

**Measuring Career
Progress in the
Health Profession
Opportunity Grants
(HPOG) 1.0 Program**



OPRE Report #2017-111

November 2017

Measuring Career Progress in the Health Profession Opportunity Grants (HPOG) 1.0 Program

OPRE Report #2017-111

November 2017

Pamela Loprest, The Urban Institute and Alan Werner, Abt Associates
With Nathan Sick, The Urban Institute

Submitted to:

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

Contract Number: HHSP23320095624WC, Task Order Number: HHSP23337007T
Project Director: Alan Werner
Abt Associates Inc.
55 Wheeler Street
Cambridge, MA 02138

This report is in the public domain. Permission to reproduce is not necessary. Suggested citation: Pamela Loprest, Alan Werner, and Nathan Sick (2017). *Measuring Career Progress in the Health Profession Opportunity Grants (HPOG) 1.0 Program*, OPRE Report #2017-111, Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Disclaimer

The views expressed in this publication do not necessarily reflect the views or policies of the Office of Planning, Research, and Evaluation, the Administration for Children and Families, or the U.S. Department of Health and Human Services.

This report and other reports sponsored by the Office of Planning, Research, and Evaluation are available at <http://www.acf.hhs.gov/programs/opre/index.html>.



Measuring Career Progress in the HPOG 1.0 Program

The Health Profession Opportunity Grants (HPOG) Program provides education and training to Temporary Assistance for Needy Families (TANF) recipients and other low-income individuals for healthcare occupations that pay well and are in high demand. This brief measures HPOG 1.0 participants' career progress by observing changes in their *outcomes* in occupational skills and earnings and employment. Note that this brief describes what HPOG participants experienced after enrolling, but does not establish causality or evidence of effectiveness.¹

Defining Career Progress

As specified in the HPOG grant announcement, ACF intended that HPOG programs support “**career pathways.**” Training activities that follow the career pathways model are:

- Associated with clearly defined and industry-recognized credentials that are “stackable”; that is, other available training may build on those credentials to add higher and higher competencies in a defined career pathway
- Offered as part of a career pathway articulated to healthcare industry needs and requirements
- Delivered in a flexible way in regard to location, schedule, pace (accelerated courses), and teaching strategy

About HPOG 1.0 and 2.0

In 2010, the Administration for Children and Families (ACF) of the U.S. Department of Health and Human Services (HHS) awarded the first round of 32 HPOG grants (referred to as HPOG 1.0) for a five-year project period to organizations in 23 states, with approximately \$67 million disbursed each year.

In September 2015, HHS awarded a second round of five-year grants (referred to as HPOG 2.0) totaling \$72 million in the first year to 32 organizations (including five tribal organizations) across 21 states; 17 of the HPOG 2.0 grantees were also part of HPOG 1.0.

Education and training programs funded by HPOG must:

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

For more about HPOG see

<http://www.acf.hhs.gov/ofa/programs/hpog>.

¹ ACF's comprehensive HPOG research and evaluation portfolio includes an evaluation of HPOG 1.0's impacts. For more, see the website at <https://www.acf.hhs.gov/opre/research/project/evaluation-portfolio-for-the-health-profession-opportunity-grants-hpog>.

- Combined with work-based learning opportunities, such as internships, externships, and clinical placements²

The *Descriptive Implementation and Outcome Study Report* of the HPOG National Implementation Evaluation (NIE)³ reported findings on the degree to which HPOG 1.0 programs⁴ incorporated career pathways elements in their program design and implementation.⁵ Exhibit 1 presents the findings, confirming that a majority of programs offered courses designed in the career pathways framework.

Exhibit 1. Characteristics of HPOG 1.0 healthcare training courses supporting career pathways

Characteristics of Training Courses Offered	Number of Programs	Percentage
Training options provide credentials that are stackable	42	86
Set of training options support multiple career pathways	32	65
Set of training options support a single career pathway	31	63
Program offers a range of training activities that can be pursued independently	25	51

Note: Responses do not sum to 100 because multiple responses are permitted.

