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The Green Jobs and Health Care Impact Evaluation: Findings from the Implementation Study of Four Training Program for Unemployed and Disadvantaged Workers

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Contents

Executive Summary	i
1. Introduction.....	1
1.1 Policy and Research Context	2
1.2 The Pathways and Health Care Grant Programs	5
1.3 Grantee Programs Included in the Study.....	6
1.4 Evaluation Design and Data Sources	10
1.4.1 Green Jobs and Health Care Impact Evaluation Design	10
1.4.2 Implementation Study Design and Data Sources	11
1.5 Overview of the Report.....	14
2. American Indian Opportunities Industrialization Center’s Soil to Sky Program.....	15
2.1 Grant Overview.....	15
2.2 Program Context and Goals	15
2.3 Target Group and Treatment Group Characteristics	16
2.4 Organizational Structure and Staffing.....	19
2.5 Recruitment and Enrollment	20
2.5.1 Recruiting Participants for Soil to Sky Trainings	20
2.5.2 Enrollment Process for Soil to Sky Trainings.....	21
2.6 Soil to Sky Training Programs	24
2.6.1 Short-Term Soil to Sky Programs	27
2.6.2 Long-Term Soil to Sky Programs	28
2.7 Assistance and Supports.....	30
2.7.1 Academic and Personal Supports.....	30
2.7.2 Financial Assistance.....	31
2.7.3 Employment Services	31
2.8 Participants’ Perspective	33
2.9 Participation Patterns in Soil to Sky Training Programs.....	34
3. Grand Rapids Community College’s Pathways to Prosperity Program	39
3.1 Grant Overview.....	39
3.2 Program Context and Goals	40
3.3 Target Group and Treatment Group Characteristics	40
3.4 Organizational Structure and Staffing.....	43
3.5 Recruitment and Enrollment	45
3.5.1 Recruiting Participants for Pathways to Prosperity Programs	45
3.5.2 Enrollment Process for Pathways to Prosperity Programs.....	46
3.6 Pathways to Prosperity Training Programs.....	47
3.6.1 Basic Skills and Career Prep.....	48
3.6.2 Occupational Training.....	51
3.7 Assistance and Supports.....	52
3.7.1 Academic and Personal Supports.....	52
3.7.2 Financial Assistance.....	53
3.7.3 Employment Services	53
3.8 Participants’ Perspective	54

3.9	Participation Patterns in the Pathways to Prosperity Program	54
4.	Kern Community College District’s Clean Energy Center	58
4.1	Grant Overview	58
4.2	Program Context and Goals	58
4.3	Target Group and Treatment Group Characteristics	60
4.4	Organizational Structure and Staffing.....	62
4.5	Recruitment and Enrollment	63
4.5.1	Recruiting Participants for Clean Energy Center Trainings.....	63
4.5.2	Enrollment Process for Clean Energy Center Trainings	64
4.6	Clean Energy Center Training Programs	67
4.7	Assistance and Supports.....	69
4.7.1	Academic and Personal Supports.....	69
4.7.2	Financial Assistance.....	70
4.7.3	Employment Services	70
4.8	Participants’ Perspective	72
4.9	Participation Patterns in Clean Energy Center Training Programs	73
5.	North Central Texas College’s Health Matrix Grant Scholarship Program	77
5.1	Grant Overview	77
5.2	Program Context and Goals	77
5.3	Target Group and Treatment Group Characteristics	80
5.4	Organizational Structure and Staffing.....	83
5.5	Recruitment and Enrollment	84
5.5.1	Recruiting Participants for Health Matrix Grant Scholarships	85
5.5.2	Enrollment Process for Health Matrix Grant Scholarships	85
5.6	Health Matrix Grant Scholarship Program.....	88
5.7	Assistance and Supports.....	93
5.7.1	Financial Assistance.....	93
5.7.2	Academic and Personal Supports.....	96
5.7.3	Employment Services	98
5.8	Participants’ Perspective	99
5.9	Participation Patterns in the Health Matrix Grant Scholarship Program	100
6.	Key Findings from the Implementation Study.....	104
	References.....	113
	Appendix: Program Environment for GJ-HC Grantees.....	117

Executive Summary

A central challenge in building a strong U.S. economy is achieving the dual goals of providing opportunities to unemployed and low-skilled individuals to enter and advance in the labor market and meeting the needs of economic sectors with a strong demand for skilled workers. To address these related goals, policymakers and practitioners have developed occupational training programs with articulated employment steps targeted to locally in-demand jobs and combined the programs with support services and strong connections to employment. Sometimes known as career pathways programs, they aim to address the economy's need for skilled workers by focusing on high-demand occupations while providing training and supports that allow low-skilled individuals and individuals facing barriers to work to find jobs and advance in careers that pay enough to support a family. The U.S. government, as well as states and localities, has shown great interest and dedicated significant funding to develop and operate training programs that reflect this career pathways approach.

As part of the response to the deep recession that started in 2008, the American Recovery and Reinvestment Act of 2009 funded several initiatives designed to provide training to improve the employment prospects of unemployed workers and other individuals facing barriers to employment. Two of these initiatives, both administered by the Employment and Training Administration at the U.S. Department of Labor (DOL), are the focus of this report:

- The Pathways Out of Poverty (Pathways) Grant Program, which funded training in “green” occupations, such as energy efficiency and renewable energy sectors, for disadvantaged populations living within high-poverty areas, with particular emphasis on unemployed individuals, high school dropouts, and those with a criminal record
- The Health Care and Other High Growth and Emerging Industries Grant Program (Health Care), which provided resources for unemployed, dislocated, and incumbent workers to prepare and enter the healthcare sector fields—nursing, allied health, long-term care, and health information technology—and other high-demand sectors of the economy, including renewable and traditional energy, logistics, and biotechnology

Through its Solicitation for Grant Awards, DOL directed both grant programs to include a focus on a career pathways approach, which combines training programs with articulated employment steps targeted to locally in-demand jobs with support services and strong connections to employment. The grants funded partnerships of workforce agencies, community colleges, non-profit organizations, and other organizations to provide the training. The Pathways grant program operated from 2010 through 2012, while the Health Care programs operated from 2010 to 2013.

DOL sponsored a single rigorous evaluation of these two grant programs. The evaluation, known as the Green Jobs and Health Care (GJ-HC) Impact Evaluation, was conducted by Abt Associates and its partner Mathematica Policy Research, Inc. Four grantees from the two grants programs were purposively selected for the evaluation based on their program design and scale.

The evaluation includes both an implementation study to examine the design and operation of each of the four programs and an impact study that uses an experimental research design to determine the effects of each grantee's program on participants' earnings, as well as on other outcomes of interest, including educational attainment.

The evaluation describes the implementation and impacts for each of the selected grantees' programs separately. The study is not designed to estimate the overall implementation or effect of all of the Pathways or Health Care grant programs. The grantees included in the study include one Pathways grantee, Grand Rapids Community College (GRCC), and three Health Care grantees: American Indian Opportunities Industrialization Center (AIOIC), Kern Community College District (KCCD), and North Central Texas College (NCTC).

This document reports on the Green Jobs and Health Care Impact Evaluation's Implementation Study and examines the design and operation of each of the four grantees' programs. The results from the impact study are provided in a separate report. This report focuses on describing the content of the training and related supports (particularly the academic and personal supports, financial assistance, and employment assistance) provided through the grant and the participation patterns for enrollees, including the length of attendance and completion rates. The report also includes key findings and lessons related to the implementation and operation of the programs across the four grantees. The remainder of this summary provides an overview of the research design for the evaluation and an overview of the grantees included in the evaluation. This is followed by a summary of the four grantees' programs and the key findings from the implementation study.

Overview of the Green Jobs and Health Care Impact Evaluation Design

The GJ-HC Impact Evaluation comprises two major components that together provide important information on the operation and effectiveness of selected grantees under the Pathways Out of Poverty and Health Care and Other High Growth and Emerging Industries grant programs. These include: (1) an implementation study that examines the operation of the programs and participation patterns of program enrollees in key program activities and (2) an impact study that uses a random assignment research design to determine whether each of the four programs increases employment, earnings, and other outcomes—relative to the experiences of a control group

To produce reliable estimates of the effectiveness of the four grantee programs, the GJ-HC Impact Evaluation uses an experimental research design. This involves assigning eligible program applicants randomly (as in a lottery or coin toss) to one of two groups: (1) a treatment group that is offered the chance to participate in the grant-funded services (whether or not those individuals actually participate) and (2) a control group that cannot participate in the grant-funded services (but can access other services available in the community). The random assignment process ensures that there are no systematic differences between the two groups at “baseline” (entry into the study). Thus, any difference between the two research groups in outcomes (known as “impacts”) that emerges over time can be attributed directly to the grant-funded program. The evaluation and random assignment process started in July and August 2011, approximately 18 months after the programs began at each of the four grantees, and continued through the remainder of the operational period of the grant.

This report examines findings from the implementation study, describes the experiences of the grantees in operationalizing their grant-funded efforts, and outlines participation patterns of program enrollees in the training activities. The implementation study focuses on the period of program operations when random assignment was ongoing (from August 2011 to June 2013 across the grantees). The information in the implementation study is based on several data sources. First, program staff and organizational partners at each grantee were interviewed in person at two points in time (the first visit also included a focus group with a small number of participants). Second, grantee program administrative records on service receipt

and completion were used to conduct a descriptive analysis of participation patterns in program activities, including participation levels, completion rates, and length of stay in the programs. To adequately capture the complete experiences of program participants, these analyses examined the participation of treatment group members for whom 12 months of follow-up data were available (this resulted in an analysis of those enrolled earlier in the random assignment period). Finally, to examine the characteristics of those served by the grantees, the implementation study used information collected from program enrollees at the time of application to the program when random assignment occurred. This includes information on demographic characteristics, education and employment history, and receipt of public assistance (this report focuses on those who were eligible for the grantee's services and assigned to the treatment group and does not discuss the experiences of control group members).

Grantees in the Green Jobs and Health Care Impact Evaluation

The four grantees were purposively selected for the evaluation, in coordination with DOL, based on three primary factors: (1) the extent to which they operated a career pathways approach, (2) whether the number of individuals served by the program was sufficient for the experimental design, and (3) the grantee's ability to implement the study's procedures, particularly random assignment. The grantees included AIOIC's Soil to Sky program, GRCC's Pathways to Prosperity program, KCCD's Clean Energy Center, and NCTC's Health Matrix Grant scholarship program.

As shown in Exhibit ES.1, AIOIC and NCTC, both Health Care grantees, aimed to increase participant skill levels and credential receipt in the healthcare field. GRCC, a Pathways grantee, and KCCD, a Health Care grantee, received funding to operate training programs in green-related industries, including wind and solar technologies (KCCD operated a green training program under the "Other High Growth Industries" provision of the Health Care grant program). AIOIC is a non-profit organization, while GRCC, KCCD, and NCTC are community colleges. All the grantees generally targeted unemployed or underemployed populations; however, reflecting the requirements of the Pathways grants, GRCC focused on low-income and low-skilled individuals, particularly those with a criminal background.

Three of the grantees (AIOIC, GRCC, and KCCD) operated programs providing training services and related supports such as academic and personal advising, financial assistance to attend training, and job placement assistance that were developed and funded by the grant. NCTC used grant funds to provide partial scholarships for existing healthcare training programs to offset participants' tuition expenses. This grantee was selected because of interest in the role of financial assistance in supporting training completion and subsequent employment. During the study period, the number of individuals enrolled in the program (the treatment group) ranged from 186 for GRCC to 555 for NCTC.

Exhibit ES.1. Overview of Grantee Programs Included in the Green Jobs and Health Care Impact Evaluation

Grantee, Program, and Location	Type of Grant	Type of Organization	Number Enrolled in Treatment Group	Target Population	Industry and Targeted Occupations
American Indian Opportunities Industrialization Center (AIOIC) Soil to Sky program Minneapolis, Minnesota	Health Care and Other High Growth and Emerging Industries	Non-profit organization	271	Unemployed or underemployed individuals with no criminal record. Education level of at least the fifth grade with some trainings requiring a high school diploma or General Educational Development (GED) certificate.	Healthcare industry Personal Care Assistant; Nursing Assistant; Home Health Aide; Trained Medication Aide; Acute Care Nursing Assistant; and Medical Office Assistant.
Grand Rapids Community College (GRCC) Pathways to Prosperity program Grand Rapids, Michigan	Pathways Out of Poverty	Community college	186	Low-income individuals. Emphasis on serving low-skilled individuals (e.g., those without a high school diploma or GED, or with limited English language proficiency) and individuals with criminal backgrounds.	Green industry Green Construction Remodeler; Construction Electrician; Welder; Information Technology Specialist; and Commercial Driver.
Kern Community College District (KCCD) Clean Energy Center Bakersfield, California	Health Care and Other High Growth and Emerging Industries	Community college	414	Unemployed, underemployed, and dislocated workers. High school diploma or GED, no violent felony convictions, and able to pass a drug test.	Green industry, specifically clean energy Wind Technician; Solar Technician; and Traditional Utility Worker.
North Central Texas College (NCTC) Health Matrix Grant scholarship program Gainesville, Texas	Health Care and Other High Growth and Emerging Industries	Community college	555	Unemployed, underemployed, and dislocated workers. Some targeting of first-generation college students and English language learners.	Healthcare industry Certified Medication Aide; Clinical Medical Assistant; Certified Nurse Aide; EKG Technician; Medical Billing and Coding; Pharmacy Technician I; Phlebotomy Technician; Physical Therapy Aide; and Licensed Vocational Nurse.

Key Findings from the Implementation Study

The four grantee programs targeted a diverse set of individuals and provided a range of training and other related services. Exhibit ES.2 presents selected characteristics of those enrolled in each of the grantee programs (the treatment group). Text boxes for each of the grantee programs summarize the key dimensions of the grantees' programs, specifically the type of training provided, the supports provided to individuals while they were in training (particularly academic and personal supports, financial assistance, and employment assistance), and patterns of participation in and completion of training activities. While the body of the report discusses the operational experiences of each of the grantees separately, this summary documents the key findings and lessons learned from the implementation and operation of the programs across the four grantees.

Overall, while recruitment was a challenge, the grantees in the Green Jobs and Health Care Impact Evaluation served a disadvantaged albeit varied population in terms of their demographic characteristics and employment and education history. The grantees engaged a high number of individuals in the training programs once they were enrolled, with some programs having relatively high completion rates. Moreover, many participants attended and completed sequences of training courses, a key component of a career pathways approach. However, by design, the length of training was short, which is likely to have encouraged engagement and completion. These grantees also indicate that support services provided in addition to occupational training were critical to engaging a hard-to-serve population. All four grantees, to varying degrees, offered academic and personal supports, financial assistance, and employment assistance. Working with employers also was an important element of the grantee programs, and a substantial commitment on the part of the grantee was required to maintain these relationships over the course of the grant. Specific findings across these areas are discussed below:

The grantee programs were successful in reaching disadvantaged populations, but the populations they served varied in alignment with the training approach. While all the grantees targeted disadvantaged populations, the populations they served reflected the nature of the training provided, the training-specific enrollment requirements, and the local environment in which they operated. As shown in Exhibit ES.1, as expected, given it was a Pathways grantee, GRCC focused on serving a high-poverty area and served a relatively disadvantaged population compared to the other grantees. Enrollees at GRCC were older and primarily male, almost two-thirds were receiving public benefits, and one-third had previously been convicted of a felony. KCCD served a primarily male population most of whom were unemployed when they enrolled in the program (82 percent), and almost half were receiving some type of public benefits. AIOIC and NCTC served a primarily female population, not surprising given their healthcare focus. Reflecting the community in which it operated, AIOIC served a primarily minority population (including 23 percent who were legal residents) and over half received public benefits. Of the grantees, NCTC served the least disadvantaged population: 44 percent of enrollees were unemployed, 50 percent had some college experience, and less than a quarter received public benefits.

Exhibit ES.2. Selected Characteristics of Treatment Group Members at the Time of Random Assignment, by Grantee Program

Characteristic	AIOIC	GRCC	KCCD	NCTC
Female (%)	79.0	29.0	10.4	83.8
Average age (years)	32.3	40.8	32.0	31.2
Race/ethnicity (%)				
White	20.9	57.0	72.9	69.5
Black or African American	58.2	36.9	10.9	18.3
Hispanic ethnicity	7.0	15.1	44.9	20.6
U.S. citizen (%)	77.1	88.7	93.9	91.5
Employed (%)	43.3	26.7	17.7	55.8
Education level (%)				
Less than high school	6.3	11.3	2.7	3.4
High school diploma or GED	27.8	25.8	46.1	26.1
Some college but no degree	37.8	31.2	32.5	49.8
Receiving any public benefit (%)	53.9	62.9	45.9	22.0
Felony conviction (%)	1.5	29.2	12.3	0.4

Source: Green Jobs and Health Care Impact Evaluation Baseline Information Form

Notes: Percentages do not sum to 100 percent for race and education because not all response categories are included.

Grantees used aggressive marketing and recruitment efforts to identify program participants. The grantees in the study recognized from the outset that the focused nature of their programs, coupled with their emphasis on disadvantaged populations, would require a dedicated outreach and marketing strategy. This challenge was compounded by the evaluation design that necessitated a degree of “over recruitment” to establish a control group. All the grantees used a multifaceted approach to recruit potential participants. Approaches used included social media, including Facebook and Twitter; in-person recruitment at community events, job fairs, schools, and churches; partnerships with local human services offices such as Supplemental Nutrition Assistance Program (SNAP) and Temporary Assistance for Needy Families (TANF); printed brochures and posters; and television and radio ads. Some of the grantees (AIOIC, GRCC) designated specific staff to recruit individuals for the programs. In addition to these outreach efforts, other strategies were used to identify eligible individuals. GRCC expanded the geographic catchment area of its program so that a wider range of individuals could potentially be eligible for the program. KCCD streamlined its intake procedures by reducing the number of in-person visits required for intake to ensure it did not inadvertently deter individuals from enrolling. However, even with these dedicated and concerted efforts, recruitment remained an ongoing and universal challenge over the life of the grants.

American Indian Opportunities Industrialization Center, Minneapolis, MN
Soil to Sky Program

Organization and Context: AIOIC is a non-profit organization located in a low-income South Minneapolis neighborhood. Although originally established to serve American Indians, AIOIC now offers education and employment services to a diverse population.

Training Programs: Soil to Sky trainings in healthcare fields ranged from short-term (one- to six-week) programs to longer term (six- and nine-month) programs. The short-term programs were Acute Care Nursing Assistant, Home Health Aide, First Aid and CPR, Nursing Assistant, Personal Care Assistant, and Trained Medication Aide. Short-term training programs could be taken in a sequence to gain multiple certificates. The long-term training programs were the Health Occupations Program (which combined several short-term programs) and the Medical Office Assistant program. Training resulted in either an AIOIC certificate or eligibility to sit for the relevant state examination.

Supports: Training was offered at AIOIC at no cost to participants. Advisors provided tutoring and support on academic-related issues, while other dedicated staff provided assistance with personal issues. Dedicated staff provided one-on-one counseling on all aspects of the job search process. Each week, AIOIC offered a two-hour work readiness class that was required for participants in short-term training and optional for those in long-term training. Staff also identified and established relationships with numerous healthcare employers to identify clinical placements and job openings, build the reputation of the program, and guide program services.

Participation Patterns: Of those who participated, the vast majority (89 percent) attended the short-term programs, with 60 percent attending two or more training programs. Completion rates were highest among those who attended two training programs (80 percent). Average length of stay was 3.2 months.

Programs achieved high participation levels and some individuals participated in multiple training program. The vast majority of those assigned to the study’s treatment group attended a training program (close to 80 percent or more). While there was variation, a significant proportion of participants in three of the grantee programs (AIOIC, GRCC, and KCCD) progressed through some sequenced training “steps.” At KCCD, over two-thirds of those who participated attended two or more of the green training programs, while in AIOIC, 60 percent of participants took two or more short-term training programs. At GRCC, 30 percent of those who participated attended an eight-week course designed to improve school and work readiness (known as Career Prep) in addition to occupational training. (NCTC did not have a sequence of training courses).

While a substantial number of individuals who participated progressed through the training sequences, the length of time individuals attended the programs was relatively short. Across the grantees, the average length of stay in the grant-funded programs ranged from 2.4 months at NCTC to 3.3 months at GRCC. A minority of participants attended the training programs longer than six months, ranging from only 1 percent at KCCD to one-third at AIOIC.

Programs had high completion rates, possibly due to the short length of training and range of supports provided. Close to 90 percent of all KCCD participants completed their trainings, including those who enrolled in the full sequence of training programs. The other three programs had high overall rates of completion (ranging from 64 percent to 85 percent), although not consistently across all courses or sequences of courses. The short duration of the programs may have facilitated completion. In addition, while service delivery approaches varied, the grantees typically provided guidance on personal and academic issues, tutoring, and help with studying and test-taking skills that may have helped participants remain engaged and complete their courses. The grantees also covered all or much of the tuition and

generally provided transportation assistance. Students at AIOIC were assigned to an academic advisor who assessed student progress and identified students who needed assistance. AIOIC also had staff to address personal issues affecting participation. At GRCC, staff from partner organizations helped participants navigate their choice of trainings and provided support during training. At KCCD, instructors provided assistance with academic and personal issues, with one instructor carrying a lighter teaching load in order to be able to assist students. NCTC had advisors to assist students on an as-needed basis.

Grand Rapids Community College, Grand Rapids, MI Pathways to Prosperity Program

Organization and Context: GRCC serves residents of Kent County, which includes Grand Rapids, where the school's main campuses are located, as well as several surrounding counties. Pathways to Prosperity was led by the School of Workforce Development. Partner organizations contributed to delivering career coaching, and support services.

Training Programs: Pathways to Prosperity offered basic skills classes in GED preparation, ABE, and ESL instruction to boost basic academic skills, and an eight-week Career Prep program focused on school and work readiness. Individuals who were prepared for college-level coursework—either upon enrollment or after completing basic skills classes—could enroll in occupational training programs in green-related sectors. Completion of Career Prep resulted in employability certificates, and some occupational trainings prepared participants to take industry certification exams.

Supports: Training was offered at no cost to participants. GRCC staff and staff at partner organizations helped participants navigate the selection of trainings, and provided support during training. These staff also assisted participants in finding employment, including giving guidance on searching for jobs and submitting an application.

Participation Patterns: Of those who participated in the program, 61 percent attended one program (primarily Career Prep), and 30 percent attended Career Prep and Occupational Training. The completion rate was 50 percent for Career Prep on its own and 80 percent for those who attended both Career Prep and occupational training. Average length of stay was 3.3 months.

Grantees integrated job readiness and job search skills into the service strategy. In addition to the occupational training and supports, all of the grantees offered a separate course focused on job readiness and job search skills and several also provided one-on-one job search assistance to participants. At GRCC, which served a relatively disadvantaged population compared to the other grantees, development of job readiness skills was a key element of the program. Early in the grant period, the program managers found that participants often did not have the basic skills and career orientation needed to enroll in and successfully complete occupational training. As a result, the program increasingly focused on providing pre-occupational training courses, particularly an eight-week Career Prep course that was designed to improve school and work readiness. At AIOIC, dedicated staff provided one-on-one job search assistance as well as weekly work readiness classes to individuals as they completed training. KCCD instructors provided assistance with job searches, including interview preparation and resume development, as part of the training curricula. KCCD instructors also offered one-on-one job search assistance to help students find jobs, and they sometimes drew on their professional networks to facilitate employment connections. NCTC had a required six-hour class designed to help participants apply for and secure jobs. Toward the end of the grant period, NCTC hired a career advisor to provide one-on-one assistance to students on resume preparation, interviewing, and identifying job leads; staff reported that in retrospect they wished they had done this earlier.

The strength and nature of grantees' partnerships with employers varied. Grantees took different approaches to working with employers. AIOIC and KCCD were notable for the priority given to these relationships. At these two grantees, staff intensively engaged employers to identify job openings for program participants, provide input into the curricula and program operations, and provide opportunities for program participants to gain hands-on experience through clinical and practical components. AIOIC had dedicated staff for establishing relationships with employers in the healthcare field, and staff had made connections with over 90 employers. KCCD instructors worked with local employers and industry representatives to build awareness about the training and market the skills of graduates. Employers and industry groups also advised on the curricula so that the training remained relevant. Although employer partnerships were given less emphasis at NCTC, particularly initially, staff at this grantee directly solicited input from employers on the curricula for some of their courses and also learned of employer needs through interactions with employers during student externships that were required for some of the training programs. GRCC initially contacted several employers to ask for help designing its green industry training, but these contacts were not sustained since the green industry did not develop as anticipated and the grant program took a somewhat different direction (see more on this below).

Kern Community College District, Bakersfield, CA Clean Energy Center

Organization and Context: KCCD, comprising three community colleges, serves multiple counties in the southern San Joaquin valley. Its Workforce Development Division established the Clean Energy Center in Bakersfield to provide occupational training in the traditional and clean utility sectors.

Training Programs: KCCD offered three training courses, starting with a required foundational PowerTech course, which focused on basic math and traditional electrical utilities. Students completing PowerTech could subsequently enroll in the WindTech and/or SolarTech courses, designed to prepare participants for jobs as wind turbine technicians and solar technicians, respectively. Each training ranged in length from six to nine weeks. Each course resulted in a KCCD certificate, and SolarTech trainees received an industry solar technician certificate.

Supports: All training courses incorporated team work skills, resume development, interview skills, and job search strategies into the curricula. Staff cultivated and maintained relationships with employers, who provided guidance on course content and hired some graduates. Instructors offered tutoring and academic advising as well as guidance on personal issues. Training was provided at no cost to participants. Instructors provided employment services and career advice, served as job references, and assisted with interview and resume preparation. When possible, instructors drew on their own professional networks to facilitate employment connections.

Participation Patterns: Of those who attended a program, two-thirds combined PowerTech with WindTech or SolarTech or both (one third took PowerTech only). Completion rates for all the programs were near or above 90 percent. Average length of stay in the program was 2.5 months.

Organizational partnerships were challenging when responsibilities and expectations were not precisely defined. Partner responsibilities and expectations often were not well defined. GRCC and KCCD both outsourced key service components to partners, and both experienced challenges maintaining these partnerships. KCCD initially planned for two American Job Centers (AJCs) to play key roles in recruitment, screening, and provision of support services to individuals in training. However, KCCD's relationship with the primary AJC in the program dissolved part way through the grant period because of dissatisfaction with the pace at which the AJC was enrolling individuals and the level of supports

(particularly assistance with job search and placement) provided to those who had completed the program. When the partnership between KCCD and the AJC ended, KCCD staff, including managers and instructors, assumed full responsibility for recruitment and helping participants find employment. The GRCC grant was structured to include other organizations as partners, rather than subcontractors, to foster each organization's identity as a collaborator in a team effort. In practice, however, this meant that GRCC had limited authority to specify requirements for each of the partners, making management of the grant challenging. GRCC reported it had difficulty controlling critical elements of the effort, such as the expertise required for staff hired by its partners for the career coaching position. In addition, the decentralized partnership approach made it difficult to establish a clear chain of command among the partner organizations. GRCC and its partners struggled to solidify their relationship and their coordination mechanisms, and GRCC indicated that it took over two years for the partnerships to operate smoothly. Both KCCD and GRCC reported that if outside partners were involved in future grant efforts they would better define the roles and responsibilities of each partner and would include a process for monitoring performance and remedying issues as they came up.

Both grantees that focused on “green” industries found that jobs in the sector did not materialize as expected. Both GRCC and KCCD found that employment in green industries did not develop as planned and as a result made adjustments to keep the training relevant to the needs of employers. Originally, GRCC's green focus included training in deconstruction, wind energy, and composite manufacturing. However, when job openings in these fields grew more slowly than projected, the grantee allowed participants to enroll in a range of other training programs that were more loosely affiliated with the green sector, such as commercial driver's license training, construction remodeling, welding, and information technology. KCCD's program focused on solar and wind, but from the start its courses were designed to promote development of transferrable skills. In particular, the foundational course PowerTech was specifically designed to focus on skills needed to work within both the traditional and renewable energy industries. When staff realized that employment in the green sector was not developing as planned, staff cultivated relationships with employers in related industries, particularly construction and residential installation, and incorporated more broadly applicable skills into the curricula.

North Central Texas College, Gainesville, TX Health Matrix Grant Scholarship Program

Organization and Context: NCTC serves four counties in northern Texas, with five campuses that extend from north of Dallas to near the Oklahoma border. The Lifelong Learning division offers short-term, non-credit courses in an effort to meet the training needs of local residents and employers.

Training Programs: Partial scholarships were awarded for eight non-credit programs in allied health (Certified Medication Aide, Clinical Medical Assistant, Certified Nurse Aide, EKG Technician, Medical Billing and Coding, Pharmacy Technician I, Phlebotomy, and Physical Therapy Aide) that ranged in length from one to six months (including externships), and a 12-month for-credit program (Vocational Nursing). The trainings resulted in a certificate or a degree.

Supports: The average scholarship was \$816 and covered 60 percent of tuition. Scholarships initially ranged from 24 to 82 percent of tuition depending on the program, but increased to cover 95 percent of tuition for non-credit programs by the end of the grant period. Advisors provided initial guidance as needed on course selection and assistance during training. Attendance in a six-hour job readiness class was required. Near the end of the grant period, a dedicated staff person provided one-on-one job search assistance to current and former scholarship recipients.

Participation Patterns: Of those who participated in a healthcare training program, most (92 percent) took only one healthcare training program, most commonly the Certified Nurse Aide and Pharmacy Technician. Few attended the longer for-credit program. Completion rates were above 80 percent in several of the non-credit programs, but were as low as 63 percent in others. Average length of stay was 2.4 months.

Grantees reported sustained institutional benefits from operating the grant. The grantees universally reported that resources were not available to continue program operations after the grant period ended. However, all four grantees reported that they hoped to provide, or even institutionalize, select programmatic elements or practices as part of their ongoing service delivery strategy.

- AIOIC planned to seek resources to continue the employment services developed under the grant, particularly the dedicated staff to provide these resources, the partnerships established with a wide range of healthcare employers, and the job search and job readiness assistance provided to participants. AIOIC also planned to expand the provision of these services to other training programs it operates. Staff at AIOIC also pointed to the lessons they learned from industry as a critical outcome of the grant; the lessons included the skills employees should have when they are hired, the type of training that is provided by the employer, and what skills are needed to advance in the healthcare field. These lessons allowed AIOIC to adjust its programming to better align the content with employer interests. In addition, staff at AIOIC viewed the tuition-free aspect of AIOIC's offerings as important and were considering changing the packaging of courses to make them eligible for Pell Grants.
- GRCC was examining ways to further develop and expand the career coaching model developed under the grant. Staff reported they were incorporating career coaching into the development of future programs. In addition, some of the organizational partners in the grant program intended to incorporate aspects of the model into their service delivery structures, if the resources were available. GRCC also planned to expand the use of the Career Prep curriculum across the college to assist students who wanted to enroll in a program but lacked the appropriate skill levels.

- Although program staff at KCCD were hoping that they might be able to continue to offer their three-pronged program for a fee, this was largely contingent on the Clean Energy Center continuing to exist (which it did not after the center failed to secure funding after the grant ended). Staff at KCCD had hoped that they might be able to charge fees and/or tuition by partnering more strategically with employers in the area and serving as a key training resource for renewable energy and related industries. However, this did not occur, and staff anticipated that instead, successful components of the program would be incorporated into other programs offered within the community college district. In particular, staff reported that an approach where the curricula incorporated broadly applicable technical skills, addressed personal issues that could affect attendance and employment, and provided direct connections to employers was unique to the grant-funded program and important to continue.
- NCTC’s administration planned to “institutionalize” the career advisor role, which was developed under the grant, and was seeking funding so that the one-on-one job search assistance provided by the advisor would be consistently available to NCTC students. NCTC staff also reported that it was generally difficult to identify funding sources for scholarships, and like staff at AIOIC, they were considering packaging courses and increasing the content of some courses to make them eligible for Pell Grants, which would be a source of funding for the tuition.

A separate report examines the impact of these four grantee programs on participant’s education and employment outcomes.

1. Introduction

A central challenge in building a strong U.S. economy is achieving the dual goals of providing opportunities to unemployed and low-skilled individuals to enter and advance in the labor market and meeting the needs of economic sectors with a strong demand for skilled workers.¹ To address these related goals, policymakers and practitioners have developed occupational training programs with articulated employment steps targeted to locally in-demand jobs and combined the programs with support services and strong connections to employment. Sometimes known as career pathways programs, they aim to address the economy’s need for skilled workers by focusing on high-demand occupations while providing training and supports that allow low-skilled individuals and individuals facing barriers to work to find jobs and advance in careers that pay enough to support a family. The U.S. government, as well as states and localities, has shown great interest and dedicated significant funding to develop and operate training programs that reflect this career pathways approach.²

As part of the response to the deep recession that started in 2008, the American Recovery and Reinvestment Act of 2009 (the Recovery Act) funded several initiatives designed to provide training to improve the employment prospects of unemployed workers and other individuals facing barriers to employment. Two of these initiatives, both administered by the Employment and Training Administration at the U.S. Department of Labor (DOL), are the focus of this report:

- The Pathways Out of Poverty (Pathways) Grant Program, which funded training in “green” occupations, such as energy efficiency and renewable energy sectors, for disadvantaged populations living within high-poverty areas, with particular emphasis on unemployed individuals, high school dropouts, and those with a criminal record.³
- The Health Care and Other High Growth and Emerging Industries Grant Program (Health Care), which provided resources for unemployed, dislocated, and incumbent workers to prepare and enter healthcare sector fields—nursing, allied health, long-term care, and health information technology—

¹ “Low-skilled” generally refers to individuals without a high school diploma or General Educational Development (GED) certificate or who lack the technical skills to work in jobs beyond an entry-level position.

² For example, the recent Workforce Innovation and Opportunities Act (WIOA) of 2014 requires state and local workforce agencies to develop career pathways strategies and provides a definition of these activities. More broadly, in 2012, a Joint Letter on Career Pathways from the U.S. Department of Labor’s Employment and Training Administration, the U.S. Department of Education’s Office of Vocational and Adult Education, and the U.S. Department of Health and Human Services’ Administration for Children and Families was released to express the interagency support for career pathways systems-building to meet the education and training needs of adults (accessed July 22, 2015, http://wdr.doleta.gov/directives/corr_doc.cfm?DOCN=3536). For information on state and local career pathways initiatives, see the Alliance for Quality Career Pathways sponsored by the Center for Law and Social Policy (CLASP, 2014).

³ U.S. Department of Labor, 2010a. The Pathways Solicitation for Grant Applications defined an area of high poverty as a Public Use Microdata Area (PUMA) where the poverty rate was 15 percent or greater. PUMAs are geographic statistical areas determined by the U.S. Census Bureau.

and other high-demand sectors of the economy, including renewable and traditional energy, logistics, and biotechnology.⁴

Both grant programs included a focus on a career pathways approach to training and funded partnerships of workforce agencies, community colleges, non-profit organizations, and other organizations to provide the training.

DOL sponsored a single rigorous evaluation of these two grant programs. The evaluation, known as the Green Jobs and Health Care (GJ-HC) Impact Evaluation, was conducted by Abt Associates and its partner Mathematica Policy Research, Inc. Four grantees from the two grants programs were purposively selected for the evaluation based on their program design and scale. The evaluation includes both an implementation study to examine the design and operation of each of the four programs and an impact study that uses an experimental research design to determine the effects of selected grantee programs on participants' earnings, as well as on other outcomes of interest, including educational attainment.

The evaluation describes the implementation and impacts for each of the selected grantee programs separately.⁵ The grantees in the study include one Pathways grantee: Grand Rapids Community College (GRCC) and three Health Care grantees: American Indian Opportunities Industrialization Center (AIOIC), Kern Community College District (KCCD), and North Central Texas College (NCTC).

This document reports on the GJ-HC evaluation's implementation study and examines the design, implementation, and operation of each grantee's program. It focuses on the content of the training and other services (particularly the academic and personal supports, financial assistance, and employment assistance) provided through the grant and the participation patterns for those that enrolled, including the length of attendance and completion rates. The report also includes key findings and lessons related to the implementation and operation of the programs across the four grantees. The information in the implementation study is based on in-person interviews with program staff, partners, and employers at each grantee, as well as on grantee program records on service receipt and completion.

The remainder of this chapter describes the policy and research context that undergirded the grant programs; summarizes the Pathways and Health Care grant programs; and provides an overview of the grantees in the study. It also provides an overview of the evaluation design, focusing on the methodology and data sources for the implementation study, and of the structure of the remainder of the report.

