

# Health Profession Opportunity Grants (HPOG 1.0) Impact Study: Six-Year Impacts Report



## Highlights

The Health Profession Opportunity Grants Program aims to provide education and training to Temporary Assistance for Needy Families recipients and other low-income adults for occupations in the healthcare field that pay well and are expected either to experience labor shortages or to be in high demand.

Abt Associates evaluated the first round of HPOG (HPOG 1.0) using a rigorous experiment. Six years after study members enrolled:

- HPOG did not detectably increase *receipt of a postsecondary credential requiring a year or more of training* among those who had access to HPOG (about one-third of the entire study sample had completed such a credential).
- HPOG increased *employment in a healthcare occupation* by 5 percentage points, from 32 percent in the control group to 37 percent in the group that could access the program.
- Despite the shift toward healthcare work, HPOG did not detectably increase *quarterly earnings* (the study sample had quarterly earnings of about \$6,000 as of the six-year follow-up).

Beyond those priority impacts:

- HPOG increased *receipt of a postsecondary credential of any length* by 8 percentage points, from 70 percent in the control group to 78 percent in the group that could access the program.
- *Duration of training* averaged about 7½ months after six years, with little difference between the control and the HPOG group.
- There is no evidence that HPOG's impact differs—being more or less favorable—for any particular subgroups (such as those defined by race, parental status, baseline education, or prior labor market attachment).

COVID-19, which struck during this report's follow-up window, affected the levels of labor-market outcomes, but it did not affect HPOG's impacts, either favorably or not.

Evidence from this evaluation suggests that HPOG 1.0's impacts are qualitatively similar to other career pathways programs, based on a meta-analysis of other impacts: that is, gains in educational progress and industry-specific employment have not led to earnings gains.

## Introduction

The Health Profession Opportunity Grants (HPOG) Program responds both to the challenges that low-income, low-skilled individuals have in securing family-supporting jobs and to the increasing demand for qualified healthcare professionals. In September 2010, the Administration for Children and Families' (ACF) Office of Family Assistance within the U.S. Department of Health and Human Services awarded a first round of HPOG grants (HPOG 1.0) to 32 grantees in 23 states. Grants were awarded to organizations to provide education and training to Temporary Assistance for Needy Families (TANF) recipients and other low-income adults for occupations in the healthcare field that pay well and are expected either to experience labor shortages or to be in high demand. The Program's funding encouraged use of the career pathways framework, which involves offering education and training in a series of steps within growing sectors combined with support services and employer connections, to meet program goals.<sup>1</sup>

To assess HPOG's effectiveness, ACF's Office of Planning, Research, and Evaluation (OPRE) oversaw a contract with Abt Associates to conduct the HPOG 1.0 Impact Study.

The HPOG 1.0 Impact Study uses an experimental evaluation design to assess effectiveness of the program. In March 2013, about 30 months after the start of the grants, local programs began randomly assigning eligible applicants to a "treatment" group that could access HPOG—we call them the "HPOG group"—or to a "control" group that could not. In total, the study randomly assigned 13,802 participants. The difference between the average outcomes of the HPOG group and the average outcomes of the control group is a strong estimate of the program's "impact."

This large sample was possible because the funding opportunity announcement required all HPOG 1.0 grantees to participate in one or more parts of ACF's career pathways research portfolio. Unlike other recent research that singles out "promising" programs, the HPOG 1.0 Impact Study considers an entire funding stream. The analysis estimates a "blended" average across programs that assesses whether the general HPOG model and the government's overall investment in that model—across its many local implementations—are effective in achieving its goals. That blended, average impact is the best estimate of the likely impact of a future funding stream like that of HPOG 1.0. It does not explicitly represent the impact of any particular grantee's implementation of HPOG.

### The Experimental Contrast: What Did HPOG Do Differently?

In an experimental evaluation such as the HPOG 1.0 Impact Study, the characteristics of the HPOG group and control group members are statistically equivalent on average. Therefore, for impacts to arise, the program made available to the HPOG group needs to be meaningfully different from the opportunities available to the control group. This difference is the "experimental contrast." The experimental contrast generates the impacts that we estimate at various short-, intermediate-, and longer-term follow-up points. Understanding how and to what degree the experiences of the HPOG group differ from the control group is critical to the interpretation of estimated impacts.

According to our implementation research, the major difference between opportunities available to the HPOG group and those available to the control group was HPOG's richer support services (Peck et al. 2018). Most HPOG group members had more financial assistance and support services available to them than did the control group members. The difference in training course offerings—most were short-term—was qualitatively more modest. Most control group members had courses available to them that were similar in type, duration, and quality to the courses available to the HPOG group members.

Because random assignment began 30 months after programs began operating, the average HPOG group member had access to HPOG training and services for less than two years.<sup>a</sup> For impacts to arise, they must stem from what happened to the HPOG group in those two years. This could be because the offer of HPOG gets people access to training and supports while HPOG was funded, inducing them to complete more training than they otherwise would. Impacts might also arise from experiences the HPOG group has that linger beyond their active time in the program, such as developing a commitment to lifelong learning, which might induce changes past when HPOG was funded.

<sup>a</sup> Among the HPOG 1.0 grantees, 17 were funded under HPOG 2.0, in which case HPOG 1.0 participants could have continued to access training and services through HPOG 2.0.

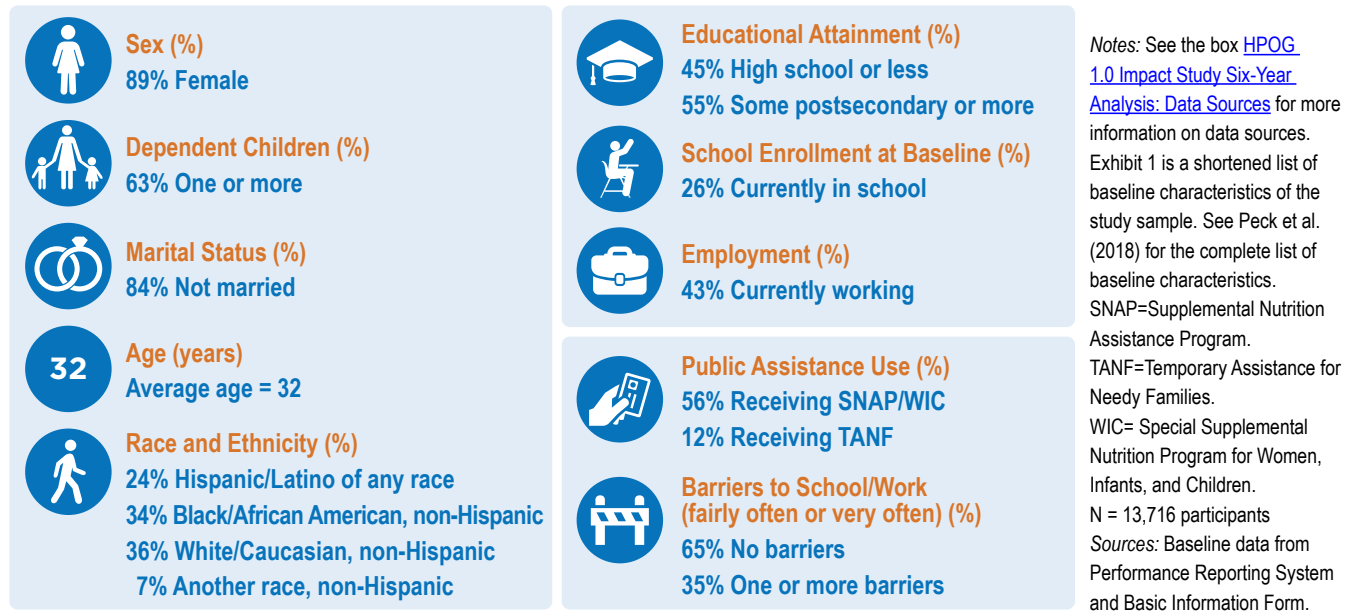
A total of 23 grantees participated in the study.<sup>2</sup> To date the Impact Study has reported on impacts at 15-18 months (Peck et al. 2018) and at three years (Peck et al. 2019). This document reports HPOG's impacts at six years out and discusses the implications of the findings.<sup>3</sup>

