New Jersey Health Professions Pathways to Regional Excellence Project TAACCCT Evaluation

Final Report: Implementation and Impact

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INTRODUCTION

The healthcare sector is a source of significant current and projected employment in the state of New Jersey. Given the needs of this large and growing industry, the New Jersey Health Professions Pathways to Regional Excellence Project (NJ-PREP) has sought to prepare students to enter and advance in careers in the health professions. NJ-PREP, a consortium led by Bergen Community College, includes 12 New Jersey community colleges and is funded by the U.S. Department of Labor's Trade Adjustment Assistance Community College Career and Training (TAACCCT) grants. TAACCCT grants focus on "advancing innovative, sector-based system change in regional and statewide economies" with the goal of "creating industry-driven strategies that are responsive to regional labor markets and state economies" (US DOL, 2014). TAACCCT grants were aimed at strengthening community colleges' ability to meet workforce needs by: 1) increasing student attainment of industry-recognized credentials, 2) developing innovative approaches to instructional delivery, and 3) improving students' employment outcomes. With its TAACCCT grant, the NJ-PREP Consortium has been working on an array of activities designed to promote the development of career pathways in health professions by creating clearer program pathways, integrating technology into the curriculum, providing supports for students, and engaging with local employers and the workforce system.

The Education and Employment Research Center (EERC) at Rutgers, The State University of New Jersey, served as the third-party evaluator to evaluate the NJ-PREP TAACCCT grant for the Consortium. Using a mixed-methods approach, the evaluation gathered grant implementation and outcomes data from multiple perspectives. EERC partnered with the Heldrich Center for Workforce Development at Rutgers to calculate employment outcomes using wage records data. Throughout the course of the grant, the evaluation examined the strategies the Consortium implemented to develop and strengthen pathways into healthcare careers, as well as the outcomes of participants in the programs.

This is the second of two evaluation reports of the NJ-PREP program. The first report, released in March 2017, focused on implementation and early outcomes achieved in the first half of the grant period. This final report focuses on implementation in the second half of the grant period and highlights promising practices, identifies lessons learned, discusses accomplishments and challenges in the grant implementation, and examines prospects for sustainability. Additionally, this report includes an examination of participant characteristics and tests the outcomes of that examination using a quasi-experimental analysis technique.

Background

The TAACCCT grant built on a prior Health Professions Opportunity Grant (HPOG) received in 2010 from the U.S. Department of Health and Human Services. As part of that grant, ten community colleges in Northern New Jersey formed the New Jersey Health Professions Consortium. Through HPOG, the Consortium provided training to low-income individuals and Temporary Assistance to Needy Families (TANF) and General Assistance (GA) recipients. HPOG helped these individuals establish careers in the health professions through tuition assis-

tance, support services, and job placement assistance. With the TAACCCT grant, the Consortium expanded to include 12 of the state's 19 community colleges –, one college was lost after HPOG, and three new colleges joined the Consortium. In addition to the 12 colleges, the Consortium subcontracted with the Health Care Talent Network (HCTN) at Rutgers to develop and offer training for a community health worker apprenticeship. All county college partners in the TAACCCT grant are listed in Table 1.

TABLE 1: TAACCCT GRANT CONSORTIUM PARTNERS

College	Status
Bergen Community College	HPOG partner
Brookdale Community College	HPOG partner
County College of Morris	HPOG partner
Essex County College	HPOG partner
Hudson County Community College	HPOG partner
Mercer County Community College	New partner with TAACCCT
Middlesex County College	HPOG partner
Ocean County College	New partner with TAACCCT
Passaic County Community College	HPOG partner
Raritan Valley Community College	New partner with TAACCCT
Sussex County Community College	HPOG partner
Union County College	HPOG partner

The TAACCCT grant sought to create the college infrastructure needed for workforce preparation by developing career pathways into healthcare professions. Since many entry-level healthcare programs are in colleges' noncredit areas, building connections between noncredit and credit-bearing programs and providing support for noncredit students were key elements in creating these career pathways. The TAACCCT proposal articulated four broad strategies for colleges to use in developing their capacity to offer career pathways in the health professions:

1) Accelerate time to program-completion for TAA-eligible and other adults by creating flexible, innovative, and well-articulated pathways toward high-skill, high-wage healthcare career opportunities.

2) Integrate technology into curriculum in ways that will engage participants in their learning while improving overall levels of program retention and completion. Effective use of technology is also intended to prepare participants for further learning and high-skill, high-wage healthcare employment as well as ongoing learning.

3) Create a supportive system for assisting adults in succeeding in their programs of study and transitioning toward high-skill, high-wage healthcare employment.

4) Effectively engage employers, workforce systems, and industry associations in all aspects of program design, development, and implementation to ensure that skills and competencies align with employer expectations.

The Consortium identified a wide range of activities related to these four broad strategies, some of which address multiple strategies. Table 2 lists the key activities of the grant based on the evaluation logic model (included in Appendix A) and the strategies they employ. We discuss the implementation of each of these activities separately later in this report.

TABLE 2: KEY TAACCCT GRANT ACTIVITIES AND MAJOR PROGRAM STRATEGIES

Activity	Pathways Development	Technology Use	Student Supports	Employer and Workforce System Engagement
Develop and reform programs to include stackable credentials, modularized curriculum, skill alignment, work-based learning, apprenticeship, articulation agreements, competency-based learning, Common-Core competencies, curriculum frameworks, and credentialing requirements.	Yes	No	No	Yes
Purchase equipment for hands-on training in healthcare courses, including simulation equipment.	No	Yes	No	Yes
Implement Smart Start classes to promote career awareness and development.	Yes	No	Yes	No
Implement contextualized and adaptive learning systems, including EdReady, Smart Sparrow, and MOOCs.*	No	Yes	No	Yes
Develop regional Prior Learning Assessment (PLA) standards and undergo Thomas Edison State University credit review process.	Yes	No	No	No
Implement networking sessions, career support network.	No	No	Yes	No
Hire and train job developers to provide comprehensive counseling and advising to students; share best practices in job development across Consortium institutions.	No	No	Yes	No
Engage with employers through local collaborations, the Consortium Leadership Council, a workplace committee, and North Jersey Partners.	No	No	No	Yes
Collaborate with the workforce system to promote referrals.	No	No	No	Yes

Develop and implement a system to track student data and maintain a statewide scorecard.	No	No	No	Yes
Develop and contribute open education resources (OER) to, and incorporate OER from, the SkillsCommons repository.	No	No	No	No
Promote faculty and staff professional development.	No	No	No	No

* Three elements of technology integration were originally proposed for the grant project: EdReady, online adaptive learning platforms such as Smart Sparrow, and the incorporation of MOOCs (Massive Open Online Courses) or simulations. EdReady was found to be the best suited to incorporation across the Consortium, and it was deemed the most sustainable of the options. Neither Smart Sparrow nor MOOCs have been incorporated into the TAACCCT project across the Consortium.

In addition to implementation goals, the Consortium's grant proposal also contained target outcomes that were approved by the U.S. Department of Labor relative to enrollment, completion, and post-program employment rates. Table 3 summarizes these target outcomes for the Consortium as a whole.

TABLE 3: CONSORTIUM-WIDE OUTCOME TARGETS

Outcome	Target for Grant Period
Total unique TAACCCT participants served/enrolled	2045
Total participants completing a TAACCCT-funded program	1451
Total participants retained in their program of study or another TAACCCT-funded program	409
Total TAACCCT participants completing credit hours	1160
Total participants who have completed credentials in a TAACCCT-funded program of study	1291
Total participants enrolled in further education after completing a TAACCCT-funded program of study	616
Total participants employed after completing a TAACCCT-funded program of study (non-incumbent workers only)	870
Total participants retained in employment after completing a TAACCCT-funded program of study (incumbent workers only)	733
Total incumbent-worker participants receiving a wage increase post-enrollment	530

Report Organization

This report begins with a section that describes the methods used in the evaluation. We then discuss the implementation of each of the grant's key activities, including developing or

redesigning relevant pathways and related programming; purchasing and installing state-of-the-art equipment and supplies; developing supports for noncredit students; and developing new connections with employers and local workforce centers. We then examine the creation of open education resources (OER) and of professional development opportunities for faculty. Next, we discuss the prospects for sustaining activities launched during the grant period, issue overall recommendations, and consider the lessons learned throughout the grant implementation process. Finally, we will conclude this report with an examination of the characteristics of participants who enrolled in the grant programs and provide an analysis of program-participant outcomes.

While the report provides a holistic view of the Consortium's TAACCCT-related activities, Appendix B includes summaries of key implementation activities that occurred at each of the 12 Consortium colleges individually as well as at the site of their subcontractor, New Jersey Health Care Talent Network (HCTN), which is based at Rutgers. Appendix C includes a summary of all the programs offered by each college through TAACCCT.

PROGRAM IMPLEMENTATION

Methods

This report is a continuation of the EERC's process evaluation of the NJ-PREP grant in years 1 and 2, which focused on the implementation of key grant activities, as described in our interim report[1]. This report addresses grant years 3 and 4. In year 3 the EERC's research focused on the broader organizational contexts and support for the programs through interviews with schools' leadership, and in year 4 the team focused on sustainability. The process evaluation used a mixed-methods approach including multiple sources of data: site visits with each of the 12 colleges in the Consortium plus the HCTN program, interviews with site coordinators and Consortium leadership, student focus groups, interviews with area employers, student surveys, content review of existing program documents, and observations of Consortium meetings. Each method is briefly described in this section.

Site Visits. In addition to the first two rounds of one-day site visits to each of the Consortium colleges and to HCTN, the results of which were reported in our interim report, we conducted two additional rounds of site visits. The third round of site visits was conducted from April through June of 2017, and the final site visits were conducted in January and February of 2018. During these visits, we interviewed grant staff – including site coordinators, job developers, and faculty – as well as college leadership. We also conducted focus groups with students in TAACCCT programs whenever possible.

- *Interviews*. The research team conducted 274 in-person semi-structured qualitative interviews with Consortium leadership and other staff involved in operating the grant

[1] Van Noy, M., Edwards, R., Haviland, S., McKay, H., Vinton, J., and Dennis, P. (2017). New Jersey Health Professions Pathways to Regional Excellence Project TAACCCT Evaluation, Interim Report: Implementation and Early Outcomes", Piscataway, NJ: Rutgers, Education and Employment Research Center.

across 4 site visits conducted between Fall 2015 and Spring 2018. Interview topics included progress on grant implementation, challenges to and facilitating factors for program success, views on the state of the job market, student preparedness for employment, and sustainability plans. Interviews ranged from 30 minutes to 2 hours in length. Interviews were audio recorded, and notes were either taken by a note-taker on-site or from the audio recordings.

- *Student Focus Groups*. Over the course of all 4 site visits, the research team conducted 16 focus groups with students in TAACCCT programs. Between 3 and 10 students from a variety of programs participated in each focus group. Students were asked about their experiences with the program, challenges they had faced, and their goals for the future. A note-taker was present in each focus group.

Student Surveys. The team also conducted a sub-study of students from May through November 2017, via pen-and-paper surveys that were distributed in TAACCCT-program classes at Consortium schools. The surveys had 11 questions, ten of which were open-response questions. Students were asked what their program of study was, whether they had enrolled in any college program prior to their current one, and what their short- and long-term career and educational goals were. They were also asked to describe any challenges they anticipated facing and the tools they might need to overcome those challenges. Upon completion, survey responses were entered verbatim into Qualtrics by research staff and subsequently uploaded to NVIVO. The research team identified dominant answer categories and coded the answers to provide counts for responses. A total of 264 students completed surveys.

Employer Interviews. The team launched a sub-study of employers in 2017. From April through June 2017, the team conducted 13 phone interviews with area employers identified by the Consortium schools as either actively engaged with the project or as a local employer of graduates. These area employers ranged from larger hospital systems to smaller companies such as home health or nursing facilities. Topics covered included the employers' views of the local Consortium programs and their experiences working with them; their priorities in hiring; and their assessments of the workforce and job market. Interviews, which were recorded and transcribed, ranged from 30 to 60 minutes.

Workforce System Interviews. EERC evaluators conducted four interviews with workforce staff, covering topics related to successes and challenges in their relationship with the local Consortium college and the role of the TAACCCT grant in that relationship. Workforce respondents were chosen based on college staff recommendations. Interviews were audio recorded, and notes were either taken by a note-taker during the live conversation or from the audio recordings.

Workforce System Survey. The evaluation team prepared a short survey for college staff and their workforce partners about the relationship between the college and the workforce system. The team distributed the survey on paper at two in-person meetings in September 2017. Seven responses were collected from workforce system staff and 23 responses from college staff.

Employer Contacts Survey. Prior to the third round of site visits in April through June of 2017, the research team asked college staff (e.g., coordinators and job developers) who were involved in employer engagement efforts to complete a short survey. The survey included questions about the kinds of contacts made, the methods of communication used, and the nature of their relationships with employers.

End-of-Grant Survey. The EERC team created a final survey for site coordinators to report on their grant activities in the final period of the grant operations, as well as to report on their colleges' final plans for sustainability. The survey was conducted online using Qualtrics in June 2018.

Mental Health First Aid Interviews and Surveys. Research team members engaged in a second sub-study of instructors, staff, and students involved in the Mental Health First Aid training that took place throughout the grant. Eight interviews and interview emails (a series of questions sent via email to those who could not participate in interviews) were conducted between May and July of 2018. Interviewees included training course attendees, managing staff of the programs that were administering the training, and training instructors. A pen-and-paper survey was distributed to students in health professions programs at Bergen Community College in May 2018. A total of 214 students responded to the survey. Upon completion, surveys were entered verbatim into Qualtrics by research staff and subsequently uploaded to NVIVO. The research team identified dominant answer categories and coded the answers to provide counts for responses.

Document Review and Observations of Consortium Meetings. As part of the ongoing evaluation process, the research team collected all documentation related to the Consortium's grant activities, including program curriculum, presentations on program activities, and materials from program activities. These documents were requested regularly from Consortium leadership, from faculty and staff at the Consortium colleges, and directly from HCTN during site visits. Additionally, the Consortium shared summary reports on program activities conducted at the colleges, responses to the Consortium's quarterly update survey on college activities, colleges' sustainability plans, and colleges' end-of-grant reports. Finally, the research team sent representatives to Consortium meetings, including both the regular monthly site coordinators' meeting and the quarterly leadership meetings, to stay apprised of progress on the program. These meetings were also used as opportunities for the research team to offer regular updates on planned evaluation activities, which evolved alongside the program and required a great deal of participation from each of the Consortium sites.

Analysis. All data were analyzed using established data analysis software and techniques. Qualitative data were managed, coded, and analyzed using NVIVO 11 qualitative analysis software. All notes and transcripts from interviews and focus groups were input into NVIVO. The research team developed broad codes for general themes in these data, and trained teams of coders reviewed all data and coded using these broad codes. The coding team regularly met to discuss the coding process and emergent questions from the data to ensure quality and consistency. The research team then conducted more detailed coding within the broad themes in the key areas of the project.

Noncredit Pathways Development

Program Development

In the final year of the grant, most of the Consortium colleges were running programs previously implemented or modified during the grant period. Most schools were making only minor changes, "tweaking" programs to optimize their benefit to students. More significant changes to programs were relatively few, and only one school, Raritan Valley, implemented a new program during this period. Some schools removed programs with low enrollment in order to focus their efforts on those with more student interest. This section provides an overview of programs in which minor changes were made, highlights the addition of Raritan Valley's new Occupational Therapy Assistant program, discusses the Consortium-level addition of mental health first aid instructor training, and discusses both Morris's and Bergen's addition of a mental health first aid certificate to their healthcare programs.

Minor program changes

A few of the Consortium colleges made minor program changes during the final year of the grant. Bergen made multiple changes, including adding CPR and first aid to their PCT program to enhance the credential; combining PCT and Advanced Patient Care; adding more supplies to its surgical technology program to enhance hands-on learning; and adding a pharmacy-compounding course available to TAACCCT students. The TAACCCT versions of Bergen's Certified Home Health Aide and Pharmacy Technician programs did not run due to low interest among TAACCCT students.

Bergen also added a couple of additional program elements for its TAACCCT students, including a Strengths Training assessment – an online assessment that helps students determine their strengths for use during job interviews – and mental health first aid training for all health professions students. (The mental health first aid training will be discussed in detail below.) Brookdale's PCT program received upgraded labs during the final year of the grant, and plans were well underway for reforms to its Pharmacy Tech program. The primary goal for the program was to improve its alignment with industry standards.

Raritan Valley stopped offering its CNA program due to low enrollments. There was some discussion that the program needed curriculum changes and updates, and an overhaul was planned. However, since TAACCCT staff's focus was mostly centered on the Occupational Therapy program, the CNA update was planned for a later date, post-grant.

Major Program Changes

Two schools, Raritan Valley and Bergen, made more substantial program changes during the final year of the grant that more deeply affected its TAACCCT programming. Raritan Valley rolled out a new program in the final grant year, and Bergen added a certificate to its health professions programs. A third change impacting TAACCCT programs occurred at the Consortium level. Grant management arranged for TAACCCT college staff to be trained to

become mental health first aid instructors, which could enhance their programs at their individual institutions. Each will of these changes will be discussed below.

Raritan Valley's Occupational Therapy Assistant program. Programmatically speaking, Raritan Valley's primary focus throughout the TAACCCT grant period was on the creation and implementation of a new Occupational Therapy Assistant (OTA) program. The process was slow, and the development of the new program was met with some resistance from within the college. But overall, the creation of the program was a huge accomplishment for the school.

Beginning an OTA program has been a goal of Raritan Valley's for some time, but the school lacked the funds to put it together, purchase equipment and supplies, and hire a Program Director. Through the TAACCCT grant, however, the funds were available to do these things. The program allows students to graduate with an associate degree after completion, and they will also receive a national certification upon passage of the national licensure test.

The first step in creating the program was to gain approval of the school's curriculum committee; then state approval was requited. Staff had to hire an occupational therapist consultant to help develop the course curriculum as well as several additional consultants to assist in that task. Space allocations for the classroom and lab space had to be secured. The program also had to be accredited by the Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA). The process involved specific candidacy applications and deadlines, which were time consuming and difficult to meet.

Hiring a program director was also a challenging task. The occupational therapy association has accreditation guidelines for the program director that were difficult for the college to meet. They required someone with both professional experience, as teaching experience. Trying to meet these requirements led to a large delay in getting the program started. Eventually because they couldn't find someone to hire, they were able to have the requirements changed them allow an experienced occupational therapist without teaching experience could gain experience with teaching while the program is getting up and running.

Lab space began to be set up in 2017, and the first run of the program began in January 2018. The program was envisioned to be a great place for students to receive a workforce-ready degree and to be a marketing tool for the school. One staff member commented that "TAACCCT funding allowed us to introduce a new associate degree program that normally we wouldn't have the resources to do." The curriculum has been uploaded and is available for others to use on Skills Commons.

Mental Health First Aid Instructor Training. At the Consortium level, grant management used grant funds to convene an instructor training event for grant staff and faculty members to become mental health first aid (MHFA) instructors. MHFA is an eight-hour certification program designed to help attendees:

- Grow their knowledge of signs, symptoms, and risk factors of mental illnesses and addictions,

- Identify multiple types of professional and self-help resources for individuals with a mental illness or addiction,
- Increase their confidence in and likelihood to help an individual in distress, and
- Show increased mental wellness themselves.[2]

Attendees of the training became certified instructors themselves, able to teach the course to students and staff at their own institutions. To renew their status as instructors, they would have to teach three mental health first aid classes over the following year—the final year of the grant. About 25 staff, faculty members, and NJ Department of Labor and Workforce Development attended the training. Of the trainees, several took what they learned and taught MHFA courses at their own schools and in their communities. Passaic, Morris, Sussex, and Bergen have all instituted MHFA courses for students or staff. NJLWD staff have offered the training throughout NJ State Government

Morris County College offered courses on MHFA, an Addiction Recovery Volunteer program, Certified Peer Recovery Specialist program, and Certified Alcohol and Drug Addiction counseling. One staff member commented that the goal was for their college to become a go-to destination for mental health and addiction education for the county and local employers. Morris's job developer became certified through the Consortium's instructor training course and then taught the course at the college as well as in the community. He and the site coordinator at Sussex often team up to teach, splitting the course into two four-hour sessions. Since receiving the TAACCCT-sponsored certification, he has received additional Mental Health First Aid Instructor Certifications, including certifications to teach the youth, higher education, and first-responder mental health first aid modules. There is some competition among other organizations in the area that offer the training at low or no cost, but staff at the college are optimistic that the trainings will continue even after the grant period has ended.

Overall, trainers and attendees alike were highly positive about the trainings and believed they should continue. One instructor commented that the course was particularly timely because of the opioid epidemic. He said, "typically people have lived experience," stating that mental health issues are often "too close to home." Several attendees echoed this as well, stating that the training helped them better understand mental health and addiction issues and that they felt the skills they learned would be beneficial at work, at home, and in their community.

Bergen's Mental Health First Aid program addition

At Bergen, the MHFA certificate is mandatory for all students completing a health professions degree, including TAACCCT students. The goal of the certificate addition at Bergen was to help students with employability by giving them a second certification relevant to the

[2] This list of goals appears on the Mental Health First Aid website at https://www.mentalhealthfirstaid.org/about/research/

field. Bergen staff felt the addition of the certificate would be well received by area employers and may help students find work faster by increasing their employability. One instructor noted that given the recent state and national attention on mental health and addiction issues, employers would likely see the certificate as a positive among potential employees. He also noted that several hospitals in the state already look for employees with the certification and believed this number would only expand in the future, especially as more employers become aware of it.

During Spring and Summer 2018 program offerings, the EERC team provided surveys to the division of health professions dean, who fielded them to students completing the MHFA certification in their courses. The surveys were distributed twice during the period from April through June of 2018. The first round of the survey yielded 72 responses, and 142 students took the survey the second time, for a total of 214 students. The surveys consisted of 11 mostly open-ended questions on paper, which students took during class time and returned to the dean. The completed surveys were then mailed to the EERC office at Rutgers, where they were transferred to an electronic format in Qualtrics and then uploaded to NVivo. The surveys were then coded for emergent themes and categories. One component of the survey was designed to understand student perceptions of the MHFA program and its usefulness to their current or future careers. How students felt about the mandatory inclusion of the certificate in their health professions program was also explored.[3]

Student respondents were overwhelmingly positive about the training and were likewise positive about its mandatory inclusion in their coursework. Prior to its introduction in their program of study, 91 percent of students were not aware of what mental health first aid was. After completing the training, 99 percent of respondents felt the information would benefit them personally, believing they could apply concepts they had learned to better understand individuals, "deal with" friends and family, or respond to other challenging situations. In addition, most students felt the knowledge would help them find employment (81 percent) or help them on the job (29 percent). Some students felt they could express during a job interview exactly how their additional training could help them with patients should they be hired. They felt this would give them an advantage while job searching.

Many students had already taken at least a portion of their clinical requirements, working with patients in a caregiving capacity; 21 percent of survey respondents indicated they had used elements of the MHFA course in their clinical experience. One noted it had made her more empathetic toward patients suffering from dementia and depression. Another responded it had helped her help a patient through a difficult emotional time. Others responded that it had helped them identify anxiety or depression in patients that they would have likely missed without the training. Students did not have to be familiar with the clinical setting to recognize the value of the training; 39 percent of respondents noted they had not taken their clinicals yet

[3] For more information about Bergen's MHFA program and more in-depth analysis of the survey responses, please see the Mental Health First Aid brief. Edwards, R. & Haviland, S. (2018). Mental Health First Aid Training in the New Jersey Pathways to Regional Excellence Program: Supporting Overall Health on the Frontlines of Care. Piscataway, NJ: Rutgers, Education and Employment Research Center.

but thought they would be able to apply what they had learned to their clinical experience in the future.

Staff members at Bergen were excited about the addition of the certificate and said it made all of the health professions programs more relevant to their respective industries. Since instructors were already Bergen faculty or staff members, they are currently teaching the courses at no charge at the school. Currently, there is every intention to continue the mandatory training post-grant.

Noncredit-to-Credit Connections

Creating connections between the noncredit and credit-bearing sides of healthcare programming was a primary goal of the TAACCCT grant. These connections are part of an overarching goal to create education and career pathways for students. Although many healthcare career pathways begin with short-term noncredit programs, advancement often requires students to move into a credit-bearing program as they move further along the pathway. The ability to make this transition between programs is therefore important to students' long-term success in the field.

Prior to the TAACCCT grant, Consortium colleges began the process of developing procedures for connecting noncredit courses and programs to credit-bearing courses and programs; Consortium colleges will continue this work after the grant period has ended. The process is long and sometimes very challenging. This section discusses how Consortium schools have begun to make these connections, explores successful facilitating factors across the Consortium, and examines challenges that have been encountered during implementation.

Developing Connections

Consortium schools developed varying ways to navigate the process of assisting students who wished to move between noncredit and credit programs. Some were intentional, such as the development of specific courses to help students transition to credit-bearing courses, and some were unintentional, like the creation of certain resources that inadvertently help students make connections to credit programs. As noted above, some Consortium schools began the process of building these connections long before the TAACCCT grant, and each school developed its own individual methods over time. But in examining methods employed at each institution, several similarities began to emerge.

The research team found that Consortium schools employed two primary methods of helping students bridge the divide between noncredit and credit-bearing programs. Schools either developed procedures – formal or informal administrative activities with required elements – to connect the two types of programs, or they created resources – classroom space, courses, tools, or forms of academic assistance – that students could use to help them make the transition to credit programs. Procedural elements can make the administrative process of moving from noncredit and credit programming easier. Resources make it easier for students to 1) be aware of their options on the credit side of programming, 2) make informed choices, and 3) have access to help while making that transition.

Procedures and Resources

Several Consortium schools were able to help their students move between noncredit and credit-bearing programming by creating facilitating factors specifically dedicated to making connections between the two sides. Each facilitating factor falls into two broader categories: *procedures* or *resources*. Within each category, a basic typology exists that further categorizes the type of facilitation the factor creates. *Resource factors* fall within three basic factor types: 1) *preparatory resources* to help students prepare for credit-side coursework, 2) *information resources* to help students become aware of their credit-side options and make informed decisions about them, and 3) *shared space*, which creates inclusion between students and staff on both sides of programming. Table 4 summarizes these factors and provides examples from the colleges.

Procedures fall within several categories, although two categories have the most participation across schools. The two most commonly used procedure types within Consortium colleges are 1) intra-institutional articulation and 2) leadership coordination. *Intra-institutional articulation*, which will be discussed further below, is a clear pathway at an institution resulting in credit for noncredit courses. *Leadership coordination* involves relationship-building between members of leadership from both sides of programming as a way to bridge the two sides of programming. The other three types of procedural factors at use in Consortium schools are 1) *noncredit prerequisites*, or noncredit courses required as prerequisites for credit-bearing programming, 2) *credit-optional courses*, which students can choose to take as a noncredit or credit-bearing course, and 3) a *prior learning assessment* (PLA) option that allows students to create a "work–life portfolio" to present knowledge earned through avenues other than credit-bearing courses. Other PLA options tied to each school's specific PLA policies are discussed in more detail later in this report and in an accompanying brief.[4] Table 4 explores each facilitating factor by college and factor type.

TABLE 4. FACILITATING FACTORS IN BUILDING NONCREDIT-TO-CREDIT CONNECTIONS

College	Facilitating Factor	Example
Resources: Raritan Valley	Preparation	Noncredit students are given access to tutoring resources, the testing center, and a pre-Accuplacer workshop to help them prepare for credit-side programming.
Resources: Hudson	Preparation	Noncredit healthcare students are given access to a free pre-National League for Nursing (NLN) exam preparation course.
Resources: Morris	Information	The college issues a publication, *Connections*, that illustrates pathways from noncredit programs to credit programs.

[4] McKay, H. & Edwards, R. (2018) Prior Learning Assessment Policy and Practice in the New Jersey Health Professions Pathways to Regional Excellence Project (NJ-PREP), Piscataway, NJ: Rutgers, Education and Employment Research Center.

Resources: Morris	Information	The college hosts open houses highlighting credit-side options and focuses some recruitment and outreach efforts on moving noncredit students to the credit side of programming.
Resources: Middlesex	Information	Students from both sides of programming are given a joint student orientation, which creates a sense of inclusion.
Resources: Middlesex	Information	Both noncredit and credit healthcare courses publish their course schedule together in the same catalog instead of separately.
Resources: Bergen **Passaic** **Middle Sex** **Hudson** **Ocean** **Essex**	Shared Space	Classroom space, lab space, equipment/supplies, instructors, or courses are shared between noncredit and credit programs. Such arrangements often result in connections between the two sides of programming and allows noncredit students to see the possibilities of continuing on with further education.
Procedures: Brookdale	Prerequisite	The noncredit Certified Nursing Assistant (CNA) course is a prerequisite for the nursing program.
Procedures: Passaic	Credit Optional	The Emergency Medical Services (EMS) program can be taken as either noncredit or credit; students must declare their choice before the course begins.
Procedures: Ocean **Middlesex** **Essex** **Morris (in progress)**	Intra-Institutional Articulation	Credits can be granted for completion of certain noncredit coursework and applied toward a generic healthcare associate degree or general associate degree at the college.
Procedures: Union	Intra-Institutional Articulation	Patient Care Technician (PCT) program completers can choose to take a bootcamp course designed as an entry point for the school's Licensed Practical Nursing (LPN) program. An entry-level course is waived for those who enter the LPN program through the bootcamp and have completed the PCT program.
Procedures: Hudson	Prior Learning Assessment Option	Students may choose to fill out a "work–life portfolio" and have it assessed for potential credit.

Procedures: **Middlesex**	Leadership Coordination	Noncredit leadership is invited to academic planning meetings, which are usually reserved for credit-side staff.
Bergen		
Ocean		
Passaic		

As shown in Table 4, many facilitating factors have already been implemented at Consortium schools. Although there is still plenty of progress to be made, Consortium schools have taken some solid steps toward moving the two sides together using procedural and resource-oriented factors. These facilitating factors should serve as promising practices for other schools in the Consortium as well as for schools outside the Consortium looking to bridge noncredit and credit programming.

Although both resources and procedural factors are crucial to developing strong connections between noncredit and credit programming, the Consortium developed several different variations of one specific type of procedural factor – intra-institutional articulation – making it worthy of closer scrutiny. Schools that did this were able to create a direct pathway from noncredit programs to credit-bearing degrees. In the next section, we examine this particularly versatile and effective facilitating factor.

Intra-Institutional Articulation

Articulation creates direct connections for students to move between noncredit and credit programs. Articulation is typically thought of as a formal agreement between two schools in which a student can apply credits earned at one school (for example, a community college) to a degree at another school (for example, a four-year university) without having to repeat courses. Articulation can also occur *within* an institution, however. In other words, certain noncredit programs have direct articulation to certain credit-bearing degree programs at the same school. For example, students who complete a certain noncredit program may be able to move to a specific associate degree-earning pathway at the same college and convert previous noncredit coursework into credits toward that degree program. This involves creating a precise procedure that results in students gaining credit for noncredit work after they have completed their noncredit credentials (and in some cases received national certification) and applied to a specific degree-earning program. Depending on the institution, these agreements can be formal or informal, but across all Consortium schools that offer these transitions, the articulation agreements have specific terms and procedures.

Consortium schools offer three types of noncredit-to-credit articulation procedures: 1) awarding credits for specific completed noncredit courses if the student continues to a credit-bearing program, 2) allowing students the opportunity to "test out" of courses and receive credit when continuing on to a credit-bearing program, and 3) awarding students credit they can apply toward a generic healthcare or general degree within the institution. Table 5 explores each articulation type in detail.

TABLE 5. TYPES OF INTRA-INSTITUTIONAL ARTICULATION ACROSS CONSORTIUM SCHOOLS

College	Articulation Type	Example
Union	Testing opportunity	Students completing the noncredit PCT program can take a bootcamp course and apply for the LPN program. Students who complete the bootcamp can test out of an introductory nursing course.
Brookdale	Credit for specific noncredit courses	Noncredit students who complete medical terminology are given credit for the course and do not have to repeat it when continuing their education on the credit side.
Ocean	General degree	Certified Clinical Medical Assistant (CCMA) students who have passed their national certification can apply a total of 14 credits toward a general associate degree.
Sussex	General degree	Certified Clinical Medical Assistant (CMA) students can petition the school for 30 credits toward an associate in applied sciences degree in health sciences.
Middlesex	General degree	Students in any noncredit health professions program may articulate and apply their completed noncredit programming toward credits for a health sciences (AAS) degree.
Essex	General degree	PCT students are given six credits toward a general science degree program. CNA students are given three credits toward a general science degree program.
Morris	General degree	(in process) Health professions students from all noncredit programs can articulate to a new applied associate degree in health sciences.

As indicated in Table 5, the most common type of articulation among Consortium schools was articulation to a general degree, through which students may apply for credits toward a general associate degree after completion of a noncredit program. There are some drawbacks to this type of articulation. The credits are generally elective credits and may not count toward specific degree requirements. In addition, these are usually associate of applied science degrees, which are considered "career" programs designed to prepare students for employment, whereas associate of arts degree programs are meant to prepare students for transfer to a four-year university. Associate of arts programs generally cover a broader range of topics, general education courses, and theory. As such, degrees of this type are generally considered "terminal," meaning they are difficult to articulate toward an additional degree such as a bachelor's. Despite its terminal nature, however, the general health associate degree is still a

good option that can save time and money even for students who want to continue beyond a noncredit credential. Although in most cases such coursework would not transfer into a bachelor's degree program, it can show an employer that a job candidate committed to – and completed – education beyond a certificate. This particular pathway – earning a credential first and then continuing to an applied science degree – can also help students gain confidence in their ability to succeed at school, which could in turn raise the likelihood that they will persist through their credit-bearing degree program.

Challenges to connecting noncredit and credit-bearing programs

Consortium colleges experienced many challenges while developing transitions for noncredit students into credit-bearing programs. Four primary types of challenges were evident throughout the Consortium relative to building those transitions. The most common challenges schools encountered involved 1) *administrative differences* between the noncredit and credit sides of programming, 2) *organizational differences* between the two sides of programming, 3) *leadership changes*, and 4) *staff/faculty reluctance* within the institution relative to encouraging noncredit-to-credit transitions.

Administrative differences. Administrative differences included different enrollment processes for noncredit and credit students, different requirements relative to the Free Application for Federal Student Aid (FAFSA), and different benefits available to the two groups of students. For example, students applying for credit-side programs might have different application forms and advising procedures compared to noncredit students, who may or may not see a general advisor and follow the same registration processes as students entering the general population of credit-side programming. In addition, noncredit students are not usually required to fill out a FAFSA, since noncredit courses and programs are not eligible for financial aid. Noncredit students are also generally limited in the benefits they have access to at their school. Although it varies by school, some noncredit students may not be given a student ID number, may not have parking benefits, and may not be given access to internet or computer labs and libraries on campus.

When a student is transitioning from noncredit to credit programs, administrative differences can present challenges. For example, a student who has never been through the entire registration process at a college may find it confusing or daunting. They may also not know where to go for help or what department to reach out to. One staff member noted that if a noncredit student "wants to go on [to a credit-bearing program], there is not a lot of support, because they are shifting to an entirely new bureaucracy on the credit side. They are on their own in a totally new world to get into that program." Filling out the FAFSA can be challenging and confusing as well. Some schools lack resources to help students fill out the form, or students may not know help is available or where to go to access it. Finally, noncredit students in schools that do not offer them student IDs, internet or library access, or other campus benefits may not feel they are part of the "campus culture" and may lack confidence when it comes to continuing their education.

Organizational differences. Organizational differences between the two sides of programming can include the two sides having different leadership, separation into completely

separate departments, or differences in how influential faculty are relative to curriculum decisions and how courses or programs articulate.

A school's noncredit- and credit-side programs are often overseen by different leadership. Because of this, each side of programming might have its own discrete set of goals, and communication between leadership on the two sides may or may not exist or be effective. If leadership on both sides is not working in concert, progress in providing transitions between noncredit and credit programming can be slow. For example, if leadership on the noncredit side decides to develop programming that can transition to a specific program on the credit side, but leadership on the credit side does not share the same vision, progress may stall. Several Consortium schools gave examples of this type of challenge having occurred at one time or another.

In other instances, noncredit and credit programming in healthcare may be housed within totally separate departments in different locations on campus. In these cases, instructors, staff, and leadership are all separated, and courses often run in different places on campus, further inhibiting contact between the two sides. There may be little to no interaction between staff, administrators, or even students from the two departments. This can lead to a lack of information-sharing between departments. For example, at one school, we found that staff on the credit side were unaware of certain programs on the noncredit side and could have referred a student to that programming if they had known about it. Staff at other schools also noted that the different departments are generally unaware of events offered by the other and of marketing/outreach activities their own students could attend. It is difficult to make transitions between the two types of programming if faculty and staff (and students) are unaware of the options available. When a new facility for workforce programs became available at Raritan Valley, allied health program administrators made the decision to keep its noncredit- and credit programs housed together rather than separate them. The workforce representative wanted to see the noncredit allied health programs housed with other work-centric programs, but staff at the institution saw the benefit of both noncredit and credit-bearing allied health programs remaining together.

Finally, differing levels of faculty influence between the two sides of programming can affect how easy – or challenging – transitions are. Faculty must agree on course equivalencies for transitions to occur between noncredit and credit courses. If faculty on both sides of programming are positive about transitions and are involved in creating them, it can be easier for transitions to occur. For example, at schools where faculty were involved in creating noncredit curriculum that could easily transfer to the credit side of programming – and agreed on the rigor of the curriculum – transitions were often able to occur easier and faster than they could in schools where faculty on the two sides of programming were not involved or did not see eye to eye. Staff members from one school noted that creating these transitions was more likely to be successful if the noncredit programs were "started from scratch" because they could be created to more closely mirror the credit-side programming. In schools where the noncredit side of programming was housed in the same department as the credit side – and used the same instructors – this could be easier. At one Consortium school, the noncredit healthcare programs were part of the same department as the credit-bearing science courses and involved the same

instructors. This school was making headway in developing noncredit-to-credit transitions because faculty were working on both sides in tandem and often were teaching both the noncredit and credit courses.

Leadership changes. Institutional leadership generally sets the agenda of focus for the school. If leadership is in favor of focusing on transitions from noncredit to credit programming, much headway can be made in a relatively short period of time. At several Consortium schools, turnover in leadership over time had led to an "on again off again" focus on transitions. When leadership focused on efforts to promote an agenda of articulation, transitions were often made easier to attain. At one Consortium school, instead of focusing on transitions, current leadership was focused on "getting people jobs" and encouraged students to hold off on pursing a bachelor's degree in favor of focusing on entering the workforce and continuing their education later. At that institution, transitions to the credit side were not a priority during the grant period as they were incongruent with its current leadership's vision for the school.

Staff/faculty reluctance. Likewise, if faculty or staff at an institution are reluctant to move forward an agenda of streamlining the transitions process, progress can end up being very slow. Faculty at some schools work very hard to maintain an image of being a transfer institution – a place where students can get an associate degree and then continue to a four-year institution for a bachelor's degree. Some faculty are concerned that encouraging transitions that allow students to achieve credit for completion of noncredit work could tarnish that image. Other faculty do not see the value in noncredit programming because it is not always required to secure employment. Some also do not think noncredit curriculum has the same rigor of credit curriculum and therefore are not convinced of its equivalence. Overall, perceptions of noncredit education are slowly changing nationally, which is alleviating many of these barriers to creating transitions between the two. But where perceptual changes have not yet taken place, faculty reluctance can hamper plans to streamline noncredit-to-credit transitions.

Next Steps

Consortium schools are continuing their journey toward creating clear connections between noncredit and credit-bearing coursework. Most schools used the TAACCCT grant period to further conversations and make some concrete plans about how to implement connections. For example, Morris made solid plans during the TAACCCT grant to create a new healthcare degree that would allow articulation from noncredit healthcare programs and award credit for completed noncredit work. Passaic made plans to create "on-ramps" to meta-majors that can be accessed through noncredit programming. College leadership involved in implementing guided pathways reforms at Mercer also reported considering the inclusion of noncredit programming as part of their current process of mapping pathways within the college. Middlesex is considering a shared-space model like the ones developed under the grant at Bergen and Hudson. Staff at Middlesex believe more frequent interaction among students from both programs would lead to more noncredit students pursuing credit-based education. Ocean opened a new building in summer 2018 and has plans to co-locate its noncredit and credit programs there, also citing the shared-space model as an impetus for these plans. Across

the Consortium, the TAACCCT grant brought awareness to the issue of building connections between noncredit and credit programs and has illuminated next steps for individual institutions. Although the process is slow and can be challenging, successful elements in merging the two sides of programming are rewarding for students and colleges alike.

Prior Learning Assessment

Prior Learning Assessment (PLA), also known as Credit for Prior Learning, was one of the key acceleration strategies included in the Round 4 TAACCCT request for proposals. PLA is a mechanism by which academic credits are awarded for skills and knowledge individuals have gained outside the classroom.[5] The Consortium-level staff included PLA as one of the focus areas for the grant and approached it in two ways. The first was by working with colleges to better understand and implement PLA at each institution, and the second was to standardize approaches to PLA across the Consortium. The grant proposal noted that, while the 12 partner colleges all had PLA policies and practices in place prior to the grant period, those policies were uneven, and few students took advantage of the opportunities that existed.

The Consortium worked to create awareness about PLA and improve implementation through information sharing and professional development opportunities. Consortium staff spoke with college staff and leadership about PLA and opportunities to improve its implementation at grant-sponsored meetings and other events, including a presentation at the state's Academic Vice President affinity group.

To create awareness of PLA, improve its implementation, and create some uniform PLA standards across the state, Consortium staff shared information and promoted membership/adoption in two existing PLA networks in the state: the New Jersey Prior Learning Assessment Network (NJ PLAN) and a set of unified PLA standards which were developed for a TAACCCT Round 3 grant lead by Passaic County Community College called the National Resiliency Consortium (NRC). NJ PLAN is a consortium of New Jersey colleges and universities led by Thomas Edison State University who have partnered to provide the opportunity for their students to earn credit toward their degrees through PLA. Several NJ-PREP colleges, including Essex and Ocean, are involved in this network. The NRC used Round 3 TAACCCT resources to develop regional PLA standards. These standards were created through an iterative process

[5] PLA can be assessed in a variety of ways, using tools such as national standardized exams in specified disciplines (e.g., Advanced Placement/AP exams or College Level Examination Program/CLEP tests), institutional challenge exams developed for specific courses, or individualized assessments of portfolios or other materials. Work performed in non-college training programs can also be evaluated. For example, colleges may consider evaluations of corporate or military training, or they may accept work evaluated by national bodies designed to perform such evaluations (e.g., the National College Credit Recommendation Service/NCCRS or the American Council on Education's ACE-CREDIT service).

involving NRC consortium leads, college faculty and staff, and national experts. The goal of the standards is to expand opportunities for students to receive credit for prior learning.[6]

In addition to sharing information about PLA and about these networks, the NJ-PREP Consortium also allowed colleges to use grant funds for professional development related to PLA. At least two colleges took advantage of these opportunities, sending staff to the Annual Council on Adult and Experiential Learning (CAEL) Conference and the Thomas Edison State University National Institute on Assessment of Adult Learning Conference. Finally, the Consortium purchased CAEL memberships for all interested NJ-PREP institutions. In total, 11 of the 12 Consortium colleges took advantage of this TAACCCT-funded opportunity. CAEL membership gives institutions access to information on PLA, professional development opportunities, and discounts on consulting services.