1.1 Policy and Research Context

By training unemployed and disadvantaged adults to obtain jobs in high-demand sectors of the economy, the DOL grant initiatives examined in this study were designed to address trends in the American labor market over the past three decades. First, there has been growing disparity in the earnings of workers with different education levels. Those with high school diplomas or less education have seen their earnings remain flat in real terms for decades, while those with postsecondary degrees have experienced significant

⁴ U.S. Department of Labor, 2010b

⁵ The study is not designed to estimate the overall effect of the Pathways or Health Care grant programs. In other words, the findings of the evaluation are specific to each of the four programs and cannot be generalized to the other grantees funded by the Pathways or Health Care grants.

earnings gains.⁶ This reflects that few low-skilled workers have jobs offering significant or lasting wage increases. For example, from 1984 to 2004, the probability that any individual would leave the bottom quintile of earnings was over 30 percentage points higher for those with more than a high school education than for those who did not complete high school.⁷ These disparities are expected to persist or worsen due to declines in the educational attainment among American workers, an aging (and soon to retire) skilled workforce, and an influx of low-skilled immigrants.⁸

Part of the reason for these trends is a growing demand for “middle-skills” jobs.⁹ Middle-skills jobs generally require education and training beyond a high school diploma but can pay enough to help pull a family out of poverty. However, the skill level required for many of these jobs is increasing.¹⁰ While in the past these jobs required the performance of manual and clerical tasks, many contemporary middle-skills jobs now require specialized skills and the performance of non-routine tasks. For example, computer technology, nursing, high-skill manufacturing, and other fields require postsecondary technical education and training and, in some cases, college math courses or degrees.

Finally, evidence exists that employers in some industries are having trouble finding qualified applicants for jobs and that some struggle to fill certain types of vacancies, especially for some middle-skills jobs.¹¹ This fact points to the possibility of a “skills gap,” where the skills of workers do not match those needed by employers. While the severity of this skills mismatch is debated,¹² it is clear that workers with no training beyond high school often have difficulty obtaining higher-skilled jobs that offer better wages.

The DOL grant initiatives examined in this study seek to provide occupational training to unemployed, dislocated, and disadvantaged adults so they can obtain and succeed in jobs in high-demand sectors of the economy. Thus, these initiatives are potentially important responses to these trends. Occupational training is not a new approach to improve the economic success of low-wage workers, and past efforts have had mixed results. Some studies of job training programs have found small but positive impacts and others found no evidence of impact.¹³ The evidence explaining why some programs have not been shown to be effective is limited, but descriptive studies point to a range of factors that appear to limit success. Low-wage workers may lack awareness of training opportunities and the types of credentials that are in demand in the labor market, resulting in low take-up of training programs.¹⁴ Moreover, low-wage workers face significant challenges to successful completion of education and training programs, including limited

⁶ Mishel et al., 2015

⁷ Acs and Zimmerman, 2008

⁸ Dohm and Shniper, 2007

⁹ Holzer and Lerman, 2007

¹⁰ Holzer, 2010

¹¹ Osterman and Weaver, 2014; Holzer, 2013

¹² Economic theory suggests the skills mismatch should correct itself over time. When labor demand rises for any given skill or credential and exceeds its supply in the market, the relative wages and salaries of workers who have these skills should rise. In turn, more workers and/or employers would invest in such skills, and eventually the skill supply among workers should also rise, thus reducing or eliminating any mismatch that might have initially resulted. Others point to market failures that may cause this mismatch to persist over time (Holzer, 2013).

¹³ Card, Kluve, and Weber, 2010; Greenberg, Michalopoulos, and Robins, 2003

¹⁴ Tompson et al., 2013

basic academic skills, limited academic or training goals due to negative school experiences, and lack of college role models, work and family demands on time; and an inability to afford school.¹⁵

Career pathways programs reflect an approach to training that seeks to improve on past efforts by bringing together training innovations and supports that directly address challenges faced by low-income and low-skilled adults. While there is no single definition of a career pathways program, key elements generally include the following:¹⁶

- Training that includes a series of manageable steps that are understood and attainable, leading to successively better credentials and employment opportunities in growing occupations
- Instructional approaches that accommodate the needs of low-skilled individuals, such as integrating technical and basic skills
- Supports to help students complete the training, such as academic and non-academic advising, tutoring, or assistance addressing personal issues
- Direct connections to employment and assistance in finding a job in the field of training
- Financial assistance to ensure students can afford school, particularly for programs or non-traditional students that may not be eligible for federal assistance under the Pell Grant program

While career pathways programs have gained attention, to date there have been no rigorous evaluations of programs using this approach, although several such evaluations are in progress.¹⁷ However, a number of studies suggest the potential of a career pathways approach to improve student outcomes and program impacts. These include a study of sectoral training programs, where training reflects the active involvement of employers and training providers in particular economic sectors, that showed earnings increases of 18 percent over a two-year period. Other studies have shown the positive effects of an approach that integrates basic skills with occupational training in the context in which the skills and training might be used on the job.¹⁸ Moreover, studies have found positive effects on the completion of training and credit receipt when enhanced financial resources were provided.¹⁹

The programs funded by the Health Care and Pathways grant programs incorporate many career pathways elements. The next section describes these grant programs further.

¹⁵ Fein, 2012

¹⁶ Fein, 2012; Werner et al., 2013

¹⁷ These include the Pathways for Advancing Careers and Education (PACE) and the Health Professions Opportunity Grant (HPOG) evaluations sponsored by the U.S. Department of Health and Human Services. See Martinson and Gardiner, 2014 on PACE and Dietz et al., 2014, on HPOG.

¹⁸ Zeidenburg, Cho, and Jenkins, 2010; Martin and Broadus, 2013

¹⁹ Richburg-Hayes et al., 2009; Richburg-Hayes et al., 2015; Miller et al., 2011; Patel and Rudd, 2012

1.2 The Pathways and Health Care Grant Programs

As noted above, the 2008 recession brought new urgency to programs and policies that focus on skills training for low-skilled and unemployed workers.²⁰ Through resources provided by the Recovery Act, DOL sponsored several training initiatives designed to help unemployed workers reenter the labor market with a particular focus on economically disadvantaged workers. These initiatives include the Pathways Out of Poverty and Health Care and Other High Growth and Emerging Industries grant programs.²¹ Grants were awarded to national non-profit organizations with local affiliates, local public agencies, and non-profit organizations. The resulting programs often involved partnerships with non-profit organizations, public workforce agencies, education and training providers, employers and industry associations, and labor organizations. The grantees were given considerable flexibility in the design and operation of their programs.²²

The Pathways grant program targeted economically disadvantaged populations, specifically individuals at least 18 years of age who were unemployed, high school dropouts, and those with a criminal record. It also focused on high-poverty regions, specifically those in or contiguous to areas where the poverty rate was 15 percent or higher. Through its Solicitation for Grant Awards (SGA) process, DOL directed applicants to provide training in energy efficiency and renewable energy that supported advancement along a defined career pathway and that resulted in an industry-recognized credential. As appropriate, the funded programs were to integrate basic skills and work readiness training with occupational skills training and combine supportive services with training services to help participants overcome barriers to employment. In January 2010, DOL awarded two-year grants to 38 grantees, ranging in value from \$1 million to \$8 million.

The Health Care grant program targeted unemployed workers, dislocated workers, and incumbent workers in need of skill upgrades to advance. Notably, this program did not have a focus on high-poverty areas, one of the key differences from the Pathways grants.²³ With the goal of developing a pipeline of credentialed healthcare workers and other high-growth industry workers, in the SGA DOL directed grantees to develop projects that supported participants' advancement along a defined career pathway, resulted in an employer- or industry-recognized certificate or degree, and integrated training activities with supportive services to help target populations overcome barriers to participation in training and employment. In February 2010, DOL awarded three-year grants to 55 grantees, ranging in value from \$2 million to \$5 million.

²⁰ Remarks delivered by President Barack Obama in April 2009 on the state of the economy emphasized the urgency for a multipronged approach to addressing the economic downturn. See The White House, Office of the Press Secretary, 2009. State and local workforce agencies were directed under ARRA to spend funds relatively rapidly, within a year if possible, on employment and job training initiatives. See Barnow and Hobbie, 2013.

²¹ The other training initiatives funded by the Recovery Act and administered by DOL are Energy Training Partnerships <http://doleta.gov/grants/pdf/SGA-DFA-PY-08-18.pdf> and the State Energy Sector Partnerships and Training <http://doleta.gov/grants/pdf/SGA-DFA-PY-08-20.pdf>. These grant programs were not included in this evaluation.

²² IMPAQ International, 2012

²³ The Healthcare SGA noted that within these categories, grantees could serve a range of individuals, such as those receiving public assistance, high school dropouts, individuals with disabilities, and individuals with limited English proficiency.

1.3 Grantee Programs Included in the Study

The GJ-HC evaluation includes 4 of the 93 grantees, one Pathways grant and three Health Care grants. In consultation with DOL, the four grantees were purposively selected based on the following factors:

- **Career pathways approach.** Because of a strong interest in learning more about a career pathways approach to training, the evaluation team considered programs with key elements of this approach, including articulated training and employment steps in occupations in demand in local communities; instructional accommodations for low-skilled populations, such as the inclusion of basic skills instruction in occupational training; supports such as academic and personal counseling and financial assistance; and connections to employers and jobs.
- **Program size.** Because the impact study uses a random assignment approach, grantees needed to operate relatively large programs that served several hundred participants over the course of a one-year enrollment period.
- **Ability to implement study procedures.** Finally, grantees had to be able to incorporate a random assignment research design into their program operations. Random assignment studies take commitment on the part of the program operators, and grantees needed to have the capacity to participate in this type of study.

Given this approach to site selection, the grantees were not selected to be and are not representative of all Pathways and Health Care grantees. The evaluation focuses on measuring grantee-specific impacts rather than impacts of the initiatives overall. Thus, with a focus on programs that include key career pathways elements, this evaluation seeks to build evidence on an approach to training that is hypothesized to have stronger results than past programs studied.

The research team used a multi-step process to select evaluation grantees. After a review of all the grantee programs funded under the two initiatives and site visits to potential candidates, and working with DOL, the research team selected four grantees that best met the criteria for the evaluation. The grantee's included AIOIC's Soil to Sky program, GRCC's Pathways to Prosperity program, KCCD's Clean Energy Center, and NCTC's Health Matrix Grant scholarship program.

Exhibit 1.1 provides an overview of the four selected grantees. AIOIC and NCTC, both Health Care grantees, aimed to increase participant skill levels and credential receipt in the healthcare field. GRCC, a Pathways grantee, and KCCD, a Health Care grantee, received funding to operate training programs in green-related industries, including wind and solar technologies (KCCD operated a green training program under the "Other High Growth Industries" provision of the Health Care grant program). AIOIC is a non-profit organization, while GRCC, KCCD, and NCTC are community colleges. All the grantees generally targeted unemployed or underemployed populations, however, reflecting the requirements of the Pathways grants, GRCC focused on low-income and low-skilled individuals, particularly those with a criminal background.

Three of the grantees (AIOIC, GRCC, and KCCD) operated programs providing training services that were developed and funded by the grant. While there is variation across the three programs, all featured a series of connected training courses that could be taken in sequence, as well as a range of supports including academic advising, tutoring, financial assistance to attend training, and employment assistance. For these grantees, the impact evaluation focused on measuring the effects of trainings and supports on credential attainment, employment, and earnings. Importantly and different from the other grantees in the

evaluation, NCTC used grant funds to provide partial scholarships for existing healthcare training programs to offset participants' tuition expenses. This grantee was selected because of interest in the role of financial assistance in supporting training completion and subsequent employment. The scholarship-supported healthcare training programs could also be sequenced to help participants progress in the healthcare profession.

Exhibit 1.1. Overview of Grantee Programs Included in the Green Jobs and Health Care Impact Evaluation

Grantee and Location	Type of Grant	Type of Organization	Target Population	Industry and Targeted Occupations	Overview of Grant-Funded Services
American Indian Opportunities Industrialization Center (AIOIC) Soil to Sky program Minneapolis, Minnesota	Health Care and Other High Growth and Emerging Industries	Non-profit organization	Unemployed or underemployed individuals with no criminal record. Education level of at least the fifth grade with some trainings requiring a high school diploma or GED certificate.	Healthcare industry Personal Care Assistant; Nursing Assistant; Home Health Aide; Trained Medication Aide; Acute Care Nursing Assistant; and Medical Office Assistant.	The Soil to Sky program healthcare trainings were short-term, lasting one to six weeks, with the exception of two that lasted six and nine months. Short-term training programs could be taken in a sequence to gain multiple certificates. Training was offered at AIOIC at no cost to participants and resulted in either an AIOIC certificate or eligibility to sit for the relevant state examination. AIOIC also offered academic and personal advising, financial assistance, and employment services.
Grand Rapids Community College (GRCC) Pathways to Prosperity program Grand Rapids, Michigan	Pathways Out of Poverty	Community college	Low-income individuals. Emphasis on serving low-skilled individuals (e.g., those without a high school diploma or GED, or with limited English language proficiency) and individuals with criminal backgrounds.	Green industry Green Construction Remodeler; Construction Electrician; Welder; Information Technology Specialist; and Commercial Driver.	The Pathways to Prosperity program included basic skills instruction, a career preparation course, and occupational training for employment in the green sector. Training was offered at no cost to participants. Most trainings resulted in employability or career readiness certificates, and some occupational trainings prepared participants to sit for industry certification exams. Partner organizations provided support to students while in training and assistance in finding employment.

Exhibit 1.1. Overview of Grantee Programs Included in the Green Jobs and Health Care Impact Evaluation (*continued*)

Grantee and Location	Type of Grant	Type of Organization	Target Population	Industry and Targeted Occupations	Overview of Grant-Funded Services
Kern Community College District (KCCD) Clean Energy Center Bakersfield, California	Health Care and Other High Growth and Emerging Industries	Community college	Unemployed, underemployed, and dislocated workers. High school diploma or GED, no violent felony convictions, and able to pass a drug test.	Green industry, specifically clean energy Wind Technician; Solar Technician; and Traditional Utility Worker.	KCCD's Clean Energy Center offered three connected trainings that prepared participants for employment in the wind and solar energy utility sector, as well as in traditional utilities. Trainings ranged in length from six to nine weeks, and could be taken individually or in sequence. Each resulted in a KCCD certificate; additionally, solar technician participants received an industry certificate. Training was offered at no cost to participants. Course instructors provided tutoring, advising on personal issues, and job search assistance.
North Central Texas College (NCTC) Health Matrix Grant Scholarship program Gainesville, Texas	Health Care and Other High Growth and Emerging Industries	Community college	Unemployed, underemployed, and dislocated workers. Some targeting of first-generation college students and English language learners.	Healthcare industry Certified Medication Aide; Clinical Medical Assistant; Certified Nurse Aide; EKG Technician; Medical Billing and Coding; Pharmacy Technician I; Phlebotomy Technician; Physical Therapy Aide; and Licensed Vocational Nurse.	NCTC provided partial scholarships for eight non-credit programs in allied health and one for-credit program (Vocational Nursing) in the School of Health Sciences. The trainings, most of which lasted one to six months, resulted in a certificate or a degree. Scholarship recipients were required to complete a six-hour job readiness class. Instructors provided informal tutoring and staff provided placement assistance.

1.4 Evaluation Design and Data Sources

The GJ-HC Evaluation comprises two major components that together provide important information on the operation and effectiveness of selected grantees under the Pathways Out of Poverty and Health Care and Other High Growth and Emerging Industries grant programs. The components are as follows:

- An implementation study that examines the operation of the programs and participation patterns of program enrollees in key program activities
- An impact study that uses a random assignment research design to determine whether each of the four programs increases employment, earnings, and other outcomes—relative to the experiences of a control group

As discussed, this report examines findings from the implementation study, and a separate volume reports on results from the impact study. This chapter describes the overall research design for the evaluation, including the impact study, and then discusses the research questions, methodology, and data sources for the implementation study that is the focus of this report.

1.4.1 Green Jobs and Health Care Impact Evaluation Design

To produce reliable estimates of the effectiveness of the four grantee programs, the GJ-HC Impact Evaluation uses an experimental research design. This involves assigning eligible program applicants through a lottery-like process to one of two groups:

- A treatment group that is offered the chance to participate in the grant-funded services (whether or not those individuals actually participate)
- A control group that cannot participate in the grant-funded services (but can access other services available in the community)

The random assignment process ensures that there are no systematic differences between the two groups at “baseline” (entry into the study). Thus, any difference between the two groups in outcomes (known as “impacts”) that emerges over time can be directly attributed to the grant-funded program rather than to differences in the characteristics of individuals in each group.

The extent and nature of the services and supports available to the control group vary from site to site. Thus, the treatment group is not being compared with a “no services” control group. Instead the impact study measures the effects on participant outcomes of *adding* the grant-funded services to the configuration of services already available in the community.

The specific random assignment procedure for each grantee is described in the chapters that follow. However, all grantees’ random assignment procedures follow the same general approach that includes the following steps:

- **Recruitment.** Program staff recruits potential participants using their established methods, which can include referrals from community partners, word of mouth, and publicizing service availability through the media.
- **Eligibility.** Program staff determines eligibility for the grant-funded services using standard procedures (i.e., program applications and meetings with program staff to determine if an applicant meets the eligibility criteria).

- **Informed consent.** Program staff describe the study to eligible individuals and administer the informed consent form, which explains individuals' rights as study participants and which individuals are required to sign it if they wish to participate in the evaluation. Those individuals who refuse to sign the informed consent form are not included in the study and are not eligible for the grant-funded services, but they receive information about other services in the community.
- **Baseline data.** Eligible individuals who consent to be in the study complete the Baseline Information Form (BIF). Program staff enters information from the BIF into a web-based Participant Tracking System (PTS) developed specifically for the evaluation.
- **Random assignment.** Following completion of the BIF, site staff uses the PTS to randomly assign individuals to the treatment or control group
- **Services according to random assignment status.** Following random assignment, those assigned to the treatment group are offered the training and related services provided through the grant-funded program, while those assigned to the control group are not able to participate in the grant-funded program but can access other services in the community.

The impact evaluation measures program impacts (separately for each grantee) 18 months after random assignment. Specifically, the impact study examines the impact of each program on: (1) short-term outcomes, specifically the receipt of training and other services and the attainment of educational credentials, and (2) the longer-term outcomes that are expected to be produced from these short-term outcomes including increased employment and earnings, improved household income, and financial circumstances, and reduced receipt of public benefits. The impact study data sources include a survey administered to study participants 18 months after random assignment and administrative records (data on quarterly earnings in jobs covered by unemployment insurance). As noted, these results are discussed in a separate report.

1.4.2 Implementation Study Design and Data Sources

The purpose of the GJ-HC implementation study is to document the four programs as implemented and to describe the experiences of the grantees in operationalizing their grant-funded efforts and participation patterns of program enrollees in the training activities. This implementation study complements the impact study by addressing the following questions:

- What is the nature and content of services the grantee programs provided to program participants? That is, what was the organizational and staffing structure for delivering these services? What training components, advising and employment services, and supports were provided?
- What are the experiences of program participants in terms of the service receipt? What type of training programs did they participate in, how long did they participate, and did they complete the programs they attended?
- What are the key operational findings and lessons based on the experiences of these grantees?

To answer these questions, the implementation study used several data sources.

- **Baseline Information Form.** At the time of application to the program and before random assignment, individuals completed the study's BIF, which captured information on their demographic and socioeconomic characteristics, employment and education history, receipt of public assistance, and opinions about work.

- **Field research.** The research team conducted in-person interviews with program administrators, instructors, organizational partners, and employers at two points during the study period (see Exhibit 1.2 for the timing of these visits). The first round of site visits also included a focus group with seven to twelve program participants.²⁴
- **Administrative program data.** Grantees provided the research team with program records. Although there was variation by grantee, program records generally included dates of enrollees' participation in the program, course enrollment information, and completion status. To ensure the "participant flow analysis" in this report captures complete participant experiences in the program, the research team used only data for participants where a 12-month follow-up (post enrollment) period was available. As discussed below, this necessitated focusing the analysis of participation patterns on a sample that enrolled earlier in the random assignment period.

Exhibit 1.2 shows, for each grantee, the dates of program operation, the period of random assignment, and the number of individuals enrolled in the treatment group. As shown, the evaluation and random assignment process started after the programs began but continued through most of the operational period of the grant (the programs typically continued for a month or two after the end of random assignment so that the last individuals enrolled could be served under the grant). The three Health Care grantees (AIOIC, KCCD, and NCTC) started their programs in approximately March 2010, with the evaluation and random assignment starting about 18 months later in July–August 2011. These grant programs had a three-year operational period and thus were scheduled to end by March 2013, although all the grantees received up to a six-month extension from DOL and ended their programs by June 2013. The Pathways grantee (GRCC) began operations in January 2010, with the evaluation and random assignment also starting in August 2011. That grant only operated for two years and although GRCC received a six-month extension the program ended by July 2012.

²⁴ Results from the focus groups should not be viewed as representative of the experiences of all students in the program. The focus group participants included those who were both currently enrolled and those who had left the program.

Exhibit 1.2. Dates of Key Data Collection Activities for Green Jobs and Health Care Impact Evaluation

Grantee	Dates of Program Operation	Sample Enrollment Period	Treatment Group Sample Size	Field Research Site Visits	Enrollment Period for Sample Included in the Participation Analysis	Sample Size for Participation Analysis
American Indian Opportunities Industrialization Center (AIOIC)	March 2010–June 2013	August 2011–May 2013	271	March 2012; April 2013	August 2011–December 2012	226
Grand Rapids Community College (GRCC)	January 2010–July 2012	August 2011–April 2012	186	February 2012; June 2012	August 2011–January 2012	86
Kern Community College District (KCCD)	March 2010–June 2013	August 2011–May 2013	414	February 2012; April 2013	August 2011–June 2012	178
North Central Texas College (NCTC)	March 2010–June 2013	July 2011–April 2013	555	March 2012; April 2013	July 2011–July 2012	307

Notes: The participation analysis includes only those sample members for whom a 12-month follow-up period is available.

The implementation study focuses on the period of program operations when random assignment occurred, and thus covers July–August 2011 through July 2012 in GRCC and through June 2013 for the other grantees. Site visits to conduct in-person interviews were generally scheduled five to six months after random assignment started, and then approximately one year later, close to the end of program operations.

Program administrative data on participants' enrollment in and completion of training was collected for all treatment group members for the implementation study. However, the grantees stopped collecting program data soon after their programs ended in July 2013 (April 2012 for GRCC). Thus, longer-term participation data is not available for those randomly assigned late in the study period. To adequately capture the complete experiences of program participants, some of whom participated in a sequence of training activities, the analyses presented in this report examines participation patterns for treatment group members for whom 12 months of follow-up data was available.

Exhibit 1.2 shows the sample size and enrollment period for individuals included in the participant flow analysis. The sample used represents 83 percent of the AIOIC sample, 46 percent of the GRCC sample, 43 percent of the KCCD sample, and 55 percent of the NCTC sample. Although not reported here, the research team did examine participation patterns for the entire sample and found the same general patterns held in each site but that the 12-month follow-up period was needed to fully capture participants' experiences in the program.

1.5 Overview of the Report

The remainder of this report is organized as follows. Chapters 2 through 5 present the implementation study results, separately, for each of the four grantees. This includes an overview of each grantee's program, the context in which the program operated, the population targeted for services, the characteristics of treatment group members at baseline, and the organizational structure of the program. Each chapter then examines grantee recruitment and enrollment processes and describes the trainings, supports, and assistance provided as part of the grant. The final sections of each chapter describe participant experiences in the program based on a focus group and analysis of program administrative data. Chapter 6 examines key findings and lessons related to the implementation and operation of the programs across the four grantees.

2. American Indian Opportunities Industrialization Center's Soil to Sky Program

2.1 Grant Overview

The American Indian Opportunities Industrialization Center (AIOIC) is a non-profit organization based in Minneapolis that offers education and training opportunities with the goal of helping individuals obtain jobs and advance in their field of interest. DOL's Health Care and Other High Growth and Emerging Industries grant funded a health occupations training program called Career Ladders from the Soil to the Sky (Soil to Sky). This program offered a series of tuition-free courses of varying lengths, as well as advising, support, and employment services. The program, designed for adults with education levels of at least fifth grade, provided expedited training for healthcare occupations to prepare unemployed, underemployed, and low-skilled individuals for direct care and administrative positions. The grant and the Soil to Sky program funded by it operated from March 2010 through June 2013.²⁵

Trainings ranged from short-term (one- to six-week) programs to longer-term (six- and nine-month) programs to give participants flexibility to enroll in a program (or multiple programs) that met their education needs and time frame for seeking employment.

- The short-term programs were Acute Care Nursing Assistant, Home Health Aide, First Aid and CPR, Nursing Assistant, Personal Care Assistant, and Trained Medication Aide. Individuals could take one or more of the programs sequentially.
- The long-term training programs were the six-month Health Occupations Program and the nine-month Medical Office Assistant program.

In addition to training, the Soil to Sky program included a range of student supports. Academic advisors provided tutoring and support on school-related issues, while other dedicated staff provided assistance with personal issues. AIOIC also used dedicated staff, provided one-on-one job search assistance, and made connections with a large number of employers to identify job openings for students.

The remainder of this chapter describes the grant-funded program implemented by AIOIC. After describing the context in which Soil to Sky operated, the chapter discusses the target population, the characteristics of the study participants randomly assigned to the program group, and the organizational structure of the program. It then examines the recruitment and enrollment process for the training, the training programs offered, and other supports provided to participants. The final sections describe participant experiences in the program based on a focus group conducted for the study and participation patterns in the training activities based on AIOIC administrative data for Soil to Sky.

2.2 Program Context and Goals

Established in 1979, AIOIC's original mission was to address disparities in education and employment among American Indians in a low-income South Minneapolis neighborhood. The organization now serves a diverse community that includes numerous immigrant populations, with a particular focus on low-income and unemployed individuals. AIOIC operates an alternative high school and an adult basic

²⁵ AIOIC received a six-month extension to operate the grant program.

education (ABE) and GED program. In addition, the Takoda Institute of Higher Education offers postsecondary programs in healthcare, business, and information technology and was the division that offered the grant-funded healthcare trainings.²⁶

All of AIOIC's programs share a common goal: provide high-quality, expedited educational opportunities to prepare unemployed and underemployed individuals for employment. To help individuals reach their employment goals, AIOIC provides supportive services that help participants understand their options and goals, identify a prospective career or occupational path, and pursue an education plan that suits their personal goals. With its DOL grant, AIOIC significantly expanded the scale of its healthcare offerings, most of which it had provided previously. At the time of the study, the Soil to Sky program was the largest training program at AIOIC.

The population in Hennepin County, where Minneapolis is located, was about 1.2 million in 2013. Three-quarters of the population was white and nearly 12 percent was black or African American, according to 2013 American Community Survey estimates (see the Appendix). Close to 7 percent of the population reported being Hispanic or Latino. Hennepin County's population was fairly highly educated: 46 percent of the population had a bachelor's degree or higher, 20 percent had some college experience but no degree, and 18 percent held a high school diploma. The median household income in 2013 was approximately \$64,000 and 13 percent of individuals in the county lived below the federal poverty level.

AIOIC staff reported that at the time the grant was awarded in February 2010, the recession was at its peak in the Twin Cities region of Minneapolis and St. Paul. Data from the U.S. Bureau of Labor Statistics show that the annual average unemployment rate in 2010 was 7 percent in Hennepin County, but by 2013 the rate had declined to 4.6 percent. The Soil to Sky program trained participants for the healthcare sector, which was projected to grow by 40 percent between 2010 and 2020 in central Minnesota,²⁷ and in 2013, home health aides, nursing assistants, and personal care assistants were among the top 10 most in-demand occupations, according to the Minnesota Department of Employment and Economic Development.²⁸

2.3 Target Group and Treatment Group Characteristics

To be eligible for the Soil to Sky program, an applicant had to be unemployed or underemployed, at least 18 years of age, and have no criminal record (which could hinder the ability to secure employment in the nursing field). Individuals also had to demonstrate proof of immunization and have a negative tuberculosis (TB) test. The education and experience requirements varied, depending on the training of interest (also see Exhibit 2.3 in Section 2.6).

²⁶ During the study period, AIOIC's accreditation was from the North Central Association (NCA) of Colleges and Schools Commission on Accreditation and School Improvement (CASI) to offer short-term postsecondary courses lasting less than one year. After the study period, AIOIC's accreditation source changed to the Accrediting Commission of Career Schools and Colleges (ACCSC), which staff reported the organization had applied to in 2013.

²⁷ Macht, 2013

²⁸ Minnesota Department of Employment and Economic Development, 2013

- For the Personal Care Assistant program and First Aid/CPR training, an applicant needed to score at the fifth-grade level in reading and math on the Test of Adult Basic Education (TABE®).²⁹
- For the Nursing Assistant program, the applicant required a seventh-grade level TABE® reading and math score.
- The Home Health Aide course required completion of the Nursing Assistant program as a prerequisite.
- To be eligible for Trained Medication Aide and Acute Care Nursing programs, the applicants needed to be current in their registration with the Minnesota Nursing Assistant Registry (NAR).³⁰
- For the longer-term trainings—Health Occupations and Medical Office Assistant—individuals needed a GED or high school diploma.

Exhibit 2.1 shows the demographic characteristics of individuals in the treatment group using data reported on the study's Baseline Information Form that individuals completed during the intake process for the program, before random assignment. The program enrolled four times as many females as males (79 percent versus 21 percent). More than half the participants reported that they were black, about 21 percent were white, and 9 percent were American Indian or Alaskan native. The average age of program enrollees was 32 and 65 percent had never been married. Slightly less than half the participants (46 percent) reported that they had children under the age of 18 residing in their household. The majority of enrollees were U.S. citizens (77 percent) and 23 percent were legal residents, reflecting the grant requirement that all served be eligible to work in the United States. Forty-two percent reported that they spoke a language other than English at home.

AIOIC did not require a high school diploma or GED for entry into its shorter-term Soil to Sky programs and enrollees reported a range of educational attainment. About one-third of enrollees said that they had a high school diploma or less, and just over one-third had earned some college credit but no degree. Smaller proportions of enrollees reported other credentials, such as technical or associate's degrees (18 percent) and bachelor's or master's degrees (10 percent). At the time of enrollment, one-quarter indicated that they were enrolled in another school or training program.

²⁹ The TABE is an assessment of adult basic skills in reading, math, and language.

³⁰ The NAR, maintained by the Minnesota Department of Health, is a record of individuals who have completed nursing assistant training with an approved provider and have passed the industry tests to be registered as nursing assistants. The status of an individual's registration, including whether they are current in their registration, can be checked by calling an NAR hotline and entering an individual's social security number.

Exhibit 2.1. Selected Characteristics of Treatment Group Members at Baseline, AIOIC

Characteristic	Outcome
Demographic Characteristics	
Gender (%)	
Female	79.0
Male	21.0
Race (%)	
American Indian or Alaskan Native	9.3
Asian	6.0
Black or African American	58.2
Native Hawaiian or other Pacific Islander	0.0
White	20.9
Multi-race	5.6
Hispanic ethnicity (%)	7.0
Average age (years)	32.3
Citizenship (%)	
U.S. citizen	77.1
Legal resident	22.9
Speaks a language other than English at home (%)	41.7
Family Status	
Marital status (%)	
Married	21.0
Widowed/divorced/separated	14.4
Never married	64.6
Number of children under age of 18 (%)	
None	54.2
One child	20.0
Two children	12.7
Three or more children	13.1
Education	
Education level (%)	
Less than high school	6.3
High school diploma or GED	27.8
Technical or associate's degree	17.8
Some college credit but no degree	37.8
Bachelor's or master's degree	10.4
Currently enrolled in school or training program (%)	26.6
Employment	
Employed (%)	43.3
Currently employed full time (30+ hours)	18.4
Currently employed part time (<30 hours)	24.9
Not employed (%)	56.7
Employed in last 12 months but not employed currently	35.2
Longer than 12 months since last worked	21.5
Weekly earnings (\$)	115.00

Exhibit 2.1. Selected Characteristics of Treatment Group Members at Baseline, AIOIC (continued)

Characteristic	Outcome
Factors That Affect Employment	
Amount a job must pay for respondent to take it (\$)	10.54
Job preferences (%)	
Prefers the kind of job that relates to training	49.4
Will take any job, even if the pay is low	71.6
Felony conviction (%)	1.5
Finding quality, affordable child care limits ability to work (%)	21.2
Transportation problems limit ability to work (%)	31.0
Any kind of physical or mental disability (%)	3.3
Public Benefits	
Receiving any public benefit (%)	53.9
Types of benefits received (%)	
Temporary Assistance for Needy Families (TANF)	18.9
Supplemental Nutrition Assistance Program (SNAP)	42.0
Unemployment insurance	6.7
Section 8 or public housing assistance	20.8

Source: GJ-HC Baseline Information Form (BIF)

Note: Statistics in this table are computed based on the 271 AIOIC treatment group members who completed the Baseline Information Form.

Employment status at the time of program enrollment varied considerably. Less than half of the treatment group was working and it was more common for someone to be working less than 30 hours per week (25 percent of the treatment group) than 30 hours or more (18 percent). About one-third were not working at the time of enrollment but had worked in the previous 12 months, but one-fifth of enrollees had not worked in more than a year. Among all treatment group members (including those who were not working), weekly earnings averaged \$115. The most common public assistance used by enrollees was SNAP (42 percent). Similar proportions of enrollees received housing assistance (21 percent) and TANF (19 percent). Unemployment insurance was the least utilized benefit, with only about 7 percent of enrollees indicating that they received it. When providing opinions about work, a majority of enrollees said that they would take any job, even if the pay was low (72 percent), although half of enrollees indicated that they would prefer to take a job related to their training. Transportation and finding affordable child care presented barriers to work for Soil to Sky enrollees (31 percent and 21 percent, respectively).

2.4 Organizational Structure and Staffing

AIOIC operated the Soil to Sky program with limited involvement from outside organizations. The program was housed within the Takoda Institute of Higher Education, which at the time of the study was called the School of Business and Office Technology. The Takoda Institute offers programs in healthcare,

business, and information technology.³¹ AIOIC offered healthcare training before the DOL grant award, but the funding enabled the organization to add a second training location for healthcare classes at the Sabathani Community Center, a non-profit service organization located about three-and-a-half miles from AIOIC.³²

AIOIC used grant funding to hire new staff dedicated to the Soil to Sky program and to cover portions of salaries for existing staff that supported the program. A full-time recruitment coordinator, who was on staff before the grant and was partially funded by the grant, conducted outreach for all AIOIC programs (including Soil to Sky) by visiting non-profit and community organizations and attending job fairs. This coordinator was supported by three part-time recruitment coordinators who marketed and recruited specifically for Soil to Sky and were fully funded by the grant. In September 2012, around the time that AIOIC launched its new brand, the organization hired a part-time recruitment and communications coordinator, who was charged with marketing the newly branded Takoda Institute and AIOIC's programs. Four student services representatives conducted intake and enrollment for Soil to Sky, as well as for other AIOIC programs, and, as needed, referred individuals to other services for which they might be eligible.

Other key staff included a healthcare training coordinator who oversaw training and instruction and taught the Nursing Assistant courses; five part-time health occupations instructors; and three full-time instructors who also served as academic advisors, monitoring participants' academic performance and progress and providing tutoring and other support as needed. A full-time employment services manager developed employer partnerships and oversaw the provision of employment services. This staff member was supported by six part-time employment services coordinators who worked with participants on resumes, the job search process, and job applications.

2.5 Recruitment and Enrollment

AIOIC's recruitment strategy and the enrollment process, which included random assignment to either a group that could enroll in Soil to Sky or a group that could not (but could access other services in the community), are described in this section. (See Chapter 1 for a fuller discussion of the random assignment evaluation design.)

2.5.1 Recruiting Participants for Soil to Sky Trainings

Over the course of the grant period, AIOIC used a variety of recruitment methods to market Soil to Sky to potential candidates. AIOIC produced printed marketing materials directing people to the organization's website and developed a social media presence on Twitter and Facebook. After the study began in August 2011, recruitment materials stated that a federal evaluation was under way and that entry into the program would be determined through a lottery-like process. After the recruitment coordinator launched these marketing campaigns, AIOIC hired additional recruitment staff to manage the effort, which freed up the

³¹ During the course of the study, AIOIC's programs underwent a rebranding in an effort to clarify that the organization's services were available to the broader community and not just Native Americans (*takoda* means "friend to all"). The School of Business and Office Technology was renamed the Takoda Institute of Higher Education.

³² Sabathani Community Center offers programming for youth and senior citizens; a food pantry; a health clinic and wellness classes; and counseling to aid families in accessing public benefits and developing a plan towards self-sufficiency.

coordinator to engage with the public. Specifically, the recruitment coordinator attended career fairs and community events to promote the program and worked on developing relationships with staff at local human services offices, such as those for TANF and SNAP, and workforce development agencies to make them aware of Soil to Sky as a potential training referral for their clients.

