promoted (i.e., higher pay and/or title)	Yes/No/Not reported
Individual is a tribal organization employee	Yes/No/Not reported
Individual is self-employed	Yes/No/Not reported
Hours worked in last week	Numeric
SOC code employment at follow-up	SOC