This report focuses on impacts on a small number of outcomes, which the evaluation had decided in advance would be the ones most likely to reflect the program's success after six years. Boxes throughout the report share essential information from prior reports, and we refer interested readers to those sources for deeper discussion. Two boxes at the end of this document describe the [data sources](#) and [analytic methods](#) for this report (including discussion of a new data source to the study—the National Student Clearinghouse, NSC). An appendix volume provides more detail on methods, data, and findings.

## Snapshot of the Study Sample

All local HPOG programs recruited TANF recipients and other low-income adults. Most study participants were unmarried, women of color, averaging 32 years of age, with dependent children (Exhibit 1).

## Exhibit 1: Characteristics of the Study Sample at Baseline



## Program Goals and Confirmatory Outcomes

HPOG aims to enhance educational progress and thereby increase both employment in the healthcare sector and earnings. Those impacts might subsequently lead to improvement in other well-being outcomes.<sup>4</sup>

Analysis in the *Short-Term Impacts Report* (Peck et al. 2018), which measured impacts 15-18 months after study enrollment, primarily focused on the extent to which study participants enrolled in or completed any training as the “confirmatory” outcome (see Outcome Classifications box). As of its short-term participant follow-up survey, about 68 percent of the HPOG group (versus 60 percent of the control group) had enrolled in training or completed training. The short-term report also presented evidence of employment being channeled into healthcare—an explicit goal of HPOG. Roughly 40 percent of the control group was employed in healthcare after 15-18 months, whereas the HPOG group’s healthcare sector employment was roughly 11 percentage points greater (a 25 percent increase). The impact on earnings after five quarters (+\$128) was not detectably different from zero.<sup>5</sup>

Analysis in the *Three-Year Impacts Report* (Peck et al. 2019), which measured impacts three years after study enrollment, expanded the confirmatory outcomes to cover both educational progress (completion of any training) and earnings (averaged over the 12th and 13th quarters). After three years, about 75 percent of the HPOG group (versus 63 percent of the control group) had completed training. However, there were no detectable impacts on earnings (+\$42). The three-year report also found a similar increase in healthcare sector employment as in the short-term. The *Three-Year Impacts Report* posited several explanations for why increases in educational progress and healthcare employment

### Outcome Classifications

The analysis distinguishes among three types of outcomes (confirmatory, secondary, and exploratory), defining and recording the outcomes the study selects in each category before data analysis begins.

- **Confirmatory** outcomes are the primary indicators of the extent to which the program is making progress toward its goals.
- **Secondary** outcomes are additional important outcomes identified in the HPOG logic model.
- **Exploratory** outcomes are of two types: (1) outcomes of interest that may be affected by the program but are not identified in the logic model; and (2) alternative specifications of confirmatory and secondary outcomes.

Using this approach is a means of protecting the integrity of the findings and minimizing statistical challenges that arise when conducting lots of hypothesis tests; for example, across many outcomes and subgroups.






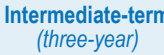


did not result in impacts on earnings: training duration seems to matter, subgroups seem to matter, implementation seems to matter, and more time is needed. This six-year report revisits those possibilities with additional evidence to determine the HPOG group's achievement of the program's longer-term goals. For this *Six-Year Impacts Report*, we prioritize three confirmatory outcomes—one in each of three domains (educational progress, healthcare employment, and earnings)—as the most important indicators of HPOG's success after six years (Litwok et al. 2021).<sup>6</sup>

- **Educational progress**—an indicator for receipt of a postsecondary credential requiring a year or more of training occurring between study enrollment and the six-year follow-up survey.
- **Healthcare employment**—an indicator for current employment in a healthcare occupation as of the six-year follow-up survey.<sup>7</sup>
- **Earnings**—average quarterly earnings over the 23rd and 24th follow-up quarters (i.e., at approximately six years).<sup>8</sup>

To limit the number of statistical tests from which we would draw conclusions, and therefore to increase the strength of the evidence the analysis provides, the evaluation pre-specified these outcomes prior to conducting analyses for this report.<sup>9</sup>

We also deliberately selected outcome measures that correspond with the program's long-term goals (per program logic). For example, our six-year measure of educational progress is *receipt of a postsecondary credential requiring a year or more of training* because those are the credentials we expect to lead to increases in earnings. Exhibit 2 summarizes the evolution of the measures over the study's three impact reports, indicating which measure is confirmatory versus secondary at each time point.

**Exhibit 2: Evolution of Confirmatory Study Outcome Measures, by Domain and Follow-up Time**

 Follow-up time	Outcome Domains		
	 Educational Progress	 Healthcare Employment	 Earnings
 Short-term (15-18 months)	Completion of or ongoing enrollment in training <sup>s</sup>	Current or most recent job is in the healthcare sector <sup>s</sup>	Average quarterly earnings in the 5th follow-up quarter <sup>n</sup>
 Intermediate-term (three-year)	Completion of training <sup>s</sup>	Current or most recent job is in the healthcare sector <sup>s</sup>	Average quarterly earnings over the 12th and 13th follow-up quarters <sup>n</sup>
 Long-term (six-year)	Receipt of a postsecondary credential requiring a year or more of training <sup>s</sup>	Currently employed in a healthcare occupation <sup>c</sup>	Average quarterly earnings over the 23rd and 24th follow-up quarters <sup>n</sup>
 Evolution of Measures	Over time, the educational progress measure indicates a rising bar for what constitutes success.	After six years, the addition of healthcare employment as confirmatory reflects HPOG's goal to meet local demand for healthcare workers.	In the short-term, job training programs don't expect earnings gains (because participants are out of the labor market for training). After three years, earnings is a clear indicator of HPOG's success.