Creating statewide or even institutional change is challenging under a grant like TAACCCT. First, New Jersey has a decentralized community college system, which makes statewide change very challenging. Second, while the Consortium sought to help colleges create institutional change and advance statewide efforts to improve PLA, doing so proved to be a challenge for a variety of reasons. In many cases, grant staff did not have the power within their institution to move such an effort forward. Unless leadership viewed institutional change around PLA as an important priority for the college, it was difficult –in some cases, impossible – for grant staff to create momentum around the idea of participating in a statewide effort or even to make changes to institutional practice and policy. Third, reform efforts were made even more challenging due to leadership changes at many of the Consortium colleges during the course of the grant. Finally, the work on PLA did not begin in earnest until year 2 of the grant with the hiring of the academic director. In the end, two colleges made great strides in PLA policy and practice during the course of the grant – Ocean and Passaic. A few other colleges were able to take smaller steps towards improvement, such as by signing on to the NRC standards.

At some colleges, the grant served as a conversation starter and an opportunity to create change. Policies for PLA existed at all of the Consortium colleges prior to the grant but use of PLA was limited. Staff at Ocean used the grant as an opportunity to think about PLA and how it might help build bridges from noncredit to credit-bearing programming for their students. The college adopted various new policies and practices in PLA and used the grant as an opportunity to educate some of its staff about how PLA works. It is likely that this work will continue at Ocean in years to come. Passaic started its work to improve PLA practice and policy under the Round 3 TAACCCT grant, and continuing this work through Round 4 provided extra time to figure out how to institutionalize and sustain these efforts going forward. Other colleges began having more conversations about PLA on campus. Please see the issue brief on PLA for more information on the changes made by these colleges.

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[6] A September 2017 evaluation report of the NRC's activities, conducted by Equal Measure, is available online at https://www.dvp-praxis.org/wp-content/uploads/2015/05/Northeast-Resiliency-Consortium-Final-Evaluation-Report-October-2017.pdf

CAEL membership provides colleges with the opportunity to continue to learn about PLA and make institutional improvements post-grant. Colleges will be able to take advantage of their CAEL memberships for a few months following the close of the grant and thus can continue to learn about PLA and work toward making improvements. During our final site visits, many colleges did not know how they could use their CAEL membership and what it was for. As a result, information sharing on the value of this membership might be important prior to the close of the grant so that colleges can make use of this opportunity.

Thomas Edison State University Credit Review

To build a consistent pathway from noncredit to credit-bearing programs across the state, the Consortium submitted several noncredit grant programs for credit review by Thomas Edison State University (TESU). The programs were chosen for review because they are offered widely across Consortium colleges. Reviews were completed and credits were assessed for the following courses: Certified Phlebotomy Technician (6 credits), Certified Patient Care Technician (3 credits), Certified EKG Technician (3 credits), Certified Pharmacy Technician (1 credit), Certified Nursing Assistant (2 credits), and Certified Clinical Medical Assistant (7 Credits). As a result of the TESU credit review, TAACCCT students can submit the appropriate documentation with the documented date of successful training completion and receive credits at Thomas Edison State University after payment of a fee[7]. College staff were asked to provide their students with information about the TESU credit opportunity and were encouraged to adopt a policy of accepting TESU credits at their institutions.

Understanding and use of the TESU credits were limited among college staff and students. Many of the faculty and staff we spoke with at Consortium institutions knew very little about the TESU credit review process and how the TESU credits could be used. Some expressed wariness to provide information to their students about the review due to the costs associated with transcripting the credits. As a result, most of the Consortium colleges shared only the most basic information about the TESU credit review with their TAACCCT students, whether individually or through information sessions. If students had any additional questions, they were directed to reach out to TESU for more information.

Additionally, there seemed to be some confusion among TAACCCT staff regarding the mobility of the TESU credits from institution to institution. Some wondered if they only held value at Thomas Edison and wondered whether other institutions would accept the credits. Some staff members suggested that it would be better for their students to use the credits they receive from TESU to continue at another institution, especially if Thomas Edison does not offer Allied Health programs that interest the student. A member of the leadership at one Consortium college also explained that, given the distance between their college and TESU, they did not feel it would make sense for their students to receive credit to continue at TESU. However, given that much of the programming at TESU is primarily offered online, this concern seemed a bit misplaced. However, many respondents felt TESU crediting would be a good opportunity for

[7] The amount of the fee is unclear but varies depending on whether the college is part of NJ PLAN.

their students making the transition from noncredit to credit-bearing courses if other schools would honor the credits. Since colleges clearly had ongoing concerns about the value and portability of the TESU credits, more could likely have been done to educate staff and faculty on this effort and how students can and cannot use the credits.

A small number of students expressed an interest in applying to TESU to receive credits for the noncredit programs they completed at member colleges; however, it was unclear what type of follow-up occurred with those students. As of the end of the grant period, a few students from Ocean received credit from TESU for their work in a Consortium program, as we discuss further below.

Adoption of a policy for accepting TESU credits at the member colleges is a slow process that requires the support and involvement of high-level college administrators. The TESU credit review of the six programs selected by the Consortium was completed in October 2016. Grant staff at many institutions held off on working to integrate the credit review into their processes and procedures until the credit review was complete. Once the reviews were completed, it took some additional time for TAACCCT staff to share the information with all the necessary college administrators; when they did, they often encountered difficulties getting leadership interested that were similar to those they faced when they were attempting PLA reform. By the close of the grant, only Ocean had developed a policy and process around the TESU credit review. The college did a tremendous amount of work on PLA over the course of the grant, and one of the core components of this work was the decision to accept all of the TESU credit reviews. Thus, students completing the reviewed Allied Health programs at Ocean on the noncredit side could apply to TESU for credits that could then be used toward a degree at Ocean. At this point in time, the credits will transfer as elective credits, but in the future, the college may develop a health sciences degree that would incorporate these credits. As of the end of the grant period, Ocean has awarded a total of 64 credits to students.

Technology/Equipment

As previously reported in the interim report, some schools in the Consortium chose to build infrastructure by purchasing supplies for their programs, including a substantial amount of equipment for simulation labs to serve their TAACCCT programs. It was believed that the simulation equipment would better prepare students for the workplace. The rest of the Consortium colleges made purchases to increase the number of labs available for programs, replace outdated equipment, or stock up on consumable supplies.

Though most schools purchased the bulk of the equipment and supplies they needed early in the grant period (in 2016), schools that added programs later or expanded new programs to include multiple sessions were still adding equipment and supplies in 2017–18. For example, Raritan Valley made purchases throughout the course of the grant, but made the bulk of its purchases in 2017–18 for its new Occupational Therapy Assistant program and lab. Brookdale made extensive purchases throughout the grant period for its Massage Therapy program – a new addition under TAACCCT – and purchased equipment for a new lab space for its Patient Care Technician (PCT) program. It also purchased some OB/GYN simulation

equipment costing over $50,000, which "the college would not have had the funds" to purchase without TAACCCT. Mercer purchased new equipment for its Pharmacy Technician, Certified Nursing Assistant (CNA), Phlebotomy, and EKG programs, and they have improved their labs on both campuses. Ocean added a second section to its Dental Assisting and Certified Health Assistant programs late in the grant; adding both programs required a second lab space. A new manikin head, dental assisting chairs, EKG machines, phlebotomy arms, and a hospital bed were some of the additions necessary for these expansions. Sussex purchased 24 manikins for its TAACCCT healthcare programs, as well as some additional supplies. Middlesex also purchased a new EKG machine to replace one that had stopped working. Colleges that had made large expansions, such as Bergen and Hudson, were still adding some supplies late in the grant to build out their extended lab and simulation spaces.

Hudson used grant dollars to renovate classroom space and to add sinks, carts, chairs, manikins, and hospital beds. They also added two EKG machines and three phlebotomy arms for use with the PCT and EKG programs. Laptops and printers were also purchased to use for soft skills workshops. The remodeled classroom and lab space has allowed the school to reinvigorate existing programs and add several new ones. A PCT program has been added, and staff at the school plan to begin offering Dialysis and a new Counseling program. The Dialysis program was planned to begin in 2018. Without lab space and classrooms, the school would not have been able to offer the new programs.

Early in the grant period, Hudson had outsourced instruction for several course offerings. Now, new instructors have been hired, and most instruction is done in-house. Similarly, staff at Passaic purchased equipment and opened a new lab, which has enabled the school to offer a PCT program. Securing a room at Passaic that could be locked and had a sink was a challenge that took some time to accomplish, but the goal was eventually reached, giving the PCT program a permanent room to serve as a lab. The college also rolled out EKG and Phlebotomy as part of the grant and purchased supplies for these courses, including privacy screens, gloves, and disposable red biohazard containers. They planned to order additional consumable supplies before the end of the grant period.

Several colleges, including Passaic, Mercer, and Middlesex, purchased consumable supplies for their programs, such as needles, tubes, biohazard containers, gloves, and other disposable supplies. Ocean used some of its grant funds to build a resource library for its health programs. This will serve as a lending library for students in its TAACCCT programs.

The impact of adding equipment and supplies varied across the Consortium. At others, such as Ocean, the ability to purchase equipment and supplies meant programs could add additional sections, expanding scheduling options. This allowed students to choose the best scheduling option for them and allowed working students to take evening courses. At schools that replaced outdated equipment with current models, students and employers commented on the benefits of that upgrade, noting the value of being trained on the same equipment being used in the workplace. At the schools that added simulation labs, increased program offerings, or did extensive space and program remodeling, positive impacts were observed in regard to the programs' marketability, recruitment efforts, and ability to attract employer partnerships.

BERGEN'S SIMULATION LAB

At Bergen, substantial amounts of equipment and supplies were purchased early in the grant to accommodate a new simulation space and new health professions labs and classrooms. Concurrent to the TAACCCT grant, a new healthcare building opened on campus that combined both credit and noncredit sides of health professions programming and allowed TAACCCT staff to purchase extensive simulation equipment.

Bergen's simulation lab is set up to look like a hospital, and students from multiple programs – such as EMT, Nursing, CNA, and Phlebotomy – interact with one another during simulations much like they would in a real-life situation, creating interdisciplinary collaborative teaching opportunities. The new building includes ten dedicated laboratories with medical simulation equipment, EKG equipment, and computer labs. Several high-tech manikins and recording devices were purchased, as well as a multitude of supplies; Bergen also added lab equipment for Pharmacy Technician students. This simulation lab equipment allows students to participate in lifelike hospital scenarios, record their experiences, and play them back later for critique and learning exercises. The images below show Bergen's simulation lab. All equipment is shared by both credit and noncredit students. Staff at Bergen feel the simulation equipment has improved the quality of their programs, increased enrollment, and added credibility to its noncredit certificate programs – and to the graduates of those programs – that did not exist previously.

Figure 1: Adult Treatment Bay

Figure 2:Nursing Station with Control Room

The purchase and installation of equipment and supplies can reinvigorate a school's programs, allow expansion for new programs and sections, and bring credibility to its noncredit healthcare programs. In addition, updating equipment and remaining current makes programs more marketable to students. Likewise, credibility is increased with employers, who prefer new employees to be trained on the same equipment they would be using on the job. Most Consortium schools did not purchase large amounts of equipment, choosing instead to focus on replacing outdated or inoperable equipment or stocking up on consumable supplies. A few schools were able to remodel or build classroom or lab space, which allowed these schools to add additional programs or sections. Those that added significant amounts of equipment and supplies observed a wide range of impacts on their school's healthcare programs, departments, students – and local employers' attitudes toward them.

Noncredit Student Supports

During the TAACCCT grant period, several supports were developed and deployed to assist students pursuing noncredit certificates in terms of their educational preparedness, career awareness, and job readiness. These supports included the creation and implementation of Smart Start classes, the incorporation of EdReady student assessment and learning modules into TAACCCT programs, and the creation and implementation of networking sessions focused on the needs of program participants. In this section, we detail late implementation efforts and their impacts.[8]

Smart Start

Smart Start, a curriculum incorporating an overview of healthcare programs and careers, was to be incorporated into programming by Consortium schools according to grant specifications. The curriculum preps students for continued education by introducing them to medical terminology and healthcare fundamentals. Most schools integrated Smart Start to some degree into their TAACCCT healthcare programming; only Middlesex chose not to implement the course, citing redundancy with existing curriculum. Table 6 summarizes the total number of classes offered by each college over the grant period.

[8] For early- and mid-grant implementation details, see the following: McKay, H. & Edwards, R. (2018) Prior Learning Assessment Policy and Practice in the New Jersey Health Professions Pathways to Regional Excellence Project (NJ-PREP), Piscataway, NJ: Rutgers, Education and Employment Research Center.

TABLE 6. NUMBER OF SMART START CLASSES OFFERED, BY COLLEGE

College	Number of Classes
Bergen	3
Brookdale	1
Essex	3
Hudson	2
Mercer	10
Middlesex	0
Morris	2
Ocean	1
Passaic	12
Raritan Valley	11
Sussex	3
Union	6
TOTALS	47

Source: NJ-PREP Consortium

Raritan Valley's online version of Smart Start was adopted by several colleges. As of January 2018, multiple schools were using an online version of Smart Start: Raritan Valley, where the curriculum had been developed, along with Brookdale, Passaic, Morris, Middlesex, and Mercer. This version runs for two weeks, with two on-site days at the end when students earn their CPR certification (on-site days are run at the home institution). Raritan Valley plans to continue its Smart Start programming after the grant and to continue to offer it to other colleges as well. A staff member at the college noted the course will likely run less often after the grant period, but no other changes will be made. She noted the course provides a good "general introduction to the [TAACCCT] programming" and is beneficial to Raritan Valley's students. Student reaction has been positive, and staff feel they have taken the course "to a great level" by making minor changes and offering it online.

Passaic has continued to offer Raritan Valley's online version of Smart Start to its students. This has given Passaic a cost-effective way to offer Smart Start, since its original rollout method – which involved paying an instructor to offer it on-site at Passaic – was only serving three to four students each time it ran. Passaic staff reported the online programming has been beneficial to students, who appreciate the introduction to healthcare programs. Although Passaic staff is not planning to offer an in-person version again, they are planning to continue to enroll students in the Raritan Valley online version for as long as it is offered.

Some colleges offered this program but discontinued due to low interest. For example, at Morris, program staff offered Raritan Valley's online version of Smart Start, but recruiting students was challenging, and those who did enroll found it difficult to stay disciplined enough to finish the course through the online format. They ended up offering an in-house version and discontinued the use of the online Smart Start.

Several colleges planned to discontinue offering Smart Start. Bergen, which had implemented Smart Start prior to the TAACCCT grant, was one of the few colleges planning to continue to offer it beyond the grant period. Overall, however, grant management noted that most schools were preparing to phase out Smart Start toward the end of the grant period and were not planning on continuing its use. Brookdale used Smart Start only for a short time and then discontinued it. According to grant staff, finding classroom space to offer the course was challenging, and student interest was low. They briefly offered students the online version taught by Raritan Valley, but they discontinued this as well due to low student interest. A staff member at Brookdale commented that the college was "never a good market for Smart Start." Union offered Smart Start at one point during the grant period but discontinued its use by the third year. It was offered as a separate course to help students decide if healthcare was really what they wanted to pursue as a career. Although students who took the course reported positive feedback, the course was not as popular as program staff had hoped it would be. Union staff felt they needed to focus on employment services and on offering courses and programs that students could earn certificates through rather than on offering Smart Start. They did not offer the online version because many Union students did not have internet service at home and noncredit students at Union do not have access to its computer labs. Most of the Consortium schools integrated Smart Start content into its curriculum at least to some extent and generally reported student feedback on that material was positive.

Ocean offered Smart Start early in the grant period but had difficulty garnering student interest in the course. Students who took the course were already enrolled in healthcare programming and took it to receive an additional certificate (CPR). Most of the students were enrolled in the Medical Office Specialist program and did not necessarily plan to enter the clinical side of healthcare. Taking the course allowed them to become familiar with the clinical side of the industry, to talk to instructors about careers, and to gain some clinical practice. Though a staff member at Ocean noted that several students entered the clinical side of healthcare programming after taking Smart Start, the program was discontinued because of low student interest. The observed decrease in enrollment was most likely due to the loss of Ocean's student coordinator who initially had helped steer students into the course. In addition, limited staff were available to teach the course, as some faculty members had such heavy loads that they could not take on additional teaching responsibilities.

Another strategy was to integrate Smart Start into existing programming. At Essex, instead of students receiving Smart Start through separate instruction or class time, the material was simply integrated into the program's existing curriculum. Math and English preparation was always a component of the Consortium's healthcare programs, but to satisfy the Smart Start requirement, program staff and instructors incorporated medical math and medical terminology into those courses as well. The impact of Smart Start at Essex is difficult to judge

since modifications were minor and the curriculum was fully integrated. However, the integration of Smart Start material with students' regular coursework seemed to be beneficial to those pursuing healthcare programming.

Some colleges saw value in using Smart Start to prepare students in credit-bearing programs. Hudson's nursing program, not part of TAACCCT programming, adopted Smart Start to prep incoming students. The program was suffering from attrition, and nursing staff discovered students found its math-related elements particularly challenging. To address this issue, Smart Start better prepared students slated to enter nursing by increasing their math and medical terminology skills. Staff on the credit side of Mercer were also considering offering Smart Start to credit-seeking students. Similar to staff at Hudson, Mercer's staff were discussing using the curriculum as a prep course for students entering credit-bearing programming. Mercer's TAACCCT staff reported that the course was no longer going to be offered on the noncredit side after the grant period had ended and was currently being phased out. The course had suffered from high attrition, although staff were unsure why. There were some conversations at the school to instead align Smart Start with the credit side after the grant period ended, for use as a bridge to help students transition from noncredit to credit-bearing programming.

EdReady

EdReady, an online math- and English-readiness software program developed by the National Repository of Online Courses (NROC), is intended to address the skill needs of adult workers helping at-risk students overcome basic math and English deficiencies. The Consortium used a version of EdReady designed to teach healthcare-related math and English skills. Colleges implemented EdReady in a range of ways to help students build basic skills.

Several colleges sought to integrate EdReady into Smart Start. Raritan Valley incorporated EdReady into its Smart Start curriculum. The college already has a system for evaluating incoming students and a software system that works similarly to EdReady. The addition of EdReady was done for the grant only, and college staff do not expect it to continue beyond the grant period. Morris attempted to integrate EdReady into its Smart Start course but had issues with software glitches and work-around that allowed students to increase their scores without learning the material. There were also challenges from math faculty who were critical of the programs' use of the software. Due to these challenges, Morris discontinued using EdReady. Sussex also embedded EdReady into its Smart Start curriculum but plans to stop using that material once the grant period ends. Staff at Sussex felt that for the limited amount EdReady is used at the school, free online resources would adequately meet the needs of their students. For example, students who are anxious about taking the Accuplacer test are already being referred to online Accuplacer tutoring and practice tests. EdReady was generally not used for these purposes.

For the schools who use the online version of Smart Start, EdReady was embedded into their programming. Staff at Raritan Valley, however, reported that some students were reluctant to use it or felt they didn't need it. Raritan Valley was not planning to continue using

EdReady after the grant period; staff and faculty felt it did not add sufficient value beyond the Accuplacer and was unnecessary. It was unclear if Passaic and Mercer would continue to offer EdReady for Smart Start after Raritan Valley discontinues the software.

At Brookdale, EdReady was very popular outside of the TAAACCCT programs. The school's developmental education staff and Science, Technology, Engineering, and Math (STEM) department staff have been investigating ways to fund keeping the software after the grant period ends. The software was not used for TAACCCT programming because staff found it didn't fit well into existing programming.

The use of EdReady in most colleges was concentrated among small numbers of students. Table 7 shows the number of student accounts at each of the Consortium colleges. Most colleges had moderate numbers of students with student accounts, ranging from 20 up to over 200, most likely from the TAACCCT programs. A few colleges had very high numbers of students with accounts, such as Hudson and Ocean, reflecting broader usage of EdReady within the college beyond the TAACCCT programs.

TABLE 7: EDREADY USE AMONG STUDENTS, RANKED BY COLLEGE

College	Cumulative Student Accounts
Raritan	20
Morris	31
Sussex	34
Union	66
Middlesex	87
Essex	111
Bergen	222
Brookdale	231
Passaic	558
Mercer	750
Ocean	1479
Hudson	9419
TOTALS	13,008

Networking Sessions

The 12 Consortium schools were tasked with the implementation of networking sessions – short curricula that gave students an opportunity to learn, discuss, and network around a given topic. All Consortium schools except for Middlesex began running networking sessions early in the grant period. Middlesex did not integrate formal networking sessions because it already offered one type of networking – employer–student networking – as part of its curriculum. Most schools were offering networking sessions in a similar format – a combination of presentation, small-group activities or breakouts, and discussion. Employers were involved in networking sessions at many of the schools. At Raritan Valley, employers were not involved, but staff collaborated with the workforce and employment services departments at the school,

and networking sessions were open to all Raritan Valley students, not just TAACCCT students. Table 8 summarizes the total number of networking sessions offered by each college over the grant period.

TABLE 8. NUMBER OF NETWORKING SESSIONS OFFERED DURING THE GRANT PERIOD, BY COLLEGE

College	Number of Sessions
Bergen	8
Brookdale	39
Essex	4
Hudson	6
Mercer	11
Middlesex	9
Morris	6
Ocean	10
Passaic	19
Raritan Valley	34
Sussex	6
Union	13
TOTALS	165

Source: NJ-PREP Consortium

Most schools shared networking sessions; the most frequently offered sessions were employment-related. Popular topics included résumé writing, interview skills, and how to "dress for success." A few schools created more unique networking sessions. For example, Morris held a "speed networking" session during which students were able to rotate among several employers and learn about different careers in 10-minute sessions. At Passaic, the Board of Health, History and Services visited students to discuss Health Care and the Future. Sussex offered a session titled Soft Skills for High-Pressure Jobs for its EMT and Paramedic students, as well as sessions on scholarship opportunities and prior learning assessment for CMAs. Staff at Ocean added topics to their list of networking sessions based on feedback from instructors, staff, and employers. For example, sessions were created to educate students about how to conduct successful job searches and where to find relevant job postings. At Union, networking sessions offered study skills and information about EdReady.

As of January 2018, most schools were still running at least one networking session per month. Morris, however, had run its last session in November 2017. Most schools reported networking sessions were well received by students and were helpful to them. Employers had also signaled positive experiences with the sessions. One employer said students at the networking session they attended were better prepared and more mature than expected.

Some schools had difficulty attracting students to the sessions and had to work to find creative ways to promote them. At Mercer, a placement counselor was tasked with informing students of future sessions. Passaic offered boxed lunches to students who attended, which helped "entice" students.

At most schools, networking sessions will likely be discontinued after the grant has ended. At most Consortium schools, the staff members who taught networking sessions were employed using grant funds and would not have a position after the grant period. Mercer averted this issue by duplicating the networking-session format and incorporating that structure into the information sessions they already offered each semester. Going forward, prospective students will participate in breakout sessions where they will speak with employers and session leaders. Raritan Valley planned to continue offering networking sessions through other (non-TAACCCT) departments after the grant period ended and to keep the sessions free to students. Several of the colleges wanted to keep offering networking sessions but did not have funding to do so. TAACCCT staff at Hudson, for example, wanted to hire a full-time staff member to run frequent networking sessions but lacked the required funding.

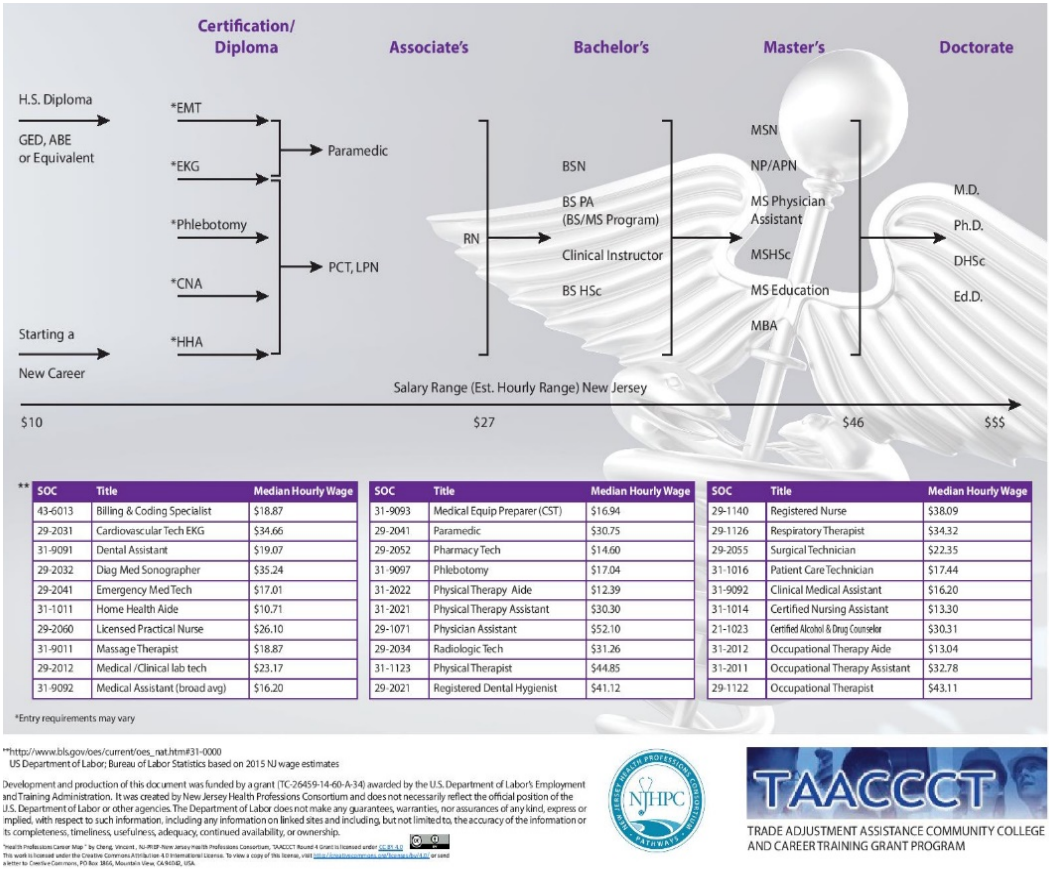
Job Developers

In this chapter we examine two key ways the NJ-PREP Consortium sought to improve career mobility for its students: by developing a more formally structured healthcare-career pathways model and by implementing the job developer role, a college-based position meant to build bridges to employers that foster student placements. First, we describe the structure of NJ-PREP's pathways, which were designed to provide students with roadmaps for future career advancement following completion of their current programs. Next, we discuss the implementation of the job developer role and identify factors that facilitated or hindered job developers' progress in supporting students' transitions to employment.

NJ-PREP Pathways: Supporting Career Advancement

Clear, well-designed career pathways are viewed throughout the NJ-PREP Consortium as critical tools for job mobility. Career pathways were central to the design of NJ-PREP, which sought both to standardize entry-level career training and to offer increased student supports. The NJ-PREP project articulated a vision of healthcare career pathways with programs that were aligned, were connected, and featured multiple entry and exit points. The clearest presentation of these pathways was a two-part flyer and poster designed by the Consortium and displayed at all Consortium schools (see Figures 1 and 2). One page described pathways starting from high school diploma/equivalent or a complete career change through the RN (associate-level nursing) and beyond, with accompanying wage information. This guide also included the median hourly wage for 30 health professions based on 2015 wage estimates for New Jersey from the U.S. Department of Labor, Bureau of Statistics.

Figure 1. This flyer detailing NJ-PREP healthcare career pathways was displayed at each Consortium school. This page focused on nursing-based pathways and included sample wage progressions.



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SOC	Title	Median Hourly Wage
43-6013	Billing & Coding Specialist	$18.87
29-2031	Cardiovascular Tech EKG	$34.66
31-9091	Dental Assistant	$19.07
29-2032	Diag Med Sonographer	$35.24
29-2041	Emergency Med Tech	$17.01
31-1011	Home Health Aide	$10.71
29-2060	Licensed Practical Nurse	$26.10
31-9011	Massage Therapist	$18.87
29-2012	Medical /Clinical lab tech	$23.17
31-9092	Medical Assistant (broad avg)	$16.20

SOC	Title	Median Hourly Wage
31-9093	Medical Equip Preparer (CST)	$16.94
29-2041	Paramedic	$30.75
29-2052	Pharmacy Tech	$14.60
31-9097	Phlebotomy	$17.04
31-2022	Physical Therapy Aide	$12.39
31-2021	Physical Therapy Assistant	$30.30
29-1071	Physician Assistant	$52.10
29-2034	Radiologic Tech	$31.26
31-1123	Physical Therapist	$44.85
29-2021	Registered Dental Hygienist	$41.12

SOC	Title	Median Hourly Wage
29-1140	Registered Nurse	$38.09
29-1126	Respiratory Therapist	$34.32
29-2055	Surgical Technician	$22.35
31-1016	Patient Care Technician	$17.44
31-9092	Clinical Medical Assistant	$16.20
31-1014	Certified Nursing Assistant	$13.30
21-1023	Certified Alcohol & Drug Counselor	$30.31
31-2012	Occupational Therapy Aide	$13.04
31-2011	Occupational Therapy Assistant	$32.78
29-1122	Occupational Therapist	$43.11

*Entry requirements may vary

**http://www.bls.gov/oes/current/oes_nat.htm#31-0000
US Department of Labor; Bureau of Labor Statistics based on 2015 NJ wage estimates

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TAACCCT
TRADE ADJUSTMENT ASSISTANCE COMMUNITY COLLEGE AND CAREER TRAINING GRANT PROGRAM

The second page of the flyer details several other healthcare pathways, progressing on both nursing and non-nursing trajectories (e.g., Paramedic, Radiology, Physical Therapy, Dental Hygiene). Both pages include information on the levels of higher education that accompany these jobs, from certificates to terminal degrees, demonstrating a range of possibilities for students and a lifetime of career options for those interested in progressing in the healthcare industry over the long term.

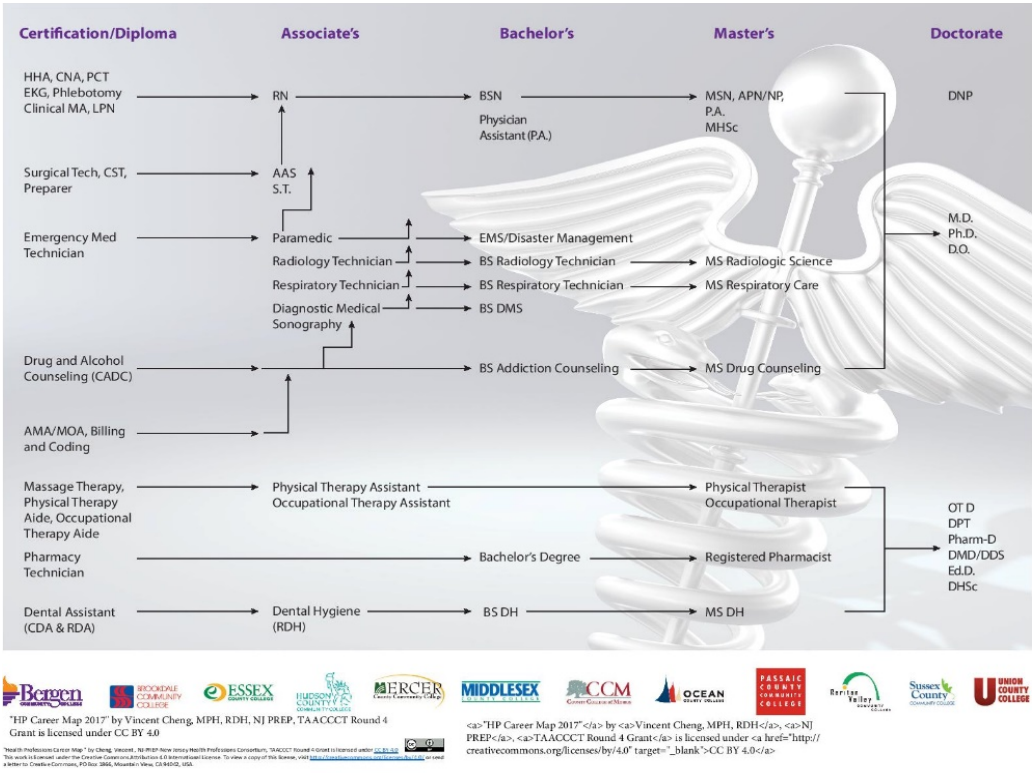
Taken together, these visuals demonstrate pathways that are sequential, ideally stackable, and often have multiple options for 'next steps' (e.g., the EMT program, which can advance to five separate associate programs and six separate bachelor's programs), giving students realistic future steps to aspire to and reasonable alternatives should they change their interests. A job developer discussed the value of the charts as part of a discussion with students:

> I think here we talk a lot about your career paths and what you can do. A chart on the door that lays it out. We talk about throughout the whole process – 'If this isn't where you want to be in ten years, this is [still] a good place to start.'

Another job developer noted the value of this visual for students coming in for advising: "I think they look at the big picture. When they come, they can be unsure of where to go. This [chart] gives them an idea of what they could do."

It is important to note that these pathways are aspirational for the students, and the Consortium has further work to do to ensure that they are realistic for most students. While they lay out a clear vision of how 58 in-demand healthcare jobs in New Jersey may be related, and how any of the 19 certificate-level occupations offered across the Consortium can move students further along the road to healthcare jobs with increasing pay and responsibilities, further work needs to be done to smooth the educational components of the pathways to mitigate credit loss. First, the expansion of clear noncredit-to-credit articulation within Consortium schools can ensure that certificates and associate programs are fully stackable. Second, schools can expand their connections with four-year colleges to ensure that credits earned at the community college are applied efficiently toward bachelor's degrees.

Figure 2. Page 2 of a flyer detailing NJ-PREP healthcare career pathways that was displayed at each Consortium school. This page provided students with many clear and detailed pathways in both nursing and non-nursing fields.



Consortium members were generally enthusiastic about the pathways. As one grant director noted,

> There's a chance plenty of people can continue down their career pathway and have fulfilling careers... When we work with students and talk about career pathways, it's not one-size-fits-all; you can envision and stop wherever you want. But lots of students are excited about it, and it helps them plan for the future in a different way. Some students talk like it's a checklist and say: "If I know the steps, I could get to a career pathway I would never have considered."

Job Developers: Bridging education and employment

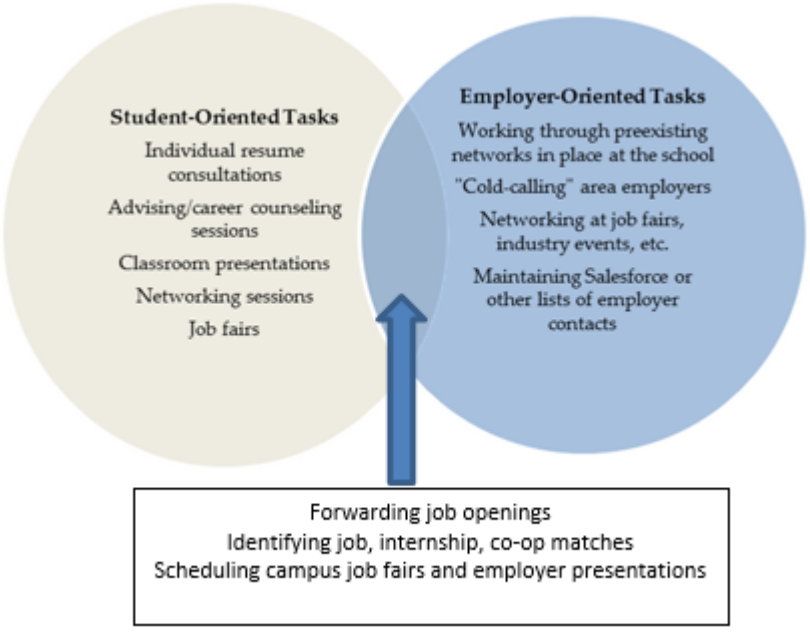
As noted in the interim report, the Consortium implemented the job developer position at all schools in order to ensure that the students enrolled in grant-related programs would both be able to enter jobs upon completion and be well prepared to succeed in those jobs. Job developers served as bridges between the Consortium and local employers and were critical to most schools' employer-engagement work. Though faculty and staff were also important to building and maintaining positive relationships with employers, the job developer position was the only role with the sole purpose of linking students and employers. One college leader noted that the addition of a job developer helped schools overcome a common challenge: Colleges' tendency to focus on the education and the training of students but lose sight of the importance of placing them in jobs. Pondering the effect of the job developers on placements, one instructor

said, "I would say maybe a fifth [of students] were employed prior to the grant. Now I would say three quarters. It's a tremendous difference." Another college leader noted the importance of job developers for student recruitment, stating:

> We are in a competitive environment, and when we interview our students, they should know there is help and support for employment opportunities. Workforce requires an answer to job placement assistance. The grant allows us to answer: "Yes." Many students will choose a place for their education where they get an education and support. Many students are unemployed, and it is important they can pay for their kids and pay their bills. The fast-track training program and employment are crucial to their educational success and personal well-being and survival.

Job developers handle a range of duties that include both student-oriented and employer-oriented tasks, which are summarized in Figure #3 (for further information on these tasks, see the interim report). While the job developer role at every Consortium college included a combination of both student- and employer-oriented tasks, some schools favored a more student-oriented job developer and others favored a more employer-oriented one. Most colleges fell somewhere in between. The level of employer engagement also varied. Job developers typically made contacts by networking, word of mouth, and going into the field for cold calls. Some job developers simply forwarded job listings to students, and student résumés to employers. Some, such as the job developer at Morris, put together pools of candidates for employers that were pre-screened to give a selective cross section of students representing a variety of skills and experiences. In this section, we focus on the employer-facing elements of the job developer role (for further discussion of the student-facing elements, see previous section on noncredit student supports).

Figure 3. Diagram of student- and employer-oriented tasks in job development showing that some tasks "overlap" the two groups: They benefit both students and employers.



Job developers worked to build relationships with area employers, but tenure could be a challenge. As a relatively new classification of employees at these schools, it took some time for the role of job developer to be worked out in many schools and for the job developers themselves to learn the roles and responsibilities. Further, there were delays in getting some job developer positions filled. As noted in the interim report, nearly all of the schools had turnover in the position; Hudson, Mercer, Raritan Valley, and Sussex faced especially difficult challenges filling it or keeping it filled due to turnover or hiring delays. In programs that went significant amounts of time without a job developer (or eliminated the position early, as was the case in Sussex), site coordinators often covered the bulk of the job developer's tasks in addition to their own.

The start-up phase of newly hired job developers could be an adjustment. Some job developers had come from a more general career advising or similar background, so it took time for them to learn the specifics of healthcare and become connected with area employers. One college leader noted that she was still going to hospitals and area employers personally because her college's job developer was not yet fully aware of the intricacies of healthcare, though the job developer had learned a lot about the professions.

As job developers were able to mature in their roles, some reported great success in cultivating relationships. One in particular estimated they were working with roughly 100 employers, having started from 2 or 3 hospitals and expanded into clinical sites and a broader range of placements. That job developer also noted that hospitals and other employers had started to initiate contact with the college based on word of mouth. They were able to place multiple students at many sites as these relationships blossomed, which can usually take a lot of time. Several job developers noted the importance of developing a trusting relationship with employers so they will "take your calls." One developer mused that key to this trust is the quality of the product they offer: students trained in the skills employers need. After that, she felt it was an "easy sell."

Job developers who had stronger relationships with employers spoke with them often about their needs and how the college could meet them. Bergen added PCT credentialing to the CNA program based on employer feedback, for example, and their job developer would later credit that decision with opening doors to placing students in hospitals. Noted one respondent, "[When employers] have staffing needs, they come to us and discuss. We make decisions whether we can make a training program for it." As the job developer at the same school noted, "I've talked to employers about the local market. Future industry. They have the same agenda I do: to fill their jobs."

The Consortium worked to bring job developers together. The Consortium hosted a number of meetings for all NJ-PREP job developers to facilitate workshopping (e.g., learning how to use Salesforce for tracking, sharing best practices) and networking opportunities. These meetings were generally well-received and encouraged the exchange of ideas, which is a good way to break down silos that keep the schools separated and to help job developers discover new approaches to this newly added campus role. Reflecting on the meetings, one grant manager noted it was "really great to have that opportunity to validate each other's experience. I think they just need to be included; it would have been even better if they were meeting earlier in the grant."

Job developers were sometimes able to advocate for better jobs. In their role bringing students and employers together, job developers had a bird's-eye view of employer hiring practices and job qualities and were sometimes able to see why some employers did not succeed in filling jobs. Since many employers are constantly seeking new talent, and job developers have access to that talent, job developers are in a good position to offer some advocacy for students in the market. However, one job developer described frank conversations with employers about what made their jobs unattractive to candidates. She sized up employers and avoided recommending students to employers she did not trust or deem professional; essentially, she did not want students working in bad situations or having their own professionalism compromised. She noted,

> If there's a shady employer that is cutting corners . . . bad financial practices, lack of insurance, or history of filing insurance cases – certain practices, doing insurance fraud – I don't want students to get comprised. When I hear things like that, it disturbs me with the ethics. I try to guide students away. Professionalism and integrity are key…. Sometimes it's a difference in wage. Sometimes it has do to with assignment.

Why didn't more job developers push harder for students? This is in part due to pushback they often received from employers, as well as a sense that there were hard ceilings for some positions. Some described the difficulty of the industry – with insurance and Medicare/ Medicaid reimbursement rates, there were limits to what employers could pay and still turn a profit. As one job developer described,

> The price point is 9 to11 dollars an hour for CHHA [Certified Home Health Aides]. [Employers have] said "I need to make money, too; I'd have to shut my doors." Agencies now have to be licensed and undergo a financial audit every year, and it will cost them near $25,000 to meet all these requirements by the state. I foresee a market change, there may be an uptick in salary for employees – but not in the immediate future. People are locked in at that 9 to 11.

It is also likely difficult to push back with employers when there is no established relationship; job developers were working to expand their portfolios of employers and may have been reticent to sacrifice contacts. This issue can be alleviated with longer job tenure and further work to establish meaningful connections with employers.

