Occupational Training for Jobs That "Pay Well"

Patterns from the Health Profession Opportunity Grants (HPOG) Program

OPRE Report 2022-98

HPOG
Health Profession Opportunity Grants
OFFICE OF FAMILY ASSISTANCE

Occupational Training for Jobs That "Pay Well": Patterns from the Health Profession Opportunity Grants (HPOG) Program

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Note: At the request of OPRE, some of the text in this report is taken verbatim or with only minor edits from earlier reports for OPRE—for the Pathways for Advancing Careers and Education (PACE) project and for the national evaluations of two rounds of the Health Profession Opportunity Grants Program (HPOG 1.0 and HPOG 2.0).

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Overview

Introduction

Between 2010 and 2021, the Health Profession Opportunity Grants (HPOG) Program funded two rounds of grants (referred to as HPOG 1.0 and HPOG 2.0) for education, training, support services, and employment assistance to prepare Temporary Assistance for Needy Families (TANF) recipients and other adults with low incomes for occupations in the healthcare field. Funded by the Office of Family Assistance of the Administration for Children and Families within the U.S. Department of Health and Human Services, HPOG supported a total of 59 grants to local programs nationwide to provide education, training, and support services (including financial and other assistance) to eligible participants.

The statutory language authorizing HPOG provides that funded grants should be "*designed to provide eligible individuals with the opportunity to obtain education and training for occupations in the health care field that pay well and are expected to either experience labor shortages or be in high demand.*"

This report provides empirical analysis focusing on one of these HPOG goals: training for healthcare jobs that "pay well." This analysis explores the prevalence of two possible training patterns that might lead to such jobs: (1) direct entry into training for occupations requiring more/longer preparation (referred to as "Above-Entry-Level Training"); or (2) a sequence of trainings, in a scheme consistent with the career pathways framework (referred to as "Follow-On Training"). Both rounds of HPOG emphasized utilizing a career pathways framework.

Research Questions

- What was the prevalence of Above-Entry-Level Training and Follow-On Training in HPOG 1.0?
- Did the prevalence of Above-Entry-Level Training and Follow-On Training in HPOG 1.0 vary with available years of federal program funding or enrollee characteristics?
- Do the findings vary by funding round (HPOG 1.0 vs. HPOG 2.0)?

Purpose

Available evidence suggests that HPOG was clearly successful in addressing the statutory language concerning providing training for healthcare occupations to TANF recipients and other adults with low incomes and for healthcare occupations that are expected to either experience labor shortages or be in high demand. This report considers success with respect to a different part of the statutory language: training for healthcare jobs that "pay well." This research explores the prevalence of training patterns that are likely to lead to jobs that "pay well" and how those training patterns vary across several dimensions: available years of HPOG federal program funding, enrollee characteristics, and funding round (HPOG 1.0 vs. HPOG 2.0). Other HPOG objectives, such as increasing the healthcare labor force, serving TANF and other low-income individuals, and meeting the needs of employers for healthcare workers, are also important but not the focus of these analyses.

Key Findings and Highlights

- The most common training patterns in HPOG 1.0 were either completing only Entry-Level Training, or not completing any occupational training at all. Wages for HPOG enrollees[1] who did not complete occupational training and those who completed only HPOG Entry-Level Training are similar.
- Entry-Level Training alone does not provide jobs that "pay well." Above-Entry-Level Training, however, does.2
- About 17 percent of HPOG 1.0 enrollees complete Above-Entry-Level Training through HPOG.
- About 3 percent of HPOG 1.0 enrollees complete Follow-On Training through HPOG.
- Having more time to complete training supported by HPOG moderately increases rates of completing Above-Entry-Level Training or Follow-On Training. Conversely, some participant characteristics are associated with lower rates. Specifically, enrollees receiving TANF and those with less education at entry are somewhat less likely to complete Above-Entry-Level Training or Follow-On Training.
- For enrollees with the longest comparable follow-up periods in each grant round (three years), rates of Above-Entry-Level Training and Follow-On Training are lower in HPOG 2.0 than in HPOG 1.0.
- One of the themes of this report is that the statutory goal to serve TANF recipients and other adults with low incomes may be in tension with the statutory goal of providing training that leads to jobs that "pay well." Those in HPOG's target population who face greater personal barriers to training for higher paying jobs—such as lower basic skills or extended time out of the classroom—may require more time for remediation, prerequisites, and training than HPOG typically has provided. We discuss the implications of this tension for programs and policymakers.

Methods

The analyses in this report are based on training reported in HPOG administrative data and on average wages reported by respondents to the three-year survey who completed that training.

We classify trainings as Entry-Level, Mid-Level, or High-Level. To create these classifications, we group HPOG 1.0 training completers by the Standard Occupational Classification (SOC) code of their last completed training recorded in the HPOG administrative data. Then we calculate the average survey-reported hourly wage for each SOC code group. We convert these

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[1] We use the term "enrollee" to refer to anyone who either (1) enrolled in the HPOG 1.0 Impact Study or the HPOG 2.0 Impact Evaluation and was randomly assigned access to HPOG 1.0 or HPOG 2.0, respectively, whether they took up any services or not; or (2) was not part of the HPOG 1.0 Impact Study or the HPOG 2.0 Impact Evaluation but enrolled in a HPOG local program and received any HPOG service recorded in administrative data (whether support service, basic skills training, pre-training activity, or occupational training).

[2] Wages associated with completing Entry-Level Training are well below the $15 minimum wage being enacted in several localities. They are also lower than the national average "Living Wage" of $16.07.

average wages to a training classification as follows: “Entry-Level” corresponds to training whose completers average less than $15 per hour; “Mid-Level” corresponds to training whose completers average $15 to $25 per hour; and “High-Level” corresponds to training whose completers average more than $25 per hour.

Analysis in this report consists of tabulations of raw or regression-adjusted training and wage data. Specifically, the report tabulates data for HPOG’s non-Tribal grantees—27 each for HPOG 1.0 and HPOG 2.0—up to, but not into, the onset of COVID-19 economic shutdown in March 2020.

Glossary

HPOG 1.0: the first round of five-year HPOG Program grants, awarded in 2010.

HPOG 2.0: the second round of five-year HPOG Program grants, awarded in 2015; this second round of grant awards was extended for a sixth year (through September 29, 2021).

Training, Above-Entry-Level: either Mid-Level or High-Level Training from HPOG.

Training, Follow-On: completed training at one level followed by completed training at a higher level from HPOG (e.g., Entry-Level Training followed by Mid-Level Training, or Mid-Level Training followed by High-Level Training).

Important Terms for This Report

Terms Related to HPOG

1.0 getting 2.0: when HPOG 2.0 services are received by an enrollee in HPOG 1.0.

basic skills education: the following types of training: Adult Basic Education, GED/Pre-GED, and English as a Second Language.

enrollee: anyone who either (1) enrolled in the HPOG 1.0 Impact Study or the HPOG 2.0 Impact Evaluation and was randomly assigned access to HPOG 1.0 or HPOG 2.0 (i.e., treatment group), whether they took up any services or not; or (2) was not part of the HPOG 1.0 Impact Study or the HPOG 2.0 Impact Evaluation but enrolled in an HPOG local program and received any HPOG service recorded in administrative data (whether support service, basic skills training, pre-training activity, or occupational training).

HPOG 1.0: the first round of five-year HPOG Program grants, awarded in 2010.

HPOG 2.0: the second round of five-year HPOG Program grants, awarded in 2015; this second round of grant awards was extended for a sixth year (through September 29, 2021).

HPOG Program: the national HPOG initiative, including grantees and local programs.

no occupational training: condition of enrollees who either did not start or did not complete Entry-, Mid-, or High-Level Training (depending on the outcome measure).

occupational training: healthcare sector training with an associated Standard Occupational Classification (SOC) code.

PAGES: Participant Accomplishment and Grant Evaluation System; the grant management information system for HPOG 2.0.

participant: one who pursues services or training from an HPOG grantee's program.

pre-training activities: prerequisite subject courses, courses to develop college skills or soft skills, and introduction to healthcare careers.

PRS: Performance Reporting System; the grant management information system for HPOG 1.0.

regression adjustment: an analytic approach to control for characteristics that explain variation in the measure under study.

Training, Above-Entry-Level: either Mid-Level or High-Level Training from HPOG.

Training, Entry-Level: HPOG training for an occupation whose SOC is associated with a wage less than $15 per hour (based on the HPOG 1.0 three-year survey).

Training, Follow-On: completed training at one level followed by completed training at a higher level from HPOG (e.g., Entry-Level Training followed by Mid-Level Training, or Mid-Level Training followed by High-Level Training).

Training, High-Level: HPOG training for an occupation whose SOC is associated with a wage greater than $25 per hour (based on the HPOG 1.0 three-year survey).

Training, Mid-Level: HPOG training for an occupation whose SOC is associated with a wage of $15 to $25 per hour (based on the HPOG 1.0 three-year survey).

1 Introduction

Between 2010 and 2021, the Health Profession Opportunity Grants (HPOG) Program funded education, training, support services, and employment assistance to prepare Temporary Assistance for Needy Families (TANF) recipients and other adults with low incomes for occupations in the healthcare field. Funded by the Office of Family Assistance of the Administration for Children and Families within the U.S. Department of Health and Human Services, HPOG supported a total of 59 grants to local programs nationwide to provide education, training, and support services (including financial and other assistance) to eligible participants.

The statutory language authorizing HPOG provides that funded grants should be "*designed to provide eligible individuals with the opportunity to obtain education and training for occupations in the health care field that pay well and are expected to either experience labor shortages or be in high demand."*

Available evidence suggests that HPOG was clearly successful in addressing the statutory language concerning providing training for health care occupations for TANF and other adults with low incomes and for healthcare occupations that are expected to either experience labor shortages or be in high demand (Klerman et al. 2022; Peck et al. 2018; Peck et al. 2019; Peck et al. forthcoming). This report considers success with respect to a different part of the statutory language: training for healthcare jobs that "pay well." This analysis explores the prevalence of two possible training patterns might lead to such jobs: (1) direct entry into training for occupations requiring more/longer preparation (referred to as "Above-Entry-Level Training"); or (2) a sequence of trainings, in a scheme consistent with the career pathways framework (referred to as "Follow-On Training"). Utilizing a career pathways framework was emphasized in both rounds of HPOG.

This introductory chapter provides background on the Health Profession Opportunity Grants (HPOG) Program.[3] The first section provides detail about the HPOG Program and the theory of action for career pathways programs. The next section discusses changes from the first round of grants (HPOG 1.0) to the second round (HPOG 2.0.) The following section defines the research questions for this analysis. The final section provides a roadmap to the rest of the report.

[3] We refer to the national HPOG initiative, including all grantees and programs (within HPOG 1.0 and HPOG 2.0), as the HPOG Program.

1.1 HPOG and the Career Pathways Theory of Action

Authorized in 2010, the HPOG Program funds grants that are "*designed to provide eligible individuals with the opportunity to obtain education and training for occupations in the health care field that pay well and are expected to either experience labor shortages or be in high demand*."[4] Later, the statute defines "eligible individuals" as Temporary Assistance for Needy Families (TANF) recipients and other adults with low incomes. The analyses presented in this report suggest that these statutory provisions may be in tension. In particular, those in the HPOG population who face greater personal barriers to training for higher paying jobs—such as lower basic skills or extended time out of the classroom—may require more time for remediation, prerequisites, and training than HPOG typically has provided.

Career Pathways Framework Components (Fein 2012)

To effectively engage, retain, and facilitate learning of a diverse population, career pathways programs involve training opportunities that

- award clearly defined and industry-recognized credentials;
- build to add higher competencies in a defined career path;
- are flexibly delivered to accommodate nontraditional students;
- are integrated with work-based learning opportunities (such as internships, externships, clinical placements); and
- integrate varied supports aimed to ensure students' program persistence, program completion, and subsequent workplace success.

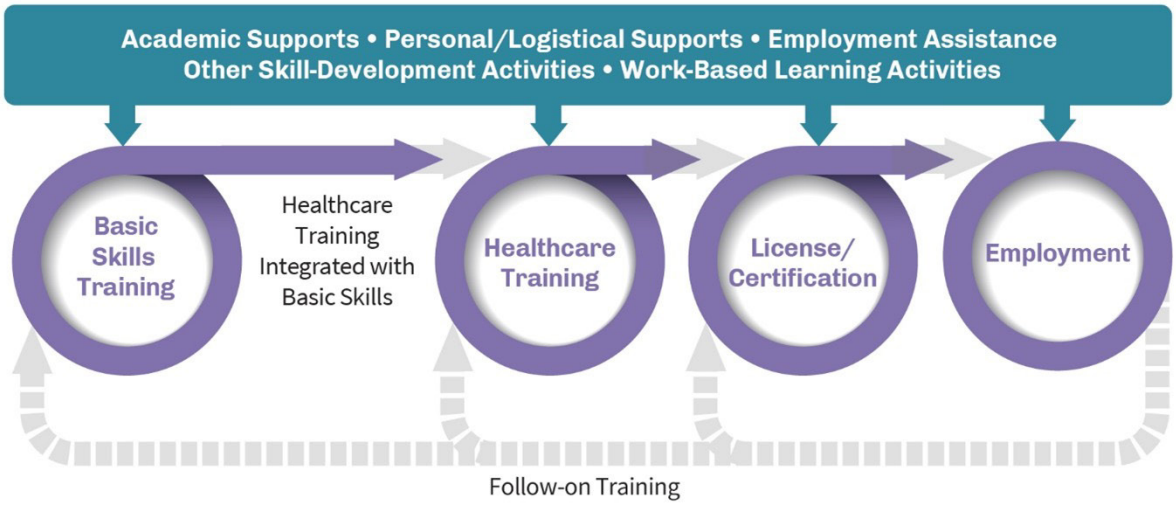
The Office of Family Assistance (OFA) of the Administration for Children and Families (ACF), within the U.S. Department of Health and Human Services, awarded the first round of HPOG grants (HPOG 1.0) in 2010, and a second round (HPOG 2.0) in 2015. Each round of grants was initially funded for five years.[5]

Consistent with principles of the career pathways framework (see box), the theory of action for HPOG local programs (**Exhibit 1**) began with providing ***basic skills training***, as needed. This basic skills education was intended to allow program participants to enroll in and complete ***occupational healthcare training*** for which they would otherwise not have been qualified. That healthcare training would, in turn, lead to better labor market outcomes—in particular, higher earnings. Then, perhaps after some time in the labor market, HPOG program participants would return for additional ("follow-on") healthcare training, with basic skills support as needed. That additional healthcare training would lead to higher-level licenses and certifications and even better labor market outcomes.