Notes: ■ Outcomes designated as confirmatory at the given follow-up time. ■ Outcomes designated as secondary at the given follow-up time.

Data source for each outcome is indicated as follows:

<sup>s</sup> Survey, whether the short-term, three-year, or six-year participant follow-up survey.

<sup>n</sup> Administrative data from the National Directory of New Hires.

<sup>c</sup> Classification by Census Bureau staff of survey-reported occupation.

Sources: Peck et al. (2018), Peck et al. (2019), Litwok et al. (2021).

## Six-Year Impacts

This section describes the impacts of HPOG 1.0 after six years. We present the findings in accordance with how program logic implies they flow: educational progress, then labor market outcomes, then well-being outcomes. We follow these results with a brief discussion of how our findings vary by subgroup and the influence of COVID-19; however, given there is little variation, we relegate most discussion of these results to the appendix volume.

### How to Read the Impact Exhibits in This Report

The sample exhibit below presents the impact of HPOG on two measures of educational progress from Exhibit 3. The “Level of Evidence” column reports whether outcomes are confirmatory, secondary, or exploratory (see the box [Outcome Classifications](#)). The “HPOG Group Mean” and “Control Group Mean” columns report regression-adjusted means. The “Impact” column shows that the HPOG group was about 3 percentage points more likely than the control group to have earned a postsecondary credential requiring a year or more of training and about 8 percentage points more likely than the control group to have earned any credential since random assignment. The right-most column reports “Relative Impact”—impact as a percent change from the control group mean—which gives a sense of impact magnitude relative to the control group’s level.

#### Sample Exhibit: Impacts on Educational Progress

Outcome	Level of Evidence	HPOG Group Mean	Control Group Mean	Impact	Relative Impact
Earned a 1+ year credential since random assignment (%)	Confirmatory	35.3	32.6	2.7	8.4
Earned any credential since random assignment (%)	Exploratory	77.7	70.2	7.6***	10.8

Notes: Confirmatory and secondary findings use a one-sided hypothesis test, and exploratory findings use a two-sided hypothesis test. Statistical significance levels for one-sided tests are indicated with hashtags, as follows: ### = 1 percent; ## = 5 percent; # = 10 percent. Statistical significance levels for two-sided tests are indicated with asterisks, as follows: \*\*\* = 1 percent; \*\* = 5 percent; \* = 10 percent.

Sample Sizes and Sources:

Treatment: 1,116. Control: 612. Six-year survey.

Impacts marked with one or more symbols are statistically significant, indicating that it is unlikely that these impacts are due to chance: Confirmatory and secondary tests are one-sided (with statistical significance indicated by hashtags), tests we use because we have a directional hypothesis for these impacts. Exploratory tests are two-sided (with statistical significance indicated by asterisks), a test we use because we do not have a directional hypothesis. Three, two, or one symbol, respectively, corresponds to whether the impact is statistically significant at the 1 percent, 5 percent, or 10 percent level. The more symbols, the less likely the finding is due to chance. All findings we discuss in this report are statistically significant at the 10 percent level at least unless otherwise noted.

The appendix volume provides expanded versions of impact exhibits with additional statistical output (standard errors, confidence intervals, and minimum detectable effect calculations).

## Educational Progress

As noted in Exhibit 2, the specific measure of educational progress that the evaluation uses to gauge HPOG 1.0’s success in this domain has evolved over time. For the six-year follow-up, the evaluation focuses on receipt of a credential requiring at least a year to complete.

- **HPOG did not increase receipt of a postsecondary credential requiring a year or more of training.**

As of the six-year survey, HPOG did not have a detectable effect on receipt of a postsecondary credential requiring a year or more of training since random assignment. Roughly one-third of both the HPOG group and the control group earned such a credential (Exhibit 3, top panel).<sup>10</sup>



- **HPOG increased receipt of a credential of any duration.**

More than two-thirds of the control group earned a credential of any duration. HPOG increased the rate of earning any credential by 8 percentage points, an 11 percent increase relative to the control group.

Consistent with earlier reports, HPOG increased receipt of short-term credentials but did not increase receipt of the longer-term certificates and degrees (those requiring a year or more of training) that are associated with higher-paying jobs.<sup>11</sup>

- **HPOG did not increase enrollment in additional education or training during the three years prior to the survey or at survey follow-up.**

HPOG's logic model and the career pathways framework posit that a sequence of trainings may be needed to make progress along a career ladder. Exhibit 3 reports on engagement with training and education between the three-year and six-year surveys to examine the extent to which this is happening. HPOG had no detectable impact in this window of recent enrollment: about a third of both HPOG and control group had enrolled in training within the last three years. HPOG group members are slightly less likely than the control group to be enrolled in training as of the six-year follow-up survey (13 percent versus 16 percent). This –3 percentage point impact is a 21 percent decline in the HPOG group relative to the control group.

Given the small impacts on training three years out and that most of that training was short-term, we would need to see impacts on additional and longer training beyond three years to expect to see impacts on earnings at six years. These results provide no evidence for that pattern.

### Exhibit 3: Impacts on Educational Progress Outcomes

Outcome	Level of Evidence	HPOG Group Mean	Control Group Mean	Impact	Relative Impact
<i>Outcomes based on survey data (subsample)<sup>a</sup></i>					
Earned a 1+ year credential since random assignment (%)	Confirmatory	35.3	32.6	2.7	8.4
Earned any credential since random assignment (%)	Exploratory	77.7	70.2	7.6***	10.8
Enrolled in training in the last three years (%)	Exploratory	35.8	34.3	1.5	4.3
Currently enrolled in training (%)	Exploratory	12.6	15.9	–3.3*	–20.6
<i>Outcomes based on administrative data (NSC; full-coverage)<sup>b</sup></i>					
Earned college credential of any duration (%)	Exploratory	24.9	22.2	2.7**	12.1
Earned college credential after 8+ full-time-equivalent months of study (%)	Exploratory	19.5	18.5	1.0	5.4
Cumulative months of full-time-equivalent college enrollment	Exploratory	7.6	7.2	0.4	5.0

Notes: See the box [HPOG 1.0 Impact Study Six-Year Analysis: Data Sources](#) for more information on data sources and an explanation of the six-year survey subsample.

Confirmatory and secondary findings use a one-sided hypothesis test, and exploratory findings use a two-sided hypothesis test.

Statistical significance levels for one-sided tests are indicated with hashtags, as follows: ### = 1 percent; ## = 5 percent; # = 10 percent.

Statistical significance levels for two-sided tests are indicated with asterisks, as follows: \*\*\* = 1 percent; \*\* = 5 percent; \* = 10 percent.

Sample Sizes and Sources:

<sup>a</sup>Treatment: 1,116. Control: 612. Six-year survey.