Despite promises,* few *schools will sustain job developer positions. The sustainability outlook for job developers varied by college, for a variety of reasons (see Table 9). Multiple colleges described looking for new grant funding to sustain staffing, and they were often particularly excited for the opportunity to continue the collaboration with the Consortium; however, without further funding awards, the job developer role will be unsustainable in several schools. Informants from several schools noted that their programs were not revenue-producing, and this lack of revenue affected their staffing outlooks. Some of these respondents spoke of reallocating some job developer functions to existing college staff (e.g., adding career advising for noncredit students to the credit programs' career advising roster). Job developer sustainability issues were particularly prevalent in colleges experiencing broader financial challenges or those in which administrators were less enthusiastic about the NJ-PREP program; broadly speaking, more financially stable schools with greater NJ-PREP support from administrators often planned to assume the responsibility of funding these positions. When asked about the ways TAACCCT benefitted Essex, for example, one leader at the school cited the job developer as the biggest benefit. Further elaborating, she noted, "Employers need someone whose focus is employers. Employers know that they're getting someone of quality." At Essex, the job developer was selling the benefits of the training programs to employers, building relationships, tracking student placements, and helping to ensure that students were prepared with good résumés and interviewing skills. The experience was so positive that the college added a second job developer. Ocean and Bergen also had plans to institutionalize these positions and add personnel.

TABLE 9. SUSTAINABILITY OUTLOOK FOR TAACCCT JOB DEVELOPERS, BY COLLEGE

College	Status of job developer position after grant
Bergen	Adopted into general budget.
Brookdale	Periodically renewed. Will continue on that basis.
Essex	Staff member will stay on to teach courses and workshops.
Hudson	Salaries distributed into other grants.
Mercer	Will continue, but most likely not at the same level. Depends on funding.
Middlesex	Will continue to offer services, but it is unclear how the services will be offered.
Morris	Eliminated; tasks moved to student support coordinator.
Ocean	Adopted into general budget; plans to expand to all of Continuing Education.
Passaic	Will be bringing on a new job developer.
Raritan Valley	Eliminated; viewed as redundant to services already in place.
Sussex	Eliminated (Year 3).
Union	Will be eliminated.

Source: NJ PREP Evaluation Site Visits

One program director noted that having a job developer and student-geared counseling services was beneficial, but the benefit was simply not sufficient to outweigh costs. One dean was concerned that removing the job developer position would be detrimental and noted that as job developers were moved to college-budget support, they would have to take on broader caseloads without any additional staffing assistance. "The healthcare students probably won't get enough individual attention or focused attention. It will be [a service provided to] students across the board."

Some interview respondents had begun to think about alternative sources of funding for these staffing issues. For one program director, that meant seeking additional grant funds:

> The dean has an understanding of what the grant is, and she relays it at the cabinet level, but we have not been asked anything further about the TAACCCT grant. The understanding is that we will sustain the stuff from the grant, so I am focused on applying for more grants to continue the services we offer.

At another school, a high-level college administrator mused on the possibility of engaging local employers to help fund the extended services:

> In terms of reaching out to those who are employed or unemployed, sustaining becomes difficult when there is no grant support because of the cost. The fees would be prohibitive unless we had support from hospitals that need employees. We've had cycles of a few grants being used and we

> market them as best we can and have focused efforts. Perhaps [employers] will be willing to invest to get the employees they need.

Another strategy to reallocate some of the work of the job developer was found at Ocean, where the assistant director of healthcare programs was working to engage local employers in the effort:

> All of our programs – except for the Community Health Worker – were in place prior, and more responsibilities were really on the instructors. So I'm looking to hire a coordinator or consultant to do résumé writing and the things that are needed to do that. I would have to increase tuition, but I would look to sustain changes made through the TAACCCT grant because it's clear they've improved the success of the students. I'm looking at other opportunities in place of an increase on tuition. . . . I'm already investigating possibilities and asking the community to come in and for experts in the field to give workshops from their perspectives. I asked someone from RWJ [Robert Wood Johnson University Hospital] to come in or an office manager to come in and share.

These strategies are interesting work-arounds for schools that are no longer able to fund the job developer position. However, because work-arounds return schools to the position of having no single person in charge of building bridges between healthcare students and local healthcare employers, they are no substitution for a strong job developer.

Employer and Workforce System Engagement

Employer Connections

In this section we investigate how the NJ-PREP Consortium worked with local employers to build and support career pathways. We describe how pathways depend on partnerships between the institutions of education and employment, and we discuss the goals employers and colleges have for these relationships. We organize our findings around both the perspectives of the employers and the perspectives of the colleges on these collaborations. We, demonstrate the similarities of goals but also note how the relationship is experienced differently from each position.

Supporting pathways: The importance of employer engagement

As pathways consist of a continuing cycle of education and paid employment, buy-in from both educators and employers is critical to pathways success, and all involved must understand the mechanics of each of the specific pathways. Employers must value the training offered by schools and their associated credentials, and they also must reward students with higher pay and higher-level responsibilities as they acquire certificates and degrees. Educators must see the pathways model as a benefit to the student population capable of leading to meaningful career improvement that is in line with their organizational mission. Achieving these goals together can be particularly difficult because employers and educators are operating in two different institutional contexts, each with different objectives. It is important, however, to recognize that the two sets of objectives are not necessarily at odds, even if the overlap is not always immediately obvious. Understanding one another's goals and finding key points of connection is critical.

Employer perspectives on collaboration

To assess employers' experiences working with Consortium colleges and their opinions of the TAACCCT program pathways, the EERC team conducted a series of interviews and brief qualitative surveys with employers in the fall of 2017. Healthcare employers have an organizational objective to secure employees who have both the technical acumen and soft skills needed to succeed in a healthcare environment. This is a major motivating factor for creating alliances with local colleges, and it led many to participate in TAACCCT programs when opportunities to do so were presented. In our interviews with local employers associated with grant-related programs, we found several common themes about what employers wanted from Consortium schools. These themes are instructive for schools seeking to build relationships with industry. Employers want more engagement with schools, more students prepared for job searches, more graduates, and more programs overall.

Some employers wanted more engagement with the schools. Although the relationships that employers had with schools varied, many employers were quite satisfied with the Consortium colleges in general. However, several wanted more involvement, even if they were already enthusiastic about the schools and programs. For example, some employers mentioned that they would be willing to serve on advisory boards. Creating advisory boards may be one way to further engage employers with these programs. This will help them to stay involved and aware of the programs, increase their familiarity with program curriculum, and inform them about what they can expect from program graduates as employees. Several employers referenced having experienced previous success with advisory boards at other institutions and stated that involvement of this type helps both employers and schools. One employer stated,

> I think we're growing our relationship with our local community college, but I think there should be more of a collaborative . . . having our companies come and talk to the students, or having the students come, and meeting the staff and knowing, again, what it is we do on a day-to-day basis, so it takes the guess work out of what their responsibilities are going to be in the next step.

Another employer stated,

> I would love to be involved with every community college that has a nursing program in the state. That would be my goal. . . . More would be great because we do cover the whole state – we can employ anybody in the state – and I would like to have a global relationship with the community colleges because we can provide that career path and hiring potential to all new grads that most people cannot. And we could literally hire every new graduate.

Fostering these forms of engagement may aid in long-term sustainability for the programs, securing buy-in and support from employers and enabling the programs to become go-to sources for new employees.

In addition to seeking formal engagement opportunities with program faculty and staff, such as through participation on advisory boards, some employers expressed a desire for more tools related to hiring program graduates. Some asked for job fairs, indicating that either schools could put job fairs in place or better advertise existing events. (It is important to note that most job developers and site coordinators reported hosting job fairs or employer meet-and-

greets during the grant period. Employers were generally short on time, but they made time for these events.) While speaking about a college that already hosts job fairs, one employer said,

> Whenever they do a job fair, we're usually there. I have spoken to the Student Nurses Associations. We also will, I mean, wherever anyone reaches out to us we will come in and speak, but the job fairs are pretty much our biggest mechanism.

One employer suggested a quarterly newsletter, or something similar, that could outline planned or currently running programs, when to expect graduates from those programs to be ready for employment, how long before the next cohort entered training, etc. This was seen as a useful tool for planning their own hiring pushes. A newsletter tied to advisory board meetings and distributed throughout job coordinators' networks could be a useful tool for employers as they plan their staffing strategies.

Employers pointed to the general need for more job preparation. Although the tone was generally positive about students and their levels of job readiness, some employers thought schools could do a better job at helping students prepare for the job market, both in terms of making them aware of job opportunities and in terms of coaching them on how to comport themselves in their interactions with employers. For example, an employer of EMTs noted that schools were not producing students who were aware of all EMT-related employment opportunities and options:

> I honestly think that the EMTs out there that are going to these schools don't know the other side of EMS. All that they know is that as an EMT you work for a volunteer organization. They don't know of the opportunities of working at a private ambulance company.

Another employer mentioned encountering issues with students not being prepared for interviews:

> I find myself doing a lot of interviews where students or candidates, shall I say, don't necessarily know what to say and what not to say during interviews. . . . I feel like when it gets down to somebody speaking and conversing, I feel like a lot of times they don't really know what to say.

This theme of graduates appearing unprofessional was repeated by multiple employers. One employer noted their biggest challenge was finding candidates who understood how critical punctuality was, a job skill that could be emphasized through the Consortium's soft-skills-oriented networking sessions. Soft skills (beyond punctuality) are especially important in the healthcare industry. One employer said, "I could get somebody with a doctorate or a master's degree, but if they have a sour demeanor about them, unfortunately, that's not going to provide the patient care and compassion that we're going to want."

Since employers were talking in general terms about the market, these comments are not necessarily related to Consortium college graduates specifically, but they do speak to the importance of the work currently handled by job developers across the TAACCCT programs. NJ-PREP incorporated lessons on these topics into the networking sessions for students, which covered topics such as interview and conversation skills, and professional practices such as punctuality, emphasizing how these factors can impact their employment prospects.

Employers were pleased with Consortium graduates and sought more. In a very good sign for the grant-related programs, employers were happy with graduates of Consortium schools. Some employers wished there were a higher volume of graduates in the fields they needed. The need for EMTs was mentioned frequently, but CNAs were the clear focus of this frustration. One employer mentioned that they felt the college in their area was not taking enough initiative to fill CNA classes. Another employer discussed their disappointment with a local college's decision to cancel a CNA program and wished the school had more concrete plans to reintroduce it. Still another employer noted that their local community college had recently run a CNA class that started out with 10 students, but the employer ultimately received only 2 graduates because 8 students dropped the program.

This is another area where keeping employers apprised of program plans and progress via advisory boards and newsletters may be useful; employers want to know, in concrete terms, when to expect program expansions and cancellations. They were frustrated when they were told that highly valued programs would be coming back "in the future" without clear indications of when or even whether that would happen. If employers were to serve on advisory boards, they could make the case for expansion when needed. One employer even stated an interest in sponsoring classes at their local community college.

It must also be noted, however, that employer and college interests are not always well aligned for some direct care jobs. Schools are often discouraged from offering further programming in low wage direct care work such as CNAs, CHHAs, and Home Health Aides due to low wages offered these jobs command in their local areas, as was mentioned in some interviews. For example, if schools were to flood the market with new CNAs, this may only further depress wages, which would make the expense of time and money related to completing a CNA program unreasonably burdensome in the face of such little reward. Here, communication between schools and employers may help alleviate frustrations, and schools may be in a good position to push for better wages for these jobs.

Some employers want community colleges to offer more vocational training for adults since there are relatively few alternative programs serving these needs. One employer said, "I think the community college is one of the best places to create programs for individuals who are …who need vocational training." Some additional programs that were suggested included dietary and food services; environmental services and housekeeping; and security. Notably, dietary and food services came up in several interviews and appears to be an unmet need in the area. One employer stated, "Now, these are entry-level positions, but gosh, if someone could have just the vocation training of how to cook, serve food, those kind of things, that's huge." This was another good sign for the Consortium's programs; employers see value in this approach and would like to expand it to address other skill needs in their organizations.

College perspectives on collaboration

Fundamentally, colleges are driven to engage with employers because they want good jobs with solid wages and advancement opportunities for their students and graduates, preferably in support of lifelong learning. In addition to asking employers what they wanted from colleges, we asked representatives of Consortium colleges what they wanted from employers, and in what key ways they have attempted to engage employers at their schools. For employers seeking to build relationships with community colleges, these findings are instructive.

Colleges want employers to support their healthcare programs through time – and resource – commitments. There are a variety of points of entry for employers seeking to develop working relationships with colleges. Three key areas that emerged involved employer advisory boards, hands-on learning, and donation of equipment. Just as employers desired, many programs had employer advisory boards, but they found their meetings were often constrained by time. Based on employers' feedback, advisory boards seemed to be an underutilized resource. This is an area where colleges can expand their activities to more meaningfully incorporate local employers, solicit advice, and create opportunities for the programs themselves to build relationships with area employers. Schools also need hosts for their practicums and internships or apprenticeships. Employers can connect with these programs as a way to meet potential new employees and see them in action. Finally, even though schools recently received an influx of equipment through the TAACCCT grant, they may need help maintaining and replacing this equipment in the future. Additionally, it should be noted that high-volume disposable items [e.g. gloves, masks] are often welcome items.

Colleges hope to serve employers' incumbent workers in the future. One area in which employers and colleges can expand their engagement is in the supply of students. Specifically, employers can provide funding for students to take college programs, and/or they could promise incumbent workers college training for increasingly-higher-level positions (a "grow-your-own" strategy). One college leader described the NJ-PREP program as structurally similar to other initiatives at their school, with one big exception:

> The idea of training incumbent workers is something more new. I think that was a new concept for them [employers] and for us. More new for them. That [idea of] training their own to fill their vacancies, rather than going to the outside. It was something they hadn't really thought of much before. I think they like it; from what I hear. I think they think it's a good idea. And this makes sense: Take people who already understand the environment and move them up in the organization.

In aiming to support incumbent-worker training, colleges are furthering their pursuit of career pathways: workers are seen as having the potential to improve their skill sets through formal education. This education enables workers to move forward into jobs that feature increasing pay and increasing responsibilities. While colleges can help students enter at the beginning of these career pathways, they can also help incumbent workers who are further along the path.

This goal of training incumbent workers is a logical extension of recruitment and will represent a strong step toward sustainability if college–employer partners are successful in translating the concept into a reality. At this point, the goal remains more ideal than realized. However, if colleges are able to continue building and strengthening relationships with local employers – including engaging employers more meaningfully and communicating with them more strongly – this is a realistic goal.

Workforce System Connections

The Consortium sought to build and improve upon relationships between colleges and their local One-Stops. Through the previous HPOG grant, the agencies had actively worked together, but the nature of their working relationship changed under TAACCCT. The lack of financial support for the workforce system through TAACCCT was a challenge to both building collaboration and maintaining it.[9] Rather than funding the One-Stops, the TAACCCT grant included a plan for the Consortium to contract with North Jersey Partners, a network of workforce system professionals in the Northern part of the state, to help build connections with the workforce system. The goal for North Jersey Partners under TAACCCT was to take on a significant role in coordinating the Workforce Investment Boards (WIBs), One-Stops, and community colleges to forge closer relationships and promote region-wide long-range planning.

Activities to promote collaboration with the workforce system were significantly delayed, limiting their scope. A formal agreement between the Consortium and North Jersey Partners was delayed by about two years occurring late in the grant period[10]. Given this delay, the Consortium adapted its strategy to focus on a problem and an immediate need that would compel the colleges and the workforce system to work together: collecting employment outcomes data on TAACCCT participants.

The Consortium and North Jersey Partners convened one high-level statewide meeting at the outset of their work but then focused most activity at the local level. North Jersey Partners' leadership and their lead consultant on this project, a former WIB director with local, on-the-ground knowledge of college and workforce collaborations, facilitated a discussion at the statewide meeting. The meeting brought college and workforce partners together to discuss broad issues of collaboration across the organizations. Representatives from local areas were seated together to promote interactions throughout the meeting. Through a survey distributed to meeting participants, respondents from both systems reported that they hoped greater connections between their organizations would provide students with a better range of services. Also, many reported that they supported stronger attempts to collect data by placing more requirements on program participants to report on their employment after completing a credential; the idea of sharing data across organizations was also supported.

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[9] We reported on this shift across grants, as well as the existing college-workforce-system relationship, in the interim report.

[10] They delay in the agreement occurred due to issues with North Jersey Partner's organizational status that had to be resolved before an agreement could be established.

Following the meeting, the North Jersey Partners consultant conducted local site visits to each county to bring together college and One-Stop staff. These discussions focused on two ways to collaborate – accessing participant employment information from the workforce system data sets and promoting a network of job developers. All job developers and business services representatives were encouraged to attend these meetings. The biggest challenge with this strategy was finding a time for the meeting that worked for everyone.

The local meetings between colleges and the workforce system focused on collecting data on participant employment status. As with many other TAACCCT grantees nationwide, the Consortium had concerns that they were not capturing employment information for all their participants. Therefore, the North Jersey Partners consultant was assigned to address this issue in partnership with colleges and their local workforce boards. Further, authorized personnel at the One-Stops were tasked with searching for TAACCCT completers in their statewide data system (called LOOPS) and providing data to the colleges and the Consortium.

Several of the colleges found additional employment information on participants through searches in the workforce system database. One college reported that the LOOPS data system was able to confirm the employment of 10 of the 35 participants for whom they did not have employment information. Staff at another college found 120 participants working who had not previously been counted as employed. Unfortunately, since LOOPS does not record earnings information, its data did not fully complete the Consortium's final reporting requirements. However, the additional LOOPS data did help college staff focus their follow-up efforts on participants who are not employed.

Because social security numbers (SSNs) are required to look up information in LOOPS, data security was a concern. Two colleges had concerns about sharing that information about their students. As a work-around, these two colleges developed an information-sharing system that did not depend on hard-copy records: A staff person from each college went to their local One-Stop office and verbally shared each SSN with a LOOPS operator, took extensive notes on each returned search, and brought the list of participant SSNs back to campus at the end of each session.

Other colleges reported that working together on this data-sharing effort helped them develop a better understanding of the services provided by their workforce-system partner. This served the broader goal of forging relationships among each organizations' staff and promoting the sharing of information – about, for example, programs offered by the colleges, services offered by the workforce system, and information about labor market needs. (The workforce system has access to employer data and projections that can be helpful to the colleges.) According to a workforce leader, "What it boils down to is how well they like each other, want to work with each other, [and] believe there will be a successful outcome from working together."

Another goal of local meetings between colleges and the workforce centers was to promote a county-based job-development network so that all involved could develop new relationships, identify and share best practices, and create a non-competitive business outreach

network. This approach is difficult, however, as it requires job development staff to overcome long-standing concerns about poaching employers.

In addition to arranging the meetings between the colleges and the workforce system, the North Jersey Partners consultant sought to create a customized job board using state data. This strategy was intended to allow college staff to view open positions in healthcare occupations from public job boards and to generate reports by county. This list of job openings was shared with the site coordinators at each Consortium college. The county-by-county job board was intended to help job developers pull job postings that may have been previously overlooked. However, given the delay encountered by North Jersey Partners before it could begin its work, this information was not available to job developers until the last year of the grant.

The level of the existing relationship between the colleges and the workforce system influenced the degree to which they engaged with the consultant in efforts to promote relationship building. In some cases, the colleges and the workforce system had traditionally held close relationships and enjoyed ongoing communication. In other cases, the data-sharing meeting arranged by the consultant was the first contact colleges had with workforce system representatives. For some, that initial meeting sparked working relationships that formed the foundation for ongoing collaborations. Local areas with high volumes of activity, however, had a harder time building relationships around their TAACCCT efforts.

Some colleges had contrasting ideas of what the local meetings' objectives were – some believed the meetings offered a platform for asking for help, others saw a platform for exchanging information. Colleges that felt they already had strong relationships with their One-Stops tended to be less enthusiastic about attending these meetings and saw less value for their institution than others might have. [11]

Data Tracking

The Consortium selected Salesforce to be a long term, Consortium-wide data management system for tracking TAACCCT students. For the first year and a half of the grant period, Consortium leadership conducted a search for a data system to meet Consortium needs and the worked to design the system so it could be used to meet the student-tracking needs of each Consortium school. Once the system was set up with TAACCCT-specific fields for collecting student information, rollout of the system began.

The rollout consisted of Consortium-wide webinars, phone conferences, and in-person training. For a year or so, many of the colleges required additional assistance with system management and data entry; this was especially true following staff turnover. Consortium leaders made several supplementary trips to the colleges and created a User Reference Manual

[11] For more detail on the range of relationships between the colleges and the workforce system, see Van Noy, M., McKay, H., and Javed, S. (2018) Community College–Workforce System Relationships: New Jersey Health Professions Pathways to Regional Excellence Project (NJ-PREP)", Rutgers University, Education and Employment Research Center.

to ensure that staff understood the system and that data entry was consistent across the Consortium.

Because Salesforce did not roll out until over a year after the start of the grant, college staff were faced with a considerable backlog of data that needed to be entered into the system. A college staff member said she felt inputting data into Salesforce was straightforward but that time constraints limited how much data entry could be accomplished. Other staff members from Consortium colleges also felt time was the greatest constraint on data entry. Several mentioned that hiring a part time employee responsible for data entry would have helped them overcome the backlog. This also may have resolved some of the issues the colleges had with inconsistent data entry as well.

Integration of Salesforce into the college's grant activities varied by each staff member's level of comfort using the technology. By the final year of the grant, all Consortium colleges were using Salesforce to collect and track information on their TAACCCT students. Brookdale, Bergen and other colleges also sought to use the system to keep track of follow-ups they conducted with their TAACCCT students 30, 60, and 90 days after their completion of a grant-related program. Consortium college staff raised occasional concerns about how the system captures various information, including employment outcomes, but aside from these concerns, college staff found Salesforce to be a useful system for storing, reporting, and tracking student information.

In addition to serving as a comprehensive database, the Salesforce system also included a job-matching feature many colleges used to serve their students. This function automatically distributed job opportunities and employer information to students based on which jobs the system matched with the student's skills. The resulting list of job openings was shared with students via email. An additional Salesforce function allowed staff to post announcements that could be shared with just one class or with all the students in the database. Staff from Bergen, Brookdale, Essex, and Mercer mentioned using these Salesforce functions in their work with TAACCCT students, but not all staff felt that Salesforce was effective in this area. One college staff member said he did not use Salesforce's job-matching function because he had already developed a system for keeping track of employers and job opportunities that he was comfortable with; he chose to communicate with students by directly emailing them rather than by posting announcements on Salesforce.

The Salesforce system allows users to run queries and generate reports. Like the job-matching function, staff members from a few of the colleges found the query/report functions to be valuable, but not all college staff used these features in their work. Staff from Mercer ran queries on student employment information as a way to track students and employers with whom they needed to follow up. A staff member from Essex explained that reports generated in Salesforce were especially helpful because they could identify places where student information was missing, which made correcting data gaps easier.

Each college had a different plan for using the Salesforce system following the conclusion of the grant. Each Consortium school was awarded 10 perpetual licenses for the use of the Salesforce database. Some colleges currently have no plans in place for using Salesforce in

the future, while other colleges plan to expand its use of the system to all continuing education programs. Bergen, Brookdale and Raritan have expanded its use into their Continuing Education departments. One site coordinator reported that she is interested in continuing to use the system but is not sure Salesforce will remain at the college if using it is viewed as an extra task. Staff from Essex plan to use Salesforce but only for TAACCCT programs. Brookdale has expanded the use of Salesforce to the college's continuing education programs in occupational areas with reporting requirements. To maintain a system like this, staff at Brookdale felt it would be helpful to appoint an administrator to manage the program and to ensure consistent data entry across the college. Similarly, an administrator from Passaic noted that the college is looking for a system to track all of the college's continuing education students and feels that Salesforce would be a good fit.

Open Educational Resources (OER)

Most schools reported some use of OER – either by contributing their own materials to SkillsCommons or by using materials from their own grant-activity repository. As of February 2018, 8 of the 12 schools in the Consortium contributed OER to the SkillsCommons repository. These resources included networking-session information, course curricula, and other materials developed using TAACCCT funds. Schools also contributed other grant materials to the repository. Passaic County College uploaded its intake process, and other schools uploaded flyers, brochures, and marketing materials. Those schools that did not contribute or use any OER materials mentioned taking time to browse the materials available in the repository and noted the value of having access to such a collection of materials.

Colleges most commonly contributed networking-session and curriculum materials. Of the 8 schools that contributed to the repository, 4 uploaded curricula for courses developed during the grant period and 6 uploaded networking-session information. Uploaded curricula include: EKG, Phlebotomy, and PCT courses developed by Hudson; an Occupational Therapy Assistant program developed by Raritan Valley; a Surgical Technician program developed by Sussex; and a Massage Therapy program developed by Brookdale. Although these schools uploaded course curricula to SkillsCommons, the repository was most commonly used to share networking-session information, flyers, brochures, and other grant materials. The Sussex site coordinator reported that although Sussex had obtained its Medical Coding and Pharmacy Technician curricula from Ocean during the grant period, the school had purchased these course curricula; they had not been obtained through the OER repository.

In addition to being asked to contribute OERs to SkillsCommons, members of the Consortium were encouraged to use materials from the repository in their own grant activity. Of the 12 schools, 6 reported browsing the repository and using available OER, either directly in their grant activity or indirectly by using repository resources as inspiration for the creation of their own materials. For example, Sussex reported using an OER PowerPoint presentation on high-stress healthcare jobs and Ocean pulled the job pathways chart from the repository a few times over the course of the grant.

A report of the materials downloaded from the NJ-PREP TAACCCT grant area of SkillsCommons shows that the majority of materials downloaded were student support materials such as networking-sessions; these were downloaded over 2,000 times. Some of the most popular networking-sessions from the repository included Humor in Healthcare, Résumé Writing Workshop 101, and Study Skills for Health Professions Students. The second-most-popular category of materials downloaded from SkillsCommons related to grant management; these were downloaded over 800 times.

While most colleges used OER materials, others did not find them to be useful resources. One college staff member explained that using SkillsCommons OER materials was not popular among instructors at their college. The content of OER materials did not synchronize well with that of the materials and assessments already being used at the college; instructors found that this inconsistency led to student confusion. Though this school did not use any OER materials in its grant work, this staff member noted that the SkillsCommons repository was a good reference tool that could be useful in the future if any courses were to be created from scratch.

Professional Development

Another grant goal was to provide TAACCCT faculty and staff with professional development opportunities. For the first two years, Consortium leadership provided professional development activities that focused on clarifying grant goals and training staff on the implementation of Smart Start, EdReady, and Salesforce. The Salesforce software training included webinars, conference calls, and one-on-one trainings. Several college staff members found the Salesforce webinars to be particularly useful.

In March of 2017, the Consortium arranged for participating staff to attend an EdReady conference in California hosted by NROC. The conference helped to generate interest among staff, who felt it enhanced their understanding of the system and its uses. After the conference, one site coordinator reported feeling especially enthusiastic about the benefits of EdReady and its uses.

Toward the end of the grant period, Consortium leadership initiated a Mental Health First Aid (MHFA) training program. Consortium leaders arranged for TAACCCT staff to receive certified MHFA instructor training. Staff that received this training felt it enabled them to better serve their students. A few of the colleges felt their students would also benefit from MHFA training and incorporated it into the curriculum of their TAACCCT courses.

College staff valued job-developer professional development and would have liked more of these opportunities. In December 2016, the Consortium organized the first of several monthly job-developer meetings that brought together the Consortium's job developers and site coordinators. These meetings were valuable opportunities for developers to network and collaborate with other Consortium partners. Early meetings focused on Salesforce training. Subsequent meetings served as opportunities for job developers and site coordinators to share their experiences with one another. Staff shared what they felt were their best practices and helped others troubleshoot challenges. A director at one college noted the value of giving job developers across the Consortium this opportunity to validate each other's experiences.

TAACCCT staff felt these monthly meetings were an important professional development opportunity but believed it would have been better if the meetings had started earlier in the grant period.

College staff would have liked more professional development opportunities geared toward job development. Staff from some of the colleges voiced a desire for professional development that focused on helping them better understand the workforce system, as well as on reaching out to adult learners. One job developer reported it would have been helpful to have more career development opportunities available; more opportunities to learn how to mentor students would have been especially useful.

Grant staff at many of the colleges sought out additional professional development opportunities on top of those promoted by the Consortium. Staff from several of the colleges attended Rutgers University's Community Health Worker conference in the fall of 2017. The Council for Adult and Experiential Learning (CAEL) also hosted a conference in 2017 that staff from Ocean participated in. Staff from Ocean also went to a NJ Plan meeting at Thomas Edison State University and a symposium on adult experiential learning in Atlantic City. In addition to conferences and symposiums, staff took advantage of webinars offered by CAEL, the NROC Project, and the U.S. Department of Labor, as well as a variety of professional development programs and workshops. For example, a staff member from Passaic attended a workshop on violence prevention and another on ADA compliance.

Sustainability

In terms of activities undertaken during the grant period, sustainability can be considered at two levels: the Consortium level and the individual college level. At the Consortium level, there are no current plans to maintain the official relationships and program elements developed during the TAACCCT grant and the previous HPOG grant. Grant leadership was hoping to keep the Consortium together and even approached the NJ Council on Community Colleges with a plan to expand the Consortium to other New Jersey institutions. Currently, however, there is no funding in place to maintain the Consortium. It is hoped that the group may be brought back together in the future if funding is secured, and members of the leadership team are actively searching for opportunities.

Sustainability of grant activities has largely been focused at the individual college level. Across Consortium schools, there were different levels of planning for the continuance of various grant components. Some colleges have made commitments to the continued funding of specific aspects of their institution's TAACCCT programming. Others were still working to determine concrete sustainability plans at the time this report was written, and still others had made the difficult decision to conclude programs or program features.

The individual nature of sustainability strategies resulted in wide variation across schools. However, some general trends arose. Nearly all schools in the Consortium chose to discontinue use of noncredit supports such as EdReady and Smart Start. While a few schools focused efforts on maintaining certain staff personnel after the grant period ended, most focused on maintaining certain grant roles, such as program staff roles or elements of the job

developer role. In terms of funding the programs and courses developed or redesigned under the grant, Consortium schools were pursuing several different strategies: 1) increasing tuition or student fees, 2) soliciting support from employers, 3) moving programs and programmatic elements to different departments within the school or sharing program elements/space with other programs, and 4) searching for additional external funding sources such as grant funds. Each of these topics will be discussed below.

Staff and Staff Roles

A specific concern for most Consortium schools post-TAACCCT was maintaining certain roles that commenced under the grant. A few schools were eliminating roles entirely or decreasing them from full-time to part-time positions, but others attempted to parse out the most important elements of each role and reassign those duties to existing institutional staff. Administrators at most Consortium schools noted there would be negative effects on students if some staff roles were not continued. A staff member at one college expressed concern about the dual loss of the school's job developer and site coordinator:

> Yes, the infrastructure is there, but who will do it? We have classes, the teachers, but who will take care of contracts, interviewing, etc.? . . . We've added a lot. You take those two [roles] away, and those jobs will be empty. I have over 200 sections to manage. And every day there's a new issue with the instructors. They need subs, and we need to process a lot of paperwork. Imagine that by 200-plus.

At some schools, one role that was found to be particularly beneficial to students was the job developer's role. Job developers worked with students directly to write résumés, prepare for job interviews, and search for jobs. The job developer role, discussed in more detail previously in this report, was considered by some grant staff as necessary and irreplaceable. As the grant period waned, some schools attempted to find a way to secure funding for their job developers, reduce the position to part time, or continue the most vital elements of the role by assigning those duties to other staff. Instructors in some programs were beginning to incorporate elements of the job developer's role into their classrooms, such as by having students create their résumés as a class assignment or by adding mock interviews as a classroom activity.

Another highly important element of the job developer role was outreach and relationship-building with employers. Job developers have been instrumental in securing internship and externship sites, informing employers about job-ready students, and partnering with employers to attend career fairs and other events. At most colleges, this element of the job developer's role was more challenging to fill with existing staff than student-oriented roles. While instructors and other staff could take on student-centric duties, it was more difficult to assign employer-related duties as a part-time role, especially because many staff already had a full plate. One job developer who operated on a part-time basis throughout the grant period noted the position should be filled by not just one, but two full-time staff members. None of the Consortium schools had this luxury, however; most were diligently working just to secure a "home" for the more crucial parts of the role.

At Bergen, the job developer was never fully funded by the grant; the college paid a portion of her salary. Because of this, Bergen planned to continue her role part time after the grant ended; absorbing the extra cost was not as big of a financial burden on the school as it could have been. An administrator from Bergen noted that whenever possible, the college pays a portion of its grant-personnel salaries in order to make the transition to a permanent position easier after the grant ends. (In most cases, Bergen increases its portion of the covered salary over time, so by the time a given grant sunsets, the college is already paying all or nearly all of the salary. This helps justify continuing vital positions after grant completion.)

Some schools did not see the job developers as imperative and thus did not feel the position needed to be sustained after the grant period. This view was expressed only by schools that already had established student services departments or student job counselors prior to the grant period. In most cases, instructors at these institutions simply planned to refer students who, under the grant, they would refer to the job developer to other student services staff and advisors after the grant sunsets. It should be noted that because Consortium institutions varied in size and student population, some schools had a large, highly developed advising/career services infrastructure, while others lacked substantial student support. Thus, job developers filled a need that existed on some campuses but did not exist on others.

Pathways Development

In terms of sustaining programs and courses developed or redesigned under the grant, many schools were working, as the grant period wound down, to gain administrative approval for continuing the programs. Several interviewees stressed the importance of administration approval, noting that a key aspect of continuing grant programs is convincing administrators and employers of the viability and necessity of program continuance. One key strategy mentioned by interviewees was to align core elements of the program with the college's strategic plan and other goals.

TAACCCT staff at most Consortium schools opted to pay instructors with grant funds, making sustainability more difficult; how to continue paying instructor costs after grant funding has ended becomes a major concern. Most New Jersey community colleges suffer from low levels of state and federal funding, and they lack the funds to sustain previously grant-funded programs without additional funding sources. Many schools suffer from low enrollments as well, further exacerbating funding issues.

At most Consortium schools, the programs offered during the grant pre-dated TAACCCT; programs were either restructured or enhanced using grant dollars. In many cases, these programs were offered to a subset of the student population for free during the TAACCCT grant period. At Middlesex, TAACCCT programs and open enrollment programs were taught parallel to each other. In other words, if select students could not afford a specific program, they were referred to TAACCCT and were offered the option to take the same program on the noncredit side. After the grant period ends, open enrollment courses will continue to run at Middlesex, but the TAACCCT-funded noncredit programs will be

discontinued; as a result, the population of students who were served under TAACCCT – those without the ability to pay tuition and fees – will no longer be served.

During the grant period, some schools developed the capacity to offer certain programs that they did not previously offer, and they planned to continue offering these programs after the grant. For example, Brookdale developed a new Massage Therapy program and revised the Pharmacy Technician program; both programs are expected to continue. Other schools, like Mercer and Passaic, added equipment to labs and revised programs during the grant period; they plan to continue to offer these programs, though without the support of TAACCCT for instructor costs. Other schools envisioned they would be able to maintain some of their TAACCCT programs but would have to drop others. Schools with low enrollment or low interest in one or more programs during the grant period were planning to discontinue less popular programs in order to pour more resources – such as marketing and outreach – into more popular programs. In most cases, institutions were less likely to drop consistently full programs.

How to fund and maintain courses and programs that would be retained after the grant period was a primary source of conversation and planning throughout the final year of the grant. Ultimately, Consortium schools varied in their approaches, but four emerged as the primary strategies Consortium schools were planning to utilize to maintain their TAACCCT programming post-grant:

Tuition or fee increases. Some schools have considered generating income through tuition or fee increases to replace grant funds. However, because many students at Consortium schools tended to come from low socioeconomic brackets, additional cost burdens can be prohibitive. In many cases, interviewees stated that without free tuition, most of their students would not be able to attend their programs. One staff member predicted that the CNA program at his institution will have trouble running after the grant period ends because students will no longer be able to afford it:

> [The] problem is, if you're interested in getting [CNA] training, you don't have $2,200 dollars. Right now the TAACCCT grant pays it, but as soon as TAACCCT goes away, the folks we're appealing the program to, they're not going to have the money. We need some source of funding.

Employer funding or tuition reimbursement. Staff at some schools indicated they were looking to employers to help support program costs. Several indicated they were working with employers in their area to begin or expand tuition-reimbursement programs. Still other schools intended to continue on-site training programs for employers as well as specific externship opportunities that were developed during the grant. Alternately, some employers offer a pay increase as a specific incentive for program completion. The advantage of employer-driven programs is that they do not place any additional cost on schools or students. Maintaining relationships with employers is an important aspect of program continuance for many Consortium colleges. Schools are implementing several strategies – such as classroom visits, employer guest lectures, tours/visits to employer worksites, mock interviews with employers, and employer résumé review – to build stronger relationships with employers. The more

employers feel involved with the programs and students, the more likely they will be to support those programs and students.

Shared programs and equipment/supplies. Some colleges were combining key elements of their TAACCCT programs with other programs to distribute costs between departments and budgets. CPR classes, labs, and simulations were being shared and combined with multiple courses/groups of students. Some schools were also sharing equipment, supplies, and space across programs to lower equipment costs.

External funding. Most Consortium schools were hoping for additional grant funding to help them continue to offer their TAACCCT programs. Many of the programs served under TAACCCT were previously funded by an HPOG grant. At least one school, Passaic, was previously funded with a Round 3 TAACCCT grant. When asked about sustainability early in the grant period, most interviewees responded that additional grant money was needed. By the end of the grant period, some schools, such as Middlesex, had secured small grants to help with student tuition costs, but most had not.

Technology/Equipment

As is discussed in the hands-on learning section of this report, Consortium schools added equipment and/or supplies to programs to fulfill the technology portion of grant goals. All Consortium schools purchased either equipment or consumable supplies during the grant. Most staff members were less concerned with the sustainability of supplies and equipment than they were with the sustainability of other grant elements. Because extensive equipment purchases were associated with new or expanded programs, and because enrollments tended to be high in those programs, staff felt those programs – and thus the equipment – would be sustainable. This belief stemmed from confidence in the programs' would have a chance at continued profitability. In addition, equipment and its maintenance were often shared across programs, which distributed costs and thus furthered the case for sustainability. Staff also noted that the type of equipment purchased during the grant period does not need to be replaced often because it is not so high-tech as to become obsolete quickly. (Several staff members said it was likely that manikins, simulation equipment, lab equipment, hospital beds, etc., would not need to be replaced for at least ten years.) Some staff noted they had been using equipment for fifteen years or longer that was still considered relevant.

Student Supports

Student supports implemented during the grant period included the use of EdReady, Smart Start, and networking sessions. A few schools kept either Smart Start or EdReady after the grant period but moved these supports to serve the school's general population (rather than only the noncredit population). In a couple of schools, EdReady has been repurposed to serve the general population for TABE or Accuplacer test prep. However, since these types of supports are costly, most Consortium schools are not continuing their use in service of TAACCCT programs.

Employer/Workforce Engagement

In most, if not all, cases, expanding employer and workforce engagement was a role primarily undertaken by the job developer, although many faculty and instructors had existing relationships with local employers as well. At nearly all Consortium schools, employer and workforce engagement activities occurred prior to the TAACCCT grant, but having a dedicated job developer helped nearly all schools increase this engagement. Job developers maintained existing employer relationships and fostered new relationships with others. In the case of Middlesex, several new employers began offering externship sites, visiting classrooms, and inviting students for jobsite tours. Passaic, Ocean, Bergen, and Hudson also developed new employer relationships during the grant period because of their expanded program offerings and new equipment. Most staff noted that these relationships were extremely important to their college and its programs, and they were finding ways to sustain these relationships. In most cases, existing staff planned to assume responsibility for employer engagement after the grant period ends.

Workforce relationships were also expanded during the grant. For most schools, this was more challenging than expanding employer relationships. Workforce staff were often very busy with a high volume of caseloads and did not spend a lot of time getting to know the various programs. Some workforce offices had high staff turnover, so job developers could not always work with the same person or people.

Some colleges intend to maintain workforce relationships by having additional staff fill the role. At Brookdale, the job developer had been a shared staff member with the local One-Stop, partially funded by the TAACCCT grant and partially funded by the workforce system. After the grant, the workforce system funds will continue, and the college intends to continue the position using college funds.

PARTICIPANT OUTCOMES

In this section we discuss the number of participants served by the Consortium. We discuss the number of participants enrolled in the TAACCCT programs and their demographic characteristics, as well as the outcomes of these participants in terms of completion of their program of study, employment, and pursuit of additional education. This discussion is based on data from Salesforce, the Consortium's tracking system, and is supplemented by other data sources including the state's wage records and the National Student Clearinghouse. The analysis to follow provides an overall picture of the scope of the Consortium's service throughout the life of the grant.

Methods

Student Tracking System Data. Consortium leadership developed a student tracking system using Salesforce database management software and implemented this system at each of the partner sites (the implementation of Salesforce was discussed in more detail earlier in this report). The data we use for our analysis of student characteristics were pulled from the Salesforce database and from the administrative records of students enrolled in TAACCCT programs. The data extract for this report was from July 2018. Given that the Consortium has been working to continually update and refine data on participants and their outcomes, the data included in this report may differ slightly from data reported by the Consortium in its reporting. The Consortium colleges conducted extensive data cleaning and verification processes to arrive at this data extract. This current data reflects the most up-to-date data available collected by the Consortium about the colleges' participants and their outcomes. Appendix D provides information on patterns of missing data in Salesforce.

Unemployment Insurance Wage data. Data on the employment and earnings of NJ-PREP participants and comparison group members came from the Unemployment Insurance (UI) wage record data system maintained by the Heldrich Center for Workforce Development through its Workforce Data Quality Initiative. At the outset of the project, the Heldrich Center obtained permission from the NJ Department of Labor and Workforce Development (NJLWD) to use UI wage record data for this evaluation. Nearly all employers in the state report the wages of their employees on a quarterly basis to the NJLWD when they pay their UI payroll taxes. UI wage records include the following information for individuals who are employed in the state: the social security number (SSN) of the employee, the quarterly earnings paid, the number of weeks worked during the quarter, the individual's employer, and the industry of employment. New Jersey UI wage records contain more than 4 million records per quarter.

In addition to indicating which students were employed in New Jersey during a particular calendar quarter and their individual earnings for that period, these data also allow us to determine whether each student has remained continuously employed from quarter to quarter, either at the same employer or at multiple employers within the same industry. For the evaluation, we linked student records data from the NJ-PREP tracking system with wage records data using the SSNs.

National Student Clearinghouse data. The college obtained data on students' enrollment at other higher education institutions around the country from the National Student Clearinghouse data. We used these data to determine how many students continued their education after TAACCCT.

The data were analyzed using established analysis software and techniques. Quantitative data were managed and analyzed using Excel and Stata quantitative analysis software. To examine the differences in the data sources on employment, we conducted a comparison of the UI-reported versus the self-reported employment data in Appendix E.