[4] HPOG was authorized by the Affordable Care Act (ACA), Public Law 111-148, 124 Stat. 119, March 23, 2010, sect. 5507(a), "Demonstration Projects to Provide Low-Income Individuals with Opportunities for Education, Training, and Career Advancement to Address Health Professions Workforce Needs," adding sect. 2008(a) to the Social Security Act, 42 U.S.C. 1397g(a). The second round of grant awards was extended through September 29, 2021.

[5] Some HPOG 1.0 grantees were granted no-cost extensions of up to six months (see discussion in Appendix A). The HPOG 2.0 grant awards were extended an additional 12 months, through September 29, 2021.

Exhibit 1 A Theory of Action for Local HPOG Programs



Also consistent with the career pathways framework's principles, HPOG programs were to provide ***academic supports, personal and logistical supports, and employment supports***. Together those services were intended to help program participants complete their education and training programs and find employment.

HPOG program participants are typically low-income women in their 20s and 30s, many of whom are parents. They are almost all high school graduates with basic skills at an eighth grade level or above, and the majority have some exposure to college/technical school. Most enter the local program with household incomes of less than $20,000 per year (Loprest and Sick 2020; Werner et al. 2018).[6]

1.2 Changes from HPOG 1.0 to HPOG 2.0

When the second round of HPOG grants was announced, requirements in the HPOG 2.0 Funding Opportunity Announcement (FOA) emphasized clearly articulated career pathways for students, the provision of basic skills education, and stronger employer engagement (OFA 2015).[7] The HPOG 2.0 FOA also required applicants (1) to identify and describe their recruitment, referral, and eligibility criteria to ensure that they served, among other requirements, TANF recipients or other low-income individuals; and (2) to use projections to set a target number of TANF recipients.

Unlike in HPOG 1.0 (OFA 2010), the HPOG 2.0 FOA explicitly discouraged recruitment of individuals currently enrolled in similar education or training programs so that HPOG could reach individuals who would not otherwise have access to similar services. At the same time, the FOA also made clear it was not discouraging grantees from offering follow-on training to

6 These statistics describe the HPOG 1.0 and HPOG 2.0 non-Tribal grantees.

7 The FOA applied to grant applicants, but the requirements set forth are expected from the eventual grantees. Therefore, the language of these publicly available announcements is a reasonable source for assessing the expectations of grantees.

HPOG 2.0 participants or to earlier HPOG 1.0 participants so they could advance along a career pathway.

HPOG Evaluation Activities

To effectively engage, retain, and facilitate learning of a diverse population, career pathways programs involve training opportunities that

To effectively engage, retain, and facilitate learning of a diverse population, career pathways programs involve training opportunities that

ACF's Office of Planning, Research, and Evaluation (OPRE) is using a multipronged research and evaluation strategy to assess the implementation, outcomes, and impacts of HPOG 1.0 and 2.0.

The HPOG 1.0 Impact Study and the HPOG 2.0 Impact Evaluation randomized eligible applicants at non-Tribal grantee programs to a group that could access HPOG or to a control group that could not. Differences in average outcomes between the treatment and control groups provide estimates of program impact.

For more information on OPRE's research on HPOG, as well as its broader career pathways research portfolio, see https://www.acf.hhs.gov/opre/project/health-profession-opportunity-grants-hpog-research-and-evaluation-portfolio.

1.3 Research Questions

Previous analyses of HPOG (see box above) have shown that most grantees offer training for entry-level occupations that are in high demand and increase employment in healthcare (Klerman et al. 2022; Peck et al. 2018; Peck et al. 2019; Peck et al. forthcoming)—in line with the portion of the statutory language that calls for HPOG programs to connect participants to jobs "*that pay well and are expected to either experience labor shortages or be in high demand*." This report explores the prevalence of training for jobs that "pay well", another key goal of the HPOG Program per its authorizing legislation. Other HPOG objectives, such as increasing the healthcare labor force, serving TANF and other low-income individuals, and meeting the needs of employers for healthcare workers, are also important but not the focus of these analyses.

The report begins by observing that, based on the HPOG administrative and survey data used for these analyses, Entry-Level Training *alone* seems not to lead to jobs that "pay well," and that one of two training patterns might be needed to yield that outcome: (1) starting with Above-Entry-Level Training; or (2) consistent with the career pathways framework, a sequence of trainings ("Follow-On Training") consisting of completed Entry-Level Training followed by Above-Entry-Level Training (i.e., Mid-Level or High-Level Training).

In exploring these two patterns, we address the following research questions:

1. What was the prevalence of Above-Entry-Level Training and Follow-On Training in HPOG 1.0?
2. Did the prevalence of Above-Entry-Level Training and Follow-On Training in HPOG 1.0 vary with available years of support or enrollee characteristics?
3. Do the findings vary by funding round (HPOG 1.0 vs. HPOG 2.0)?

In focusing on training patterns that could lead to well paid healthcare jobs, we are exploring one important dimension of what HPOG sought to achieve. As discussed elsewhere, there may be a tension between this goal and other HPOG objectives, and tradeoffs among policy and practice choices as to which goals to prioritize.

1.4 Organization of This Report

This chapter is followed by boxes on data sources and methods. Then the remainder of this document consists of four chapters: Chapter 2 describes average wages by training pattern, demonstrating the importance of Above-Entry-Level and Follow-On Training for jobs that "pay well." Chapter 3 is the core of the analysis, answering the first two research questions using data on HPOG 1.0 enrollees. Specifically, it discusses patterns of training in HPOG 1.0 overall and for subgroups. Chapter 4 describes patterns of training in HPOG 2.0 as compared to HPOG 1.0, answering research question three about training patterns by funding round. By analyzing training patterns for those HPOG 1.0 enrollees who had the opportunity to also receive HPOG 2.0 support, Chapter 5 explores whether more than five years of HPOG support would substantially increase Above-Entry-Level and Follow-On Training. Chapter 6 discusses the implications of the findings.

Appendix A has more technical details, and Appendix B reports the results of the analysis in more detail.

Data Sources

We extracted administrative data for HPOG 1.0 and HPOG 2.0 from their respective grant management information systems—the Performance Reporting System (PRS) for HPOG 1.0 and the Participant Accomplishment and Grant Evaluation System (PAGES) for HPOG 2.0. Both PRS and PAGES data capture participant characteristics at program enrollment, engagement with training and program services, outcomes, and randomization status (for those study participants who were randomized). Each system was custom built to capture complete and accurate data for its grant program.

Our extract from the PRS data covered all five HPOG 1.0 grant years. Our extract from PAGES covered the first four and a half years of the HPOG 2.0 grant period—through March 1, 2020—such that our analysis is not affected by the economic shutdown due to COVID-19.

Each of these two data sources includes elements summarizing basic skills education, pre-training activities, occupational trainings, and characteristics of enrollees. We use recorded start dates and completion dates of training to create variables in a master analysis file reflecting training classification, enrollment, and disposition. We also identify individuals who enrolled in both HPOG 1.0 and HPOG 2.0 programs.

The third source of data is the HPOG 1.0 three-year participant follow-up survey (hereafter referred to as the "three-year survey"). Participants in the HPOG 1.0 Impact Study were surveyed approximately 36 months after being randomized. Among the topics covered by the survey were respondents' current employment status and hourly wage for their current or most recent employment. We make use of the survey data in classifying training types (see **Methods** box below).

Data Sources

Analysis in this report consists of tabulations of trainings as reported in the PRS and PAGES and wages as reported in the HPOG 1.0 three-year survey. Tabulations are of raw or regression-adjusted data (see below for more on regression adjustment).

Classifying Training Types. We classify trainings into three groups: Entry-Level, Mid-Level, and High-Level. We create these classifications by merging PRS data with three-year survey data. We group training enrollees by the Standard Occupational Classification (SOC) code of their last completed training recorded in the PRS (whether or not the respondent is working in the occupation they trained for). Then we calculate the average survey-reported hourly wage for each SOC code group. This means that hourly wage estimates come from survey respondents with completed training that is captured in the PRS.

When considering the earnings associated with a training for an occupation, we need to consider both earnings in the target occupation and also the possibility that the trainee will not work in the occupation. Rather than focusing only on the wages for enrollees who work in the occupation they trained for, calculating average wages by grouping enrollees in this way is the most appropriate method to assess the wages associated with training. (To illustrate this point, imagine that 100 people train in a profession but 98 end up working outside of it; the average wage of the 2 people working in that profession is much less informative than the average wage of the entire group.)

We convert these average wages to a training classification as follows: "Entry-Level" corresponds to training whose completers average less than $15 per hour in wages; "Mid-Level" training completers average $15 to $25 per hour; and "High-Level" training completers average more than $25 per hour. (We call trainings associated with wages of at least $15 per hour "Above-Entry-Level" Training.)

The HPOG 2.0 *Annual Reports* also classify trainings into Entry-Level, Mid-Level, and High-Level using the same dollar-amount cutoffs; however, the HPOG 2.0 *Annual Reports* use grantees' self-coding of their training programs into these three categories to reflect differences in local labor markets. The choice of methodology appears to be consequential: In the scheme the *Annual Reports* use, different grantees coding the same training (e.g., Certified Nursing Assistant) might assign it to different levels (e.g., depending on local wage levels). Our coding scheme leads to fewer trainings being coded as Above-Entry-Level compared to the HPOG 2.0 *Annual Reports*.

Regression Adjustment. The analysis differentiates between "raw" or "unadjusted" means and "regression-adjusted" means. Raw or unadjusted means are average values of a single data element. Regression-adjusted means are average values of the data element after controlling for other characteristics. For instance, regression-adjusted average wages will control for factors by which wages are likely to vary, such as baseline education, enrollment in school, employment, receipt of public assistance, gender, and race and ethnicity.

We report both unadjusted and adjusted means throughout the report because both are useful and answer different questions. Guidance provided to grantees—e.g., regarding the characteristics of enrollees—implies a comparison of unadjusted means. In contrast, the question of whether completing training affects earnings is one where regression adjustment for other factors that influence earnings is appropriate.

2. Wages by Training Level

This chapter reports on average wages by training pattern. Specifically, it describes wages for enrollees who completed different levels of training in HPOG 1.0, as well as wages for those who did not complete occupational training in HPOG 1.0. The analysis tabulates HPOG 1.0 administrative data supplemented with wage data from the HPOG 1.0 three-year survey. It thus includes both training provided by the grantee and training provided by outside providers but supported by HPOG. It is important to note that training not recorded in HPOG 1.0 administrative data—any training that HPOG enrollees received outside of HPOG—is not included in the analysis. Each HPOG occupational training is assigned one of the three *training levels* shown in the box at right, using the average wages reported by respondents to the three-year survey who completed that training. (See **Methods** box in Chapter 1 for details.)

Wage-Defined Training Levels

- **Entry-Level:** Training whose completers average less than $15 per hour in wages
- **Mid-Level:** Training whose completers average $15 to $25 per hour in wages
- **High-Level:** Training whose completers average more than $25 per hour in wages

Our analysis of the HPOG 1.0 training and wage data finds the following:

- **Wages rise with training level, but wages for enrollees who completed only Entry-Level Training are similar to wages for enrollees who completed no occupational training in HPOG.**

Exhibit 2 reports average wages as of the HPOG 1.0 three-year survey by training level. Not only does the exhibit report wages for completers at the three training levels; it also reports wages for those who enroll in HPOG but are not recorded in HPOG program administrative data as having completed any occupational training.[8] Those in the "No Completed Occupational Training" group could have accessed some HPOG components such as support services and basic skills education, and they might even have started—but not finished—occupational training in HPOG.[9] Similar to enrollees who did complete HPOG training, those in the "No Completed Occupational Training" group might have received training outside of HPOG not captured in this analysis.[10]

8 These wages are self-reported and could be from any industry or occupation—healthcare or non-healthcare.

9 Because this analysis focuses on the relationship between completed occupational training and wages, we report those who did not complete occupational training as a single category in this chapter. We include all enrollees in our analysis because attrition is a crucial feature of training programs—especially those that offer remediation. Our goal is to provide a complete assessment of occupational training patterns for all enrollees. See Appendix Exhibit B-1 for average wages separately for those who (1) did not participate in basic skills education, pre-training activities, or occupational training; (2) participated in pre-training activities; and (3) enrolled in occupational training but did not complete it.