<sup>b</sup>Treatment: 8,672. Control: 5,044. National Student Clearinghouse.

- **HPOG's impacts on educational progress as measured in survey data are broadly consistent with estimates using administrative college records. Both sources provide evidence of general but not long-term credential impacts.**

To explore whether the impacts on education outcomes are consistent across data sources, we also estimated impacts on alternative educational progress measures using administrative data from the NSC (Exhibit 3, bottom panel). The NSC-based impacts are consistent with those from the survey. As would be

expected, given differences in coverage and measures from the two data sources, the levels and impacts differ.<sup>12</sup> HPOG increased receipt of an NSC-reported college certificate or degree of any duration by about 3 percentage points (25 percent for the HPOG group versus 22 percent for the control group). HPOG did not have a detectable impact on receipt of a college credential after at least eight months of full-time-equivalent study.<sup>13</sup> HPOG also had no detectable impact on training duration: over six years, both the HPOG group and control group enrolled in about 7½ full-time-equivalent months of college, on average.<sup>14</sup>

In summary, across both survey and NSC data, those in the HPOG group show some educational progress gains over the control group, but the gains are not large in magnitude and are concentrated at short durations of training. This magnitude of impact seems insufficient to lead to large earnings gains after six years of follow-up.

## Labor Market Outcomes

Labor market outcomes fall into multiple domains, including employment, earnings, job quality, and career progress.

- **HPOG increased the share of the HPOG group working in a healthcare occupation, but it did not have a detectable impact on general employment in the 23rd and 24th quarters.**

Consistent with the findings in earlier reports, HPOG increased employment in healthcare: 37 percent of the HPOG group was employed in a healthcare occupation compared to 32 percent of the control group as of the six-year follow-up.<sup>15</sup> Over the three years prior to responding to the six-year survey, 42 percent of the HPOG group was employed in a healthcare occupation compared to 36 percent of the control group. Given that increasing the healthcare labor force was a statutory goal of the HPOG Program, this sustained increase in employment in healthcare is a clear program success.

More generally, roughly 80 percent of both the HPOG and control groups were employed at some time during the 23rd and 24th quarters after random assignment (Exhibit 4), with no detectable impact on overall employment.

**Exhibit 4: Impacts on Employment, Job Quality, and Career Progress Outcomes**

Outcome	Level of Evidence	HPOG Group Mean	Control Group Mean	Impact	Relative Impact
<i>Outcomes based on survey data (subsample)<sup>a</sup></i>					
Currently employed in a healthcare occupation (%)	Confirmatory	36.9	32.0	4.9 <sup>##</sup>	15.4
Currently employed in a job that offers 4 or more benefits out of 5 (%)	Secondary	48.5	48.0	0.5	1.1
Completed training and received a promotion in the last three years (%)	Secondary	17.2	15.2	2.0	12.9
Employed in a healthcare occupation in the last three years (%)	Exploratory	41.8	36.2	5.5 <sup>**</sup>	15.3
<i>Outcome based on administrative data (NDNH; full-coverage)<sup>b</sup></i>					
Employment in Q23 or Q24 (%)	Secondary	78.5	78.6	-0.1	-0.1

Notes: See the box [HPOG 1.0 Impact Study Six-Year Analysis: Data Sources](#) for more information on data sources and an explanation of the six-year survey subsample.

Confirmatory and secondary findings use a one-sided hypothesis test, and exploratory findings use a two-sided hypothesis test.

Statistical significance levels for one-sided tests are indicated with hashtags, as follows: <sup>###</sup> = 1 percent; <sup>##</sup> = 5 percent; <sup>#</sup> = 10 percent.

Statistical significance levels for two-sided tests are indicated with asterisks, as follows: <sup>\*\*\*</sup> = 1 percent; <sup>\*\*</sup> = 5 percent; <sup>\*</sup> = 10 percent.

Sample Sizes and Sources:

<sup>a</sup>Treatment: 1,116. Control: 612. Six-year survey.

<sup>b</sup>Treatment: 8,672; Control: 5,044. National Directory of New Hires.

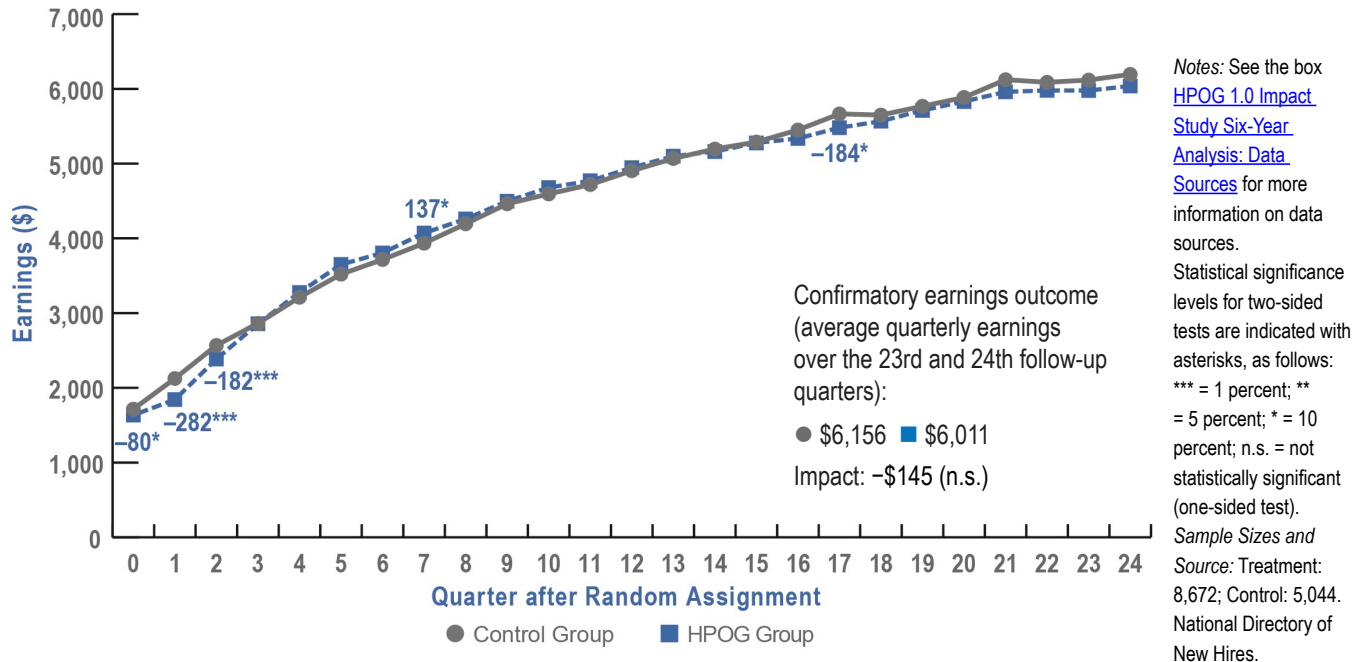
- **HPOG did not have a detectable impact on job quality or career progress.**

Roughly half (48 percent) of both the HPOG group and control group were employed in a job that offers 4 or more benefits out of 5 as of the six-year follow-up, which we refer to as “high quality” jobs (Exhibit 4).<sup>16</sup> About 16 percent of the sample completed training and received a promotion in the last three years, a measure of career progress. Appendix D reports on additional outcomes and shows that HPOG had no detectable impact on other measures of job quality and most measures of career progress (outside of career network, for which HPOG had a favorable impact).