Participant Characteristics

The Consortium exceeded its total outcome goals for enrollments. From the start of the grant in October 2014 to its end in March 2018, the Consortium far exceeded its US DOL-approved enrollment target of 2,045 participants, which was included as part of the grant proposal (see Table 3 earlier in the report). In the end, the Consortium enrolled a total of 3,516 participants in TAACCCT programs. Clearly some programs offered by some Consortium colleges had wide appeal that attracted many participants.

Enrollments varied by college. A few colleges enrolled a relatively small number of participants – each accounting for 5 percent of enrollments, or under 200 participants. Other colleges accounted for much higher numbers of participants – each enrolling over 10 percent, or over 350, participants. Table 8 summarizes student enrollment numbers by college.

TABLE 8: STUDENT ENROLLMENT BY CONSORTIUM COLLEGE AS A PERCENT OF TOTAL TAACCCT ENROLLMENT

College	Enrollment Number	% of Total Enrollments
Bergen	362	10.2
Brookdale	253	7.1
Essex	334	9.4
Hudson	186	5.3
Mercer	407	11.5
Middlesex	343	9.7
Morris	156	4.4
NJ HCTN	36	1.0
Ocean	440	12.4
Passaic	378	10.7
Raritan	168	4.7
Sussex	279	7.9
Union	200	5.7
Total	3542	100

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

The majority of participants were female, minority, and older than average. Over 85 percent of participants were female, and over 60 percent were from underrepresented minority groups. The average age of participants was 36, much higher than the typical average age of community college students (about 27 years). Such a large proportion of women is common for frontline-care work, an area of work that is historically dominated by women and highly represented by minorities. Most participants reported they were not married (71%), and very few reported a disability (1%). Nearly 54 percent of participants reported they were incumbent workers, who reported an average wage of $12.57 per hour. Table 9 summarizes the overall demographic characteristics of participants in Consortium programs.

TABLE 9: DEMOGRAPHIC CHARACTERISTICS OF STUDENTS SERVED BY TAACCCT GRANT

Demographic Characteristics	N	% of Total Students
Gender: Female	3020	85.4
Gender: Male	516	14.6
Ethnicity: American Indian	8	0.2
Ethnicity: Asian	320	9.2
Ethnicity: Black/African American	955	27.5
Ethnicity: Hawaiian/Pacific Islander	11	0.3
Ethnicity: Hispanic/Latino	724	20.8
Ethnicity: More than One Race/Other	136	3.9
Ethnicity: White	1325	38.1
Age: Average Age (years)	36.44	
Marital Status: Married	985	28.5
Marital Status: Not Married	2470	71.5
Veteran Status	39	1.1
Disability Status	68	1.9
Pre-enrollment Employment: Incumbent Worker	1911	54.0
Pre-enrollment Employment: Mean Hourly Wage (Incumbent Workers)	$12.57	
Pre-enrollment Employment: Employed in Health Care	627	33.8
Financial Aid: TAA	0	0
Financial Aid: Pell	390	11
Financial Aid: TANF	125	3.5
Financial Aid: SNAP	340	9.6
Financial Aid: Dislocated Worker	151	4.3
Financial Aid: UI(Current)	211	6.0
Financial Aid: UI(Future)	195	5.5
Financial Aid: UI(Exhaust)	81	2.3

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018, N = 3,542
Note: Data included 6 missing observations on gender; 63 missing observations for ethnicity; 87 missing observations for marital status

Students enrolled in 31 different programs offered by the Consortium. The top three programs accounted for large proportion of enrollments: Nursing Assistant (nearly 20 percent of enrollments), Phlebotomy (11 percent of enrollments), and Clinical Medical Assistant (10 percent). Others, including Home Health Aide (7 percent), Administrative Medical Assistant (5 percent), EKG (7 percent), EMT (5 percent), and Pharmacy Technician (5 percent), accounted for moderate numbers of enrollments. It is clear that many participants enrolled in more than one program – 3,542 participants accounted for a total of 4,990 enrollments across programs. Table 10 summarizes students' enrollments by program.

TABLE 10. STUDENT ENROLLMENT BY TAACCCT PROGRAM AS A PERCENT OF TOTAL TAACCCT ENROLLMENT

Program	Enrollment	% Total Enrollments
Administrative Medical Assistant	276	5.53
Billing & Coding	314	6.29
Certified Alcohol and Drug Counselor	29	0.58
Clinical Medical Assistant	499	10.00
Community Health Worker	36	0.72
Computed Tomography	4	0.08
Dental Assistant	141	2.83
Dental Hygiene	10	0.20
Dental Radiography	89	1.78
Diagnostic Medical Sonography	38	0.76
EKG, Electrocardiogram, & Telemetry	333	6.67
EKG/Phlebotomy	80	1.60
Emergency Dispatcher	7	0.14
EMT	257	5.15
Health Sciences	8	0.16
Home Health Aide	336	6.73
Licensed Practical Nurse	66	1.32
Mammography	9	0.18
Massage Therapist	26	0.52
MRI	2	0.04
Nursing Assistant	980	19.64
Occupational Therapy Aide	18	0.36
Patient Care Technician	417	8.36
Pharmacy Technician	233	4.67
Phlebotomy	545	10.92
Physical Therapy Aide	70	1.40
Radiology Technician	20	0.40
Registered Nurse Refresher	91	1.82
Respiratory Technician	2	0.04
Surgical Technician	54	1.08
Total	4990	100

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

Note: A TAACCCT student can enroll in multiple programs. Courses that began after April 2018 were not included in this count.

Educational Outcomes

Most participants completed TAACCCT programs. An important part of the grant's goals was to establish career pathways for participants to follow. The TAACCCT programs were positioned as the first in a series of programs that would help participants build and advance a career in the health professions. Completing the TAACCCT program was seen as an important first step in students' potential movement along a career pathway. Based on the number of program completions shown in Table 11, the Consortium well exceeded its targets, reaching 3,049 completions compared to the grant proposal target of 1,451 completions. This reflects a completion rate of 86 percent across the Consortium. Across colleges, completion rates ranged from close to 80 percent to 95 percent. Table 11 summarizes completion rates by college.

TABLE 11. TAACCCT PROGRAM COMPLETION RATES BY COLLEGE

College	Complete a TAACCCT program	Completion Rate
Bergen	345	95.30%
Brookdale	235	92.88%
Essex	275	82.34%
Hudson	177	95.68%
Mercer	335	82.01%
Middlesex	287	84.16%
Morris	125	80.13%
Ocean	402	91.36%
Passaic	290	76.72%
Raritan	134	80.72%
Sussex	244	87.45%
Union	189	94.5%
Total	3049	86.20%

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018, N = 3,542

While many students completed programs, very few continued on for further education during the grant period. Based on a match with National Student Clearinghouse data from colleges around the country, only 42 TAACCCT participants were identified as continuing their studies in another program. It is unclear whether it takes students longer than the grant period to enroll in additional education, or if students are not pursuing career pathways as designed and enrolling in additional education. These longer term outcomes of these programs are in need of further study.

Employment Outcomes

Participants had varied success with employment across colleges. Overall, close to half of TAACCCT participants (48%) found employment by the end of the grant period as self-reported to college staff. These employment rates varied substantially by college – from 15 percent up to 86 percent. This variation may reflect a variety of factors including the programs offered by each college, the student population at each college, the local labor market context, and the job development strategies used by each college. Table 12 presents the employment rates for TAACCCT participants by college.

TABLE 12: EMPLYOMENT RATES BY COLLEGE, BASED ON SELF-REPORTED DATA

College	Employed after Completion	Employment Rate
Bergen	273	75.41%
Brookdale	218	86.16%
Essex	243	72.75%
Hudson	42	22.58%
Mercer	64	15.72%
Middlesex	157	45.72%
Morris	69	44.23%
Ocean	243	55.27%
Passaic	139	36.77%
Raritan	39	23.21%
Sussex	154	55.19%
Union	56	28%
Total	1709	48.25%

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018, N = 3,542

Table 13 examines student success in the TAACCCT program in a different way, by examining changes in wages and employment characteristics. This analysis relied on the data from the New Jersey State Unemployment Insurance (UI) data system, which is housed at the John J. Heldrich Center for Workforce Development at Rutgers University. The analysis was conducted through a partnership between our evaluation team and the Heldrich Center. We begin by noting a few caveats to the UI data and the analysis presented here. First, New Jersey UI data are limited to employees who work for documented wages in the state. As such, the data do not include out-of-state employment, off-the-books employment, self-employed workers, farm workers, or military service members. The first exclusion is likely a consequential exclusion, given the proximity of some New Jersey community colleges to neighboring states like New York and Pennsylvania. Another limitation of UI data is that students needed to have provided valid social security numbers to be included in the wage match. Beyond the data limitations, the analysis presented here is also confined to students who had a documented "Exit Date" from the TAACCCT program, which was not true for some students in later TAACCCT cohorts by the time of our final data collection.

TABLE 13. PRE- AND POST-TAACCCT WAGES AND EMPLOYMENT AMONG PROGRAM PARTICIPANTS, BASED ON UI WAGE DATA

	Entry (Application Date)	Exit (TAACCCT Exit Date)
Wage Match Sample	2,637	1,914
Number Employed	1,762	1,601
Quarterly Earnings	NA	NA
Mean	$3,777	$4,076
Standard Deviation	$4,070	$4,026
Median	$2,746	$3,143
25th percentile	$1,084	$1,239
75th percentile	$5,261	$5,671
Industry (%)	NA	NA
Healthcare	28	42
Retail Trade	17	13
Educational Services	4	3
Accommodation and Food Services	12	7
Other Services	3	2
Other codes	20	17
Not Reported	16	15

Source: NJ State Unemployment Insurance (UI) Wage data

Accepting these limitations, we observe substantial positive changes for students between program entry and exit. Average quarterly earnings increased from $3,777 to $4,076, an increase of $299 or 8 percent. This change was not due to outliers in the data; we observe similar growth in the median (+$397), 25th percentile (+$155), and 75th percentile (+$410) – indicating that the distribution of wages made a positive shift. The other important finding concerns field of employment. At the start of the program, 28 percent of wage-matched students were employed in the health care field. Among those wage-matched at program exit date, that figure had climbed to 42 percent. Between entry and exit dates, the notable decreases were in employment in the retail (- 4 percent) and food service (- 5 percent) sectors. Thus, in addition to increasing wages, TAACCCT students also appear to have moved from low-skill jobs into new jobs and careers in the field for which they were trained by the program.

When examined by college, employment outcomes using the wage data also revealed variation across colleges. Their median earnings varied from just under $3,000 to close to $5,000 in a quarter. Table 14 summarizes findings by college.

TABLE 14: EMPLOYMENT OUTCOMES BY COLLEGE

College	Number Employed	Median Earnings	Number Employed in Healthcare
Bergen	210	$4,261	133
Brookdale	146	$3,914	63
Essex	201	$4,466	99
Hudson	34	$3,128	16
Mercer	192	$5,398	71
Middlesex	164	$3,941	85
Morris	74	$3,799	30
Ocean	181	$4,183	82
Passaic	170	$2,981	46
Raritan	66	$3,870	26
Sussex	142	$3,817	84
Union	52	$4,891	16
Total	1,644	$4,261	753

Source: NJ State Unemployment Insurance (UI) Wage data

PROGRAM IMPACT

Given the multiple strategies the Consortium implemented to develop and strengthen pathways into healthcare careers, the evaluation sought to examine the outcomes of participants in these programs. In this section we present an in-depth assessment of the impacts of these programs on students. To do so, this section addresses three research questions:

- Compared to a group of similar individuals who completed training in the same occupational fields, were TAACCCT program completers more likely to be employed in New Jersey after graduation?
- Did TAACCCT program completers earn more than similar individuals who completed equivalent, non-TAACCCT training in the same occupational fields?
- Were NJ-PREP trainees more likely than members of the comparison group to be employed in the healthcare industry after program completion?

This section is organized as follows: We first describe the methodology we used to conduct a quasi-experimental evaluation of the TAACCCT training programs, the data that we used to conduct the analysis, and the study limitations. The following section presents the quasi-experimental evaluation data and the results of the analysis. The final section offers concluding observations.

Methods

Data Sources

To conduct this evaluation, EERC staff obtained data from multiple sources, including intake forms that TAACCCT participants completed upon enrollment, Unemployment Insurance (UI) wage data, state higher education data, and data from the New Jersey Consumer Report Card of Training Providers. This section discusses each of these data sources in detail.

TAACCCT Student Enrollment and Tracking Data. Throughout the evaluation, the EERC team worked closely with NJ-PREP leadership to ensure that data on student outcomes were consistently collected for the evaluation. EERC team members provided extensive technical assistance to NJ-PREP staff on which data elements the colleges should collect and on how to enter the information from the intake forms into the electronic data system in a way that would allow the data to be used for reporting and data analysis.

Although we originally intended for NJ-PREP to track both students enrolled in TAACCCT programs and students enrolled in similar, non-TAACCCT programs at their colleges, the colleges did not offer comparable programs in the health professions that could be used for comparison purposes. Therefore, data collection was limited to only the students who participated in TAACCCT programs.

The Consortium colleges gathered student-level data on intake forms and entered it into the Salesforce data tracking system. At the outset of the project, EERC team members collaborated with NJ-PREP to develop strategies for capturing data elements needed for the evaluation of these student populations. The NJ-PREP tracking system collected key data elements for TAACCCT participants at the time of each individual's intake into the program, including basic demographics (gender, ethnicity, marital status, citizenship, disability, and veteran status); self-reported education and current employment information; program eligibility status; program of interest, and student identifying information including social security number.

In addition, the Consortium colleges sought to collect as much key information as possible from students after program completion. Post-completion follow-up points of interest included the number of courses and credits completed each semester (in credit-bearing programs only); continued enrollment in a TAACCCT program; completion of additional program(s); college credential attained (short-term certificate, long-term certificate, and associate degree); program duration; industry certification or licensure (whether the student took the exam and whether the student passed the exam); employment status, including (if

employed) employer name, occupation, number of hours, salary, and benefits. The outcomes data on employment supplements the data available through the state UI wage data.

Unemployment Insurance Wage data. A key source of information was the state's unemployment insurance wage data. See discussion in the previous section for more detail on these data.

New Jersey Consumer Report Card of Training Providers Data. The best source of data for identifying individuals for the comparison group was the New Jersey Consumer Report Card of Training Providers (CRC).[12] At the start of the project, the Heldrich Center obtained permission from the NJ Department of Labor and Workforce Development to use CRC data for this evaluation.

The NJCRC is a training provider scorecard and database. All postsecondary educational institutions are permitted to list any of their educational programs on the CRC and on the state's Eligible Training Provider List (ETPL). After an institution lists a program on the ETPL, it is required by state law to upload, to a secure web portal that NJLWD maintains, identifying information (SSN) on each student enrolled in and completing its programs, the program of study (CIP) in which each student participates, enrollment and exit dates, and some demographic data. Since 1998, the Heldrich Center has matched these data on SSN with the state's UI wage record data to calculate employment and earnings outcomes of these providers and has posted them to the publicly accessible CRC website.

New Jersey State Higher Education Data. The Office of the Secretary of Higher Education in New Jersey maintains the Student Unit Record (SURE) data system. The SURE system is a comprehensive collection, storage, and retrieval system for computer-readable data on each student enrolled in higher education and on each graduate earning a degree or credential from a New Jersey institution of higher education. Twice a year, all 31 of New Jersey's public colleges and universities and nine independent institutions report comprehensive data on all students enrolled in degree and certificate programs at their colleges, including basic demographics, CIP, credits, transfer information, and GPA, among many other fields. These colleges and universities also report students who complete their degree and certificate programs annually to the SURE data system, including date of award and type of degree or certificate earned. The 19 county colleges also report extensive data to SURE on students in noncredit programs, including data on registrations for training that does not lead to college credit. Data fields in the noncredit file include the SSN as the unique identifier, the institution code, the year of enrollment, sex, race, ethnicity, year of birth, zip code, and county of residence. All colleges use SSN as the unique identifier, allowing their data to be merged with the NJLWD's wage records. The Heldrich Center submitted a formal data request to NJLWD to use UI wage data for this evaluation.

[12] For more information on the New Jersey Consumer Report Card of Training Providers, see http://www.njtopps.org.

Combining these Data Sources for the Evaluation. To create the comparison group, we used data from the New Jersey Consumer Report Card (CRC) of training providers. The CRC is the definitive resource for obtaining information on occupational training programs in New Jersey. Training providers upload student record data, including program of study, date of graduation, and social security number. Demographic data on the CRC is sparse, however, and as a result, the Heldrich Center had to match the individuals from the CRC with the New Jersey higher education enrollment data to obtain demographic information such as age, race, and sex. These variables are important for ensuring that our statistical models were properly specified, because these could influence both selection into treatment and the post-treatment outcomes the individuals achieved.

To calculate labor market attachment and earnings histories for treatment and comparison group members, we used the SSNs from Consortium college graduates and from CRC data to match them with the New Jersey UI wage record data system. The UI system gathers wage data on all New Jersey employees from forms filed by employers, who are expected to report wages in the course of paying their quarterly UI taxes. Accessing these data allow us to determine whether treatment and comparison group members were employed in New Jersey in a particular calendar quarter and how much they earned. New Jersey UI wage data do not contain any earnings or employment information on anyone working outside of New Jersey.

Quasi-Experimental Evaluation Design

The evaluation design used to estimate the causal impact of the TAACCCT grant on student employment and earnings outcomes involved matched comparison groups, Bayesian Additive Regression Trees, and – for earnings outcomes – difference-in-differences. This section provides a general overview of this design. More details on the methodology are included in Appendix F. Also details on the power analysis are reported in Appendix G.

The primary focus of this report is to answer the question of whether and to what extent the NJ-PREP TAACCCT grant helped participants become employed, increase their earnings, and enter the healthcare industry. Generating a valid answer to the research questions requires us to answer the more specific question of how the outcomes of TAACCCT program completers would have been different had they not participated in a TAACCCT program. To answer this question, ideally we would be able to compare trainees' earnings in the world in which they participated in TAACCCT training with their earnings in the world in which they did not participate. This is, of course, impossible, because a researcher observes either the state of the world in which our subjects participate or the state of the world in which our subjects do not participate, but not both. This is known as the fundamental problem of causal inference, or in the evaluation context, the fundamental problem of evaluation. We must, therefore, compare individuals who participated in the TAACCCT programs with individuals who did not participate in them but are otherwise as similar as possible to those who did.

Ideally, we would compare the group of TAACCCT trainees to a group of individuals whose only meaningful difference from the TAACCCT population was that the latter did not participate in grant-related programming. Purely from a research standpoint, the ideal way to develop such a comparison (*control*) group would be to randomly assign a portion of those interested in training to receive training (*treatment group*) and a portion to receive some other service (*control group*), follow both groups as they enter the labor market, and then compare their earnings. With a large sample of prospective trainees, assignment at random would ensure that the only difference between the two groups, on average, was participation in training. Unfortunately, such a research design was not feasible for this evaluation, partly because Trade Adjustment Assistance recipients, by law, cannot be randomized, and partly because demand for program participation by students did not far exceed the capacity of the colleges to serve them.

Strengths of this Design

The research design that guides this study has a number of strengths as well as some important limitations. One strength of this study is that it uses high-quality, longitudinal wage information from New Jersey's UI wage record database, enabling us to construct a detailed employment and earnings history for each treatment and comparison group member. Prior employment and earnings are incredibly valuable variables to include in the model because they can proxy for some of the characteristics we are unable to measure that are correlated with post-program earnings, such as motivation and skill.

Second, for the earnings analyses, the use of a difference-in-differences design enables us to mitigate the problems caused by missing data on some important key variables in the data sources. By employing a fixed effects (difference-in-differences) design, this study compares individual trainees to themselves over time, permitting us to control for time-invariant attributes such as sex and race, and for slow-changing characteristics such as a person's highest level of education – data points that are not available for members of the comparison group.

Third, most studies of workforce training use as the comparison group individuals who did not participate in training (Andersson, Holzer, Lane, Rosenblum, & Smith, 2013; Hollenbeck & Huang, 2006; 2013; Heinrich, Mueser, Troske, Jeon, & Kahvecioglu, 2011). Such a comparison group may not provide the ideal counterfactual because there are reasons – such as degree of motivation to succeed – why people may select into occupational training as opposed to non-training activities that may be correlated with how well those individuals perform in the labor market afterwards. By comparing the outcomes of TAACCCT program graduates to the graduates of other training programs, this study provides a more realistic assessment of the value of completing a training program offered by a Consortium school.

Finally, since the CRC collects data on all training programs throughout New Jersey, in the matching model, we were able to match NJ-PREP graduates to comparison group members who participated in an occupational training program in the same field of study (Classification of Instructional Program, or CIP), in New Jersey, in the same years.

A detailed discussion of limitations and threats to the validity of the design are discussed in Appendix H.

Comparison Groups

To create a valid comparison group, we must identify individuals who are similar to treatment group members in two significant ways. First, the comparison group needs to include individuals who received services that are broadly similar to the services that the treatment group received because those individuals serve as proxies for the experiences that members of the treatment group would have had if they had not received the treatment. The greater the similarity, the stronger the comparison group. In this instance, the ideal comparison group would consist of individuals who participated in a non-TAACCCT-funded certificate program at a Consortium college in an identical occupational field at the same time that the treatment group was enrolled there. Such a comparison group, unfortunately, does not exist, and it would probably be counterproductive for the colleges to structure their workforce programs in such a redundant manner.

Instead, we created a comparison group of individuals who participated in certificate programs at nonprofit and private training providers in New Jersey in the same occupational fields, at the same time, and in the same counties as their treatment-group counterparts. The sets of services that both the treatment and comparison groups received were similar in terms of the occupational fields in which they were trained, the fact that they pursued this training in a nondegree program, the time when they participated, and the geographic location where the training took place. The primary difference in service receipt is the difference in the types institutions where these individuals received training. We think that these groups of individuals are broadly similar and make the assumption of ignorability not entirely implausible. The set of individuals who received non-TAACCCT training is known as the *comparison pool*, and a subset of individuals was selected from this pool to create the *comparison group*.

An additional comparison group that we explored creating was a comparison group that consisted of all health sciences trainees in nondegree programs at the six New Jersey community colleges that did not participate in the TAACCCT grant. Unfortunately, data were available on only a very small number of these trainees, rendering this set of individuals unusable as a comparison group.

Based on the data available for the treatment and comparison group individuals, we built two separate comparison groups.

1. *All individuals who participated in training at a private training provider, regardless of whether demographic data were available for those individuals*. The data elements that this comparison group had in common with the treatment group were the program they completed, the year of completion, and the employment and wage history variables.
2. *The college-registered comparison group: All individuals who participated in training at a private training provider who also matched to records in the New Jersey higher education credit enrollment data*. This matching enabled us to use information on the comparison group member's age, sex, and race in our statistical models. In creating this comparison group, we pruned from the treatment group any individuals who did not also match any records in the higher education credit enrollment data. The thinking here was that students who enroll in degree-seeking programs at colleges and universities at some point may differ in important ways from those individuals who do not. Individuals who fit the parameters of the college-registered analysis were included regardless of when they were registered or whether they were registered at the time of the analysis.

Table 14 summarizes the two comparison groups. It compares the two groups along multiple dimensions, including the data sources used to generate each group, the variables used for exact matching, and the variables used for statistical matching. One of the strengths of this matching design was that it allowed us to exact-match TAACCCT students with similar students in the exact same field of study (i.e., same CIP code) who completed their programs in the exact same year, and who enrolled in a training program in the exact same region of the state (labor market). This was true for both comparison groups.

In addition, we use statistical matching methods to further maximize the similarity of the treatment group students and the comparison group students. Members of both comparison groups were matched to TAACCCT completers who earned similar amounts of money in the year that spanned the third quarter before program enrollment through the sixth quarter before program enrollment. We repeated that process based on students' employment status in the third quarter before enrollment. For the second comparison group, demographic data were available from the New Jersey State Higher Education Enrollment data, so comparison students were also statistically matched to NJ-PREP students on the demographic characteristics of age, race, Hispanic ethnicity, and sex.

TABLE 14. SUMMARY OF TWO COMPARISON GROUPS MATCHED TO TAACCCT COMPLETERS

Comparison Group	Data Used to Build Comparison Group	Variables Used for Exact Matching	Variables Used for Statistical Matching
#1 — Health sciences program completers of private and nonprofit programs	CRC Training Provider Data	Program of study Year of completion Region of NJ where enrolled	Wages before enrollment Employment status before enrollment
#2 — Health sciences program completers of private and nonprofit programs who ALSO enrolled at some point in at least one for-credit course at a NJ college	CRC Training Provider Data NJ State Higher Education Degree Enrollment Data	Program of study Year of completion Region of NJ where enrolled	Wages before enrollment Employment status before enrollment Age Race Hispanic ethnicity Sex

These two comparison groups were used to build two separate data sets on which, along with the treatment group data, statistical modeling could be conducted to assess the causal impact of participation in TAACCCT programs on employment and earnings outcomes. Tables 14 and 15 below present the means of the pre-treatment covariates for the treatment group and the comparison groups. Table 15 presents these data for the first treatment group and comparison group, and Table 16 presents the same for the second (college-registered) treatment group and comparison group.

Even before matching, each treatment group is broadly similar to its corresponding comparison group. The comparison group includes greater proportions of individuals who participated in training programs in Essex and Passaic counties relative to the treatment group. In Table 15, we observe that the average quarterly wages earned by TAACCCT completers prior to enrollment in training was roughly $300 a quarter greater than the wages earned by the comparison group before training. In Table 16, however, this is reversed, with the treatment group earning about $300 -$400 *less* per quarter before training than the comparison group members. This difference is likewise reflected in the average wage earned during the year that comprised the third through the sixth quarter before enrollment in training.

The same trend holds for the likelihood of being employed before the start of training. The percentage of employment among members of the first treatment group was roughly 5 percent higher each quarter than it was for corresponding comparison group members. Conversely, Table 16 shows that the number of treatment group members employed in any given quarter before TAACCCT enrollment was between 3 percent and 5 percent lower than their counterparts in the college-registered comparison group.

Across both data sets, comparison group members were somewhat more likely than the NJ-PREP students to have worked in the healthcare industry before participating in training. With respect to the demographic variables, the programs served roughly similar populations, with the TAACCCT programs serving a slightly higher proportion of white students and slightly lower proportions of black and Hispanic students than were served by the comparison group programs.

TABLE 15. TAACCCT-TREATED AND COMPARISON GROUP 1 COVARIATE MEANS (RAW DATA)

Variable	Comparison Mean	Treatment Mean
Year	2015.96	2016.04
Completion quarter	20162.0	20163.1
Monmouth	0.09	0.09
Bergen	0.08	0.12
Essex	0.22	0.12
Hudson	0.07	0.04
Mercer	0.02	0.12
Middlesex	0.15	0.07
Morris	0.03	0.04
Ocean	0.05	0.13
Passaic	0.21	0.12
Somerset	0.00	0.03
Sussex	0.01	0.08
Union	0.08	0.04
Wages 8th quarter before enrollment	$2,616.18	$2,918.29
Wages 7th quarter before enrollment	$2,715.20	$3,097.77
Wages 6th quarter before enrollment	$2,763.33	$3,096.33
Wages 5th quarter before enrollment	$2,797.52	$3,111.91
Wages 4th quarter before enrollment	$2,835.57	$3,117.47
Wages 3rd quarter before enrollment	$2,721.04	$3,016.03
Wages 2nd quarter before enrollment	$2,686.42	$2,730.44
Wages 1st quarter before enrollment	$2,759.12	$2,600.48
Employment 8th quarter before enrollment	0.50	0.54
Employment 7th quarter before enrollment	0.51	0.57

Variable	Comparison Mean	Treatment Mean
Employment 6th quarter before enrollment	0.52	0.57
Employment 5th quarter before enrollment	0.53	0.59
Employment 4th quarter before enrollment	0.54	0.59
Employment 3rd quarter before enrollment	0.54	0.58
Employment 2nd quarter before enrollment	0.54	0.58
Employment 1st quarter before enrollment	0.57	0.59
Central NJ	0.31	0.45
Northern NJ	0.69	0.55
Ever employed in healthcare industry before enrollment	0.72	0.65
Total earnings between 6th and 3rd quarters before enrollment	$11,117.46	$12,341.74
N	12,621	2,472

TABLE 16. TAACCCT-TREATED AND COMPARISON GROUP 2 COVARIATE MEANS (RAW DATA)

Variable	Comparison Mean	Treatment Mean
Year	2,015	2,016
Completion quarter	2016Q1	2016Q2
Sex	0.16	0.15
Year of birth	1985.34	1983.86
Hispanic ethnicity	0.28	0.23
Native American	0.01	0.01
Asian	0.06	0.08
Black or African-American	0.30	0.27
Hawaiian or Pacific Islander	0.01	0.01
White	0.32	0.40
Monmouth	0.12	0.12
Bergen	0.11	0.12
Essex	0.18	0.11
Hudson	0.04	0.04
Mercer	0.02	0.08
Middlesex	0.15	0.07
Morris	0.02	0.04
Ocean	0.04	0.12
Passaic	0.23	0.14
Somerset	0.00	0.04
Sussex	0.01	0.08
Union	0.08	0.04

Variable	Comparison Mean	Treatment Mean
Wages 8th quarter before enrollment	$3,438.66	$3,000.30
Wages 7th quarter before enrollment	$3,527.09	$3,195.62
Wages 6th quarter before enrollment	$3,534.23	$3,145.82
Wages 5th quarter before enrollment	$3,536.85	$3,127.22
Wages 4th quarter before enrollment	$3,594.81	$3,186.70
Wages 3rd quarter before enrollment	$3,470.80	$3,160.96
Wages 2nd quarter before enrollment	$3,385.88	$2,848.48
Wages 1st quarter before enrollment	$3,343.66	$2,730.30
Employment 8th quarter before enrollment	0.66	0.60
Employment 7th quarter before enrollment	0.66	0.64
Employment 6th quarter before enrollment	0.67	0.62
Employment 5th quarter before enrollment	0.67	0.63
Employment 4th quarter before enrollment	0.67	0.65
Employment 3rd quarter before enrollment	0.66	0.63
Employment 2nd quarter before enrollment	0.65	0.63
Employment 1st quarter before enrollment	0.66	0.62
Central NJ	0.33	0.43
Northern NJ	0.67	0.57
Ever employed in healthcare industry before enrollment	0.69	0.64
Total earnings between 6th and 3rd quarters before enrollment	$14,136.69	$12,620.70
N	5,155	1,282

Analysis Variables

Dependent Variables

The dependent variables used in this analysis represented five separate quantities, each measured at four different points in time, for a total of 20 different dependent variables modeled.

Following are the five quantities that serve as dependent variables in our analysis:

1. The *difference in earnings* relative to the fourth quarter before the start of training;
2. The *difference in the natural log of earnings* relative to the fourth quarter before the start of training;
3. The *natural log of earnings*;
4. *Employment status* (whether the individual was employed after program completion); and
5. *Healthcare industry employment status* (whether the individual was employed in the healthcare industry or not after program completion).

We examined these quantities in each of the first four full quarters after students completed their TAACCCT program(s). In addition, we also examined whether an individual was employed in the healthcare industry in any one of the four quarters after completion. Table 17 displays the dependent variables analyzed in this study. The bold column headings list the quantities calculated, and the cells display the quarters for which each quantity was calculated. As the table indicates, a total of 21 different dependent variables were considered in the analysis.

TABLE 17. DEPENDENT VARIABLES STUDIED

Difference in Earnings	**Difference in Natural Log of Earnings**	**Natural Log of Earnings**	**Natural Log of Earnings**	**Employment in Healthcare Industry**
1st quarter after completion vs. 4th quarter before enrollment	1st quarter after completion vs. 4th quarter before enrollment	1st quarter after completion vs. 4th quarter before enrollment	1st quarter after completion	1st quarter after completion
2nd quarter after completion vs. 4th quarter before enrollment	2nd quarter after completion vs. 4th quarter before enrollment	2nd quarter after completion vs. 4th quarter before enrollment	2nd quarter after completion	2nd quarter after completion
3rd quarter after completion vs. 4th quarter before enrollment	3rd quarter after completion vs. 4th quarter before enrollment	3rd quarter after completion vs. 4th quarter before enrollment	3rd quarter after completion	3rd quarter after completion
4th quarter after completion vs. 4th quarter before enrollment	4th quarter after completion vs. 4th quarter before enrollment	4th quarter after completion vs. 4th quarter before enrollment	4th quarter after completion	4th quarter after completion
NA	NA	NA	NA	any quarter after completion

Control Variables

The key explanatory variable is a dichotomous treatment dummy, taking a value of 1 for individuals who completed an NJ-PREP TAACCCT (healthcare) program and a value of 0 for individuals who completed a healthcare training program at a private or nonprofit postsecondary education training provider.

For the quasi-experimental evaluation, we created two variables to match treatment group members (i.e., TAACCCT completers) with individuals in the CRC comparison pool. The *Pre-Enrollment Wages* variable measures an individual's total earnings in New Jersey in quarters 3 through 6 prior to the start of training. To proxy for the trainees' pre-training labor market attachment, we created a *Pre-Enrollment Employment Status* variable to indicate whether an individual was employed in the third quarter prior to the start of training.

For all analyses based on the second treatment group–comparison group data set, the following demographic variables were also included: Year of birth, Race, Hispanic ethnicity, and Sex. A region dummy (Northern NJ versus Central NJ) was included in all analyses.

Statistical Methods

Bayesian Additive Regression Trees (BART)

As previously explained, the primary method used to estimate the causal effect of the NJ-PREP TAACCCT grant on the three sets of earnings-dependent variables was Bayesian Additive Regression Trees, or BART. In some models, the propensity score was introduced via Targeted Minimum Loss-Based Estimation (TMLE).

Matching Methods

To corroborate the results obtained from the analysis using BART for the three earnings-outcome variables and to examine the dichotomous employment status and healthcare industry employment status variables, we also used three different statistical matching algorithms and then estimated parametric statistical models using the matched data.

Below is a list of the three matching methods used in the analysis:

- *Nearest-neighbor matching with the propensity score*. This is the most common form of propensity score matching (PSM).
- *Genetic matching* is a method for iteratively modifying the propensity score using an evolutionary search algorithm to decide how to weight the covariates included in the matching model. Diamond and Sekhon (2013) demonstrate the effectiveness of their algorithm in achieving improved covariate balance relative to traditional PSM using simulations and a reexamination of the Lalonde (1986) data.
- *Coarsened Exact Matching (CEM).* With CEM, data are first "coarsened" into smaller groups and then exact-matched within those groups. So age, for example, instead of being continuous from 17 to 99, would be coarsened into, say, 17–22, 23–30, 31–45, and 46 plus. Categorical variables, such as race and sex, are generally left unchanged, and then the individuals are exact-matched across these categories. Iacus, King, and Porro (2012)

demonstrate that "CEM dominates commonly used existing (EBPR and other) matching methods in its ability to reduce imbalance, model dependence, estimation error, bias, variance, mean square error, and other criteria."

Parametric Statistical Models

For the data sets produced from the matching algorithms, we used the appropriate statistical models – *linear regression* on the natural log of earnings, difference in earnings, and the difference in the natural log of earnings, and *logistic regression (logit)* for employment status.

Results

We examined the effect of the NJ-PREP TAACCCT grant activities on the labor market outcomes of program completers by comparing changes in their employment status and earnings before and after training to those of a comparison group of similar individuals who completed training programs in the same occupational fields during the same time frame at different postsecondary educational institutions.

We conducted nearly 200 statistical tests to evaluate the effect of the NJ-PREP TAACCCT initiative on the employment and earnings outcomes of program completers. The statistical tests yielded mixed results with respect to the effect of TAACCCT training on these outcomes.

- Regarding the effect of participation in TAACCCT on a student's **employment status** after program completion, the data showed that there was *no statistical difference* between TAACCCT program completers and a comparison group of trainees.

- With respect to **earnings**, the majority of the statistical tests showed that any differences in earnings between NJ-PREP TAACCCT trainees and comparison group trainees were *statistically indistinguishable*, though some statistical tests indicated that completers of the grant-related programs earned about $150 *less per quarter* than students who completed comparable health sciences programs at other postsecondary training providers.

- As for **employment in the healthcare industry** after program completion, some statistical tests indicated that TAACCCT trainees were *statistically more likely* than members of a comparison group of students to be employed in the healthcare industry, while others indicated that there was *no statistically distinguishable difference* between the two groups.

Table 18 displays all of the dependent variables analyzed in this evaluation. The 21 dependent variables can be grouped into three categories: earnings, employment, and employment in the healthcare industry. Table 18 summarizes the results in this manner in terms of earnings after program completion; employment status after program completion; and whether or not graduates were employed in the healthcare industry after program completion. The table indicates whether the findings using a particular method were significant and whether TAACCCT's effect on the outcome was positive or negative.

TABLE 18. THE EFFECTS OF TAACCCT PROGRAMMING ON EMPLOYMENT AND EARNINGS OUTCOMES: SUMMARY OF RESULTS

Outcome	Bayesian Additive Regression Trees (BART)	BART with Targeted Minimum Loss Based Estimation (BART + TMLE)	Nearest-Neighbor Matching	Genetic Matching	Coarsened Exact Matching (CEM)
Earnings	Not significant	**Significant but negative**	Not significant	Not significant	Not significant
Employment status	NA	NA	Not significant	Not significant	Not significant
Employment in health care	NA	NA	*Significant and positive*	*Significant and positive*	Not significant

Table 18 shows that for most of the outcome variables studied, the results were not statistically significant. In the BART-only models as well as in the matching models, the TAACCCT program was not shown to have a statistically significant effect on the earnings of program completers. Likewise, TAACCCT had no statistically significant effect on whether a student was employed in the quarters following program completion.

The statistically strongest results came from the BART + TMLE models examining the effect of TAACCCT on earnings (bolded in Table 18). For the BART models that included the TMLE adjustment, the results were statistically significant but negative, with TAACCCT completers earning in the vicinity of $150 less per quarter than their comparison group counterparts. These results held across both comparison groups.

There were some mildly statistically significant results in the study of the effect of TAACCCT program completion on employment in the healthcare industry. These results have been noted in Table 18 in italics, indicating that statistically significant results did not hold across all models or across all treatment comparison groups. The results were generally positive and were statistically significant in the nearest-neighbor and genetic matching models, though only for the first comparison group.

These results are summarized in more detail below; the results of all 196 statistical models are presented in Appendix I.

Earnings Outcomes

To estimate the effect of TAACCCT training on earnings, five sets of models were run: (1) BART; (2) BART with Targeted Minimum Loss-Based Estimation (TMLE) adjustment; (3) Propensity Score Matching followed by linear regression; (4) Genetic matching followed by linear regression; and (5) Coarsened Exact Matching followed by linear regression.

Although the models generated somewhat conflicting results, the majority indicated that there was no statistical difference between treatment and comparison group trainees with respect to any of the three earnings-related dependent variables (log of wages, difference-in-difference in wages, and difference-in-difference in the log of wages). The statistical models that applied the Targeted Minimum Loss-Based Estimation (TMLE) correction, however, generally indicated that completers of NJ-PREP TAACCCT programs earned about $150 less per quarter than students who completed comparable health sciences programs at other postsecondary training providers.

Employment Outcomes

We ran three sets of models to estimate the effect of the NJ-PREP TAACCCT grant on employment status. Regarding the effect of participation in TAACCCT programming on a student's employment status after program completion, the data analysis generally showed that there was no statistical difference between TAACCCT program completers and a comparison group of trainees. In the first and second quarters after completion, however, some of the models found that TAACCCT trainees were less likely than the comparison group trainees to have found employment.

Employment in the Healthcare Industry

Finally, we ran three sets of models to examine the effect of the NJ-PREP TAACCCT program on the probability that a program completer would be employed in the healthcare industry after completion. Whereas there was some evidence to indicate that NJ-PREP either did not positively affect employment outcomes or did not do so in a way that was statistically meaningful, these results provide some indication that, compared with members of the first comparison group, NJ-PREP's TAACCCT implementation may have increased its graduates' probability of employment in the healthcare industry in the first three quarters after program completion. These results, however, do not hold when the TAACCCT students were matched with the second, college-registered comparison group.

Summary

The causal impact of the NJ-PREP TAACCCT grant on employment and earnings outcomes has been exhaustively studied. State-of-the-art statistical models combined with quality data were employed in an effort to detect statistically significant differences between TAACCCT program completers and similar trainees who completed the same types of programs in the same years in New Jersey.

The thrust of the results indicates that the trainees who participated in the TAACCCT programs fared about as well after program completion in terms of employment and earnings as completers of programs at private and nonprofit training providers.

One set of models, however – BART with the TMLE correction – consistently found that NJ-PREP completers earned in the vicinity of $150 less per quarter than the comparison group. All four other sets of statistical models indicated that there was no statistical difference in earnings between the two groups.

In terms of the probability of being employed after program completion, the vast majority of the models found no difference between the comparison and treatment groups. However, the analyses using the data sets created from genetic matching and coarsened exact matching found that TAACCCT trainees were statistically less likely to be employed in the first and second quarters after program completion, though this finding held only for the first treatment group.

Lastly, we studied the probability that a trainee would be employed in the healthcare industry after program completion. This component of the research indicated some tentatively positive results for the NJ-PREP TAACCCT program. In the first three quarters after completion, NJ-PREP trainees were more likely to be employed in the healthcare industry than the comparison group, though this finding held only for the first comparison group. These findings, however, were only statistically significant for all three quarters for the estimates based on the PSM nearest-neighbor and genetic matching algorithms.

CONCLUSION

The NJ-PREP Consortium had numerous goals as part of the TAACCCT grant. Many of these goals were related to creating an infrastructure for career pathways in health professions, and others related to serving a targeted numbers of students with these programs. Overall, it is notable that the Consortium developed a structure to coordinate activities among the 12 colleges that took part in the grant. Based on work from their prior HPOG grant, the NJ-PREP Consortium continued to collaboratively work together on this effort to build pathways in the health professions. With the TAACCCT grant, the Consortium shifted its efforts from HPOG toward a substantial investment in making institutional change to support these pathways. This evaluation has focused on these efforts to promote institutional change, as well as the ongoing efforts to serve students.

Several efforts of the grant have led to lasting changes at the colleges. Many colleges have increased capacity through the addition of new materials and equipment, as well as the

development of curriculum and addition of new programs. They have updated health professions programs to make them more relevant to employer needs and have added capacity to offer programs that had not been offered before. Other pathways-development reforms to facilitate noncredit-to-credit transitions involve much longer and more complicated institutional changes. These included the development of prior learning assessment policies and processes and the building of bridges from noncredit to credit programming. The Consortium's efforts to promote pathways development was slow, but this is an inherently slow process.