The focus group conducted for the study, which included 10 participants, asked about how they heard about the program, and their responses reflect the multifaceted recruitment approach. Three were receiving cash assistance and heard about the program through the TANF program, and three who were enrolled in the Medical Office Assistant program heard about it from a Direct Nursing Assistant program they were attending at another provider. Two others found out about the program through marketing materials they received in the mail or picked up at a community service center, and one student found out about the program through a family member who had taken business classes at AIOIC.

Staff at AIOIC reported that recruiting for Soil to Sky was a challenge throughout the grant period. They attributed the difficulties to the prevalence of entry-level nursing programs in the area with strong marketing efforts, even though these programs charged tuition while AIOIC did not. Staff also thought that the public may have perceived AIOIC's offerings as specific to American Indians. In 2012, about two years into the grant period, AIOIC underwent significant rebranding in an effort to increase the organization's profile and market it as a resource for the broader community. The new brand, including a new website and renamed offices within AIOIC, was incorporated into Soil to Sky (and other program) marketing strategies.

In addition, AIOIC sought to increase its recruitment capacity in September 2012 and hired a permanent part-time recruitment coordinator. The coordinator focused on implementing the new brand and a range of other recruitment efforts, including a social media campaign, a direct mail campaign, presence at career fairs, engagement with workforce development centers, and outreach to the Minneapolis public school system and local ABE programs. Although AIOIC staff perceived that rebranding and staff capacity-building initiatives benefitted the organization and bolstered its recruitment efforts, they continued to identify recruitment as a challenge for the Soil to Sky program through the end of the grant period.

2.5.2 Enrollment Process for Soil to Sky Trainings

Every Tuesday, AIOIC held a two-part information session, also referred to as campus visits. During the first part of the session, staff provided potential applicants with information about all of the trainings offered by AIOIC, including those in healthcare, business, and information technology. The second part of the session involved a TABE[®] assessment if applicants could not provide an acceptable indicator of academic ability (e.g., a college degree, evidence of recent college admission, and/or a recent TABE[®] score). Individuals took the TABE[®] while at AIOIC and received their scores immediately.

Following the information session on the same day, individuals met with a student services representative to discuss their academic skill level and the trainings for which they qualified. Those who placed at the fifth-grade level or above and who were interested in healthcare occupations were asked to return on a separate day to attend a healthcare overview session that was offered every Thursday morning. During this session, a student services representative presented all of the Soil to Sky training options and eligibility requirements; discussed the careers and types of employers associated with each training; and reviewed employment eligibility requirements, such as limitations for those with felony convictions. AIOIC provided additional information about the federal evaluation and the random assignment process

during this session. Student services representatives also walked through the Soil to Sky application, and the study's consent form and baseline survey with attendees to facilitate completion of the forms.

Following the presentation, a student services representative met one-on-one with each applicant to review the completed application and study forms. The representative then conducted random assignment. Individuals assigned to the study's treatment group could enroll in the Soil to Sky program and were referred to a student services representative for an intake meeting. During this meeting, the student services representative discussed with the enrollee the training options that aligned with the individual's TABE scores and interests. Staff reported that these one-on-one meetings helped participants determine which trainings would be appropriate since many had general knowledge of the healthcare industry but not of the requirements of specific jobs. For instance, the student services representative might mention that nursing assistants often have to lift patients and handle bed pans, tasks that might not suit everyone. In other instances, the student services representative might discuss the applicant's timeline for obtaining a job and suggest a shorter-term training if the applicant had a more immediate need for employment.

Student services representatives worked with enrollees to develop an educational plan to meet their goals, ensure they had correct immunizations, assess their barriers, and identify other services that they potentially needed in order to attend class. Enrollees in short-term programs were also required to attend a two-hour work readiness class (see description below). Students enrolled in the long-term tracks worked with AIOIC's financial aid counselor to apply for financial aid (e.g., Pell Grants) or identify other resources that could be used to cover living and transportation expenses (see discussion below). After these steps, AIOIC's Office of Student Registration reviewed the enrollee's course of study and identified class times and locations that fit his or her schedule. Exhibit 2.2 depicts the enrollment process.

Exhibit 2.2. Soil to Sky Enrollment Process

2.6 Soil to Sky Training Programs

The Soil to Sky training offerings included several short-term, one- to six-week programs and two longer-term programs of six and nine months, respectively, designed to give participants flexibility to identify a program or series of programs that met their education needs and time frame for seeking employment. Exhibit 2.3 lists each course, the length, necessary prerequisites for enrolling, course content, credits, and resulting certifications or credentials.³³

- The short-term programs were First Aid and CPR, Personal Care Assistant, Nursing Assistant, Home Health Aide, Trained Medication Aide, and Acute Care Nursing Assistant. Individuals in short-term programs were permitted and encouraged to take multiple short-term courses (and as discussed further below a significant portion did so) that together would build their resume and make them stronger job candidates.
- The long-term training programs were the Health Occupations Program and the Medical Office Assistant program. The Health Occupations Program bundled several of the short-term programs (First Aid/CPR, Home Health Aide, Nursing Assistant, and Trained Medication Aide) and added units in math, computer skills, medical terminology, and communication with a required clinical experience as well. The Medical Office Assistant program included classes in math, computer skills, electronic health records, medical office procedures, medical insurance billing, computerized accounting, and an externship.

AIOIC's healthcare training director took the lead in selecting curricula for the Soil to Sky courses, although the curricula were based on the healthcare courses AIOIC had offered before receiving the grant. For the Nursing Assistant and Home Health Aide courses, AIOIC used the curricula designed by Minnesota State College and University. The Acute Care and Trained Medication Aide curricula were developed by AIOIC with input from instructors who continued to review and modify it as needed. AIOIC routinely had curricula for all the courses reviewed by the teaching staff. Instructors met periodically to discuss how the curriculum was working for AIOIC's students and identify best practices. Teaching staff could pick and choose from a lot of different curricula/tools to meet student and industry needs. Curricula were also informed by quarterly Academic Advisory Committee meetings that gathered student and employer feedback about the content and quality of the courses on offer.³⁴

³³ Most courses provided credits that could be transferred to other educational institutions.

³⁴ AIOIC's Academic Advisory Committee is made up of academic advisors, top students, and selected employers. It meets on a quarterly basis.

Exhibit 2.3. Summary of Soil to Sky Training Programs

Program	Length	Prerequisites	Content	Certifications, Credentials
Short-Term Trainings				
First Aid and CPR	1 week; 20 hours (1 credit)	TABE score at 5 th grade level or above	• Standard first aid with Automated External Defibrillator (AED) • Infant and child CPR • Basic care for injuries and sudden illness, performing CPR, and using an AED • Blood borne pathogens	Certificates awarded in accordance with American Heart Association standards
Personal Care Assistant	4 Weeks, 80 hours (4 credits)	TABE score at 5 th grade level or above	• Patient bathing; dressing and exercise; safety; infection control.	Minnesota Department of Human Services (DHS) certificate for Personal Care Assistant
Nursing Assistant	5 Weeks, 110 hours (5 credits)	TABE score at 7 th grade level or above	• Concepts of basic human needs; health/illness continuum; basic nursing skills in long-term care and/or home care environments. • Three-day clinical practicum in a long-term care facility.	Eligibility to take Minnesota Nursing Assistant Competency Evaluation
Home Health Aide	1 Week; 20 hours (1 credit)	Successful completion of the Nursing Assistant course	• Home care skills • Home care system and authority • Ethics and etiquette of home care	Eligibility to take Minnesota Nursing Assistant/Home Health Aide Competency Evaluation
Trained Medication Aide (TMA)	3 Weeks; 60 hours (3 credits)	Current listing on the Minnesota NAR	• Administration of medications; body systems; categories, forms and routes of medications; terminology and procedures.	AIOIC certificate for Trained Medication Aide
Acute Care Nursing Assistant	6 Weeks; 130 hours (6 credits)	Current listing on the Minnesota NAR; Current Mantoux/Tuberculosis screening. Completion of one or more electives: CPR, TMA, First Aid, or Medical Terminology.	• Advanced Nursing Assistant skills and concepts • Acute care skills for hospital settings • One-week clinical practicum in hospital	AIOIC certificate for Acute Care Nursing Assistant

Exhibit 2.3. Summary of Soil to Sky Training Programs (continued)

Program	Length	Prerequisites	Content	Certifications, Credentials
Long-Term Trainings				
Health Occupations Program	6-month program: 2 quarters; 610 hours (30 credits)	High school diploma or GED and background check	• Nursing Assistant • Home Health Aide • First Aid/CPR • Trained Medication Aide • Keyboarding • Introduction to Health Occupations • Career Development for the Healthcare Professional • Introduction to Computers • Medical Terminology or Medical Office Procedures • Business Communication or Technical and Business Communication • Math for Health Occupations • Off-site Clinical Experience	Component certificates earned for Nursing Assistant, Home Health Aide, and TMA AIOIC certificate for Health Occupations Program
Medical Office Assistant (MOA)	9-month program: 3 quarters; 930 hours (45 credits)	High school diploma or GED and background check	• Introduction to Computers • Integrated Software • Database • Keyboarding • Medical Office Procedures • Human Relations • Medical Terminology • Medical Insurance Billing and Introduction to Coding • Math for Health Occupations • Business Communication or Technical and Business Communication Elective • Externship	AIOIC certificate for MOA

2.6.1 Short-Term Soil to Sky Programs

As discussed, the short-term programs ranged from one to six weeks in length. All were offered at AIOIC, and Home Health Aide was also offered at Sabathani Community Center. The content, credits, and resulting certifications of each program are described below.

- The one-week *First Aid and CPR program* was intended to qualify completers according to American Heart Association standards as CPR and AED Professional Rescuers. The course taught participants standard first aid; CPR for adults, infants, and children; how to use an AED; and basic care for injuries and sudden illness. AIOIC used the American Heart Association curriculum, materials, and examinations. Participants earned one credit for the 20-hour class and certificates according to the American Heart Association standards. While this program was not strictly a prerequisite for other training programs, it complemented the additional certificates that could be earned through Soil to Sky.
- The four-week *Personal Care Assistant program* instructed participants on patient bathing and dressing techniques, patient exercise routines, safety, and infection control. The 80-hour course resulted in four credits and a Minnesota Department of Human Services Personal Care Assistant certificate. This program operated for five months of the study period, but AIOIC eliminated it in early 2012 due to limited interest and the availability of a free online training, examination, and credentialing course offered directly by the Minnesota Department of Human Services.
- The five-week, 110-hour *Nursing Assistant program* included classroom and simulation lab instruction on basic human needs, health and illness, and basic nursing skills for application in long-term care and home healthcare environments. Participants also completed a three-day clinical experience in a long-term care facility. Course content was designed to align with federal nursing home regulations and Minnesota Department of Health requirements.³⁵ After meeting attendance requirements, passing tests with a minimum score of 80 percent, and finishing the clinical experience, participants were eligible to sit for the Minnesota Nursing Assistant Competency Evaluation.³⁶ While participants were waiting to take the exam on the next scheduled date, AIOIC made its simulation lab available to them so that they could continue to practice their skills in preparation for the exam. After passing the state competency exam, individuals were eligible to work as nursing assistants.
- The one-week *Home Health Aide program* was available to individuals who passed the Nursing Assistant program. The content covered the skills required in home healthcare, information on the home healthcare system and authority, and ethics related to home healthcare. Upon completion of the one-credit course, participants were eligible to take the Minnesota Nursing Assistant/Home Health Aide Competency Evaluation, which qualified them to work in home healthcare settings.
- The three-week *Trained Medication Aide program* was designed by AIOIC for individuals who had already trained as nursing assistants and were listed on the Minnesota Nursing Assistant Registry. The program prepared participants to administer medications to patients. The curriculum met the

³⁵ In late spring 2013, AIOIC made modest adjustments to the Nursing Assistant curriculum in anticipation of changes to the state's Certified Nursing Assistant assessment that were scheduled to roll out in July 2013. The state added catheter care as a new skill and eliminated two skills: occupied bed and fingernail care skills.

³⁶ Even if a participant did not complete or pass the course, they could still elect to register for and take the state exam.

standards required by the Minnesota Board of Nursing for Trained Medication Aides and covered the administration of medications, terminology, the categories and forms of medications, procedures, and body systems. Participants completed 48 hours of classroom instruction. They had to meet attendance requirements and were required to achieve a minimum score of 90 percent on each unit examination. They also completed 12 hours of laboratory instruction and took a competency test on which they needed to achieve a perfect score. Participants earned three credits and an AIOIC Trained Medication Aide certificate. Upon completion, individuals were eligible to work as medication aides. With the dual qualifications of Nursing Assistant and Trained Medication Aide, individuals were more marketable to employers since they could perform multiple functions.

- The six-week *Acute Care Nursing Assistant program* also required a current listing on the Minnesota Nursing Assistant Registry, as well as completion of at least one previous course, such as First Aid and CPR or Trained Medication Aide. Participants also needed to have a current tuberculosis screening. The course built on content in the Nursing Assistant program, introducing participants to more advanced concepts and nursing skills that could be applied in a hospital setting. Following four weeks of classroom instruction, participants completed a one-week clinical experience during which they rotated through several hospital departments. The curriculum was designed by AIOIC around the Minnesota Health Care Core Skills, the Minnesota Academic Standards, and the National Health Care Skill Standards. Participants needed to meet attendance requirements, score at least 80 percent on tests, and finish the clinical experience in order to receive AIOIC's Acute Care Nursing Assistant Certificate. Completion of this course qualified individuals to pursue nursing assistant employment opportunities within hospitals.

In addition to these short-term programs, for a limited time AIOIC also offered a nine-week Nursing Assistant/Home Health Aide Extended Course targeted to those who needed additional study time, review, and learning assistance in order to successfully complete these courses. The program combined the content of the separate Nursing Assistant and Home Health Aide programs, including the clinical practicum, into a single longer program with additional study time and instructor assistance. AIOIC offered the program in three semesters between 2011 and 2012, however, few individuals enrolled or attended and it was discontinued. AIOIC staff reported that students generally did not want to enroll in a program they perceived as being “remedial,” and preferred to attend the separate Nursing Assistant and Home Health Aide programs.

Once an individual completed one short-term course, he or she could pursue additional short-term courses. Staff found that often participants would express interest in a single short-term course initially and after completing that course would decide to pursue additional classes. Staff reported that participants became more confident after successfully finishing their first course and were motivated by seeing others enrolling in additional classes. As discussed further below, program administrative data shows that participants who chose to enroll in multiple short-term programs typically selected Home Health Aide, Nursing Assistant, and Trained Medication Aide, and some also added First Aid and CPR.

2.6.2 Long-Term Soil to Sky Programs

The six-month Health Occupations Program and the nine-month Medical Office Assistant program were designed for individuals with at least a high school diploma or GED, and as such had the highest education level requirement of the Soil to Sky trainings. AIOIC enrolled long-term students in cohorts to encourage peer support and facilitate the formation of study groups. Both programs were held at AIOIC.

The *Health Occupations program* combined several of the short-term programs—specifically Nursing Assistant, Home Health Aide, First Aid and CPR, and Trained Medication Aide—and included courses in math for health occupations, business communication, computer skills, medical terminology, and career development. The Health Occupations Program also included a three-day clinical experience at a long-term care facility as part of the Nursing Assistant course. In total, the program involved 610 hours of training over two quarters and resulted in 30 credits. Participants earned certificates upon successful completion of the Nursing Assistant, Home Health Aide, and Trained Medication Aide units as well as earning an AIOIC certificate for the Health Occupations Program. Graduates were prepared for nursing assistant and home health aide jobs in home healthcare, long-term care, and assisted living facilities.

The *Medical Office Assistant program* prepared individuals for jobs as administrative assistants in medical office settings. The Medical Office Procedures course covered medical office tasks, as well as medical law, ethics, and compliance. Courses included decision making and critical thinking skills, and some included role-playing to simulate actual issues that could arise in the workplace. The Medical Office Assistant program had less stringent testing and attendance requirements than the clinical programs because the related occupations did not have the same strict state and industry standards as jobs that involve direct patient care. Participants had to have an attendance rate of 70 percent or better and had to complete a 120-hour externship with a healthcare employer. Upon completion of the 930-hour, 45-credit program, participants received an AIOIC Medical Office Assistant certificate.

AIOIC kept class sizes relatively small for both the short- and long-term programs, with about 10 to 20 participants in each program, which allowed instructors to offer individualized attention. State and industry standards prescribed the number of hours students needed to spend in lecture, lab, and a clinical practicum for the direct care classes (i.e., all but Medical Office Assistant). Particularly in the short-term accelerated classes, attendance was important; participants could have only one absence, lest they fall short of the industry-required classroom hours. (Regular assessments during class of the content and skills being taught were intended to ensure that participants kept up with learning the material in an accelerated environment.) For several programs, AIOIC required a score of at least 80 percent on in-class assessments because staff found that participants were more likely to do well on state competency exams if they performed well on internal assessments. All classes included hands-on skills instruction, sometimes in a simulation lab.

2.7 Assistance and Supports

AIOIC offered personal and academic support to Soil to Sky participants, as well as financial assistance and employment services. These services were intended to facilitate participants' completion of training and assist them in gaining employment.

2.7.1 Academic and Personal Supports

AIOIC's program supported student success by offering a range of services directed at both their personal and academic needs. The student services representatives supported students' out-of-classroom needs; instructors provided course-related support.

As noted above, after being admitted to the Soil to Sky program, enrollees met with a student services representative for an education and employment goals assessment, as well as to discuss potential barriers to achieving those goals. Based on this conversation, enrollees developed an education plan under the guidance of the student services representative. If non-academic or employment issues were identified, the representative referred the enrollee to other services (e.g., TANF, SNAP, food pantries, community health clinics, emergency housing resources, and shelters for domestic violence survivors). AIOIC's four student services representatives supported the non-academic needs of participants in other AIOIC training programs, not just Soil to Sky.

Assistance and Supports Provided by AIOIC's Soil to Sky Program

- ✓ Student services representatives assisted participants with non-academic support needs. Individual meetings with student services representatives at intake to identify support needs.
- ✓ Academic advisors and instructors provided academic support. Quarterly academic advising meetings throughout participation.
- ✓ Short-term trainings offered at no cost to participants. Assistance in applying for Pell Grants and federal loans for long-term trainings.
- ✓ Transportation assistance for participants in short-term training.
- ✓ Two-hour work readiness class as an overview of the job search process.
- ✓ Employment services staff provided one-on-one job search assistance on job search skills, help with resume development and submitting job applications, and made connections with a large number of employers to identify job openings for students.
- ✓ Vouchers provided to participants upon securing employment to offset expenses related to starting work.

Often there was a lag between enrollment and the start of classes, so student services staff contacted participants shortly before the first day of class to remind them when and where to report and to answer any questions. These same staff followed up with individuals who did not show up on the first day and would continue to call them until they reached them or until too much time (usually several days) had passed for a late-starter to be able to catch up. Instructors typically called upon staff to check in with students who had attendance issues. Student services staff made themselves available throughout a participant's time in the program, either by appointment or with drop-in hours throughout the week.

In addition to the student services representatives, AIOIC students also were assigned to an academic advisor. Although staffing for this position varied over the course of the study period, there was generally one advisor for the Medical Office Assistant track and one to three advisors for the direct care nursing courses. Academic advisors met with students once a quarter to assess student progress, at which time students had to have each of their instructors complete a progress report for them. These reports helped academic advisors assess students' strengths and weaknesses so they could identify strategies and needs for completion of a given course.

Finally, course instructors were primarily responsible for providing informal counseling and tutoring to students as needed. AIOIC staff reported that short-term students tended to rely on their instructors for advice and assistance rather than seeking out the academic advisors or student services representatives. Occasionally instructors would ask student services representatives to reach out to students who were having attendance issues (i.e. not showing up to class), since they typically had better access to contact information for students.

2.7.2 Financial Assistance

AIOIC offered the Soil to Sky courses at no cost to participants. In addition, through its grant, AIOIC also allocated \$85 per month per participant for transportation subsidies to cover bus fare or gas for the duration of the short-term classes (these subsidies were not available for the longer-term classes). Program staff perceived the transportation allowance as being important to participants' attendance in and completion of the program.

To help participants in long-term trainings (Health Occupations and Medical Office Assistant) address non-academic financial needs (e.g., living expenses, transportation, and child care), staff provided assistance in applying for Pell Grants and federal loans accessible through the Free Application for Federal Student Aid (FAFSA). Staff reported that a few individuals interested in the long-term trainings did not qualify for Pell Grants due to defaults on previous student loans. In these cases, staff typically advised individuals to consider the short-term training programs.

After a participant secured employment, AIOIC provided two \$50 vouchers that the individual could use for transportation and/or uniforms. These vouchers were intended to offset expenses and help the individual get on the "right foot" in starting employment.

2.7.3 Employment Services

AIOIC's Employment Services Center offered an array of services to Soil to Sky participants to help them prepare for and engage in the job search process.³⁷ The center was staffed by one full-time manager and six part-time employment services staff. The timing and level of intensity of the employment services varied, depending on whether the course was short or long term and the extent to which each participant chose to engage in the services.

Staff made presentations to each class to remind participants of available services. Those in short-term classes typically only received this presentation once during training, whereas employment staff reminded long-term participants of their services at least once a quarter by means of an in-class presentation. Participants in the two long-term programs were required to meet with an employment staff member at the midpoint in their training program. Short-term training participants were not required to meet with employment staff, and staff reported that participants in these trainings tended to use AIOIC's employment services less than those in the long-term programs. Those who did use these services tended to do so upon completion of training, and sometimes individuals returned after graduating if they had difficulty finding a job.

³⁷ As part of the DOL grant, these employment services also were available to graduates of healthcare training programs offered by other providers, although these individuals were not included in the study. The employment services were not available to other students at AIOIC during the study period.

Each week, AIOIC offered a two-hour work readiness class that was designed to introduce individuals to the employment services offered by AIOIC. It also gave an overview of standard job search components including networking and searching for job opportunities, developing cover letters and resumes, working on interview skills, and identifying references. The work readiness class was required for new enrollees in short-term classes before they could register. The class was optional for individuals enrolled in the longer Health Occupations and Medical Office Assistant programs since they were required to meet with an employment counselor midway through their training. However, if long-term participants later decided to use AIOIC's employment services, they first needed to complete the work readiness class.

AIOIC developed a multi-step structured process for providing one-on-one job search assistance.

- The employment staff first reviewed the individual's work history and career goals, while also exploring factors such as motivation, strengths, and any barriers to work. Individuals who were determined to be ready to pursue employment immediately focused on job placement assistance and interview preparation.
- For those who needed a greater level of assistance in finding employment, AIOIC offered work readiness workshops in topics such as interpersonal and technical skills; networking, cold calling, and other job search techniques; cover letters and resumes; online job applications; interviewing skills; tips for success on the job; and information about job laddering. Beyond these more structured opportunities, employment services coordinators also worked individually with participants to review their resumes, help them identify possible references, and encourage them to remain on track with their job search.
- Once an individual was ready to begin applying for jobs, employment services coordinators helped him or her to identify job opportunities and complete and submit applications. Staff hosted mock interview sessions to enable participants to practice interview skills.

The program also offered *retention services*. Participants who secured a job were encouraged to meet with staff to develop a retention plan. During this meeting, the employment staff verified the participant's employment, worked with the participant to develop a child care and transportation plan, and reviewed the person's eligibility for other public benefits.

As noted earlier, the grant also enabled AIOIC to offer participants who secured employment financial assistance in the form of two \$50 vouchers that could be used for transportation or uniforms to help them get started in their jobs. Employment coordinators conducted follow-up phone calls with participants after they had begun work to address any issues. These phone calls were conducted at designated intervals: 30, 60, 90, and 180 days from the date of hire.

Finally, AIOIC's employment staff invested significant time and resources in *job development* in the healthcare field. Staff were responsible for identifying employers who could hire AIOIC graduates and for establishing and maintaining relationships with them. In addition to developing informal agreements with employers to interview and hire Soil to Sky graduates, these relationships were developed for other purposes, including building the reputation of AIOIC's program and identifying possible host sites for the clinical experiences and internships. Staff at AIOIC also pointed to the lessons they learned from industry, such as skills employees should have when they are hired, type of training that is provided by the employer, and what skills are need to advance in employment. AIOIC incorporated this information into its employment counseling approach and its classes. As of April 2013, AIOIC staff reported that they had established or had pending partnerships with more than 90 employers that operate 240 health-related

facilities (i.e., nursing homes, long-term care facilities, and hospitals). About 20 of these employers were viewed by AIOIC staff as “top employers” that had a good understanding of the skills of AIOIC graduates and a strong record of hiring them.

The two healthcare employers interviewed for this study, both of which operated long-term care facilities that employed numerous nursing assistants, indicated that they were willing to consider candidates referred to them by AIOIC because they knew the organization had performed a thorough screening of candidates and prepared them well, which made the employers’ hiring process easier and less time consuming. Because of relatively low hourly wages and strenuous working conditions, both employers struggle to some extent with turnover. They are eager to hire candidates who are “in it for the long haul” and are interested in advancing their careers. Because turnover is costly to these employers, attractive candidates are those who “know what they are getting into.” One employer noted that AIOIC helps trainees get a better feel for the profession through clinical or externship opportunities that help reduce the potential for turnover.

2.8 Participants’ Perspective

All eight Soil to Sky participants in the study’s focus group were positive about the training they were receiving (or had received) at AIOIC. Everyone mentioned the benefit of small classes. All of the students with previous training experience were in agreement that AIOIC offered a more supportive, flexible environment that supported student success. Many students noted that they felt the school served a diverse population and was accommodating to individuals of various backgrounds. Instructors were noted to be of high quality and very helpful when students needed extra assistance with their coursework. Students felt it was easy for them to get connected to financial aid and other supports.

The students reported they were partially motivated to pursue training in the healthcare field because they perceive it to be a source of stable employment. Many also were encouraged by the fact that they could complete their training at AIOIC in a short amount of time—they wanted and/or needed to find a good job quickly. Although everyone noted that they were encouraged by the low cost of AIOIC’s training, no student cited this as a factor for deciding to pursue training. Instead, most students expressed that they felt privileged to have the opportunity to receive their training free of charge. A few students said that this feeling of privilege motivated them to try harder in their classes; another noted that she felt lucky because she had almost taken out \$17,000 in loans to do a medical office assistant program at a local for-profit college.

Although nearly all of the students in the focus group had not yet completed their training, most were at some stage of a job search. Some were actively looking for opportunities, while other students were considering their career path and the kinds of jobs and/or further training they would need in order to pursue employment. In particular, all three nursing assistant students expressed interest in eventually training to be a Licensed Practical Nurse (LPN) or Registered Nurse (RN). Two students without high school diplomas expressed interest in taking advantage of AIOIC’s ABE program to earn their GED.

Several students reported that they did not plan to use AIOIC’s employment services. Even though everyone was aware of these services to some extent, some students felt that they already had a good sense of where and how to look for a job, but they were open to what AIOIC had to offer when they were ready. Others were not sure if they would have enough time to meet with employment staff and go through the steps involved in AIOIC’s job search process.

2.9 Participation Patterns in Soil to Sky Training Programs

This section uses AIOIC administrative data to describe participation patterns for study participants assigned to the treatment group. Specifically, it reports the overall level of participation, types of courses taken, completion rates, and the length of participation. Participation is reported for a 12-month follow-up period following random assignment (see Chapter 1 for a discussion of the study design).

Exhibit 2.4 shows the participant flow through AIOIC's Soil to Sky programs.³⁸ Out of every 100 people assigned to the treatment group, 79 attended some type of training program: 70 attended a short-term healthcare training program (including Acute Care Nursing Assistant, Home Health Aide, First Aid and CPR, Nursing Assistant, Personal Care Assistant, and Trained Medication Aide), and 12 attended a long-term healthcare training program (either the Health Occupations Program or the Medical Office Assistant program). Of the 12 who attended a long-term training program three also attended a short-term one (not in Exhibit 2.4). Twenty-one chose not to participate after they were randomly assigned. Of the two long-term programs included in the study, more individuals participated in the Medical Office Assistant (nine) than the Health Occupations (three) program (which combined First Aid and CPR, Home Health Aide, Nursing Assistant, and Trained Medication Aide).

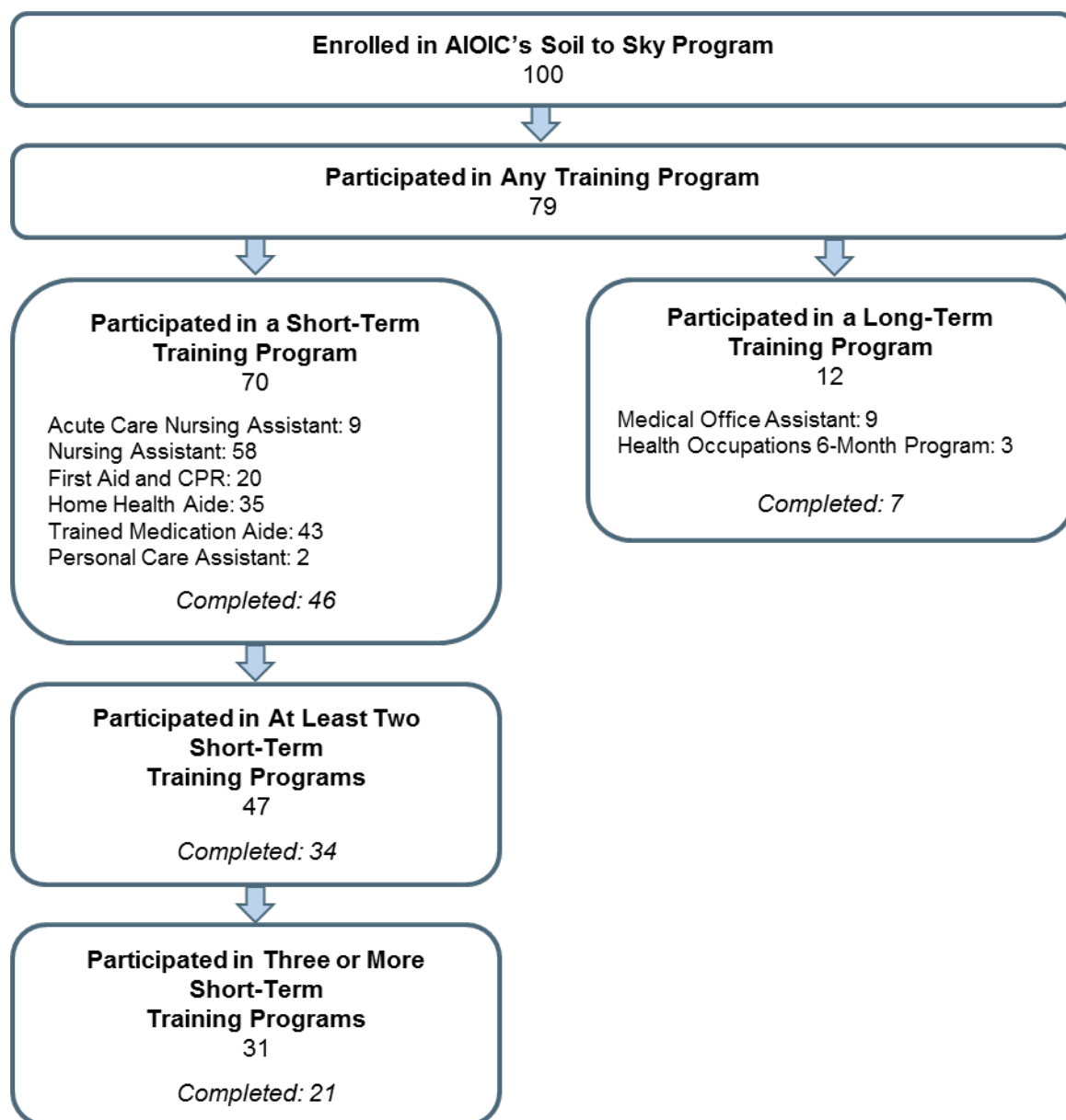
As discussed above, AIOIC did not have a pre-defined pathway of short-term courses. Instead, participants worked with AIOIC staff to determine the appropriate path based on their skills and interests. Those who participated in short-term trainings often engaged in multiple training programs. For every 70 individuals who attended a short-term program, 47 participated in at least two short-term training programs, and 31 participated in three or more training programs. And, as noted above, three who attended a short-term training also enrolled in a long-term training.

The most common short-term program, attended by 58 of the 70 participants, was the Nursing Assistant program. This is likely because having a Nursing Assistant certificate or being listed on the Minnesota Nursing Assistant Registry was a requirement for some of the other short-term programs. A substantial number also attended the Trained Medication Aide (43), Home Health Aide (35), and First Aid and CPR (20) programs. Fewer (nine) attended the Acute Care Nursing program. A small number (two) enrolled in Personal Care Assistant.³⁹ Of the 70 who attended a short-term training, 46 completed.

³⁸ Exhibit 2.4 displays illustrative figures based upon actual enrollment and participation levels.

³⁹ All enrollments in Personal Care Assistant took place in May 2012, and AIOIC discontinued the program shortly after due to lack of interest.

Exhibit 2.4. Participation and Completion of AIOIC's Soil to Sky Program among 100 Treatment Group Members Within a 12-Month Follow-Up Period



Source: Calculations are from AIOIC program records

Notes: Sample size is 226 individuals assigned to the treatment group. Individuals could attend more than one short-term training program and thus the number attending individual programs does not sum to the total. Three of the 100 participated in both a short-term and long-term program.

Exhibit 2.5 shows, among enrollees who attended at least one AIOIC healthcare program, the *proportion* that participated in and completed each program. It also shows the groupings of programs attended and associated completion rates and the average duration of participation. Of those who participated, 30 percent attended only one short-term program, most commonly the Nursing Assistant program (20 percent), followed by Trained Medication Aide. Few took the First Aid and CPR or Acute Care Nursing Assistant training in isolation. None attended the Home Health Aide program on its own (not in Exhibit 2.5 on table). In general completion rates and length of stay were relatively low among those who

attended only one short-term training program. The Nursing Assistant program, when taken on its own, had a relatively low completion rate of 36 percent. Overall, 53 percent of those attending one short-term program completed it and the length of stay was less than a month, due in part to the short duration of the programs.

Exhibit 2.5. Type of Program Attended, Completion Rates, and Average Length of Stay among AIOIC Program Participants Over a 12-Month Follow-Up Period

Training Program	Participation Rate (%)	Completion Rate (%)	Months in Training
Attended any short-term training	89	65	2.4
Attended only one short-term training	30	53	0.8
Nursing Assistant	20	36	0.8
Trained Medication Aide	7	85	0.5
Acute Care Nursing Assistant	2	100	1.3
First Aid and CPR	1	100	0.1
Attended two short-term trainings	20	80	2.4
Nursing Assistant and Home Health Aide	6	82	1.2
Nursing Assistant and Trained Medication Aide	6	70	2.6
Acute Care Nursing Assistant and Trained Medication Aide	2	75	3.2
Other pairings of short-term trainings	6	90	3.3
Attended three or more short-term trainings	40	68	3.7
Home Health Aide, Nursing Assistant, Trained Medication Aide, and First Aid and CPR	16	86	3.8
Home Health Aide, Nursing Assistant, and Trained Medication Aide	11	50	2.5
Home Health Aide, Acute Care Nursing Assistant, Nursing Assistant, and Trained Medication Aide	3	33	5.2
Other groupings of short-term trainings	9	71	4.5
Attended any long-term training	16	57	7.3
Medical Office Assistant	12	67	7.9
Health Occupations six-month Program	4	29	4.6
Attended any training	100	64	3.2

Source: Calculations are from AIOIC program records

Notes: Sample size is 179 for the participation rate column and includes those in the treatment group who attended at least one AIOIC Soil to Sky program. Totals do not sum to 100 percent because those in long-term training programs may also have taken a short-term training. Completion and length-of-stay measures are for those who attended the specific program or combination of programs (sample sizes not listed but can be calculated by multiplying sample size by participation rate).