10 Although this analysis does not capture that non-HPOG training, Klerman et al. (2022) analyze training received both from HPOG and from other training providers (but does not explicitly explore the extent to which training was received outside of HPOG by those offered HPOG).

Three years after entry into HPOG 1.0, reported hourly wages for those who completed Entry-, Mid-, and High-Level trainings were $13.94, $17.52, and $25.14, respectively. However, the average hourly wage for completers of Entry-Level Training ($13.94) is similar to wages for those who completed no occupational training in HPOG ($14.41). These wages are well below the $15 minimum wage being enacted in several localities.[11] They are also lower than the national average "Living Wage" of $16.07.[12] Plausibly, unless they complete Follow-On Training, the jobs of these Entry-Level Training completers are not HPOG's target jobs that "pay well."[13]

Exhibit 2 Average Wages, by Highest Training Level Completed, Raw and Adjusted, for HPOG 1.0 Sample Three Years after Enrollment

Highest HPOG Training Level Completed	Raw Wages	Adjusted Wages	Difference from Adjusted Entry-Level Wages
No Completed Occupational Training	$14.93	$14.41	+$0.47
Entry-Level Training	$13.94	**$13.94**	–
Mid-Level Training	$17.52	$16.14	+$2.20
High-Level Training	$25.14	$21.29	+$7.35

Note: "Difference" in the last column is adjusted wages relative to Entry-Level Training adjusted wages (in bold). See Exhibit B-1 for more details on those with no completed occupational training.
Source: Tabulations from PRS data merged with HPOG 1.0 three-year survey (N=8,211 for the merged data).

- **Controlling for the characteristics of HPOG enrollees who do and do not complete training does not change these findings.**

Compared to those who do not complete any occupational training in HPOG 1.0, those who enroll in and complete HPOG training differ in characteristics that are likely to affect resulting wages. For instance, those who enter training with prior college education or with a current relationship with an employer might earn higher wages whether they complete training or not. Regression-adjusted wages account for such characteristics, such as gender, race and ethnicity, education at baseline, public assistance receipt, being already enrolled in school at baseline, and being employed at baseline.[14]

After controlling for the characteristics of enrollees who do and do not complete HPOG training:

- Adjusted wages for Entry-Level Training completers remain similar to wages for those who completed no HPOG occupational training; and
- The rise in wages with training level—from Entry-Level to Mid-Level and from Mid-Level to High-Level—shrinks but is not eliminated.

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11 For example, see https://fightfor15.org/.

12 The $16.07 "Living Wage" is a national average in 2017 for a family of four. On the Living Wage, see https://livingwage.mit.edu/articles/31-bare-facts-about-the-living-wage-in-america-2017-2018.

13 There is variation in the wages associated with completing Entry-Level Training. Some trainings result in wages that are close to, but below, the cutoff of $15 per hour (e.g., Medical Assistants earn $14.94 per hour). Had we lowered this cutoff to $14 or if there is wage growth over time, some trainings would be classified as Mid-Level instead of Entry-Level. However, the most popular Entry-Level Training by far—Certified Nursing Assistant—is well below the $15 threshold at $13.65 per hour. Exhibit B-12 in Appendix B shows that 22 percent of the whole sample, and 45 percent of those who completed Entry-Level Training only, completed training for Certified Nursing Assistant.

14 The linear regression also includes dummy variables for the first grantee program where a participant enrolls. We calculate adjusted wages relative to Entry-Level Training. That is, we set unadjusted and adjusted wages to be equal at Entry-Level Training, and add or subtract the regression-adjusted differences to the Entry-Level Training wage.

3. HPOG 1.0 Training Patterns

Using the wage-defined classification of trainings, this chapter explores the prevalence of Above-Entry-Level Training and Follow-On Training. This chapter focuses specifically on the level of HPOG occupational training recorded for HPOG 1.0 enrollees. We focus on HPOG 1.0 grantee programs because these grants had ended when we conducted our analysis. As a result, all possible HPOG training had been received. In contrast, HPOG 2.0 grants were—as of these data—ongoing, so additional training was still possible. Furthermore, HPOG 1.0 enrollees had several years for employment or additional training prior to the onset of the COVID-19 pandemic and the corresponding economic shutdown. Focusing our analysis on the period before the pandemic-induced economic shutdown implies greater emphasis on the HPOG 1.0 grants.

- **Completing only Entry-Level Training and completing no HPOG occupational training were both common.**

Exhibit 3 reports patterns of training for HPOG 1.0 enrollees.[15] Each row corresponds to the highest level of completed HPOG 1.0 occupational training recorded in administrative records, and the final row (below the line) reports rates of Follow-On Training. The first column reports the distribution of training completion considering everyone enrolled in HPOG 1.0 through the end of the grant period: 36 percent did not complete any occupational training and 63 percent completed Entry-, Mid-, or High-Level Training.

Exhibit 3 Training Completed, by Training Level for HPOG 1.0 Sample

	Highest Level Completed (%)	Highest Level Started (Whether or Not Completed) (%)
Highest Level of HPOG 1.0 Training		
No Completed Occupational Training	36	18
Entry-Level Training	47	56
Mid-Level Training	12	18
High-Level Training	4	8
Follow-On HPOG 1.0 Training	3	5

Note: N=29,868. Highest Level of Training rows are mutually exclusive. Follow-On Training is not mutually exclusive from Highest Level of Training. Rates of occupational training do not sum to 100 due to rounding.
Source: Tabulations from PRS data, "1.0 getting 2.0" experience excluded.

In training programs that target populations with low incomes and/or greater personal barriers to training, such as lower basic skills or extended time out of the classroom, it can be common for many students to start a training but not complete it. The second column in Exhibit 3 reports the distribution of the highest occupational training level started (whether or not completed). This

[15] We characterize the experience of everyone offered HPOG 1.0, including those who never start occupational training or start but never complete training. To address other research questions, other HPOG publications (Loprest and Sick 2020; Peck et al. 2018; Peck et al. 2019; Werner et al. 2018) only consider those who start occupational training. Given our focus on the experiences of everyone offered HPOG 1.0, that analytic choice would be inappropriate here.

column reports that 18 percent never started occupational training while 82 percent did.[16] Further, it implies that 18 percent started but never finished occupational training.

- **Completing Above-Entry-Level Training was not common, and Follow-On Training was rare.**

Roughly one in four HPOG 1.0 enrollees started Above-Entry-Level Training—18 percent started Mid-Level Training and 8 percent started High-Level Training. Among HPOG 1.0 enrollees, 17 percent completed Above-Entry-Level Training: 12 percent completed Mid-Level Training and 4 percent completed High-Level Training.[17]

A small portion of those who completed training at one level also completed Follow-On Training; that is, they completed training at one level and then completed a second training at a *higher* level.[18] Among all enrollees, 3 percent completed Follow-On Training (these individuals are a subset of Mid- and High-Level Training completers). The most common sequences of trainings among this 3 percent were from CNA (Entry-Level) to either LPN/LVN or Cardiovascular Technician (Mid-Level) to Registered Nurse (High-Level). See Appendix Exhibit B-12 for more information.

- **Having more time to complete training supported by HPOG facilitated completing Above Entry-Level Training and Follow-On Training.**

Part of the reason why completion rates for Above-Entry-Level Training and Follow-On Training were low was that the HPOG 1.0 grants operated for only five years. Those who enrolled in training towards the end of the grant period simply did not have enough time to complete Above-Entry-Level Training or Follow-On Training. Those trainings typically required more time to complete.[19]

Consistent with that interpretation, for those enrollees entering training in the first year of their program's grant period, 24 percent completed Above-Entry-Level Training; for those entering in the fifth year of their program's grant period, only 9 percent did (**Exhibit 4**, left panel). The

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[16] We can decompose the 18 percent who never started HPOG occupational training even further—10 percent of those who enrolled in HPOG 1.0 never participated in any basic skills education, pre-training activities, or occupational training; less than 1 percent completed basic skills education only; and 6 percent participated in pre-training activities only (rates do not sum to 18 due to rounding).

[17] The prevalence of Mid-Level Training plus the prevalence of High-Level Training does not equal the prevalence of Above-Entry-Level Training due to rounding.

[18] This definition of Follow-On Training as an enrollee following a first training with a second training at a *higher* training level is consequential. For example, what is known as "CNA+" comprises multiple trainings (e.g., completing Certified Nursing Assistant, followed by completing Certified Medication Technician, Medication Aide, Electrocardiogram Technician, or Phlebotomist), but all are Entry-Level (Loprest and Sick 2018). CNA+ is common, so multiple trainings at the same level are also common. Analyses that count multiple trainings or *any* subsequent training will find much higher rates than will analyses (such as this one) that require the subsequent training to be at a *higher* level in order to qualify as Follow-On Training.

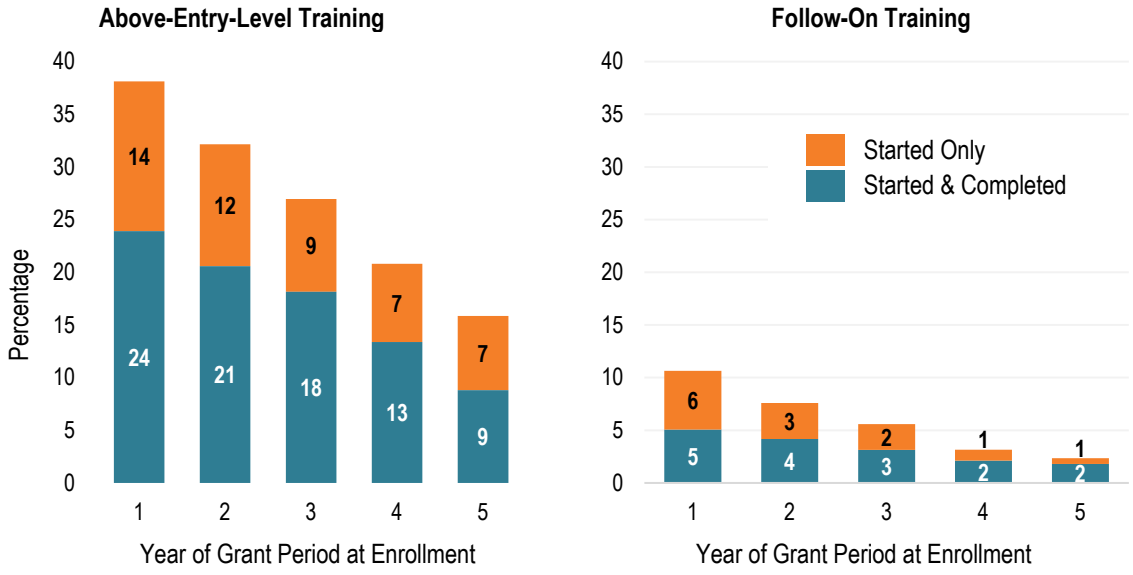
[19] For example, the median Entry-Level Training takes roughly one month of full-time study; the median Mid-Level Training takes roughly 12 months of full-time study; and the median High-Level Training takes roughly 24 months of full-time study. See Appendix A for further discussion.

corresponding rates of completing Follow-On Training are 5 percent and 2 percent (**Exhibit 4**, right panel).

We also examine patterns of starting but not completing training by grant year. Exhibit 4 shows that additional people start Above-Entry-Level-Training but do not finish. Among those who enter training in the first year of the program's grant period, 38 percent start some training, 24 percent finish at least one training, and another 14 percent start at least one training but do not finish any training. Among those who enroll in HPOG later in the grant period, a smaller share enter Above-Entry-Level Training (whether or not they finish), with only 16 percent of fifth year enrollees doing so. Rates of enrollment and completion of Follow-On Training show a similar pattern.

Though this relation to grant year is clear and strong, even for those enrolled in the first year (who potentially had more than four years to obtain HPOG-funded training), rates of completing Above-Entry-Level Training or Follow-On Training were not that high. Overall for HPOG 1.0 (regardless of the year in which they enrolled), some 17 percent completed Above-Entry-Level Training; the rate is clearly higher—24 percent—for those who enrolled in the first year, but still reasonably characterized as "not common." Similarly, for all of HPOG 1.0 (regardless of the year in which they enrolled), the completed Follow-On Training rate is 3 percent; for those who enrolled in the first year, the rate is higher—5 percent—but still reasonably characterized as "rare."

Exhibit 4 Training Rates, by Grant Year at Enrollment, for HPOG 1.0 Sample



Note: *N*=29,866 HPOG 1.0 enrollees. Two HPOG 1.0 enrollees excluded from analysis due to missing year of grant period enrolled (implausible dates in system).
Source: Tabulations from PRS data, "1.0 getting 2.0" experience excluded.