Progress on these reforms varied greatly across colleges; some were able to make more change, and others, less. Institutional factors such as college stability, leadership buy-in, and local context contributed to varying outcomes. While some colleges were still working on funding models to continue offering programs, many planned to continue with these programs. A handful of colleges in the Consortium worked on serious efforts to build linkages between noncredit and credit programs and to promote the use of the TESU credits with their students. However, these efforts were limited across the Consortium. The TAACCCT grant did, however, raise awareness of these issues within each institution and promoted their discussion. Some schools emerged from the grant with plans for proceeding with noncredit-to-credit transitions and other pathways development.

Other important strategies deployed by the Consortium colleges in their promotion of pathways development included efforts to provide supports to students in their noncredit health professions programs and the development of strong relationships with area employers and workforce centers. The colleges achieved widespread implementation of several student supports, but few of those efforts will be sustained. Finding the funding to allow these supports to continue is the biggest challenge. The provision of noncredit advising or student support is not common within regular college funding models; such features typically exist only with grant support. The Consortium also invested in developing strong employer relationships. At several campuses, employer relationships greatly expanded as a result of grant activities. However, it is difficult to say who will continue these relationships post-grant. Some colleges arranged for existing staff to continue this work, but it will be part of someone's job rather than a full-time focus; maintaining these relationships therefore may not receive the amount of attention that is required. It remains to be seen whether such efforts will be sufficient to maintain and continue to expand employer relationships.

Additionally, some colleges worked on maintaining and developing relationships with their local workforce system. Through the grant, workforce partner relationships were sustained or expanded at schools where they already existed. In a few instances, inroads were made where none existed previously, particularly around data sharing. However, as is the case with the maintenance of employer relationships, having adequate staff dedicated to maintaining relationships with the workforce system will be a challenge moving forward. Additionally, without the need to meet a grant goal, colleges may not have the immediate motivation to invest in building these relationships or even keeping existing ones active.

The Consortium exceeded the grant goals in serving participants in terms of enrollments and completions. Overall there were a lot of participants served, which shows there is an interest and a need for these programs. Yet, the funding model does not exist to support this type of education beyond the grant period. Some colleges' continuing education departments are poised to take over the noncredit programs implemented under TAACCCT. However, while the programs will continue, the specific population these programs catered to under TAACCCT may not continue to be served, whether due to increased costs (e.g., tuition, book fees, supplies fees) or courses that may not continue to run at alternate times (e.g., nights or weekends) or may no longer be accelerated. Some colleges are experimenting with alternative funding models, such as clock-hours funding for some programs or employer support for programs.

While the Consortium served a high number of students, they faced more challenges with students' employment outcomes. Some of these challenges are inherent to the occupations that comprised many of the grant's programs. Many of these occupations, such as CNA and HHA, are typically low-wage jobs, and despite the concern and some efforts made on the part of Consortium staff, colleges simply are limited in their ability to make significant changes to industry wages. This conundrum raised larger questions about the state of the healthcare industry that stretch beyond the scope of this project. The grant also sought to help students advance along pathways to better paying jobs. However, not enough time has elapsed to determine if students have been able to meaningfully advance in their careers in the health professions.

Overall, the NJ-PREP Consortium sought to meet a very ambitious set of grant goals. As with many projects of this scope, challenges existed, and the extent of reforms varied across colleges. In the final analysis, Consortium colleges generated examples of practices that are new and innovative and have the potential to be institutionalized. These practices are documented within this report, as well as in the six related issue briefs generated from the evaluation findings. The TAACCCT grant helped the Consortium continue a broader effort to promote health professions at a regional level in New Jersey.

APPENDIX A: LOGIC MODEL

NJ PREP TAACCCT EVALUATION LOGIC MODEL

Healthcare Pathways in New Jersey

Inputs	**Activities**	**Outputs**	**Outcomes**	**Impacts**
TAACCCT Funds Program Staff Faculty Existing college facilities andservices at 13 NJ colleges *Partners:* Dept. WF Development WIBs Healthcare Employers Other TAACCCT Grantees	Purchase and Implement contextualized learning and adaptive learning systems (Smart Start, EdReady, Smart Sparrow) Hire Career Success Coaches to advise students using Real Time jobs information Develop pathways through credit for noncredit, competency based education, prior learning assessment, articulation agreements Faculty and staff professional development Implement career support network	Software implemented across all colleges and available to all students. Partner colleges hosting career advising sessions with students Clearly articulated pathways that transition noncredit to credit, use competency based learning, prior learning assessments All instructors trained with relevant trainings, and changes to instructional approaches Opportunities for hands-on learning and employer involvement	Participants complete work-based learning Participants complete individual courses Participants complete program of study or retained Participants complete credentials Participants earn credits for noncredit credentials Participants earn credits in credit programs	Participants enrolled in further education Participants without jobs placed in employment after completion Participants employed at enrollment or exit retained in employment Participants employed at enrollment or exit obtain wage increases Widespread adoption of PLA

Inputs	Activities	Outputs	Outcomes	Impacts
	Build Consortium Leadership Council and local collaborations to engage with employers Build collaborations with the workforce system	Increase number of students from workforce system entering to programs Increase number of employers involved with healthcare program & # of activities Increase number of workforce boards involved with healthcare programs		

APPENDIX B: COLLEGE SUMMARIES

NJ-PREP TAACCCT Evaluation

Summary of Implementation Activities Through Spring 2018

Bergen Community College

This summary describes progress with grant implementation activities through spring of 2018 based on site visits conducted by Rutgers evaluators from February 2016 through February 2018. It also includes data on student characteristics and enrollments pulled from the NJ-PREP Consortium tracking system in July 2018.

Program Development

Bergen developed new programs and reformed existing programs in several ways. The table below summarizes the new programs added and the curricular reforms made to existing programs. All programs added career development and job placement services through the job developer's role. A complete list of programs included in the grant along with student enrollment data for each appears at the end of this summary.

*All programs added career development and job placement services through the job developer's role.

Equipment

Bergen has integrated substantial changes to its TAACCCT programs through the addition of equipment and a simulation lab. The college also built and opened a new healthcare building by leveraging funds from other sources, which contributed greatly to the TAACCCT programs at the school. The new building includes ten dedicated laboratories with medical simulation equipment (including manikins, hospital beds, recording equipment, and microscopes), EKG equipment, and computer labs. Bergen also added lab equipment for pharmacy technician students and purchased a new classroom sink for CNA students at the Hackensack campus. This equipment will be shared by both credit and noncredit students. The college staff reports that the equipment dramatically improved the quality of both credit and noncredit programs, increased enrollment, and added credibility to their programs and graduates.

TAACCCT staff purchased two new electronic blood pressure machines as well as two new manikin hands and many utility carts for the Patient Care Technician program. The blood pressure machines are identical to those currently in use at local hospitals, making them great hands-on learning tools for students.

Program	Curriculum Reform*	New Equipment
Advanced Patient Care	Returning program; combined with Patient Care Technician program; beginning to use simulation lab.	Share simulation lab
Certified Drug and Alcohol Counselor	Returning program.	No
Certified Home Health Aide	Has not run (through TAACCCT) due to lack of interest. Returning program; added a dementia and rehabilitation certification; added hospice program; added 76 hours (60 lecture and 16 clinical) to curriculum for labor market alignment.	Share simulation lab
Certified Nursing Assistant	Returning program; can be stacked with Phlebotomy and EKG for Patient Care Technician certification; added medical simulation lab; labor market alignment.	Yes
Dental Assistant	Returning program.	No
Diagnostic Medical Sonography	Available to everyone, but mostly attended by TAACCCT students.	Yes
EKG	Returning program; combined with Phlebotomy (not a stand-alone program); can be stacked with Phlebotomy and CNA for Patient Care Technician certification; added equipment; labor market alignment.	Yes
Medical Office Assistant	Returning program.	No
Paramedic Science	Returning, credit-bearing program.	Share simulation lab
Patient Care Technician	Returning program; stacked with CNA, Phlebotomy, and EKG; added CPR and First Aid to enhance the credential; added medical simulation lab; labor market alignment.	Yes
Pharmacy Technician	Returning program; added sink, pharmacy lab space, automated drug and supply dispensing system (Pyxis), and label maker; students receive national private certification examination; labor market alignment.	Yes

Program	Curriculum Reform*	New Equipment
Phlebotomy Technician	Returning program; combined with EKG; can be stacked with CNA and EKG for Patient Care Technician certification; labor market alignment.	Yes
Surgical Technology	Returning program; ordering supplies to increase hands-on learning.	Yes, share simulation lab

Noncredit-to-Credit Articulation

The construction of the new healthcare building tremendously helped to bridge the gap between noncredit and credit programs. Bergen staff report that the shared building has centralized everything and that having students from both types of programs now in one location allows students from both sides to "meet and talk in the hallways" and learn about other available programs for continued education. New excitement has gathered from the credit side about noncredit certification, and staff feel more buy-in from administration as well as from students. TAACCCT staff see the importance of continuing to bridge the gap between noncredit and credit programs, recognize the challenges in the logistics of building and maintaining such a bridge, and hope this partnership strengthens over time.

Smart Start

Bergen implemented Smart Start as part of HPOG, a grant the college had received prior to the start of the TAACCCT grant. Smart Start courses were so successful at Bergen that they were scaled across the TAACCCT Consortium. Bergen staff was instrumental in duplicating the course material and disseminating it to the other Consortium schools. Bergen continues to run the course in its original four- to five-week format during the regular semester. During Bergen's summer semesters, however, the course runs for only two weeks in a format that features longer classes. Bergen also created a night session to better accommodate students with work and care responsibilities. Students who completed the course were extremely positive about their experience. Smart Start gave students confidence and prepared them for success in healthcare programs; students who didn't take the program felt less prepared in comparison to those who completed the program.

Early in 2017, the Smart Start instructor relocated, and Bergen was not able to find a new instructor before the end of the grant period. When Raritan Valley started their online version of Smart Start, it was offered to Bergen's students along with all other Consortium students. However, no TAACCCT students participated. Bergen continues to run a version of Smart Start for its health professions programs called New Beginnings that focuses on resume and job search assistance, but TAACCCT-specific Smart Start courses no longer run.

EdReady

Bergen began implementing EdReady during the Fall 2016 term. Grant staff received initial pushback from some faculty and staff at the institution; most centered on the fear that EdReady would be used as a replacement for developmental education, perceptions that BCC had already deployed a more robust software suite, or may encourage students to take courses they were unprepared for. Grant leadership at Bergen hosted an information session with the company behind EdReady that helped better educate and inform college staff and faculty. EdReady is currently being used to bridge students from high school to college-level coursework, specifically as it relates to math proficiency. Many Bergen students struggle with their math skills upon enrollment. Bergen's Hackensack campus, in particular, has many ESL students and students seeking their GED/High School Equivalency, and Bergen wants to support and guide these students. EdReady is integrated for each student to use upon registration as a method to assess and review basic math and English skills. Although the course is currently in use for the broader student population, it was never run for TAACCCT students specifically. There was much dialogue at the school to offer it for TAACCCT students either through the local One-Stop or for TABE or Accuplacer preparation, but none of these plans were realized during the grant period.

Networking Sessions

Bergen completed ten networking sessions. The topic of their first two networking sessions, Hidden Disabilities, was adopted by Essex and Mercer. Other session topics included Humor as a Coping Mechanism and The Teach-Back Method. The instructor who ran the sessions reported students benefitted greatly from them and that the sessions increased students' confidence upon completion.

Career Advising/ Employer Connections

Bergen staff effectively worked to build their outreach for business partnerships throughout the grant period. This led to increased employer connections at the school – and to new and expanded clinical sites. Bergen's rigorous outreach and quality students led to many employer-initiated calls seeking interns, clinical groups, and potential employees. Indirectly, the TAACCCT grant made students more employable by virtue of the enhancements in instructor time and new equipment it made possible. The new building and simulation labs also gave TAACCCT staff the ability to invite employers to tour the facility, which led to increased confidence among employers in the quality of Bergen graduates.

Bergen created a required six-hour job-search training program for all its Continuing Education students, including TAACCCT students, called New Beginnings. This course covered the basics of finding a job – from résumé writing, to evaluating potential workplaces, to interviewing.

Workforce System Connections

Bergen built strong relationships with representatives of its local workforce center over the course of the grant. Since many students interested in Bergen's TAACCCT programs were economically disadvantaged, students were often referred from – and to – the workforce center. The site coordinator, job developer, and college administration therefore worked closely with the local workforce center. They met with workforce system clients, attended their networking sessions, gave presentations to WIOA-eligible prospective students, and worked directly with the WIOA liaison. Because so many prospective students were from lower socioeconomic brackets, many could not afford enrollment. Lower-income, unemployed, and underemployed students often could not afford the courses, even though they were extremely interested in getting involved. Bergen continues to be challenged with providing enough funding for all students who wish to enroll. Bergen tries to support students by subsidizing tuition costs for many programs – with the exception of the CNA program, which is in high demand.

Student Demographics and Enrollments

The following tables present information on demographic characteristics and program enrollments among all students in the college's TAACCCT programs as reported through the Salesforce student-tracking system as of July 2018. Information on the Consortium as a whole is included in the table to provide context for this information.

STUDENT DEMOGRAPHIC CHARACTERISTICS: BERGEN

Demographic Characteristics	College: N	College: Percent of Students	Consortium: N	Consortium: Percent of Students
Total Enrolled	362	NA	3542	NA
***Gender*: Female**	306	84.76	3020	85.41
***Gender*: Male**	55	15.24	516	14.59
***Ethnicity*: American Indian**	1	0.27	8	0.23
***Ethnicity*: Asian**	51	14.21	320	9.20
***Ethnicity:* Black/African American**	91	25.35	955	27.45
***Ethnicity:* Hawaiian/Pacific Islander**	1	0.27	11	0.32
***Ethnicity:* Hispanic/Latino**	89	24.79	724	20.81
***Ethnicity*: More than One Race/Other**	16	4.46	136	3.91
***Ethnicity*: White**	110	30.640	1325	38.09
Average Age (Years)	39.14	*	36.45	*
***Marital Status:* Married**	109	30.88	985	28.51
***Marital Status:* Not Married**	244	69.12	2470	71.49
Veteran Status	3	0.83	39	1.10
Disability Status	3	0.83	68	2.41
***Pre-enrollment Employment:* Incumbent Worker**	179	49.45	1911	55.60
Mean Hourly Wage for Incumbent Worker (Dollars)	$12.65	*	$12.57	*
***Financial Aid*: Pell**	43	11.88	390	11
***Financial Aid*: TANF**	15	4.14	125	3.52
***Financial Aid*: SNAP**	43	11.88	340	9.6

Demographic Characteristics	College: N	College: Percent of Students	Consortium: N	Consortium: Percent of Students
Financial Aid: Dislocated Worker	7	1.93	151	4.26
Financial Aid: UI(Current)	24	6.62	211	5.95
Financial Aid: UI(Future)	7	1.93	195	5.5
Financial Aid: UI(Exhaust)	24	6.62	81	2.28

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

STUDENT ENROLLMENT BY PROGRAM: BERGEN

Program	Enrollment	% Total Enrollments
Home Health Aide	80	13.63
Administrative Medical Assistant	3	0.51
Clinical Medical Assistant	0	0
Billing & Coding	0	0
Certified Alcohol and Drug Counselor	0	0
Nursing Assistant	188	32.03
Community Health Worker	0	0
Computed Tomography	0	0
Dental Assistant	0	0
Dental Hygiene	10	1.70
Dental Radiography	0	0
Diagnostic Medical Sonography	13	2.21
EKG, Electrocardiogram, & Telemetry	26	4.43
EKG/Phlebotomy	80	1.63
EMT	0	0
Emergency Dispatcher	0	0
Health Sciences	0	0
Licensed Practical Nurse	0	0
MRI	0	0
Mammography	0	0
Massage Therapist	0	0
Occupational Therapy Aide	0	0
Patient Care Technician	45	7.67
Pharmacy Technician	8	1.36
Phlebotomy	25	4.26
Physical Therapy Aide	0	0

Program	Enrollment	% Total Enrollments
Radiology Technician	20	3.40
Registered Nurse Refresher	0	0
Respiratory Technician	2	0.34
Smart Start	45	7.67
Surgical Technician	42	7.15
Total	587	100.0

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

Note: This table reflects all enrollments; students may be enrolled in multiple programs.

NJ-PREP TAACCCT Evaluation

Summary of Implementation Activities Through Spring 2018

Brookdale Community College

This summary describes progress with grant implementation activities through spring of 2018 based on site visits conducted by Rutgers evaluators from February 2016 through February 2018. It also includes data on student characteristics and enrollments pulled from the NJ-PREP Consortium tracking system in July 2018.

Program Development

Brookdale sought to develop new programs and reform existing programs in several ways. The table below summarizes the new programs added and the curricular reforms made to existing programs. All programs added career development and job placement services through the job developer's role. A complete list of programs included in the grant, along with student enrollment data for each, appears at the end of this summary.

Program	Curriculum Reform	New Equipment
Certified Nursing Assistant	Stackable credential; part of PCT program.	Yes
Diagnostic Medical Equipment	Purchased equipment.	Yes
Massage Therapy	New program; 609 hours to certification offered through the Board of Bodyworks.	Yes
Patient Care Technician	New partnership with the Monmouth Medical Center; created a new lab near the Center, which offers clinicals; stackable credential; work-based learning.	Yes
Pharmacy Tech	Returning but enhanced program; extra class hours added to fit industry need; externship added; software simulation added; skills alignment; work-based learning	Yes

Equipment

The college now has new equipment for the PCT, Pharmacy Technician, and Medical Diagnostics programs. They also purchased a new EKG machine for the Medical Assisting program.

Smart Start

Initially the college did not have success with Smart Start and looked into running it through Raritan Valley's online program. The college eventually participated with Raritan Valley's online Smart Start program. Grant staff felt that more students would be interested because of the shortened format and their marketing and promotion. However, this effort will not be sustained.

EdReady

EdReady was already being used widely at Brookdale, including with boot camp students who were taking Accuplacer, high school students from Asbury Park who were dual-enrolled in college, and GED prep students. With TAACCCT, EdReady was used specifically in Medical Assisting and Pharmacy Technician programs to improve students' math skills. Grant staff were hoping to convince the college to fund EdReady after the grant because of its continued use among various groups at Brookdale. It is unclear whether the college will continue to pay for it, but there was continued discussion of other departments sharing the cost.

Credit Review

Grant staff have had discussions about the TESU credit review and PLA standards, but official progress on these issues at a college-wide level has been slow. They noted a difference between what they offer and what the Consortium approved through TESU. The college had been considering alternative strategies to connect noncredit and credit courses. For example, they are seeking to provide credit by finding noncredit courses that map onto credit coursework. This worked well in the case of medical terminology, a course that is required in almost all of their healthcare programs. Students who complete the noncredit medical terminology course can show proof to the registrar and receive credit as though they had taken it on the credit side.

Networking Sessions

The college offered formal networking sessions, but despite strong efforts to market them, student attendance was low. The networking session in April on résumé writing attracted four students, for example. Grant staff believed that the issue may have been related to the fact that the healthcare programs were scattered across multiple campuses. Staff did mention, however, that students network indirectly throughout their time in the programs. Additionally, job developers regularly visited classes to run sessions on job skills like résumé writing and interviewing, and these were counted as networking sessions as well. Job developers found that these in-class workshops encouraged students to come meet with them individually.

Job Development

Brookdale chose to retain their two job developers beyond the grant period. The college hired its second job developer in April 2016. The additional staff allowed for more hands-on assistance for students, helped build new relationships with employers, improved student outreach, and created opportunities for more class presentations about potential employment opportunities.

Employers visited classes to talk about jobs; students could apply on the spot, and employers could provide information about what they were looking for. Along with in-class workshops, staff also hosted meet-and-greets and workshops outside of the classroom that employers and students could attend. Twice a year in April and December, staff hosted a large job fair as well. Because of these engagements and the emphasis on continuing education, grant staff believed that they were ahead of the curve in employer outreach, especially because of the focus on adult returning students, dislocated workers, and minority students. Not much was done on apprenticeships and externships. Staff reported these areas were challenges because of bureaucratic requirements, and because students were not able to work in direct healthcare without first having certifications. Thus, there was not much enthusiasm from employers, and students in these roles ended up doing tasks that were menial or clerical rather than putting their specialized skills to use.

The site coordinator and job developer were very active in reaching out to students in classes and for individual meetings. The meetings involved both sharing jobs opportunities and organizing events. This was in conjunction with the grant's main focus: providing job development to students in the programs.

Employer Connections

Grant staff reported that developing employer relations in Monmouth County was not difficult. They reported that employers saw the college as a prominent source for healthcare employees in the county. As a result, they were eager to work with the school and often reached out to the college on their own. The job specialist alone spoke to 100 employers and was able to be selective about which employers they worked with most directly. Favored employers were often those who were the most responsive and best at hiring Brookdale students.

Staff worked to build relationships with employers. The college actively engaged with employers by developing new relationships and maintaining old ones. They recently developed a new relationship with Memorial Sloan Kettering Cancer Center in their new location in Monmouth County. They used their relationships to gather regular informal input on curriculum as well as to conduct more intentional outreach when necessary, such as when there were changes in industry exams or new ideas about soft skills. They regularly shared this information with each other at staff meetings. Staff expressed concern about wages and salaries, particularly relative to the cost of the programs.

Employers also attended networking events like job fairs and meet-and-greets. Some went into classrooms to talk to students about opportunities in their own workplace and to describe what their workplace is like.

When the job developers were approached by employers with jobs, they sent email blasts to students in the relevant programs. They also maintained a public job board.

Workforce System Connections

The college maintained a close and longstanding relationship with the local One-Stop. One of the job developers was partially paid by the workforce system and spent two days a week at the One-Stop in order to run presentations for potential students and host one-on-one meetings with them.

Student Demographics and Enrollments

The following tables present information on demographic characteristics and program enrollments among all students in the college's TAACCCT programs as reported through the Salesforce student tracking system as of July 2018. Information on the Consortium as a whole is included in the table to provide context for this information.

STUDENT DEMOGRAPHIC CHARACTERISTICS: BROOKDALE

Demographic Characteristics	College: N	College: Percent of Students	Consortium: N	Consortium: Percent of Students
Total Enrolled	253	NA	3542	NA
***Gender*: Female**	230	90.90	3020	85.41
***Gender*: Male**	23	9.09	516	14.59
***Ethnicity*: American Indian**	1	0.39	8	0.23
***Ethnicity*: Asian**	14	5.58	320	9.20
***Ethnicity*: Black/African American**	34	13.54	955	27.45
***Ethnicity*: Hawaiian/Pacific Islander**	1	0.39	11	0.32
***Ethnicity*: Hispanic/Latino**	35	13.94	724	20.81
***Ethnicity*: More than One Race/Other**	10	398	136	3.91
***Ethnicity*: White**	156	62.15	1325	38.09
Average Age (Years)	36.29	*	36.45	*
***Marital Status*: Married**	62	24.70	985	28.51
***Marital Status*: Not Married**	189	75.30	2470	71.49

Demographic Characteristics	College: N	College: Percent of Students	Consortium: N	Consortium: Percent of Students
Veteran Status	3	1.19	39	1.10
Disability Status	3	1.19	68	2.41
***Pre-enrollment Employment*: Incumbent Worker**	167	66.00	1911	55.60
Mean Hourly Wage for Incumbent Worker (Dollars)	$12.54	*	$12.57	*
***Financial Aid*: Pell**	50	19.76	390	11
***Financial Aid*: TANF**	1	0.39	125	3.52
***Financial Aid*: SNAP**	23	9.09	340	9.6
***Financial Aid*: Dislocated Worker**	2	0.79	151	4.26
***Financial Aid*: UI(Current)**	7	2.77	211	5.95
***Financial Aid*: UI(Future)**	6	2.37	195	5.5
***Financial Aid*: UI(Exhaust)**	17	*	81	2.28

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

STUDENT ENROLLMENT BY PROGRAM: BROOKDALE

Program	Enrollment	% Total Enrollments
Home Health Aide	179	16.20
Administrative Medical Assistant	1	0.09
Clinical Medical Assistant	28	2.53
Billing & Coding	59	5.34
Certified Alcohol and Drug Counselor	0	0
Nursing Assistant	176	15.93
Community Health Worker	0	0
Computed Tomography	0	0
Dental Assistant	78	7.06
Dental Hygiene	0	0
Dental Radiography	89	8.05
Diagnostic Medical Sonography	25	2.26
EKG, Electrocardiogram, & Telemetry	56	5.07
EKG/Phlebotomy	0	0
EMT	0	0
Emergency Dispatcher	0	0
Health Sciences	8	0.72
Licensed Practical Nurse	0	0
MRI	0	0
Mammography	0	0
Massage Therapist	26	2.35
Occupational Therapy Aide	0	0
Patient Care Technician	174	15.75
Pharmacy Technician	61	5.52
Phlebotomy	6	0.54
Physical Therapy Aide	48	4.34
Radiology Technician	0	0
Registered Nurse Refresher	91	8.23
Respiratory Technician	0	0
Smart Start	0	0
Surgical Technician	0	0
Total	1,105	100.0

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

Note: This table reflects all enrollments; students may be enrolled in multiple programs.

NJ-PREP TAACCCT Evaluation

Summary of Implementation Activities Through Spring 2018

County College of Morris

This summary describes progress with grant implementation activities through spring of 2018 based on site visits conducted by Rutgers evaluators from February 2016 through February 2018. It also includes data on student characteristics and enrollments pulled from the NJ-PREP Consortium tracking system in July 2018.

Program Development

The college developed new programs and reformed existing programs in several ways. The table below summarizes the new programs added and the curricular reforms made to existing programs. All programs added career development and job placement services through the job developer's role. A complete list of programs included in the grant along with student enrollment data for each appears at the end of this summary. The college focused on marketing to increase enrollments, such as using social media (under the direction of a staff person) to facilitate outreach.

Program	Curriculum Reform	New Equipment
Certified Drug and Alcohol Counselor	Returning program; externship added; developing pathway to AAS degree and articulation agreement with Thomas Edison; looking to accelerate. *No longer offering because it takes 18 months to complete.*	No
Certified Nursing Assistant	Returning program but expanded to accommodate more students; developing pathway to AAS degree and articulation agreement with Thomas Edison.	No
Home Health Aid	New program; developing pathway to AAS degree and articulation agreement with Thomas Edison.	No
Medical Billing and Coding	Returning program; updated to fit industry need with CCS certification; externship added; developing pathway to AAS degree and articulation agreement with Thomas Edison.	No
Mental Health First Aid, certified Peer Recovery Specialist and Addiction Recovery Volunteer	New programs; job developer was trained as an MHFA trainer and is offering the course.	No

The college is developing an AAS Health Sciences degree that all noncredit healthcare programs would articulate into. The Health and Natural Sciences Department staff has been leading its development and are moving the proposed degree through college- and state-level approvals. They planned to have this degree considered by the curriculum committee and for it to articulate to a bachelor's degree at Thomas Edison State College to address concerns about the transferability of credits articulated from noncredit programs at other colleges. At the time of the last interview, the college was working on completing the last step of documenting the need for the degree in the labor market. College administrators were still working to justify the need for the degree and its value in terms of employment.

Equipment

Morris did not make any large equipment purchases, but rather bought smaller materials for existing simulation labs. For example, the Home Health Aide course purchased a scale, slide board, and sitz bath, as well as disposable supplies. Additionally, the TAACCCT programs purchased laptops for running Smart Start and EdReady in the classroom and for use in the Medical Billing and Coding course.

The programs relied on employer partners for equipment, as they had limited access to the Nursing program facility during the school year. One of the local hospitals allowed the school to use its facilities as a working lab and long-term clinical site.

Smart Start

Smart Start was offered to students during orientation before they enrolled in a TAACCCT program. The course was about 18 to 24 hours and was mainly an opportunity for students to gauge their interest in the programs offered and learn about careers in health care. It also covered computer basics and included opportunities to earn certifications in medical terminology, CPR, and anatomy and physiology. The college was working to adapt Smart Start to fit the needs of their students by adding instruction on interview and résumé skills.

Despite the efforts to develop Smart Start, it was difficult to encourage students to take the optional course. The college ran two in-person Smart Start sessions, each attended by seven students. One challenge to enrollment was the time commitment involved, especially for students with transportation difficulties or who were working part or full time. In addition, teaching Smart Start was sometimes challenging for instructors since students came to the course with a wide range of prior knowledge and skills. Staff considered whether to shorten the classroom-based version of the course or offer it on weekends to enroll more students.

Morris also offered four rounds of Raritan's online version of the course, but they did not see an increase in enrollment numbers, and completion rates fell dramatically. Of the six students who enrolled in the online course, only 2-3 completed it.

EdReady

At Morris, students were asked to use EdReady in the beginning of the Smart Start course, but staff reported that students were confused by it. The goal was to help incoming and current noncredit students increase their basic math skills. The site administrator had been working with EdReady on this issue.

The grant staff explored the possibility of continuing to use EdReady, but other departments were not interested in using it, or in sharing its cost, after the grant period was over. Many in the math department decided to use Pearson instead because the cost could be included in students' tuition.

Credit Review

The college was not clear on how Consortium efforts to have noncredit-to-credit programs reviewed by Thomas Edison State College will impact their programs. The college planned a networking session for the CNA program that covered noncredit-to-credit transition and the Thomas Edison State College credit review program.

The college, per its strategic enrollment plan, worked to integrate noncredit and credit programs to enroll more students from lower income and minority populations, as well as to provide better academic support and services to all students. Further, college staff sought to develop the capacity for noncredit students to receive federal financial aid.

Morris's new strategic plan prioritized adult learners, so there was more interest in PLA at the college than at many other schools. There is currently a PLA policy that includes established practices for giving credit with an industry exam, but it is rarely used. The PLA is administered by each department, with department chairs and division deans responsible for determining the appropriate number of credits to award.

Networking Sessions

The college hosted several networking sessions that covered topics such as volunteerism. The sessions attracted 44 students, with 27 of them being TAACCCT students. College staff reported that it was challenging to get students to attend; students often said they would attend but then did not show up. To better market these events, staff attempted to increase social media outreach with the help of communications staff. They also used emails, phone calls, and Eventbrite. Additionally, they reached out to both current and former students and to community and employer partners. They hoped that by inviting partners, they would build better relationships and provide better networking opportunities.

The community was particularly engaged in these sessions, which provided opportunities for community members to look at the college as a place for training. Alumni have not returned to these sessions in significant numbers. However, grant staff were planning a review, preparation, and speed networking session in the fall specifically for alumni.

One planned networking session would address Translating Credentials into Credit. All health program students would be invited. Another session, planned for June, will focus on suicide awareness. At the time of the interview, 35 people were signed up – 7 students and 28 community partners. Another networking session, which covered Volunteerism as an Enhancement for the Job Search, was sparsely attended. The college also held speed networking sessions.

Job Development

Staff at Morris focused on creating networking opportunities for students. The college hosted speed networking and mini job fairs specifically for TAACCCT students. These events were successful, but staff found that the college's larger, non-industry-specific, biannual career fairs were very fruitful for grant students. Speed networking events, where each student had an opportunity to talk to each employer for five minutes, were held frequently when it was established that they were popular among employers – even those who had not been involved with TAACCCT in the past.

In addition, the college hired an instructor for externship classes on a per-student basis. The instructor helped students make more connections within the industry and obtain externships or jobs. Because health care is different from other industries due to the need for clinical hours, externships are viewed as important.

The staff found it challenging to obtain employment information because student response to follow up attempts was sparse. Recently, staff were trying to get these data through a survey of students. The college also encouraged instructors to ask students for employment information when students checked back with instructors after program completion. (Often instructors hear from former students, but they do not ask about wage, start date, and other employment details.)

The job developer facilitated the employment process by sending employers a vetted group of students. They also recommend employers to students according to the employer's level of professionalism, thereby guiding students away from those who cut corners or have questionable ethical practices.

Employer Connections

Employer connections were developed mainly by staff attending county networking events and following leads through instructors. Grant staff also worked with the career services department, women's center, and independent nonprofits in order to develop employer relations. Sustaining relationships involved regular meetings, phone calls, and emails, as well as employer participation on the advisory board. Using spreadsheets, staff tracked employers with the help of the job developer and the externships coordinator, as well as with lead instructors. (The job developer alone worked with about fifty employers.) The staff prioritized working with employers who were the most professional and offered the best environments for students to work in. Employers began reaching out to grant staff when they had open positions, especially for CNA students – there were around thirty employers that would hire CNAs from

Morris whenever CNAs become available. Medical Billing and Coding was harder to break into with employers, but it became easier as the program developed and, more employers joined the industry advisory board.

Additionally, the college organized separate advisory boards for their various programs to more easily discuss curriculum and credentials and to allow for a much deeper connection with the employers and community. There were about thirty employers on the advisory boards for healthcare programs. Moreover, the staff were working to build strong partnerships with employers who are interested in helping to pay for student tuition, which would aid in the sustainability of the programs.

The college tried to get employers more involved in supporting programs through offering tuition reimbursement. This is a major goal for the college with their CNA program. They found three employers who were willing to pay back graduates for the cost of their tuition once employed. The job developer conducted a lot of outreach to find employers who were willing to be partners and provide this support for students in exchange for accessing a more stable workforce.

Workforce System Connections

The site coordinator was part of the workforce board's community partners group, which was a group that created partnerships with low-income individuals. However, the school received few referrals from the workforce system and found that their local workforce system was usually more interested in getting their clients re-employed in their current field than in reskilling them for a new field. Toward the end of the grant period, Morris made some progress with workforce connections because of new leadership at the local One-Stop. Morris began to get its programs listed in workforce resources with more detailed information, and the two groups started exploring more possibilities for coordination.

Student Demographics and Enrollments

The following tables present information on demographic characteristics and program enrollments among all students in the college's TAACCCT programs as reported through the Salesforce student tracking system as of July 2018. Information on the Consortium as a whole is included in the table to provide context for this information.

STUDENT DEMOGRAPHIC CHARACTERISTICS: MORRIS

Demographic Characteristics	College: N	College: Percent of Students	Consortium: N	Consortium: Percent of Students
Total Enrolled	253	NA	3542	NA
***Gender:* Female**	130	83.33	3020	85.41
***Gender*: Male**	26	16.67	516	14.59
***Ethnicity:* American Indian**	0	0	8	0.23
***Ethnicity:* Asian**	13	8.33	320	9.20
***Ethnicity*: Black/African American**	24	15.38	955	27.45
***Ethnicity*: Hawaiian/Pacific Islander**	0	0	11	0.32
***Ethnicity:* Hispanic/Latino**	26	16.67	724	20.81
***Ethnicity:* More than One Race/Other**	4	2.56	136	3.91
E*thnicity:* White	89	57.05	1325	38.09
Average Age (Years)	44.34	*	36.45	*
***Marital Status*: Married**	41	27.52	985	28.51
***Marital Status:* Not Married**	108	72.48	2470	71.49
Veteran Status	1	0.64	39	1.10
Disability Status	10	6.41	68	2.41
***Pre-enrollment Employment:* Incumbent Worker**	82	52.56	1911	55.60
Mean Hourly Wage for Incumbent Worker (Dollars)	$13.71	*	$12.57	*
***Financial Aid*: Pell**	12	7.69	390	11
***Financial Aid*: TANF**	4	2.56	125	3.52
***Financial Aid*: SNAP**	15	9.62	340	9.6
***Financial Aid*: Dislocated Worker**	7	4.49	151	4.26
***Financial Aid*: UI(Current)**	8	5.13	211	5.95
***Financial Aid*: UI(Future)**	7	4.49	195	5.5
***Financial Aid*: UI(Exhaust)**	20	1	81	2.28

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

STUDENT ENROLLMENT BY PROGRAM: MORRIS

Program	Enrollment	% Total Enrollments
Home Health Aide	22	13.84
Administrative Medical Assistant	0	0
Clinical Medical Assistant	0	0
Billing & Coding	58	36.48
Certified Alcohol and Drug Counselor	29	18.24
Nursing Assistant	50	31.45
Community Health Worker	0	0
Computed Tomography	0	0
Dental Assistant	0	0
Dental Hygiene	0	0
Dental Radiography	0	0
Diagnostic Medical Sonography	0	0
EKG, Electrocardiogram, & Telemetry	0	0
EKG/Phlebotomy	0	0
EMT	0	0
Emergency Dispatcher	0	0
Health Sciences	0	0
Licensed Practical Nurse	0	0
MRI	0	0
Mammography	0	0
Massage Therapist	0	0
Occupational Therapy Aide	0	0
Patient Care Technician	0	0
Pharmacy Technician	0	0
Phlebotomy	0	0
Physical Therapy Aide	0	0
Radiology Technician	0	0
Registered Nurse Refresher	0	0
Respiratory Technician	0	0
Smart Start	0	0
Surgical Technician	0	0
Total	159	100.0

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

Note: This table reflects all enrollments; students may be enrolled in multiple programs.

NJ-PREP TAACCCT Evaluation

Summary of Implementation Activities Through Spring 2018

Essex County College

This summary describes progress with grant implementation activities through spring of 2018 based on site visits conducted by Rutgers evaluators from February 2016 through February 2018. It also includes data on student characteristics and enrollments pulled from the NJ-PREP Consortium tracking system in July 2018.

Program Development

Essex developed new programs and reformed existing programs in several ways. The table below summarizes the new programs added and the curricular reforms made to existing programs. All programs added career development and job placement services through the job developer's role. A complete list of programs included in the grant along with student enrollment data for each appears at the end of this summary.

Program	Curriculum Reform	New Equipment
Certified Nurse Aid	Provided workshops including Smart Start; added Community Health Worker curriculum.	No
Medical Assistant (CCMA)	Integrated workshops from Smart Start.	No
Patient Care Technician	Integrated workshops from Smart Start.	No

Equipment

Essex did not add any new equipment to their programs.

Smart Start

Essex does not run an official Smart Start program but worked to incorporate aspects of the Smart Start curriculum into their programs. These included workshops such as Résumé Writing, Dress for Success, and Cover Letter Writing. Essex staff did not feel that running a separate four-week Smart Start program would work with their courses because the timeframe was too long. The integrated Smart Start offerings at Essex will continue post-grant.

EdReady

Essex acquired EdReady in September 2016 and allowed all students at the college to access the program for skills prep. The program was used by TAACCCT students and by students at the college studying for their high school equivalency exam. Essex would have preferred an EdReady program that focuses on reading skills, but that is not offered yet. The college also offered EdReady to EOF and to students who were interested in TAACCCT programs but who had not yet enrolled in one.

Credit Review / Noncredit-to-Credit Articulation

Training, Inc. (the noncredit division at Essex where the TAACCCT grant is housed) worked throughout the grant period with the college's Nursing department to develop articulation pathways to credit for their programs. They were interested in creating pathways for a variety of their healthcare credentials including CNA, CCMA, and PCT to the LPN and RN programs. Due to changes in administration and financial constraints, this work was put on hold toward the end of the grant.

Networking Sessions

Networking sessions were run by a grant support staff person who worked part-time at the college. She had experience running training sessions and did similar work in the healthcare field as a consultant. She ran two networking sessions each year. The networking sessions were about two hours long and were incorporated into regular classes. As such, they occurred in the evening when the TAACCCT classes met. In 2016, the first networking session addressed customer service, and the second addressed disabilities. In 2017, both sessions were about customer service. The customer service curriculum is available on SkillsCommons. The person who ran the networking sessions left the college about halfway through the final grant year, and no new networking sessions were offered after that.

Job Development

Essex had multiple people in the job developer role providing career advising to students. Career advising services were an important part of the program and began at orientation. The job developers spoke with students throughout the year and had a formal interaction with each one about a month prior to the end of each course, when they visited classrooms and held individual meetings with students on résumé and interview preparation. They visited the classes again in the last week or two to remind students of the services they provided, and when students completed their certificates, the job developers began to send them job openings.

Job developers also met with students individually through appointments and as walk-ins. In these one-on-one meetings, the job developers would typically go over students' résumés, talk about their career goals, and determine whether there were any barriers to employment. They would typically meet with students individually two to three times during their course. The first meeting was usually a half hour long and focused on the student's history and future goals. The job developer also helped the student with job interview preparation or

suggested that practicing with someone close to them. They then worked to connect students to jobs, many of which came from employers in their network. The college used Salesforce to track student employment and communicate with students. College staff also followed up with students about taking industry certification tests after they completed their coursework at the college. The job developer role will be sustained post-grant.

Employer Connections

Connecting with employers was a priority at Essex. This work was primarily conducted by the job developers, but instructors and other staff also made some of these connections. Essex connected with employers in a variety of ways including phone calls, campus visits, and advisory board meetings. New connections were often made by attending outside job fairs, networking events, and open houses as well as through cold calls.

The employer advisory board met every quarter. At the start of the grant, the college invited the board (made up of 10 to 15 employers) to visit the Essex campus for lunch. Toward the end of the grant, the school reworked these meetings into conference calls to make them easier for employers to attend.

Advisory board meetings were opportunities for discussion on various topics, including updates to the program, challenges and concerns, changes in various employment sectors, and potential new curriculums. Sometimes staff used these meetings to introduce students and alumni of the program to employers.

Keeping track of employer connections was essential for the college. Prior to the grant, this work was done using binders and Excel spreadsheets. The college moved this directory into Salesforce during the grant, which they found useful.

Other ways Essex connected with employers included externships, clinicals, and internships. Essex offered externships for the CCMA program and clinicals for the PCT and CNA programs. Students were often hired as a direct result of these work-experience opportunities, especially in the case of externships. Essex worked with 50 clinical sites for the PCT program and more than 35 sites for the CNA program.

Essex ran job fairs for students, but the college only invited employers who were hiring at the time. The last in-house job fair attracted 500 TAACCCT and non-TAACCCT students. Healthcare employers were represented along with employers from other industries. Students were introduced to employers at the job fair, and some were hired.

Employers were also included in college events, such as graduations, so they could meet students. If the employers were available to come to campus, staff would take them to the classrooms to speak to students.

Workforce System Connections

The college (and specifically Training, Inc.) have a long-standing relationship with the county workforce systems and job centers. Staff at Training, Inc. described the relationship as strong and noted that they often referred people back and forth. Additionally, the director of training sat on the local workforce development boards and the local One-Stop board. Two Essex staff members also sat on the workforce boards. Collaboration with the workforce system continued to be strong at the time of our last contact; this is specifically important for future grant applications. TAACCCT was helpful to the workforce center staff because it allowed them to serve clients they could not serve with other funds.

Student Demographics and Enrollments

The following tables present information on demographic characteristics and program enrollments among all students in the college's TAACCCT programs as reported through the Salesforce student tracking system as of July 2018. Information on the Consortium as a whole is included in the table to provide context for this information.