- **HPOG did not increase average quarterly earnings over the 23rd and 24th quarters.**

According to administrative earnings data from the National Directory of New Hires (NDNH), both the HPOG group and control group earned roughly \$6,000 per quarter on average six years after random assignment (Exhibit 5). More broadly, Exhibit 5 shows how earnings changed over time for both the HPOG and control groups. In the first and second quarters after randomization, HPOG group earnings were lower than the control group’s, as we would expect given the greater rates of training in the HPOG group in the short-term (Peck et al. 2018). Thereafter, there is little difference in quarterly earnings for the HPOG and control groups. Although differences between the groups are statistically significant for a small number of quarters (e.g., Q7 or Q17), these differences are small in magnitude and not consistently positive or negative.<sup>17</sup> We therefore conclude that they are not indicative of a broader pattern of impacts.<sup>18</sup>

**Exhibit 5: Time Trend of Earnings and Earnings Impacts over 24 Follow-up Quarters**





## Well-Being Outcomes

Well-being outcomes include financial hardship, income and debt, receipt of public assistance, barriers to employment, psychological well-being and health, and child development and well-being. This section briefly reports the evidence for secondary outcomes in these well-being domains. See Appendix E for other exploratory outcomes in these domains.

- **HPOG had no detectable impact on study participants' financial hardship as measured by their ability to make ends meet at the end of the month.**

Roughly one in five members (20 percent) of both the HPOG group and control group reported not having enough money to make ends meet at the end of the month (Exhibit 6).

- **HPOG had no detectable impact on household receipt of any of TANF, SNAP, or Medicaid benefits in the prior month.**

About 44 percent of both the HPOG group and control group lived in households that received any of TANF, Supplemental Nutrition Assistance Program, or Medicaid benefits as of the six-year follow-up.<sup>19</sup> Across both the HPOG and control groups, the most commonly used of the three programs was Medicaid at roughly 40 percent, followed by SNAP at 26 percent and TANF at just 3 percent of the study participants (Appendix E).

### Exhibit 6: Impacts on Well-Being Outcomes

Outcome	Level of Evidence	HPOG Group Mean	Control Group Mean	Impact	Relative Impact
Participant reports generally not having enough money to make ends meet at the end of the month (%)	Secondary	19.9	19.0	0.9	4.8
Household receipt of any of TANF, SNAP, or Medicaid in prior month (%)	Secondary	43.9	42.5	1.4	3.4

Notes: See the box [HPOG 1.0 Impact Study Six-Year Analysis: Data Sources](#) for more information on data sources. Secondary findings use a one-sided hypothesis test. Statistical significance levels for one-sided tests are indicated with hashtags, as follows: ### = 1 percent; ## = 5 percent; # = 10 percent.

Sample Sizes and Sources:

Treatment: 1,116. Control: 612. Six-year survey.

- **HPOG had no consistent pattern of impacts on other measures of well-being.**

Appendix E reports impacts for exploratory outcomes in a variety of domains reflecting other measures of well-being: financial hardship, income and debt, barriers to employment, and psychological well-being and health. Although there are a small number of statistically significant impacts, there is no consistent pattern. We therefore conclude that there is no evidence of impact on broader measures of well-being.

- **HPOG had no detectable impact on outcomes for children of study participants.**

As in the *Three-Year Impacts Report* (Peck et al. 2019), the six-year survey measured outcomes reported by parents about one of their children. Appendix E reports impacts for these exploratory outcomes. As with other measures of well-being, there is no consistent pattern of impacts for children of study participants.

The HPOG logic model implies that well-being outcomes are likely to improve when earnings improve. Given the lack of earnings gains, it is not surprising that HPOG did not meaningfully influence well-being, either for HPOG group members or their children.

## Subgroup Impacts

The evaluation also seeks to explore how HPOG's impacts vary for specific types of people. To do so, we compared impacts for groups defined by demographic traits (age, race/ethnicity, parental status), other personal traits at baseline (education level, barriers to school or work, employment status, school enrollment status), and public assistance receipt (of TANF, SNAP/WIC, or Medicaid). Here we briefly summarize the results of a large number of tests comparing impacts within and between subgroups. Appendix F includes exhibits with the results of those tests.

- **There is no evidence that HPOG's impacts vary across subgroups.**

To gauge whether HPOG has a differential impact for one group or another, we compared the impacts for one group (e.g., parents) to the impacts for its opposing group (e.g., non-parents). There is no clear pattern that HPOG is any more or less effective for any of the subgroups examined. Across the eight sets of subgroups and eight outcomes (the three confirmatory and five secondary, which generate 61 comparisons total), we observe ten statistically significant differences.<sup>20</sup> Because this analysis involves a large number of statistical tests, we urge caution in interpretation of a single estimate. We mitigate this concern by drawing conclusions about differential effectiveness by subgroup by assessing patterns of statistical significance that indicate HPOG is consistently more or less effective for particular subgroups. See Appendix F for further discussion.

This finding is a change from previous reports, which found evidence of meaningful differentials between some subgroups for some outcomes. The lack of evidence of subgroup impact differentials is not due only to the smaller survey sample at six years than at 15-18 months and three years; analyses of outcomes for which we have full-coverage administrative data (NDNH, NSC) also do not reveal systematic subgroup impact differentials (see Appendix F for additional discussion).

## Influence of COVID-19

The COVID-19 pandemic began in March 2020, during which this study's six-year follow-up survey was in the field, and just as the research team was finalizing plans for the six-year impact analysis. The pandemic changed all aspects of life in the United States for several months—increased morbidity stressed the healthcare system while the threat of the virus halted economic activity. This disruption was particularly harmful to lower income adults—this study's target population—who had higher rates of job loss and financial stress (Parker, Minkin, and Bennett 2020).

The study's main findings are "COVID-blind" with respect to the timing of outcome measures.<sup>21</sup> This section considers how the outcomes and impacts vary with the onset of COVID-19. See Appendix G for further detail.

- **COVID-19 had unfavorable effects on the level of labor market outcomes.**

We expect that the HPOG Impact Study participants would experience declines in employment in line with the major, national job loss; but would there be any buffering effect for those specifically in the healthcare sector? Hypothetically, we might have anticipated that the levels of labor market outcomes might decrease, increase, or have pockets of offsetting effects that result in no obvious change overall among those working in healthcare.