Source: Grantee survey, 2014, Q8.7

N = 49 programs

Missing: 0 programs

A core motivating principle underlying the career pathways framework is that ongoing doses of occupational training and employment experience within a career pathway or pathways will lead to higher skilled jobs with better wages. **Career progress thus has two dimensions: advancement in occupational skills and advancement in job position and wages.** Given that the HPOG 1.0 programs largely operated in that framework, it is important to assess whether HPOG participants experienced the outcomes predicted by the career pathways logic model.

² David J. Fein. (2012). *Career Pathways as a Framework for Program Design and Evaluation: A Working Paper from the Pathways for Advancing Careers and Education (PACE) Project*. OPRE Report # 2012-30. Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

³ Alan Werner, Robin Koralek, Pamela Loprest, Radha Roy, Deena Schwartz, Ann Collins, and Allison Stolte. (2016). *Descriptive Implementation and Outcome Study Report: National Implementation Evaluation of the Health Profession Opportunity Grants (HPOG) to Serve TANF Recipients and Other Low-Income Individuals*. OPRE Report # 2016-30. Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

⁴ An “HPOG program” is an individual training program supported by an HPOG grantee. The “HPOG Program” is the national initiative supporting all grantees.

⁵ The HPOG NIE included all 27 non-tribal grantees and the 49 distinct programs they supported. The categories presented in Exhibit 1 are based on the response choices included in the NIE grantee survey item developed to assess the presence of design principles that support career pathways.

Goals of This Brief

In assessing the career progress of HPOG 1.0 participants, this brief presents measures in two dimensions. It describes **changes in HPOG participants' educational attainment and quarterly earnings** over a period of up to three years after program enrollment.

In addition to **tracking career progress**, this brief also considers the use of **measures of career progress as performance management tools** for HPOG grantees and for the ACF Office of Family Assistance (OFA). OFA has administrative oversight for HPOG and is responsible for tracking and managing grantees against their performance goals. For HPOG 1.0, OFA developed three performance measures: program enrollment, training completion, and number of jobs obtained.

Measures of Career Progress

This brief defines and examines multiple measures of career progress in the two dimensions of **educational attainment** and **earnings growth**.

Primary career progress measures. Primary measures (Exhibit 2) are the most direct assessment of career progress and include **(a) completion of at least one healthcare training course**⁶ and **(b) growth in quarterly earnings** (defined as attaining quarterly earnings after HPOG enrollment that are greater than at four quarters prior to enrollment).⁷ Quarterly earnings growth can indicate movement from unemployment to employment, increases in hours worked in a quarter, or increases in hourly wages.⁸ Two additional primary measures are **(c) progress in either earnings or healthcare education and training**, and **(d) progress in both earnings and healthcare education and training**.

Data sources. The strength of the measures proposed for career progress is partly dependent on the integrity of the data. This study uses two data sources: the **Performance Reporting System (PRS)**, the management information system used by HPOG 1.0; and the **National Directory of New Hires (NDNH)**, a federal administrative system containing data on individuals' quarterly employment and earnings.

Highlights of the Findings

The analysis of career progress in HPOG 1.0 found that:

- More than half of HPOG participants advanced in education and more than half advanced in earnings over the three years following enrollment.
- The percentage of HPOG participants advancing in education and the percentage advancing in earnings grew annually over the three years following enrollment.
- By three years after enrollment, 85 percent of HPOG participants had advanced either in education or earnings and 43 percent had advanced in both.
- Thirty-nine percent of HPOG participants with prior employment experience in healthcare at intake completed a training course for a higher-wage occupation by three years after enrollment.

⁶ “Healthcare training course” refers to the set of all classes required to complete the educational preparation for a healthcare occupation. “Completing multiple healthcare training courses” means completing the preparation necessary for more than one occupation.