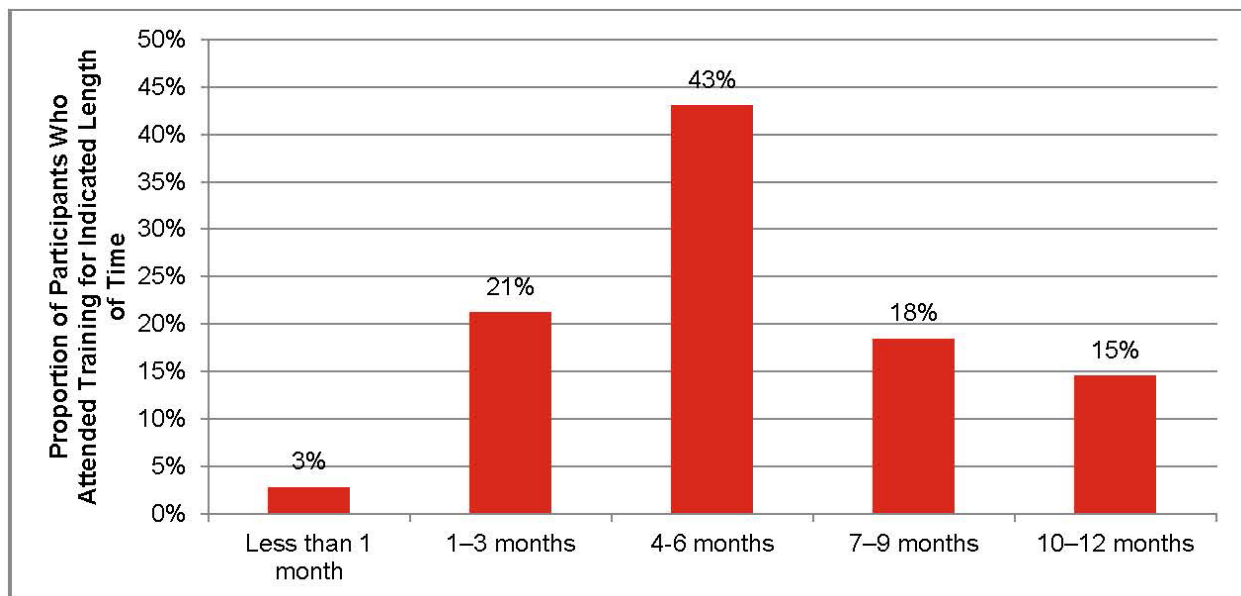
As shown, it was more common to attend two or more short-term training programs and 60 percent of the participants did so: 20 percent of the participants attended two short-term training programs and 40 percent of AIOIC participants attended three or more. Of those participating in two short-term training programs, the three most prevalent combinations were Nursing Assistant and Home Health Aide (6 percent of all participants), Nursing Assistant and Trained Medication Aide (6 percent), and Acute Care Nursing Assistant and Trained Medication Aide (2 percent). The completion rates were 82 percent, 70 percent, and 75 percent, respectively. The average duration in two trainings ranged from 1.2 to 3.3 months.

The largest share of participants (40 percent) enrolled in three or more short-term trainings. The most common combination was Nursing Assistant, Home Health Aide, and Trained Medication Aide, with some also adding First Aid and CPR to this grouping. About 11 percent of all participants started this three-program combination, and an additional 16 percent added the First Aid and CPR program. Of those taking the three trainings together, half completed all three. Among those taking the four-program combination, 86 percent completed the entire sequence. Another 3 percent of participants took the combination of three plus the Acute Care Nursing Assistant training, but only one-third of those starting completed the entire combination. The average duration in three or more trainings ranged from 2.5 to 5.2 months.

Among the long-term training programs, about three times as many individuals participated in Medical Office Assistant than Health Occupations. About 12 percent of participants began the Medical Office Assistant training, with about two-thirds of those participating completing the program. About 4 percent of participants began the Health Occupations training, and 29 percent of those who attended completed it. The average duration in the Medical Office Assistant training was 7.9 months, considerably higher than the average duration in the Health Occupations program (4.6 months).

Exhibit 2.6 shows the distribution of time participants spent training at AIOIC. Most participants (64 percent) spent between one and six months in training, reflecting the focus on short-term programs. The largest group, over 40 percent of all participants, attended training between three and six months, with 18 percent spending between six and nine months in training and 15 percent attending the training programs longer than nine months.

Exhibit 2.6. Length of Time in AIOIC's Soil to Sky Training Programs



Source: Calculations are from AIOIC program records

Notes: Sample size is 179 and includes those in the treatment group who attended at least one AIOIC Soil to Sky program.

In sum, AIOIC's Soil to Sky program had high levels of participation overall, with 79 percent of those assigned to the treatment group attending at least one healthcare training program. Most individuals attended the short-term training programs, with 70 percent of those assigned to the treatment group attending a short-term training program and 12 percent attending a longer-term program (primarily the

Medical Office Assistant Program). Combining the short-term training programs was common, with 60 percent of those participating in training at AIOIC attending two or more short-term programs. Completion rates were higher among those who attended two or more short-term training programs. Those who attended two short-term programs had an 80 percent completion rate, compared to 53 percent who attended only one short-term program. The longer-term Medical Office Assistant program had a 67 percent completion rate, but less than one-third of those who attended the six-month Health Occupations program completed it. Although many participants combined programs, the duration of participation in AIOIC trainings was relatively short overall. The average length of stay across all the programs was 3.2 months. Most (67 percent) attended for six months or less; 15 percent attended for longer than nine months.

3. Grand Rapids Community College's Pathways to Prosperity Program

3.1 Grant Overview

With the DOL Pathways Out of Poverty grant, Grand Rapids Community College (GRCC), located in Grand Rapids, Michigan, and its community-based partners established the Pathways to Prosperity program. The grant was awarded in January 2010 and ended in July 2012.⁴⁰ GRCC is the only Pathways Out of Poverty grantee included in this evaluation. Following the Pathways Out of Poverty grant's guidelines, the Pathways to Prosperity program at GRCC focused on serving individuals in high-poverty areas and targeted economically disadvantaged populations, specifically individuals who were unemployed, high school dropouts, and ex-offenders. While the GRCC program initially was focused on training low-income and low-skilled residents for jobs in a range of green industries, the program changed its focus over time due to two factors. First, the program participants often did not have the basic skills and career orientation needed to enroll in and successfully complete occupational training. As a result, the program increasingly focused on providing pre-occupational training courses, such as basic skills classes and an eight-week Career Prep course designed to improve school and work readiness. Second, the range of occupational trainings supported with grant funds increased. Originally, GRCC's green focus included training in deconstruction (dismantling buildings and salvaging the materials for future use); wind energy (covering wind turbine installation and maintenance as well as equipment production); and composite manufacturing (production of wind turbine components). However, when job openings in these fields grew more slowly than projected, GRCC allowed participants to enroll in a range of other training programs approved by DOL that were loosely affiliated with the green sector, such as commercial driver's license training, construction and remodeling, welding, and information technology (IT).

Pathways to Prosperity included a number of supports to encourage program completion and entry into employment. Career coaches helped participants navigate their training choices and provided support to encourage persistence in education and training. The coaches assessed participants' barriers to participation and identified and referred them to appropriate services. All basic skills and occupational trainings were offered at no cost to participants. The grant also supplied transportation assistance in the form of gas cards and bus passes to offset the costs of travel to and from training. Finally, Manpower, the human resources company, helped participants secure part-time work while in training, and job developers at three of the community-based partner organizations assisted participants in finding employment upon training completion.

The remainder of this chapter describes the grant-funded program implemented by GRCC. After describing the context in which the GRCC program operated, the chapter discusses the target group for which the program was designed, the characteristics of the treatment group at baseline, and the organizational structure of the program. It then examines the recruitment and enrollment process for the training, describes the trainings available, and summarizes the other supports and assistance provided to participants. The final sections describe participant experiences in the program based on a focus group conducted for the study and participation patterns in the training activities based on GRCC program administrative data.

⁴⁰ GRCC received a six-month extension on the two-year grant.

3.2 Program Context and Goals

GRCC predominantly serves residents of Kent County (which includes Grand Rapids), though residents from surrounding counties attend as well. Since 1917, it has been accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools (NCA). GRCC's primary campus in downtown Grand Rapids comprises facilities in two locations: Main Campus and DeVos Campus.⁴¹ Several satellite locations, including the Michigan Technical Education Centers (MTEC) and ABE centers are located in counties served by GRCC. The grant activities were led by the School of Workforce Development on the main campus and services were delivered on the DeVos campus as well. Originally, GRCC's intended service area for the grant focused on sections of the city of Grand Rapids where poverty rates were 15 percent or higher, in keeping with the specifications of the DOL Pathways Out of Poverty grant announcement. Over the course of the grant period, due to low enrollment, GRCC expanded the area served by the grant to include the entire city of Grand Rapids as well as the suburbs of Wyoming and Kentwood, which according to the grantee had similar poverty rates at or above 15 percent.

Historically, much of western Michigan's economy has centered on automobile and machinery manufacturing. During the recession of 2008, this industry declined, resulting in layoffs from a number of automobile parts suppliers. At the time that GRCC applied for the Pathways Out of Poverty grant, staff reported that the college and local employers were anticipating significant regional job growth in green industries as manufacturers shifted their operations towards the clean economy, in part due to heightened national dialogue about alternative energy and green trades.⁴² Locally, a 2009 award by Michigan of a \$27.3 million 15-year tax credit to a composites manufacturing company to expand its production of wind turbine blades suggested that jobs needing trained workers in these areas could materialize.⁴³ GRCC and its partners developed the Pathways to Prosperity program to train local low-income individuals for jobs in green industries to capitalize on these anticipated upcoming employment opportunities.

During the study period, Kent County had a population of close to 610,000 residents, with a population of approximately 192,000 in Grand Rapids. In 2013, the majority of the population was white (82 percent) and nearly 10 percent was black or African American. About 10 percent was of Hispanic or Latino origin.⁴⁴ The median household income in 2013 was \$52,000, and about 16 percent of residents lived below the federal poverty level.⁴⁵ In 2010, the year the grant was awarded, Kent County's unemployment rate was 10.1 percent, but by 2013, unemployment decreased to 6.3 percent. (See the Appendix.)

3.3 Target Group and Treatment Group Characteristics

Pathways to Prosperity targeted low-income adults in the greater Grand Rapids area, with a focus on those who had low educational and basic skill levels. To be eligible for the program, individuals had to

⁴¹ An additional campus, Lakeshore, is located approximately 30 miles to the west of Grand Rapids in Holland, Michigan.

⁴² Green, 2009; Muro and Rothwell, 2011

⁴³ Governors' Wind Energy Coalition, 2012

⁴⁴ U.S. Census Bureau, 2014

⁴⁵ Poverty Status is defined by the Census Bureau. Accessed September 29, 2014, http://www.census.gov/acs/www/data_documentation/documentation_main/#doc2012.

meet the Workforce Investment Act (WIA) definition of low-income, which includes those who have received SNAP or cash assistance benefits or had a family income below a certain threshold.⁴⁶ In addition, eligible individuals had to live within the grant's catchment area and have registered with the Selective Service. The GRCC program had a particular interest in serving individuals who had been involved in the criminal justice system. This population tended to experience barriers to employment that program staff thought could be mitigated through training and support services.

Exhibit 3.1 shows the demographic characteristics of individuals in the treatment group. It uses data reported on the study's Baseline Information Form, which individuals completed during the intake process for the program, before random assignment. As shown, nearly three-quarters (71 percent) of treatment group members were male. More than half (57 percent) identified as white and 37 percent were black or African American. About 15 percent reported being of Spanish, Hispanic, or Latino origin. Close to 90 percent of treatment group members indicated they were U.S. citizens and 11 percent were legal residents; 22 percent of enrollees reported speaking a language other than English at home.

At the time of application to the program, 29 percent of treatment group members reported having been convicted of a felony at some point in the past, which reflected the focus on formerly incarcerated individuals. The average age of the program enrollees was 41 years. Just under half (47 percent) had never been married, while 23 percent were married and 30 percent were divorced or separated. About one-third reported having children 18 years old or younger residing in their household.

Pathways to Prosperity enrollees varied in terms of educational background. Eleven percent had less than a high school diploma and a quarter had a high school diploma or GED at baseline. Thirty-one percent had attained some college credits but not a degree. Fifteen percent reported having a technical or associate's degree, while about 17 percent had a bachelor's degree or higher. Thirteen percent reported being enrolled in another school or training program at the time of application to Pathways to Prosperity.

About one-quarter of treatment group members (27 percent) were employed when they applied to the program; though 11 percent worked less than 30 hours a week. Forty-one percent of enrollees were not currently working but had been employed in the previous 12 months, while 33 percent had not worked in more than a year. Among all treatment group members (including those who were not working), weekly earnings averaged \$80.

⁴⁶ Workforce Investment Act of 1998. Accessed June 5, 2015, <http://www.doleta.gov/regs/statutes/wialaw.pdf>

Exhibit 3.1. Selected Characteristics of Treatment Group Members at Baseline, GRCC

Characteristic	Outcome
Demographic Characteristics	
Gender (%)	
Female	29.0
Male	71.0
Race (%)	
American Indian or Alaskan Native	1.1
Asian	2.2
Black or African American	36.9
Native Hawaiian or other Pacific Islander	0.6
White	57.0
Multi-race	2.2
Hispanic ethnicity (%)	15.1
Average age (years)	40.8
Citizenship (%)	
U.S. citizen	88.7
Legal resident	11.3
Speaks a language other than English at home (%)	22.0
Family Status	
Marital status (%)	
Married	23.2
Widowed/divorced/separated	30.3
Never married	46.5
Number of children under age of 18 (%)	
None	64.8
One child	13.2
Two children	9.3
Three or more children	12.6
Education	
Education level (%)	
Less than high school	11.3
High school diploma or GED	25.8
Technical or associate's degree	15.1
Some college credit but no degree	31.2
Bachelor's or master's degree	16.7
Currently enrolled in school or training program (%)	13.1
Employment	
Employed (%)	26.7
Currently employed full time (30+ hours)	15.6
Currently employed part time (<30 hours)	11.1
Not employed (%)	73.4
Employed in last 12 months but not employed currently	40.6
Longer than 12 months since last worked	32.8
Weekly earnings of respondent (\$)	80.29

Exhibit 3.1. Selected Characteristics of Treatment Group Members at Baseline, GRCC (continued)

Characteristic	Outcome
Factors That Affect Employment	
Amount a job must pay for respondent to take (\$)	11.43
Job preferences (%)	
Prefers the kind of job that relates to training	43.2
Will take any job, even if the pay is low	54.6
Felony conviction (%)	29.2
Finding quality, affordable child care limits ability to work (%)	10.9
Transportation problems limit ability to work (%)	22.5
Any kind of physical or mental disability (%)	12.4
Public Benefits	
Receiving any public benefit (%)	62.9
Types of benefits received (%)	
Temporary Assistance for Needy Families	4.8
Supplemental Nutrition Assistance Program	44.6
Unemployment insurance	19.9
Section 8 or public housing assistance	12.4

Source: GJ-HC Baseline Information Form (BIF)

Notes: Statistics in this table are computed based on the 186 GRCC treatment group members who completed the baseline survey.

When providing their opinions about work opportunities on the baseline survey, over half of the treatment group members said that they would take any job even if the pay was low. Forty-three percent indicated that they would prefer a job that related to their training. Transportation was a greater barrier to work than child care: 23 percent of enrollees found transportation to be a challenge while 11 percent said affordable child care limited their ability to work.

At the time of application to the program, about 63 percent of treatment group members reported that they received one or more public benefit. SNAP was the most common public benefit received (by 45 percent of enrollees). One in five reported they were receiving unemployment insurance. Less commonly received public benefits were Section 8 or public housing assistance (12 percent) and TANF (5 percent).

3.4 Organizational Structure and Staffing

In developing the Pathways to Prosperity program, GRCC envisioned leveraging the capacity and strengths of local organizations to serve participants with training and support services. As the program was originally planned, GRCC would provide occupational training complemented by applicant screening and job placement services from Michigan Works!, the local AJC. However, in practice, Michigan Works! played a more limited role in the grant-funded efforts, primarily assisting GRCC with recruitment of participants for Pathways to Prosperity but not conducting applicant screening for the program or providing job placement assistance.

GRCC was the grant administrator. The program director and a program manager, as well as two career coaches and three full- or part-time instructors, were GRCC staff.⁴⁷ Two GRCC recruiters handled the

⁴⁷ The program director for Pathways to Prosperity was a GRCC employee that was not funded by the DOL grant.

majority of the outreach and marketing for the program, with some support from Michigan Works! In addition, several organizations, played central roles in delivering training, career coaching, and other support services throughout the grant period. Through their varying missions and areas of emphasis, the partners' services were intended to address individuals' barriers to participating in occupational training and employment. These organizations included the following:

- The *Women's Resource Center* (WRC), a non-profit organization with a mission of supporting women in their efforts to secure employment and become economically independent, provided career coaching and job development services for female program participants. In the years before the study began, WRC had committed to focusing efforts on low-income single mothers with criminal backgrounds—a group aligned with the population GRCC sought to serve under the grant. WRC provided a career coach and a job developer for the grant-funded effort.
- Because of its organizational focus on workforce development, the non-profit *Goodwill Industries* was tapped to provide three career coaches and a job developer for the grant, as well as GED instructional staff. GRCC included Goodwill in the partnership to add expertise in job placement and retention services.
- The non-profit *Literacy Center of West Michigan*, whose mission is to help clients improve their English language and literacy skills, was primarily responsible for developing the ABE and English as a Second Language (ESL) curricula and teaching these classes for the Pathways to Prosperity program. The Literacy Center provided three instructors and a career coach, as well as a job developer, who were supported by grant funds.
- *Manpower*, a for-profit company that assists job seekers as well as employers with staffing needs, played a supportive role in Pathways to Prosperity by advising GRCC and the other partners on prospective job openings and the skills that employers were seeking. They also helped some Pathways to Prosperity participants find part-time jobs while in the program and longer-term employment upon completion of training.

GRCC's management structure for the grant activities relied on considerable input from its organizational partners to allow each organization to identify as part of a team effort. In practice, GRCC had limited authority to specify requirements for each of the partners because the contractual agreements between the organizations were partnerships rather than subcontracts. As a result, the grant was challenging to manage. For instance, each partner wrote its own job description for the career coach position and hired according to its own practices and organizational mission. According to GRCC staff, this resulted in several individuals being hired as career coaches who were inappropriate for the role, particularly because they did not have the desired qualities of being able to develop rapport with students and did not have the requisite organizational skills, persistence, and follow through.

The decentralized partnership approach also made it difficult to establish a clear chain of command among partner organizations. As a result, some of the career coaches, job developers, and instructors were not clear about whether they should report to GRCC or their own management. Senior representatives from GRCC and each of the other partner organizations served on an executive steering committee that was intended to oversee and coordinate efforts among the partner agencies. However, staff who attended these meetings were sometimes not familiar with the program's daily operations. Later in the grant period, the partners assigned a staff member to act as a liaison between the career coaches and the organization's leadership so that the leadership could communicate issues to GRCC in the steering

committee meetings. GRCC and its partners struggled to solidify their relationship and their coordination mechanisms, and GRCC indicated that it took over two years for the partnerships to operate smoothly.

3.5 Recruitment and Enrollment

GRCC, working with Michigan Works!, led recruitment efforts to identify potential participants for Pathways to Prosperity and facilitated the intake process with assistance from career coaches from the partner organizations. In support of the evaluation (see Chapter 1 for a discussion of the study design), applicants were assigned at random to a treatment group that could enroll in Pathways to Prosperity or a control group that could not but could pursue other services available in the community.

3.5.1 Recruiting Participants for Pathways to Prosperity Programs

Both GRCC and Michigan Works! recruited for Pathways to Prosperity. Recruitment began in summer 2010; a full-time GRCC recruiter and a Michigan Works! recruiter referred candidates to the college for intake. In January 2012, GRCC hired a part-time recruiter to boost marketing efforts, given the low rates of enrollment into the program. (The evaluation, including randomly assigning individuals to the control group, began in August 2011.).

GRCC used a combination of print advertising (e.g., newspaper advertisements, banners on buses, and yard signs) and in-person strategies. The recruiters promoted the program at recruiting events held by the broader college and organized “awareness” events in targeted neighborhoods. Awareness events were held twice a week, on Mondays and Fridays, at various community locations. During these sessions, Pathways to Prosperity staff introduced the program (and later the evaluation), explained eligibility, services and supports, program goals, and expectations for participants. GRCC required individuals to attend an awareness event before applying to the program. Individuals who were interested completed a program questionnaire that captured information on particular training and job interests.

Before an awareness event, recruiters would spend the week distributing marketing materials in the target area, an effort that they found to be particularly effective. Staff found that advertising an awareness event just before holding it created a sense of urgency and therefore resulted in larger attendance than when they announced all upcoming event dates at once. The part-time recruiter focused on promoting the program through adult education schools, high schools, churches, and other community-focused locations, and also provided brochures to local community organizations for distribution.

Michigan Works! used a different recruitment approach by focusing on individuals seeking AJC services. After individuals attended an AJC orientation session, the recruiter reviewed potential participants’ paperwork to determine whether they qualified for Pathways to Prosperity. Those that did received a phone call or email from the recruiter to gauge their interest in the program. The recruiter referred interested candidates to a Pathways to Prosperity awareness event. In spring 2012, the full- and part-time GRCC recruiters attended the general AJC orientations held at Michigan Works! in order to connect with potential participants directly and provide them with information regarding the grant-funded program.

Based on the evaluation team’s participant focus group held with a small number of individuals, participants learned about the Pathways to Prosperity program in a variety of ways. Several first learned about the program through bus advertising, while others obtained a brochure for Pathways to Prosperity and called to inquire about it. One participant heard about the program through someone at a temp agency, and she told a relative about it, who also joined. Others found out about the program while researching green jobs online or from the Pathways to Prosperity recruiter at the Michigan Works! office.

3.5.2 Enrollment Process for Pathways to Prosperity Programs

As shown in Exhibit 3.2, after attending an awareness session, individuals interested in pursuing the program went to GRCC on a separate day to attend a Pathways to Prosperity orientation session, which included further detail about the program benefits, requirements, eligibility criteria, and the evaluation. After the evaluation began, those interested in the program completed application and intake forms at the conclusion of the orientation. The program manager then assigned each applicant a career coach for a one-on-one meeting that same day. To the extent possible, female applicants were assigned a career coach from the Women's Resource Center, individuals with language barriers were assigned a coach from the Literacy Center, and other applicants were assigned to Goodwill or GRCC.

During the initial meeting, the career coach assessed the applicant's eligibility for Pathways to Prosperity and discussed with the individual his or her training interests. At the conclusion of the meeting, the career coach gave the applicant a voucher to complete the WorkKeys® Applied Mathematics, Reading for Information, and Locating Information assessments at the local AJC or another location where testing was available. The WorkKeys® scores did not have a bearing on admission to the program but rather helped to identify skills levels and direct participants to appropriate services, which may or may not have included training.⁴⁸ After GRCC received the WorkKeys® scores, usually the day after testing, an administrative assistant conducted random assignment and called treatment group members to discuss next steps.

Individuals who were assigned to the treatment group, and therefore were eligible to receive program services, completed Talent and Fit assessments in WorkKeys® to determine their strengths, skills, and career interests, as well as their attitudes, values, and behaviors towards work. The assessments were typically offered twice per week at GRCC or one of the Pathways to Prosperity community partner organizations. After receiving the assessment results, the coach met with the participant to discuss career possibilities. In total, it could take a few weeks from the awareness event to the one-on-one meeting with a career coach. As discussed in the next section, participants then enrolled in the appropriate basic skills class (ABE/GED or ESL), Career Prep, or an occupational training course.

⁴⁸ The ACT WorkKeys® assessment serves as an indicator of individual skill level in three areas: Applied Mathematics, Locating Information, and Reading for Information. Employers and training programs use WorkKeys® scores to determine eligibility and readiness for work or education. The assessments also underlie ACT's National Career Readiness Certificate program. Accessed July 31, 2015, <http://www.act.org/products/workforce-act-workkeys/>.

Exhibit 3.2. Pathways to Prosperity Enrollment Process**3.6 Pathways to Prosperity Training Programs**

Although GRCC set out to offer green jobs training programs developed for the grant, the college responded to the needs of its Pathways to Prosperity participants and to the local economy by adjusting the program offerings during the initial months of grant operations. Specifically, when program staff

observed that occupational training participants had difficulty completing their course of study and finding a job, they began offering the Career Prep program to build participants' employability skills. In addition, when program graduates had difficulty finding employment in composites, wind energy, and deconstruction, GRCC expanded the Pathways to Prosperity occupational training offerings.

During the time of the evaluation site visits in the first half of 2012, Pathways to Prosperity offered several types of education and training options based on a participant's skill level, as measured by the WorkKeys® assessment participants took shortly after applying to the program. Three WorkKeys® assessments (Applied Mathematics, Reading for Information, and Locating Information) were used to identify participants' skills levels and to direct them to different types of education or training. Those who had a low score typically began with ABE/GED courses at the Literacy Center. Those scoring in the medium range generally began in Career Prep, unless they had a language barrier and needed to first attend ESL courses through the Literacy Center to improve their reading proficiency. The career coach could also decide on a case-by-case basis that an individual with a medium-range score was suited to enter occupational training without needing to enroll in Career Prep. Individuals with high scores could enroll directly in occupational training.

3.6.1 Basic Skills and Career Prep

The core programs offered by GRCC's Pathways to Prosperity program were basic skills classes in GED preparation, ABE, and ESL instruction to boost basic academic skills and a Career Prep program focused on school and work readiness. The length and content of these programs is summarized in Exhibit 3.3 and discussed below.

Exhibit 3.3. Pathways to Prosperity Basic Skills and Career Prep Programs

Program	Length	Content	Certifications, Credentials
GED exam preparation and ABE instruction <i>Offered by Literacy Center</i>	208 hours; 8 weeks	- Math skills including ratios, fractions, proportions, word problems - Reading instruction - Computer and other employability skills, such as organizational skills, planning, and decision making	Employability skills certificate
ESL instruction <i>Offered by Literacy Center</i>	Varied depending on the needs of the participant	Emphasis on vocabulary and reading comprehension.	None
Career Prep <i>Offered by GRCC</i>	Originally 150 to 180 hours over 6 weeks. Later extended to 200 to 240 hours over 8 weeks to better prepare participants for employment or additional education or training.	- Reading, math, and locating information - Critical thinking and problem-solving skills, teamwork, conflict management, and workplace professionalism - Life skills - Career exploration - Resume and cover letter development, interview skills - Emphasis on soft skills needed to attain and retain a job	Employability skills certificate. National Career Readiness Certificate (NCRC)

GED/ABE. Both GED exam preparation and ABE instruction were provided in the same course and had two components: basic skills and employability skills. For basic skills, reading and math instruction was designed to prepare participants to pass the NCRC assessment with a score of four or above and/or prepare for the GED test.⁴⁹ The basic skills instructor used word problems and other types of activities that would be relevant to the students to teach concepts like ratios, fractions, and proportions while also incorporating critical thinking skills. The employability skills component included computer skills instruction and lessons on self-discipline, organization, time management, and decision making.⁵⁰ The GED/ABE class met for four hours a day, four days a week for eight weeks (a total of 128 hours), and the

⁴⁹ The NCRC is a credential based on the scores achieved on the three WorkKeys® assessments described above (accessed June 5, 2015, <http://www.act.org/certificate/index.html>). A score of four is viewed as a “silver” level of skills—the third-highest level (after “platinum” and “gold”), above the fourth and lowest (“bronze”) level for the certificate.

⁵⁰ The employability skills curriculum was based on an existing Literacy Center training and, at GRCC’s request, was modified to align with the skill areas found in the Talent and Fit assessment used by the Pathways to Prosperity career coaches.

employability skills component was an additional 80 hours during the same eight weeks. In an effort to teach participants about the importance of attendance and follow through, the class required that participants have an 80 percent class attendance rate and complete at least 80 percent of their assignments. When participants fell below these targets, Literacy Center instructors contacted the career coach to intervene. Upon completion of the course, individuals received a completion of employability skills training certificate and then generally continued to Career Prep (individuals were not required to obtain a GED to complete the program).

ESL. The ESL curriculum, also offered by the Literacy Center, was intended for individuals who were within the range of ability for the Career Prep program but needed help with their English language and literacy skills. The class length was based on each individual's need for language instruction. Upon completion of ESL instruction, participants could take the WorkKeys® again and, depending on their score, could either proceed to Career Prep or enroll directly in occupational training.

Career Prep. Early in the grant period, staff at GRCC developed the Career Prep program to help participants build skills and habits that were expected to improve their success in training and employment. This program consisted of several school and work readiness modules and was intended to be taken before occupational training by program participants who neither achieved the highest composite score level on WorkKeys® nor had language barriers that would interfere with their success in education, training, and/or employment. GRCC operated the Career Prep class on a rolling basis when they had at least 10 individuals registered, which was typically every four or five weeks. Career Prep, taught by GRCC instructors, initially consisted of five modules over six weeks. Originally the program lasted 150 to 180 hours over six weeks, but it was later extended to 200 to 240 hours over eight weeks to better prepare participants for employment or additional education or training. Staff reported that the class was lengthened to allow participants more time to absorb the material and the content of the class was adjusted based on the needs of participants.

- The first module was basic skills instruction (reading, math, and locating information), with a curriculum designed by instructors to teach the skills required to earn the NCRC. The employability skills module taught critical thinking and problem-solving techniques, teamwork, conflict management, and workplace professionalism. Instructors said they emphasized habits that would help participants keep jobs, such as arriving on time to work and communicating effectively with supervisors and coworkers.
- A module called Once and for All highlighted psychosocial skills such as positive thinking and emotional awareness to give participants tools to manage their feelings both in the workplace and in their personal lives.
- A module focused on group career coaching supplemented individual career coaching to help participants explore different career possibilities and develop a plan for achieving their goals.
- The final module, the Job Institute, involved preparing resumes and cover letters, practicing interview skills, and preparing a list of references. The Job Institute curriculum was based on a program offered by Goodwill Industries but adapted for Pathways to Prosperity. It totaled 11 sessions of three hours each.

Upon successful completion, participants earned a Michigan Employability Certificate and could retake the WorkKeys® assessments to obtain the NCRC. GRCC designed Career Prep so that participants would

gain not only employability certificates and develop resumes and cover letters but also would learn skills related to professionalism and navigating educational and workplace challenges.

3.6.2 Occupational Training

GRCC originally planned to offer training in deconstruction, wind energy, and composites. These programs were developed by GRCC instructors specifically for this grant but were open to enrollment by both Pathways to Prosperity and other GRCC students. Deconstruction, taught by a GRCC instructor, was a 12-week course that met eight hours per day, four days per week. Wind energy, also led by a GRCC instructor, was a two-week, 80-hour program. Composites training was taught by a private company at its site in Holland, Michigan, and involved 80 hours of training over four weeks.

Over the course of the grant period, however, the green industry jobs did not materialize as expected and the green sector grew more slowly during the recession and recovery than had been anticipated. As a result of the limited job prospects, the college adjusted the training offerings. First, GRCC split the grant-funded wind energy training into several Occupational Safety and Health Administration (OSHA) certificate courses to facilitate a broader range of employment options for training participants after they completed the curriculum. In addition, GRCC permitted participants to enroll in other GRCC training, as well as in courses offered through private providers not originally included as part of the grant initiative, as long as the courses aligned with the DOL definition of green jobs in the grant solicitation.⁵¹

As discussed further below, Pathways to Prosperity supported individuals in commercial driver's license (CDL) training (offered by a private training provider) and a variety of IT and business skills courses (provided by a for-profit computer learning center). One of the IT programs prepared individuals for professional roles improving processes and increasing efficiencies in manufacturing, and one of the business skills trainings prepared participants for roles in production and inventory management. Other supported trainings included heating, ventilation, and air conditioning (HVAC) certification, business administration, architectural drafting, industrial maintenance, and landscaping. Because of this flexibility, Pathways to Prosperity participants often took programs that only one or two individuals participated in, or in some cases, that no other Pathways to Prosperity participants pursued.

⁵¹ The solicitation for applications for Pathways Out of Poverty grants provides more information about how green jobs were defined near the start of the grant period, although the definition was expected to evolve over time (accessed July 22, 2015, <http://www.doleta.gov/grants/pdf/SGA-DFA-PY-08-19.pdf>). Examples include, but are not limited to, the energy-efficient building, construction, and retrofit industries; the renewable electric power industry; the energy efficient and advanced drivetrain vehicle industry; the biofuels industry; and the deconstruction and materials use industries.

3.7 Assistance and Supports

Central to the provision of support services was the role of the career coach who not only guided participants in identifying an appropriate career and associated training but also worked with them to address barriers to program participation, such as the need for transportation assistance and child care. Through Pathways to Prosperity, participants also received financial supports (including tuition-free education and transportation assistance) and job search assistance.

3.7.1 Academic and Personal Supports

With the DOL grant, GRCC sought to expand on a career coaching model that had been a feature of an earlier job training program.

GRCC envisioned sharing this approach with its service delivery partners in the hopes that career coaching might later be adopted by these organizations. All four partner organizations—GRCC, Women's Resource Center, Goodwill Industries, and the Literacy Center—had career coaches who received the same training on GRCC's model. All Pathways to Prosperity participants were assigned a career coach during the intake process. GRCC made an effort to pair female participants with career coaches at the Women's Resource Center and limited English participants with coaches at the Literacy Center.

In the first participant meeting following admission, the career coach typically spent one to two hours discussing the results of the WorkKeys® and Talent and Fit assessments, the latter of which gave an indication of an individual's career interests, strengths, and weaknesses. Together, the coach and participant developed an action plan that specified tasks to complete while awaiting the start of training. This could include researching occupations that the assessment and career coach suggested might be good fits by accessing the O*NET OnLine database for career exploration, scheduling informational interviews with employers, and looking into coursework and jobs associated with the possible careers identified.⁵² This exploration phase could take several weeks and could be included as part of Career Prep. The career coach also worked with the participant to develop an education plan of incremental steps designed to help the individual envision a career path.

The career coach was accessible throughout an individual's Pathways to Prosperity involvement. The frequency and length of meetings varied based on the participant's needs. In instances where a participant's training was scheduled to begin several weeks after the initial career coaching session, the career coach would work closely with the individual to keep him or her focused on preparation for education and employment. Once training began, interactions between the career coach and the participant tended to be less regular. Career coaches intervened if an instructor indicated that an individual was not attending class or completing assignments. As program conclusion neared, the coach and individual met more regularly to develop a career plan that articulated short- and long-term goals. For

Assistance and Supports Provided by GRCC's Pathways to Prosperity Program

- ✓ Career coaches assisted participants in addressing barriers to participation. Individual meetings with career coach at intake to identify appropriate training and support needs. Additional meetings thereafter according to participant needs.
- ✓ Additional support and referrals to other services provided by partner organizations.
- ✓ Trainings offered at no cost to participants.
- ✓ Transportation assistance while in training.
- ✓ Financial assistance for uniforms or tools available on a case-by-case basis.
- ✓ Job developers offered guidance with job search process.

⁵² See O*Net OnLine. Accessed September 9, 2015, <https://www.onetonline.org/>

example, the career coaches advised participants who were deciding whether to pursue further training or to seek employment.

Beyond their responsibilities in guiding participants on their career choices, the coaches also worked with participants to identify and address barriers to training, such as insufficient transportation and the need for child care or other support services to help them be successful in the program. Pathways to Prosperity partner organizations also offered a variety of support services and referrals, such as a clothing closet and opportunities for professional mentoring through the Women's Resource Center.

3.7.2 Financial Assistance

ABE, ESL, Career Prep, and occupational trainings that met the definition of green were provided at no cost to participants. GRCC also administered financial supports for transportation. Bus passes, gas cards, and occasional emergency car repair funds were distributed weekly to ensure that only those who were in good standing with the program—those who were attending class and/or in contact with their career coach—received them when needed. The amount of transportation assistance was based on individual need, with daily, weekly, or monthly bus passes and gas cards in the amount of \$10, \$20, or \$30. On a case-by-case basis, GRCC also allotted financial assistance for uniforms or tools directly related to an individual's training. Participants could not receive the financial support after their participation in basic skills, Career Prep, and occupational training ended.

3.7.3 Employment Services

While enrolled in training, participants in need of part-time work could consult with Manpower, which would help them find temporary employment. Upon completion of Career Prep or occupational training, grant-funded job developers at the Women's Resource Center, Goodwill Industries, and the Literacy Center assisted participants with their job searches. The job developers offered guidance on searching for jobs online and elsewhere and provided further support in preparing and submitting a strong application. Manpower also helped graduates find full-time employment.

When Pathways to Prosperity was originally conceived, a number of employers were involved in developing curricula for the occupational training programs, with the intention of having them offer portions of the training on-site and hiring program completers. GRCC had worked with several of these employers previously in developing on-the-job training curricula. One wind farm construction company interviewed for the study anticipated launching four wind farm development projects across the country, and a wind turbine blade manufacturer expected to supply blades for the growing industry. However, when these projects and others that the employers were anticipating did not come through, the employers were unable to hire new staff in the numbers they had initially predicted.

Based on interviews with employers conducted for the study, a few employers attempted to help GRCC achieve some of its grant objectives in ways other than directly hiring graduates. An engineering company offered to engage other local employers in a dialogue about hiring formerly incarcerated individuals in the hopes that some would change their hiring practices. To do so, the company spoke with the chief executive officers (CEOs) of other companies to secure commitments to hire one or two candidates with criminal backgrounds. In June 2011, GRCC held an "employer summit" and convinced a number of CEOs to hire individuals with criminal backgrounds; however, these commitments translated to fewer job offers than GRCC would have liked, which GRCC attributed in part to challenges getting human resources staff to view ex-offenders as appropriate job candidates. One employer indicated that many of the candidates referred to them from the program were not qualified for employment with the company.

because of company policy not to hire ex-offenders and because a high school diploma or GED was required.