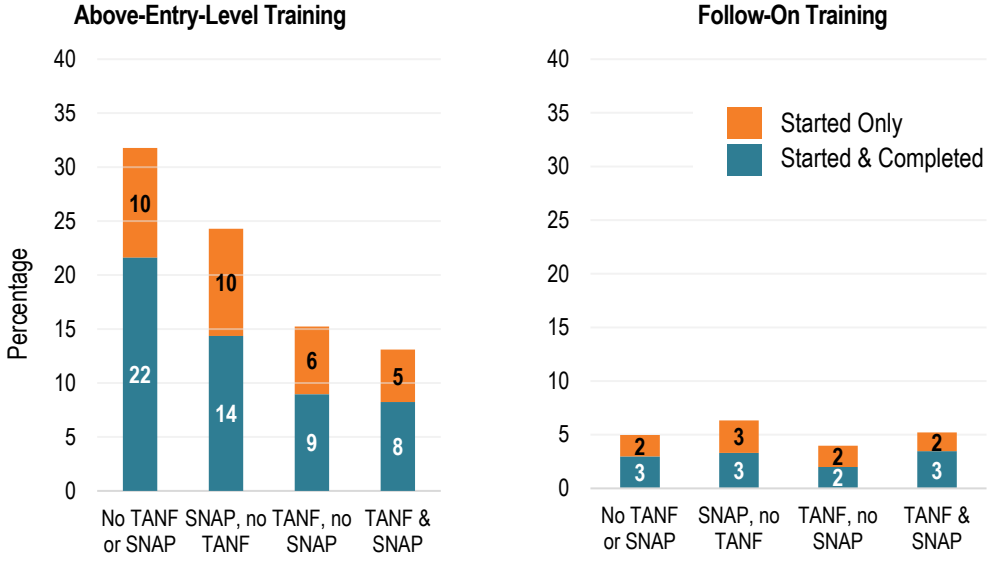
- **Both Above-Entry-Level Training and Follow-On Training completion rates are lower for enrollees who are more disadvantaged.**

Most HPOG 1.0 enrollees are low-income women with dependent children. Here we explore the prevalence of training patterns by subgroups of the HPOG 1.0 population. We define the more "disadvantaged" enrollees as those who are receiving TANF or Supplemental Nutrition Assistance Program (SNAP) benefits at baseline, those who are not already enrolled in training at baseline, those who are not employed at baseline, and those with lower levels of education at baseline. These particular enrollees can face greater challenges to enrolling in and completing Above-Entry-Level or Follow-On Training. Those challenges might include the need for basic skills education or pre-training activities as prerequisites to occupational training; lack of income to sustain participation in long-term training; and/or lack of other supports, such as family, child care, or transportation.

We find that rates of both Above-Entry-Level Training and Follow-On Training vary with characteristics at enrollment. Enrollees with more intensive involvement with means-tested public assistance programs and those not already enrolled in training at the time of HPOG enrollment have lower rates of Above-Entry-Level Training (**Exhibits 5 and 6**, left panels). Patterns are weaker for Follow-On Training (**Exhibits 5 and 6**, right panels). But rates of Follow-On Training are low for all groups of enrollees, regardless of characteristics at the time of enrollment.

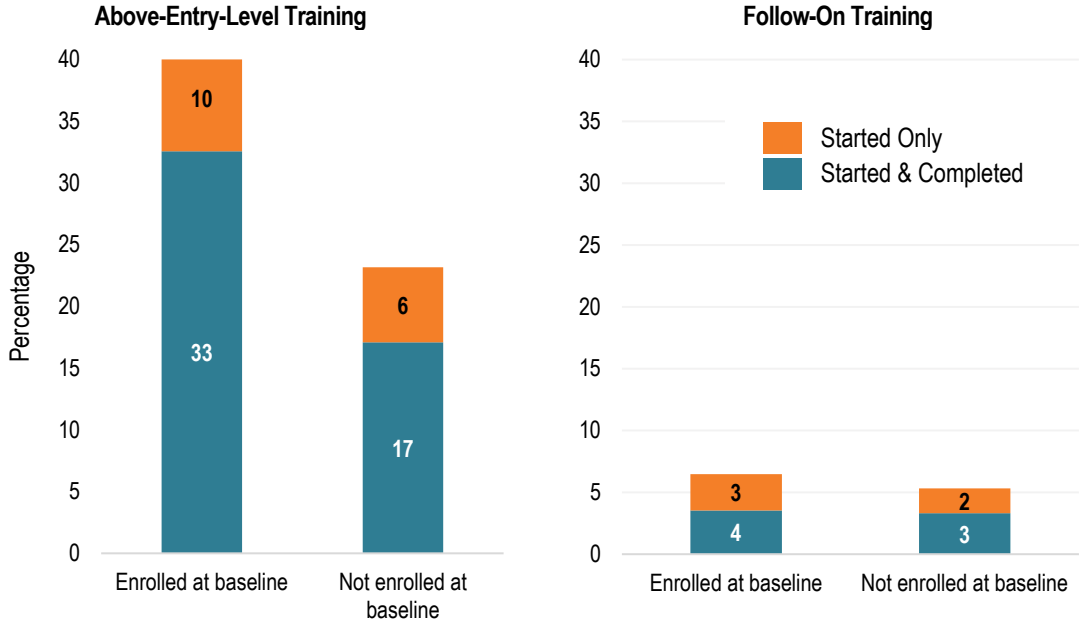
There are similar patterns for subgroups defined by completed education and employment. That is, rates of Above-Entry-Level Training are higher for those with more education and who were employed at enrollment; and rates of Follow-On Training remain low for all groups. (See Exhibits B-17 and B-18 in Appendix B.)

Exhibit 5 Training Rates, for HPOG 1.0 Sample, by Baseline Receipt of Public Assistance



Key: SNAP=Supplemental Nutrition Assistance Program. TANF=Temporary Assistance for Needy Families.
Note: *N*=28,251 enrollees from HPOG 1.0 with non-missing public assistance information at baseline. Exhibit reflects training from enrollment through the end of the HPOG 1.0 grant period (see Appendix A for more information on enrollment dates and grant period end dates). Source: Tabulations from PRS data, "1.0 getting 2.0" experience excluded.

Exhibit 6 Training Rates for HPOG 1.0 Sample, by Baseline School Status



Key: SNAP=Supplemental Nutrition Assistance Program. TANF=Temporary Assistance for Needy Families.
Note: *N*=28,045 enrollees from HPOG 1.0 with non-missing school status information at baseline. Exhibit reflects training from enrollment through the end of the HPOG 1.0 grant period (see Appendix A for more information on enrollment dates and grant period end dates). Source: Tabulations from PRS data, "1.0 getting 2.0" experience excluded.

4 Training from HPOG 2.0 versus HPOG 1.0

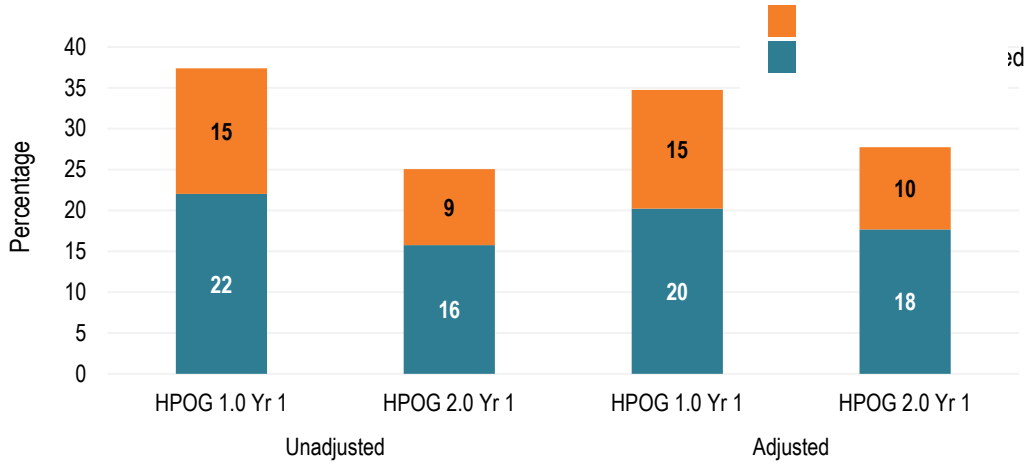
As discussed in Chapter 1, the FOA for HPOG 2.0 grants differed from the one for HPOG 1.0. Compared to HPOG 1.0, the FOA for HPOG 2.0 put more emphasis on clearly articulated career pathways, the provision of basic skills education to enrollees, and stronger employer engagement (OFA 2015).[20] This chapter explores whether those changes resulted in different training patterns across HPOG 1.0 versus 2.0.

As we note in prior chapters, our analysis intentionally focuses on the period prior to the economic shutdown due to COVID-19. The analysis in this chapter compares training rates through three years after enrollment for those who enrolled in HPOG 2.0 in its first year of operation ("HPOG 2.0 first-year cohort") versus those who enrolled in HPOG 1.0 in its first year of operation ("HPOG 1.0 first-year cohort").[21] We chose the period of three years after enrollment because it is the longest possible follow-up period for the HPOG 2.0 first-year cohort before the onset of COVID-19, thereby making the rates comparable.

- **Above-Entry-Level Training rates are lower for the HPOG 2.0 first-year cohort than for the HPOG 1.0 first-year cohort.**

For the HPOG 1.0 first-year cohort, 22 percent had completed Above-Entry-Level Training by three years after enrollment and another 15 percent had started but not completed such training by this time (**Exhibit 7** below, left panel). Rates are lower for those in the HPOG 2.0 first-year cohort: 16 percent completed Above-Entry-Level Training by three years after enrollment and 9 percent started but did not yet complete such training by this time.

Exhibit 7 ***Unadjusted and Adjusted Above-Entry-Level Training Rates for Year 1 Enrollees within Three Years after Enrollment: HPOG 1.0 vs. HPOG 2.0***



[20] See Appendix B for a comparison of basic skills education and pre-training activities between HPOG 1.0 and HPOG 2.0.

[21] It is possible that patterns for enrollees in other years will differ from patterns for Year 1 enrollees. (See Appendix B for some results consistent with that conjecture.) The goal of the longest possible follow-up consistent between HPOG 1.0 and HPOG 2.0 focuses attention on Year 1.

Note: *N*=2,602 enrollees from the first year of HPOG 1.0 and 5,477 enrollees from the first year of HPOG 2.0.
Source: Tabulations from PRS and PAGES data.

- **Adjusting for differences in the characteristics of enrollees in HPOG 1.0 versus HPOG 2.0 shrinks but does not eliminate the difference in Above-Entry-Level Training rates.**

In addition to changes from HPOG 1.0 noted earlier, the HPOG 2.0 FOA also included more explicit requirements regarding enrolling TANF recipients and discouraged enrollment of individuals already in training, since the intent of HPOG was to serve individuals who did not already have access to education and training. Comparing Year 1 for each grant, the share of TANF recipients was relatively similar between HPOG 1.0 and HPOG 2.0: 16 percent in the first year of HPOG 1.0 and 18 percent in the first year of HPOG 2.0 (not shown).[22]

However, there is a marked decrease in the share of enrollees already in school at baseline: 44 percent in the first year of HPOG 1.0 versus 24 percent in the first year of HPOG 2.0 (not shown). Exhibits 5 and 6 in Chapter 3 suggest that completion of Above-Entry-Level Training and Follow-On Training rates are smaller for those not already in school at baseline. This change in the composition of enrollees in HPOG 1.0 versus HPOG 2.0 implies that even if HPOG 2.0 had identical training rates to HPOG 1.0 for enrollees with a given set of baseline characteristics, the overall rates for HPOG 2.0 (e.g., of Above-Entry-Level Training) would be lower.

Indeed, adjusting for the characteristics of enrollees in the two rounds of grants moves HPOG 1.0 versus HPOG 2.0 rates of completed Above-Entry-Level Training closer to each other (**Exhibit 7** above, right panel): an adjusted difference of 2 percentage points (20 vs. 18 percent) compared to an unadjusted difference of 6 percentage points (22 vs. 16 percent).[23] The same is true for regression-adjusted rates of starting but not completing training.[24]

- **Follow-On Training rates are slightly lower in HPOG 2.0 than in HPOG 1.0. Adjusting for differences in the characteristics of enrollees between the two grant rounds does not change that finding.**

Exhibit 8 reports the same set of HPOG 1.0 versus HPOG 2.0 rates as Exhibit 7, but for Follow-On Training. Of the HPOG 1.0 first-year cohort, only 4 percent completed Follow-On Training within three years; an additional 6 percent enrolled in Follow-On Training but had not completed

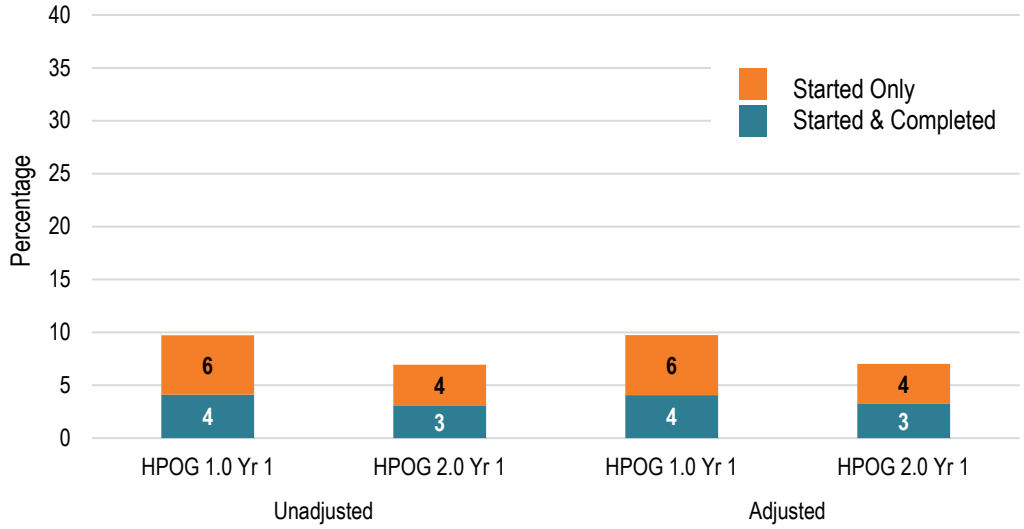
[22] The rates of TANF receipt at baseline diverge after Year 1 such that rates of TANF receipt at baseline are larger for the HPOG 2.0 enrollment cohorts for which we have data than for all of the HPOG 1.0 enrollment cohorts, for which we have data for all its cohorts (not shown).