⁷ Measuring relative to the fourth quarter prior to enrollment avoids the “Ashenfelter dip” (see Orley Ashenfelter and David Card, (1985), “Using the Longitudinal Structure of Earnings to Estimate the Effect of Training Programs,” *Review of Economics and Statistics* 67: 648–60), whereby individuals typically have a decline in earnings and employment prior to entering a training program such as HPOG. This earnings pattern was found among HPOG participants in Werner et al. (2016).

⁸ Note that the National Directory of New Hires data do not include information on hours worked or hourly wages and so cannot distinguish among the various reasons why quarterly earnings may change.

HPOG program staff entered information into the PRS for participant characteristics at program entry as well as on an ongoing basis to record of all trainings and services. While PRS data were usually entered at the time of service receipt, and so are not likely to suffer from errors of respondent recall, they are subject to HPOG staff entry error. The NDNH quarterly earnings are based on mandatory employer reports to state Unemployment Insurance agencies and have a high degree of accuracy.⁹

Exhibit 2. Primary career progress measures: Definitions, data sources, and samples

Career Progress Measure	Definition	Data Source, Sample
a) Earnings growth	Quarterly earnings in the 4th, 8th, or 12th full quarter after enrollment higher than earnings in the 4th full quarter prior to enrollment	NDNH All HPOG participants
b) Completion of healthcare education and training	Completed one or more courses of training for a healthcare occupation by 12th, 24th, or 36th full month after enrollment	PRS All HPOG participants
c) Progress in <i>either</i> earnings or healthcare education and training	Met primary indicator of career progress in earnings OR education and training by 12th, 24th, or 36th month after enrollment	PRS and NDNH All HPOG participants
d) Progress in <i>both</i> earnings and healthcare education and training	Met primary indicator of career progress in earnings AND education and training by 12th, 24th, or 36th month after enrollment	PRS and NDNH All HPOG participants

Secondary career progress measures. Secondary measures (Exhibit 3) explore additional ways to document career progress in the education dimension beyond completing healthcare training. These include: **(e) completion of healthcare training and receipt of a credential;**¹⁰ **(f) completion of multiple training courses; and (g) receipt of multiple credentials.**¹¹

The brief reports on these secondary measures for all HPOG participants and reports some measures separately for the subgroup of participants who had work experience in the healthcare sector before enrolling in HPOG. For example, the study focuses on participants who have had experience in healthcare employment in the past and measures the proportion who completes at least one course in HPOG (measure *h*). We might expect greater progress in healthcare training completion for that subgroup, for example, because they possess the experience and workplace skills needed to succeed in a healthcare setting, or because they might make more knowledgeable selections of an occupation for which to train. Another secondary measure (measure *i*) singles out the group of participants who were in a healthcare job at the time they enrolled in HPOG and analyzes career progress as completion of healthcare training

⁹ There are limitations to the NDNH data as well. These data rely on accurate reporting by employers, including correct Social Security Numbers. These data also do not include earnings for those who are self-employed and for those working in jobs not covered by the unemployment insurance system.

¹⁰ A “credential” is defined as an associate’s or bachelor’s or other academic degree or a license or certification earned from a third party that either is required for employment in the occupation or signals to employers the attainment of a necessary set of occupational skills.

¹¹ Receipt of multiple credentials is not limited to those who completed multiple training courses, as it is possible to receive multiple certifications and/or degrees after completing a single training.

in an occupation that has a higher average wage than the job held at program entry,¹² which can indicate movement up a career ladder.