STUDENT DEMOGRAPHIC CHARACTERISTICS: ESSEX

Demographic Characteristics	College: N	College: Percent of Students	Consortium: N	Consortium: Percent of Students
Total Enrolled	334	NA	3542	NA
Gender: Female	287	86.19	3020	85.41
Gender: Male	46	13.81	516	14.59
Ethnicity: American Indian	1	0.30	8	0.23
Ethnicity: Asian	14	4.24	320	9.20
Ethnicity: Black/African American	243	73.63	955	27.45
Ethnicity: Hawaiian/Pacific Islander	2	0.60	11	0.32
Ethnicity: Hispanic/Latino	54	16.36	724	20.81
E*thnicity:* More than One Race/Other	7	2.12	136	3.91
Ethnicity: White	9	2.72	1325	38.09
Average Age (Years)	36.05	*	36.45	*
Marital Status: Married	91	27.74	985	28.51
Marital Status: Not Married	237	72.26	2470	71.49
Veteran Status	1	0.3	39	1.10
Disability Status	4	1.2	68	2.41
Pre-enrollment Employment: Incumbent Worker	191	*	1911	55.60
Mean Hourly Wage for Incumbent Worker (Dollars)	$11.50	*	$12.57	*
Financial Aid: Pell	36	10.78	390	11
Financial Aid: TANF	18	5.39	125	3.52
Financial Aid: SNAP	53	15.87	340	9.6
Financial Aid: Dislocated Worker	8	2.40	151	4.26
Financial Aid: UI(Current)	11	3.29	211	5.95
Financial Aid: UI(Future)	5	1.5	195	5.5
Financial Aid: UI(Exhaust)	10	2	81	2.28

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

STUDENT ENROLLMENT BY PROGRAM: ESSEX

Program	Enrollment	% Total Enrollments
Home Health Aide	0	0
Administrative Medical Assistant	0	0
Clinical Medical Assistant	177	40.41
Billing & Coding	0	0
Certified Alcohol and Drug Counselor	0	0
Nursing Assistant	109	24.88
Community Health Worker	0	0
Computed Tomography	0	0
Dental Assistant	0	0
Dental Hygiene	0	0
Dental Radiography	0	0
Diagnostic Medical Sonography	0	0
EKG, Electrocardiogram, & Telemetry	0	0
EKG/Phlebotomy	0	0
EMT	0	0
Emergency Dispatcher	0	0
Health Sciences	0	0
Licensed Practical Nurse	0	0
MRI	0	0
Mammography	0	0
Massage Therapist	0	0
Occupational Therapy Aide	0	0
Patient Care Technician	50	11.4
Pharmacy Technician	0	0
Phlebotomy	3	0.68
Physical Therapy Aide	0	0
Radiology Technician	0	0
Registered Nurse Refresher	0	0
Respiratory Technician	0	0
Smart Start	99	22.60
Surgical Technician	0	0
Total	438	100.0

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

Note: This table reflects all enrollments; students may be enrolled in multiple programs.

NJ-PREP TAACCCT Evaluation

Summary of Implementation Activities Through Spring 2018

Hudson County Community College

This summary describes progress with grant implementation activities through spring of 2018 based on site visits conducted by Rutgers evaluators from February 2016 through February 2018. It also includes data on student characteristics and enrollments pulled from the NJ-PREP Consortium tracking system in July 2018.

Program Development

The college developed new programs and reformed existing programs in several ways. The table below summarizes the new programs added and the curricular reforms made to existing programs. All programs added career development and job placement services through the job developer's role. A complete list of programs included in the grant along with student enrollment data for each appears at the end of this summary.

During the grant, the college shortened their CNA course and developed new programs: PCT, Phlebotomy, and EKG. In the final year of the grant, they also began to develop a Dialysis program by creating a curriculum and identifying an instructor. Some interest was expressed during the final site visit in developing a drug and alcohol counseling program, but this was not completed by the end of the grant. At the same site visit, there was also mention of changing some program schedules, like shortening the CNA program from nine weeks to five or six weeks.

Over the course of the grant, the college stopped running a few programs. Home Health Aide was no longer offered. (It was previously run by an outside provider.) Pharmacy Technician was canceled because the course did not fill. Additionally, Phlebotomy and EKG were no longer offered as stand-alone courses because of lack of space. The college would like to use the Community Health Worker curriculum purchased through the grant at some point.

Program	Curriculum Reform	New Equipment
Certified Nursing Assistant	Shortened the program. Hired new instructor with the Nursing program's input.	No
Clinical Medical Assisting	Curriculum has not been changed.	No
EKG	New program. A new classroom was built allowing for more sections and hands-on learning with new equipment.	Yes
Home Care Module (combination of CNA and CHHA)	Curriculum has not been changed.	No
Medical Administrative Assistant	Curriculum has not been changed.	No
Pharmacy Technician	Stopped using a third party to provide instruction.	No
Phlebotomy	New program; added a classroom for more sections; added new equipment for increased hands-on learning.	Yes

Equipment

Hudson used the grant to acquire new equipment and renovate a room for its noncredit programs. Equipment purchased included two hospital beds, two EKG tables, EKG machines, a phlebotomy table, phlebotomy arms, locking storage cabinets, sinks, carts, chairs and manikins. They also purchased consumables for the equipment as well as laptops and a printer.

There is now dedicated space for noncredit programs, and the new space offers more flexibility in when and how many classes can be offered.

Smart Start

At Hudson, Smart Start was geared toward Nursing students. The Nursing department saw that incoming freshmen needed help with math and medical terminology, so the college developed its Smart Start course around these topics. The class was required and was given to first-time Nursing students at the start of the program in 2016. Hudson piloted another Smart Start course – an introduction to healthcare careers – for Job Corps students from Jersey City.

EdReady

EdReady was used by the general college population for math review and assistance.

Credit Review / Noncredit-to-Credit Articulation

Hudson does not currently have any articulation agreements between its noncredit and credit health programs, although some students did make the transition from noncredit programs to credit-bearing RN or LPN programs. They often did this by taking credit-bearing courses concurrent with their noncredit courses. Some credit students also took noncredit courses to gain a new form of expertise.

Networking Sessions

As of May 2017, Hudson had run seven networking sessions. The sessions were titled Conducting a Strategic Job Search and Time Management. Students were notified about the sessions through an email from the job developer. The sessions were offered free of charge, and attendance was voluntary. Staff noted that students provided positive feedback about these sessions. The new job developer began running the networking sessions herself during the few months she was employed at the college. At the end of the grant, instructors and the site coordinator were working together to help with résumé writing and interview skills in class.

Job Development

The college hired a new job developer to handle employer relations and job placement in the winter of 2017. She was experienced in the field and came from a for-profit school. However, she only stayed in the job for a few months. After that job developer left, the college did not hire another replacement. Instead, the site coordinator began doing some of the work that had been assigned to this role.

Employer Connections

Both job developers, and later the site coordinator, worked to develop and strengthen employer partnerships. They attended events, job fairs, and meetings with the New Jersey Healthcare Network. They also contacted employers via telephone and email.

The site coordinator took on job developing duties in the final year of the grant. She worked to engage new employers for student placements. She had employers come to classrooms to meet students and hire from there. Her goal was to make very strong connections with a few employers, rather than to engage lots of employers in small ways.

Workforce System Connections

Hudson had an existing relationship with the local workforce system prior to the grant, and the two systems are in constant communication–. Communication is especially frequent between the college and the job centers in Hudson and Jersey City. College staff sit on the local Workforce Investment Board.

The site coordinator had already established a good relationship with the staff at the workforce center prior to the grant, through her previous work as a coordinator with the college's Hospitality program. She visited the workforce center weekly, where she and the workforce staff worked together on funding and student recruitment.

Student Demographics and Enrollments

The following tables present information on demographic characteristics and program enrollments among all students in the college's TAACCCT programs as reported through the Salesforce student tracking system as of July 2018. Information on the Consortium as a whole is included in the table to provide context for this information.

STUDENT DEMOGRAPHIC CHARACTERISTICS: HUDSON

Demographic Characteristics	College: N	College: Percent of Students	Consortium: N	Consortium: Percent of Students
Total Enrolled	186	NA	3542	NA
Gender: **Female**	161	86.56	3020	85.41
Gender**: Male**	25	13.44	516	14.59
Ethnicity**: American Indian**	1	0.55	8	0.23
Ethnicity**: Asian**	24	13.11	320	9.20
Ethnicity**: Black/African American**	67	36.61	955	27.45
Ethnicity: **Hawaiian/Pacific Islander**	1	0.55	11	0.32
Ethnicity: **Hispanic/Latino**	57	31.15	724	20.81
Ethnicity**: More than One Race/Other**	7	3.82	136	3.91
Ethnicity**: White**	26	14.2	1325	38.09
Average Age (Years)	35.78	*	36.45	*
Marital Status: **Married**	67	37.85	985	28.51
Marital Status: **Not Married**	110	62.15	2470	71.49
Veteran Status	1	0.54	39	1.10
Disability Status	0	0	68	2.41
Pre-enrollment Employment: **Incumbent Worker**	86	46.24	1911	55.60

Demographic Characteristics	College: N	College: Percent of Students	Consortium: N	Consortium: Percent of Students
Mean Hourly Wage for Incumbent Worker (Dollars)	$15.75	*	$12.57	*
***Financial Aid*: Pell**	27	14.52	390	11
***Financial Aid*: TANF**	5	2.89	125	3.52
***Financial Aid*: SNAP**	25	13.44	340	9.6
***Financial Aid*: Dislocated Worker**	4	2.15	151	4.26
***Financial Aid*: UI(Current)**	8	4.3	211	5.95
***Financial Aid*: UI(Future)**	1	0.54	195	5.5
***Financial Aid*: UI(Exhaust)**	3	1.61	81	2.28

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

STUDENT ENROLLMENT BY PROGRAM: HUDSON

Program	Enrollment	% Total Enrollments
Home Health Aide	16	6.56
Administrative Medical Assistant	8	3.28
Clinical Medical Assistant	0	0
Billing & Coding	7	2.87
Certified Alcohol and Drug Counselor	0	0
Nursing Assistant	131	53.69
Community Health Worker	0	0
Computed Tomography	0	0
Dental Assistant	0	0
Dental Hygiene	0	0
Dental Radiography	0	0
Diagnostic Medical Sonography	0	0
EKG, Electrocardiogram, & Telemetry	12	4.92
EKG/Phlebotomy	0	0
EMT	0	0
Emergency Dispatcher	0	0
Health Sciences	0	0
Licensed Practical Nurse	0	0
MRI	0	0
Mammography	0	0
Massage Therapist	0	0
Occupational Therapy Aide	0	0
Patient Care Technician	0	0
Pharmacy Technician	5	2.05
Phlebotomy	8	3.28
Physical Therapy Aide	0	0
Radiology Technician	0	0
Registered Nurse Refresher	0	0
Respiratory Technician	0	0
Smart Start	59	24.18
Surgical Technician	0	0
Total	244	100.0

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

Note: This table reflects all enrollments; students may be enrolled in multiple programs.

NJ-PREP TAACCCT Evaluation

Summary of Implementation Activities Through Spring 2018

Mercer County Community College

This summary describes progress with grant implementation activities through spring of 2018 based on site visits conducted by Rutgers evaluators from February 2016 through February 2018. It also includes data on student characteristics and enrollments pulled from the NJ-PREP Consortium tracking system in July 2018.

Program Development

The college developed new programs and reformed existing programs in several ways. The table below summarizes the new programs added and the curricular reforms made to existing programs. All programs added career development and job placement services through the job developer's role. A complete list of programs included in the grant along with student enrollment data for each appears at the end of this summary.

Program	Curriculum Reform	New Equipment
Certified Home Health Aide	New program; offering as a 10-hour CNA add-on course.	No
Certified Nurse Aid	Accelerated program: 3-month program converted to 7 weekends.	Yes
EKG	50-hour program; stackable with PCT.	Yes
Medical Billing and Coding Program	Shortened program from 12 courses in 1.5 – 2 years to 5 courses in 6 – 8 months; removed outdated courses.	NA
Patient Care Technician	New program; stackable credential with EKG and Phlebotomy, all can be completed in 6.5 months or less.	Yes
Pharmacy Technician	Accelerated program; converted 600-hour program to 300 hours.	Yes
Phlebotomy Technician	Industry alignment; added 80-hour externship; worked closely with LabCorp and Robert Wood Johnson.	Yes

Mercer developed a partnership with Amazon to offer many of these training programs for their workers at a local warehouse as a benefit. The college worked to integrate certification testing into its classes; students would take the test at the end of the course as if it was the final exam.

Equipment

The college purchased new equipment for their Pharmacy Technician, CNA, Phlebotomy, and EKG programs. This purchase allowed them to improved their labs on their main campus and to offer programs at their urban location in Trenton in order to make these programs more accessible to an economically disadvantaged area. This equipment included a bed, manikins, and supplies for the CNA program; a practice arm for the Phlebotomy program; and computers and software for the Pharmacy Technician program. The EKG program was able to purchase all the equipment it needed except for a patient table. The Pharmacy Technician program is using its new Abacus software to practice printing out labels and prescriptions. College staff reported that the equipment dramatically improved the quality of their programs, which in turn helped draw more students to the school.

Smart Start

The Smart Start program initially ran for four weeks, 7 hours a day, about 4 days a week. The course was offered from 9 AM to 4 PM for a total of 120 hours. The college combined the EdReady course with the Smart Start class. The college later offered Smart Start through Raritan Valley's online program, which was two weeks long. The students preferred that length, so the college redesigned its in-person courses to be two weeks long as well. However, it is unlikely Mercer will continue to offer this program after the grant.

EdReady

Before the grant, the college used EdReady as a bridge program to help high school students build their reading and writing skills. Because the EdReady program was already being used and was paid for through the college's account, Mercer did not need to go through a lot of approvals and justifications to begin using the program, and it was easier to transition EdReady for noncredit use. Also, the testing center provided EdReady on its website to allow prospective students to practice their skills, which made it readily available to noncredit students without requiring a special program.

Mercer used EdReady in its Smart Start and Pharmacy Technician programs. EdReady was beneficial for the math portion of Pharmacy Tech, where it was used to help students develop basic skills, gain confidence, and transition from Smart Start into their certificate programs. Even when EdReady was not officially a part of the course, instructors promoted its use to students. The school also promoted EdReady to its students at the Amazon warehouse. Despite it having been available at Mercer prior to the grant, it remains unclear whether the college will continue to use EdReady post-grant.

Credit Review

Overall, there is recognition within the college of the importance of noncredit programming for the goals of the college and for serving the community. The college does not have a plan to implement the TESU credits; rather, it is waiting to see what happens with this form of articulation at other schools, and it will then consider how the credits might fit in with its PLA

policy. Prior to the grant, some arrangements existed to translate courses from noncredit to credit. Currently, there is activity within credit–noncredit links in terms of moving credit students into noncredit programs to help them build job skills while attending school. The CNA and Phlebotomy Technician noncredit programs articulate credits towards an AAS degree in Allied Health. However, based on our focus group, some students may not be aware of this, and others are more interested in getting credits towards a Nursing degree.

Though some departments have their own PLA processes, Mercer does not have an official PLA policy in place at the college level. However, senior leadership sees PLA as a part of guided pathways, which is a priority for the college. The school is currently reviewing guided pathways policy so all students, in any part of the college, can be counseled on their potential educational and career pathways. The noncredit division is valued both as a source of future students for programs on the credit side of the college and as a key support for students struggling in its credit-bearing programs.

Networking Sessions

Mercer offered 11 networking sessions. One topic, Hidden Disabilities, was based on an existing workshop developed by Bergen. It featured a guest from the credit side who spoke about disabilities that are not immediately obvious. Staff at the college developed their own networking session on the topic of Humor in the Workplace, for which they contacted healthcare employers and asked them to present about humor in the profession and where to draw the line. This lesson plan has been uploaded to OER. They also conducted a networking session run by a local healthcare employer, Critical Thinking and Goal Making, which covered topics like tips for employment, details about the speaker's workplace, and what the speaker looks for in potential employees. Mercer staff invited employers to speak at networking sessions on a quarterly basis. Other sessions they offered included a Résumé Writing Workshop, a session on Interviewing Skills, and a discussion of Next Steps in the College/Career Path. They also did a networking session about how to search for a job with their Amazon warehouse students in February. Many topics were picked from SkillsCommons, with additional topics built off of what is available there.

The placement counselor used slideshow presentations with notes printed for the students and brought examples of résumé and cover letter formats. The networking sessions were advertised with flyers.

Job Development

The college faced several challenges in filling its job developer position, both in terms of difficulties in initially hiring and in staff turnover once the position was filled. The site coordinator filled in for the job developer as much as possible during the interim periods. The job developer's role was to share information about career options; make sure students were prepared for employment; help students with applications, résumés, interviews, and reference sheets; and follow up with students to see whether they were employed. The job developer was also expected to visit about 10 new employers per week, to maintain existing employer relationships, and to develop connections with new employers.

The job developer and the recruiter had little success with student outreach efforts. To assuage this, they attended classes to give presentations, and they allocated time to meet with students. Overall, the college encountered difficulties with student follow-up after the program; as a result, instances of employment may be underreported at Mercer. It was evident that students did not want jobs that had poor salaries, and that they needed more advisement about the nature of the jobs they were training for before enrolling in the programs.

Employer Connections

Through the grant, Mercer sought to involve employers in a variety of ways. They gathered information about employer needs and incorporated them into the curriculum. For example, they worked closely with LabCorp and the Robert Wood Johnson University Hospital to revise the curriculum for the phlebotomy externship. Employers were invited to speak at a networking session about their company and how to be hired there. Some programs, including Phlebotomy and CNA, required clinicals and externships. Some employers contacted the college about openings, and grant staff shared this information with students and instructors. The college did not have a formal system to track employer contacts, but they discussed the employers they met with each week at their staff meeting.

The college had existing relationships and built new relationships with several large local employers during the grant period. Mercer has a formal agreement with St. Lawrence Rehabilitation Center that states the Center will support the tuition of potential CNA students and hire them for at least a year. It also has strong relationships with Robert Wood Johnson and St. Francis Medical Center, including externships and job placement. The school is also building relationships with Quest Diagnostics, local pharmacies, Walgreens, and CVS. Mercer has a notable relationship now with Amazon, which is allowing their employees to take any classes, including those in health professions. During the grant period, Mercer held information sessions at the Amazon warehouse for Amazon employees and saw great interest. They offered a variety of their programs at Amazon for their employees, often over weekends.

Workforce System Connections

Mercer historically had a good relationship with the local One-Stop. Through the grant, they built on this relationship and increased communication. College staff reached out to the local One-Stop every semester to meet and share information on upcoming information sessions, classes, and networking sessions. They also went to the One-Stop to make presentations and share information with One-Stop counselors. The college reported that the number of referrals from the local One-Stop increased during the grant period. One challenge in getting referrals was that the One-Stops require students to score at the ninth-grade level on the TABE to fund their training. The college proposed using Smart Start to help prospective students get to this basic skill level so they can enroll in training with One-Stop support.

Student Demographics and Enrollments

The following tables present information on demographic characteristics and program enrollments among all students in the college's TAACCCT programs as reported through the Salesforce student tracking system as of July 2018. Information on the Consortium as a whole is included in the table to provide context for this information.

STUDENT DEMOGRAPHIC CHARACTERISTICS: MERCER

Demographic Characteristics	College: N	College: Percent of Students	Consortium: N	Consortium: Percent of Students
Total Enrolled	407	NA	3542	NA
***Gender*: Female**	351	86.45	3020	85.41
***Gender*: Male**	55	13.55	516	14.59
***Ethnicity:* American Indian**	1	0.25	8	0.23
***Ethnicity:* Asian**	67	17.00	320	9.20
***Ethnicity:* Black/African American**	142	36.04	955	27.45
***Ethnicity*: Hawaiian/Pacific Islander**	1	0.25	11	0.32
***Ethnicity:* Hispanic/Latino**	51	12.94	724	20.81
***Ethnicity:* More than One Race/Other**	22	5.58	136	3.91
***Ethnicity:* White**	110	27.92	1325	38.09
Average Age (Years)	37.90	*	36.45	*
***Marital Status*: Married**	145	36.16	985	28.51
***Marital Status:* Not Married**	256	63.84	2470	71.49
Veteran Status	3	0.74	39	1.10
Disability Status	7	1.72	68	2.41
***Pre-enrollment Employment:* Incumbent Worker**	262	64.37	1911	55.60
Mean Hourly Wage for Incumbent Worker (Dollars)	$13.31	*	$12.57	*
***Financial Aid*: Pell**	4	0.98	390	11
***Financial Aid*: TANF**	5	1.23	125	3.52
***Financial Aid*: SNAP**	21	5.16	340	9.6
***Financial Aid*: Dislocated Worker**	4	0.98	151	4.26
***Financial Aid*: UI(Current)**	12	2.95	211	5.95
***Financial Aid*: UI(Future)**	8	1.97	195	5.5
***Financial Aid*: UI(Exhaust)**	7	1.73	81	2.28

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

STUDENT ENROLLMENT BY PROGRAM: MERCER

Program	Enrollment	% Total Enrollments
Home Health Aide	0	0
Administrative Medical Assistant	40	6.48
Clinical Medical Assistant	0	0
Billing & Coding	156	25.28
Certified Alcohol and Drug Counselor	0	0
Nursing Assistant	184	29.82
Community Health Worker	0	0
Computed Tomography	0	0
Dental Assistant	0	0
Dental Hygiene	0	0
Dental Radiography	0	0
Diagnostic Medical Sonography	0	0
EKG, Electrocardiogram, & Telemetry	62	10.05
EKG/Phlebotomy	0	0
EMT	0	0
Emergency Dispatcher	0	0
Health Sciences	0	0
Licensed Practical Nurse	0	0
MRI	0	0
Mammography	0	0
Massage Therapist	0	0
Occupational Therapy Aide	0	0
Patient Care Technician	19	3.08
Pharmacy Technician	31	5.02
Phlebotomy	67	10.86
Physical Therapy Aide	0	0
Radiology Technician	0	0
Registered Nurse Refresher	0	0
Respiratory Technician	0	0
Smart Start	58	9.40
Surgical Technician	0	0
Total	617	100.0

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

Note: This table reflects all enrollments; students may be enrolled in multiple programs.

NJ-PREP TAACCCT Evaluation

Summary of Implementation Activities Through Spring 2018

Middlesex County College

This summary describes progress with grant implementation activities through spring of 2018 based on site visits conducted by Rutgers evaluators from February 2016 through February 2018. It also includes data on student characteristics and enrollments pulled from the NJ-PREP Consortium tracking system in July 2018.

Program Development

The college developed new programs and reformed existing programs in several ways. The table below summarizes the new programs added and the curricular reforms made to existing programs. All programs added career development and job placement services through the job developer's role. A complete list of programs included in the grant along with student enrollment data for each appears at the end of this summary.

Program	Curriculum Reform*	New Equipment
Certified Nursing Assistant	Returning program, stackable credential, labor market alignment, career development and job placement, added certification, changed some requirements, can be stacked with Phlebotomy and EKG for Patient Care Technician certification.	No
EKG	Returning program, stackable credential, labor market alignment, career development and job placement, can be stacked with CNA and Phlebotomy for Patient Care Technician certification.	No
Health Information Management	Returning program.	No
Medical Administrative Assistant	Returning program.	No
Patient Care Technician	Stackable credential, labor market alignment, career development and job placement, added certification. Combination of three programs: CNA, EKG and Phlebotomy.	No
Pharmacy Tech	Returning program.	No

Program	Curriculum Reform*	New Equipment
Phlebotomy	Returning program, stackable credential, labor market alignment, career development and job placement, can be stacked with Phlebotomy and EKG for Patient Care Technician certification.	No

*All programs added career development and job placement services through the job developer's role.

Equipment

Middlesex did not purchase any equipment through the TAACCCT grant. Equipment purchased through HPOG was leveraged for use in the TAACCCT programs. Middlesex TAACCCT staff re-allocated funds set aside for equipment to help pay for instructor costs.

Noncredit-to-Credit Articulation

The college does not currently have formal articulation agreements for noncredit-to-credit transfer of its TAACCCT programs other than those that were approved through the Consortium by Thomas Edison State University. However, efforts are under way to increase awareness among noncredit students of credit programs they may wish to consider after completing their TAACCCT program. The Spring 2016 college catalog was the first to include both noncredit and credit programs in the same section as opposed to separate sections. Although there was some basic coordination between the noncredit and credit departments, and although the dean of the school was interested in developing a more official pathway, there is currently no formal way to track students that move from noncredit to credit programs at Middlesex. (Such as students that move from a noncredit program to the Nursing school.) Upon completion and certification through some TAACCCT programs, students may apply some credits toward a pre-health associates degree at Middlesex. However, the degree has limited workforce alignment and was not used by a majority of TAACCCT students. Additionally, most students who planned to continue their education did not pay for the certification process, which is required in order to receive credits for the completed program. Students who wished to continue their education generally did so through Nursing, which does not provide a means for credit transfer. Additionally, turnover in the dean's position on the noncredit side of programming stalled progress in the development of clear plans for transitions between noncredit and credit-bearing programming.

Smart Start

Middlesex did not run Smart Start during the grant period. The college lacked classroom space for the course, and grant staff reported a general lack of interest among students, possibly because students were unable to afford the course, or because students came to the school's TAACCCT programs with clear education and career goals already in mind. Staff also noted that much of the Smart Start curriculum, including elements of career pathways development, medical terminology, career readiness skills, and soft skills, was covered in existing classes within Middlesex's TAACCCT programs, albeit not as a part of a separate, formal curriculum.

Other elements of the course were covered during student orientations. The college temporarily offered Raritan's online version of Smart Start but discontinued offering it due to low interest.

EdReady

Middlesex used EdReady as preparation for TABE testing for students, but the software was not used as a supplement to TAACCCT courses. Early in the grant period, staff offered one EdReady session, which garnered a positive response among staff and students. There were several ideas floated for incorporating the software into new and existing programming. However, it was not offered beyond test preparation for the math portion of the TABE test, and there was some discussion of school incorporating English readiness in the future, since reading preparation is even more of a concern than math. Generally speaking, there was light pushback from some remedial math program faculty on the credit side who were concerned that EdReady might help students pass their entrance exams or move through remedial course sequences faster, thus resulting in fewer students being placed into remedial math.

Networking Sessions

Middlesex modified networking sessions to be more workforce-oriented and included local employers LabCorp, Exam One, and Roosevelt Hospital in the sessions. Employers regularly visited students in the classroom. The sessions focused on education- and career-relevant topics such as building soft skills, understanding employer expectations, stacking programs, opening a bank account, and knowing what to expect in certain careers. These topics were generated based on input from participants and employers. For example, LabCorp listed typical interview questions, technical proficiencies, and soft skills they look for in potential employees; these were used in the sessions.

Career Advising/Employer Connections

Middlesex's job developer was highly involved in career advising and employer connections. Her role was to prepare students for their job search as well as for employment. In order to more effectively do this, the developer advised students when they started their programs and went into classes to give presentations on what students should expect from careers in health care. The developer also covered résumé writing, conducted mock interviews, and generally attempted to build confidence in students, many of whom were changing careers or were returning to school after an extended period of time. She put concerted effort into familiarizing students with her role from the moment they entered their program, then she acted as their coach until completion. She also participated in mandatory information sessions for new students twice a month, during which she went over available programs, program requirements, career pathways, timing and scheduling, and career expectations. She found the latter issue to be especially important for students interested in the CNA program. The job developer also met with employers to arrange their involvement in both the information and networking sessions, as well as in externships. The job developer left late in the grant period, at which point the role was covered by existing staff. Since strong processes were in place, the transition was smooth, and the job developer role continued with little interruption or change.

Middlesex had strong preexisting relationships with many local employers prior to TAACCCT and built on those relationships over time. Most noteworthy were the relationships the school developed with employers on behalf of the Phlebotomy program. (There were three levels in Phlebotomy; the third level was an externship during which students performed well over the 150 blood-draws necessary for certification.) Additionally, Roosevelt Care Centers allowed the school to use its facilities at no cost for CNA classroom space and clinicals. In return, the facility hoped to hire Middlesex's CNA graduates. However, most of the school's CNA graduates continued their education to receive their Patient Care Technician certification and did not seek employment as CNAs. Because of this, TAACCCT staff were looking at ways to market the benefits of entry-level employment at Roosevelt to students.

Most of these employer relationships existed prior to the TAACCCT grant; however, Middlesex built on its relationships throughout the grant period. Grant staff were very active in their outreach to employers through networking and following up on leads. One improvement staff hoped to make was to create a formal advisory board where employers can offer input on curriculum, equipment purchases, and classes. Staff are currently speaking with employers to institute these formal meetings.

Externships were considered a key part of job development at Middlesex. The school extended its insurance liability coverage to include employer worksites; externships have since become central to its healthcare programs. Externships gave students work experience and a way to develop relationships with employers. Employers were often impressed with the quality of students coming out of the TAACCCT programs and often hired students post-externship. In fact, LabCorp relaxed their two-year work-experience requirement for new hires from Middlesex because they were so pleased with the quality of externs coming from the school.

Workforce System Connections

Middlesex has historically had a good working relationship with its local workforce center. Students were often referred from the workforce center to the college, and both HPOG and TAACCCT programs benefited from student placement via the workforce center. TAACCCT staff met with workforce representatives to discuss available training programs and to keep the local office up-to-date on offerings within health care. Additionally, the job developer occasionally made presentations to the workforce center clients. Although not new under the grant, those relationships continued to be built upon and expanded through TAACCCT.

The Middlesex team utilized the offer by its local One-Stop to run its students' names through the LOOPS system to look for underreported employment. However, administration at the college would not allow the release of student social security numbers. Staff undertook certain measures to avoid transferring SSNs in writing. The college found employment information for over 100 students for whom they did not previously have data.

Student Demographics and Enrollments

The following tables present information on demographic characteristics and program enrollments among all students in the college's TAACCCT programs as reported through the Salesforce student tracking system as of July 2018. Information on the Consortium as a whole is included in the table to provide context for this information.

STUDENT DEMOGRAPHIC CHARACTERISTICS: MIDDLESEX

Demographic Characteristics	College: N	College: Percent of Students	Consortium: N	Consortium: Percent of Students
Total Enrolled	343	NA	3542	NA
Gender: **Female**	300	87.72	3020	85.41
Gender: **Male**	42	12.28	516	14.59
Ethnicity: **American Indian**	1	0.29	8	0.23
Ethnicity: **Asian**	65	19.12	320	9.20
Ethnicity: **Black/African American**	83	24.41	955	27.45
Ethnicity: **Hawaiian/Pacific Islander**	0	0	11	0.32
Ethnicity: **Hispanic/Latino**	119	35.00	724	20.81
Ethnicity: **More than One Race/Other**	11	3.23	136	3.91
Ethnicity: **White**	61	17.94	1325	38.09
Average Age (Years)	34.78	*	36.45	*
Marital Status: **Married**	100	29.94	985	28.51
Marital Status: **Not Married**	234	70.06	2470	71.49
Veteran Status	3	0.87	39	1.10
Disability Status	4	1.16	68	2.41
Pre-enrollment Employment: **Incumbent Worker**	138	40.23	1911	55.60
Mean Hourly Wage for Incumbent Worker (Dollars)	$11.13	*	$12.57	*
Financial Aid: **Pell**	6	1.75	390	11
Financial Aid: **TANF**	7	2.04	125	3.52
Financial Aid: **SNAP**	28	8.16	340	9.6
Financial Aid: **Dislocated Worker**	46	13.41	151	4.26
Financial Aid: **UI(Current)**	19	5.54	211	5.95
Financial Aid: **UI(Future)**	5	1.46	195	5.5
Financial Aid: **UI(Exhaust)**	8	2	81	2.28

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

STUDENT ENROLLMENT BY PROGRAM: MIDDLESEX

Program	Enrollment	% Total Enrollments
Home Health Aide	0	0
Administrative Medical Assistant	1	0.19
Clinical Medical Assistant	68	13.13
Billing & Coding	0	0
Certified Alcohol and Drug Counselor	0	0
Nursing Assistant	84	16.22
Community Health Worker	0	0
Computed Tomography	0	0
Dental Assistant	0	0
Dental Hygiene	0	0
Dental Radiography	0	0
Diagnostic Medical Sonography	0	0
EKG, Electrocardiogram, & Telemetry	93	17.95
EKG/Phlebotomy	0	0
EMT	0	0
Emergency Dispatcher	0	0
Health Sciences	0	0
Licensed Practical Nurse	0	0
MRI	0	0
Mammography	0	0
Massage Therapist	0	0
Occupational Therapy Aide	0	0
Patient Care Technician	42	8.10
Pharmacy Technician	7	1.35
Phlebotomy	223	43.05
Physical Therapy Aide	0	0
Radiology Technician	0	0
Registered Nurse Refresher	0	0
Respiratory Technician	0	0
Smart Start	0	0
Surgical Technician	0	0
Total	518	100.0

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

Note: This table reflects all enrollments; students may be enrolled in multiple programs.

NJ-PREP TAACCCT Evaluation

Summary of Implementation Activities Through Spring 2018

Ocean County College

This summary describes progress with grant implementation activities through spring of 2018 based on site visits conducted by Rutgers evaluators from February 2016 through February 2018. It also includes data on student characteristics and enrollments pulled from the NJ-PREP Consortium tracking system in July 2018.

Program Development

The college developed new programs and reformed existing programs in several ways. The table below summarizes the new programs added and the curricular reforms made to existing programs. All programs added career development and job placement services through the job developer's role. A complete list of programs included in the grant along with student enrollment data for each appears at the end of this summary.

Program	Curriculum Reform	New Equipment
Certified Clinical Medical Assistant	Existing program; added hands-on learning; attempted to offer credit-bearing, secured externship site with LabCorp.	No
Dental Assistant	Existing program further developed; 2 additional sections offered, made possible due to new dental assistant chairs and accessories purchased through grant.	Yes
Medical Office Specialist	Returning program.	No
Holistic Health Degree	New program, under review for AAS degree approval; not under TAACCCT; may be using TAACCCT equipment or credits from prior learning.	No
Patient Care Technician	Existing program; added hands-on learning, now an intensive 3-week program.	No
Phlebotomy Technician	Existing program; secured clinical site with LabCorp.	No

Towards the end of the grant, the college worked on the CHW program, and they also made changes to their PCT program. They began offering PCT as an intensive program, and students did three weeks of programming after they finished the Medical Assistant program. PCT now covers many nationally recognized credentials. It is now offered for current and former medical assistants. CHW was offered in February but students did not finish it until after March; thus these students were not counted in grant numbers for completions. The college created its own curriculum for this course. There was need for grant funding, but should students pursue CHW, the program will continue.

They were also interested in creating a general Health Sciences degree so that credits earned from noncredit healthcare coursework could be transferred to a health sciences program at the college. While a general Health Sciences degree was offered previously, the college discontinued it because of a lack of students' interest and marketing programs. However, now, there is increased student interest in stackable credentials and degree seeking.

Equipment

Ocean did not allocate resources toward the purchase of equipment at the start of the grant. However, mid-way through the grant, they submitted a budget modification to purchase equipment. The motivations for this included the opening of a new building to house the health programs and the need to replace some old and out-of-date equipment. The school purchased dental chairs, hospital beds, two EKG machines, and six phlebotomy arms; consumables including paper for the EKG machines and skins for the phlebotomy arms to last through the grant were also purchased. In some cases, more equipment meant that more sections of courses could be taught. The college also used funds to build a resource library for the health programs. This served as a lending library for students in the program with the goal of saving them money.

Smart Start

Smart Start was implemented at Ocean as both a career and résumé enhancer for former and current students. The course was offered as a supplement to existing programs and provided students with instruction in CPR, first aid, infection control, and HIPPA. Two sections were held at the start of the grant. Smart Start was then listed in the summer course catalog, but it did not fill. It was also theorized that the first course was successfully filled because it was offered on Saturday. Ultimately, there were no new offerings. As of our last site visit, the staff were considering continuing Smart Start after the grant as a modified, one-day foundational program.

EdReady

The college used EdReady for tutoring and test preparation. It was well received and used campus-wide by students; it was also used by hundreds of high school students who were preparing for college. Students accessed EdReady through the success center. EdReady will be sustained at the college after the grant.

Credit Review / Noncredit-to-Credit Articulation

The college wanted to better prepare students for the nursing program. Specifically, it was considering a health sciences degree program so students can move their credits towards a career in healthcare. Many students who declared themselves as pre-Nursing students were not actually on the academic pathway to the Nursing program. Additionally, students in the TAACCCT health science programs were sometimes unprepared for the academic rigor, teaching style, and delivery of the nursing program. The differences between the credit and noncredit courses included grades – noncredit courses are pass/fail, whereas the credit-bearing Nursing courses are not. There was a perception that these differences caused stress and self-confidence issues for students and prevented them from making the transition to credit programs. As a result, grant staff began to think about ways to provide students with more support and better prepare them to transition into credit-bearing programming. Flyers about career pathways were distributed on campus, and students were invited to meetings to learn more about the prerequisites to continue their education and the academic pathways available to them.

Ocean TAACCCT staff also worked with Thomas Edison to articulate noncredit programs for credit in a general education degree. Mainly, they were trying to get electives from Health Science to transfer; however, the articulation process with Ocean and noncredit-to-credit has been a struggle. Staff also wanted to create a health program that students could transfer their credits to, but there were some fiscal and staffing challenges. Determining what degree would be most appropriate for transfers was also an issue.

Through the TESU partnership, the college had one student complete the transition from noncredit to credit; other students are still working on it. A total of 64 credits were awarded to students at Ocean as a result of TESU recommendations. Staff were excited about the possibility of the CAEL membership and hoped there could be more professional development opportunities across the campus. The college is working through a plan for PLA post the grant to ensure momentum continues. For example, a contact is needed for students to reach out to besides the site coordinator post-grant.

Networking Sessions

The career navigator at Ocean was responsible for assisting students through the application and employment process, as well as for working with the workforce systems to focus on unemployed populations. The navigator offered monthly networking sessions at the college that were held outside of class time. The sessions, which typically featured a guest speaker, were opportunities for current students and alumni to learn about various career-readiness topics as well as to network with one another while discussing job applications, interviewing, and job experiences. The time provided for networking among students and alumni seemed to be fruitful. Those that have positions helped those that didn't. However, staff observed that getting alumni to attend these sessions was challenging. Additionally, many of the materials covered in these sessions were already part of the curriculum. As a result, grant staff may try to redesign these sessions.

It is unclear if networking sessions will continue after the grant. Students show interest, but continuation depends on whether Ocean is able to hire someone as a job developer to manage these sessions after the grant. The job developer will also be in charge of marketing the sessions. To market the networking sessions, the job developer will send a couple of mass emails about a week before the event. As in the past, the sessions will be catered to both current and former students, and both employed and unemployed individuals are expected to attend. It is hoped that employed graduates will continue to offer to help those who are unemployed or to talk to students about their own career pathways.

Job Development

Connecting students to employment was a very important goal for the TAACCCT grant at Ocean. Almost everyone we spoke to at the college – staff, faculty, and grant managers – declared this as the main goal for the TAACCCT program. The college had two staff people, a career navigator and a job developer, dedicated specifically to this goal. The career navigator provided information, instruction, and counseling to all TAACCCT students in job readiness and job search skills programs. Topics included dressing for success and interviewing. This instruction was primarily provided during class time, but students also met individually with the career navigator. The job developer worked primarily to connect students with externships, internships and employment. She met with students at the end of their externships to talk about their experiences, and she sought to better understand what kinds of permanent employment a given student might be interested in. The job developer also made sure that all program certifications were added to a student's résumé.

The career navigator and the job developer worked together very closely – they even shared an office right outside of the TAACCCT classrooms. Students stopped by this office to ask both of them questions and get help with writing résumés, creating LinkedIn profiles, filling out job applications, conducting mock interviews, and other job related issues.

The career navigator and the job developer visited classrooms early in the course to introduce themselves and their services. TAAACCT students were required to meet with them more than once. In the future, the administration is considering hiring a job developer not just for the Allied Health courses, but for the whole continuing education program.

Recently, the person the college had doing the networking sessions got hired to the credit side. She and the new job developer began partnering. Getting people jobs was the big focus of the last few months of the grant. They would like to find a way to try to sustain the job developer role by moving the person to working with all of continuing and professional education as opposed to just healthcare. This is contingent on the budget.

Employer Connections

Connecting with employers was an important focus under TAACCCT at Ocean. In fact, about half of the first job developer's time was spent developing new relationships with employers and maintaining existing relationship. The first job developer, who has a background in sales and credited this for her success, spent one full day a week at the start of the grant

visiting area doctors and healthcare facilities to share information about the program. She created connections with employers for externships, internships, incumbent-workers training, and employment. Employer connections were used to establish externships for the college's programs, which in some cases led to employment. The first job developer left the college towards the end of the grant and another grant employee took on the role. That employee was able to connect with many of the employers that the previous job developer had worked with.

Both job developers used their connections to find open positions in the region and placed students in these jobs. When a student applied for a job the job developer(s) would often contact the employer on the student's behalf. It was noted by a few people that student employment more than doubled with the introduction of the job developer role.

The job developer was very pleased with the quality of relationships that had been built with many of the large hospitals and labs, and she is now looking to generate more interest from smaller practices, including urgent care centers and billing companies. She is also going to begin tracking employer satisfaction with the graduates they hire.

Workforce Systems Connections

Ocean has a longstanding and good relationship with the local workforce system. This relationship continued during the TAACCCT grant. Each week Ocean sent the workforce system the number of program openings so that potential students from the workforce system could be referred. Grant staff presented information on the grant to the local Workforce Investment Board about TAACCCT.

Student Demographics and Enrollments

The following tables present information on demographic characteristics and program enrollments among all students in the college's TAACCCT programs as reported through the Salesforce student tracking system as of July 2018. Information on the Consortium as a whole is included in the table to provide context for this information.