3.8 Participants' Perspective

Based on the focus group of seven students conducted for the evaluation, participants in GRCC's Pathways to Prosperity program indicated that they were interested in a green job at the time that they first met with a career coach. All also indicated that they were already thinking about green jobs when they saw the advertisement for the Pathways to Prosperity program. Focus group participants were pleased that they could attain credentials and certificates through training that they did not pay out-of-pocket for, even though some of them had difficulty obtaining a job in the field in which they were trained. They also appreciated the support and guidance they received from career coaches, who helped them both to think broadly about career options that aligned well with their skills and interests and to develop a plan to pursue a career.

Some focus group participants seemed to be confused about the content of the program services. Many indicated that the up-front communication about the sequence of Career Prep and training could have been better, as they had entered with the intent of going straight into training. This might have been because the focus group participants had, with one exception, started in the program before mid-2011, which was when grant operations were just ramping up and the partners were still establishing their means of communicating with one another and with participants. All said they would recommend the Pathways to Prosperity program to someone else, and several either already had or planned to do so if the program was extended. Two older focus group participants thought the program was good for their age group, as it eased them back into the routines of being in school and completing assignments. One noted that Pathways to Prosperity really catalyzed her momentum to return to school, and she felt empowered, rather than intimidated, about changing career fields because the Talent and Fit assessment results validated that the new field was a good fit for her.

3.9 Participation Patterns in the Pathways to Prosperity Program

This section discusses the participation patterns for those assigned to the study's treatment group in the Pathways to Prosperity program, based on administrative data obtained from GRCC. Specifically, the section reports on the overall level of participation, participation levels in more than one program, the length of participation, and completion rates. Participation is reported over a 12-month follow-up period (see Chapter 1 for a discussion of the study design).

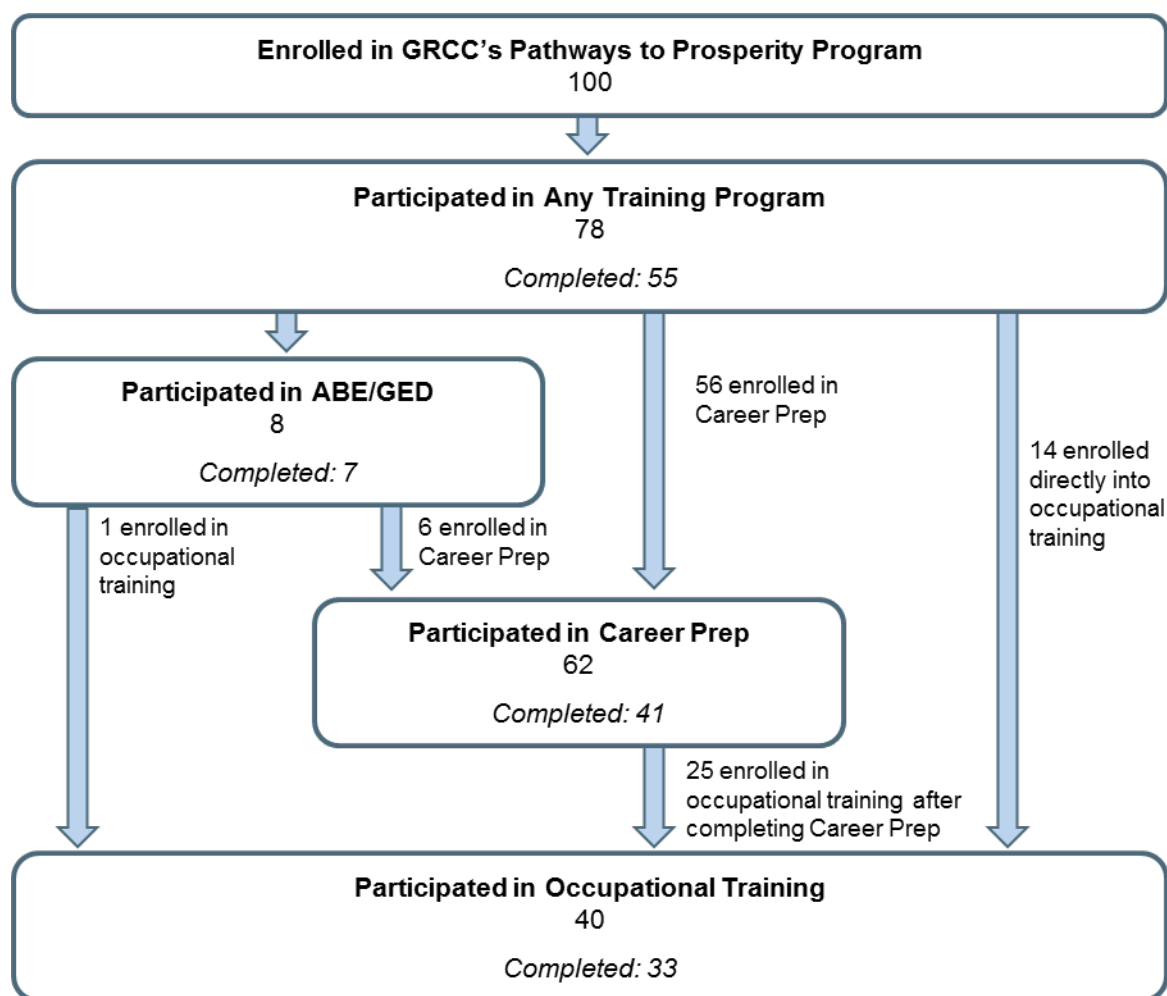
Exhibit 3.4 shows the participant flow through GRCC's Pathways to Prosperity program.⁵³ Out of every 100 individuals assigned to the treatment group, 78 participated in any education or training activity which could include the ABE/GED course, Career Prep, or occupational training.⁵⁴ Twenty-two did not participate in the program after they were randomly assigned. Of the 78 who did participate, 56 began with Career Prep, 14 began in occupational training, and eight began with a basic skills class (ABE/GED).

⁵³ Exhibit 3.4 displays illustrative figures based upon actual enrollment and participation levels.

⁵⁴ Data on attendance and completion of ESL classes were not available in records obtained from GRCC.

An additional six individuals who started in basic skills continued to Career Prep; thus a total of 62 out of 100 participants attended Career Prep. In all, 40 individuals participated in occupational training. In addition to the 14 who enrolled in occupational training directly after intake, 25 entered after completing Career Prep, and one entered after completing basic skills training. Of the 40 who attended occupational training, 33 completed it.

Exhibit 3.4. Participation and Completion of GRCC's Pathways to Prosperity Program among 100 Program Enrollees Within a 12-Month Follow-Up Period



Source: Calculations are from GRCC program administrative records

Notes: Sample size is 86 individuals assigned to the treatment group.

Exhibit 3.5 shows, among enrollees who attended at least one Pathways to Prosperity program, the *proportion* that participated in and completed each course and the average length of time participants spent in training. Of those who participated, 61 percent attended only one program, most commonly Career Prep (42 percent) followed by occupational training (18 percent). Over one-third (36 percent) attended two programs, with the vast majority of these attending Career Prep and occupational training.

Exhibit 3.5. Type of Programs Attended, Completion Rates, and Average Length of Stay among GRCC Program Participants Over a 12-Month Follow-Up Period

Programs	Participation Rate (%)	Completion Rate (%)	Months in Training
Attended one program:	61	54	1.7
ABE/GED	1	0	n/a
Career Prep	42	50	1.5
Occupational training	18	67	2.4
Attended two programs	36	75	5.2
ABE/GED and Career Prep	4	33	2.3
ABE/GED and occupational training	2	100	2.0
Career Prep and occupational training	30	80	5.8
Attended three programs: ABE/GED, Career Prep, and occupational training	3	100	8.5
Attended any program	100	69	3.3

Source: Calculations are from GRCC program records

Notes: Sample size is 67 for the participation rate column and includes those who attended at least one Pathways to Prosperity program. Completion and length-of-stay measures are for those who attended the specific program or combination of programs (sample sizes not listed but can be calculated by multiplying sample size by participation rate). Percentages may not sum to total due to rounding.

The completion rate for those who attended multiple programs includes those who completed all programs attended.

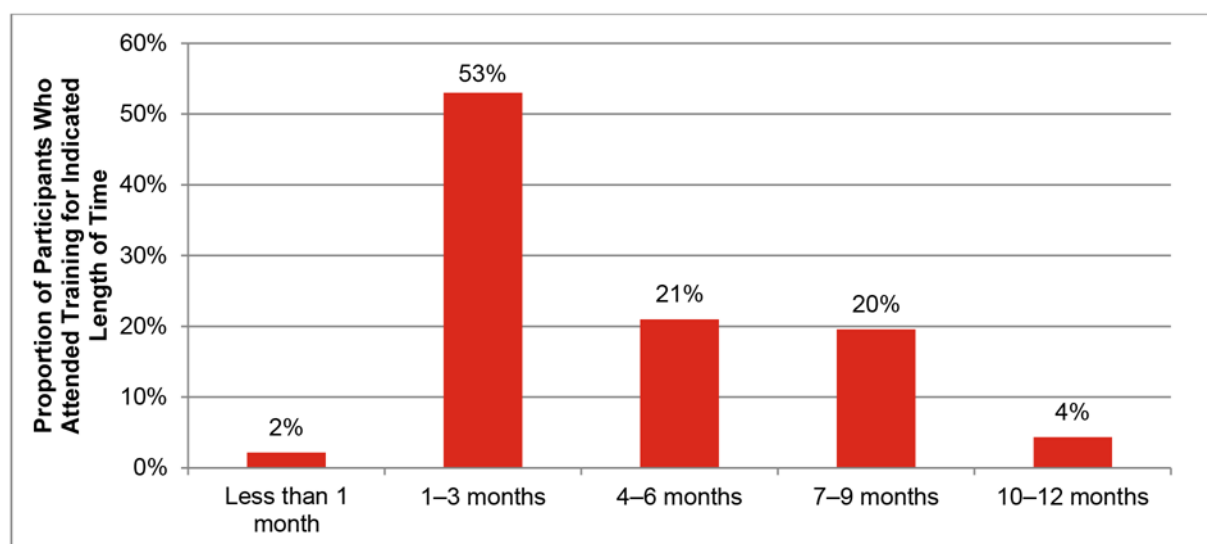
Program end dates were not available for ABE/GED classes.

The sample sizes are very small for those who attended ABE/GED only, ABE/GED and Career Prep, and ABE/GED and occupational training, so these completion rates and length-of-stay averages should be interpreted cautiously.

Except for Career Prep, end dates are not available for those who did not complete their programs, so length-of-stay measures are based on those who completed the programs.

As shown in Exhibit 3.5, the completion rate for individuals who participated in any program was 69 percent. Completion of the ABE/GED and Career Prep program meant earning an employability certificate, while at the occupational training level completion typically resulted in receipt of an industry-recognized certificate. The completion rates varied across the programs. Of those who participated in only one program, those attending an occupational training class had the highest completion rate (67 percent) followed by Career Prep (50 percent). Completion of an occupational training class increased if individuals completed the Career Prep class first, with 80 percent of those who attended this sequence of courses completing it.

Exhibit 3.5 also shows that, among those who participated in training, the average length of attendance was 3.3 months. (Aside from Career Prep, data on the date of withdrawal was not available from the program records; those who dropped out are not included in length-of-stay calculations. Thus, these statistics slightly overestimate the length of stay in the programs.) Those who attended Career Prep and occupational training attended 5.8 months on average, and the average length of stay in training for those who only attended occupational training was 2.4 months. Exhibit 3.6 shows the distribution of the overall length of stay in the programs—over half of the participants attended training for one to three months, and almost one-quarter attended more than six months.

Exhibit 3.6. Length of Stay in GRCC's Pathways to Prosperity Programs

Source: Calculations are from GRCC program records

Notes: Sample size is 47 and includes those who completed at least one Pathways to Prosperity program. Aside from Career Prep, end dates are not available for those who did not complete their programs, so length-of-stay measures are based on those who completed the programs.

For those who attended occupational training, participants enrolled in a wide range of programs (not shown in Exhibit 3.5). Nearly one-third (32 percent) of those who attended a training program participated in commercial driver's license training, making it the most commonly subscribed training. Aside from this, participants enrolled in numerous trainings covering many industries and occupations. The trainings included architectural drafting, auto mechanics, business administration, computer support technician, customer service representative, HVAC certification, industrial maintenance, landscaping, and welding. Most of these programs enrolled only a few Pathways to Prosperity participants.

Overall, the GRCC program administrative data indicate relatively high levels of participation, with 78 percent of those assigned to the treatment group attending at least one education or training activity, 62 percent attending Career Prep, and 41 percent attending an occupational training program. Of those who participated, the most common activity was Career Prep, with 42 percent of participants attending this program and an additional 30 percent attending both Career Prep and an occupational training. Of those who attended both Career Prep and occupational training, 80 percent completed both courses. Completion rates were lower when individuals attended these programs on their own. The duration of attendance was relatively short, participants attended for an average of 3.3 months.

4. Kern Community College District's Clean Energy Center

4.1 Grant Overview

Located in Bakersfield, California, in the southern San Joaquin Valley, Kern Community College District (KCCD) used its DOL Health Care and Other High Growth and Emerging Industries grant to support the establishment of its Clean Energy Center. This center provided tuition-free, non-credit wind and solar technician training for dislocated, underemployed, and unemployed residents of the region. The goal was to provide technical job skills in what was anticipated to be a growing industry in the state. The center opened in March 2010 and operated for the duration of the grant (through June 2013). The GJ-HC impact study, with random assignment to a treatment and control group, began in August 2011 (see Chapter 1 for a discussion of the study design).

The Clean Energy Center offered three connected training programs: PowerTech, WindTech, and SolarTech. All participants started with PowerTech, a six-week foundational training providing instruction on workplace safety and basic math and electrical skills. The foundational training also introduced the tools and equipment used in the field. From there, participants could seek entry-level employment or pursue the WindTech or SolarTech trainings (or both), which were nine and seven weeks long, respectively. These two training programs involved classroom instruction on wind or solar technology, systems, installation, and maintenance, as well as experiential field trips that provided hands-on learning opportunities. Those who completed any of the three trainings earned KCCD-developed certifications in the industry. Those who completed SolarTech were also prepared to sit for the North American Board of Certified Energy Practitioners (NABCEP) exam, which confers an industry-recognized certification. At the time the center operated, there was no standard industry certification for those completing the PowerTech or WindTech programs.

In addition to the training, participants had access to the career counseling and job search assistance services provided by the AJCs operated by two Workforce Investment Boards (WIBs) in the region. Clean Energy Center instructors also offered tutoring and informal academic advising to participants who sought this assistance. Through the AJCs or, later in the grant, through the center, participants received counseling and guidance on personal issues and assistance in identifying and applying for job opportunities. Over the course of the grant, program managers built relationships with a number of employers that provided the program with guidance on course content and labor market information and at times led to jobs for participants who had completed the program.

The remainder of this chapter describes the grant-funded program implemented by KCCD. After describing the context in which the KCCD programs operated, the chapter discusses the target group the program was designed for, the characteristics of the program enrollees, and the organizational structure of the program. It then examines the recruitment and enrollment process for the training and describes the training programs and other supports provided to participants as part of the grant. The final sections describe participant experiences in the program based on a focus group conducted for the study and participation patterns in the training activities based on KCCD's program administrative data.

4.2 Program Context and Goals

Since 1994, KCCD has offered training opportunities to residents in its district, which includes most of Kern and Inyo counties and portions of Mono, Tulare, and San Bernardino counties. KCCD comprises

three colleges: Bakersfield College, Porterville College, and Cerro Coso Community College. KCCD's Workforce Development Division, which managed and administered the DOL grant, has a history of partnering with local WIBs and employers to offer non-credit workforce training. The DOL grant supported the Workforce Development Division's Clean Energy Center at KCCD's headquarters in Bakersfield, which is where the majority of the trainings took place.⁵⁵

Kern County, home to Bakersfield, the largest city in KCCD's service area, had a population of approximately 848,000 in 2013 according to the American Community Survey. As shown in the Appendix, the majority of the population in the county was white (72 percent), with about 6 percent reporting a race of black or African American. Half of the population was Hispanic or Latino. Less than a quarter of the county's population held an associate's degree or higher, and about a quarter of the population had less than a high school diploma. The median household income was approximately \$49,000 annually and 23 percent of the population lived below the federal poverty level.⁵⁶

Historically, Bakersfield had been an agricultural center and an oil production base, but in the two decades before the 2008 recession, homebuilding emerged as the region's highest growth sector. The foreclosure crisis and the economic downturn negatively affected the home building industry as well as many of the traditional industrial and business sectors in the Bakersfield region. The construction and oil field sectors faced the greatest downturns. In 2009, the year KCCD applied for the DOL grant, Kern County had an annual average unemployment rate of 14 percent; Tulare County, also part of KCCD's service area, had an annual average unemployment rate of 15 percent.⁵⁷ By contrast, California's annual average unemployment rate at that time was 11 percent.

By the middle of 2012, part way through the DOL grant period, the economy began to recover as local industry began hiring and initiating a variety of construction projects. In fall 2012, the *Los Angeles Times* and the *Wall Street Journal* reported a "Bakersfield boom" resulting from a growing economy and population.⁵⁸ Kern County had an annual average unemployment rate of almost 16 percent in 2010, which by 2013 had decreased about four percentage points to just under 12 percent (see the Appendix).⁵⁹

Because of the effects of the recession, KCCD's Workforce Development Division explored other sectors of the economy for potential employment growth. The division reviewed analysis of national, state, and regional economic outlooks and consulted with the Kern Economic Development Corporation and its recently established Green Employer Council. Based on the information gathered, coupled with evidence of federal and state investment in renewable energy, staff at KCCD anticipated that the renewable energy sector would experience strong near-term growth between 2009 and 2014. In addition, staff saw an opportunity to train oil field and construction workers displaced by the recession for jobs in wind and solar energy. KCCD applied simultaneously for the DOL grant and a Clean Energy Workforce Training

⁵⁵ Two sessions of PowerTech were offered on the Porterville campus in May and June 2012, but all other trainings were held at the Clean Energy Center in Bakersfield.

⁵⁶ Poverty Status is defined by the Census Bureau. Accessed September 29, 2014, http://www.census.gov/acs/www/data_documentation/documentation_main/#doc2012

⁵⁷ U.S. Bureau of Labor Statistics, 2010, 2013

⁵⁸ Lopez, 2012; Carleton, 2012

⁵⁹ U.S. Bureau of Labor Statistics, 2010, 2013

Program (CEWTP) grant funded by several state agencies. The CEWTP grant was awarded first and KCCD used it to establish the Clean Energy Center. When it was awarded the DOL grant, KCCD was able to continue the wind turbine technician program and add the power and solar trainings as the CEWTP grant was coming to a close.⁶⁰

The PowerTech, WindTech, and SolarTech trainings were designed to provide participants with entry-level technical skills that they could apply in both the traditional and renewable utility sectors. When the program was developed, industry-recognized credentials did not exist for the power or solar courses, and KCCD developed new credentials in these fields that they hoped would be beneficial in the labor market. The KCCD program also was designed to provide supports to participants while they were in the training, both to ensure successful completion of the program and to help them secure employment once the training was completed.

4.3 Target Group and Treatment Group Characteristics

The Clean Energy Center's trainings targeted unemployed, underemployed, and dislocated workers residing in KCCD's service area. To be eligible for the program, applicants needed a high school diploma or GED; scores at Level 4 or higher on three WorkKeys® skills assessments;⁶¹ a valid driver's license; no violent felony convictions; and a negative result on a drug test. These requirements were intended to ensure that participants had the baseline educational skills needed for the course content and to screen out individuals whose backgrounds would make employment in these industries difficult.

Exhibit 4.1 shows the demographic characteristics of individuals in the treatment group. It uses data reported on the study's Baseline Information Form that individuals completed during the intake process for the program, before random assignment. The treatment group members were considerably more likely to be male than female (90 percent versus 10 percent). Almost half (45 percent) reported being of Hispanic or Latino ethnicity. Nearly all (94 percent) reported U.S. citizenship, while 36 percent spoke a language other than English at home. The average enrollee was 32 years old. The majority (56 percent) had never been married and a quarter was married at the time of random assignment. About half (52 percent) had children 18 years old or younger living in their households.

As discussed, the Clean Energy Center trainings required at least a high school diploma or GED, and a vast majority (97 percent) of the treatment group members reported having attained one of these or a higher level of education. Other types of credentials were less common: about 13 percent reported they had a technical or associate's degree at the time they enrolled and 5 percent had a bachelor's or graduate degree. Seven percent indicated that they were currently enrolled in school or another training program.

Eighty-two percent of treatment group members reported that they were not working at the time of random assignment, reflecting KCCD's focus with this grant on serving unemployed and dislocated

⁶⁰ Seed funding from California's CEWTP grant enabled KCCD to launch the Clean Energy Center, but the DOL grant was the primary source of funds as the center ramped up its programs and operations.

⁶¹ The ACT WorkKeys® assessment serves as an indicator of individual skill level in three areas: Applied Mathematics, Locating Information, and Reading for Information. Employers and training programs use WorkKeys® scores to determine eligibility and readiness for work or education. The assessments also underlie ACT's National Career Readiness Certificate program. Accessed July 31, 2013, <https://www.act.org/workkeys/index.html>.

workers. About 48 percent had worked within the previous 12 months even if they were not employed when enrolled, but 34 percent had been unemployed for more than a year. Among all treatment group members (including those who were not working), weekly earnings averaged \$58. About a quarter received SNAP benefits and a similar proportion received unemployment insurance. When providing their opinions about work opportunities on the baseline survey, nearly two-thirds said that they were willing to take any job even if the pay was low and just over one-third indicated that they preferred a job related to their training. Enrollees did not feel that access to transportation or affordable child care posed a particular barrier to their ability to work, with only 13 percent and 8 percent of enrollees, respectively, indicating these as challenges.

Exhibit 4.1. Selected Characteristics of Treatment Group Members at Baseline, KCCD

Characteristic	Outcome
Demographic Characteristics	
Gender (%)	
Female	10.4
Male	89.6
Race (%)	
American Indian or Alaskan Native	5.9
Asian	3.5
Black or African American	10.9
Native Hawaiian or other Pacific Islander	0.6
White	72.9
Multi-race	6.2
Hispanic ethnicity (%)	44.9
Average age (years)	32.0
Citizenship (%)	
U.S. citizen	93.9
Legal resident	6.1
Speaks a language other than English at home (%)	36.2
Family Status	
Marital status (%)	
Married	26.4
Widowed/divorced/separated	17.7
Never married	55.9
Number of children under age of 18 (%)	
None	48.1
One child	19.1
Two children	18.6
Three or more children	14.1

Exhibit 4.1. Selected Characteristics of Treatment Group Members at Baseline, KCCD (continued)

Characteristic	Outcome
Education	
Education level (%)	
Less than high school	2.7
High school diploma or GED	46.1
Technical or associate's degree	13.3
Some college credit but no degree	32.5
Bachelor's or master's degree	5.3
Currently enrolled in school or training program (%)	6.9
Employment	
Employed (%)	17.7
Currently employed full time (30+ hours)	9.2
Currently employed part time (<30 hours)	8.5
Not employed (%)	82.3
Employed in last 12 months but not employed currently	48.1
Longer than 12 months since last worked	34.2
Weekly earnings of respondent (\$)	58.30
Factors That Affect Employment	
Amount a job must pay for respondent to take (\$)	12.54
Job preferences (%)	
Prefers the kind of job that relates to training	36.3
Will take any job, even if the pay is low	62.2
Felony conviction (%)	12.3
Finding quality, affordable child care limits ability to work (%)	8.1
Transportation problems limit ability to work (%)	12.9
Any kind of physical or mental disability (%)	3.1
Public Benefits	
Receiving any public benefit (%)	45.9
Types of benefits received (%)	
Temporary Assistance for Needy Families	4.9
Supplemental Nutrition Assistance Program	23.6
Unemployment insurance	25.8
Section 8 or public housing assistance	3.2

Source: GJ-HC Baseline Information Form (BIF)

Notes: Statistics in this table are computed based on the 414 KCCD treatment group members who completed the baseline survey.

4.4 Organizational Structure and Staffing

KCCD was the lead organization for the grant and provided the training and academic supports to program participants. KCCD partnered with two AJCs to operate the program: the Employers' Training Resource (ETR), which is the administrative arm of the Kern/Inyo/Mono counties' WIB; and the Tulare WIB, which provides workforce services in Tulare County. KCCD and ETR had worked together on past DOL grants, although this was the first effort for which KCCD served as the lead. The AJCs involved their existing staff in recruitment and intake for the Clean Energy Center training. At ETR, four managers and 18 staff were involved in these activities, in addition to their other responsibilities at the AJC; at the

Tulare WIB, two managers and eight staff were involved. During the initial grant period, the AJCs recruited potential participants, conducted eligibility assessments, and made referrals to the training program. They also provided WIA-funded support services and employment assistance that were available at the AJC (see discussion below).

The partnership between KCCD and ETR did not last for the entire grant period. The relationship with ETR dissolved in spring 2012 due to KCCD's dissatisfaction with ETR's pace in enrolling individuals in the grant-funded training and concern that ETR was not providing sufficient supports to the students. The new roles each organization played when this grant initiative got started—with KCCD as the grant lead rather than ETR—proved challenging for both entities, more so than it seems either expected. When the partnership ended, Clean Energy Center staff assumed ETR's recruitment and enrollment responsibilities for the remainder of the grant. The partnership with the Tulare WIB lasted the duration of the grant, but the Tulare WIB played a more minimal role in the program, primarily recruiting students for the PowerTech sessions that were offered on the Porterville campus in June and July 2011 and May and June 2012.

The Clean Energy Center was housed within the Weill Institute, which is a facility in downtown Bakersfield shared by KCCD and Bakersfield College. Three full-time Clean Energy Center employees administered the program: a program director, a program manager, and an office manager. Nine part-time instructors were responsible for teaching PowerTech, WindTech, and SolarTech. Seven of the instructors had experience with construction and operations of traditional and renewable utilities and thus focused on the technical training components. The remaining two instructors were experienced in workforce education and taught the math course, communications skills, and resume and job search courses for participants in all three programs. Two part-time substitute instructors were available to fill-in when needed. All Clean Energy Center administrative and instructional staff were expected to assist participants as needed with academic, personal, and employment counseling.

4.5 Recruitment and Enrollment

To identify and enroll potential candidates in the Clean Energy Center programs, KCCD and the AJCs developed a recruitment and enrollment process to identify eligible individuals. For the evaluation, the enrollment process also included random assignment to a treatment group that was eligible to receive the program services and a control group that was not but that could receive other services at the college or in the community (see Chapter 1 for a discussion of the study design).

4.5.1 Recruiting Participants for Clean Energy Center Trainings

The first step in the enrollment process was recruitment of eligible applicants. At the start of the grant, KCCD, ETR, and the Tulare WIB collaborated on a strategy to identify and recruit individuals for the training programs. KCCD and the AJCs already had some recruitment efforts under way for the training offered under the CEWTP grant. The AJCs produced television, radio, and print (brochures, posters, and newspaper) advertisements and conducted outreach at community events. The AJCs and KCCD also used their websites as a platform for marketing the Clean Energy Center. When the evaluation began in August 2011, the AJC's marketing materials explained that a federal evaluation of the training program was under way and that because of the study, spaces in the PowerTech program were limited, with entry into the program determined through a lottery-like process.

KCCD staff reported that the AJC's recruitment efforts before the start of the study were successful in that they brought in a sufficient number of enrollees to run the classes, according to college and AJC staff. However, by late 2011, several months after the study began, fewer people were attending information and orientation sessions and applying to the program. KCCD, the AJCs, and some of the industry and employer partners gave varying explanations for the recruitment challenges they faced. The AJC staff reported that the weak economy and slow growth (and thus fewer jobs) in the renewable energy sector limited people's enthusiasm for the training. Clean Energy Center staff reported that the AJC's were not doing enough to market the program. A few partners mentioned that the technical content and physical requirements of jobs in the renewable energy sector may have deterred applicants. In response to the decline in applicants, KCCD's Clean Energy Center staff took over recruitment responsibilities from the AJCs. They focused on word-of-mouth recruitment, Craigslist postings, and public service announcements on local television stations. In reflecting on these marketing efforts near the end of the grant period, the Clean Energy Center's staff perceived that interest in the program improved as a result of these recruitment strategies.

Twelve program participants who took part in the focus group conducted for the evaluation revealed that they heard about the Clean Energy Center programs in a variety of ways. Word of mouth was the primary way but some had heard about it through friends who had completed the program themselves or through contacts in the industry. Several also learned about the program through a TV or radio ad or saw one of the flyers staff had developed. One focus group participant found out about the program through an Internet search.

4.5.2 Enrollment Process for Clean Energy Center Trainings

As originally designed, individuals who were interested in the Clean Energy Center offerings attended a PowerTech orientation session at the AJCs during which they learned about the program content, associated jobs, eligibility requirements, steps to enroll, and the evaluation, including the random assignment process. During the period of their involvement, both AJCs conducted orientations once a week.⁶² At the conclusion of the orientation, AJC staff scheduled applicants for individual intake appointments that took place in the days following the orientation.

During the intake appointment, AJC staff reviewed applicants' basic eligibility for the program. At a minimum, applicants needed a high school diploma or GED, a record of no violent felonies, and a valid driver's license. Staff also discussed the physical requirements of the jobs associated with the training, such as climbing, operating equipment, and heavy lifting. Individuals who met the basic eligibility requirements were scheduled to return and complete the Applied Mathematics, Reading for Information, and Locating Information sections of the WorkKeys[®] assessment, which typically took place the following week. Applicants needed to place at Level 4 or higher on each WorkKeys[®] section in order to qualify for PowerTech.⁶³

⁶² ETR was involved with the grant until March 2012. The Tulare WIB was most actively involved with recruitment and enrollment from March 2012 through July 2012.

⁶³ The WorkKeys[®] Applied Mathematics and Reading for Information assessments each had five levels of difficulty, starting with Level 3. The Locating Information assessment had four levels of difficulty, also beginning with Level 3. On all three assessments, the center's required minimum of Level 4 was the second least-complex level.

Applicants who met the WorkKeys® skill level for PowerTech received a drug test referral from AJC staff, which had to be completed within 24 hours. AJC counselors also had a one-on-one meeting with the applicant that was scheduled for two weeks after the drug test. When the individual returned for the one-on-one meeting, the counselor discussed the results of the drug test. For applicants who passed the drug test, the AJC counselor described the evaluation in detail, administered the informed consent form, and asked the individual to complete the baseline questionnaire for the study. AJC staff conducted random assignment at the conclusion of this meeting and informed the applicant of the results. Those assigned to the treatment group received a referral to enroll in PowerTech training at KCCD.

The enrollment process for the Clean Energy Center trainings changed over the course of the study period, due in part to efficiencies identified once the study was under way and also due to changes in the partnership between KCCD and the AJCs. Exhibit 4.2 illustrates the enrollment process as it operated under the AJCs for the majority of their period of involvement and as it operated once the Clean Energy Center took over recruitment and enrollment. The original enrollment process required five separate days of activities, one of which involved a full day for the Career Path Workshop and WorkKeys® testing. The AJCs eliminated the Career Path Workshop during the first year of the study because staff felt it slowed intake for the program and was a deterrent for applicants because of the extra three hours it added to the process. The AJCs also began doing eligibility determination with groups of applicants because they could screen multiple people in one sitting more efficiently than in individual sessions. Another change that occurred about four months into the evaluation was adjusting the point at which the drug test was completed. The AJCs covered the expense of the drug test using grant funds and, due to concerns about resources, decided to conduct random assignment before the drug test so that they would only bear the cost of treatment group members' screenings. Staff perception was that very few people failed the drug test and so the change would have little effect on the study.

When Clean Energy Center staff assumed recruitment and enrollment responsibilities for the program, they refined the process further but kept the order of activities the same as when the AJCs had been conducting it. They held orientations twice a week at the Clean Energy Center in an attempt to better accommodate people's schedules. They also began holding the initial eligibility screening immediately following orientation on the same day to reduce the number of visits each applicant needed to make and to maintain momentum in the enrollment process once someone expressed interest. Staff referred individuals to take a drug test, which was paid for with KCCD's grant funds.

Exhibit 4.2. Clean Energy Center Enrollment Process

Enrollment Process Under American Job Centers August 2011-March 2012		Enrollment Process Under Clean Energy Center March 2012-June 2013	
Recruitment	Individuals learned about PowerTech and the Clean Energy Center through word of mouth, print and radio advertisements, and community outreach events.	Recruitment	Individuals learned about PowerTech and the Clean Energy Center through word of mouth, print and radio advertisements, and community outreach events.
PowerTech Orientation	Individuals received information on program content and eligibility requirements. AJC staff scheduled interested individuals for an intake appointment to occur within the following few days.	PowerTech Orientation	Individuals received information on program content and eligibility requirements. For those expressing interest in the program, Clean Energy Center staff confirmed basic eligibility (high school diploma/GED, no violent felonies, driver's license) on the same day.
Intake Meeting	AJC staff met with individual (initially in a one-on-one meeting, later in a group setting) and confirmed basic eligibility for the program (high school diploma/GED, no violent felonies, driver's license). Those who met requirements were scheduled for a day of WorkKeys® assessment.	WorkKeys® Assessment	Individuals took the math, reading, and locating information sections of WorkKeys®. Minimum score of Level 4 required on each in order to proceed.
WorkKeys® Assessment	Individuals took the math, reading, and locating information sections of WorkKeys® (4 hours). Minimum score of Level 4 required on each in order to proceed. For a time, individuals also took a Career Path Workshop (3 hours) on the same day.	Intake Meeting and Random Assignment	Individuals met with a Clean Energy Center staff member. Final program eligibility was confirmed. After explaining the evaluation and the random assignment process, staff conducted random assignment and treatment group members continued in the program.
Individual Intake Session and Random Assignment	Within a week, individuals met one-on-one with an AJC counselor. Final program eligibility was confirmed. After explaining the evaluation and the random assignment process, staff conducted random assignment and treatment group members were referred for a drug test	Drug Testing	Individuals were referred for a drug test as a final step in the intake process. Those testing negative on the drug test could enroll in Clean Energy Center trainings.
Drug Testing	Individuals completed the drug test within 24 hours of the referral as a final step to the intake process. Those testing negative could enroll in Clean Energy Center trainings. (For the first four months of the project, drug testing occurred after the individual intake session and before random assignment.)	PowerTech Training	Individuals began training with the next available PowerTech program.
PowerTech Training	Individuals began training with the next available PowerTech program.		

4.6 Clean Energy Center Training Programs

After completing the enrollment process, an enrollee could begin training at KCCD's Clean Energy Center. All program participants, regardless of prior training or experience, first attended the foundational PowerTech training. After completing this program, participants could seek employment as a utility technician or they could enroll in WindTech or SolarTech or in both trainings. Additional training classes had to be completed sequentially and could not be taken concurrently.

PowerTech was originally five weeks long until the summer of 2012 when it was extended to six weeks, WindTech was nine weeks, and SolarTech seven weeks. All three trainings occurred Monday through Friday from 8:00 a.m. to 4:30 p.m. and class sizes were kept relatively small (10 to 20 students per class). Exhibit 4.3 summarizes the length, content, and resulting certificates and credentials of each of the three trainings.

Exhibit 4.3. Summary of Clean Energy Center Training Programs

Program	Length	Prerequisites	Content	Certifications, Credentials
PowerTech	Originally 5 weeks, 175 hours. Extended in summer 2012 to 6 weeks, 210 hours.	High school diploma or GED	• Workplace and worksite safety • Basic technical math • Basic electricity, residential wiring • Basic climbing, tools of the trade • 24 hours on teamwork, communication, codes of conduct, basic job searching, and resumes	• KCCD certificate for entry-level utility worker • OSHA-10 Construction, and Hazardous Waste Operations and Emergency Response • First Aid, CPR, OSHA Blood borne Pathogens • Microsoft Office • National Center for Construction Education and Research (NCCER) Introductory Craft Skills
WindTech	9 weeks, 315 hours	PowerTech	• Wind technology basics and aerodynamics • Wind power electronics and troubleshooting • Turbine mechanical systems, gearboxes, hydraulics, lubrication, torquing, and tensioning • Safety at heights, tower rescue, and climbing • Teamwork, customer service, resume preparation, job interview skills, and report writing	• KCCD certificate for entry-level wind turbine technician
SolarTech	7 weeks, 245 hours	PowerTech	• Basic electrical, photovoltaics, and solar irradiance • Solar electronics and troubleshooting • Tools of the trade, electrical installation, and safety • Resumes and job search techniques, job interview skills	• KCCD and NABCEP certificates for entry-level positions in building, installing, operating, and maintaining photovoltaic solar systems • NABCEP Photovoltaic Entry Level Exam for certification

As part of the grant, the Clean Energy Center developed a curriculum for each program that was based on industry trainings but adapted to meet the needs of the target population and to provide marketable skills that would be useful even in non-utility jobs. Clean Energy Center staff reviewed and revised each curriculum during the grant period using input from employers and from students in an effort to keep the content relevant to the evolving industry. The curricula and resulting credential for each program are described below.