Exhibit 3. Secondary career progress measures: Definitions, data sources, and samples

Career Progress Measure	Definition	Data Source, Sample
e) Completion of healthcare education and training and receipt of credential	Completed one or more courses of training for a healthcare occupation and received a credential by 12th, 24th, or 36th full month after enrollment	PRS All HPOG participants
f) Completion of multiple healthcare education and training courses	Completed multiple courses of training for a healthcare occupation by 12th, 24th, or 36th full month after enrollment	PRS All HPOG participants
g) Receipt of multiple credentials	Received multiple credentials by 12th, 24th, or 36th full month after enrollment	PRS All HPOG participants
h) Completion of healthcare education and training for those with healthcare experience at entry	Completed one or more courses of training for a healthcare occupation by 12th, 24th, or 36th full month after enrollment	PRS HPOG participants with prior experience in healthcare at entry
i) Completion of healthcare education and training in a higher-wage occupation than healthcare occupation employed in at entry	Completed one or more courses of training for a healthcare occupation that has a higher average wage than the healthcare occupation employed in at program entry by 12th, 24th, or 36th full month after enrollment	PRS HPOG participants employed in healthcare at entry

Subgroups of HPOG participants. In addition to the subgroup of those in a healthcare job at program entry (subgroup for measures h and i), the study analyzes career progress for three subgroups of interest to examine if their career progress is different from all participants. The subgroups examined are those who at program entry: were receiving TANF benefits, had only a high school diploma or equivalent, or were ever employed in healthcare. TANF recipients' career progress is of interest as they are a target group for the HPOG Program. The career progress of HPOG participants with only a high school degree or equivalency certificate is of interest to understand how well a group with no experience in post-secondary education or training fares in HPOG training and subsequent employment. About half of HPOG participants are in this group. The career progress of those employed in healthcare at intake is of interest to understand whether healthcare training is associated with progress for those already in the industry. For each group we compare career progress to the career progress of all HPOG participants.

Data and Analysis

Time periods. The study analyzes career progress over **three time periods**: one year after enrollment in HPOG (four quarters), two years after enrollment (eight quarters), and three years after enrollment (twelve quarters). Because the analysis informing this brief was not conducted a full three years after the final participant enrolled in HPOG 1.0, the sample of participants for whom we have three years of data is smaller than that for which we have two years and one year of data (see the *Sample Sizes* section below). Earnings for each time period are measured at that point (i.e., earnings for year one are for the fourth

¹² The study measures wage levels of occupations using data on average wages in occupations from the Bureau of Labor and Statistics Occupational Employment Survey (https://www.bls.gov/oes/current/oes_nat.htm).

quarter after enrollment).¹³ Training-related achievements for each time period include only those that occurred within that time period. For example, only training courses completed within 12 months of enrollment are counted for measures of progress at one year. “Enrollment” is defined as the start date of the earliest substantive activity undertaken by the HPOG participant, including healthcare training, supportive services receipt, and pre-training activities.

Sample sizes. The sample for this study is all HPOG participants in the 27 non-tribal HPOG 1.0 grantees enrolled between September 30, 2010 and September 30, 2015 who gave informed consent and have the requisite time after HPOG enrollment for each of our three time periods. In order to have the largest sample available for each estimate, the study uses a different sample for each time period. Overall sample sizes are 25,189 participants with at least one year of data after enrollment, 17,739 with at least two years after enrollment, and 9,117 with at least three years after enrollment. For subsample measures and subgroups, sample sizes are listed in the relevant exhibits.

Career Progress Results

Training completion and earnings growth

Most HPOG 1.0 participants experienced career progress in either earnings or education and training; the percentage making career progress increased over time after enrollment. More than half of HPOG participants saw an increase in their earnings (52 percent), and more than half completed at least one healthcare training course (55 percent) within one year after program enrollment (Exhibit 4). Almost three-fourths (74 percent) progressed in *either* earnings *or* training completion by one year after enrollment, and almost a third (31 percent) had made progress in *both* areas by the end of their first year after enrolling in HPOG.