STUDENT DEMOGRAPHIC CHARACTERISTICS: OCEAN

Demographic Characteristics	College: N	College: Percent of Students	Consortium: N	Consortium: Percent of Students
Total Enrolled	440	NA	3542	NA
***Gender*: Female**	407	92.5	3020	85.41
***Gender*: Male**	33	7.5	516	14.59
***Ethnicity*: American Indian**	2	0.47	8	0.23
***Ethnicity*: Asian**	16	3.73	320	9.20
***Ethnicity*: Black/African American**	23	5.36	955	27.45
***Ethnicity*: Hawaiian/Pacific Islander**	1	0.23	11	0.32
***Ethnicity*: Hispanic/Latino**	48	11.19	724	20.81
***Ethnicity*: More than One Race/Other**	16	3.73	136	3.91
***Ethnicity*: White**	323	75.29	1325	38.09
Average Age (Years)	38.54	*	36.45	*
***Marital Status:* Married**	132	30.20	985	28.51
***Marital Status*: Not Married**	305	69.80	2470	71.49
Veteran Status	5	1.14	39	1.10
Disability Status	16	3.63	68	2.41
***Pre-enrollment Employment*: Incumbent Worker**	230	52.27	1911	55.60
Mean Hourly Wage for Incumbent Worker (Dollars)	$11.68	*	$12.57	*
***Financial Aid*: Pell**	22	5	390	11
***Financial Aid*: TANF**	9	2.05	125	3.52
***Financial Aid*: SNAP**	31	7.05	340	9.6
***Financial Aid*: Dislocated Worker**	8	1.82	151	4.26
***Financial Aid*: UI(Current)**	74	16.82	211	5.95
***Financial Aid*: UI(Future)**	14	3.18	195	5.5

Demographic Characteristics	College: N	College: Percent of Students	Consortium: N	Consortium: Percent of Students
Financial Aid: UI(Exhaust)	30	6.82	81	2.28

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

STUDENT ENROLLMENT BY PROGRAM: OCEAN

Program	Enrollment	% Total Enrollments
Home Health Aide	0	0
Administrative Medical Assistant	109	24.49
Clinical Medical Assistant	163	36.63
Billing & Coding	15	3.37
Certified Alcohol and Drug Counselor	0	0
Nursing Assistant	0	0
Community Health Worker	0	0
Computed Tomography	0	0
Dental Assistant	63	14.16
Dental Hygiene	0	0
Dental Radiography	0	0
Diagnostic Medical Sonography	0	0
EKG, Electrocardiogram, & Telemetry	0	0
EKG/Phlebotomy	0	0
EMT	0	0
Emergency Dispatcher	0	0
Health Sciences	0	0
Licensed Practical Nurse	0	0
MRI	0	0
Mammography	0	0
Massage Therapist	0	0
Occupational Therapy Aide	0	0
Patient Care Technician	22	4.94
Pharmacy Technician	0	0
Phlebotomy	51	11.46
Physical Therapy Aide	22	4.94
Radiology Technician	0	0
Registered Nurse Refresher	0	0
Respiratory Technician	0	0
Smart Start	0	0
Surgical Technician	0	0
Total	445	100.0

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

Note: This table reflects all enrollments; students may be enrolled in multiple programs.

NJ-PREP TAACCCT Evaluation

Summary of Implementation Activities Through Spring 2018

Passaic County Community College

This summary describes progress with grant implementation activities through spring of 2018 based on site visits conducted by Rutgers evaluators from February 2016 through February 2018. It also includes data on student characteristics and enrollments pulled from the NJ-PREP Consortium tracking system in July 2018.

Program Development

Passaic developed new programs and reformed existing programs in several ways. The table below summarizes the new programs added as well as the curricular reforms made to existing programs. All programs added career development and job placement services through the job developer's role. A complete list of programs included in the grant along with student enrollment data for each appears at the end of this summary.

Program	Curriculum Reform	New Equipment
Administrative Medical Assistant with ESL Bridge	Returning program, no reform.	No
EKG Technician	Added American Society of Phlebotomy Technicians (ASPT) certification.	No
Emergency Medical Technician (EMT)	Transitioned to hybrid course; purchased Chromebooks for students; added lab room.	Yes
Pharmacy Technician	Pharmacy Technician Certification Board (PTCB) reviewed content.	No

Equipment

Passaic purchased 72 Chromebook laptops to be used in the college's hybrid classrooms as part of the EMT program. The college purchased equipment to establish a dedicated Allied Health classroom; this classroom allowed the college to offer the PCT program, as this space provided them the ability to offer Phlebotomy and EKG programs.

Smart Start

Passaic tried running Smart Start in a variety of formats to determine which would best serve their students. They eventually settled on offering a compressed version three days per week from 9:00 a.m. to 2:30 p.m. They found it too difficult to schedule the program when the

course met for five days a week. Their revised version of the course integrated Smart Start with EdReady.

EdReady

The college integrated EdReady into its Smart Start classes and Pharmacy Technician program and used it in many other ways across the college. (For example, the EOF program used it as part of the summer bridge program.) While the math department previously used EdReady, it is currently using two other online programs: ALEX and MyLabs. The college has also used it to help students prepare for placement exams. Despite the many uses at the college, they will not continue to use it after the grant ends because of the cost.

Credit Review / Noncredit Context

Passaic developed a new Prior Learning Assessment policy through its Round 3 TAACCCT grant. This existing policy will help facilitate the use of the TESU credits, although only one of the college's programs has been included in the credit review process thus far.

Passaic worked to build noncredit-to-credit relations from the admission process onward. This work was framed by a larger college reform effort centered on guided pathways, as the college seeks to map pathways for all programs, including noncredit programs. There was some ambiguity about what degree programs noncredit could translate to. Officials worked with the admissions office to provide nontraditional students with a Prospective Student ID. This ID was intended to allow students to return to the college even without academic credit. They also worked with the credit-bearing programs to help build stackable credentials and job placement.

Networking Sessions

Passaic held a Health Career Fair and completed 19 networking sessions. Session topics included Next Steps, Time Management/Stress Relief, Tips to Survive College-Level Courses, Dress for Success/Résumé Writing, The Role of the Pharmacy Technician, Humor in Healthcare, and Critical Thinking for Goal Making. The college provided food in these sessions, which staff felt made a big difference in promoting attendance and enhancing conversations.

Job Development

Passaic's job developer conducted a range of activities to help prepare students for work. The job developer actively worked with current students by presenting in their classes at least three times per term on topics such as résumé writing and interviewing. She also regularly checked in with students on an informal basis. The college conducted a job fair in a way that was designed to promote more interaction between students and employers. First, employers presented on their organization and their hiring needs. Then, the students and employers had an opportunity to meet in small groups and talk with each other. Grant staff intentionally formed the small groups of students so that they would be comprised of students with a mix of in personality and talkativeness to create a good group dynamic. They prepared students by doing two mock interviews and bringing in Dress for Success to give the students new suits.

Staff also matched students with volunteer experiences to help them gain practical experience to build their résumés.

Employer Connections

Passaic worked to form business partnerships by increasing its outreach and using multiple approaches, including mass mailings and cold calling. They also held career fairs and student networking sessions where students were able to dress professionally, present their résumés to employers, and participate in mock interviews. The job fairs served as a way for students to maintain and strengthen their connections with employers. Passaic staff felt this was important because hospitals could be hard to navigate given their size, making it hard to find the right people to talk with. The smaller doctors' offices, on the other hand, posed their own challenges due to their high client volumes and the resulting limits on their staff time.

Workforce System Connections

Passaic accomplished both job placement and relationship building, and the level of workforce engagement at the college is sustainable. The college's grant staff actively reached out to the workforce board to maintain relationships and get student referrals. The local One-Stop is co-located on the college campus with further facilitates the relationship.

Student Demographics and Enrollments

The following tables present information on demographic characteristics and program enrollments for all students in Passaic's TAACCCT programs as reported through the Salesforce database as of July 2018. Information on the Consortium as a whole is also included in each table to provide context for this information.

STUDENT DEMOGRAPHIC CHARACTERISTICS: PASSAIC

Demographic Characteristics	College: N	College: Percent of Students	Consortium: N	Consortium: Percent of Students
Total Enrolled	378	NA	3542	NA
***Gender*: Female**	260	68.78	3020	85.41
***Gender*: Male**	118	31.22	516	14.59
***Ethnicity*: American Indian**	0	0	8	0.23
***Ethnicity*: Asian**	25	6.65	320	9.20
***Ethnicity*: Black/African American**	69	18.35	955	27.45
***Ethnicity*: Hawaiian/Pacific Islander**	1	0.27	11	0.32
***Ethnicity*: Hispanic/Latino**	144	38.30	724	20.81
***Ethnicity*: More than One Race/Other**	20	5.32	136	3.91
***Ethnicity*: White**	117	31.12	1325	38.09
Average Age (Years)	29.80	*	36.45	*
Marital Status				
***Marital Status*: Married**	63	17.03	985	28.51
***Marital Status*: Not Married**	307	82.97	2470	71.49
Veteran Status	6	1.59	39	1.10
Disability Status	4	1.06	68	2.41
Pre-enrollment Employment				
***Pre-enrollment Employment*: Incumbent Worker**	207	54.76	1911	55.60
Mean Hourly Wage for Incumbent Worker (Dollars)	$12.32	*	$12.57	*
***Financial Aid*: Pell**	70	18.52	390	11
***Financial Aid*: TANF**	19	5.03	125	3.52
***Financial Aid*: SNAP**	42	11.11	340	9.6

Demographic Characteristics	College: N	College: Percent of Students	Consortium: N	Consortium: Percent of Students
***Financial Aid*: Dislocated Worker**	0	0	151	4.26
***Financial Aid*: UI(Current)**	16	4.23	211	5.95
***Financial Aid*: UI(Future)**	8	2.12	195	5.5
***Financial Aid*: UI(Exhaust)**	36	9.25	81	2.28

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

Student Enrollment by Program: Passaic

Program	Enrollment	% Total Enrollments
Home Health Aide	10	2.28
Administrative Medical Assistant	53	12.07
Clinical Medical Assistant	0	0
Billing & Coding	0	0
Certified Alcohol and Drug Counselor	0	0
Nursing Assistant	0	0
Community Health Worker	0	0
Computed Tomography	4	0.91
Dental Assistant	0	0
Dental Hygiene	0	0
Dental Radiography	0	0
Diagnostic Medical Sonography	0	0
EKG, Electrocardiogram, & Telemetry	41	9.34
EKG/Phlebotomy	0	0
EMT	209	47.60
Emergency Dispatcher	7	1.59
Health Sciences	0	0
Licensed Practical Nurse	0	0
MRI	2	0.45
Mammography	9	2.05
Massage Therapist	0	0
Occupational Therapy Aide	0	0
Patient Care Technician	0	0
Pharmacy Technician	31	7.06
Phlebotomy	41	9.34
Physical Therapy Aide	0	0
Radiology Technician	0	0
Registered Nurse Refresher	0	0
Respiratory Technician	0	0
Smart Start	32	7.29
Surgical Technician	0	0
Total	439	100.0

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

Note: This table reflects all enrollments; students may be enrolled in multiple programs.

NJ-PREP TAACCCT Evaluation

Summary of Implementation Activities Through Spring 2018

Raritan Valley Community College

This summary describes progress with grant implementation activities through spring of 2018 based on site visits conducted by Rutgers evaluators from February 2016 through February 2018. It also includes data on student characteristics and enrollments pulled from the NJ-PREP Consortium tracking system in July 2018.

Program Development

Raritan developed new programs and reformed existing programs in several ways. The table below summarizes the new programs added as well as the curricular reforms made to existing programs. All programs added career development and job placement services through the job developer's role. A complete list of programs included in the grant along with student enrollment data for each appears at the end of this summary.

The grant allowed the college to start the OTA program which had been a goal for some time. The program allows students to graduate with an associate degree after completion, and they will also receive a national certification upon passage of the national licensure test. Since the interim report, the college started the Occupational Therapy Assistant (OTA) program, and there is a new OTA lab space. This took much longer than expected due to the accreditation process, and the program was not launched until January 2018. But, the creation of the program was a major accomplishment for the school. This program a significant investment of grant resources for both equipment and staffing to launch the program. There are no clear plans to reintroduce the CNA program.

Program	Curriculum Reform	New Equipment
Certified Nursing Assistant	Currently on hold. Course is being reevaluated, and they are having trouble finding an instructor.	No
Licensed Practical Nurse	New program.	No
Occupational Therapy	New program launched in Spring 2018.	Yes

Equipment

Using TAACCCT funds, Raritan initially purchased laptops, then later purchased adult- and infant-sized CPR manikins for Smart Start. They also purchased supplies to create a binder for Smart Start students that included all the information taught in the course along with course

evaluation surveys for students to fill out. (The binders were mailed to online students.) The binders included supplies, such as four sets of gloves (small, medium, large, and extra-large), a gown, a stethoscope, and alcohol pads. The costs of the binder and its contents were covered through the grant. To get the OTA lab up and operational, a lot of equipment was purchased; because this was a brand new program, all equipment in the space had to be newly acquired. The equipment was a significant investment of grant funds and required a budget modification. The college also purchased supplies for other programs, but those items tended to be consumables such as needles and gauze for Phlebotomy.

Smart Start

Originally, the Smart Start program at Raritan was conceived as a traditional face-to-face course. However, the Smart Start developer/instructor found that this was a lot of time to ask of students who may have conflicting responsibilities or transportation challenges and felt some innovation might help the program reach a broader audience. The course was then reconfigured so that it could be taught online in addition to being offered in person. By September 2016, Raritan had run six Smart Start sessions: two classes online, and four traditional. Third and fourth online sessions scheduled in October and November. Class sizes ranged from two to six students. The course was also shortened from its original length of four to five weeks to a one-week, 20-hour in-person course or a two-week hybrid course. Some traditional sessions ran for a week, Monday through Friday, from 4 p.m. to 8 p.m., and others ran on four consecutive Saturdays, from 9 a.m. to 2 p.m. The online course could be completed at the students' own pace over a period of two weeks, after which the students could go to campus on certain evenings, or for one very long day, to learn the hands-on skills necessary for their CPR certificate. Also, Raritan incorporated the EdReady program into its Smart Start course. Because the online course is designed for students who are not technologically savvy, the instructor sent students a comprehensive letter before the course began with information on how to get started in the course online. She created a screencast that showed students how to get into the web studies.

The school recruited for Smart Start through flyers and marketing at community events. The free CPR certification attached to Smart Start was the major draw for most students, especially those in Allied Health, but some students took Smart Start despite already having CPR certification just to learn about healthcare careers and pathways.

Raritan dropped all in person Smart Start (except the hands-on days) because students were mostly interested in the online version. The college wants to continue to use Smart Start after the grant completes. They had offered sessions quite frequently; however, after the grant, there will likely be fewer sessions offered. However, they have had to cancel offerings in the past due to small enrollments, so fewer offerings to larger cohorts make sense for the program.

The online version of Smart Start was offered to all schools in the Consortium as a regional attempt to provide students with opportunities to take this course. The online version was also a way to introduce new or returning students to online technology in college setting, thus building confidence and skills and a way for them to be prepared for technology in the

workplace and if they chose to continue their education. Several other schools have used the online portion, but they usually host their own hands-on portion.

Credit Review / Noncredit Context

All Raritan health programs are in the Allied Health Department, which facilitates communication between credit-bearing and noncredit programs. Also, there are monthly staff meetings during which the two departments update each other on their status and future plans.

There are two examples of Raritan programs bridging noncredit-to-credit on their own. First, in the Billing and Coding program, students were required to get the noncredit coding certificate before moving on to the credit-bearing Billing and Coding course. Additionally, the 36-credit CMA program was a credit-bearing certificate program. At the end of the program, students received a certificate, but their credits were potentially transferable if another program or college would accept them. Students were encouraged to move from noncredit to credit, but it was not pushed. Individual students sometimes approached the department for help navigating the pathway from school to employment, and the majority of instructors were willing to provide that assistance.

PLA was handled mostly at the departmental level. Raritan's Department of Allied Health includes both credit and noncredit students, and they try not to differentiate between the two too much. They were working on clock-hour reviews.

Networking Sessions

Raritan's networking sessions were optional and were advertised by bulletin board postings and flyers around the college campus as well as via Allied Health faculty. Topics were picked based on need, as determined through talking with students, taking their questions, and conducting mock interviews with them. Prior to adding the job developer, the site coordinator developed three networking session curriculums (Cover Letter Writing, Résumé Writing, and The Importance of and How to Say 'Thank You'). She also developed a networking session on the topic of 'Grit.' in which she explained the concept and then screened a Ted Talk that explored the topic in more detail. In another networking session, employers from the community came in and spoke about what they are looking for from the people they interview. The new job developer continued to develop new networking sessions, and created a session to go with the introduction of TAACCCT when she first meets incoming students as well as a session about the job search process. She also developed a networking session about social media and the job search and a "dressing for success" session. These sessions are open to the entire college, not just TAACCCT students, with the hope of attracting more students to TAACCCT programs. The sessions were offered to the whole school, and the college expressed interest in continuing them after TAACCCT. This plan for future schoolwide networking sessions may involve other departments as well as Allied Health.

Job Development

Early in the grant period, Raritan attempted to use the site coordinator to fill the job developer role as well as perform site coordinator duties. The college eventually decided to hire a separate job developer and were on their second of two hires – the first one did not persist, and the second had been in place for one month – at the time of our second site visit. This was a part-time position that was intended to be focused on TAACCCT and other Allied Health students rather than one who worked with students across the whole college. Raritan asked the new job developer to focus on working directly with students as a career counselor rather than on developing employer relations. This was a good fit, as this job specialist had moved from the west coast to take the position and had to build networks in the area from the ground up, a process that would take time to accomplish. In the meantime, the site coordinator and workforce development department pitched in to help counsel students and place them in jobs, and the site coordinator also offered students assistance with résumé writing and cover letters. An additional practicum specialist regularly conducted online research about available jobs, put together a copy of search results, and sent the compiled lists on the 15th and 30th of each month. Raritan also held a focused open house targeted exclusively at healthcare careers.

At the final site visit, the college was on its third job developer after the second job developer left for a new permanent position. The position was temporary; the college had hired this third job developer to see the grant through to March, but because the contract was so short, that staff member was less involved than the second job developer and did not have time to really take off in the position. The Allied Health Director thought the position was beneficial and wished it could stay, but it was considered redundant to other career services at the school.

Employer Connections

Raritan mainly connected with employers through advisory boards and practicum placements. The employer collaborators who participated on the advisory boards were reported to be very active. The advisory boards consisted of outside employers, current instructors, and current and former students. Employers shared what was new in the industry and what should be included in the curriculum. They also gave feedback on what they're looking for in job candidates, how to put tools in place to measure the employability piece, and how to embed that training in the classes. Employers played an important role in the development of the college's new OTA program.

The Allied Health and Job Services departments both reached out to employers. Raritan's major employers were Hunterdon, RWJ, and Overlook Summit Medical Group. The CNA program served several nursing homes in the area. In the summer, CMA students completed 160 hour clinical and administrative practicums on-site in a doctor's office. Raritan has access to about 25 clinical sites, and staff reported no difficulty placing students. These clinical sites often hired students for permanent positions upon completion of their practicums.

Most of the practicum sites already had signed agreements with Raritan, some of which never expire, so the practicum specialist simply sent the necessary forms to the practicum sites when students ask her to do so. She works with the professors to place students, but she does not match students to practicum sites.

The second job developer did some work with employer engagement, but most of that work is performed by faculty. The director of Allied Health noted that employers were helpful with the development of curriculum and practices, though sometimes they asked for things the program could not fit in while implementing the pieces they needed to hit for the program to be accredited (e.g. CMA employers wanted students to spend more time on patient care, but there was no extra time within the hours of the program).

Workforce System Connections

Raritan worked directly with the local One-Stop, which sent the college its displaced workers for training. The college initially had some issues engaging One-Stop staff, however, because they seemed to be overwhelmed and lacking resources to expand their efforts. A Raritan staff member visited the One-Stop once a month to run a Raritan Workforce Day and promote some of the TAACCCT programs. However, the director of Allied Health credited the grant with improving these relationships and helping them to establish a better pipeline of students from the workforce center. They received help from the Consortium overall on that matter (such as helping organize meetings with the One-Stop). The collaboration was still limited, but they helped with employment and to find support for students.

Student Demographics and Enrollments

The following tables present information on demographic characteristics and program enrollments for all students in Raritan's TAACCCT programs as reported through the NJ-PREP Consortium Salesforce Student Tracking System as of July 2018. Information on the Consortium as a whole is also included in each table to provide context for this information.

STUDENT DEMOGRAPHIC CHARACTERISTICS: RARITAN VALLEY

Demographic Characteristics	College: N	College: Percent of Students	Consortium: N	Consortium: Percent of Students
Total Enrolled	168	NA	3542	NA
Gender: **Female**	146	87.43	3020	85.41
Gende:r **Male**	21	12.57	516	14.59
Ethnicity: **American Indian**	0	0	8	0.23
Ethnicity**: Asian**	15	9.62	320	9.20
Ethnicity**: Black/African American**	22	14.10	955	27.45
Ethnicity**: Hawaiian/Pacific Islander**	3	1.92	11	0.32
Ethnicity: **Hispanic/Latino**	28	17.95	724	20.81
Ethnicity: **More than One Race/Other**	6	3.85	136	3.91
Ethnicity**: White**	82	52.56	1325	38.09
Average Age (Years)	33.67	*	36.45	*
Marital Status: **Married**	53	34.87	985	28.51
Marital Status: **Not Married**	99	65.13	2470	71.49
Veteran Status	3	1.78	39	1.10
Disability Status	5	2.98	68	2.41
Pre-enrollment Employment: **Incumbent Worker**	105	62.5	1911	55.60
Mean Hourly Wage for Incumbent Worker (Dollars)	$12.37	*	$12.57	*
Financial Aid**: Pell**	17	10.12	390	11
Financial Aid**: TANF**	1	0.59	125	3.52
Financial Aid**: SNAP**	3	1.78	340	9.6
Financial Aid**: Dislocated Worker**	3	1.78	151	4.26
Financial Aid**: UI(Current)**	2	1.19	211	5.95
Financial Aid**: UI(Future)**	3	1.78	195	5.5
Financial Aid**: UI(Exhaust)**	6		81	2.28

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

STUDENT ENROLLMENT BY PROGRAM: RARITAN VALLEY

Program	Enrollment	% Total Enrollments
Home Health Aide	0	0
Administrative Medical Assistant	46	28.22
Clinical Medical Assistant	0	0
Billing & Coding	12	7.36
Certified Alcohol and Drug Counselor	0	0
Nursing Assistant	29	17.79
Community Health Worker	0	0
Computed Tomography	0	0
Dental Assistant	0	0
Dental Hygiene	0	0
Dental Radiography	0	0
Diagnostic Medical Sonography	0	0
EKG, Electrocardiogram, & Telemetry	3	1.84
EKG/Phlebotomy	0	0
EMT	0	0
Emergency Dispatcher	0	0
Health Sciences	0	0
Licensed Practical Nurse	0	0
MRI	0	0
Mammography	0	0
Massage Therapist	0	0
Occupational Therapy Aide	18	11.04
Patient Care Technician	0	0
Pharmacy Technician	12	7.36
Phlebotomy	42	25.77

Program	Enrollment	% Total Enrollments
Physical Therapy Aide	0	0
Radiology Technician	0	0
Registered Nurse Refresher	0	0
Respiratory Technician	0	0
Smart Start	1	0.61
Surgical Technician	0	0
Total	163	100.0

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

Note: This table reflects all enrollments; students may be enrolled in multiple programs.

NJ-PREP TAACCCT Interim Report

Summary of Implementation Activities Through Spring 2018

Sussex County Community College

This summary describes progress with grant implementation activities through spring of 2018 based on site visits conducted by Rutgers evaluators from February 2016 through February 2018. It also includes data on student characteristics and enrollments pulled from the NJ-PREP Consortium tracking system in July 2018.

Program Development

Sussex developed new programs and reformed existing programs in several ways. The table below summarizes the new programs added as well as the curricular reforms made to existing programs. All programs added career development and job placement services through the job developer's role. During the third year of the grant, the executive leadership changed and program offerings and staff were reduced. This resulted in nine courses being discontinued. Scheduled courses ran through July 2017. Remaining programs were Clinical Medical Assisting and Emergency Medical Technician. A complete list of programs included in the grant along with student enrollment data for each appears at the end of this summary. Generally speaking, the project is very small at Sussex as the college undergoes some financial hardships.

Program	Curriculum Reform	New Equipment
Certified EKG	New program in Spring 2016; cut for Fall 2016.	Yes
Certified Medical Assistant	New program in Spring 2016. Only new program that continues to run at the college.	No
Certified Nurse Aide	Intended to start Fall 2016, but it was never run.	No
EMT	Reformed program.	No
Home Health Aide	Intended to start Fall 2016, but it was never run.	No
Medical Billing and Coding	Developed as an online course, but it was cut by Fall 2016.	No
Medical Office Admin.	New program in Spring 2016; cut by Fall 2016.	No
Pharmacy Technician	New program in Spring 2016; cut by Fall 2016.	No
Phlebotomy	Redesigned program offered in Spring 2016 but cut by Fall 2016, redesigns required 100 sticks instead of 20.	Yes
Surgical Technology	New program in Spring 2016; cut by Fall 2016.	Yes

Equipment

Early in the grant, Sussex purchased a Trauma Man and an intramuscular injector simulator. The college also purchased standard-, baby-, and child-sized CPR mannequins along with two blood pressure arms – one for the EKG program and one for Phlebotomy. Sussex also purchased software for the Surgical Technician program that explains how to do a perfect interview. The college transferred their Trauma Man to Bergen Community College when their Surgical Technician program was disbanded. This transfer enabled the continued use of this expensive equipment for the benefit of TAACCCT students.

Smart Start

The college reduced Smart Start to a 30-hour program, which included six hours of CPR. They did not use the online Raritan program. Smart Start is not likely to continue after the grant.

EdReady

EdReady is only used as part of Smart Start, and there are no plans to continue using EdReady after the grant. Sussex staff found it frustrating to use and redundant to other systems they had in place.

Credit Review / Noncredit Context

There is no official noncredit-to-credit articulation pathway at Sussex. One support that does exist is in the CMA program, where an advisor was hired for 10 hours weekly in Health Sciences Advising. This person worked directly with students who petitioned for noncredit-to-credit. However, the college does not see PLA as compatible with its programs due to accreditation standards.

Networking Sessions

All students in TAACCCT classes, regardless of whether they count as TAACCCT students, were eligible to attend the networking sessions at Sussex. The site coordinator hosted several sessions, such as a networking session on Soft Skills for High Pressure Jobs. They also did a Business-to-Business Networking Day last April and offered some sessions designed around discussing scholarship opportunities.

Job Development

Sussex has not had a job developer since August 2016, as a result of program restructuring. Students were still finding jobs, but the staff were not able to follow up with them. The site coordinator worked with students to help them learn about their options in the healthcare field. Many of Sussex's TAACCCT students are referred to the college by social services or the local One-Stop. The site coordinator visits TAACCCT classes often to help with professional development.

Prior to August 2016 the job developer at Sussex worked with the site coordinator. All students enrolled in a TAACCCT course could benefit from the TAACCCT networking sessions and the employment services offered by both staff members. Students could sit with the TAACCCT staff to work on their résumés, and the job developer helped the students submit their resumes to employers. The job developer also brought employers to campus to interview students.

As of July 2015, Sussex reassigned its grant liaison to a career counseling position, where she guided program graduates into academic pathways, tying credit and certifications towards employment goals.

Employer Connections

Early in the grant, Sussex ran a pilot program that involved having a local employer come to campus to interview students. The employer hired three students from the Phlebotomy program for part-time positions. Sussex ran an Allied Health job fair in September 2016 with 50 students and 19 employers in attendance. The students were able to speak to hiring managers, collect business cards, and hand out their résumés. The college had an advisory committee for its CMA program that includes three area physicians, and it hoped to expand the committee's mission to cover the EMT program as well. Staff invited the local One-Stop but discovered that One-Stop staff do not attend evening meetings.

Sussex offered externships with LabCorp, who interviewed some of its students. It was difficult for Sussex students to get jobs there, however, because they required two years of experience. Because of their conversations with LabCorp, Sussex increased the number of sticks that Phlebotomy students perform in their course from 20 to 100. LabCorp was also looking for students who had completed an 80-hour practicum, but Sussex only offered a 20-hour practicum. Sussex hoped that LabCorp would someday support the other 60 hours because Sussex cannot afford it.

Employer engagement activities continued through the faculty, and some were performed by the site coordinator. The real use of job development was in CMA, as they viewed most of the EMT students as volunteers who were not pursuing EMT as a career.

Workforce System Connections

Students who wanted to continue their education – such as Phlebotomy students who wished to transition to Medical Assisting, for example – were referred to the One-Stop to try to get WIOA funding. Most TAACCCT students at Sussex were referred to the program from social services or the local One-Stop. The college also refers students to the One-Stop. Despite these referrals, the relationship between Sussex and the workforce system was described as still in development.

The site coordinator is involved with New Jersey Youth and Employment Training Services and made presentations through them about TAACCCT. Only recently, they added programs to ETPL, and no one has had a chance to take advantage of that yet according to the site coordinator.

Student Demographics and Enrollments

The following tables present information on demographic characteristics and program enrollments for all students in Sussex's TAACCCT programs as reported through the NJ-PREP Consortium Salesforce Student Tracking System as of July 2018. Information on the Consortium as a whole is also included in each table to provide context for this information.

STUDENT DEMOGRAPHIC CHARACTERISTICS: SUSSEX

Demographic Characteristics	College: N	College: Percent of Students	Consortium: N	Consortium: Percent of Students
Total Enrolled	279	NA	3542	NA
***Gender*: Female**	238	85.61	3020	85.41
***Gender*: Male**	40	14.39	516	14.59
***Ethnicity*: American Indian**	0	0	8	0.23
***Ethnicity*: Asian**	2	0.73	320	9.20
***Ethnicity*: Black/African American**	9	3.27	955	27.45
***Ethnicity*: Hawaiian/Pacific Islander**	0	0	11	0.32
***Ethnicity*: Hispanic/Latino**	30	10.90	724	20.81
***Ethnicity*: More than One Race/Other**	7	2.55	136	3.91
***Ethnicity*: White**	227	82.55	1325	38.09
Average Age (Years)	36.83		36.45	
***Marital Status*: Married**	70	25.83	985	28.51
***Marital Status*: Not Married**	201	74.17	2470	71.49
Veteran Status	6	2.15	39	1.10
Disability Status	7	2.5	68	2.41
***Pre-enrollment Employment:* Incumbent Worker**	154	55.20	1911	55.60
Mean Hourly Wage for Incumbent Worker (Dollars)	$12.75	*	$12.57	*
***Financial Aid*: Pell**	75	16.13	390	11
***Financial Aid*: TANF**	14	5.02	125	3.52
***Financial Aid*: SNAP**	23	8.24	340	9.6
***Financial Aid*: Dislocated Worker**	47	16.85	151	4.26
***Financial Aid*: UI(Current)**	19	6.81	211	5.95
***Financial Aid:* UI(Future)**	14	5.02	195	5.5
***Financial Aid*: UI(Exhaust)**	21		81	2.28

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

STUDENT ENROLLMENT BY PROGRAM: SUSSEX

Program	Enrollment	% Total Enrollments
Home Health Aide	29	9.50
Administrative Medical Assistant	15	4.92
Clinical Medical Assistant	63	20.65
Billing & Coding	7	2.30
Certified Alcohol and Drug Counselor	0	0
Nursing Assistant	29	9.50
Community Health Worker	0	0
Computed Tomography	0	0
Dental Assistant	0	0
Dental Hygiene	0	0
Dental Radiography	0	0
Diagnostic Medical Sonography	0	0
EKG, Electrocardiogram, & Telemetry	25	8.20
EKG/Phlebotomy	0	0
EMT	48	15.74
Emergency Dispatcher	0	0
Health Sciences	0	0
Licensed Practical Nurse	0	0
MRI	0	0
Mammography	0	0
Massage Therapist	0	0
Occupational Therapy Aide	0	0
Patient Care Technician	1	0.33
Pharmacy Technician	16	5.24
Phlebotomy	60	19.67
Physical Therapy Aide	0	0
Radiology Technician	0	0
Registered Nurse Refresher	0	0
Respiratory Technician	0	0
Smart Start	0	0
Surgical Technician	12	3.93
Total	305	100.0

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

Note: This table reflects all enrollments; students may be enrolled in multiple programs.

NJ-PREP TAACCCT Evaluation

Summary of Implementation Activities Through Spring 2018

Union County College

This summary describes progress with grant implementation activities through spring of 2018 based on site visits conducted by Rutgers evaluators from February 2016 through February 2018. It also includes data on student characteristics and enrollments pulled from the NJ-PREP Consortium tracking system in July 2018.

Program Development

Union developed new programs and reformed existing programs in several ways. The table below summarizes the new programs added as well as the curricular reforms made to existing programs. All programs added career development and job placement services through the job developer's role. A complete list of programs included in the grant along with student enrollment data for each appears at the end of this summary.

In the final year of the grant, staff at Union worked to run as many courses as they could They also began to offer EKG and Phlebotomy through a third-party vendor as stand-alone courses because there was demand for those courses. Additionally, they ran a tutoring program for nursing students to help them with the NCLEX exam.

Program	Curriculum Reform	New Equipment
Patient Care Technician **(Students take CNA, EKG, and Phlebotomy as part of PCT – certificates are not separable.)**	Returning program; labor market alignment; added externships.	No
Bridge to Practical Nursing	Articulates credits from PCT to Practical Nursing program.	No

Equipment

Union purchased some equipment for its Nursing program.

Smart Start

Union ran five Smart Start courses serving a total of 34 students. The school modified the original four-week course to run in two weeks. TAACCCT staff at Union removed the basic skills component from the course because their students received that instruction as part of their program courses. Staff also incorporated a full week of professional development into the course. At Union, Smart Start was meant to be tailored to each group of students. The Smart Start instructor gave students pre-course assessments that determined their learning styles and then adjusted the program accordingly, giving students learning strategies that were tailored to

suit their individual needs. Assessments were also used to determine students' strengths and weaknesses relative to the course material. Students were reassessed after completing the course to gauge their progress. Students who discussed the assessments with us spoke positively about them, reporting that the tools helped them to focus on those elements they most needed to work on. Students were also overwhelmingly positive about Smart Start, noting that the course gave them confidence to pursue college-level work along with clear conceptualizations of career pathways in health care, and they appreciated the benefit of getting their CPR certification.

TAACCCT staff at Union also reported that the CPR certification helped them promote the course. One barrier to increasing enrollment, however, was the timing of the courses – many students were unable to take the additional course during "traditional" class times. The college considered using the Raritan online Smart Start curriculum but, in the end, did not think it would work for their students because many did not have internet access at home.

EdReady

A networking session on EdReady was developed and delivered to students and information about it was included in the presentation at orientation, but it was unclear how many students were actually using it. There were efforts to try to get other departments at the college to use the program, but no other departments showed interest, likely because other software, like Aleks, was being used instead.

Credit Review / Noncredit Context

Union's TAACCCT programs were housed under the college's Department of Practical Nursing, a credit-bearing department, rather than the Continuing Education (noncredit) department. However, the TAACCCT program still operated separately from the Practical Nursing program. Removing barriers to credit programs was a priority for the college. TAACCCT staff and the Practical Nursing department worked to build a Bridge to Practical Nursing program that would allow students from the (noncredit) Patient Care Technician program to obtain credits for their coursework if they later enrolled in the Practical Nursing program. Stipends were given to the Practical Nursing staff to develop this bridge.

Job Development

Union's job developer met with students throughout their TAACCCT program. During registration, she interviewed students to determine their level of understanding of the programs and associated career pathways. She also regularly ran workshops on career-readiness topics such as how to search for jobs and how to write résumés and cover letters. She organized job fairs for students near completion of their program and helped set up externships. She also conducted one-on-one meetings with students. Several students reported that they appreciated the time Union's job developer spent with them one-on-one.

The job developer's role at Union also included sending out job postings and helping students search for jobs. Finding jobs for PCT students was more difficult than for other programs because employers were looking for applicants with on-the-job experience. The job

developer encouraged students to volunteer and sent them lists of hospitals to volunteer at. Volunteer service counts as experience and could help students' résumés stand out. Staff reported that those students who volunteered were often hired before those who did not. Once PCT students finished their courses, the job developer met with the college's director of volunteers to get her students' paperwork – which included background checks and medical records – for their externships.

Union had several job developers across its campus, each specializing in working with students in different employment sectors such as welding, those working from home, or those working in call centers. The job developers participated in team meetings and collaborated to host a job career fair at the school. The most recent fair was attended by 11 employers.

Networking Sessions

Union TAACCCT staff ran a variety of networking sessions. Sessions were run monthly and were open to students across the college, not just those in TAACCCT programs. Session topics included Critical Thinking, Stress Management, Résumé Building, Pathways to Practical Nursing, Active Learning Methods in Pharmacy, EdReady, and Interview Skills. In the beginning, networking sessions were led by volunteers from the healthcare sector; later, a TAACCCT staff member took over.

Employer Connections

Union built connections with employers for two primary purposes: to secure externship sites for PCT students and to secure employment for students across all TAACCCT programs. Trinitas Regional Hospital is an externship site for PCT students who finish the program. The hospital considers hiring qualified candidates upon successful completion of their externship based on position availability. The hospital also took an active role in helping Union design and validate its PCT curriculum.

TAACCCT staff had better luck securing externship sites for their students than they had securing employment opportunities for them. This is largely due to employers' desire for potential employees that have one to two years of experience. Most of Union's students do not have that level of experience when they complete their TAACCCT programs.

Union did not have an official advisory board; as previously mentioned, however, the school did actively involve employers in course and curriculum creation and solicited their input on equipment purchases. The job developer reached out to employers via visits, phone calls, and e-mails, and she regularly sought input regarding what skills and qualities local employers looked for in potential employees. The TAACCCT program tried to run a job fair toward the end of the grant, but it was poorly attended by employers.

Workforce System Connections

At the start of the grant, Union's TAACCCT staff reported having an excellent relationship with local workforce centers. They received many referrals from the local centers, and they referred their students to them. The centers helped students secure support in other

ways as well; for example, there were sometimes able to subsidize items TAACCCT could not cover for students, such as books and supplies. Four PCT students' certifications were funded by a local workforce center when it was discovered that the students met a certain low-income requirement that qualified them for the extra assistance. Since certifications cost about $100.00, and there are four certifications required for the PCT program, the savings were significant for these students. Staff found that since many TAACCCT students were economically disadvantaged, these relationships with local workforce centers benefitted students tremendously. Midway through the grant, staffing for the TAACCCT grant changed at the college, and the relationship with the workforce system dwindled; due to efforts by the Consortium, however, the relationship began to improve toward the end of the grant. The workforce center helped TAACCCT grant staff track participants' employment in their data system, and the two sites shared employer contacts. Union also began to get some referrals from the center.

Student Demographics and Enrollments

The following tables present information on demographic characteristics and program enrollments for all students in Union's TAACCCT programs as reported through the NJ-PREP Consortium Salesforce Student Tracking System as of July 2018. Information on the Consortium as a whole is also included in each table to provide context for this information.

STUDENT DEMOGRAPHIC CHARACTERISTICS: UNION

Demographic Characteristics	College: N	College: Percent of Students	Consortium: N	Consortium: Percent of Students
Total Enrolled	200	NA	3542	NA
***Gender*: Female**	172	86	3020	85.41
***Gender*: Male**	28	14	516	14.59
***Ethnicity*: American Indian**	0	0	8	0.23
***Ethnicity*: Asian**	14	7.22	320	9.20
***Ethnicity*: Black/African American**	119	61.34	955	27.45
***Ethnicity*: Hawaiian/Pacific Islander**	0	0	11	0.32
***Ethnicity*: Hispanic/Latino**	40	20.62	724	20.81
***Ethnicity*: More than One Race/Other**	10	5.15	136	3.91
***Ethnicity*: White**	11	5.67	1325	38.09
Average Age (Years)	35.39	*	36.45	*
***Marital Status*: Married**	47	23.86	985	28.51
***Marital Status*: Not Married**	150	76.14	2470	71.49
Veteran Status	2	1	39	1.10
Disability Status	4	2	68	1.91
***Pre-enrollment Employment*: Incumbent Worker**	107	53.5	1911	53.95
Mean Hourly Wage for Incumbent Worker (Dollars)	$14.01	*	$12.57	*
***Financial Aid*: Pell**	23	11.5	390	11
***Financial Aid*: TANF**	6	3	125	3.52
***Financial Aid*: SNAP**	17	8.5	340	9.6
***Financial Aid*: Dislocated Worker**	8	4	151	4.26
***Financial Aid*: UI(Current)**	10	5	211	5.95
***Financial Aid*: UI(Future)**	2	1	195	5.5
***Financial Aid*: UI(Exhaust)**	12	*	81	2.28

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

STUDENT ENROLLMENT BY PROGRAM: UNION

Program	Enrollment	% Total Enrollments
Home Health Aide	0	0
Administrative Medical Assistant	0	0
Clinical Medical Assistant	0	0
Billing & Coding	0	0
Certified Alcohol and Drug Counselor	0	0
Nursing Assistant	0	0
Community Health Worker	0	0
Computed Tomography	0	0
Dental Assistant	0	0
Dental Hygiene	0	0
Dental Radiography	0	0
Diagnostic Medical Sonography	0	0
EKG, Electrocardiogram, & Telemetry	15	5.66
EKG/Phlebotomy	0	0
EMT	0	0
Emergency Dispatcher	0	0
Health Sciences	0	0
Licensed Practical Nurse	66	24.90
MRI	0	0
Mammography	0	0
Massage Therapist	0	0
Occupational Therapy Aide	0	0
Patient Care Technician	64	24.15

Program	Enrollment	% Total Enrollments
Pharmacy Technician	62	23.40
Phlebotomy	19	7.17
Physical Therapy Aide	0	0
Radiology Technician	0	0
Registered Nurse Refresher	0	0
Respiratory Technician	0	0
Smart Start	39	14.72
Surgical Technician	0	0
Total	265	100.0

Source: NJ-PREP Consortium Salesforce Student Tracking System, July 2018

Note: This table reflects all enrollments; students may be enrolled in multiple programs.