Examining the levels of labor market outcomes, we found that COVID-19 affected average outcome levels for both the HPOG group and control group. For example, study participants' earnings in the second quarter of 2020 decreased by roughly 10 percent compared to the first quarter of 2020 (Appendix G). This decline in earnings coincided with a stark increase in Unemployment Insurance benefits levels. In brief, the experience of the study's sample members mirrors that of the nation as a whole at that time.

- **COVID-19 did not change HPOG's impacts.**

We also analyzed the extent to which HPOG's *impacts* changed with the onset of the pandemic.<sup>22</sup> We might have anticipated three possibilities:

- If healthcare workers were protected from greater job loss, then the HPOG group's greater healthcare attachment might have translated into larger impacts (i.e., larger differences between the HPOG group and the control group), post-pandemic.
- If healthcare workers were more vulnerable during the pandemic, then the HPOG group's greater healthcare attachment might have translated into greater hardship for them compared with the control group, post-pandemic.
- Any pre-post pandemic changes might be unrelated to HPOG.

The estimates indicate that COVID-19 did not generate a detectable *change* in HPOG's impacts. That is, there is no evidence that the HPOG group's greater attachment to the healthcare sector buffered or amplified the negative effects of the pandemic.

## Conclusion

This concluding section puts the HPOG 1.0 six-year impact findings in the context of broader evidence on the effectiveness of career pathways programs, explores some explanations for the pattern of results, and suggests future steps.

## Career Pathways Programs

It is useful to first put these findings in the context of the broader literature on sectoral and career pathways training programs. The results of a recent U.S. Department of Labor-funded meta-analysis of such programs are strongly consistent with our findings—on average the 46 evaluations found large relative increases in educational progress and sectoral employment but no evidence of meaningful earnings gains (Peck et al. forthcoming).<sup>23</sup> From this perspective, HPOG 1.0 is not much different from the average career pathways programs evaluated to date: HPOG has increased general credential receipt and sectoral employment but not earnings. This combination of findings warrants further consideration.

## Possible Explanations

In the *Three-Year Impacts Report* (Peck et al. 2019) we posited four possible explanations for why educational progress gains had not translated to earnings gains. The evidence of HPOG's impacts through six years and the summary of the evidence on career pathways program impacts allow us to re-assess these explanations as well as offer some new ones (we pose these explanations as questions below).

- 1. Does training duration matter?** The new evidence on HPOG's impact six years out does not change our conjecture that the pattern of findings may have arisen because the training duration was not much greater for HPOG than for the control group. The *Three-Year Impacts Report* showed that a large majority of the HPOG group enrolled in short-term trainings that result in similar wages to what participants could have earned without the training (and therefore should not be expected to influence earnings).<sup>24</sup> The evidence in this six-year report continues to support that finding: the lack of a detectable impact on long-term credentials (those requiring a year or more of training to earn) and on months of training together imply that earnings gains are unlikely.
- 2. Do subgroups matter?** There is little evidence to suggest that impacts for some subgroups differ from impacts for other subgroups in a way that leads to the overall impacts we observe. As a result, variation in impacts across subgroups are not a likely explanation for the pattern of findings we observe after six years. Through three years we observed patterns of differential impacts indicating that HPOG improved educational progress more for those who were less prepared for a program such as HPOG; and that HPOG improved earnings more for those who were more prepared for a program such as HPOG. There is no longer evidence of such differences in impacts across subgroups. The lack of differential subgroups impacts is not due only to the reduction in statistical power from surveying only a subsample of study participants at six years. Our subgroup analyses of administrative data (NDNH, NSC) have similar statistical power to earlier reports and do not reveal systematic subgroup impact differentials.<sup>25</sup>
- 3. Does implementation matter?** Because the programs were not in operation between the three- and six-year follow-ups, the details of HPOG 1.0 implementation have not changed from the *Three-Year Impacts Report*. In that report we argued that certain HPOG 1.0 implementation details, such as the time-limited nature of the grant and the incentives created by performance metrics, may explain some of the findings we observe. We also noted that the second round of HPOG grants (HPOG 2.0) revised program performance metrics to put more emphasis on students completing longer-term and multiple trainings. Analysis of training patterns using HPOG 1.0 and HPOG 2.0 program data finds no evidence of changes to training patterns in HPOG 2.0—that is, similar rates of short-term and follow-on training (Klerman, Litwok, and Morris forthcoming). While this is not an assessment of overall implementation, it implies that the performance metrics alone are a less compelling explanation for the findings.
- 4. Is more time needed?** After three years we argued that it might take longer for impacts on earnings to emerge, especially if the HPOG group returns for additional education or training more so than

the control group. Although impacts on education and training receipt past six years, and therefore the emergence of impacts on earnings past six years, remain possible, this potential explanation for the pattern of findings we observe is less compelling now than it was three years ago. The trends in earnings show no evidence of the HPOG and control groups diverging, and there is no evidence of ongoing differential behavior (such as differential enrollment in or returning to training) that would make us optimistic that impacts might emerge with more time.

This six-year report's impact findings are consistent with the small contrast in training duration between the HPOG and control groups. Given the evidence in this report, our earlier conjectures—that subgroups seem to matter, implementation seems to matter, and more time may be needed—are less compelling. However, beyond revisiting the explanations we posited in the *Three-Year Impacts Report*, the six-year findings—both in and of themselves and in the context of related research—suggest two more possible, and perhaps related, explanations. In what follows we explore the possibility that HPOG's target participants or the targeted sector and occupations could help explain this pattern of findings.

- 5. Do the target participants matter?** At the time of enrollment, HPOG study participants had low incomes (earning roughly \$9,300 in the year prior to program enrollment), had low skill levels (highest level of education for nearly 50 percent of participants was a high school diploma, GED, or below), and needed support (many participants cited childcare arrangements and transportation as barriers to school or work at program enrollment) (Peck et al. 2019). Given these challenges, preparing this population for above entry-level jobs in the healthcare sector requires a large investment in training (including remedial classes if needed, followed by occupational training needed to earn a long-term credential) as well as corresponding supports to facilitate training completion. Recent descriptive research (e.g., Kazis and Molina 2016; Klerman and Litwok 2020) observes that the most successful job training programs—which generate substantially larger impacts—are those that involve a high degree of screening; that is, only those applicants most likely to succeed are offered a slot in the program. Descriptive research on HPOG 1.0 and HPOG 2.0 suggests those most likely to succeed are relatively better prepared for a program like HPOG at baseline (for example, higher levels of baseline education) (Klerman, Litwok, and Morris forthcoming). Such screening is one approach future programs could explore to generate greater impacts; but in the case of HPOG, such screening may be in tension with statutorily defined target populations (such as the goal of serving TANF recipients and other low-income adults).
- 6. Does the sector, or occupations within the sector, matter?** Prior research has shown that career pathways programs are generally successful in shifting employment toward the industry trained for, but that doing so is not a clear path to greater earnings (Peck et al. forthcoming). This pattern is evident for HPOG as well, where moving workers into the occupations they train for meets one program goal. That said, if those occupations are no better paying than those of the control group, then we should not expect an impact on earnings or career growth. Certified Nursing Assistants provide a good example of this argument. The occupation is in demand and, in theory, is the entry-level step on a nursing pathway. In practice, however, the work is low paid and there is little evidence that it propels HPOG participants along the steps of a career path in a way that would lead them to better jobs with higher earnings (Klerman, Litwok, and Morris forthcoming; Peck et al. 2019). If shifting the sector in which participants work does not result in earnings gains, then perhaps career pathways programs such as HPOG should consider targeting the specific occupations that offer greater earnings and opportunities for career growth. Current work is examining just this issue (Schwartz et al. forthcoming).