Exhibit 4. Career progress among HPOG participants in earnings and education

Career Progress Measure	Percentage with Progress One Year after Enrollment	Percentage with Progress Two Years after Enrollment	Percentage with Progress Three Years after Enrollment
a) Earnings growth	52	57	61
b) Completion of healthcare education and training	55	63	67
c) Progress in either earnings or healthcare education and training	74	82	85
d) Progress in both earnings and healthcare education and training	31	38	43

Source: Authors’ calculations from PRS and NDNH data. N = 25,189 one year after enrollment; N = 17,739 two years after enrollment; N = 9,117 three years after enrollment.

As time after enrollment increased, the percentage of HPOG participants making progress in these primary measures also increased. For example, three years after enrollment, 61 percent of HPOG participants had increased earnings relative to pre-enrollment, compared with 52 percent one year after enrollment. And a total of 85 percent of participants had completed at least one training course *or* had an increase in earnings by three years after enrollment, 11 percentage points higher than at one year after

¹³ Sensitivity tests using the cohort of individuals with three years of time elapsed post-enrollment for all measures (i.e., one, two, and three years post-enrollment) find similar results to what is reported here.

enrollment. The percentage of participants making career progress in each of the four measures improved between 9 and 12 percentage points across the four primary measures from year one to year three. Slightly less than half (43 percent) made career progress in earnings *and* training by year three.

Moving along career pathways

In addition to increasing earnings or completing a training course, **career progress can also mean completing multiple courses** to increase credentials and/or to move forward along a career pathway. Participants who complete multiple courses at the same level (for example, for entry-level jobs) increase their chances of employment and may qualify for higher-wage jobs because of their more varied and flexible skills. Those who complete courses along a career pathway are making their way towards higher-wage and more stable occupations.

Exhibit 5 presents results for the **six secondary measures of career progress** in education and training. The percentage of participants meeting these career progress criteria **increased for all measures and across all three years**.

Exhibit 5. Career progress among HPOG participants in credentials, multiple courses, and training for higher-wage jobs

Career Progress Measure	Percentage with Progress One Year after Enrollment	Percentage with Progress Two Years after Enrollment	Percentage with Progress Three Years after Enrollment
e) Completion of healthcare education and training <i>and</i> receipt of credential	37	44	48
f) Completion of multiple healthcare education and training courses	10	13	14
g) Receipt of multiple credentials	9	12	15
h) Completion of healthcare education and training for those with healthcare experience at entry ^a	53	64	68
i) Completion of healthcare education and training in a higher-wage occupation than the healthcare occupation employed in at entry ^b	29	39	39

Source: Authors' calculations from PRS and NDNH data. For measures e), f), and g), respectively, N = 25,189 one year after enrollment; N = 17,739 two years after enrollment; N = 9,117 three years after enrollment.

^a Percentages are of those reporting prior healthcare employment experience at program entry. N = 4,331 one year after enrollment; N = 2,914 two years after enrollment; N = 1,499 three years after enrollment.

^b Percentages are of those employed in healthcare at program entry. N = 4,169 one year after enrollment; N = 2,823 two years after enrollment; N = 1,458 three years after enrollment.

The first secondary measure, defining progress as receipt of a credential in addition to completing a healthcare training course, is stricter than the primary measure used above in Exhibit 4. It shows that only a subset of those completing healthcare training (primary) *also* received a credential.¹⁴ Even by three

¹⁴ Most credentials received by HPOG participants consisted of certificates and licenses, with 9 percent or less receiving academic degrees (Associate's, Bachelor's, or Master's; Werner et al. 2016).

years after enrollment, allowing for time after training completion that might be necessary to attain licenses or certifications, 48 percent of participants had completed training *and* received a credential compared with 67 percent only completing a healthcare training. In year three, the percentage of participants who completed a training *and* received a credential is lower than the percentage only completing training after year one (55 percent in Exhibit 3). This suggests that not everyone completing training receives a degree or third-party certification. It is important to recognize, however, that not all HPOG healthcare training courses grant degrees or lead to a license or certification required to obtain work, and not all states require a license or certification for specific healthcare occupations. In some occupations—for example, medical billing—there are no government licensing requirements and it is possible to work without any certification, although certifications are available.