APPENDIX C: LIST OF TAACCCT PROGRAMS, BY COLLEGE

2018 TRAINING PROGRAMS	Bergen	Brookdale	Essex	Hudson	Mercer	Middlesex	Morris	Ocean	Passaic	Raritan Val	Sussex	Union
Administrative Medical Assistant	YES	YES	NO	YES	YES	YES	NO	YES	YES	YES	YES	NO
Billing & Coding (CERS)	NO	YES	NO	YES	YES	NO	YES	NO	NO	YES	YES	NO
Certified Clinical Medical Assistant	NO	YES	YES	YES	NO	YES	NO	NO	NO	NO	YES	NO
Certified Dental Assistant	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Computed Tomography	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO
Registered Dental Hygienist	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Certified Drug & Alcohol Counsel	YES	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO
Certified EKG/Telemetry Technician	YES	YES	NO	YES	YES	YES	NO	NO	YES	YES	YES	YES
Certified EKG/Phlebotomy	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Certified EMT	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	YES	NO
Health Information Management	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO
Health Sciences	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Holistic Health Degree	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO
Certified Home Health Aide	YES	YES	NO	YES	NO	NO	YES	NO	YES		YES	NO
Certified Nursing Assistant/Aide	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	YES	NO
Diagnostic Radiography	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Diagnostic Sonography (DMS)	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Emergency Dispatcher	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO
Mammography	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO
Medical Office Specialist	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO
Mental Health First Aid	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO
MRI	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO
Nursing, Registered Refresher	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Nursing, Licensed Practical	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	YES
Occupational Therapy Aide	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO
Paramedic (AAS)	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Patient Care Technician	YES	YES	YES	NO	YES	YES	NO	YES	NO	NO	YES	YES
Pharmacy Technician	YES	YES	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES
Phlebotomy Technician	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Physical Therapy Aide	NO	YES	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO
Respiratory Therapist	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Smart Start	YES	NO	YES	YES	YES	NO	NO	NO	YES	YES	NO	YES
Certified Surgical Technician	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO
Therapeutic Massage Therapist	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

APPENDIX D: SUMMARY OF MISSING RESPONSES IN SALESFORCE DATA

Data	Gender	Ethnicity	Marital Status	Veteran Status	Disability Status	TAA
Response #	3536	3479	3455	1176	2825	2841
Missing	6	63	87	2366	717	701
Total	3542	3542	3542	3542	3542	3542

Data	PELL	TANF	SNAP	Dislocated	UI Current	UI Future	UI Exhaust
Response #	2837	3542	3542	2557	487	487	487
Missing	705	0	0	985	3055	3055	3055
Total	3542	3542	3542	3542	3542	3542	3542

APPENDIX E: COMPARISON OF UI-REPORTED VERSUS SELF-REPORTED EMPLOYMENT DATA

Table E.1 below compares reported employment in TAACCCT students' application quarter collected from two sources. The first is the intake form collected by the TAACCCT program, and the second is the New Jersey State Unemployment Insurance (UI) data system. The comparison shows a significant amount of agreement between the two sources, with 76% percent of cases in either the 'Yes-Yes' or 'No-No' cells. To the extent that there is disagreement, we note that there are limitations in the UI data system. UI records do not include self-employment, undocumented "off the books" employment, military, or out of state employees. This last category may be significant given the proximity of many New Jersey Community College campuses to the state's borders. Thus, students in these employment categories may legitimately respond "Yes" to the question 'Are you currently employed?' while not being covered in the state's wage records data. Students who responded "No" but were reported as employed in the UI system could also do so for legitimate reasons. Because UI wage records are measures in a three-month period, a student could have stopped working at the beginning of a quarter and enrolled in the TAACCCT program at the end of the same quarter. Another possibility is that a student may have only contingent work that they don't consider employment, even if it does lead to a wage record in the UI system.

TABLE E.1. COMPARING SELF-REPORTED AND UI-REPORTED EMPLOYMENT IN TAACCCT STUDENTS' APPLICATION QUARTER

Self-Report	UI Report "No"	%	UI Report "Yes"	%	Row Total	%
Self-Report "MISSING"	61	4.3	15	1.0	76	41.8
Self-Report "REFUSED"	41	2.9	20	1.0	2.4	1,705
Self-Report "No"	1,007	71.6	317	18.0	61	53.9
Self-Report "Yes"	299	21.2	1,406	80.0	1.9	3,166
Column Total	1,408	100	1,758	100	1,324	100

Table E.2 examines the sub-group of students who self-reported employment, weekly work hours, and hourly wage in their application quarter, and who had valid wage records in

the UI data system. The self-reported data were used to estimate a quarterly wage (weekly work hours X hourly wage X 12 weeks) for comparison with the UI report. Overall, the self-reported data are substantially higher, but a few data points need to be explained. First, the average self-reported wage ($7,084) is inflated by a handful of outliers who reported high wages and working hours; these outliers also account for the high standard deviation in the self-report wage. Thus we can examine the percentiles on the wage distribution to get a more accurate sense of the comparison. The median self-reported wage estimate ($3,900) is $730 greater than the median UI-reported figure ($3,170). The 25th and 75th percentile figures are also higher in the self-report than the UI-report, by $922 and $333 respectively. We take this to mean that TAACCCT students were somewhat over-stating either their wages or working hours, or that our estimates did not adequately account for incidental unpaid time off.

TABLE E.2. COMPARING SELF-REPORTED AND UI-REPORTED QUARTERLY EARNINGS IN TAACCCT STUDENTS' APPLICATION QUARTER

	N	Mean	SD	Median	25th percentile	75th percentile
Self Report (Estimated)	1,239	7,084	91,335	3,900	2,496	5,850
UI Reported (Actual)	1,239	4,050	3,848	3,170	1,574	5,517
Δ	NA	3,034	NA	730	922	333

Table E.3 examines TAACCCT students who self-reported that they were unemployed in the application quarter, but who were nonetheless found with wage records in that period. In terms of occupational categories, when we compare these with the general data on TAACCCT participants in the application quarter (Table 13), the proportions look reasonably similar. However, the wage data tell a different story. We note first that the mean, median, 25th, and 75th percentile figures are substantially lower than those reported by UI wage records among the Yes-Yes group (Table Y, Row 2). The mean application quarter wage for this group was $1,983 – compared with $4,050 for those who self-reported employment. The differences are more substantial for the 25th percentile ($324 vs. $922), median ($909 vs. $3,170) and 75th percentile ($2,441 vs. $5,517). We take these differences as evidence that students in this category may have either stopped working, or had precarious employment which led them to respond "No" to the survey question on current employment.

TABLE E.3. EMPLOYMENT CHARACTERISTICS OF THE UI-YES/SR-NO GROUP (N= 332)

Trait	Number
Occupation Category (from UI) %	*
Healthcare (62)	22
Retail Trade (44-45)	15
Educational Services (61)	5
Accommodation and Food Services (72)	9
Other Services (81)	3
Other codes (11, 21, 23, 31-33, 42, 48-49, 51, 55, 56, 71, 92)	23
Not Reported	23
UI Reported Earnings in Quarter of Entry (from UI)	*
Mean	$1,983
Standard Deviation	$2,982
Median	$909
25th percentile	$324
75th percentile	$2,441

Source: UI data

APPENDIX F: DETAILED METHODOLOGY FOR QUASI-EXPERIMENTAL DESIGN

Matched Comparison Group Design

Assumptions

The next best alternative to an experimental design, and the strategy that we chose to follow, is to use observational data to generate a comparison group. For such a design – indeed for *all* non-experimental designs – to yield accurate estimates of treatment effects, it is necessary to make two assumptions:

(1) *Ignorability*. This is the assumption that all potentially confounding variables have been included in the statistical analysis. In other words, the analysis should condition on all variables that could affect both selection into treatment and the outcome. In practice, this assumption almost never holds completely, but whether the violations of ignorability are significant enough to compromise the model estimates depends on the specific research study being conducted. In this case, because we are able to include some very powerful covariates in our statistical models, and because we combine matching methods with a difference-in-differences design, we are comfortable making the assumption of ignorability. The difference-in-differences design allows us to control for all time-invariant, person-specific factors.

(2) *Proper Model Specification*. A properly specified model includes all of the relevant variables that we can measure, omits irrelevant covariates, and correctly models the functional of the relationship between X and Y.

Propensity Score Matching

The vast majority of the research in the field of causal inference with respect to these two assumptions has been concentrated on the second assumption, model specification, and the bulk of this work has focused on propensity score matching (Rosenbaum and Rubin, 1983).[13] A propensity score represents an individual's probability of receiving the treatment conditional on the values of that individual's covariates; the covariates are used to predict whether the individual would receive the treatment. In practice, this involves running a logit or probit model of the probability of receiving treatment on the covariates.

Causal inference studies *that use propensity scores for matching* typically proceed in two steps. First, propensity scores are calculated and used to select into the comparison group those individuals most similar to treatment recipients. Second, a parametric model is used to estimate the effect of the treatment on the outcome, conditioning on a covariate matrix.
Though a popular technique, researchers have identified some significant problems with this method.

[13] Following King and Nielsen (2016), a search for "propensity score" AND (matching OR matched OR match) on Google Scholar in 2018 returns 108,000 citations.

First, according to the property of double robustness, if a matching method is correctly specified but the regression equation is incorrectly specified, then the estimate of the treatment effect will nonetheless be consistent. An example of this is a randomized experiment where a large number of people are randomly assigned to treatment or control. In such an instance, randomization ensures that the only systematic difference between the two groups is whether they were assigned to treatment or to control. Because the "matching" method is perfectly specified, there is no need to specify any model to estimate the treatment effect, other than to compare a difference in means or proportions.

Likewise, if the matching method is incorrectly specified but the regression equation is correctly specified, then the estimate of the treatment effect will also be consistent (Kang and Schafer, 2007). One implication of double robustness is that variables that are correlated only with selection into treatment but are completely irrelevant to the outcome do not need to be incorporated into the analysis in any way.

In other words, if statistical tests reveal that there are systematic differences in treatment recipients and comparison group members, but that these differences are **un**related to the dependent variable, matching – using propensity scores or any other technique – is not necessary. In situations like this, propensity score matching can introduce problems. If the propensity score model includes variables that predict selection into treatment but that are unrelated to the outcome, then the propensity score method may unnecessarily prune observations from the common support that could be used to estimate the treatment effect, resulting in potentially biased estimates (Dorie, Hill, Shalit, Scott, and Cervone, 2017).

Second, when used for matching, propensity scores increase bias in the parameter estimates and increase covariate imbalance. King and Nielsen (2016) differentiate between a *fully blocked randomized experiment* – in which, at the start of the experiment, units are matched on their observed covariates and then assigned at random to treatment or control – and a *fully randomized experiment*, in which there may be partial blocking or no blocking, and units may be assigned completely at random to treatment or control. Fully blocked randomized experiments have zero imbalance by definition, whereas unblocked designs have zero imbalance only when sample sizes approach infinity. Mahalanobis Distance Matching and Coarsened Exact Matching approximate the former, while PSM approximates the latter. Through a series of simulations, King and Nielsen (2016) demonstrate that PSM seeks to find a subset of data that approximates complete randomization (without blocking), but then prunes observations from the data in a manner that increases imbalance in the distribution of covariates between treatments and controls.

(One caveat that is important to note is that King and Nielsen's (2016) critique applies to using propensity scores for matching. The problems they identify do not indict the inclusion of a propensity score as a covariate in a regression of the dependent variable on a treatment dummy, and a set of covariates.)

Finally, PSM gives researchers complete control over which variables to include in the propensity score model and in the outcome estimation model as well as over the choice of the

precise matching method to use (e.g., nearest-neighbor, genetic, caliper, etc.). In one sense, allowing researchers flexibility to build their models as they see fit might be seen as a positive feature of PSM. After a number of replication studies of heretofore accepted scientific findings have failed to uncover any statistically significant effect, however, this flexibility may be more of a vice than a virtue (Ioannidis, 2005). As Simmons, Nelson, and Simonsohn (2016) and Gelman and Loken (2016) detail, this flexibility, combined with the fact that *null* results typically do not get published, affords researchers the opportunity to include or exclude covariates in their models or try to isolate findings within specific sub-groups of the data – a practice Simmons et al. (2011) coined "p hacking" – in search of a statistically significant result. In the interest of curbing the temptation to go hunting for statistical significance, they argue, a better approach would be to restrict researcher discretion.

Bayesian Additive Regression Trees (BART)

The limitations of PSM give rise to the question of how one should proceed if one wants to produce accurate estimates of treatment effects in a quasi-experimental evaluation. Dorie, Hill, Shalit, Scott, and Cervone (2017) sought to address this issue in an empirical manner when they organized a contest at the Atlantic Conference on Causal Inference, where they solicited treatment effect estimation models from statisticians and applied researchers, created 7,700 simulated data sets on which these models could be tested, and then compared the results of each submitted model on the simulated data.

The most effective model in the competition was Bayesian Additive Regression Trees (BART) with Targeted Minimum Loss-Based Estimation (TMLE). Because the application of BART to causal inference marks a critical turning point in the development of causal inference methodology, we will focus our discussion in this section on a brief description of how BART works. For the details of its implementation, the papers referenced provide ample detail and are largely accessible.

BART is a method for estimating the causal effect of a treatment on an outcome. It does so by modeling the response surface. It is an ensemble method that adds together the predictions generated from many different regression trees, a Bayesian version of boosted regression trees (Friedman, Hastie, and Tibsharani, 2000; Chipman, George, and McCulloch, 2010).

The three key components of the method are: (i) it is a regression-tree method; (ii) it is additive (i.e., it is a boosted model); and (iii) it is Bayesian, in that the regularization parameter for limiting tree size is drawn from a prior (actually multiple prior) distribution(s).

Regression trees. Regression trees are a method for splitting data into homogenous subsets. The deeper the tree is grown, the more subsets of data are generated, and the greater the homogeneity within each of those subsets.

Additive. BART is a backfitting algorithm in that the first tree fits the variation in y, the next tree fits the variation in the residuals of the first tree, the third fits the variation in the residuals of the second tree, and so on. BART is additive in the sense that it is an

ensemble method that adds together the predictions generated from many different regression trees (Freund, 1995).

Bayesian. Tree-based models have a tendency to overfit the data. A model is said to overfit the data when it measures not only the systematic variation in the data but also the noise and would therefore likely generate different results when estimated on new data. Consequently, all variants of tree models (e.g., regression trees, random forests, bagged trees, etc.) include a regularization parameter that penalizes parameter values that generate models that overfit the data. The regularization parameter keeps the model from overfitting, which in the case of regression trees prevents the trees from growing too large.

What makes BART Bayesian is that its regularization parameter is calculated using three parameters (the structure of the tree, the parameters of the leaves of the tree, and the error variance), each of which are drawn from prior distributions. The tree structure parameter keeps the trees shallow and prevents the growing of deep trees with many branches that would overfit the data. This means that each tree is what Freund (1995) labels a "weak" learner. A weak learner predicts slightly better than a random guess, but when a large number of weak learners are combined, accurate predictions can be generated.[14]

BART can be implemented in R Software for Statistical Computing using the bartCause package. Currently, the software has only been designed for use with continuous dependent variables.

Difference-in-Differences Design

For the earnings dependent variable, we sought to mitigate the effects of inherent personal attributes, such as race and sex, as well as of characteristics that change very little over short periods of time, such as educational attainment, on outcomes. To that end, we implemented a difference-in-differences design.

The ideal non-experimental design would have been a difference-in-difference-difference design. This would have involved four sets of students: (1) training completers of the training programs at the Consortium colleges during the TAACCCT grant; (2) training completers of the same programs at Consortium colleges in the years prior to the colleges' receipt of the grant; (3) training completers of the same programs at private and nonprofit training providers in the years before the TAACCCT grant; and (4) training completers of the same programs at private and nonprofit training providers at the time that the Consortium was implementing its TAACCCT grant.

Access to these data would make it possible to calculate three differences. First would be the difference in employment outcomes of graduates of programs at the Consortium colleges

[14] For details with respect to each of these parameters, please see Chipman, George, and McCulloch (2010).

during the TAACCCT grant to the outcomes achieved by students at those same colleges before they received the TAACCCT grant. Second, the difference in outcomes at the nonprofit and private training providers from the TAACCCT grant period to the period before the TAACCCT grant could be calculated. The final difference calculated would involve the first two differences to answer the question of whether completers of training programs at the Consortium schools experienced greater wage gains over this period than completers of programs at nonprofit and private training providers.

Examining the trends in the differences between the outcomes across these two groups allows us to assess the extent to which the difference in outcomes over time is a result of the TAACCCT funding, rather than a general time trend toward more positive outcomes.

Because some of the programs that the Consortium colleges introduced were new and the programs that were revised had previously been noncredit, it was not possible to obtain data on participants in the NJ-PREP programs before the colleges received the TAACCCT grant. We therefore employed a difference-in-differences design, which itself is a very robust method of estimating causal effects.

In the design that we used, the dependent variable we measured for NJ-PREP graduates and comparison group members was each completer's change in earnings from before participating in training to after completing it. We then conducted statistical tests to determine whether the average of the earnings changes for the treatment group exceeded the average change in earnings for the comparison group. By comparing each trainee to themselves over time, we were able to control for time-invariant attributes, such as sex and race, of each treatment and comparison group member, creating the greatest opportunity to isolate the effect of the training program on the participants' outcomes.

APPENDIX G: POWER ANALYSIS

The starting point for every statistical analysis is what is known as the "null hypothesis." The best way to understand the concept of the null hypothesis is to think of it as a twist on the criminal justice concept of "innocent until proven guilty." Under the null hypothesis, all programs are actually presumed to have no effect until the evidence proves otherwise (that is, all programs are presumed guilty – of not working – until proven effective). The necessary evidence is data. Without a lot of data, it is impossible to determine whether or not a program is effective.

Therefore, at the start of any analysis, the researcher conducts what is known as a *power analysis* in order to determine how much data will be needed to detect a statistically meaningful effect. The power analysis answers the question, *Is there enough power in the data to be able to draw a statistically valid conclusion to reject the null hypothesis?* Sometimes, there are only enough data to be able to detect effects when they are very large. When more data are available, however, it is possible to detect even small program effects, which is preferable because not all programs can be expected to have very large effects, especially when addressing significant societal and economic challenges.

Upon receipt of the data, we conducted a power analysis. We based this analysis on previous research studies in the field and the effect sizes that those studies sought to detect. All results were computed using the "pwr" package in R Software for Statistical Computing. The power analyses indicated that the EERC team had collected enough data to enable us to detect even very small program effects. Because it is necessary to conduct separate power analyses for the different types of outcomes being evaluated, we conducted separate power analyses for the separate power analyses for the dichotomous outcomes (employment) and for the continuous outcomes (wages).

We calculated the results from the point of view of detecting a statistically significant effect for a binary dependent variable (employment status or employment in the healthcare industry after program completion). The goal is to be able to detect even small effects. In other words, the smaller the "Effect Size" that can be detected, the better. Figure B.1 shows that as the number of observations exceeds 250, it becomes possible to detect an effect size of 0.25, and when it is greater than 500, the detectable effect size lies between 0.1 and 0.2. We also calculated the results from the point of view of detecting a statistically significant effect for a continuous dependent variable (earnings after program completion). Again, smaller effect sizes are preferable, as smaller numbers on this scale indicate that ever smaller effects that can be detected. Figure B.2 shows that as the number of observations exceeds 250, it becomes possible to detect an effect size of about 0.2, and when it is greater than 500, the detectable effect size falls to 0.125. The samples sizes for all statistical tests were greater than 1,000, ensuring sufficient statistical power to detect even relatively small effects (≥0.125).

Figure 1. Effect Size Detected with 10 to 1,000 observations at 80 percent power and a significance level of 0.05 for a binary dependent variable.

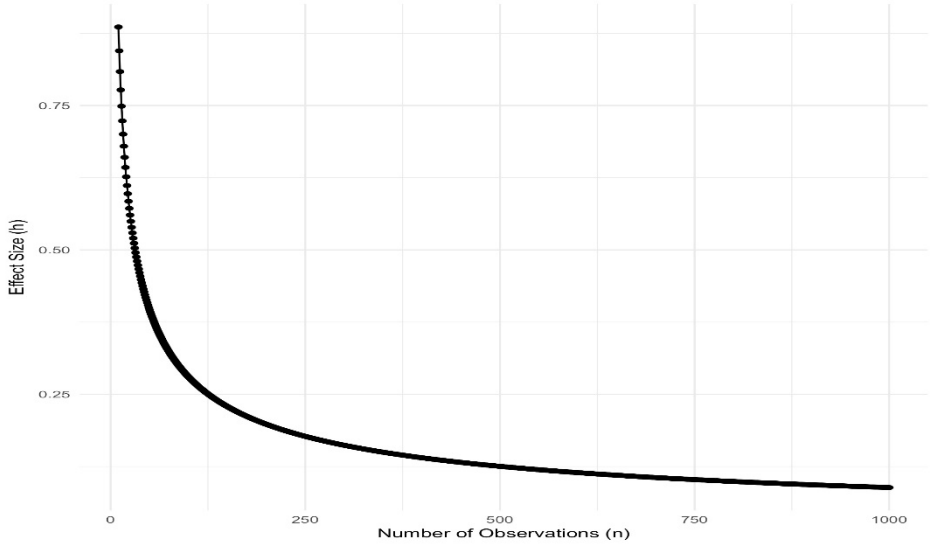
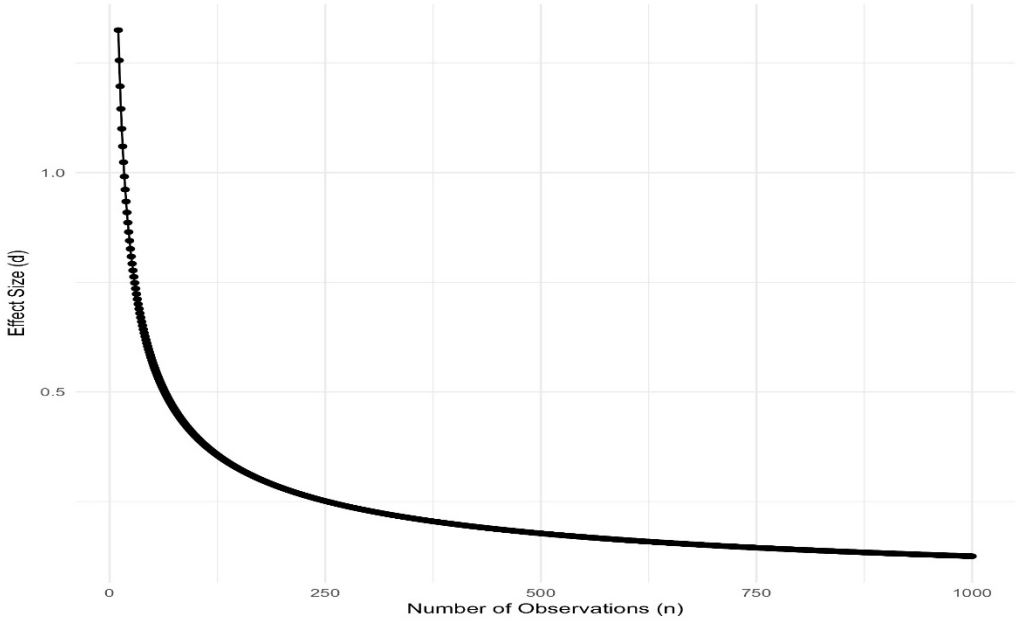


Figure 2. Effect Size Detected with 10 to 1,000 observations at 80 percent power and a



significance level of 0.05 for a continuous dependent variable.

APPENDIX H. LIMITATIONS / THREATS TO VALIDITY IN THIS DESIGN

Threats to Internal Validity

We have designed this study so as to minimize threats to internal validity.

Confounding. All observables have not been included in this analysis. We have, however, included arguably the most important predictors of a person's labor market success at time t: their prior wages and employment history was well as other variables that are known to be strongly associated with employment and wages, including age, sex, and race.

Selection Bias. We seek to mitigate selection bias by including in the comparison group individuals who made the choice to undertake programs in the exact same field of study as the members of the treatment group during the same year. Further, the study includes the propensity score via TMLE in one set of models to ensure that the treatment and control observations are as similar as possible. That said, the literature on double robustness combined with the effectiveness of the BART model for reducing bias give us confidence that selection bias is low.

History. Factors external to the TAACCCT program – such as changes in certification requirements for a health care occupation – could affect the outcomes of the treatment group. It is likely, however, that these factors would also affect the individuals in the comparison group, since that group includes individuals trained in the same occupational fields at the same time as the treatment group. Likewise, the assumption underlying this difference-in-differences design is that earnings trends across the treatment and comparison groups would have been the same in the absence of treatment.

Maturation. As with history, maturation of the subjects would occur to the same extent in the treatment and comparison groups.

Mortality. The study includes only completers in the treatment and comparison groups. If there are differential rates of program completion across the Consortium colleges and the individual private postsecondary training providers from which members of the comparison group were drawn, the results could be affected. For this reason, our study estimates the Average Treatment Effect (ATE) and is not an Intention to Treat analysis.

Diffusion. Because the trainees studied in this evaluation received training from different postsecondary institutions, diffusion effects are likely close to zero.

A few limitations arise from the use of UI wage record data to calculate the employment and earnings outcomes used in our analyses. Since the New Jersey UI wage data do not contain information on the employment and earnings of anyone outside of the state, we were unable to capture the post-training labor market experiences of anyone who found employment in New York or Pennsylvania (or any other state). This could bias the results of this study to the extent that individuals in the treatment group have a different likelihood of finding work outside of New Jersey than those in the comparison group.

The other limitations concern the sample size available for data analysis and the number of post-training quarters of wage data that could be used to calculate individual labor market outcomes. Many of the students served by the TAACCCT grant and included in these analyses completed their programs as late as early 2018. Because there is a six-month lag in the wage data used to calculate an individual's employment status and earnings, data on some program exiters for the third or fourth quarters after program completion were not available at the time of data collection for these analyses, and data on the most recent completers were not available at all. To maintain a sufficiently large sample size, we limit our analysis to only the first four quarters after program exit, which allows us to assess the program's effect on short- and medium-term outcomes but not its effect on students' long-term labor market success.

It is important to note that the limitations discussed here are common in quasi-experimental studies, and the design used in this analysis serves to mitigate these limitations to the greatest extent possible.

Threats to External Validity

There are a handful of aspects of the program that could limit the external validity of the evaluation results, though it is not possible to quantify the extent to which these factors might influence the delivery of a similar program at a different time, in another location, or to a different population of trainees. The following are potential threats to external validity:

Time. Completers of TAACCCT programs entered the labor market when hiring had improved after the Great Recession.

Unique Labor Market. The healthcare industry is incredibly robust in New Jersey. In states that are losing population or that have different dynamics in terms of the health care services demanded by the local population, the results could differ.

Different Populations. The data presented above on the characteristics of treatment group individuals show the population for whom the results of this evaluation are relevant.

APPENDIX I. DETAILED STATISTICAL RESULTS

We ran many models in order to be able to assess the robustness of the results. Overall, 196 models were run. Although there were some themes in the results, none of the analyses were conclusive. In other words, TAACCCT-related programming had neither a positive nor a negative statistically significant effect on any outcome across all models. Therefore, the results presented – both positive and negative – should be regarded as inconclusive. This appendix contains tables that display the results for each statistical model relevant to our analyses. Each table row shows the results for a single run of a statistical model. Rows that are in **bold** contain statistically significant results.

The format of presentation for the BART and BART plus TMLE results, on the one hand, and the matching results on the other is simply a function of the output that the software packages make available following the modeling process. The first three columns of each table identify the dependent variable studied, the time period relative to the completion quarter for when it was measured, and the comparison group from which the result was obtained. The other columns present the statistical properties of the results.

One final point worth mentioning is that tests presented here are in no way an assessment or comparison of the statistical models used. Such comparisons can only be undertaken under controlled conditions when the researcher has created the data on his or her own such that the statistical truth that underlies the data is known. This can only be done using simulated data.

Earnings Results

Table I.1 presents the results from the 24 separate statistical models using BART. All indicate that the earnings differences between the treatment and comparison groups are statistically indistinguishable from zero. Because so many models were run, only effect size estimates have been displayed.

TABLE I.1. BART EARNINGS OUTCOME RESULTS

Dependent Variable	Quarter after Completion	Comparison Group	Estimate	Standard Deviation	Lower Bound Estimate	Upper Bound Estimate
Natural log of earnings	4	1	-0.16	0.08	-0.32	0.01
Difference in log of earnings	3	2	-0.31	0.18	-0.66	0.04
Difference in log of earnings	4	2	-0.31	0.18	-0.67	0.05
Difference in log of earnings	2	2	-0.23	0.16	-0.54	0.07
Difference in earnings	1	1	-168.80	125.53	-414.84	77.23
Natural log of earnings	4	2	-0.21	0.16	-0.51	0.10
Natural log of earnings	2	2	-0.16	0.13	-0.42	0.09
Natural log of earnings	3	2	-0.17	0.15	-0.46	0.12
Difference in log of earnings	1	2	-0.15	0.13	-0.42	0.11
Natural log of earnings	2	1	-0.11	0.10	-0.31	0.09
Difference in earnings	1	2	-181.21	168.20	-510.88	148.46
Difference in log of earnings	1	1	-0.12	0.11	-0.33	0.10
Difference in earnings	3	2	-222.89	244.86	-702.80	257.02
Natural log of earnings	4	2	-0.08	0.10	-0.29	0.12
Difference in earnings	3	1	-131.65	175.81	-476.22	212.93
Difference in log of earnings	3	1	-0.10	0.15	-0.39	0.19
Natural log of earnings	3	1	-0.07	0.12	-0.30	0.16
Difference in log of earnings	2	1	-0.07	0.13	-0.33	0.20
Difference in earnings	4	2	-121.23	271.13	-652.64	410.18
Difference in earnings	4	1	-33.88	196.34	-418.71	350.94
Difference in earnings	2	1	-12.64	154.99	-316.40	291.13
Difference in earnings	2	2	9.11	212.17	-406.74	424.96
Natural log of earnings	4	1	0.02	0.12	-0.21	0.26
Difference in Log of Earnings	4	1	0.06	0.15	-0.24	0.36

TABLE I.2. BART WITH TMLE ADJUSTMENT EARNINGS OUTCOME RESULTS

Data Set	Quarter after Completion	Comparison Group	Estimate	Standard Deviation	Lower Bound Estimate	Upper Bound Estimate
Natural log of earnings	4	1	-0.17	0.01	-0.18	-0.16
Difference in earnings	1	1	-223.60	12.87	-248.82	-198.38
Difference in log of earnings	3	2	-0.32	0.02	-0.36	-0.28
Natural log of earnings	4	1	-0.16	0.01	-0.18	-0.13
Natural log of earnings	4	2	-0.21	0.02	-0.24	-0.18
Difference in log of earnings	4	2	-0.30	0.03	-0.35	-0.25
Natural log of earnings	3	2	-0.17	0.01	-0.20	-0.15
Natural log of earnings	2	2	-0.17	0.01	-0.19	-0.14
Difference in log of earnings	2	2	-0.24	0.02	-0.28	-0.20
Difference in log of earnings	1	2	-0.15	0.02	-0.18	-0.12
Natural log of earnings	4	2	-0.08	0.01	-0.11	-0.06
Difference in earnings	3	2	-244.59	34.92	-313.04	-176.14
Natural log of earnings	2	1	-0.14	0.02	-0.19	-0.10
Difference in earnings	1	2	-162.96	25.22	-212.39	-113.53
Difference in earnings	3	1	-143.38	25.96	-194.26	-92.49
Difference in log of earnings	1	1	-0.14	0.03	-0.20	-0.09
Natural log of earnings	3	1	-0.13	0.03	-0.19	-0.08
Difference in earnings	2	1	-72.09	17.27	-105.94	-38.24
Difference in log of earnings	3	1	-0.21	0.05	-0.31	-0.11
Difference in earnings	4	2	-112.29	42.90	-196.38	-28.20
Difference in log of earnings	4	1	-0.10	0.04	-0.18	-0.01
Difference in log of earnings	2	1	-0.10	0.05	-0.19	-0.01
Difference in earnings	4	1	-4.31	33.31	-69.60	60.98
Difference in earnings	2	2	20.69	30.19	-38.48	79.87

Table I.2 presents the results for the 24 models that employ BART with the TMLE adjustment. Most of these models (indicated in **bold**) suggest that NJ-PREP completers earn somewhat less per quarter than the comparison group after training completion.

The results from all matching models indicate that there is no statistical difference in earnings between the treatment and comparison groups. These results are presented in Tables I3-I5.

TABLE I.3. RESULTS OF 10 PSM NEAREST-NEIGHBOR MATCHING MODELS ON STUDENTS' POST-TAACCCT EARNINGS

Dependent Variable	Quarter after Completion	Comparison Group	Estimate	Standard Error	Test Statistic	P Value
Difference in log of earnings	2	2	-0.4	0.2	-2.13	0.03
Difference in earnings	2	2	-385.2	280.4	-1.37	0.17
Difference in log of earnings	4	2	-0.3	0.2	-1.35	0.18
Difference in log of earnings	3	2	-0.3	0.2	-1.13	0.26
Natural log of earnings	1	1	-0.1	0.1	-0.78	0.43
Natural log of earnings	2	2	-0.1	0.2	-0.75	0.46
Natural log of earnings	4	2	-0.1	0.2	-0.61	0.54
Natural log of earnings	2	1	-0.1	0.1	-0.5	0.62
Difference in earnings	3	2	-149.7	328.2	-0.46	0.65
Difference in earnings	1	1	-62.9	166.1	-0.38	0.71
Difference in earnings	1	2	-53.2	231.5	-0.23	0.82
Difference in earnings	4	2	-67.1	349.1	-0.19	0.85
Natural log of earnings	3	2	0	0.2	-0.17	0.86
Difference in log of earnings	1	2	0	0.2	-0.08	0.94
Difference in log of earnings	1	1	0	0.1	0.05	0.96
Natural log of earnings	1	2	0	0.1	0.13	0.9
Difference in log of earnings	4	1	0	0.2	0.19	0.85
Difference in log of earnings	2	1	0	0.2	0.21	0.84
Natural log of earnings	4	1	0	0.1	0.24	0.81
Natural log of earnings	3	1	0.1	0.1	0.58	0.56
Difference in log of earnings	3	1	0.1	0.2	0.6	0.55
Difference in earnings	3	1	242.2	236.4	1.02	0.31
Difference in earnings	4	1	297.9	243.1	1.23	0.22
Difference in earnings	2	1	324.1	197.2	1.64	0.1

TABLE I.4. RESULTS OF 24 GENETIC MATCHING MODELS ON STUDENTS' POST-TAACCCT EARNINGS

Dependent Variable	Quarter after Completion	Comparison Group	Estimate	Standard Error	Test Statistic	P Value
Difference in log of earnings	1	1	-0.5	0.1	-3.52	0
Difference in log of earnings	2	1	-0.5	0.2	-3.23	0
Difference in log of earnings	4	1	-0.5	0.2	-2.53	0.01
Difference in log of earnings	3	1	-0.4	0.2	-2.32	0.02
Natural log of earnings	1	1	-0.2	0.1	-2.22	0.03
Natural log of earnings	2	1	-0.2	0.1	-1.63	0.1
Difference in earnings	1	1	-258.4	159.6	-1.62	0.11
Natural log of earnings	4	1	-0.1	0.1	-0.91	0.36
Difference in log of earnings	3	2	-0.2	0.2	-0.84	0.4
Difference in log of earnings	2	2	-0.2	0.2	-0.81	0.42
Natural log of earnings	2	2	-0.1	0.2	-0.79	0.43
Natural log of earnings	1	2	-0.1	0.1	-0.67	0.5
Natural log of earnings	3	1	-0.1	0.1	-0.64	0.52
Natural log of earnings	3	2	-0.1	0.2	-0.47	0.64
Difference in log of earnings	4	2	-0.1	0.3	-0.29	0.78
Difference in earnings	1	2	-57.3	246.1	-0.23	0.82
Difference in earnings	4	2	-52.3	366.1	-0.14	0.89
Difference in earnings	3	2	-26.6	352	-0.08	0.94
Difference in log of earnings	1	2	0	0.2	-0.02	0.99
Difference in earnings	4	1	14.8	235.4	0.06	0.95
Difference in earnings	3	1	15.4	222.3	0.07	0.94
Natural log of earnings	4	2	0.1	0.2	0.26	0.79
Difference in earnings	2	2	85.9	301.8	0.28	0.78
Difference in earnings	2	1	90.5	189.6	0.48	0.63

TABLE I.5. RESULTS OF 24 COARSENED EXACT MATCHING MODELS ON STUDENTS' POST-TAACCCT EARNINGS

Dependent Variable	Quarter after Completion	Comparison Group	Estimate	Standard Error	Test Statistic	P Value
Natural log of earnings	1	1	-0.2	0.1	-1.9	0.06
Difference in log of earnings	3	1	-0.2	0.1	-1.74	0.08
Difference in log of earnings	3	2	-0.3	0.2	-1.68	0.09
Difference in log of earnings	1	1	-0.2	0.1	-1.41	0.16
Difference in log of earnings	2	1	-0.2	0.1	-1.38	0.17
Difference in log of earnings	4	1	-0.2	0.1	-1.37	0.17
Difference in log of earnings	1	2	-0.2	0.2	-1.26	0.21
Difference in log of earnings	2	2	-0.2	0.2	-1.18	0.24
Difference in earnings	1	1	-142.8	125.8	-1.14	0.26
Natural log of earnings	2	1	-0.1	0.1	-1.13	0.26
Difference in log of earnings	4	2	-0.2	0.2	-1.06	0.29
Natural log of earnings	3	1	-0.1	0.1	-0.93	0.35
Difference in earnings	1	2	-163.3	179.2	-0.91	0.36
Natural log of earnings	4	1	-0.1	0.1	-0.68	0.5
Natural log of earnings	3	2	-0.1	0.2	-0.66	0.51
Natural log of earnings	4	2	-0.1	0.2	-0.63	0.53
Natural log of earnings	2	2	-0.1	0.1	-0.49	0.63
Difference in earnings	3	1	-81.9	173.6	-0.47	0.64
Difference in earnings	3	2	-88.6	244.8	-0.36	0.72
Natural log of earnings	1	2	0	0.1	-0.03	0.98
Difference in earnings	4	1	0.7	192.7	0	1
Difference in earnings	2	1	3.5	153.3	0.02	0.98
Difference in earnings	4	2	80.3	281.7	0.28	0.78
Difference in earnings	2	2	121.1	219	0.55	0.58

Employment Results

The employment results are presented in Table I.6 through I.8 and generally show that the NJ-PREP program did not have a statistically significant impact on whether a student was employed after program completion.

TABLE I.6. RESULTS OF 8 PSM NEAREST-NEIGHBOR MATCHING MODELS FOR STUDENTS' POST-TAACCCT EMPLOYMENT STATUS

Dependent Variable	Quarter after Completion	Comparison Group	Estimate	Standard Error	Test Statistic	P Value
Employment status	4	2	-0.3	0.3	-1.26	0.21
Employment status	2	1	-0.2	0.2	-1.16	0.24
Employment status	2	2	-0.2	0.2	-0.7	0.48
Employment status	1	1	-0.1	0.2	-0.68	0.5
Employment status	4	1	0	0.2	-0.22	0.82
Employment status	3	2	0	0.2	-0.18	0.86
Employment status	3	1	0	0.2	0.03	0.97
Employment status	1	2	0.1	0.2	0.28	0.78

TABLE I.7. RESULTS OF 8 GENETIC MATCHING MODELS FOR STUDENTS' POST-TAACCCT EMPLOYMENT STATUS

Dependent Variable	Quarter after Completion	Comparison Group	Estimate	Standard Error	Test Statistic	P Value
Employment status	2	1	-0.4	0.2	-2.27	0.02
Employment status	1	1	-0.3	0.2	-2.17	0.03
Employment status	3	1	-0.2	0.2	-1.25	0.21
Employment status	4	1	-0.2	0.2	-1.23	0.22
Employment status	2	2	-0.3	0.3	-1.12	0.26
Employment status	3	2	-0.2	0.2	-0.62	0.53
Employment status	1	2	-0.2	0.3	-0.62	0.54
Employment status	4	2	0	0.3	0.13	0.89

TABLE I.8. RESULTS OF 8 COARSENED EXACT MATCHING MODELS FOR STUDENTS' POST-TAACCCT EMPLOYMENT STATUS

Dependent Variable	Quarter after Completion	Comparison Group	Estimate	Standard Error	Test Statistic	P Value
Employment status	1	1	-0.2	0.1	-1.98	0.05
Employment status	2	1	-0.2	0.1	-1.65	0.1
Employment status	3	1	-0.2	0.1	-1.54	0.12
Employment status	4	2	-0.3	0.2	-1.14	0.26
Employment status	4	1	-0.2	0.1	-1.05	0.29
Employment status	2	2	-0.2	0.2	-0.92	0.36
Employment status	3	2	-0.2	0.2	-0.91	0.36
Employment status	1	2	-0.1	0.2	-0.25	0.8

Employment in Healthcare

The final three tables (Tables I.9, I.10, and I.11) display the results for the dependent variable *employment in the healthcare industry*. These results were statistically significant for the first comparison group in both the nearest-neighbor and genetic matching models. The results indicate that the odds of TAACCCT graduates being employed in the healthcare industry were between 20 and 50 percent higher than those of comparison group members. These results, however, were not significant when the second comparison group was used and were also significant for one model when coarsened exact matching models were run on the first comparison group.

TABLE I.9. RESULTS OF 10 PSM NEAREST-NEIGHBOR MATCHING MODELS ON POST-TAACCCT EMPLOYMENT IN THE HEALTHCARE INDUSTRY

Dependent Variable	Quarter after Completion	Comparison Group Used	Estimate	Standard Error	Statistic	P value
Employed in healthcare	Any	2	0.2	0.2	0.76	0.45
Employed in healthcare	1	2	0.2	0.2	0.93	0.35
Employed in healthcare	2	2	0.2	0.2	1.1	0.27
Employed in healthcare	4	2	0.2	0.2	1.15	0.25
Employed in healthcare	4	1	0.2	0.1	1.27	0.2
Employed in healthcare	2	2	0.3	0.2	1.42	0.15
Employed in healthcare	1	1	0.3	0.2	1.93	0.05
Employed in healthcare	3	1	0.3	0.1	2.05	0.04
Employed in healthcare	Any	1	0.4	0.2	2.21	0.03
Employed in healthcare	2	1	0.4	0.2	2.75	0.01

TABLE I.10. RESULTS OF 10 GENETIC MATCHING MODELS ON POST-TAACCCT EMPLOYMENT IN THE HEALTHCARE INDUSTRY

Dependent Variable	Quarter after Completion	Comparison Group Used	Estimate	Standard Error	Statistic	P value
Employed in healthcare	1	2	0	0.2	-0.17	0.87
Employed in healthcare	Any	2	0	0.2	-0.05	0.96
Employed in healthcare	1	2	0	0.2	0.1	0.92
Employed in healthcare	4	2	0.2	0.2	1.04	0.3
Employed in healthcare	4	1	0.2	0.1	1.26	0.21
Employed in healthcare	2	2	0.3	0.2	1.43	0.15
Employed in healthcare	3	1	0.3	0.1	1.74	0.08
Employed in healthcare	Any	1	0.4	0.2	2.19	0.03
Employed in healthcare	1	1	0.4	0.2	2.38	0.02
Employed in healthcare	2	1	0.5	0.2	3.11	0

TABLE I.11. RESULTS OF 10 COARSENED EXACT MATCHING MODELS ON POST-TAACCCT EMPLOYMENT IN THE HEALTHCARE INDUSTRY

Dependent Variable	Quarter after Completion	Comparison Group Used	Estimate	Standard Error	Statistic	P Value
Employed in healthcare	1	2	0	0.2	-0.23	0.82
Employed in healthcare	2	1	0	0.2	-0.23	0.82
Employed in healthcare	Any	2	0	0.2	-0.08	0.94
Employed in healthcare	3	1	0	0.1	0.3	0.76
Employed in healthcare	4	2	0.1	0.2	0.36	0.72
Employed in healthcare	4	1	0	0.1	0.36	0.72
Employed in healthcare	2	2	0.1	0.2	0.51	0.61
Employed in healthcare	Any	1	0.1	0.1	0.97	0.33
Employed in healthcare	1	1	0.2	0.1	1.33	0.18
Employed in healthcare	2	1	0.2	0.1	1.64	0.1

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