[23] The adjustment is by linear regression, controlling for gender, race and ethnicity, education at baseline, TANF/SNAP receipt, already enrolled in school at baseline, and employed at baseline. This linear regression for training rates (unlike the linear regression for wages) does not include grantee-specific variables because the focus of this analysis is on differences in individual characteristics between the HPOG 1.0 and HPOG 2.0 populations.

[24] These adjustments do not capture ways in which the HPOG 1.0 and HPOG 2.0 programmatic contexts and evaluation environments differ other than individual characteristics. For instance, HPOG 1.0 and HPOG 2.0 experienced different economic environments that could result in different training patterns.

it within three years. Of the HPOG 2.0 first-year cohort, only 3 percent completed Follow-On Training within three years; an additional 4 percent enrolled in but had not yet completed training.

Exhibit 8 ***Unadjusted and Adjusted Follow-On Training Rates for Year 1 Enrollees within Three Years after Enrollment: HPOG 1.0 vs. HPOG 2.0***



Note: *N*=2,602 enrollees from the first year of HPOG 1.0 and 5,477 enrollees from the first year of HPOG 2.0.
Source: Tabulations from PRS and PAGES data.

5 Exploratory Analysis of Longer Grant Period

Completing Above-Entry-Level Training or Follow-On Training requires substantial time. Even for those who enrolled in the first year of the grant period, five years of HPOG support may not have afforded enough time for these outcomes to be achieved. However, some HPOG 1.0 grantees were also awarded grants under HPOG 2.0 (referred to as "re-funded" grants, and training provided by them as "1.0 getting 2.0"). This chapter reports the results of an exploratory analysis using a subset of these grantees in which a longer period of HPOG support was potentially available to enrollees.

Levels of training of HPOG 1.0 enrollees from re-funded grantees varied widely. To get some insight into what might happen with grants lasting longer than five years, we limited our analysis to the four re-funded grantees for which more than 10 percent of their HPOG 1.0 enrollees later received training from HPOG 2.0.[25] For those grantees, we merged HPOG 1.0 and HPOG 2.0 administrative records and explored the same training patterns as appear in the preceding chapters. Crucially, those enrolling at an HPOG 1.0 program in the grantee's first year of operation, with the grantee later supported by a re-funded grant, potentially have had access to up to nine and a half years of HPOG support (five years under HPOG 1.0 plus four and a half years under HPOG 2.0).[26]

In one sense, using these four grantees gives an "upper bound" on outcomes if HPOG grants ran longer than five years. This is because focusing on only these four grantees—where we know that a higher, though still small, share of HPOG 1.0 enrollees continued under HPOG 2.0—implies that the tabulated rates are higher than would be tabulated from all enrollees.

Two other perspectives suggest that one longer funding period might have higher training rates than we observe here across the two separate funding periods. First, it did not become clear until relatively late in the HPOG 1.0 grant period that there would be an HPOG 2.0. Even once it was clear that there would be a second funding round, grantees were required to reapply, and it was not clear that they would be re-funded. As a result, grantees and enrollees might have made training choices assuming that funding would soon be coming to an end. The patterns of enrollment in Above-Entry Level and Follow-On Training for all grantees shown in Exhibit 4 support this conjecture.

Second, though there was no gap in funding, there was a gap in services. HPOG 2.0 funding started within days of the end of HPOG 1.0 funding, but all HPOG programs had a 120-day planning period per the FOA. As a result, even re-funded HPOG 2.0 grantees used the early months of funding to develop their new programs and implement the new procedures (e.g., randomization, PAGES rather than PRS). In practice, service gaps between the start of HPOG 2.0 funding and the first participant

[25] These grantees are Central Community College, Central Susquehanna Intermediate Unit, Edmonds Community College, and Schenectady County Community College.

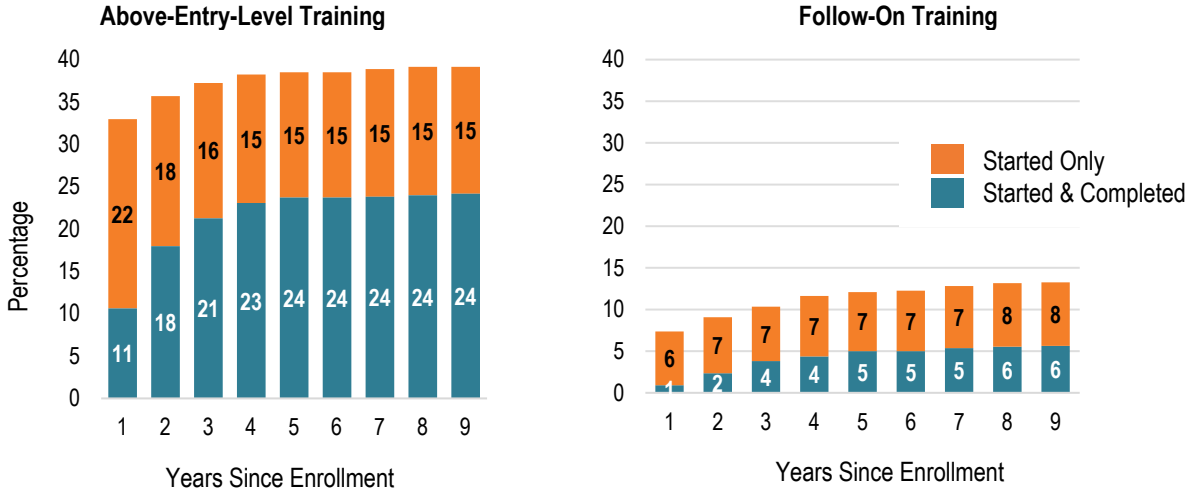
[26] Of course, when considering training options, neither enrollees nor grantees would have known in advance that nine and a half years of support would be available. (See **Data Sources** box in Chapter 1 for why the term is nine and a half years.) As well, our analysis cannot determine what share of these first year HPOG 1.0 enrollees were actually offered HPOG 2.0 services or not or if so, when.

randomized (a useful proxy for start of service delivery) were at least five months and as long as nine months.

- **Completion rates for Above-Entry-Level Training and Follow-On Training did not change where more than five years of HPOG support was potentially available to enrollees.**

For the subsample of enrollees in this selected set of grantees, rates of Above-Entry-Level and Follow-On Training were roughly consistent with the rates for the entire HPOG 1.0 sample reported in **Exhibit 3** by their fourth year since enrollment. However, our exploratory analysis shows little increase in the prevalence of Above-Entry-Level and Follow-On Training past this point; even at nine years, rates of Above-Entry-Level and Follow-On Training remained low for the subset of 1.0 enrollees offered 2.0 services in these four grantee programs.

Exhibit 9 ***Training Rates, by Grant Year, for HPOG 1.0 Sample Enrolling in Year 1 at Four Re-Funded Grantees***



Note: *N*=1,101. Sample restricted to HPOG 1.0 enrollees who enrolled in the first year of HPOG 1.0 in the four re-funded grantees where more than 10 percent of HPOG 1.0 enrollees later received services from HPOG 2.0 (Central Community College, Central Susquehanna Intermediate Unit, Edmonds Community College, and Schenectady County Community College).
Source: Tabulations from PRS data, "1.0 getting 2.0" experience included.

As noted, these analyses are not a perfect proxy for how rates would change with a longer funding period from the outset or with the full sample of grantees and enrollees.[27] However, these perspectives are consistent with **Exhibit 9** showing not much increase in rates past Year 3 for those who enrolled in the first year of HPOG 1.0. Together they are not strongly supportive of the conjecture that extending the funding period past five years—absent other changes to incentivize and support higher-level training—would substantially increase rates of Above-Entry-Level and Follow-On Training.[28]

[27] Another potential limitation to this analysis is the focus on only those who enrolled in a grant's first year of operation. It is possible the characteristics of grantees changed over time in ways that might influence training patterns. We explored this by comparing training rates after three years for enrollees in HPOG 1.0's second year and found little evidence of differences across cohorts (Exhibit B-23).

[28] The HPOG 2.0 FOA revised grantee incentives to place greater emphasis on Follow-On Training by allowing grantees to receive credit for each training completion (rather than for each enrollee served) (OFA 2015).

6 Discussion

This final section summarizes the analysis (Section 6.1), relates the findings to the lack of impacts on earnings in the HPOG 1.0 Impact Study and the HPOG 2.0 Impact Evaluation (Section 6.2), and discusses implications for the HPOG design (Section 6.3).

6.1 Summarizing the Analysis

Available evidence suggests that HPOG was clearly successful in addressing the statutory language concerning providing training for healthcare occupations for TANF recipients and other adults with low incomes and for healthcare occupations that are expected to either experience labor shortages or be in high demand. This report has considered evidence of success with respect to a different part of the statutory language: training for healthcare jobs that "pay well." Analysis of training reported in HPOG 1.0 administrative data and wages reported by respondents to the three-year survey who completed that training suggests that Entry-Level Training *alone* does not provide jobs that "pay well." Above-Entry-Level Training, however, does.

- Analysis of HPOG 1.0 and 2.0 administrative data finds that though Entry-Level Training was common among HPOG enrollees, Above-Entry-Level Training was not common (e.g., only 17 percent of all HPOG 1.0 enrollees completed such training).
- Consistent with the career pathways framework, one might argue that Entry-Level Training can be a first step on a career pathway to jobs that could "pay well."
- That argument is plausible, but our analysis of HPOG 1.0 administrative data suggests that such a stepwise pattern is rare. Only 3 percent of HPOG 1.0 enrollees completed Entry-Level Training and then completed the Above-Entry-Level Training from HPOG that can provide jobs that "pay well."
- Furthermore, the analyses of data for those who enrolled in HPOG 1.0 early in the grant period and therefore potentially had access to four or more years of HPOG-supported training finds more, but still not substantial, Follow-On Training—even with the longer follow-up period.
- A more exploratory analysis of merged HPOG 1.0/2.0 program administrative data for HPOG 1.0 enrollees in the four "refunded" grantees with the highest rates of serving HPOG 1.0 enrollees during HPOG 2.0, also does not find substantial Follow-On Training. This is despite their having up to nine and a half years of HPOG funding. As noted in Chapter 5, the comparison is imperfect. There was a gap in service of about six months and at entry enrollees did not know that follow-on funding would be available. With those crucial caveats, this analysis does not provide support for a conjecture that more than five years of funding—absent other changes to incentivize and support higher-level training—would yield sharply higher rates of Above-Entry-Level Training and Follow-On Training.
- HPOG programs target adults who have low incomes and low skills. However, among applicants eligible for HPOG, rates of Above-Entry-Level Training and Follow-On Training are both higher for those less disadvantaged at enrollment—individuals who were not on TANF, were already enrolled in school, had more education, or were employed at the time

of enrollment. This suggests a tension between competing goals within HPOG that are specified in its authorizing legislation: that of serving more individuals with more disadvantages versus helping more enrollees gain access to jobs that "pay well." Those in the HPOG population who face greater personal barriers to training for higher paying jobs—such as lower basic skills or extended time out of the classroom—may require more time for remediation, prerequisites, and training than HPOG typically has provided.

- Another tension in the legislation that may warrant additional examination, but that is outside the scope of this analysis, is the directive to provide training for jobs "*that pay well and are expected to either experience labor shortages or be in high demand*." Most grantees offer training for entry-level occupations that are in high demand and increase employment in healthcare (Klerman et al. 2022; Peck et al. 2018; Peck et al. 2019; Peck et al. 2022). They are therefore meeting the latter goal in this portion of the statutory language, but not the goal of connecting participants to jobs that "pay well" given our finding that Entry-Level Training does not lead to such jobs.

Importantly, only training supported by HPOG programs was analyzed. If HPOG enrollees completed Above-Entry-Level or Follow-On Training outside of HPOG, it is not captured in our analyses.[29]

6.2 Relation to Impact Findings

These results are potentially insightful for understanding the broad pattern of impact estimates for the HPOG 1.0 Impact Study (Peck et al. 2019) and the HPOG 2.0 Impact Evaluation (Klerman et al. forthcoming). Those evaluations (HPOG 1.0 through three years; HPOG 2.0 through two and half years) both find strong impacts on training, but no impact on earnings. Given that the HPOG theory of action and program design posit that more training leads to higher earnings, this is surprising.

Our results suggest a possible explanation for the lack of earnings impacts.

Exhibit 2 presented regression-adjusted estimates of the increment to the hourly wage associated with having completed training by level. In 2018, three years after entering HPOG, the average hourly wage for those completing Entry-Level training (only) was less than $14 per hour. This was less than the $15 minimum wage being enacted in many localities and adopted by many large employers (Amazon, Target, small manufacturers). [30]

Consistent with this finding about the level of wages, Exhibit 2 found small or even zero increments to earnings for completing Entry-Level Training relative to completing no training. In contrast, the analyses found moderate increments to hourly wages from completing Above-Entry-Level Training. Those analyses are descriptive, not causal, so they need to be treated

[29] Klerman and Litwok (2020) explore training at non-HPOG programs, though they do not specifically analyze Above-Entry-Level and Follow-On Training.