Two other secondary measures of career progress are completion of multiple healthcare trainings and receipt of multiple credentials. A **minority of participants completed multiple trainings or obtained multiple credentials**. By three years or more after enrollment, 14 percent of participants completed multiple training courses and 15 percent received multiple credentials. This means about one-fifth of the 67 percent of participants completing a healthcare training course completed more than one.

The next two secondary measures of career progress focus on those who had work experience in the healthcare sector at program entry. Of **participants who had healthcare experience at entry, 53 percent completed training by the end of year one**, roughly the same as the percentage of all participants completing healthcare training by then (55 percent in Exhibit 4). The same pattern holds for years two and three. Of **participants employed in healthcare at program entry**, by year three, **39 percent completed training in an occupation with a higher wage** than their occupation at program entry.

Some of those who were employed in healthcare at program entry completed training in an occupation with an average wage that was not higher, and still others did not complete any HPOG training. However, because this analysis uses an occupation's average wage (and not the average of wages actually paid to participants), it is possible that those who trained for an occupation that did not have higher average wage might still receive a higher wage, or might have the potential for greater wage growth, after completing training. It is also possible that those who did not complete training received wage increases on their current job and, therefore, decided not to complete training.

Overall, **approximately two-thirds of participants made some sort of career progress**, but the analysis demonstrates that fewer moved up the career pathways ladder based on these secondary measures. Most participants did not complete multiple training courses, or if they were employed in healthcare at program entry, most did not complete training in a higher-wage occupation.

Career Progress for Subgroups

This section examines career progress of three specific subgroups that are of particular interest to HPOG: TANF recipients, participants without any prior post-secondary training or education who have a high school degree or equivalency, and participants who were working in healthcare at intake. Participants entered HPOG programs with various levels of education and work experience, and differences in receipt

of TANF benefits.¹⁵ Using the two-dimensional measure of progress in both earnings and healthcare education and training to summarize overall career progress, we can see that, compared to all HPOG participants, those with only a high school diploma or equivalent or who received TANF at program entry made somewhat less progress (Exhibit 6).

Members of each of these two subgroups, in every year after enrollment, experienced rates of career progress 4 to 6 percentage points lower than did HPOG participants overall. For example, 33 percent of participants receiving TANF experienced career progress in both earnings and education in year one compared with 37 percent for all participants. On the other hand, the percentage of HPOG participants who were employed in healthcare at program entry had the same rate of career progress as all participants (48 percent) in year three and close to the same in year two.

Despite lower rates of career progress than the sample overall, the subgroups examined did show increases in career progress across the three years. For example, 33 percent of participants receiving TANF at program entry made career progress by the end of year one, increasing to 42 percent by the end of year three. Those who were high school graduates or equivalent performed similarly. These results are promising for TANF recipients and participants with less education, whom we might expect to have greater challenges succeeding in HPOG given their lower basic skills and less work experience on average.¹⁶

Exhibit 6. Career progress in both earnings and healthcare education and training, by subgroup

Characteristic at Program Entry	Progress One Year after Enrollment		Progress Two Years after Enrollment		Progress Three Years after Enrollment	
	Percentage	N	Percentage	N	Percentage	N
All participants	37	25,189	44	17,739	48	9,117
TANF recipient	33	3,304	40	2,408	42	1,385
High school diploma/GED	32	11,791	38	8,611	42	5,033
Employed in healthcare	33	4,169	43	2,823	48	1,458

Source: Authors' calculations from PRS and NDNH data.

Note: Differences between the career progress measure for a subgroup versus all participants are significant at the .05 level for all measures and years except for those employed in healthcare at program entry, in year two.