- For the six-week *PowerTech* course, KCCD adapted a curriculum provided by a local electric company. KCCD also spoke with instructors elsewhere in California that used the shared curriculum for their insight on relevant content. KCCD's *PowerTech* curriculum included basic math, introduced participants to the basics of electricity and residential wiring, and covered job site safety and skills. It also included non-technical material related to communication, teamwork skills, and job search techniques. Instructors reported that they taught through lecture and group discussion, with about 25 percent of class time spent doing hands-on lessons or field trips.⁶⁴ They also used e-learning modules to reinforce classroom instruction. *PowerTech* resulted in a KCCD certificate as an entry-level utility worker, either in traditional or renewable utilities. The training also gave participants several OSHA certifications, including OSHA-10 Construction and Hazardous Waste Operations and Emergency Response. Near the end of the grant, participants also earned the NCCER Introductory Craft Skills certification.
- The nine-week *WindTech* curriculum was developed based on the emerging wind technician skill sets identified by the American Wind Energy Association (AWEA). Mornings typically involved classroom lecture and group discussion about technical, safety, and workplace skills while afternoons were spent applying the concepts through hands-on lab work or by completing self-paced e-learning lessons. Participants took a field trip to the Tehachapi area wind farms where they completed a multi-day tower climbing and rescue exercise. At the time of the grant-funded training, there was no industry-recognized wind certification, so upon successful completion of the program, *WindTech* participants received a KCCD certificate for entry-level wind turbine technician, a role that involves performing maintenance on wind turbines.
- The seven-week *SolarTech* program was organized to correspond to the standard industry textbook recognized by NABCEP.⁶⁵ Participants received technical instruction in photovoltaics and solar electronics and developed workplace skills related to installation, maintenance, safety, and customer service. Originally, participants took two field trips to solar thermal and solar photovoltaic utility facilities, but these excursions were later replaced with a more hands-on experience through a California non-profit organization whose mission was to improve access to affordable renewable energy for low-income households. The cohorts of *SolarTech* participants spent at least one day assisting the non-profit with residential solar panel installation. During the final week of the program, *SolarTech* participants prepared for and took the NABCEP Photovoltaic Entry Level Exam for

⁶⁴ The two *PowerTech* field trips were to a local electric company's general construction yard where participants practiced climbing, excavation, and other job site skills.

⁶⁵ To develop the *WindTech* curriculum, staff referred to trainings offered by other private trainers and public colleges in the Pacific Northwest. The *SolarTech* textbook is *Photovoltaic Systems* by James P. Dunlop in partnership with the non-profit National Joint Apprenticeship and Training Committee (NJATC), which is now called the Electrical Training Alliance.

certification. Successful participants also received KCCD and NABCEP certificates for entry-level positions in photovoltaic systems installation and maintenance.

In addition to the discrete programs described above, in spring 2013 the Clean Energy Center ran a hybrid program that incorporated aspects of PowerTech and WindTech. This training was offered to meet demand for the courses and as a way for the Clean Energy Center to pilot an alternative model that they considered using after the end of the DOL grant period.

Daily attendance was required for all three training programs, though participants were permitted up to three excused absences (e.g., illness or job interview) with the stipulation that they notify a staff member in advance. Having more than three unexcused absences or four behavioral infractions were grounds for termination from the program. Instructors monitored attendance but reported that absenteeism was not generally a problem. Staff reported that the small class size resulted in classmates encouraging each other to successfully complete the course.

Originally, the three programs were held in Bakersfield in a KCCD facility shared by the Clean Energy Center and Bakersfield College. Over the course of the grant period, KCCD made the programs available elsewhere as well. In June and July 2011 and in May and June 2012, the Clean Energy Center made PowerTech available at KCCD's Porterville College campus. PowerTech was also offered in Delano in August 2011. These additional locations allowed PowerTech participants across the region to select a location that was most convenient to them. The hybrid PowerTech/WindTech program was offered only in Mojave. The WindTech and SolarTech courses continued to be offered primarily in Bakersfield, but SolarTech was also offered in Delano in October and November 2011, and in Mojave from April to June 2013.

4.7 Assistance and Supports

In addition to the specific training programs, KCCD's Clean Energy Center programs provided program participants with a range of academic and personal supports, including financial assistance and employment assistance. As described in this section, these services were provided to help participants complete the training programs and secure employment once the training was completed.

4.7.1 Academic and Personal Supports

At the outset of the grant, the AJCs—ETR's Bakersfield office and the Tulare WIB—provided program participants with access to a range of non-academic supports and resources. These were supports that were routinely available at the two AJCs, particularly access and referrals to resources to address employment-related barriers

(e.g., public benefits, transportation, and/or child care) and, as discussed further below, assistance with and services for finding employment. Although earlier in the grant period the AJCs co-enrolled

Assistance and Supports Provided by KCCD's Clean Energy Center Programs

- ✓ Academic support and personal guidance provided by instructors. Early in grant period, AJCs provided non-academic assistance.
- ✓ Training offered at no cost to participants.
- ✓ Vouchers available as-needed for purchase of professional work boots.
- ✓ Instructors incorporated team work skills, resume development, interview skills, and job search strategies into the training curricula. Assistance with employment search provided by AJCs early in the grant period.
- ✓ Instructors cultivated and maintained relationships with employers, who provided guidance on course content and hired some graduates. When possible, instructors drew on their own professional networks to facilitate employment connections

participants in WIA services, during the study period participants were not co-enrolled due to a decrease in WIA funding.

After the partnership with ETR ended, staff at KCCD began providing most of these supports, with assistance from other instructors and the Clean Energy Center's program manager and director. The Clean Energy Center offered a range of supports to participants, including tutoring and help with study and test-taking skills; access to instructors during office hours; and personal guidance on managing school, work, and family. Because the center is separate from Bakersfield College, participants did not have access to the services offered by the college. One PowerTech instructor who had prior program administration and student counseling experience was given fewer teaching responsibilities so that he could dedicate time to counseling participants. This staff member typically handled non-academic issues, with instructors referring individuals if they learned of a personal challenge in the context of discussing academics. Participants were given the phone number of the counselor and were encouraged to contact him if they needed help accessing services or addressing an issue.

The academic and personal support services available through the Clean Energy Center were provided informally in the sense that the program did not have dedicated support service staff and did not require meetings between participants and staff. Instructors offered both academic guidance and counseling on personal issues in addition to their other responsibilities. Instructors reported that participants using these services were those who sought them out on their own or those who could be identified by instructors as struggling based on performance on assignments and assessments. Because of relatively small class sizes, staff reported that instructors and participants got to know each other fairly well, making it easier for instructors to detect if a participant was not doing well and determine how best to intervene to provide assistance. Instructors made themselves available outside of class to meet with participants to offer additional help with course content and difficult assignments or guidance on study skills and other academic issues. Individual and group tutoring was available to those in need of improving their studying and test-taking skills.

4.7.2 Financial Assistance

The Health Care and Other High Growth and Emerging Industries grant covered the cost of the three Clean Energy Center trainings so that participants did not incur tuition expenses. If a participant was unable to afford professional-grade work boots, which were a necessity for the program, the participant also received a voucher to cover the cost of work boots.

4.7.3 Employment Services

ETR and the Tulare WIB were initially responsible for providing employment services for program participants, including job placement assistance. The services included employment assistance activities routinely provided through the AJCs, including job search workshops; assistance with developing resumes, practice in interview techniques, and help developing job search strategies and identifying job leads. ETR also had a resource room with computers that individuals could use to prepare their resumes and search online for jobs.

After the partnership with ETR ended, Clean Energy Center instructors played the lead role in providing employment services. Instructors, some of whom had previous work experience in the industry, provided participants with assistance in applying for job opportunities and reported that they typically provided career advice, served as job references, and assisted with interview and resume preparation on request. When possible, instructors said that they drew on their own professional networks to facilitate student

connections with industry contacts. Staff also sought to cultivate and maintain relationships with employers and share job announcements with participants.

Components intended to develop participants' workplace skills and prepare them for employment were built into the curriculum of each of the three trainings. PowerTech included exercises in teamwork and communication and introduced resume development and basic job search techniques. During WindTech and SolarTech trainings, participants revised their resumes to keep them current, practiced interview skills, and continued to focus on job search strategies.

The Clean Energy Center director and program manager developed relationships with a number of employers and asked them for feedback on the curricula, information about the sector's labor market, and information about current and planned job openings. Early in the lifetime of the grant, staff specifically sought out employers that were either part of or did business directly with the renewable energy sector. Later in the program, however, the center shifted its strategy somewhat to seek out a wider range of employers. Hiring was accelerating in these other industries and the center presumed that many of the soft and hard skills emphasized in its training programs were transferrable. By the end of the DOL grant, the center had active relationships with 30 employers.

Staff reported they met with employers about once a week to inform them about the skills participants were developing, learn about employer training needs, and identify current and planned job openings for which program graduates would be competitive applicants. Graduates sought employment with the employers with which the Clean Energy Center had a relationship and also pursued job opportunities outside of these relationships. Staff reported that they would meet with employers to maintain ongoing relationships as well as with new employers in both related and tangential industries. The center also worked out an arrangement with an electrical workers' union so that it could refer new training graduates to be considered for the union's apprenticeship program. In reflecting on the grant experience, center staff said that it would have been beneficial to have had written agreements with employers regarding the number of trainees they would interview and hire. Staff felt that a commitment of this nature might have facilitated employment for program graduates.

Five employers that were directly involved in different aspects of the Bakersfield region's renewable energy industry were interviewed as part of the study, including employers involved in construction and operation of utility-scale wind and solar energy generation sites. Three of these employers had been engaged with the Clean Energy Center since the program's inception and had been periodically consulted by center staff for input on the program's structure and curriculum. One employer even shared learning objectives and a list of training courses from its internal entry-level employee training program. These insights helped the center identify entry-level skills and characteristics that renewable energy sector employers value so it could ensure that these skills and characteristics were cultivated and emphasized throughout the program. In response to these efforts, all employers that were interviewed for the study agreed that trainees graduating from the center's programs were well positioned as entry-level job applicants or candidates for more advanced training.

Beyond providing input into the Clean Energy Center's program design, all of the employers reported that the center had encouraged them to consider interviewing its training graduates. Although each of these employers spoke positively about the center's training programs, and one employer reported it gave a strong preference to center graduates before looking to the wider community for employees, not all of the employers interviewed had hired center graduates. Reasons for not hiring center graduates vary but seem to be associated with industry-specific peculiarities described in the subsequent paragraph. One of the

main critiques of the program was that the center's trainings resulted in graduates who were often "overqualified" for many of the renewable energy sector jobs that were opening up at the time, which were either low-skilled positions or subject to mandatory, company-provided training (that was duplicative of some aspects of the center training). Nevertheless, in comparison with other entry-level hires, the employers reported that they found center graduates to be more motivated and to have fewer discipline and work-ethic issues, which one employer specifically credited to the inclusion of soft skills training in the center's curriculum.

While positive partnerships were established with employers, overall staff reported that the renewable-energy sector in the state did not develop as originally anticipated for a number of reasons. First, federal tax credits that encouraged wind farm development were scheduled to expire at the end of 2012, and a one-year extension that came just before the expiration did not necessarily help since developers had already slowed their projects and thus their hiring.⁶⁶ Second, solar power plant projects often had longer time lines than initially expected because they required lengthy approvals and permitting processes with local utility companies and negotiations with labor unions for project construction. A related issue with employment in the clean utility sector was that the need for skilled labor for wind and solar projects was limited to particular roles or time periods. For solar utilities, the most intensive need for workers was during construction when they mostly required low-skilled individuals, not people with specific training. Many of the projects also required the use of union laborers so companies could not directly hire recent program graduates. Wind turbines came with manufacturer-issued warranties so the manufacturer's teams performed any needed maintenance or repairs.

As a result of these challenges and conditions, Clean Energy Center staff reported that many of the renewable energy utility jobs ended up being temporary construction positions because, given the uncertainty in the market, employers were not in a position to hire for longer-term maintenance positions. Graduates of the center found, though, that the skills they developed in the training programs were applicable to jobs outside of the large-scale utility sector. Staff reported that graduates secured jobs in solar panel sales and residential solar panel installation as well as in non-renewable industries, such as oil production, natural gas extraction, and logistics.

4.8 Participants' Perspective

Based on the focus group of 12 participants conducted for the evaluation, participants in the Clean Energy Center programs had positive experiences. Many of the participants had been laid off before enrolling in training at the center and emphasized that they were motivated to gain marketable skills to return to work quickly. Participants noted that the center's programs were particularly attractive to them because of the programs' short but intensive duration. Although the majority of respondents had worked in unrelated industries before enrolling in center trainings, they were attracted to the center's trainings because they provided an entrée into work that seemed more engaging than other service sector training options.

Participants agreed that PowerTech provided helpful fundamentals and that the information presented was straightforward and applicable. The participants were pleased with the instructors and described them as approachable, helpful, responsive, and knowledgeable. Many cited instructors' professional experience in the utilities industry as a particular strength. Many participants liked that they came away from the

⁶⁶ Wald, 2012

training with concrete skills, certifications, and knowledge (especially safety training) that they could use in a variety of contexts.

The hands-on experience in the WindTech and SolarTech trainings was viewed as a key strength, while participants reported that the PowerTech training could have been improved by incorporating more hands-on activities and having less information delivered by PowerPoint.⁶⁷ Participants were particularly enthusiastic about the cohort structure of the program because it fostered teamwork and enabled students to support and motivate one another to finish the program and apply for employment. Everyone also was very positive about the job search and resume components built into the program. Many participants had not known previously how to develop a professional resume. Others spoke about feeling empowered to be able to market themselves and know how to look for a job.

4.9 Participation Patterns in Clean Energy Center Training Programs

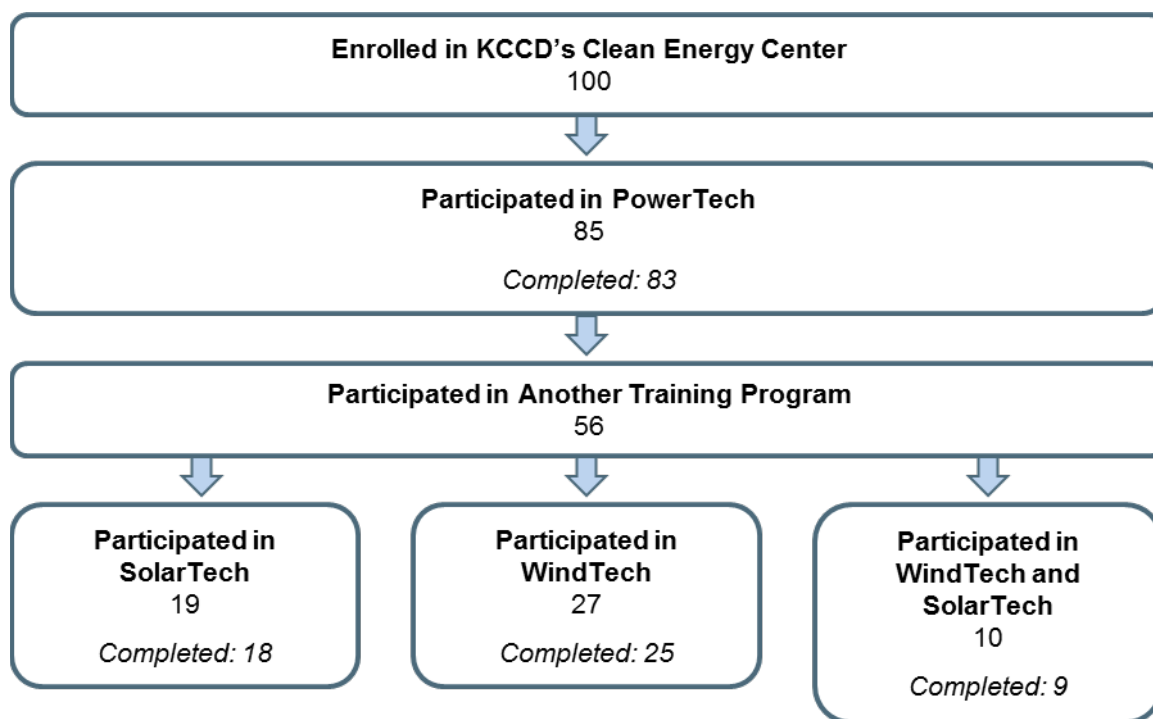
This section uses KCCD administrative data to describe participation patterns for those assigned to the study's treatment group. It first reports the level of participation in the initial course in the sequence (PowerTech), followed by participation in more than one training program, completion rates, and the length of participation in training. Participation is reported for a 12-month follow-up period (see Chapter 1 for a discussion of the study design).

Exhibit 4.4 shows participant flow through the Clean Energy Center programs.⁶⁸ Out of every 100 individuals assigned to the treatment group, 85 attended the PowerTech program; the remaining 15 did not participate despite having gone through the intake and enrollment process and registering to attend. For most of the study period, drug testing occurred after individuals were randomly assigned, so it is likely that some portion of enrolled individuals did not attend because they failed the drug test (see discussion above in section 4.5.2 on the enrollment process).⁶⁹ Of the 85 who attended PowerTech, 56 went on to attend another training program. Of these, 19 attended SolarTech, 27 attended WindTech, and 10 attended both of these trainings. Almost all who attended each course completed it. For every 100 treatment group members, 83 completed PowerTech, 18 completed PowerTech and SolarTech, 25 completed PowerTech and WindTech, and 9 completed all three.

⁶⁷ Center staff extended the PowerTech course by 35 hours in summer 2012 in response to participant feedback from prior cohorts that recommended incorporating more hands-on, practical training elements.

⁶⁸ Exhibit 4.4 displays illustrative figures based upon actual enrollment and participation levels.

⁶⁹ Program staff reported when interviewed that very few individuals failed this test, indicating there were other reasons individuals did not attend the training once they were enrolled (this information is not available in the program records data).

Exhibit 4.4. Participation and Completion of Clean Energy Center Programs among 100 Treatment Group Members Within a 12-Month Follow-Up Period


Source: Calculations are from KCCD program records

Notes: Sample size is 178 individuals assigned to the treatment group.

Exhibit 4.5 shows, among those who attended at least one Clean Energy program, the *proportion* that participated in and completed each course and the average length of stay in each course. To count as “completed” an individual must have obtained the relevant KCCD credential: an entry-level utility worker credential (PowerTech), an entry-level wind turbine technician certificate (WindTech), and an entry-level solar technician certificate (SolarTech).

Of the 85 who attended a program, 34 percent attended the PowerTech program only and 93 percent completed it. Among those who attended all three courses (12 percent), 89 percent completed them. The highest completion rate (100 percent) was among the individuals who participated in PowerTech and SolarTech (about one-fifth of those who attended a program). The completion rate for the third of participants who combined PowerTech and WindTech was 92 percent.

Exhibit 4.5. Type of Program Attended, Completion Rates, and Average Length of Stay among Program Participants in KCCD's Clean Energy Center Over a 12-Month Follow-Up Period

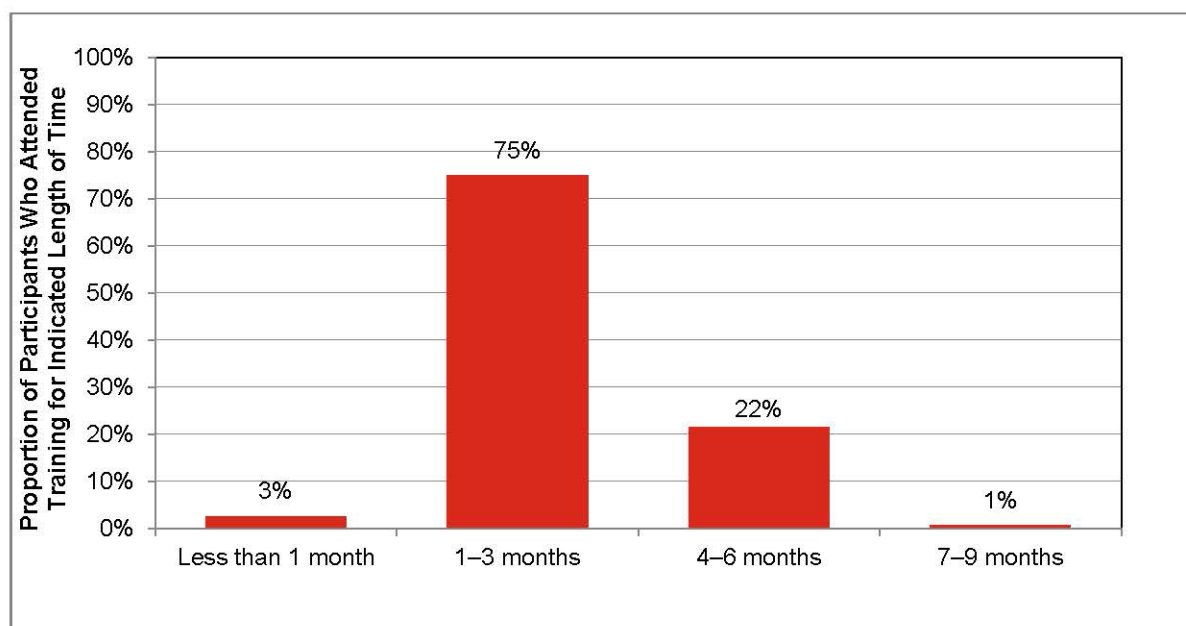
Training Programs	Participation Rate (%)	Completion Rate (%)	Months in Training
PowerTech only	34	93	1.0
PowerTech and SolarTech	22	100	2.8
PowerTech and WindTech	32	92	3.1
PowerTech, SolarTech, and WindTech	12	89	4.5
Any program	100	97	2.5

Source: Calculations are from KCCD program records

Notes: Sample size is 152 for the participation rate column and includes those who attended at least one Clean Energy Center program. Completion and length of stay measures are for those who attended the specific program or combination of programs (sample sizes not listed but can be calculated by multiplying sample size by participation rate). The completion rate for those who attended multiple programs includes those who completed all programs attended. End dates are not available for those who did not complete their program, so length-of-stay measures are based on those who completed the programs.

The average amount of time completers spent in training was relatively short, reflecting the length of the courses. Across the programs, the average completion time for those who completed any program was 2.5 months; the average time spent in PowerTech only was one month, and the average time spent in all three programs was 4.5 months. (Data on the date of withdrawal was not available from the program records, thus duration time is calculated only for those who completed their programs. However, given that the vast majority of individuals completed their programs, these estimates are good proxies for the duration of the program.) Exhibit 4.6 shows the distribution of participation by the length of training. Over three-quarters of participants attended training for one to three months, with very few attending less than one month or longer than six months.

Exhibit 4.6. Length of Time in KCCD's Clean Energy Center Training Programs



Source: Calculations are from KCCD program records

Notes: Sample size is 152 and includes those who attended at least one Clean Energy Center program. End dates are not available for those who did not complete their program, so length of stay measures are based on those who completed the programs.

Overall, the participation data indicate high levels of participation in the Clean Energy Center trainings, with 85 percent attending the foundational PowerTech program and close to two-thirds attending SolarTech, WindTech, or both as well as PowerTech. Completion rates for all the programs were also very high, near or above 90 percent. The average length of time to complete any program was two-and-a-half months; three-quarters of completers attended the training programs for one to three months.

5. North Central Texas College's Health Matrix Grant Scholarship Program

5.1 Grant Overview

North Central Texas College (NCTC) serves four counties in northern Texas with five campuses stretching from just north of Dallas to just south of the Oklahoma border. The community college's Lifelong Learning division offers short-term, non-credit courses in an effort to meet the training needs of local residents and employers. With its DOL Health Care and Other High Growth and Emerging Industries grant, Lifelong Learning at NCTC offered scholarships for a range of allied health programs. The evaluation of the NCTC grant program (the Health Matrix Grant) focuses on the scholarships provided for eight non-credit programs in allied health offered through Lifelong Learning, and one for-credit program offered through NCTC's School of Health Sciences. The non-credit programs were Certified Medication Aide, Clinical Medical Assistant, Certified Nurse Aide (CNA), EKG Technician, Medical Billing and Coding, Pharmacy Technician I, Phlebotomy, and Physical Therapy Aide. The for-credit program in the School of Health Sciences was Vocational Nursing—for becoming a Licensed Vocational Nurse (LVN). The grant and the program funded by it operated from March 2010 through June 2013.⁷⁰

The Health Matrix Grant scholarship was designed to remove a financial barrier to training for those in the region who otherwise might not have been able to afford college courses. Initially, the value of the scholarships varied by program and covered between 25 percent and 82 percent of the tuition. Over the course of the grant period, NCTC increased the scholarship amount several times so that in the final months the grant covered 95 percent of tuition for the allied health programs and 35 percent of tuition for the Vocational Nursing program. Health Matrix Grant recipients were eligible to receive multiple scholarships and therefore could take more than one healthcare course, although the programs were not explicitly sequenced. In addition to financial assistance, NCTC provided advising that was intended to help participants articulate a career plan and identify coursework that contributed to achieving professional goals. Scholarship recipients also were required to attend a job readiness class to prepare for employment.

The remainder of this chapter describes the grant-funded scholarship program implemented by NCTC. After describing the context in which the Health Matrix Grant operated, the chapter discusses the student population targeted, the characteristics of the enrollees, and the organizational structure of the program. It then examines the recruitment and enrollment process for the scholarships and training, describes the amount of the scholarships, the training programs for which they were provided, and other supports and assistance provided to participants as part of the grant. The final sections describe participant experiences in the program based on a focus group conducted for the study and participation patterns in the training activities based on NCTC program administrative data.

5.2 Program Context and Goals

Established in 1924, NCTC is a public, two-year community college accredited by the Commission on Colleges of the Southern Association of Colleges and Schools. Lifelong Learning, which managed the

⁷⁰ NCTC received a six-month extension to operate the grant program.

DOL grant, is the continuing education division of the college that offers non-credit programs in allied health, information technology, vocational trades, GED preparation, and ESL. The majority of the courses covered by the Health Matrix Grant were non-credit classes within the allied health program at NCTC, but scholarships also were available for several for-credit programs offered by the college's School of Health Sciences. (As discussed below, scholarships for the non-credit allied health courses and one for-credit class, which accounted for most of the scholarships granted by the program, were included in this study.)

NCTC's goal in designing the grant program was to lower the financial barrier to training for low-income students. Although NCTC participated in the federal Pell Grant program for its undergraduate certificate and associate's degree programs, it did not participate for its non-credit Lifelong Learning programs. By offering scholarships, Lifelong Learning hoped to attract candidates for healthcare training who might never have considered a college education an option. In addition to broadly serving low-income individuals, the grant sought to serve unemployed, underemployed, and dislocated workers for whom tuition was too costly. Incumbent healthcare workers wishing to upgrade their skills also were encouraged to apply. Some of NCTC's Pell Grant-eligible for-credit programs, including Vocational Nursing, were included as part of the Health Matrix Grant since even with federal financial aid, the courses could be too costly for some in the community.

Individuals were eligible to receive Health Matrix Grant funding multiple times, as long as they continued to meet the eligibility requirements each time (see below). NCTC hoped that first-time college attendees who successfully completed a course with the help of the scholarship would realize that college coursework was manageable and would then pursue additional education leading to an associate's degree or higher. Lifelong Learning and the School of Health Sciences referred students to each other, not only to promote individual flexibility and choice but also to encourage progression on a career pathway when appropriate. For instance, students who wanted to enroll in a School of Health Sciences degree program might have been referred to Lifelong Learning if their circumstances necessitated that they obtain an interim credential for immediate employment or if they needed to improve their academic skill level, with the understanding that they could return in the future to seek a degree. Staff also reported some instances of allied health participants progressing to the for-credit healthcare programs to advance a longer-term professional objective.

NCTC serves an expansive four-county region to the north and northwest of Dallas with five campuses—Gainesville, Corinth, Flower Mound, Graham, and Bowie.⁷¹ The demographics and characteristics of the population across this region varied widely in educational attainment, income, and poverty level, according to 2013 estimates from the American Community Survey and unemployment data from the U.S. Bureau of Labor Statistics. For the purposes of comparison, this section looks at data for Denton County, a suburb of Dallas where the Corinth and Flower Mound campuses are located, and rural Cooke County, the home of NCTC's main campus.⁷²

⁷¹ The four counties are Cooke (Gainesville campus), Denton (Corinth and Flower Mound campuses), Young (Graham campus), and Montague (Bowie campus).

⁷² The other two counties—Young and Montague—are rural as well and have demographics generally similar to Cooke County.

Overall, Denton residents were more highly educated, had higher incomes, and experienced less poverty than individuals in Cooke County. As shown in the Appendix, for 19 percent of Denton county residents, the highest level of education was a high school diploma or equivalency compared with 31 percent of Cooke County's population. Twice as many individuals in Denton (28 percent) had attained a bachelor's degree (compared to 14 percent in Cooke) and more than twice as many (about 13 percent) held a graduate or professional degree (compared to 5.5 percent in Cooke).

The median household income in Denton County was approximately \$74,000, compared to \$50,000 in Cooke County. Although the two counties had similar annual average unemployment rates in 2010 (about 7 percent) and 2013 (about 5 percent), the poverty rate among all individuals was six percentage points higher in Cooke County (15 percent compared to 9 percent). The majority of the population in both counties reported being white (91 percent in Cooke, 78 percent in Denton), though Denton had higher proportions of people of other races. In Cooke County, 16 percent of the population was Hispanic or Latino compared to 18 percent in Denton County.

Lifelong Learning staff reported that when the DOL grant was awarded, healthcare professionals were needed throughout the four counties. Texas labor market information indicates that during the study period in 2012, annual average employment among healthcare practitioners and technical occupations comprised about 4 percent of the total employment in North Central Texas.⁷³ In the healthcare occupations for which NCTC trained participants under this grant, employment was expected to grow between 2012 and 2022. For instance, nursing assistant employment was projected to grow 32 percent, while pharmacy technician and registered nurse employment were projected to increase by about 35 percent and phlebotomists 39 percent.⁷⁴

The healthcare industry was particularly strong in the Dallas-Fort Worth metroplex, which has a concentration of hospitals and large medical facilities. Lifelong Learning staff indicated that residents in the areas served by NCTC's Corinth and Flower Mound campuses think of themselves as being part of the Dallas-Fort Worth metroplex. Indeed, these campuses feed the metroplex labor market. However, residents of the outlying counties, served by the Gainesville, Graham, and Bowie campuses, do not have the same affiliation with the metro region. Although the suburban outskirts of the metroplex can be reached in about an hour from the Gainesville campus, staff reported that the commute time and subtle psychological boundaries appeared to limit the number of people taking jobs in and around the metroplex.

⁷³ North Central Texas Workforce Development Area Long-term Occupation Projections

⁷⁴ Ibid

5.3 Target Group and Treatment Group Characteristics

The Health Matrix Grant targeted unemployed, underemployed, and dislocated workers who sought technical training for healthcare occupations. Additionally, NCTC designed the scholarship for English language learners and first-generation college students, with the goal that these populations would benefit from tuition assistance that would offset their training costs. To be eligible for the Health Matrix Grant, applicants had to be unemployed, working part time, working full time without benefits, or receiving Supplemental Security Income (SSI). Applicants also had to be U.S. citizens or legal residents. For several of the healthcare programs, convicted felons were ineligible because of the requirements for employment in the field. In addition, some of the programs required proof of immunizations because the required clinical externships necessitated that participants be immunized in order to be on-site in a hospital or clinical setting.⁷⁵

Individuals applying for the scholarships needed to participate in the study and consent to assignment at random to either a group that could enroll in the scholarship-funded programs (the treatment group) or a group that could not but could participate in other programs in the community or at the college, including self-funded allied health programs. (See Chapter 1 for additional information about the study design.) Exhibit 5.1 shows the demographic characteristics of individuals in the treatment group. It uses data reported on the study's Baseline Information Form that individuals completed during the intake process for the program, before random assignment. The majority of treatment group members were women (84 percent), with 70 percent reporting being white and 18 percent reporting being black or African American. Twenty-one percent of enrollees indicated they were of Hispanic or Latino origin. Over 90 percent of enrollees reported that they were U.S. citizens, and about one-quarter spoke a language other than English at home. The average enrollee was 31 years old. Half of the enrollees had children 18 years old or younger residing in their household. About half had never been married at the time they enrolled and 29 percent were married.

All of the programs eligible for Health Matrix Grant scholarship assistance required at least a high school diploma, except for the Certified Nurse Aide program, which admitted individuals 16 years and older. Nearly all treatment group members (97 percent) reported that they had at least a high school diploma. For 26 percent of the treatment group, a high school diploma or GED was the highest level of education completed, while half had some college credit but no degree. Other types of credentials were much less common: 10 percent had a technical or associate's degree and 10 percent had a bachelor's or master's degree. About one-quarter (28 percent) reported that they were enrolled in other school or training at the time they enrolled in the Health Matrix Grant program. Some of those who reported that they were in college may have already been enrolled in the School of Health Sciences Vocational Nursing program. These students were eligible for Health Matrix Grant scholarship assistance, but they had to be admitted to the nursing program before applying for grant assistance.

More than half (56 percent) of the treatment group were employed at the time they sought the scholarship, and close to half of those were working less than 30 hours per week. One-quarter of treatment group members who were not employed had worked within the previous 12 months, while 18 percent had not worked in more than a year. Among treatment group members (including those who were not working),

⁷⁵ Proof of immunizations was required for applicants to the Certified Nurse Aide, Phlebotomy, and Clinical Medical Assistant programs.

weekly earnings averaged \$163. Twenty-two percent of the treatment group received a public benefit. Approximately 15 percent reported that they received SNAP benefits and close to 8 percent received unemployment insurance.

When asked their opinions about work, about half the enrollees indicated they were willing to take any job even if the pay was low and half preferred a job related to their training. Enrollees generally did not perceive child care or transportation to be barriers to their ability to work: 16 percent said that finding affordable child care limited their ability to work, while only 6 percent said that difficulties with transportation were a barrier.

Exhibit 5.1. Selected Characteristics of Treatment Group Members at Baseline, NCTC

Characteristic	Outcome
Demographic Characteristics	
Gender (%)	
Female	83.8
Male	16.2
Race (%)	
American Indian or Alaskan Native	3.0
Asian	5.5
Black or African American	18.3
Native Hawaiian or other Pacific Islander	0.4
White	69.5
Multi-race	3.4
Hispanic ethnicity (%)	20.6
Average age (years)	31.2
Citizenship (%)	
U.S. citizen	91.5
Legal resident	8.5
Speaks a language other than English at home (%)	24.1
Family Status	
Marital status (%)	
Married	29.3
Widowed/divorced/separated	18.3
Never married	52.4
Number of children under age of 18 (%)	
None	50.5
One child	23.9
Two children	15.2
Three or more children	10.5
Education	
Education level (%)	
Less than high school	3.4
High school diploma or GED	26.1
Technical or associate's degree	10.3
Some college credit but no degree	49.8
Bachelor's or master's degree	10.3
Currently enrolled in school or training program (%)	28.3

Exhibit 5.1. Selected Characteristics of Treatment Group Members at Baseline, NCTC (continued)

Characteristic	Outcome
Employment	
Employed (%)	55.8
Currently employed full time (30+ hours)	30.0
Currently employed part time (<30 hours)	25.8
Not employed (%)	44.2
Employed in last 12 months but not employed currently	26.2
Longer than 12 months since last worked	18.0
Weekly earnings (\$)	163.00
Factors That Affect Employment	
Amount a job must pay for respondent to take (\$)	10.89
Job preferences (%)	
Prefers the kind of job that relates to training	49.9
Will take any job, even if the pay is low	53.2
Felony conviction (%)	0.4
Finding quality, affordable child care limits ability to work (%)	16.1
Transportation problems limit ability to work (%)	5.5
Any kind of physical or mental disability (%)	3.1
Public Benefits	
Receiving any public benefit (%)	22.0
Types of benefits received (%)	
Temporary Assistance for Needy Families	0.7
Supplemental Nutrition Assistance Program	14.9
Unemployment insurance	7.7
Section 8 or public housing assistance	2.7

Source: GJ-HC Baseline Information Form (BIF)

Notes: Statistics in this table are computed based on the 555 NCTC treatment group members who completed the baseline survey.

5.4 Organizational Structure and Staffing

Two instructional divisions at NCTC—Lifelong Learning and the School of Health Sciences—implemented the Health Matrix Grant. The division of Lifelong Learning, which offers non-credit training as well as other educational enrichment courses, oversaw the daily operations of the scholarship program and operated the short-term allied health programs. The School of Health Sciences offered the for-credit courses, including the LVN course, which was included in the evaluation. In managing the grant, Lifelong Learning reported to the Institutional Advancement Office, which was responsible for grant procurement and oversight. NCTC's classroom training was supported by employers that offered clinical externship sites for the programs that required them for completion (see discussion below). NCTC maintained memoranda of understanding with these partners.