[30] Thomas and Jefferson (forthcoming) report that HPOG 2.0 participants and program staff note that wages for Entry-Level healthcare jobs are often lower that for non-healthcare jobs. Gardiner et al. (2021) also notes that for exactly this reason the Carreras en Salud program operated by Instituto del Progreso Latino does not consider CNA (the modal Entry-Level Training) to be a terminal training, but only an initial step towards an LPN.

with caution. [31] With that crucial caveat, Exhibit 2 suggests that Entry-Level Training alone likely has only small impacts on completers' hourly wages and earnings.

Given that in HPOG 1.0 and 2.0 most of the training received is Entry-Level Training and that Follow-On Training (i.e., subsequent training at a higher level) is rare, the implied increase in earnings is small—likely too small to be detected even by the very large HPOG 1.0 and HPOG 2.0 samples.[32]

6.3 Program and Policy Implications

Descriptive analyses in this report suggest that Entry-Level Training alone does not lead to jobs that "pay well" and that increasing access to jobs that "pay well" through HPOG would likely require either:

- Starting with Above-Entry-Level Training; or
- Entry-Level Training followed by Above-Entry-Level Training

The report shows that neither of these training patterns is common in either HPOG 1.0 or HPOG 2.0. Instead, in HPOG 1.0 and HPOG 2.0, Entry-Level Training is only rarely followed by Above-Entry-Level Training. Starting with Above-Entry Level Training is more common, yet only about one in four HPOG 1.0 participants started such training and only one in six completed.

Assuming HPOG continued to focus on the goals of providing training for healthcare jobs that "pay well" and serving TANF recipients and other low-income adults, how might one design the grant program—its FOA language, performance targets, and funding—to yield more enrollees completing these two training patterns and thereby increasing access to jobs that "pay well"? Some promising strategies might include:

- **Provide more intensive supports—including more basic skills training—to help enrollees start and finish Above-Entry-Level Training.** HPOG already provides basic skills training and case management. More intensive supports might begin with more basic skills training and more intensive case management. Our analysis provides no direct evidence on the likely success of versions of this strategy. Peck et al. (2018) characterized HPOG 1.0 as distinguished from other available training programs because of the strength

[31] The regression controls undoubtedly do not control for many ways in which enrollees getting training at different levels vary. The direction of the remaining bias is unclear (see Card 2001):

(1) If, conditional on the included regression controls, enrollees who get training would have *higher* wages even if they did not get training, then our estimated returns to training are too high. This might be the case, for example, if enrollees do not finish the training because they find it too hard (perhaps because of unmeasured disadvantage).

(2) If instead, conditional on the included regression controls, enrollees who get training would have *lower* wages if they did not get training, then our estimated returns to training are too low. This might be the case, for example, if enrollees do not finish training because they get and take a job offer that does not require the training.

We note that our regression adjustment is strong evidence for the first theoretical pathway.

[32] See Klerman and Litwok (2020) for analyses along these lines. In addition to considering the nature of the training, which is the focus of this report, they also consider treatment/control differences in training received.

of its support services. HPOG 2.0 deliberately intensified basic skills training. Evidence is mixed as to whether more support services and basic skills training are effective strategies (see Oreopoulos 2021). One might argue that a key barrier to Above-Entry-Level Training is living expenses. HPOG 1.0 and HPOG 2.0 were statutorily prohibited from providing stipends. Nevertheless, stipends plausibly are a key support in allowing enrollees with disadvantages to complete long Above-Entry-Level Training—and often the basic skills training they would need to proceed to Above-Entry-Level Training—and thereby get jobs that "pay well." Each of these strategies—stronger supports, more basic skills training, and stipends—seem worthy of formal evaluation.

- **Specify performance measures that *only* value completing Above-Entry-Level Training.** If a grantee believes that Entry-Level Training is valuable *because* it leads to Above-Entry-Level Training, one approach could be to allow the grantee to offer the Entry-Level Training, but to only reward the grantee in terms of performance metrics when it demonstrates the claim by getting those initially enrolled in Entry-Level Training to enroll in and complete the Above-Entry-Level Training.[33]
- **Encourage grantees to front-load initial enrollment**. Rates of Above-Entry-Level Training are much higher for those who enroll earlier in the HPOG grant (see Exhibit 4). This is not surprising given that Above-Entry-Level Training takes a long time, both absolutely and relative to the five-year grant term. Therefore, the grant announcement and grant terms could strongly discourage enrollment late in the grant since, with a five-year grant term, those entering the program late in the grant cannot have long periods of support from the program.[34]

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[33] Consideration of the incentives facing grantees and discussion with other members of the HPOG 2.0 evaluation team suggest that this is a crucial point. ACF specified performance measures. Grantees specified performance targets in their proposals. Grantees worked hard to meet those targets.

For the grantee, Entry-Level Training is faster, surer, and cheaper than Above-Entry-Level-Training. Nearly any performance measurement scheme that gives any credit for Entry-Level Training will likely induce grantees to favor Entry-Level Training. Even with the HPOG 1.0 to HPOG 2.0 performance measurement changes, the incentive for Entry-Level Training remained strong. If the goal truly is Above-Entry-Level Training, a performance measurement system needs to be careful not to inadvertently encourage Entry-Level Training *alone*.

Several related points seem worth noting explicitly. Above-Entry-Level Training is likely much more expensive than Entry-Level Training alone. Clearly Entry-Level Training followed by Above-Entry-Level Training is more expensive that Entry-Level Training alone. It follows that any shift towards Above-Entry-Level Training will have much higher costs per enrollee and fewer enrollees for a given funding level—for the program as a whole and for individual grantees.

Conversely, any performance measure that is not in some sense duration-sensitive—e.g., number of enrollees, number of completers—gives a strong incentive for grantees to favor Entry-Level Training. If the goal is Above-Entry-Level Training (and performance measures matter, as seems plausible), then performance measures need to be duration-sensitive. The text in the body of the report] suggests simply measuring completed Above-Entry-Level Training. Measuring months of training might be an alternative.

[34] If Above-Entry-Level Training alone takes two years, then no one enrolling in the fourth of fifth years of a five-year grant can finish Above-Entry-Level Training. If to start Above-Entry-Level Training, an enrollee needs a year of Basic Education, then enrolling in year three of the grant cannot lead to finishing Above-Entry-Level Training. This is not an abstract argument. Both HPOG 1.0 and HPOG 2.0 had moderate numbers of enrollees in their last year (and even last months) when only Entry-Level Training was possible.

- **Explore ways to structure grants to provide support beyond the current five-year grant period.** Beyond front-loading enrollment, can the grant program design ways to extend funding past five years? The direct approach would be some funding structure with a presumption of longer duration.[35] Short of that, perhaps grantees could pre-fund some expenses (e.g., tuition, support services) in order to extend their support of participants after the end of the grant period. Perhaps grantees could be encouraged to use some of their funds to incentivize those who completed Entry-Level Training through HPOG to enroll in Above-Entry-Level Training after the end of the HPOG grant (and therefore not supported by HPOG).[36]
- **Recruit enrollees who are more likely to complete Above-Entry-Level Training**. Our analysis suggests that among HPOG-eligible enrollees, those with certain characteristics are much more likely to enroll in and complete Above-Entry-Level Training (e.g., those with less public assistance receipt, more education, and employment at time of enrollment; see Exhibit 5 and the discussion there). Given that one of the statutory goals of HPOG is to serve TANF recipients and other adults with low incomes, such "creaming"—that is serving those who are slightly less disadvantaged individuals—does not seem in line with HPOG's objectives. However, another statutory goal is jobs that "pay well," so some trade-off to serve a range of individuals may be appropriate. Note also that, for a given budget, any grantee with more Above-Entry-Level Training will serve fewer enrollees given the higher costs associated with this type of training. Thus, a shift to more Above-Entry-Level Training will by its nature require serving only some of those who would be served by simply extending the HPOG 1.0 and HPOG 2.0 provisions or offering larger grant budgets in order to serve the same numbers of participants with Above-Entry-Level Training.

The statutory language authorizing HPOG stated multiple and not totally consistent goals. Available evidence suggests that HPOG was clearly successful in addressing the statutory language concerning providing training for healthcare occupations for TANF recipients and other adults with low incomes and for healthcare occupations that are expected to either experience labor shortages or be in high demand. This report found less success in a different part of the statutory language: training for healthcare jobs that "pay well." Most training was for jobs with low wages and that training was only rarely a first step in an HPOG-provided career pathway to a job with substantially higher wages. Future HPOG-like programs and job training programs more broadly might carefully consider whether jobs that "pay well" are a goal and, if so, how to align that goal with a target population that has multiple barriers to completing the kind of training that leads to jobs that "pay well." This report has provided some constructive suggestions to inform such efforts.

[35] We acknowledge that this direct approach is inconsistent with the nature of HPOG 1.0 and HPOG 2.0 funding to date. This direct approach would require instead perhaps annual funding, with each year's funding available for obligation for five years, and with an expectation of renewal.

[36] Presumably, there would be a corresponding performance measure for enrollment in such grantees.

Appendix A. Technical Details

The analysis team extracted program administrative data from the management information system used for HPOG 1.0 (the Performance Reporting System, or PRS) and the system used for HPOG 2.0 (the Participant Accomplishment and Grant Evaluation System, or PAGES) as of March 1, 2020.[37] The data contain information on basic skills education (BSE), pre-training activities (PTA), occupational trainings (OT), and characteristics of enrollees.

We processed the data from the administrative systems separately as follows:

- Merged separate data tables from within each system:
  - For the PRS, this includes tables with demographic information and baseline variables for enrollees, services received, education (BSE and PTA), employment development activities (PTA), training (OT), and training programs.
  - For PAGES, this includes tables with demographic information and baseline variables for enrollees similar to the PRS, as well as service details (BSE, PTA, and OT).
- Removed duplicated enrollees (one in the PRS, none in PAGES).
- Removed records of those not enrolled (6,589 HPOG 1.0 and 16,288 HPOG 2.0). Set enrollment date to missing for two HPOG 1.0 enrollees with implausible enrollment dates.

Next, we identified BSE, PTA,[38] and OT as follows:

- From the PRS:
  - BSE includes Adult Basic Education, GED/Pre-GED, and English as a Second Language training.
  - PTA includes prerequisite subject courses, courses to develop college skills or soft skills, and introduction to healthcare careers (see Werner et al. 2018, Chapter 4).
  - OT includes healthcare training with an associated Standard Occupational Classification (SOC) code.
- From PAGES:
  - BSE includes all service details labeled as “Basic Skills,” which in addition to the PRS basic skills education services includes college developmental education.
  - PTA includes all service details labeled as “Prerequisites for Healthcare Training” (see Loprest and Sick 2020).

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[37] As noted in the HPOG 1.0 *Year Four Annual Report*, the PRS was implemented at the beginning of Year 2 of the HPOG Program (September 30, 2011). In Year 1, grantees’ Performance Progress Reports were submitted on paper. At the start of Year 2, data entry was required only on those enrollees who were still enrolled when the PRS came online. As a result, the PRS does not have individual-level data for all Year 1 enrollees (Sick et al. 2015).

[38] We define PTA to be consistent with prior HPOG 1.0 and HPOG 2.0 publications. In particular, we define PTA in the PRS as it was defined for the HPOG 1.0 National Implementation Evaluation (Werner et al. 2018); and we define PTA in PAGES as it was defined in the HPOG 2.0 *Annual Reports* (see, e.g., Loprest and Sick 2020).

- OT includes training labeled as "Health Occupation Training" with an associated SOC code.

All BSE, PTA, and OT have associated start dates. BSE and OT also have a disposition in the data that allows us to identify whether the training/activity was completed. PTA do not have a disposition in the PRS, so we do not determine disposition for PTA.[39] We created common variables from the two files with information we needed to identify training classification, enrollment, and disposition (e.g., type of training, training start date, occupation code, etc.).

Next, we appended the PAGES file to the PRS file to create one large training-level database with all BSE, PTA, and OT records for HPOG 1.0 and HPOG 2.0. The database also has blank records for enrollees who do not have any BSE, PTA, or OT.

This large database includes both PRS and PAGES records for individuals who enrolled in *both* HPOG 1.0 and HPOG 2.0 programs. We are able to identify these records because PAGES includes a data element that contains the PRS identifier for those enrollees who have one. We generated a common "AbtID" that identifies enrollees across HPOG 1.0 and HPOG 2.0 records.

We also added information to the PRS and PAGES data to classify trainings. Specifically, we merged on average wage rates from the HPOG 1.0 three-year participant follow-up survey by the occupation code associated with the highest completed HPOG training in the PRS.[40] About 95 percent of OT merged to the SOCs for which wages were reported in the survey data. We also merged in grantee-reported information from PAGES that classifies trainings as either Entry-Level, Mid-Level, or High-Level according to anticipated wages with associated occupations. For the roughly 5 percent of OT that did not merge with the survey data on SOC code, we classify trainings using the grantee-reported information from PAGES.[41]

Our classification of trainings used the same cutoffs as in PAGES and the HPOG 2.0 *Annual Reports*. We coded trainings associated with wages of less than $15 per hour as Entry-Level, $15 to $25 as Mid-Level, and greater than $25 as High-Level.

We defined our classifications by associated survey-reported wages. However, we also calculated the median training length by training type using information reported by grantees in the PRS and PAGES. Grantees reported either number of credits or hours per week associated with each training. We converted these to full-time equivalents by assuming that 3 credits or roughly 173 total hours implies one full-time equivalent month. Using these conversions, the median Entry-Level Training takes roughly one month of full-time study; the median Mid-Level

[39] Instead of "starting" or "completing" PTA, we report only "participation in" PTA.