Considerations for Performance Measurement

In addition to defining and presenting career progress outcomes for HPOG participants, this paper also considers whether measures of career progress can be useful indicators for performance management. That is, do the measures of career progress represent accurate indicators of desirable program outcomes

¹⁵ For a fuller description of the characteristics of HPOG participants, see Werner, Alan, Pamela Loprest, Deena Schwartz, Robin Koralek, and Nathan Sick (Forthcoming). *Final Report: National Implementation Evaluation of the Health Profession Opportunity Grants (HPOG)*. Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

¹⁶ Alyssa Rulf Fountain, Alan Werner, Maureen Sarna, Elizabeth Giardino, Gretchen Locke, and Pamela Loprest. (2015). *Training TANF Recipients for Careers in Healthcare: The Experience of the Health Profession Opportunity Grants (HPOG) Program*. OPRE Report # 2015-89. Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

and can such measures provide useful feedback in time to make a difference in program performance?¹⁷ In HPOG 1.0, OFA required grantees to report on three main measures of performance: program enrollment, training completion, and number of jobs obtained. For HPOG 2.0, OFA expanded the performance measures to seven: program enrollment, healthcare training enrollment, healthcare training completion, TANF enrollment, basic skills training enrollment, basic skills training completion, and number of jobs obtained. The results in this paper suggest that: 1) additional measures can be used to document other aspects of career progress: and, 2) tracking individuals over time is another important dimension of career progress. Training completion and earnings growth are each useful measures of career progress. However, these two measures reflect different dimensions of career progress. The results of this paper show that different groups of individuals are progressing on different timelines based on one or the other measure. Using only one of these measures tells only part of the story of career progress. Using a complex measure (progress based *either* on earnings growth *or* training completion) includes a broader group of participants who are making progress. Some of the other measures introduced in this paper also attempt to reflect progress along a career pathway – such as multiple course completions or movement into higher-wage occupations.

Documenting training completion in HPOG using administrative data (e.g., the PRS in HPOG 1.0) is relatively straightforward. In order to combine earnings measures with measures of educational progress to create useful management performance standards, the earnings data should meet the dual criteria of accuracy and timeliness.¹⁸ An issue for using earnings growth as a performance measure is the difficulty of obtaining accurate employment and earnings data. In HPOG 1.0, over a quarter of participants who completed training were missing information on employment and wages in the PRS.¹⁹ Greater efforts to collect wage information from participants, possibly on a quarterly basis, could be built into future programs, potentially as a requirement of grant receipt. However, even with additional resources for grantees to collect this information and for evaluation staff to oversee the quality, it will likely still be challenging to collect wage information after individuals have left the program. For example, it can be difficult and costly to maintain accurate contact information for former participants, and resulting data can be biased to include less mobile individuals.

One more reliable way to track progress in quarterly earnings – both during and after HPOG participation – is to use administrative data sources such as the NDNH.²⁰ The benefit of these data is that they provide accurate, stable measures of earnings and employment growth. However, there currently are limitations to using these data as well. One limitation of using these data for performance measurement is that, for security reasons, access to them is restricted. In a nationally-funded program such as HPOG, a third party

¹⁷ The application of performance management measures to the results of public programs was a major movement in government in the 1990s. For more on its origins and principles, see, for example: Carolyn Heinrich (2004). *Performance management in federal employment and training programs*. Focus (23) 2 and Joseph Wholey and Harry Hatry (1992). *The Case for Performance Monitoring in Public Administration Review*, Vol. 52, No. 6 (Nov. - Dec., 1992), pp. 604-610.

¹⁸ Considerations of completeness and cost of data collection are also relevant.