Health Matrix Grant staff were located on three of the five NCTC campuses (Gainesville, Corinth, and Flower Mound) and traveled to the other two campuses (Bowie and Graham) to meet with students as

needed.⁷⁶ The Health Matrix Grant project coordinator oversaw all grant activities and coordinated with the dean of Lifelong Learning and the dean of Health Sciences. By the end of the grant, the project coordinator was supported by seven staff. An administrative assistant fielded telephone inquiries from prospective and current participants, assisted with registration paperwork, and handled data entry. Intake advisors led information and assessment sessions as part of the intake process, reviewed applications to determine eligibility, and conducted random assignment for the study. Initially, there were two intake advisors, but in late summer 2012, NCTC added a third so there would be one at each primary campus. Intake advisors held individual advising sessions with enrollees before they registered for classes, and advisors were available to meet with participants throughout the program to address academic and personal issues. Several other positions were added over the course of the grant:

- In April 2012, NCTC hired a Matrix Grant specialist who was partially funded by the DOL grant. This staff member's role was to identify the skills and competencies required in the jobs associated with the allied health trainings so that course curricula could be tailored accordingly. In addition, the specialist set the course schedule, hired instructors, and helped with intake during high-volume periods.
- In summer 2012, one of the intake advisors transitioned into the new role of healthcare programs coordinator for allied health programs across Lifelong Learning (not specifically the Health Matrix Grant programs).⁷⁷ This staff member identified clinical sites for externships, established memoranda of understanding (MOUs) with employers, proctored on-site certification exams, and addressed issues that arose with participants during their externships.
- In October 2012, NCTC hired a Matrix Grant career advisor. This staff member helped Health Matrix Grant enrollees identify career options aligned with their training; offered feedback on resumes, cover letters, and interview skills; and provided guidance on the job application process. In addition to working with participants, the career advisor also conducted outreach to employers to identify which were hiring and to promote the hiring of NCTC graduates.

The majority of courses supported by Health Matrix Grant scholarships were at NCTC's three larger campuses: Corinth, Flower Mound, and Gainesville. Gainesville is the college's home campus and where its administrative offices are located. Classes also were offered at Graham and Bowie but less frequently since the demand was lower in the more rural and less populated areas from which these campuses drew students.

5.5 Recruitment and Enrollment

This section describes the recruitment and enrollment process developed by NCTC for the scholarship program. During the evaluation, which began in August 2011, Health Matrix Grant staff incorporated random assignment into the intake process to assign applicants to either a treatment group that was eligible to receive the Health Matrix Grant scholarship support or to a control group that could not receive

⁷⁶ Lifelong Learning opened an office on NCTC's Flower Mound campus in spring 2012, midway through the grant period.

⁷⁷ When this individual became the healthcare programs coordinator, the vacant intake advisor position was filled so that there continued to be three intake advisors.

the scholarship but could choose to pay for the same training using their own resources or pursue other training provided at NCTC or in the community.

5.5.1 Recruiting Participants for Health Matrix Grant Scholarships

The primary mechanism for marketing the Health Matrix Grant scholarship program was Lifelong Learning's course catalog, which was mailed to households across NCTC's four-county region. NCTC mailed catalogues several weeks before the start of the fall, spring, and summer terms. The catalog described the scholarship assistance available through the grant and listed the allied health programs and their schedules and eligibility requirements. The course catalog instructed individuals to call the Lifelong Learning department for more information on the Health Matrix Grant or to visit NCTC's website for information on how to apply. Staff reported that positive word of mouth also was a significant source of advertising for the scholarship. On a more limited basis, Lifelong Learning also used social media, including Facebook and Twitter, posters in public places and businesses, and in-person recruitment at job and college fairs. The program engaged directly with employers by sending emails to and visiting healthcare providers that might refer staff for additional training. To provide further information about the Health Matrix Grant scholarship program and available training, program staff held optional information sessions each week at the Gainesville, Corinth, and Flower Mound campuses.

A focus group with Health Matrix Grant scholarship recipients indicated that they heard about the program through a variety of channels. Some students contacted NCTC directly asking about courses/grants available and were referred to the Health Matrix Grant. Others heard about the scholarship through word of mouth—particularly friends and past students. Finally, a few cited learning about the resources available through NCTC's marketing materials and course catalogue.

5.5.2 Enrollment Process for Health Matrix Grant Scholarships

All individuals interested in the Health Matrix Grant scholarship program went through the enrollment process described in this section. The non-credit healthcare programs provided by Lifelong Learning were open-enrollment, meaning individuals meeting the minimum age (i.e., 16 years or older for the CNA program, 18 years or older for all other programs) and education level (i.e., a high school diploma or GED for all but the CNA program) requirements were eligible. Individuals seeking for-credit training through the School of Health Sciences went through a competitive admissions process. They had to first apply and be admitted by the college and then had to apply and be accepted by the particular health sciences program before they could proceed with the Health Matrix Grant scholarship application. In other words, before awarding the scholarship to individuals pursuing for-credit training, grant staff first needed to confirm the individuals were accepted into the program, though they need not have begun training. As a result, the Health Matrix Grant intake process was slightly different for Lifelong Learning applicants than for the School of Health Sciences applicants, as noted below.

Regardless of the course of study, the first step in the scholarship application process was to attend a Health Matrix Grant scholarship program assessment session, held weekly at each of Lifelong Learning's three main campuses (see Exhibit 5.2). At these sessions, individuals submitted applications and supporting documents to help determine their eligibility, learned in greater detail about the evaluation and the programs covered by the scholarship, and completed math and reading assessments designed by Lifelong Learning. The application for the Health Matrix Grant scholarship program was available on NCTC's website and some individuals chose to complete it before arriving at the assessment session, while others completed the application at the session. Applicants also completed the study's consent form and baseline information survey during the assessment session after the intake advisor described the

evaluation and the random assignment process. Applicants to the allied health programs took mandatory untimed math and reading assessments that were developed by Lifelong Learning. Individuals earning an 80 percent on both the math and reading tests were qualified for the allied health programs.⁷⁸

Eligibility for the Health Matrix Grant scholarship program was determined by intake advisors after the assessment session had concluded and applicants had departed. At that time, intake advisors reviewed the supporting documents submitted by each applicant, including a valid form of identification, a high school diploma or GED certificate, immunization records (if required by the particular program), and evidence of income or employment status to demonstrate that the individual met the grant requirement of being an unemployed, dislocated, or incumbent worker.⁷⁹ The intake advisor conducted random assignment for those who qualified for the Health Matrix Grant scholarship and were seeking to enroll in one of the eight non-credit or one for-credit trainings included in the study. The intake advisor then notified applicants of their random assignment status via email. The email instructed treatment group members to contact an intake advisor to schedule an intake interview, which was required before course registration as part of the services associated with Health Matrix Grant scholarship assistance. Taking this step was the responsibility of the enrollee and intake advisors did not follow up with enrollees who did not contact them.

During the intake interview, the advisor spoke individually with the enrollee about his or her academic and career goals. At this meeting, the intake advisor also reminded enrollees of the requirements for remaining compliant with the Health Matrix Grant scholarship (described further below). The final step to enrollment in the allied health programs was for the individual to formally register with the college by completing NCTC's registration form and paying a \$30 enrollment fee. The scholarship amount, which as noted below varied by program and was not individually needs-based, was disclosed at the time of registration. Vocational Nursing enrollees did not meet with an intake advisor for an intake interview. They were already registered with NCTC since acceptance into the college and the School of Health Sciences was a prerequisite for applying for the Health Matrix Grant scholarship for the LVN program.

⁷⁸ The allied health programs that were part of the study required math and reading assessment scores of at least 80 percent. However, NCTC offered several options for individuals testing below that threshold. Individuals who scored from 60 to 79 percent on either math or reading were permitted to retake the assessment to try to improve their scores to qualify for allied health training. Individuals earning a score below 60 percent on either the math or reading assessment could choose to take basic skills classes (ESL and GED preparation) through Lifelong Learning and could retest upon completion to try and qualify for the allied health programs.

⁷⁹ Proof of immunizations was required for applicants to the Certified Nurse Aide, Phlebotomy, and Clinical Medical Assistant programs.

Exhibit 5.2. Health Matrix Grant Enrollment Process

Enrollment Process for Non-Credit Lifelong Learning Programs		Enrollment Process for Licensed Vocational Nursing (LVN) Program in the School of Health Sciences Program	
Recruitment	Individuals learned about the Health Matrix Grant through Lifelong Learning's course catalog, word of mouth, posters, or other advertisements. Lifelong Learning intake advisors held weekly information sessions to provide interested individuals with further information about the scholarship opportunity, courses covered by it, and application process.	Recruitment	Individuals learned about the Health Matrix Grant through Lifelong Learning's course catalog, word of mouth, posters, or other advertisements. Lifelong Learning intake advisors held weekly information sessions to provide interested individuals with further information about the scholarship opportunity, courses covered by it, and application process.
Assessment Session	Individuals attended one of the weekly assessment sessions during which they learned about the evaluation, completed the Health Matrix Grant application and the study's informed consent form and baseline information survey, and submitted documentation needed to determine their eligibility for the training and the Health Matrix Grant scholarship.	Acceptance into School of Health Sciences program	Individuals had to be accepted by NCTC and the School of Health Sciences program before applying for the Health Matrix Grant. Those needing additional financial assistance beyond that provided through federal financial aid programs were referred to an assessment session for the Health Matrix Grant.
Basic Skills Assessment	During the assessment session, Allied Health applicants took math and reading assessments to identify if they met the 80 percent or higher eligibility requirement to participate in allied health training.	Assessment Session	Individuals attended one of the weekly assessment sessions during which they learned about the evaluation, completed the Health Matrix Grant application and the study's informed consent form and baseline information survey, and submitted documentation needed to determine their eligibility for the training and the Health Matrix Grant scholarship.
Eligibility Determination and Random Assignment	Following the assessment session, the intake advisor reviewed each applicant's application, assessment scores, and documentation to determine the applicant's eligibility for the scholarship program. Those who were eligible were randomly assigned. The intake advisor then notified individuals of their random assignment status via email.	Eligibility Determination and Random Assignment	Following the assessment session, the intake advisor reviewed each applicant's application, assessment scores, and documentation to determine the applicant's eligibility for the scholarship program. Those who were eligible were randomly assigned. The intake advisor then notified individuals of their random assignment status via email.
Intake Interview	Individuals assigned to the treatment group attended an intake interview with an advisor on the campus where their classes were scheduled. They discussed their educational and professional goals and worked with the advisor to identify a suitable allied health training program that was included in the offerings under the Health Matrix Grant scholarship.	Training	Already registered with NCTC, enrollees proceeded with the training, which would now be (partially) supported by the grant-funded scholarship.
Registration and Training	To formally register with NCTC, enrollees completed the college's registration form and paid an enrollment fee of \$30. Once completed, the individual was awarded the grant-funded scholarship and began training according to the program's schedule.		

5.6 Health Matrix Grant Scholarship Program

Under the DOL grant, NCTC operated its Lifelong Learning and School of Health Sciences programs as it typically would with the addition of a screening process (discussed in the previous section) to identify candidates eligible to receive the Health Matrix Grant scholarship and its related services. The focus of this study is on the scholarships provided for eight non-credit Allied Health programs offered by the Lifelong Learning division and one for-credit program. As shown in Exhibit 5.3, the non-credit programs were Certified Medication Aide, Clinical Medical Assistant, Certified Nurse Aide, EKG Technician, Medical Billing and Coding, Pharmacy Technician I, Phlebotomy, and Physical Therapy Aide. In addition, those who had applied and been accepted to the School of Health Sciences Vocational Nursing program, but who were seeking Health Matrix Grant scholarship assistance in order to attend, were included in the study.⁸⁰

The trainings ranged in length from 50 hours for Pharmacy Technician I to 160 hours plus a 140-hour externship for Clinical Medical Assistant. Most programs resulted in a certificate and, if applicable, eligibility to sit for a state licensing exam. Health Matrix Grant scholarship recipients took classes alongside students not receiving the scholarship. No instructional or curriculum changes were made to the programs due to the DOL grant.

Over the course of the DOL grant period, NCTC modified the content of the Clinical Medical Assistant program and also added a number of short-term supplementary programs to help participants acquire skills of interest to employers. When instructors and program coordinators observed from employers' hiring practices that Clinical Medical Assistants were in high demand, they verified through conversations with employers that Clinical Medical Assistants were less costly to hire than LVNs and subsequently revised the program content of the Clinical Medical Assistant training to include other skills common to LVNs. Rolled out in January 2012, the new curriculum included training in phlebotomy, EKG technology, and medical administrative assistant skills. In January 2013, NCTC piloted a new format for the Clinical Medical Assistant program whereby the instructor recorded voice-over PowerPoint presentations that were accompanied by lecture notes and accessed by students online.⁸¹ Participants viewed the lectures remotely so that in-class time was spent in the lab with hands-on instruction. According to instructional staff, the hands-on experience was valued by employers and gave participants greater confidence when they began work.

⁸⁰ A few programs for which individuals could receive the Health Matrix Grant scholarships were not included in the study (i.e., applicants were not randomly assigned to determine whether they would receive the scholarship). These were (1) programs requiring one to two years of coursework where student outcomes could not be measured within the evaluation timeline (Surgical Technology, Radiological Technology, and Associate Degree Nursing programs) and (2) programs that were very small before the start of the study and for which random assignment would further decrease enrollment, thus resulting in cancellation of the course (Sterile Instrument Technician and Medical Administrative Assistant).

⁸¹ The Certified Medical Assistant program that launched in January 2013 had fewer classroom hours (140 instead of 160) and more clinical externship hours (160 instead of 140).

Exhibit 5.3. Programs Eligible for the Health Matrix Grant Scholarship

Program	Length	Prerequisites	Content	Certifications, Credentials
Life Long Learning Programs (non-credit)				
Clinical Medical Assistant	4 months (160 hours plus) 140-hour externship	High school diploma or GED; proof of immunization	- Medical terminology - EKG strip analysis - Collection and safe handling of blood specimens - Taking vital signs - Medication administration - CPR training - Communication skills - Externship	American Heart Association Basic Life Support for Healthcare Providers course completion card Eligibility to sit for industry-recognized National Healthcareer Association test
Certified Medication Aide	4 months (140 hours)	High school diploma or GED; at least 90 days of work experience as a Certified Nurse Aide; proof of immunization	Designed to train on skills needed to pass the state Certified Medication Aide exam	State testing with Texas Department of Aging and Disability Services
Certified Nurse Aide (CNA)	2 months (56 hours plus) 24-hour externship	Proof of immunization	- Techniques to provide basic patient comfort and care - Communication skills - Terminology and safety skills used in long-term care facilities	Eligibility to sit for the state certification exam
EKG Technician	3 months (80 hours)	High school diploma or GED	- Requirement to co-enroll in CPR for Healthcare Providers - Instruction in anatomy of the heart and physiology of disease - Instruction in electrocardiograph machines, heart monitoring, telemetry	American Heart Association Basic Life Support for Healthcare Providers course completion card Eligibility to sit for industry-recognized National Healthcareer Association test
Medical Billing and Coding	3 months (80 hours)	High school diploma or GED	Instruction on coding methodologies for outpatient, provider office, and insurance	Additional self-study or training recommended before taking the Certified Professional Coder exam
Pharmacy Technician I	2 months (50 hours)	High school diploma or GED	- Dosage calculations - Pharmaceutical terminology - Drug interactions	Eligibility to sit for the Pharmacy Technician Certification Board (PTCB) exam

Exhibit 5.3. Programs Eligible for the Health Matrix Grant Scholarship (continued)

Program	Length	Prerequisites	Content	Certifications, Credentials
Phlebotomy Technician	3 months (90 hours) plus externship	High school diploma or GED; proof of immunization	- Requirement to co-enroll in CPR for Healthcare Providers - Instruction on drawing blood and handling blood specimens; progress from lab instruction using mechanical arms to drawing blood from classmates - Externship of 100 successful blood draws required	American Heart Association Basic Life Support for Healthcare Providers course completion card Eligibility to sit for industry-recognized National Healthcareer Association test
Physical Therapy Aide	2 months (50 hours) plus 14-hour field observation	High school diploma or GED	- Executing therapy treatment plans - Assisting with patient scheduling, clinic upkeep, and other non-technical duties	NCTC Marketable Skills Achievement Award
School of Health Sciences				
Vocational Nursing Program (LVN)	12 months (82 credit hours, including clinical externship)	High school diploma or GED	Coursework in nursing skills, health and illness, anatomy and physiology, pharmacology, medication administration, and professional development. Clinical externship	NCTC certificate of completion. Eligibility to sit for the National Council Licensing Examination-Practical Nurse (NCLEX-PN)

During the last semester of the DOL grant, beginning in January 2013, Lifelong Learning made available several supplementary courses because it had sufficient remaining grant funds and felt that these courses would enhance the employability of previous Health Matrix Grant recipients. As shown in Exhibit 5.4, these courses, which were open to others but offered at no cost to prior scholarship recipients, included CPR for Healthcare Providers, Spanish for Healthcare, basic computer and Microsoft Office instruction, and a series of 12 four-hour Supervisory Skills classes. A Telemetry Skills course, related to the operation of EKG technology equipment, was intended to complement the skills of previous EKG technician students and make them more employable. Lifelong Learning also offered the Medical Billing and Coding exam preparation course at no cost to scholarship recipients to encourage their completion of the exam. Earlier in the grant period, individuals either had to pay \$399 for the exam preparation course or study on their own, which staff said seemed to be a barrier to participants completing the testing.

Exhibit 5.4. Supplementary Healthcare Provider Skills Courses for Prior Health Matrix Grant Scholarship Recipients

Program	Length	Prerequisites	Content	Certifications, Credentials
CPR for Healthcare Providers	1 day (4.5 hours)	Incumbent healthcare professional. Offered beginning in January 2013 at no cost to previous Health Matrix Grant recipients.	- Recognize life-threatening emergency - Provide CPR - AED instruction - Choking intervention	American Heart Association Basic Life Support for Healthcare Providers course completion card.
Computer Technology and Introduction to Microsoft Office	1 day (4 hours)	Offered beginning in January 2013 at no cost to previous Health Matrix Grant recipients.	Instruction on entering, editing, formatting, and sorting data in Excel.	None
Medical Billing and Coding Certified Professional Coder Exam Preparation	1 month (16 hours)	Completion of 80 hours of Medical Billing and Coding, or completion of NCTC Medical Billing and Coding course, or currently employed in a medical practice with knowledge of coding systems.	Coding certification exam review, including review of concepts and identifying and addressing gaps in learning.	Course results in preparedness to sit for the Certified Professional Coder exam.
Spanish for Healthcare	2 months (24 hours)	Incumbent healthcare professional; basic knowledge of Spanish language. Offered beginning in January 2013 at no cost to previous Health Matrix Grant recipients.	Spanish language basics applicable to the healthcare setting, including greetings, medical terminology, directions, scheduling, patient questions.	N/A
Supervisory Skills Series	3 months (Series of 12 courses of 4 hours each, 48 hours total)	Incumbent healthcare professional. Offered beginning in January 2013 at no cost to previous Health Matrix Grant recipients.	- Essential skills of leadership - Essential skills of communicating - Coaching job skills - Providing performance feedback - Performance goals/standards - Improving work habits - Effective discipline - Communicating up - Managing complaints - Delegating - Resolving conflicts - Supporting change	N/A
Telemetry Update	1 month (36 hours)	Former NCTC EKG Technician student.	Advanced telemetry skills to complement EKG certification.	N/A

Participants were permitted to receive the Health Matrix Grant scholarship multiple times, though their eligibility was evaluated each time to ensure they continued to meet the requirements for assistance by the grant (e.g., unemployed or underemployed and/or no felony convictions). Although the allied health programs were not designed as a packaged sequence, Lifelong Learning staff noted several course pairings that had the potential to result in advancement to higher-paid work or that made the participant more competitive in the job market. For example, following CNA training, participants could take Phlebotomy and Physical Therapy Aide, giving them a skill set that could potentially lead to higher-paid positions. Health Matrix Grant staff reported that, as appropriate, they referred individuals interested in advanced training to the School of Health Sciences to learn more about the courses and explore enrollment. In turn, the School of Health Sciences referred applicants to the Health Matrix Grant office if an individual needed shorter-term training in order to secure employment and begin earning an income quickly before proceeding with longer-term for-credit programs.

Externships. Four of the allied health programs—Clinical Medical Assistant, CNA, Phlebotomy Technician, and Physical Therapy Aide—required externships so that participants could gain hands-on experience. Externships occurred after classroom training concluded and the length in hours was determined by state standards. The healthcare programs coordinator identified clinical sites, put memoranda of understanding in place, and provided a list of the sites to participants. Students were then responsible for contacting the clinical sites on their own to secure their externships, although if they encountered difficulty, the coordinator would assist. By the end of the grant period, about 35 healthcare providers offered externships for Clinical Medical Assistant participants (information was not available on how many sites were available for CNA, Phlebotomy, and Physical Therapy Aide participants). Clinical externships also were a component of the Vocational Nursing program, and these were arranged by the School of Health Sciences.

Certification exams. Certification exam fees were included in tuition for CNA, Certified Medication Aide, Clinical Medical Assistant, EKG Technician, Pharmacy Technician I, and Phlebotomy. Health Matrix Grant scholarship recipients were required to sit for the exams to meet the grant obligations, although if they did not pass the exam there were no repercussions imposed by Lifelong Learning, such as having to repay the grant. After finishing the coursework and the externship, students had up to three months to take the certification exam. The certification exam for Medical Billing and Coding was not required and therefore was not included in the course fee because it required a significant amount of additional studying on an individuals' own time. However, as noted above, in the last semester of the grant period, beginning in January 2013, Lifelong Learning offered a Medical Billing and Coding exam preparation class that was available at no cost to Health Matrix Grant recipients.⁸²

⁸² Certification to become a Physical Therapy Aide comes with additional coursework, so no exam fee was included in tuition. For the Vocational Nursing program, participants registered for the NCLEX-PN exam upon completion of their coursework.

5.7 Assistance and Supports

The primary component of NCTC's DOL-funded grant program was the financial assistance provided by the Health Matrix Grant scholarship program; however, a number of other services were funded by the grant and offered to Health Matrix Grant scholarship recipients.⁸³ These included an intake advising session before course registration, access to intake advisors throughout their time in the program, and access to child care assistance. Scholarship recipients also were required to participate in a six-hour job search class that was optional for other students.⁸⁴ These services are described in the sections that follow.

5.7.1 Financial Assistance

As discussed above, the focus of NCTC's DOL-funded efforts was the provision of financial assistance in the form of a scholarship to offset the costs of tuition for several allied health courses and for the Vocational Nursing program in the School of Health Sciences. Tuition for the allied health courses ranged from \$799 for the Certified Nurse Aide course to \$2,949 for the Clinical Medical Assistant course. In determining scholarship amounts, NCTC initially chose not to cover the full tuition amount in order to serve more students. According to the NCTC staff involved with developing the proposal to DOL, the original scholarship amounts were determined based on the future earning potential for someone employed in that position: a greater percentage of tuition was covered for programs leading to lower-paying positions (e.g., CNA, Certified Medication Aide). Initially, the Health Matrix Grant covered between 25 percent and 82 percent of the course cost, which amounted to scholarship values of \$565 to \$925 for the allied health programs.

The scholarship amounts increased twice because NCTC had sufficient grant funds remaining to offer more assistance to participants. From May 2012 through December 2012, the Health Matrix Grant scholarship covered 85 percent of tuition for all allied health courses. From January 2013 through the end of the grant, the scholarship paid for 95 percent of the course cost. Tuition for the two-semester Vocational Nursing program was \$5,716 and the Health Matrix Grant originally covered \$1,400, or about 25 percent of it. From May 2012 through the end of the grant, the scholarship offset the Vocational

Assistance and Supports Provided by NCTC's Health Matrix Grant Scholarship Program

- ✓ Partial scholarships provided to offset tuition expenses.
- ✓ Assistance identifying additional sources of funding to cover training expenses, if needed.
- ✓ Intake advisors held individual meetings at intake to identify support service needs, discuss career goals and appropriate training.
- ✓ Course-related materials and certification exam fees included in tuition and covered by scholarship for most programs.
- ✓ Tutoring provided by instructors.
- ✓ Child care assistance offered.
- ✓ Six-hour job skills class required for allied health participants.
- ✓ Career advisor hired late in grant provided individual job search assistance

⁸³ Individuals in the study's control group could enroll in the same programs as scholarship recipients if they were willing to pay for tuition on their own. While they could choose to participate in the Workforce Job Skills class described in this section, they could not access the services provided by the intake advisors or the child care assistance that was provided as part of the scholarship.

⁸⁴ Vocational Nursing students who received the Health Matrix Grant scholarship did not participate in the mandatory services provided through the scholarship, such as the intake advising session and the job skills class. For these students in a for-credit program, the scholarship was a funding source to help cover tuition and the services they received were those provided through the School of Health Sciences.

Nursing tuition by \$2,000 or 35 percent. Exhibit 5.5 summarizes the program tuition and Health Matrix Grant scholarship amounts over the course of the grant period.

NCTC also offered a payment plan for all of the programs covered by the Health Matrix Grant. The plan allowed students to pay half of their share of the tuition they owed at the time of enrollment and the remaining portion over the course of the training. Individuals who needed other financial assistance could meet with a Lifelong Learning advisor who assisted all students (not just Health Matrix Grant recipients) with identifying other resources, such as those available through the Texas Department of Assistive and Rehabilitative Services (DARS).

Recipients of the Health Matrix Grant scholarship were required to maintain an attendance rate of 85 percent and pass the course or have their instructor attest that they had put forward a strong effort to do so. As discussed above, they also were required to complete an externship, if applicable, and attempt the certification exam, if the exam fee was included in tuition for the program. Lifelong Learning also required that scholarship recipients complete the job skills class (see description below). Health Matrix Grant recipients who failed to comply with these standards were required to repay the scholarship. In practice, however, NCTC had difficulty enforcing repayment unless the individual returned to seek the grant a second time. In that case, Health Matrix Grant staff would ask that the individual first repay the scholarship amount owed.

Exhibit 5.5. Tuition Amounts and Health Matrix Grant Scholarship Amounts

Course	Cost of Course (\$)	Effective August 2011 through April 2012		Effective May 2012 through December 2012		Effective January 2013 through Grant-End	
		Scholarship Amount (\$)	Percent of Tuition Covered by Scholarship (%)	Scholarship Amount (\$)	Percent of Tuition Covered by Scholarship (%)	Scholarship Amount (\$)	Percent of Tuition Covered by Scholarship (%)
Certified Medication Aide	999	795	80	850	85	950	95
Certified Nurse Aide (CNA)	799	655	82	680	85	759	95
Clinical Medical Assistant	2,949	725	25	2,500	85	2,800	95
EKG Tech	1,049	565	54	895	85	997	95
Medical Billing/Coding	1,599	925	58	1,360	85	1,520	95
Pharmacy Technician I	999	735	74	850	85	950	95
Phlebotomy	1,649	765	46	1,400	85	1,567	95
Physical Therapy Aide	1,049	795	76	890	85	997	95
Vocational Nursing	5,716	700/semester, 1,400 total	24	1,000/semester, 2,000 total	35	1,000/semester, 2,000 total	35

5.7.2 Academic and Personal Supports

Intake advisors were the first point of contact for Health Matrix Grant scholarship program enrollees. As discussed above, the advisors held one-on-one intake appointments with each allied health enrollee before the enrollee registered for training. Intake advisors also were available throughout participants' time in the program to offer guidance on academic and other issues related to attending training. From the start of the grant through summer 2012, Lifelong Learning employed two intake advisors: one in Gainesville and one in Corinth. By fall 2012, the division had hired a third intake advisor for the Flower Mound campus. The intake advisors also were available to travel to the two smaller campuses (Graham and Bowie) to meet with participants when needed.

As noted above, Health Matrix Grant enrollees were responsible for setting up a one-on-one appointment with the intake advisor, which usually occurred at the campus where their courses were to be taken. This meeting, which typically lasted 30–60 minutes, included discussion of the following:

- **Course of study.** The intake advisor and enrollee discussed the desired course of study, the jobs associated with it, and nature of the work, such as whether it involved handling blood or physically lifting patients. Intake advisors reported that most participants had already decided which healthcare training program they wanted to take. While some were open to discussing alternatives if the intake advisor suggested that the program or ultimate job might not be a good fit for the individual, most wanted to proceed with what they had originally planned.
- **Career plan.** The meeting included developing a potential career plan that built upon the course of study identified. Together, the intake advisor and enrollee completed a goal planning worksheet, setting objectives for one, five, and ten years into the future and, when appropriate, tying those goals to additional training options. The intake advisor retained a copy of this form in the individual's file; however, staff reported that they did not typically revisit the plan with participants because, as discussed further below, participants rarely returned to meet with the intake advisor once enrolled.
- **Health Matrix Grant requirements and support services.** Intake advisors reminded participants of the other services available to them through the Health Matrix Grant and the college, such as child care assistance, tutoring, ongoing advising, and job search skills development (see discussion below). In addition, the intake advisor reviewed the attendance and completion expectations associated with use of the grant and the consequence of having to repay the scholarship amount to Lifelong Learning if the participant dropped a class or did not make a concerted effort to complete it.

Throughout the program, intake advisors were available to meet with participants and they reminded Health Matrix Grant scholarship recipients of their services via email at the midpoint and near the end of the program. They were available to assist participants with issues that arose during training, discuss subsequent training opportunities, provide career guidance, and address personal barriers to education, such as time management skills, the need for child care assistance, or help with identifying transportation options.⁸⁵ However, staff reported that very few participants requested additional meetings with the

⁸⁵ Financial assistance for transportation was not provided as part of the Health Matrix Grant scholarship. If a participant had trouble with transportation, intake advisors would help think of alternatives, such as carpooling or asking a family member or friend for a ride. If a participant needed financial help, they were referred to a Lifelong Learning advisor, who assisted all Lifelong Learning participants (not just Health Matrix Grant recipients) in identifying resources.

advisor after the initial intake appointment. In interviews with staff, staff speculated on some reasons for the low uptake of advising services, including that those new to a college setting might not understand the purpose and value of such services or because the short-term nature of the training limited the opportunity for participants to develop relationships with program staff.

Intake advisors indicated that they typically engaged with a Health Matrix Grant recipient a second time only if he or she returned to pursue the scholarship for a subsequent healthcare training. If individuals qualified for a second Health Matrix Grant scholarship (i.e., still met the original eligibility requirements for the grant), they met again with an intake advisor for an intake assessment meeting. During this meeting, the advisor discussed whether the training of interest complemented the previous training by making the enrollee more employable or eligible for a higher-paid position. Staff reported that returning scholarship recipients, similar to first-time recipients, often had made up their minds about which training they wanted to pursue before attending these meetings.

The following additional supports were available to Health Matrix Grant scholarship recipients:

- **Course-related materials provided at no cost.** Lifelong Learning included the cost of textbooks, workbooks, and lab supplies in tuition for most of its programs. In addition, liability insurance and scrubs were covered for Certified Nurse Aide participants.⁸⁶ As part of tuition, these materials thus also were covered as part of the scholarship.
- **Tutoring.** When instructors identified a student struggling with course material, they completed an Early Alert form and submitted it to the healthcare programs coordinator, who then set the student up with one-on-one tutoring. Some of the courses, such as Pharmacy Technician, required advanced math abilities, and the health programs coordinator said that two or three hours of tutoring with a GED instructor often noticeably improved the participant's understanding of math concepts and class performance. Allied health and GED instructors served as tutors outside of class hours and NCTC compensated them for their time using grant funds. Staff indicated that formal tutoring was less common than informal tutoring provided by instructors after class. Several of NCTC's campuses housed "math labs" where students from across the college's programs could seek assistance, and Health Matrix Grant recipients were sometimes referred there as well.
- **Certification exam fees.** Program tuition included certification exam fees for the CNA, Certified Medication Aide, Clinical Medical Assistant, EKG Technician, Pharmacy Technician, and Phlebotomy programs. For Health Matrix Grant recipients in these programs, the scholarship covered the cost of the exam.
- **Child care assistance.** The Health Matrix Grant reimbursed participants up to 70 percent but no more than \$1,500 for their child care expenses at a registered or licensed child care facility. Staff reported that few allied health students used the child care assistance because many already had child care in place and for a short-term program it was not worthwhile for them to change their provider to qualify for financial support. As a result, Lifelong Learning made the child care funds originally earmarked for allied health participants available to the for-credit School of Health Sciences Health Matrix Grant scholarship recipients, which staff said yielded a greater uptake.

⁸⁶ Scrubs also were required for Phlebotomy Technician participants but were not included in tuition and so were not covered by the scholarship.

5.7.3 Employment Services

The primary employment-related service that was available to Health Matrix Grant scholarship recipients throughout the grant period was a Workforce Job Skills class that helped participants prepare for a job search (see description that follows). Staff capacity for other job search and development services was limited until a career advisor was hired in the final eight months of the grant. The addition of this staff member enabled the program to provide individualized job-search assistance to scholarship recipients. This section describes these services and also the program's connections with employers, which were designed to facilitate the employment of program participants.

Workforce Job Skills Class. Lifelong Learning offered a six-hour Workforce Job Skills class designed to prepare students to apply for, secure, and retain jobs. The class, which was taught by Health Matrix Grant intake advisors and offered on all NCTC campuses, covered resume development, cover letter writing, interview skills, workplace communication skills, leadership and team building skills, and conflict resolution. Partway through the grant period, intake advisors modified the class to include feedback on participants' resumes so that students finished the class with a resume they could use in applying for jobs. Health Matrix Grant scholarship recipients in Lifelong Learning courses were required to attend this class as a condition of the scholarship, and the class was open to other Lifelong Learning students to attend at their discretion.⁸⁷

One-on-One Assistance from a Career Advisor. Before October 2012, job search assistance services for Health Matrix Grant recipients were primarily the same as those available to other students at NCTC. In addition to the Workforce Job Skills class, these services included a "job board" on Lifelong Learning's website that all students could use to search for job announcements and group emails to students when employers notified the college of job opportunities. However, in October 2012, NCTC hired a career advisor (for the final eight months of the grant) to augment the employment services provided specifically to Health Matrix Grant scholarship recipients. With the addition of the career advisor, Health Matrix Grant recipients who were engaged in the program during this period received one-on-one assistance with their job search materials and process, including the following:

- Guidance on adding prior work and volunteer experience to their resumes that highlighted qualities important in the healthcare field
- Recommendations on including certain key words and phrases in cover letters and resumes so that the application would be picked up in computerized screening systems
- Mock interview sessions with feedback
- Referrals to Lifelong Learning's Microsoft Office course or similar courses available through the workforce commission or public library for those in need of basic computer proficiency skills
- Notifications via email, from the career advisor, of job opportunities announced in local and college employment databases

The career advisor spent time each week on NCTC's three main campuses and traveled to the other two campuses when needed to meet with current enrollees and former Health Matrix Grant scholarship

⁸⁷ Health Matrix Grant scholarship recipients in Lifelong Learning courses who did not take the mandatory job skills class were asked to reimburse NCTC \$84 for the cost of the course that was covered by the scholarship.

recipients who were looking for jobs. The career advisor and other Lifelong Learning staff invited employers to two job fairs at the Corinth campus in spring 2013 that were open to all Lifelong Learning students.

Working with Employers. Staff working on the Health Matrix Grant engaged several employers to gain informal input on curricula and clinical externships. The instructors who developed and refined the allied health course curricula said that they contacted several healthcare providers to inquire about the content knowledge and skills they sought in job candidates. Specifically, the instructor who designed the Clinical Medical Assistant program as well as several units of the Vocational Nursing program asked employers what drove their hiring of medical assistants over vocational nurses. The response was that medical assistants were less costly to hire and could perform the fundamental functions employers needed. The instructor used this information to enhance the content of the medical assistant training to give NCTC's Clinical Medical Assistant program graduates an advantage over individuals coming from other schools. To the existing Clinical Medical Assistant training, the instructor added content related to the roles of phlebotomists, EKG technicians, and medical administrative assistants which made these graduates more versatile and able to perform additional tasks in the workplace.

Reflecting these practices, one employer interviewed for the study (a nursing home that served as a clinical site for NCTC for six years) reported its partnership with NCTC had strengthened because of NCTC's open line of communication. This communication gave the nursing home staff an understanding of the quality of NCTC's training programs and that the standards and philosophy of NCTC's healthcare programs were aligned with those of the nursing home. Instructors typically were on-site to supervise students during some of their clinical hours, which gave instructors an understanding of the workplace experience and allowed them to integrate workplace practices, standards, and expectations into their classrooms. The employer reported that when openings occurred (which could be infrequent), NCTC CNA graduates would be chosen over other applicants because the employer knew exactly what training the NCTC graduates had received. The nursing home adopted the practice of sending job announcements to NCTC for its job board.