## Looking Forward

Given the findings presented in this report, future earnings gains from the HPOG 1.0 program seem unlikely. With three additional years of follow-up, there was no detectable impact on receipt of additional training (between three and six years after study enrollment), nor was there detectable impact on current enrollment in training (as of six years after enrollment).

Impacts on additional training seem necessary for the upward career moves needed to result in greater earnings for the HPOG group over the control group. Still, building a career—particularly for HPOG’s target participants—can take quite a long time. The COVID-19 pandemic also produced substantial upheaval in the economy as a whole and particularly within the healthcare sector. Our initial analysis revealed no differential impacts of HPOG in the wake of the pandemic; but those data are relatively short-term.

With the reshaping of the U.S. economy post-COVID, the future is uncertain. Should healthcare sector employment mean new and better opportunities for the HPOG group post-COVID, the details of those opportunities is a subject for future analysis. That said, without a major recalibration of healthcare sector work and career paths, the magnitude of what impact we observed—shifting healthcare occupations from 32 to 37 percent—does not seem large enough to lead to detectable earnings gains across the whole HPOG group.



### HPOG 1.0 Impact Study Six-Year Analysis: Data Sources

This box briefly describes the data sources used in this report. More information is available in this study's *Three-Year* and *Six-Year Analysis Plans* (Litwok et al. 2018; Litwok et al. 2021).

- The HPOG grant management information system, called the Performance Reporting System (PRS) was used by all local HPOG programs to collect data on program operations and participant outcomes.
- Baseline information on study participants was collected using one of two instruments: the HPOG baseline survey and the Basic Information Form (BIF). For more information on the distinction between these two, see Peck et al. (2018).
- Three follow-up surveys capture data to measure impacts on key program outcomes. The short-term, three-year, and six-year surveys were initiated about 15-18 months, three years, and six years after randomization, respectively. The surveys capture information on participants' education and employment history; credentials earned; wages, hours worked, fringe benefits, and other indicators of job quality; school loans and other educational assistance; and overall indicators of financial well-being. The short-term and three-year surveys were administered to all study participants, whereas the six-year survey was administered to a 20 percent subsample (because of budget considerations).
- The National Directory of New Hires (NDNH) collects individual quarterly earnings data from state Unemployment Insurance (UI) records, augmented with data from some employers not included in the UI program (e.g., the federal government). Other earnings and employment types, in particular self-employment income, are not reported to the NDNH. For this report we use NDNH records to construct outcomes of earnings and employment at about six years after randomization, as well as baseline measures of both.
- The National Student Clearinghouse (NSC) collects data on student enrollment, degrees earned, and other credential completion data from most U.S. institutions of higher education. We use this data source to construct additional measures of credential receipt that we consider alongside survey-based measures.

### HPOG 1.0 Impact Study Six-Year Analysis: Analytic Methods

Because the treatment ("HPOG group") and control group members were assigned to their groups randomly, the only systematic difference between the groups is that the HPOG group members were offered the opportunity to participate in HPOG, but control group members were not. As is standard practice, the study confirmed analytically that the two groups are otherwise similar (Harvill, Moulton, and Peck 2015).

The difference in mean outcomes between the HPOG group and the control group, therefore, is an estimate of the "impact" of the HPOG Program. With properly implemented random assignment, as HPOG had, we can infer that any difference between those mean outcomes that is statistically significantly different from zero was caused by the offer of HPOG.

Note that this estimate of the impact of the offer of access to HPOG ignores whether treatment group members actually took up that offer, although a large majority did. To estimate the impact of the offer rather than on take-up is more policy relevant because participation in HPOG is not mandatory.

To estimate the impact on our designated outcomes, we use a multi-level regression model that ensures that standard errors are calculated accurately for individuals within programs. For additional information related to the computation and presentation of the report's outcome construction, data preparation, and impact estimation procedures, see the *Six-Year Analysis Plan* (Litwok et al. 2021).