[40] SOC codes differ between the PRS and PAGES. This step required creating a crosswalk between PRS and PAGES SOC codes for the subset of occupations reported in the HPOG 1.0 three-year survey data.

[41] When classifying trainings based on grantee-reported information, we use the modal reported level associated with the training across grantees.

Training takes roughly 12 months of full-time study; and the median High-Level Training takes roughly 24 months of full-time study.[42]

Using HPOG 1.0 survey-reported wage data allowed us to consistently code training across all participants. In contrast, the HPOG 2.0 *Annual Reports* use the grantees' self-classification of trainings based on anticipated wages. That classification was created at the beginning of HPOG 2.0 (in 2015). Grantees were instructed to classify their trainings based on the expected wages for training completers, using these same ranges (<$15, $15-$25, and >$25). For a given training, those classifications often vary across grantees. For our purposes, calculating the average reported wage by highest completed training yielded a consistent value across grantees.

For enrollees with records in both PRS and PAGES, we cross-checked the two sources for consistency in baseline characteristics. If demographic information that does not vary over time was inconsistent, we set it to missing. If time-varying baseline characteristics (such as baseline education) differed, we used the value from the PRS, which more closely captures the characteristics at the time of enrollment in HPOG for that individual.

The processing of dates associated with individual enrollees was non-trivial. Each person needed an enrollment date—from which we calculated whether trainings were complete within six months, one year, etc.—as well as a grant end date. Enrollment date was consistently captured in PAGES data, but it was not universally captured in the PRS. We determined the enrollment date in the PRS in the following order of priority: enrollment date (if non-missing), random assignment date (if in the impact sample), program registration date, creation date of the record in the PRS.

The grant end date is necessary for calculating the remaining time available in the grant period and for correctly attributing trainings to either HPOG 1.0 or HPOG 2.0. For HPOG 1.0, the grant end date was either the expiration date of the HPOG 1.0 funds (September 30, 2015) or the expiration of the grant-specific no-cost extension (up to six months later). Because HPOG 2.0 grants were ongoing, we treated them as censored as of the date the data were pulled (March 1, 2020).

We also created different sets of grant-specific variables, some of which consider re-funded HPOG 1.0 grants to be one long grant and others of which restrict grants to their original period and exclude the re-funded period. We classified HPOG 2.0 grants as re-funded only if the rate of having served HPOG 1.0 enrollees was greater than 10 percent. Using this rule, only four grantees were treated as being re-funded (Central Community College, Central Susquehanna Intermediate Unit, Edmonds Community College, and Schenectady County Community College). This strict selection rule implies the largest possible rates of training in the re-funded period. Note, however, that there were gaps of roughly five to nine months in services between

[42] We note that exploratory analyses suggest large variation in reported lengths of a given training, suggesting the possibility of issues with those data. More exploration is indicated, but is out of scope for this effort.

HPOG 1.0 and HPOG 2.0, so this analysis was not exactly equivalent to one continuously funded program.

Finally, we processed training histories according to their classification. We generated four different types of training history variables—for all combinations of

(1) completed training only or (2) either completed training or started but did not complete training; and

(1) included the re-funded experience or (2) excluded the re-funded experience.

The training history grows each time a trainee enrolls in or completes a training (depending on the particular variable). We calculated the time elapsed from enrollment until the time of the change in that trainee's training history. Doing so allowed the analysis to estimate how training histories evolve with time since enrollment.

We also noted censoring dates—dates at which access to the grantee's program expires. When an individual trainee's censoring date is before the follow-up period for a given analysis, we dropped that record from the analysis. Thus, for example, a trainee enrolling in HPOG 1.0 two years before the end of that grantee's grant (including the no-cost extension period) would not be used to analyze three-year follow-up. Similarly, a trainee enrolling in HPOG 2.0 two years before the date we pulled the data (March 1, 2020) would not be used to analyze three-year follow-up.

We excluded a small share of training histories (less than 1 percent) from this analysis for one of three reasons: the start date of the person's training is missing, the training is completed but the end date is missing, or the grantee-reported training classification is missing.

We summarized our primary classification of training histories in terms of completed training. To do so, we imposed the following hierarchy of mutually exclusive and exhaustive statuses (i.e., everyone is included in some category, but in only one):

- Completed High-Level OT.
- Completed Mid-Level OT.
- Completed Entry-Level OT.
- Enrolled in any OT, but none completed.
- Participated in PTA.
- Completed BSE.
- Enrolled in BSE, but none completed.
- Did not participate in BSE, PTA, or OT.

Appendix B. Detailed Results

This appendix provides two sets of additional tabulations. The first set of additional tabulations provides results for basic skills education (BSE) and pre-training activities (PTA): by enrollment cohort, by subgroups (separately for HPOG 1.0 and HPOG 2.0), and by HPOG 1.0 vs. HPOG 2.0.

The second set of tabulations provides additional results for types of training (disaggregating Mid-Level Training and High-Level Training), training ongoing but not completed as of the latest available data, and Follow-On Training received. Dimensions considered include more enrollment cohorts and for more subgroups.

B.1. Additional Tabulations for Basic Skills Education and Pre-Training Activities

The tabulations in this appendix focus on BSE and PTA as defined in Appendix A. Specifically, we repeat the tabulations for completion of occupational training from the body of the report but in addition tabulate starting BSE, completing BSE, and participating in PTA. We also include tabulations of additional HPOG 1.0 and HPOG 2.0 subgroups and one more cohort at the three-year follow-up (HPOG 1.0 Year 2—those who enrolled in HPOG 1.0 during its second year of operation).

Differences in the rates of BSE and PTA between HPOG 1.0 and HPOG 2.0 recur across these tabulations. Part of the reason for this difference is that these concepts were measured differently in two different data systems (PRS and PAGES, respectively; see discussion in Appendix A). Rates of BSE are substantially lower, and rates of PTA are substantially higher in HPOG 1.0 than in HPOG 2.0. Rates of BSE are higher for those enrollees who at baseline who are more disadvantaged / less prepared for a program such as HPOG (e.g., those who enter with lower levels of education).

Exhibit B-1 Hourly Wage, by Highest Completed Training

	Raw Wages	Adjusted Wages	Difference from Adjusted Entry-Level Wages
Did not participate in BSE, PTA, or OT	$14.51	$14.44	$0.50
Participated in PTA	$13.91	$14.23	$0.29
Enrolled in OT, none completed	$15.55	$14.47	$0.53
Completed Entry-Level OT	$13.94	**$13.94**	–
Completed Mid-Level OT	$17.52	$16.14	$2.20
Completed High-Level OT	$25.14	$21.29	$7.35

Key: BSE=basic skills education. PTA=pre-training activities. OT=occupational training.

Note: *N*=8,211 HPOG 1.0 enrollees who also responded to the HPOG 1.0 three-year participant follow-up survey. "Raw Wages" reports the average survey-reported wage among survey respondents with the given level of completed HPOG training. "Difference" in the last column is adjusted wages relative to Entry-Level Training adjusted wages (in bold.).This exhibit decomposes "No Occupational Training" (as reported in the report body) into its components: those who did not participate in BSE, PTA, or OT; those who participated in PTA; and those who enrolled in OT but did not complete any. Rates of BSE (starting and completion) were too low in HPOG 1.0 to reliably estimate an average wage for those who participated only in BSE.

Exhibit B-2 Basic Skills Education and Pre-Training Activities, by Grant Year Enrolled

	Started BSE (%)	Started & Completed BSE (%)	Participated in PTA (%)
HPOG 1.0 Year 1	6.6	5.2	60.5
HPOG 1.0 Year 2	4.1	3.1	60.6
HPOG 1.0 Year 3	5.0	3.7	60.9
HPOG 1.0 Year 4	2.2	2.3	55.9
HPOG 1.0 Year 5	1.1	3.1	51.0
HPOG 2.0 Year 1	38.5	29.5	21.6
HPOG 2.0 Year 2	38.7	30.1	17.7
HPOG 2.0 Year 3	37.4	31.1	10.9

Key: BSE=basic skills education. PTA=pre-training activities.

Note: *N*=51,433 enrollees in HPOG 1.0 and HPOG 2.0, "1.0 getting 2.0" experience excluded. Starting and completing BS are not mutually exclusive.

Exhibit B-3 Basic Skills Education and Pre-Training Activities, for HPOG 1.0 Sample, by Baseline Receipt of Public Assistance

	Started BSE (%)	Started & Completed BSE (%)	Participated in PTA (%)
TANF & SNAP (13.1%)	4.8	4.0	63.0
SNAP, no TANF (39.4%)	4.5	3.9	59.3
TANF, no SNAP (1.1%)	3.3	2.3	58.6
No TANF or SNAP (46.4%)	2.6	2.6	56.7

Key: BSE=basic skills education. PTA=pre-training activities. SNAP=Supplemental Nutrition Assistance Program. TANF=Temporary Assistance for Needy Families.

Note: *N*=28,251 enrollees in HPOG 1.0 with non-missing baseline receipt of public assistance. "1.0 getting 2.0" experience excluded. Starting and completing BSE are not mutually exclusive.

Exhibit B-4 Basic Skills Education and Pre-Training Activities, for HPOG 1.0 Sample, by Baseline School Status

	Started BSE (%)	Started & Completed BSE (%)	Participated in PTA (%)
Not enrolled at baseline (69.7%)	3.8	3.3	57.6
Enrolled at baseline (30.3%)	3.4	3.2	61.2

Key: BSE=basic skills education. PTA=pre-training activities.

Note: *N*=28,045 enrollees in HPOG 1.0 with non-missing baseline school status, "1.0 getting 2.0" experience excluded. Starting and completing BSE are not mutually exclusive.

Exhibit B-5 Basic Skills Education and Pre-Training Activities, for HPOG 1.0 Sample, by Baseline Education

	Started BSE (%)	Started & Completed BSE (%)	Participated in PTA (%)
Less than high school (4.3%)	20.1	11.7	63.1
High school diploma (26.2%)	3.7	3.7	60.9
GED (8.2%)	3.5	3.0	60.9
Some college (20.7%)	1.4	2.2	55.5
Degree/certificate below bachelor's (32.3%)	2.9	2.6	61.4
Bachelor's or higher (8.3%)	1.9	1.8	48.8

Key: BSE=basic skills education. PTA=pre-training activities.
Note: *N*=27,720 enrollees in HPOG 1.0 with non-missing baseline education, "1.0 getting 2.0" experience excluded. Starting and completing BSE are not mutually exclusive.

Exhibit B-6 Basic Skills Education and Pre-Training Activities, for HPOG 1.0 Sample, by Baseline Employment

	Started BSE (%)	Started & Completed BSE (%)	Participated in PTA (%)
Not employed at baseline (58.7%)	3.9	3.0	58.9
Employed at baseline (41.3%)	3.3	3.0	56.9

Key: BSE=basic skills education. PTA=pre-training activities.
Note: *N*=29,094 enrollees in HPOG 1.0 with non-missing baseline employment. "1.0 getting 2.0" experience excluded. Starting and completing BSE are not mutually exclusive.

Exhibit B-7 Basic Skills Education and Pre-Training Activities, for HPOG 2.0 Sample, by Baseline Receipt of Public Assistance

	Started BSE (%)	Started & Completed BSE (%)	Participated in PTA (%)
TANF & SNAP (16.8%)	33.1	26.3	13.9
SNAP, no TANF (42.3%)	37.0	28.8	13.2
TANF, no SNAP (2.2%)	36.1	29.4	20.6
No TANF or SNAP (38.7%)	32.8	27.0	13.4

Key: BSE=basic skills education. PTA=pre-training activities. SNAP=Supplemental Nutrition Assistance Program. TANF=Temporary Assistance for Needy Families.
Note: *N*=29,028 enrollees in HPOG 2.0 with non-missing baseline receipt of public assistance. Starting and completing BSE are not mutually exclusive.

Exhibit B-8 Basic Skills Education and Pre-Training Activities, for HPOG 2.0 Sample, by Baseline School Status

	Started BSE (%)	Started & Completed BSE (%)	Participated in PTA (%)
Not enrolled at baseline (78.3%)	36.4	28.7	13.0
Enrolled at baseline (21.7%)	28.6	24.0	15.8

Key: BSE=basic skills education. PTA=pre-training activities.
Note: *N*=29,046 enrollees in HPOG 2.0 with non-missing baseline school status. Starting and completing BSE are not mutually exclusive.

Exhibit B-9 Basic Skills Education and Pre-Training Activities, for HPOG 2.0 Sample, by Baseline Education

	Started BSE (%)	Started & Completed BSE (%)	Participated in PTA (%)
Less than high school (8.5%)	38.8	26.5	6.7
High school diploma (22.1%)	35.2	27.1	10.6
GED (6.0%)	32.5	25.3	10.5
Some college (21.4%)	33.6	27.6	14.7
Degree/certificate below bachelor's (35.7%)	35.3	29.0	16.4
Bachelor's or higher (6.3%)	30.2	26.5	16.4

Key: BSE=basic skills education. PTA=pre-training activities.

Note: *N*=29,156 enrollees in HPOG 2.0 with non-missing baseline education. Starting and completing BSE are not mutually exclusive.

Exhibit B-10 Basic Skills Education and Pre-Training Activities, for HPOG 2.0 Sample, by Baseline Employment

	Started BSE (%)	Started & Completed BSE (%)	Participated in PTA (%)
Not employed at baseline (53.2%)	34.0	26.7	11.9
Employed at baseline (46.8%)	35.6	29.0	15.8

Key: BSE=basic skills education. PTA=pre-training activities.