During the final stages of the grant, NCTC also engaged the services of a company that conducted surveys of local employers to identify current and future labor market demand. The college sought this information for use in determining what positions employers would seek to fill in the years to come and determine what training the college could provide to prepare the workforce to fill those jobs. NCTC purchased access to this company's job database, which allowed Health Matrix Grant scholarship participants to search job announcements and apply via the system. The career advisor also dedicated time to networking with local employers directly to build the reputation of the college and its healthcare programs and encourage employers to seek out and hire NCTC graduates.

5.8 Participants' Perspective

Based on the focus group of nine students conducted for the evaluation, participants were positive about their experiences in NCTC programs. Students generally enrolled in the program to get further education and improve their employment prospects. Most reported that the scholarship provided an additional incentive to enroll but was not their sole reason for enrolling. Several said they would have tried to attend even without the scholarship (or with a smaller scholarship); however, they acknowledged that it would have been difficult financially and they likely would have had to delay their training start date while they saved enough money for tuition. The students reported that the staff at NCTC and the atmosphere of the

program encouraged students and made them want to be at school. The focus group participants discussed that they liked the employment-oriented educational track and that the program provided solid employment-related content and contextual links to the work they would perform on the job. Several students said that their instructors emphasized the importance of pursuing certification, even if the exam fee was not included in their tuition and therefore not covered by the scholarship. This discussion suggested that some participants were not aware that obtaining the certification often was necessary to secure employment in the occupation for which they were training, so instructors helped educate them more broadly about the healthcare industry.

The instructors and books associated with the course received mixed reviews with some viewing each more favorably than others. The participants reported that the teachers were professionals from the field and generally brought that experience to the classroom. Students felt the course workload and the time spent on coursework outside of class was on par with their expectations. They knew in advance that they would have to dedicate time outside of class to study, though several commented that they had to modify their personal routines and schedules to make time to study (e.g., watch less television, wake up early to study before getting children ready for school, and the like). Students appreciated that they could seek out instructors or advisors for help when needed. A number of them reported having relied on the instructor for additional tutoring or informal help understanding course content after class, while those who had completed a program said that the Health Matrix Grant staff assisted them in identifying suitable job opportunities.

5.9 Participation Patterns in the Health Matrix Grant Scholarship Program

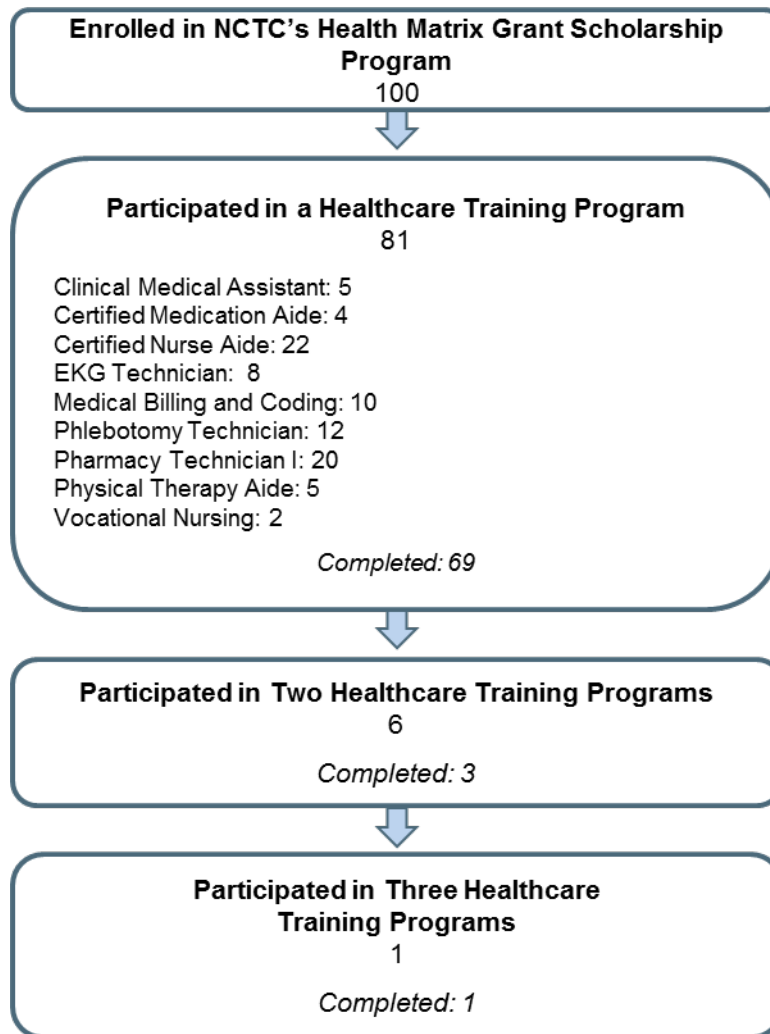
This section uses NCTC program administrative data to describe participation patterns for those assigned to the study's treatment group, meaning that they were eligible to receive a Health Matrix scholarship to attend allied health training programs. Specifically, the section reports on the overall level of participation in NCTC's healthcare training programs, the types of courses taken, completion rates, the length of participation, and the amount of the scholarships awarded. Participation is reported for a 12-month follow-up period following random assignment (see Chapter 1 for a discussion of the study design).

As discussed above, the evaluation of the Health Matrix Grant focuses on the scholarships provided for eight non-credit programs and one for-credit program. The non-credit programs included Certified Medication Aide, Clinical Medical Assistant, Certified Nurse Aide, EKG Technician, Medical Billing and Coding, Pharmacy Technician I, Phlebotomy Technician, and Physical Therapy Aide. The length of these programs ranged from one month to six months, including an externship that was required by several programs. The for-credit program was Vocational Nursing, which was a 12-month program.

Exhibit 5.6 shows participant flow through the Health Matrix Grant healthcare programs included in this study.⁸⁸ Out of every 100 individuals assigned to the treatment group, 81 participated in at least one healthcare training program; the remaining 19 did not participate despite completing the intake and enrollment process. The most common programs were Certified Nurse Aide (22) and Pharmacy Technician I (20). Few treatment group members (2 out of 100) participated in the only for-credit option available under the Health Matrix Grant, Vocational Nursing. Sixty-nine of the 81 completed one healthcare training program, but few went on to additional healthcare training programs. Overall, out of 100 individuals, six attended a second healthcare training program and only one individual attended a third training program.

⁸⁸ Exhibit 5.6 displays illustrative figures based upon actual enrollment and participation levels.

Exhibit 5.6. Participation and Completion of Health Matrix Grant Scholarship Programs for 100 Treatment Group Members Within a 12-Month Follow-Up Period



Source: Calculations are from NCTC program records

Notes: Sample size is 307 individuals assigned to the treatment group. Individuals can attend more than one short-term program and thus the number attending individual programs does not sum to the total.

For those who attended at least one healthcare training program, *the proportion* that participated in and completed each program, the average duration of each program, and the average Health Matrix Grant scholarship amounts and percentage of tuition covered by the scholarship is shown in Exhibit 5.7. Of those who attended a healthcare training program, 92 percent attended only one program, most commonly Certified Nurse Aide and Pharmacy Technician (23 percent in each of these programs). Completion rates for those who attended one program were relatively high, above 80 percent for five of the eight short-term programs. The Phlebotomy Technician and Physical Therapy Aide had somewhat lower completion rates, 63 percent and 67 percent, respectively. As discussed above, the value of the scholarships varied by program and increased several times over the course of the grant. Based on the program administrative data, the average scholarship for individuals completing one healthcare program was \$755, which covered 65 percent of the program tuition.

Exhibit 5.7. Type of Program Attended, Completion Rates, and Average Length of Stay and Scholarship Amounts for Program Participants in NCTC's Healthcare Programs Over a 12-Month Follow-Up Period

Program	Participation Rate (%)	Completion Rate (%)	Average Length of Time in Training (months)	Average Scholarship Amount (\$)	Average Percent of Tuition Covered by Scholarship (%)
Attended one healthcare program	92	84	1.8	755	65
Certified Medication Aide	4	91	3.0	795	80
Certified Nurse Aide	23	91	1.0	662	83
Clinical Medical Assistant	4	73	6.0	725	25
EKG Technician	8	80	1.0	565	54
Medical Billing and Coding	11	86	2.0	961	60
Pharmacy Technician I	23	95	1.0	764	76
Phlebotomy Technician	12	63	5.2	865	52
Physical Therapy Aide	6	67	1.0	795	76
Attended two healthcare programs	7	44	8.1	1,323	44
Certified Nurse Aide and either Pharmacy Technician I, Phlebotomy Technician, or Clinical Medical Assistant	2	33	8.5	913	74
EKG and Medical Billing and Coding	1	50	9.0	1,208	57
Vocational Nursing and either Certified Nurse Aide, Clinical Medical Assistant, Pharmacy Technician I, Phlebotomy Technician, or Certified Medication Aide	2	67	7.3	1,744	31
Phlebotomy Technician and either Certified Medical Assistant or EKG Technician	2	25	7.0	1,376	69
Attended three programs	0.3	100	9.0	4,080	50
Certified Nurse Aide, Vocational Nursing, and Phlebotomy Technician					
Attended any program	100	85	2.4	816	60

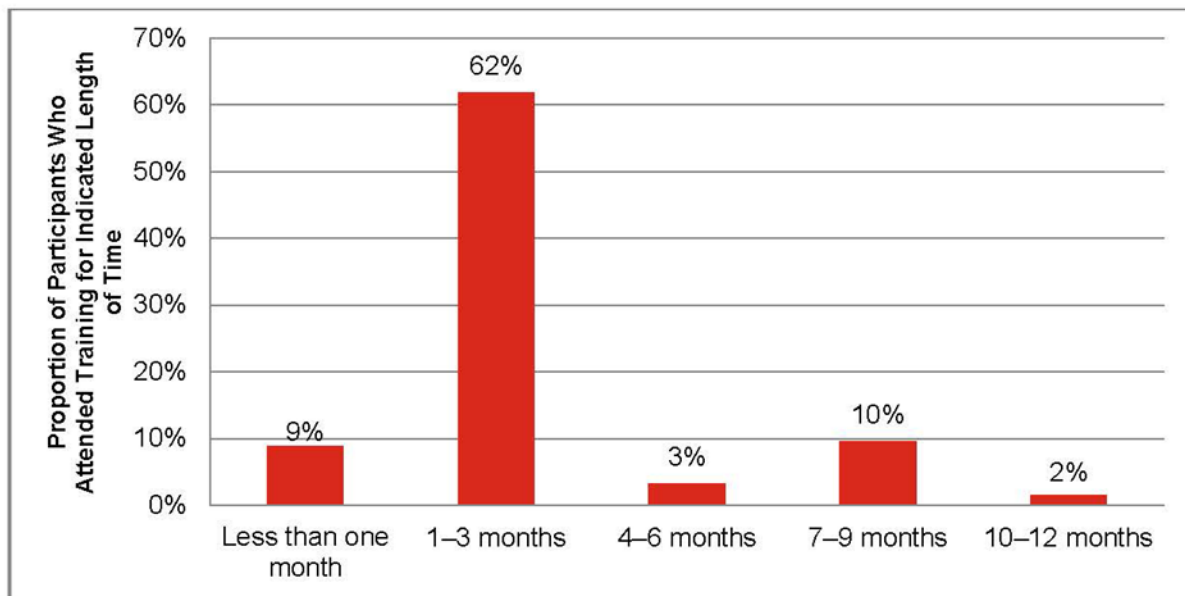
Source: Calculations are from NCTC program records

Notes: Sample size is 249 for the participation rate column and includes those who attended at least one Health Matrix Grant healthcare training program. Completion and length of stay measures are for those who attended the specific program or combination of programs (sample sizes not listed but can be calculated by multiplying sample size by participation rate). The completion rate for those who attended multiple programs includes those who completed all programs attended. End dates are not available for those who did not complete their program, so length-of-stay measures are based on those who completed the programs.

Relatively few of those who attended a healthcare training program at NCTC went on to participate in an additional healthcare training program (7 percent attended two training programs and less than 1 percent attended three). Interestingly, the for-credit Vocational Nursing program was only attended in combination with one of the non-credit allied health programs. Though combinations of training programs varied, most individuals combined Certified Nurse Aide or Vocational Nursing programs with a somewhat shorter program, such as Pharmacy Technician I or Phlebotomy Technician. The completion rate for individuals attending two programs was 44 percent across all combinations. The average scholarship for these individuals was \$1,323, which covered 44 percent of total tuition. Across all the programs, the average scholarship amount was \$816, which covered 60 percent of tuition.

The average amount of time participants' spent in training was relatively short, reflecting the relatively short duration of the courses. Across the programs, the average length of stay for those who attended any program was 2.4 months. (Data on the date of withdrawal was not available from the program records, thus duration is calculated only for those who completed their programs.) For individuals who only took one program, the average length of stay was 1.8 months; for those who participated in two programs, the average length of stay was 8.1 months. Exhibit 5.8 shows the distribution of participation by the length of training. Most (62 percent) training attendees spent between one and three months in training with few attending less than one month or more than 10 months.

Exhibit 5.8. Length of Stay in NCTC's Healthcare Training Programs



Source: Calculations are from NCTC program records

Notes: Sample size is 212 and includes those who completed at least one healthcare training program. End dates are not available for those who did not complete their program, so length-of-stay measures are based on those who completed the programs.

Overall, the participation data indicate high levels of participation in NCTC healthcare training programs, with 81 percent of those in the treatment group attending at least one training program, most commonly Certified Nurse Aide or Pharmacy Technician I. The vast majority of participants (92 percent) took only one healthcare training program, so individuals generally did not progress through the healthcare courses. The average amount of a Health Matrix Grant scholarship was \$816, which covered 60 percent of the program tuition. Across all the programs, the average length of program attendance was 2.4 months; over half of the participants attended training programs for one to three months.

6. Key Findings from the Implementation Study

The 2008 recession brought new urgency to programs and policies that focus on skills training for low-skilled and unemployed workers. DOL, with resources from the Recovery Act, dedicated substantial funding to develop training programs that both addressed employer demand for skilled workers in high-growth sectors and provided assistance to move unemployed workers back into the labor market. Two of these initiatives are the focus of this report: (1) the Pathways Out of Poverty (Pathways) Grant Program and (2) the Health Care and Other High Growth and Emerging Industries Grant Program (Health Care). DOL directed both grant programs to include a focus on a career pathways approach that combines training programs with articulated employment steps targeted to locally in-demand jobs, support services, and strong connections to employment. The grants funded partnerships of workforce agencies, community colleges, non-profit organizations, and other organizations to provide the training.

DOL sponsored a single rigorous evaluation of these two grant programs. Four grantees were purposively selected for the evaluation based on their program design and scale. They include one Pathways grantee, Grand Rapids Community College (GRCC), and three funded under the Health Care initiative: American Indian Opportunities Industrialization Center (AIOIC), Kern Community College District (KCCD), and North Central Texas College (NCTC). This report on the implementation study examines the operation of the programs the grantees designed and implemented. Its primary emphasis is on documenting the characteristics of those served by the programs, grantee service strategies, and patterns of participation, including the length of attendance and completion rates.⁸⁹ Data collection for the implementation study included in-person interviews with program staff, partners, and employers at each grantee as well as an analysis of program records on service receipt and completion.

Exhibit 6.1 provides a description of the key dimensions of the grantees' programs as well as the characteristics of the populations they served. While the body of the report discusses the operational experiences of each of the grantees separately, the remainder of this chapter summarizes key findings and lessons related to the implementation and operation of the programs across the four grantees.

⁸⁹ The evaluation also includes an impact study to measure the effects of the training program on participants' education and economic outcomes. The impact study results are provided in a separate report.

Exhibit 6.1. Key Dimensions of Grantee Programs in the Green Jobs and Health Care Impact Evaluation

Program Dimension	American Indian Opportunities Industrialization Center	Grand Rapids Community College	Kern Community College District	North Central Texas College
Selected Characteristics of Treatment Group at Baseline	<i>Demographics:</i> Mostly female (80 percent); primarily black (58 percent) and white (21 percent); 23 percent legal residents; average age of 32 <i>Employment:</i> 57 percent unemployed; 54 percent receiving public benefits (mostly SNAP and TANF) <i>Education:</i> 6 percent with no high school diploma; 38 percent with some college (no degree)	<i>Demographics:</i> Mostly male (71 percent); primarily white (57 percent) and black (37 percent); 29 percent with felony conviction; average age of 41 <i>Employment:</i> 73 percent unemployed; 63 percent receiving public benefits (mostly SNAP) <i>Education:</i> 11 percent with no high school diploma; 31 percent with some college (no degree)	<i>Demographics:</i> Mostly male (90 percent); primarily white (73 percent) but almost half Latino; average age of 32 <i>Employment:</i> 82 percent unemployed; 46 percent receiving public benefits (mostly unemployment insurance and SNAP) <i>Education:</i> 3 percent with no high school diploma; 33 percent with some college (no degree)	<i>Demographics:</i> Mostly female (84 percent); primarily white (70 percent); average age of 31 <i>Employment:</i> 44 percent unemployed; 22 percent receiving public benefits (mostly SNAP) <i>Education:</i> 3 percent with no high school diploma; 50 percent with some college (no degree)
Training and Resulting Credentials	Trainings ranged from short-term (one- to six-week) programs to longer term (six- and nine-month) programs. The short-term programs were Acute Care Nursing Assistant, Home Health Aide, First Aid and CPR, Nursing Assistant, Personal Care Assistant, and Trained Medication Aide. Short-term training programs could be taken in a sequence to gain multiple certificates. The long-term training programs were the Health Occupations Program (which combined several short-term programs) and the Medical Office program. Training resulted in either an AIOIC certificate or eligibility to sit for the relevant state examination.	Key courses were an eight-week Career Prep course and occupational training programs in green-related sectors, with some in basic skills (ABE/GED or ESL). Most trainings resulted in employability or career readiness certificates, and some occupational trainings prepared participants to sit for industry certification exams.	Three training courses were offered, starting with the foundational PowerTech course focused on traditional utilities, followed by WindTech or SolarTech. Each training ranged in length from six to nine weeks. Students completing PowerTech could subsequently enroll in WindTech and/or SolarTech. Each course resulted in a KCCD certificate and SolarTech trainees received an industry certificate for solar technician.	Partial scholarships for eight non-credit programs in Allied Health (Certified Medication Aide, Clinical Medical Assistant, Certified Nurse Aide, EKG Technician, Medical Billing and Coding, Pharmacy Technician I, and Physical Therapy Aide) that ranged in length from one to six months (including externship) and one 12-month for-credit program (Vocational Nursing). The trainings resulted in a certificate or a degree in a specified area.

Exhibit 6.1. Key Dimensions of Grantee Programs in the Green Jobs and Health Care Impact Evaluation (*continued*)

Program Dimension	American Indian Opportunities Industrialization Center	Grand Rapids Community College	Kern Community College District	North Central Texas College
Participation Levels and Length of Stay in Training	Seventy-nine percent of those assigned to the treatment group attended at least one of the healthcare training programs. Of those who participated, the vast majority (89 percent) attended the short-term programs with 60 percent attending two or more.	Seventy-eight percent of those assigned to the treatment group attended at least one activity. Of those who participated, 61 percent attended one program (primarily Career Prep) and 30 percent attended Career Prep and Occupational Training.	Eighty-five percent of those assigned to the treatment group attended at least one activity. Of those who participated, about one-third attended PowerTech only. The remaining two-thirds combined PowerTech with WindTech or SolarTech or both.	Eighty-one percent of those in the treatment group attended at least one healthcare training program, most commonly the Certified Nurse Aide and Pharmacy Technician I. The vast majority of participants (92 percent) took only one healthcare training program. Few attended the longer-term for-credit program.
	Completion rates were highest among those who attended two training programs (80 percent).	Completion rates were 50 percent for Career Prep on its own and 80 percent for those who attended Career Prep and occupational training	Completion rates for all the programs were near or above 90 percent.	Completion rates for several of the non-credit programs were above 80 percent but lower in Certified Nurse Aide, Phlebotomy, and Physical Therapy Aide
	Average length of stay was 3.2 months.	Average length of stay was 3.3 months.	Average length of stay was 2.5 months.	Average length of stay was 2.4 months.
Academic Advising and Personal Supports	Advisors provided tutoring and support on academic-related issues, while other dedicated staff provided assistance with personal issues.	Staff at partner organizations helped participants navigate choice of trainings and provided support during training.	Instructors offered tutoring and academic advising as well as guidance on personal issues. One instructor had a reduced workload to handle these responsibilities.	Advisors provided initial guidance on course selection and were available to provide assistance during training. Tutoring was provided by instructors as needed.

Exhibit 6.1. Key Dimensions of Grantee Programs in the Green Jobs and Health Care Impact Evaluation (*continued*)

Program Dimension	American Indian Opportunities Industrialization Center	Grand Rapids Community College	Kern Community College District	North Central Texas College
Financial Assistance	Training was offered at AIOIC at no cost to participants. Each participant in short-term training received \$85 per month in transportation assistance. Those who secured employment received two \$50 vouchers to offset transportation and uniform expenses.	Training was offered at no cost to participants. Bus or gas cards in \$10, \$20, and \$30 amounts were offered based on individual need. Assistance with uniforms and tools was provided on a case-by-case basis.	Training was offered at no cost to participants.	The average amount of the scholarship grant was \$816, which covered 60 percent of tuition. Scholarships initially ranged from 25 to 82 percent of tuition but increased to cover 95 percent of tuition for non-credit programs. Most certification exam fees were included in the scholarship. Child care reimbursement also was offered for up to 70 percent of cost up to \$1,500.
Job Placement Assistance	Dedicated staff provided one-on-one job search assistance, including help with developing a career plan, interviewing and job search techniques, developing resumes, submitting applications, and services needed to retain a job. Weekly two-hour job readiness class provided.	Staff at organizational partners assisted participants in finding employment, including guidance on searching for jobs and submitting an application. The grantee contracted with an organization to assist participants in securing part-time work while in training,	Instructors played the lead role in providing employment services. They provided career advice, served as job references and assisted with interview and resume preparation. When possible, instructors drew on their own professional networks to facilitate connections. All training courses incorporated resume development, interview skills, and job search strategies into the curricula.	Scholarship recipients were required to complete a six-hour job readiness class focused on resume development and interview skills. Staff provided one-on-one job search assistance near the end of the grant period, including assistance with resumes and interviewing.

Program Dimension	American Indian Opportunities Industrialization Center	Grand Rapids Community College	Kern Community College District	North Central Texas College
Connections with Employers	Dedicated staff identified and established relationships with numerous healthcare employers to identify clinical placements and job openings for participants, build the reputation of the program, and guide program services.	Green industry employers provided input on the initial trainings and offered to hire program completers, but their role did not come to fruition due to limited jobs in the field. GRCC convened employers to open a conversation about the hiring of ex-offenders and secure employment commitments.	Staff cultivated and maintained relationships with employers and shared job announcements with participants. Employers provided guidance on course content, offered labor market information, hosted experiential field trips for students, and at times hired those who completed the program.	For some programs, instructors engaged a few employers for input on aligning curricula. Employers also served as clinical externship sites for those trainings that required them.

The grantee programs were successful in reaching disadvantaged populations, but the populations they served varied in alignment with the training approach. While all the grantees targeted disadvantaged populations, the populations they served reflected the nature of the training they provided, the training-specific enrollment requirements, and the local environment in which they operated. As expected, given it was a Pathways grantee, GRCC focused on serving a high-poverty area and served a relatively disadvantaged population compared to the other grantees. Enrollees at GRCC were older and primarily male, almost two-thirds were receiving public benefits, and one-third had previously been convicted of a felony. KCCD served a primarily male population most of whom were unemployed when they enrolled in the program (82 percent), and almost half were receiving some type of public benefits. AIOIC and NCTC served a primarily female population, not surprising given their healthcare focus. Reflecting the community in which it operated, AIOIC served a primarily minority population (including 23 percent who were legal residents) and over half received public benefits. Of the grantees, NCTC served the least disadvantaged population: 44 percent of enrollees were unemployed, 50 percent had some college experience, and less than a quarter received public benefits.

Grantees used aggressive marketing and recruitment efforts to identify program participants. The grantees in the study recognized from the outset that the focused nature of their programs, coupled with their emphasis on disadvantaged populations would require a dedicated outreach and marketing strategy. This challenge was compounded by the evaluation design that necessitated a degree of “over recruitment” to establish a control group. All the grantees used a multifaceted approach to recruit potential participants. Approaches used included social media, including Facebook and Twitter; in-person recruitment at community events, job fairs, schools, and churches; partnerships with local human services offices such as SNAP and TANF; printed brochures and posters; and television and radio ads. Some of the grantees (AIOIC, GRCC) designated specific staff to recruit individuals for the programs. In addition to these outreach efforts, other strategies were used to identify eligible individuals. GRCC expanded the geographic catchment area of its program so that a wider range of individuals could potentially be eligible for the program. KCCD streamlined its intake procedures by reducing the number of in-person visits required for intake to ensure it did not inadvertently deter individuals from enrolling. However, even with these dedicated and concerted efforts, recruitment remained an ongoing and universal challenge over the life of the grants.

Programs achieved high participation levels and some individuals participated in multiple training program. The vast majority of those assigned to the study’s treatment group attended a training program (close to 80 percent or more). While there was variation, a significant proportion of participants in three of the grantee programs (AIOIC, GRCC, and KCCD) progressed through some sequenced training “steps.” At KCCD, over two-thirds of those who participated attended two or more of the green training programs, while in AIOIC, 60 percent of participants took two or more short-term training programs. At GRCC, 30 percent of those who participated attended an eight-week course designed to improve school and work readiness (known as Career Prep) in addition to occupational training. (NCTC did not have a sequence of training courses).

While a substantial number of individuals who participated progressed through the training sequences, the length of time individuals attended the programs was relatively short. Across the grantees, the average length of stay in the grant-funded programs ranged from 2.4 months at NCTC to 3.3 months at GRCC. A minority of participants attended the training programs longer than six months, ranging from only 1 percent at KCCD to one-third at AIOIC.

Programs had high completion rates, possibly due to the short length of training and range of supports provided. Close to 90 percent of all KCCD participants completed their trainings, including those who enrolled in the full sequence of training programs. The other three programs had high overall rates of completion (ranging from 64 percent to 85 percent), although not consistently across all courses or sequences of courses. The short duration of the programs may have facilitated completion. In addition, while service delivery approaches varied, the grantees typically provided guidance on personal and academic issues, tutoring, and help with studying and test-taking skills that may have helped participants remain engaged and complete their courses. The grantees also covered all or much of the tuition and generally provided transportation assistance. Students at AIOIC were assigned to an academic advisor who assessed student progress and identified students who needed assistance. AIOIC also had staff to address personal issues affecting participation. At GRCC, staff from partner organizations helped participants navigate their choice of trainings and provided support during training. At KCCD, instructors provided assistance with academic and personal issues, with one instructor carrying a lighter teaching load in order to be able to assist students. NCTC had advisors to assist students on an as-needed basis.

Grantees integrated job readiness and job search skills into the service strategy. In addition to the occupational training and supports, all of the grantees offered a separate course focused on job readiness and job search skills and several also provided one-on-one job search assistance to participants. At GRCC, which served a relatively disadvantaged population compared to the other grantees, development of job readiness skills was a key element of the program. Early in the grant period, the program managers found that participants often did not have the basic skills and career orientation needed to enroll in and successfully complete occupational training. As a result, the program increasingly focused on providing pre-occupational training courses, particularly an eight-week Career Prep course that was designed to improve school and work readiness. At AIOIC, dedicated staff provided one-on-one job search assistance as well as weekly work readiness classes to individuals as they completed training. KCCD instructors provided assistance with job searches, including interview preparation and resume development, as part of the training curricula. KCCD instructors also offered one-on-one job search assistance to help students find jobs, and they sometimes drew on their professional networks to facilitate employment connections. NCTC had a required six-hour class designed to help participants apply for and secure jobs. Toward the end of the grant period, NCTC hired a career advisor to provide one-on-one assistance to students on resume preparation, interviewing, and identifying job leads; staff reported that in retrospect they wished they had done this earlier.

The strength and nature of grantees' partnerships with employers varied. Grantees took different approaches to working with employers. AIOIC and KCCD were notable for the priority given to these relationships. At these two grantees, staff intensively engaged employers to identify job openings for program participants, provide input into the curricula and program operations, and provide opportunities for program participants to gain hands-on experience through clinical and practical components. AIOIC had dedicated staff for establishing relationships with employers in the healthcare field, and staff had made connections with over 90 employers. KCCD instructors worked with local employers and industry representatives to build awareness about the training and market the skills of graduates. Employers and industry groups also advised on the curricula so that the training remained relevant. Although employer partnerships were given less emphasis at NCTC, particularly initially, staff at this grantee directly solicited input from employers on the curricula for some of the NCTC courses and also learned of employer needs through interactions with employers during student externships that were required for some of the training programs. GRCC initially contacted several employers to ask for help designing its

green industry training, but these contacts were not sustained since the green industry did not develop as anticipated and the grant program took a somewhat different direction (see more on this below).

Organizational partnerships were challenging when responsibilities and expectations were not precisely defined. Partner responsibilities and expectations often were not well defined. GRCC and KCCD both outsourced key service components to partners, and both experienced challenges maintaining these partnerships. KCCD initially planned for two AJCs to play key roles in recruitment, screening and provision of support services to individuals in training. However, KCCD's relationship with the primary AJC in the program dissolved part way through the grant period because of dissatisfaction with the pace at which the AJC was enrolling individuals and the level of supports (particularly assistance with job search and placement) provided to those who had completed the program. When the partnership between KCCD and the AJC ended, KCCD staff, including managers and instructors, assumed full responsibility for recruitment and helping participants find employment. The GRCC grant was structured to include other organizations as partners, rather than subcontractors, to foster each organization's identity as a collaborator in a team effort. In practice, however, this meant that GRCC had limited authority to specify requirements for each of the partners, making management of the grant challenging. GRCC reported it had difficulty controlling critical elements of the effort, such as the expertise required for staff hired by its partners for the career coaching position. In addition, the decentralized partnership approach made it difficult to establish a clear chain of command among the partner organizations. GRCC and its partners struggled to solidify their relationship and their coordination mechanisms, and GRCC indicated that it took over two years for the partnerships to operate smoothly. Both KCCD and GRCC reported that if outside partners were involved in future grant efforts they would better define the roles and responsibilities of each partner and would include a process for monitoring performance and remedying issues as they came up.

Both grantees that focused on "green" industries found that jobs in the sector did not materialize as expected. Both GRCC and KCCD found that employment in green industries did not develop as planned and as a result made adjustments to keep the training relevant to the needs of employers. Originally, GRCC's green focus included training in deconstruction, wind energy, and composite manufacturing. However, when job openings in these fields grew more slowly than projected, the grantee allowed participants to enroll in a range of other training programs that were more loosely affiliated with the green sector, such as commercial driver's license training, construction remodeling, welding, and information technology. KCCD's program focused on solar and wind, but from the start its courses were designed to promote development of transferrable skills. In particular, the foundational course, PowerTech, was specifically designed to focus on skills needed to work within both the traditional and renewable energy industries. When staff realized that employment in the green sector was not developing as planned, staff cultivated relationships with employers in related industries, particularly construction and residential installation, and incorporated more broadly applicable skills into the curricula.

Grantees reported sustained institutional benefits from operating the grant. The grantees universally reported that resources were not available to continue program operations after the grant period ended. However, all four grantees reported that they hoped to provide, or even institutionalize, select programmatic elements or practices as part of their ongoing service delivery strategy.

- AIOIC planned to seek resources to continue the employment services developed under the grant, particularly the dedicated staff to provide these resources, the partnerships established with a wide range of healthcare employers, and the job search and job readiness assistance provided to

participants. AIOIC also planned to expand the provision of these services to other training programs it operates. Staff at AIOIC also pointed to the lessons they learned from industry as a critical outcome of the grant; the lessons included the skills employees should have when they are hired, the type of training that is provided by the employer, and what skills are needed to advance in the healthcare field. These lessons allowed AIOIC to adjust its programming to better align the content with employer interests. In addition, staff at AIOIC viewed the tuition-free aspect of their offerings as important and were considering changing the packaging of courses to make them eligible for Pell Grants.

- GRCC was examining ways to further develop and expand the career coaching model developed under the grant. Staff reported they were incorporating career coaching into the development of future programs. In addition, some of the organizational partners in the grant program intended to incorporate aspects of the model into their service delivery structures, if the resources were available. GRCC also planned to expand the use of the Career Prep curriculum across the college to assist students who wanted to enroll in a program but lacked the appropriate skill levels.
- Although program staff at KCCD were hoping that they might be able to continue to offer their three-pronged program for a fee, this was largely contingent on the Clean Energy Center continuing to exist (which it did not after the center failed to secure funding after the grant ended). Staff at KCCD had hoped that they might be able to charge fees and/or tuition by partnering more strategically with employers in the area and serving as a key training resource for renewable energy and related industries. However, this did not occur, and staff anticipated that, instead, successful components of the program would be incorporated into other programs offered within the community college district. In particular, staff reported that an approach where the curricula incorporated broadly applicable technical skills, addressed personal issues that could affect attendance and employment, and provided direct connections to employers was unique to the grant-funded program and important to continue.
- NCTC's administration planned to "institutionalize" the career advisor role, which was developed under the grant, and was seeking funding so that the one-on-one job search assistance provided by the advisor would be consistently available to NCTC students. NCTC staff also reported that it was generally difficult to identify funding sources for scholarships, and like staff at AIOIC, they were considering packaging courses and increasing the content of some courses to make them eligible for Pell Grants, which would be a source of funding for the tuition.

Overall, while recruitment was a challenge, the grantees in the Green Jobs and Health Care Impact Evaluation engaged many individuals in training programs once they were enrolled, with relatively high completion rates. Strong attendance in and completion of training courses is a key objective of a career pathways approach. However, by design, the length of training was short, which is likely to have encouraged engagement and completion. These grantees also indicate that providing support services, not just occupational training, was critical to engaging a hard-to-serve population, with all (to varying degrees) offering academic and personal supports, financial assistance, and employment assistance. Working with employers also was an important element of the grantee programs, and a substantial commitment on the part of the grantee was required to maintain these relationships over the course of the grant.

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Appendix: Program Environment for GJ-HC Grantees

Characteristics of the Program Environment for Evaluation Sites, 2013

Characteristic	AIOIC Hennepin County, MN	GRCC Kent County, MI	KCCD Kern County, CA	NCTC Cooke, Denton Counties, TX ^a
Total population	1,170,623	609,544	848,204	Cooke: 38,484 Denton: 687,857
Race and ethnicity (%)				
White	75.2	82.4	72.3	Cooke: 90.5 Denton: 78.1
Black or African American	11.7	9.6	5.6	Cooke: 2.9 Denton: 8.4
Other race	13.1	8.0	22.1	Cooke: 6.6 Denton: 13.5
Hispanic or Latino	6.7	9.8	49.8	Cooke: 16.0 Denton: 18.4
Educational attainment ^b (%)				
No high school diploma	7.6	10.6	27.5	Cooke: 16.2 Denton: 8.2
High school graduate (includes equivalency)	18.4	26.4	26.5	Cooke: 31.0 Denton: 19.0
Some college, no degree	20.0	22.6	23.9	Cooke: 25.0 Denton: 24.3
Associate's degree	8.1	8.6	7.0	Cooke: 8.3 Denton: 8.0
Bachelor's degree	30.0	21.0	9.9	Cooke: 14.0 Denton: 28.0
Graduate or professional degree	15.8	10.7	5.1	Cooke: 5.5 Denton: 12.5
Median household income (\$)	64,403	51,667	48,552	Cooke: 50,067 Denton: 74,155
All people below poverty level ^c (%)	12.8	15.5	22.9	Cooke: 14.8 Denton: 8.7
Unemployment rate (%)				
2010	7.0	10.1	15.6	Cooke: 7.3 Denton: 7.1
2013	4.6	6.3	11.7	Cooke: 4.9 Denton: 5.3

Sources: 2013 data as reported by the American Community Survey 2009–2013

2010 and 2013 unemployment rate data from U.S. Bureau of Labor Statistics

Notes: Data reported in the table is for 2013, unless otherwise noted.

a NCTC's five campuses serve a four-county region to the north and northwest of Dallas. Demographics vary across the counties, so this table reports on Cooke County, where the main Gainesville campus is located, and on Denton County, where the Flower Mound campus is located.

b Among those 25 and over.

c Among the entire population. Poverty Status is defined by the U.S. Census Bureau. Accessed June 1, 2015, http://www.census.gov/acs/www/data_documentation/documentation_main/#doc2012.