¹⁹ Werner, Alan, Robin Koralek, Pamela Loprest, Radha Roy, Deena Schwartz, Ann Collins, and Allison Stolte (2016). *Descriptive Implementation and Outcome Study Report: National Implementation Evaluation of the Health Profession Opportunity Grants (HPOG) to Serve TANF Recipients and Other Low-Income Individuals*, OPRE Report # 2016-30. Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

²⁰ The NDNH data are sourced from state Unemployment Insurance data files.

would need to be engaged to analyze the data to create the measures at regular intervals for grantees, adding to program costs. Another limitation is that the NDNH data are reported with a lag of at least four months, delaying the time program operators may have to respond to unexpected or undesirable trends. In developing performance measures for HPOG 2.0, ACF considered the use of NDNH data to measure employment and earnings, but did not implement it in large part because of the cost and difficulties associated with limited access to the data, and the time lag.²¹ However, future efforts to simplify access to the NDNH data could allow for the use of performance measures that rely on the data.²² Allowing better access to quarterly wage data would be less expensive and more reliable than asking program staff to find and contact participants long after they have left a program.

In addition to suggesting the usefulness of tracking employment and earnings as part of performance measurement, this brief also shows that measures of career progress trend over time since enrollment. To date, OFA's performance measures are aggregates of individuals who have met a specific benchmark regardless of time since joining the program (they are "cross-sectional" measures, indicating cumulative program results for inputs and outputs at any specific point in time). Using longitudinal data as performance measures allows a program the perspective of how individuals they serve fare over time and after leaving the program. Combined with the other cumulative measures, the longer-range results should be considered as important indicators of program results that may influence ongoing program improvement strategies.

Conclusion

This study examined the extent to which HPOG 1.0 participants made career progress over the three years after enrollment, using multiple measures in the education and work experience domains. Below we summarize the major findings, consider the prospects for further research, and assess the usefulness of the study's measures of career progress as HPOG performance criteria.

The majority of HPOG 1.0 participants met one or more of the study's career progress primary measures, with **85 percent showing improvement in either earnings growth or completion of healthcare education and training three years after enrollment**. More than half of participants had gains in each category, with 61 percent having increased earnings and 67 percent completing at least one training within three years. The **percentage of participants making progress increased from year one to year three for all 10 primary and secondary career progress measures** defined in this study. These findings are descriptive and cannot be interpreted as causal impacts of HPOG.

Measuring career progress over longer periods of time after enrollment (including periods following exit from HPOG) allows time for more participants to complete their initial training course or complete additional trainings, and/or allows for more work experience and the consequent potential for higher wages. For example, earlier studies of HPOG found that large portions of HPOG participants were still in training at 12 and 18 months after program enrollment, but that most had finished by 36 months.²³ Many

²¹ Note, however, that the federal evaluations of HPOG 1.0 and HPOG 2.0 are using NDNH data.

²² Agencies operating under the Workforce Innovation and Opportunity Act routinely collect these quarterly data from their state Unemployment Insurance agencies.

²³ See Werner et al. (forthcoming) and Werner et al. 2016

of those who were still in training after 18 months were participating in longer-term training courses for higher-wage jobs, such as Registered Nursing.²⁴

Current ongoing research studies of HPOG 1.0 will report on impacts at 36 and 72 months after random assignment, offering the prospect of greater insights into the longer-term track of career progress for HPOG participants.²⁵ Specifically, the studies will:

- Track quarterly employment and earnings outcomes through 36 and 72 months after HPOG enrollment for all sample members of the HPOG 1.0 Impact Study;²⁶
- Track educational progress and growth in hourly wages and employment benefits on a random subsample of HPOG 1.0 Impact Study participants using a follow-up survey fielded at 36 and 72 months after program entry; and
- Estimate HPOG impacts on primary career progress outcomes.

The longer-term studies will help confirm whether the positive trends in career progress observed here continue over six years after program entry, and whether those trends represent an improvement over what would have occurred in the absence of HPOG.

²⁴ Op. cit.

²⁵ See <https://www.acf.hhs.gov/opre/research/project/career-pathways-intermediate-outcomes-cpio-study> and <https://www.acf.hhs.gov/opre/research/project/career-pathways-long-term-outcomes-study>.

²⁶ Note that the HPOG Impact Study includes all but 7 of the 49 distinct HPOG 1.0 programs.