Note: *N*=27,832 enrollees in HPOG 2.0 with non-missing baseline employment. Starting and completing BSE are not mutually exclusive.

Exhibit B-11 Basic Skills Education and Pre-Training Activities within Three Years, by HPOG 1.0 vs. HPOG 2.0

	Started BSE (%)	Started & Completed BSE (%)	Participated in PTA (%)
HPOG 1.0 Year 1	6.6	4.9	60.4
HPOG 1.0 Year 2	3.9	2.8	61.4
HPOG 2.0 Year 1	38.8	29.6	21.6

Key: BSE=basic skills education. PTA=pre-training activities.

Note: *N*=15,323 enrollees. Starting and completing BSE are not mutually exclusive. HPOG 1.0 Year 2 imposes censoring on a small share of the cohort (roughly, enrollment after September).

B.2. Additional Tabulations for Occupational Training

The tabulations in this appendix section add details on starting occupational training. Specifically, we repeat the tabulations for completion of occupational training from the body of the report, but in addition tabulate starting Entry-Level (E), Mid-Level (M), and High-Level Training (H), as well as starting Follow-On Training (FO). We also report the most common completed trainings by occupational training type, include tabulations of additional subgroups, and add one more cohort at the three-year follow-up (HPOG 1.0 Year 2—those who enrolled in HPOG 1.0 during its second year of operation).

These findings are consistent with those presented in the report. Starting and completing M, H, and FO all drop with time remaining in the grant period. Rates of starting and completing are also lower for enrollees who are more disadvantaged / less prepared at baseline for a program

such as HPOG (e.g., those who enter with lower levels of education). Finally, note that the prevalence of starting the various types of occupational training is higher than the prevalence of completing training.

Exhibit B-12 Most Common Completed Training, by Occupational Training Type

Most Common Completed Training		In Sample	Within Type
	Certified Nursing Assistant	21.7%	44.5%
E	Patient Care Technician	4.7%	9.7%
	Medical Assistant	4.1%	8.4%
M	Licensed Practical Nurse/Licensed Vocational Nurse (LPN/LVN)	4.9%	44.7%
H	Registered Nurse (RN)	3.1%	89.0%
Most Common Sequences of Training for Follow-On Training			
E>M	Nursing Assistant > Cardiovascular Technician		
E>H	Nursing Assistant > RN		
M>H	LPN/LVN > RN		
E>M>H	Nursing Assistant > LPN/LVN > RN		

Note: *N*=59,164 enrollees in HPOG 1.0 or HPOG 2.0, "1.0 getting 2.0" experience included. Exhibit reports statistics using first completed training at each level.

Exhibit B-13 Types of Training Started and Completed, by Entry Cohort

	Started (Whether or Not Completed)				Completed			
	E (%)	M (%)	H (%)	FO (%)	E (%)	M (%)	H (%)	FO (%)
HPOG 1.0 Year 1	59.4	27.5	12.1	10.6	49.9	18.1	6.5	5.1
HPOG 1.0 Year 2	59.4	23.6	10.2	7.5	49.4	15.7	5.5	4.2
HPOG 1.0 Year 3	57.9	18.3	9.9	5.6	47.9	13.0	5.7	3.1
HPOG 1.0 Year 4	62.5	15.3	5.9	2.9	51.9	10.6	2.8	2.1
HPOG 1.0 Year 5	64.1	12.3	3.6	1.9	49.4	7.7	1.2	1.8
HPOG 2.0 Year 1	56.9	18.8	7.9	7.1	47.0	13.1	3.8	3.4
HPOG 2.0 Year 2	57.4	16.3	7.4	5.4	47.3	10.5	2.9	1.9
HPOG 2.0 Year 3	60.1	13.3	5.2	3.5	48.0	7.0	1.4	1.1

Note: *N*=51,433 enrollees in HPOG 1.0 and HPOG 2.0, "1.0 getting 2.0" experience excluded. Columns are not mutually exclusive. Starting occupational training is not mutually exclusive from completing training.

Exhibit B-14 Types of Training Started and Completed, for HPOG 1.0 Year 1 Cohort, for Four Grantees Providing Services to More Than 10 Percent of HPOG 1.0 Trainees

	Started (Whether or Not Completed)				Completed			
	E (%)	M (%)	H (%)	FO (%)	E (%)	M (%)	H (%)	FO (%)
Year 1	51.4	24.7	8.9	7.3	39.7	8.4	2.2	0.8
Year 2	54.0	26.6	10.2	9.0	44.1	14.3	4.0	2.3
Year 3	55.0	28.1	11.1	10.3	45.6	15.9	5.9	3.6
Year 4	55.4	28.7	11.7	11.5	46.3	17.5	6.3	4.2
Year 5	55.6	28.8	12.0	11.8	46.4	18.1	6.5	4.7
Year 6	55.8	28.8	12.1	11.8	46.6	18.1	6.5	4.7
Year 7	55.9	29.2	12.3	11.8	46.8	18.2	6.7	4.8
Year 8	55.9	29.3	12.4	11.8	46.8	18.3	6.7	4.8
Year 9	55.9	29.3	12.6	11.8	46.8	18.5	6.7	4.9

Note: *N*=1,101. Sample restricted to HPOG 1.0 enrollees who enrolled in the first year of HPOG 1.0 in the four re-funded grantees where more than 10 percent of HPOG 1.0 enrollees received services from HPOG 2.0. "1.0 getting 2.0" experience included. Columns are not mutually exclusive. Starting occupational training is not mutually exclusive from completing training.

Exhibit B-15 Types of Training Started and Completed, for HPOG 1.0 Sample, by Baseline Receipt of Public Assistance

	Started (Whether or Not Completed)				Completed			
	E (%)	M (%)	H (%)	FO (%)	E (%)	M (%)	H (%)	FO (%)
TANF & SNAP (13.1%)	72.0	11.1	2.3	5.1	57.8	7.3	1.0	3.5
SNAP, no TANF (39.4%)	60.6	18.0	7.4	6.1	49.0	11.4	3.3	3.3
TANF, no SNAP (1.1%)	72.5	12.3	3.6	3.6	54.3	8.3	1.0	2.0
No TANF or SNAP (46.4%)	56.8	21.8	11.0	4.8	48.1	15.6	6.5	3.0

Key: SNAP=Supplemental Nutrition Assistance Program. TANF=Temporary Assistance for Needy Families.

Note: *N*=28,251 enrollees in HPOG 1.0 with non-missing baseline receipt of public assistance. "1.0 getting 2.0" experience excluded. Columns are not mutually exclusive. Starting occupational training is not mutually exclusive from completing training.

Exhibit B-16 Types of Training Started and Completed, for HPOG 1.0 Sample, by Baseline School Status

	Started (Whether or Not Completed)				Completed			
	E (%)	M (%)	H (%)	FO (%)	E (%)	M (%)	H (%)	FO (%)
Not enrolled at baseline (69.7%)	66.8	13.8	3.0	4.8	55.7	9.3	1.2	2.9
Enrolled at baseline (30.3%)	45.4	30.6	20.9	6.7	35.6	21.2	12.2	3.5

Note: *N*=28,045 enrollees in HPOG 1.0 with non-missing baseline school status. "1.0 getting 2.0" experience excluded. Columns are not mutually exclusive. Starting occupational training is not mutually exclusive from completing training.

Exhibit B-17 Types of Training Started and Completed, for HPOG 1.0 Sample, by Baseline Education

	Started (Whether or Not Completed)				Completed			
	E (%)	M (%)	H (%)	FO (%)	E (%)	M (%)	H (%)	FO (%)
Less than high school (4.3%)	65.3	4.3	1.1	2.1	51.3	1.5	0.3	0.3
High school diploma (26.2%)	68.3	15.8	3.8	5.3	55.8	10.0	1.5	2.8
GED (8.2%)	70.1	14.0	2.2	5.1	56.7	9.0	0.6	3.4
Some college (20.7%)	55.7	23.7	11.5	5.7	45.8	16.0	6.1	3.1
Degree/certificate below bachelor's (32.3%)	56.3	21.0	10.4	5.5	46.7	14.8	5.9	3.7
Bachelor's or higher (8.3%)	51.0	23.4	16.8	6.1	42.9	17.8	10.1	3.6

Note: *N*=27,720 enrollees in HPOG 1.0 with non-missing baseline education. "1.0 getting 2.0" experience excluded. Columns are not mutually exclusive. Starting occupational training is not mutually exclusive from completing training.

Exhibit B-18 Types of Training Started and Completed, for HPOG 1.0 Sample, by Baseline Employment

	Started (Whether or Not Completed)				Completed			
	E (%)	M (%)	H (%)	FO (%)	E (%)	M (%)	H (%)	FO (%)
Not employed at baseline (58.7%)	63.4	16.7	5.8	5.0	51.3	11.0	2.8	3.0
Employed at baseline (41.3%)	56.4	22.0	11.9	5.6	47.2	15.5	6.8	3.1

Note: *N*=29,094 enrollees in HPOG 1.0 with non-missing baseline employment. "1.0 getting 2.0" experience excluded. Columns are not mutually exclusive. Starting occupational training is not mutually exclusive from completing training.

Exhibit B-19 Types of Training Started and Completed, for HPOG 2.0 Sample, by Baseline Receipt of Public Assistance

	Started (Whether or Not Completed)				Completed			
	E (%)	M (%)	H (%)	FO (%)	E (%)	M (%)	H (%)	FO (%)
TANF & SNAP (16.8%)	63.6	8.8	2.0	2.7	48.4	4.5	0.6	0.8
SNAP, no TANF (42.3%)	57.6	13.7	4.4	4.0	42.8	7.3	1.4	1.5
TANF, no SNAP (2.2%)	56.5	11.9	6.2	4.2	45.6	5.5	2.2	1.4
No TANF or SNAP (38.7%)	56.2	17.3	9.8	4.7	44.5	10.1	3.4	1.8

Key: SNAP=Supplemental Nutrition Assistance Program. TANF=Temporary Assistance for Needy Families.
Note: *N*=29,028 enrollees in HPOG 2.0 with non-missing baseline receipt of public assistance. Columns are not mutually exclusive. Starting occupational training is not mutually exclusive from completing training.

Exhibit B-20 Types of Training Started and Completed, for HPOG 2.0 Sample, by Baseline School Status

	Started (Whether or Not Completed)				Completed			
	E (%)	M (%)	H (%)	FO (%)	E (%)	M (%)	H (%)	FO (%)
Not enrolled at baseline (78.3%)	60.6	12.1	3.3	3.7	46.3	6.3	0.7	1.4
Enrolled at baseline (21.7%)	48.8	21.7	16.3	5.5	37.9	13.3	6.9	2.0

Note: *N*=29,046 enrollees in HPOG 2.0 with non-missing baseline school status. Columns are not mutually exclusive. Starting occupational training is not mutually exclusive from completing training.

Exhibit B-21 Types of Training Started and Completed, for HPOG 2.0 Sample, by Baseline Education

	Started (Whether or Not Completed)				Completed			
	E (%)	M (%)	H (%)	FO (%)	E (%)	M (%)	H (%)	FO (%)
Less than high school (8.5%)	68.5	2.1	0.4	0.8	53.2	1.2	0.0	0.2
High school diploma (22.1%)	65.3	9.4	3.0	2.5	49.1	4.5	0.6	0.9
GED (6.0%)	66.5	10.0	1.5	2.9	50.0	5.2	0.4	0.9
Some college (21.4%)	57.7	17.2	6.8	5.1	44.2	9.8	2.4	1.9
Degree/certificate below bachelor's (35.7%)	50.8	18.8	8.5	5.2	39.1	10.5	3.0	2.0
Bachelor's or higher (6.3%)	52.6	14.8	13.6	4.7	42.2	9.5	5.5	1.6

Note: *N*=29,156 enrollees in HPOG 2.0 with non-missing baseline education. Columns are not mutually exclusive. Starting occupational training is not mutually exclusive from completing training.

Exhibit B-22 Types of Training Started and Completed, for HPOG 2.0 Sample, by Baseline Employment

	Started (Whether or Not Completed)				Completed			
	E (%)	M (%)	H (%)	FO (%)	E (%)	M (%)	H (%)	FO (%)
Not employed at baseline (53.2%)	62.7	11.0	3.7	3.2	47.2	6.1	1.1	1.2
Employed at baseline (46.8%)	52.0	18.2	9.2	5.2	40.6	10.0	3.3	1.9

Note: *N*=27,832 enrollees in HPOG 2.0 with non-missing baseline employment. Columns are not mutually exclusive. Starting occupational training is not mutually exclusive from completing training.

Exhibit B-23 Types of Training Started and Completed, for Cohorts of HPOG 1.0 and HPOG 2.0 Samples, Unadjusted for Enrollee Characteristics, by Year Enrolled

	Started (Whether or Not Completed)				Completed			
	E (%)	M (%)	H (%)	FO (%)	E (%)	M (%)	H (%)	FO (%)
HPOG 1.0 Year 1	59.4	27.5	12.1	10.6	49.9	18.1	6.5	5.1
HPOG 1.0 Year 2	59.6	23.7	10.5	7.7	49.4	15.7	5.6	4.3
HPOG 2.0 Year 1	56.9	18.8	7.9	7.1	47.0	13.1	3.8	3.4

Note: *N*=15,323 enrollees. HPOG 1.0 Year 2 imposes censoring on a small share of the cohort (roughly, enrollment after September). Columns are not mutually exclusive. Starting occupational training is not mutually exclusive from completing training.

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