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## Notes

- 1 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 five-year grant awards (HPOG 2.0) was awarded in 2015 and was extended until September 29, 2021. For more on the career pathways framework, see the HPOG 1.0 Funding Opportunity Announcement (HHS/ACF/OFA 2010), Fein (2012), or earlier HPOG reports (Peck et al. 2018; Peck et al. 2019; Werner et al. 2018).
- 2 All 32 of the HPOG 1.0 grantees were expected to be part of some evaluation research, whether through an ACF-sponsored university partnership research study, Tribal evaluation, or the HPOG Impact Study. A separate study describes implementation and outcomes of the five Tribal HPOG 1.0 grantee programs (Meit et al. 2016). In addition, three grantees were exempted from the Impact Study because their incumbent worker programs posed challenges with treatment-control group spillover and contamination potential; and one grantee was not included in the Impact Study because its program did not enroll any new participants after random assignment began. The remaining 23 grantees participated in the HPOG Impact Study.
- 3 A future analysis may consider impacts 9 to 10 years after enrollment, pending available funding. The HPOG 1.0 Impact Study is one part of a multipronged research and evaluation strategy ACF uses to assess the success of the HPOG Program in achieving its goals. That research portfolio is detailed in Appendix A and here: <https://www.acf.hhs.gov/opre/project/career-pathways-research-portfolio>.
- 4 The HPOG Program logic model relates program inputs, activities, and outputs to expected outcomes, including the well-being outcomes mentioned in the text. A complete logic model appears in other project documents including the *Impact Study Design Report* (Peck et al. 2014), *Short-Term Impacts Report* (Peck et al. 2018), and elsewhere in implementation reports (e.g., Werner et al. 2018). A streamlined logic model appears in the *Three-Year Impacts Report* (Peck et al. 2019). At this six-year follow-up, we highlight the logic among priority long-term outcome domains.
- 5 The *Short-Term Impacts Report* reported a statistically significant impact on quarter five earnings of +\$137. The *Three-Year Impacts Report* updated that estimate to +\$128 and not statistically significant—the change in magnitude was due to an update to NDNH data, and the change in statistical significance was due to applying a two-sided test (because the outcome was no longer secondary) (see Peck et al. 2019).
- 6 In line with the ACF Evaluation Policy’s principle of transparency, the *Six-Year Analysis Plan* was published and registered prior to conducting any analyses (though after publication of the *Three-Year Impacts Report*). Registration of the *Six-Year Analysis Plan* is available at <https://osf.io/54akq/>. ACF’s Evaluation Policy is available at <https://www.acf.hhs.gov/opre/resource/acf-evaluation-policy>.
- 7 The corresponding outcome measure in the *Three-Year Report* was *current or most recent* employment in the healthcare field. The change in measure is due to (1) a narrower definition corresponding with long-term outcomes in the logic model; and (2) a change in the survey instrument. Regarding outcome definition, earlier reports were more liberal in measuring whether current or most recent employment was in the healthcare field to allow for the possibility that survey respondents had gained employment in healthcare and subsequently returned to school. However, as of the six-year survey we expected most training to be complete, so we measured only whether survey respondents were currently employed in healthcare. Regarding the instrument, the six-year survey asked respondents to report details about their *occupation* but not whether their job was in the healthcare field. Professional staff at the U.S. Census Bureau classified those survey responses into Standard Occupational Classification codes, which we use to classify healthcare sector occupations. See Appendix D for additional detail.
- 8 We average the 23rd and 24th quarters to reduce variability due to short-term fluctuations in earnings; this results in a more precise estimate than analyzing the 24th quarter alone. In addition, these quarters align temporally with the six-year follow-up survey, and averaging over two quarters corresponds to the three-year confirmatory earnings measure (which averaged over the 12th and 13th quarters).
- 9 Designating confirmatory outcomes within distinct outcome domains is a common approach to mitigating the statistical problem of “multiple comparisons.” We do not make any statistical adjustment for multiple comparisons because our three confirmatory outcomes are in different outcome domains (ED/IES 2017). For a more detailed discussion see Litwok et al. (2018).
- 10 The 20 percent survey subsample implies that we have less statistical power to detect small impacts than we would with the full sample. Indeed, Appendix C reports that the post hoc minimum detectable effect for the confirmatory educational progress outcome is 5.9 percentage points. Even if the estimate of 2.7 percentage points could be detected (i.e., was statistically significant), this effect is small, likely too small to expect it to result in a detectable impact on earnings.
- 11 See Chapter 8 of the *Three-Year Impacts Report* (Peck et al. 2019) for more analysis relating credential length to wages.

- [12](#) The NSC collects enrollment and credential receipt data from nearly all U.S. degree-granting colleges. NSC has several important advantages relative to the follow-up survey: NSC data cover the full study sample, whereas the survey was administered only to a selected subsample of participants; NSC data have no nonresponse, whereas the survey has evidence of differential nonresponse (see Appendix B); and NSC data do not suffer from recall bias. NSC also measures full-time status and provides cumulative data over time, enabling us to construct measures of full-time-equivalent and total enrollment that are not available in the survey. A limitation of the NSC is that it does not collect data from institutions that are not accredited to grant degrees. Given that the survey covers any type of institution, we do not expect the measures to align perfectly between sources; however, because NSC offers near-universal coverage of degree-granting institutions, we expect that credentials reported by NSC consist of longer-term credentials that are likely to lead to increased earnings. For an analysis comparing survey and NSC results more directly, see Appendix C.
- [13](#) This outcome includes all degrees (associate or higher) and sub-degree certificates that were earned after the participant enrolled in at least eight months of full-time-equivalent study. Since NSC does not report the length of sub-degree certificates, we use eight months of full-time-equivalent study as a proxy for certificates requiring a year or more of full-time study. We use this measure as roughly analogous to the survey-reported receipt of a postsecondary credential requiring a year or more of training.
- [14](#) The six-year survey did not capture dates associated with all training, so we cannot construct a survey-based measure of total training duration through six years.
- [15](#) Employment in a healthcare *occupation* is based on classification of open-ended job descriptions by professionals at the U.S. Census Bureau (see endnote 7). This differs from the analogous outcome in earlier reports, which measured self-reported employment in the healthcare *field*. We explored the alignment between these two measures, finding that self-reported healthcare employment was higher than Census-classified healthcare employment. The difference is largely driven by respondents working in healthcare-related office administrative support occupations or customer service, or as counselors or social workers. Many of these workers reported that they were employed in the healthcare field, but because their jobs do not involve performing healthcare-related tasks, they were not classified as working in a healthcare occupation. See Appendix D for full results of this analysis.
- [16](#) What we call “high-quality” jobs are jobs that offer four or more of the following benefits: health insurance, paid vacation, paid holidays, paid sick days, and retirement benefits. See Appendix D for more information as well as additional impacts on the characteristics of employment, such as availability of benefits, flexible work environment, and advancement opportunities.
- [17](#) These estimates are also not adjusted for multiple comparisons, which would likely make them no longer significant.
- [18](#) In addition to analyzing the quarterly impacts, we examine whether the trend for earnings differs between the HPOG group and control group. That analysis finds no statistically significant differences in the slopes of the trend lines (see Appendix D). We also explore the extent to which COVID-19 affects the latest quarters. Although the pandemic caused earnings levels to decline, it did not cause any changes to impact (Appendix G).
- [19](#) Prior reports measured receipt of public assistance at the individual level. Levels of outcomes in this report differ from earlier reports because the six-year survey measures receipt of public assistance at the household level.
- [20](#) The total of 61 comparisons is distributed as follows: (i) for demographic subgroups, there are (3 race/ethnicity pairs + 1 age pair + 1 parental status pair) x 3 outcomes = 15 comparisons; (ii) for education, barriers, employment, and enrollment there are 4 pairs x 8 outcomes = 32 comparisons; and (iii) for public assistance there are 3 pairs x 8 outcomes = 24 comparisons. The total is 15+32+24 = 61 comparisons.
- [21](#) By “COVID-blind” we mean that we do not distinguish between study participants for whom Q23 or Q24 after study enrollment occurred during the economic downturn due to COVID-19 (i.e., after March 2020) and study participants for whom Q23 or Q24 occurred earlier.
- [22](#) These analyses estimated impacts separately by whether the 23rd quarter after random assignment was earlier than the first quarter of 2020. See Appendix G for detailed results.
- [23](#) More specifically, that meta-analysis reported increases in educational progress (measured as credential attainment) of about 155 percent increase and in sectoral employment of about 72 percent (Peck et al. forthcoming).
- [24](#) See Chapter 8 of the *Three-Year Impacts Report* (Peck et al. 2019) for a descriptive analysis of wages by training duration.
- [25](#) See Appendix F for more detailed analysis and discussion of subgroup findings.



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Note: Because this is a long-standing project, some of the text in this report is taken verbatim or with only minor edits from earlier reports, all of which we cite herein.

## Health Profession Opportunity Grants (HPOG 1.0) Impact Study: Six-Year Impacts Report A Career Pathways Long-Term Outcomes Study Publication

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