A Prescription for Healthcare Training in Tennessee (RxTN) Program Evaluation Final Report: Executive Summary

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A Prescription for Healthcare Training in Tennessee

Executive Summary

This final evaluation report describes key findings related to *A Prescription for Healthcare Training in Tennessee* (RxTN) program's formative evaluation component (through which the program's implementation processes and program delivery are being evaluated) and its summative component (through which RxTN outcomes and impacts are being evaluated). The report was generated to apprise the U.S. Department of Labor (DOL) about progress made toward key program evaluation benchmarks and outcome indicators attributable to the RxTN project from April 2013 through August 2016. This report also may be instructive to the RxTN primary grantee at Roane State Community College (Roane State) and the RxTN co-grantee institutions.

RxTN Program Introduction

In September 2012, Roane State received a Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant funded through DOL. Designed to strengthen pathways into high needs healthcare employment, the RxTN program implementation period ended in June 2016, with additional student outcomes assessed through August 2016.

In 2012, Tennessee had 13 local workforce investment areas (LWIAs), 12 of which identified ambulatory healthcare and hospital industries as a high priority that were expected to show the most growth at nearly 3 percent (TDOL, 2012). In addition, all regions of Tennessee were identified as having occupational gaps in healthcare fields (WIN Strategic Compass, 2012). The RxTN grant-writing team identified critical gaps that included the lack of or limited availability of healthcare training in multiple regions, clinical sites, and simulation opportunities in labs. The consortium also identified gaps within its programs, categorized as core elements, which the grant would alleviate through the funds provided to the grantees (RSCC, 2012). The elements within the consortium identified by the gap analyses included evidence-based design, stacked credentials, online enabled learning, transferability articulation, strategic alignment, and student support.

In response to these challenges, the RxTN leadership team from Roane State led a consortium of 13 co-grantee Tennessee community colleges and 27 Tennessee Centers of Applied Technology (TCATs) to implement two, integrated main interventions: Student Support Prescriptions, which consisted of an arrangement of career advising, completion coaching, and other supports for students; and Training Prescriptions, which provided access to nine healthcare training programs. The development of the RxTN program, and the courses offered to training and technical assistance-eligible and other high-need workers, were designed to provide support, relevant training, and job opportunities throughout a given program through completion coach support, clinics in local healthcare settings, and employer guidance to address these needs.

Evaluation Design

The purpose of the RxTN evaluation was to collect, analyze and interpret data pertaining to RxTN that would lead to continuous program improvement and determine the extent to which the various program components were associated with positive outcomes and impacts in the lives of program participants. The RxTN program evaluation consisted of a formative evaluation component, where the program implementation process and program delivery were evaluated, and a summative evaluation component, where program outcomes and impacts were evaluated.

Box 1. Implementation Evaluation Questions

1) What process was used/is being used to plan the various program components, including student services?

2) What can be done to improve the program components during planning?

3) What actions can be taken toward continuous improvement during implementation?

4) What factors contribute to partners' level of involvement in the whole program and program components?

5) Which contributions from partners are most critical to the success of the grant?

6) Which contributions from partners are less critical to the success of the grant?

7) Were program activities and outputs consistent with what was planned, and to what extent did consistency occur across institutions?

The implementation evaluation of the RxTN program helped develop an understanding of the extent to which project activities such as student support prescriptions were being implemented as intended by the grant. The implementation evaluation addressed seven core research questions (see Box 1).

The outcomes and impacts evaluation of the RxTN program determined the extent to which the program accomplished its goals. Specifically, the outcomes and impact evaluation addressed nine core research questions about students' academic performance and employment outcomes (see Box 2).

Box 2. Outcome Evaluation Questions

1) To what extent were the self-paced competency curricula associated with higher COMPASS test scores?
2) To what extent (and in what ways) were Student Support Services associated with graduation and retention rates at participating institutions?
3) How many program participants completed a TAACCCT-funded program of study? How many participants entered but did not complete a TAACCCT-funded program of study?
4) To what extent did program participants achieve mastery of key program outcomes?
5) How many participants earned degrees and certificates in the various grant-funded programs of study?
6) How many participants who completed a grant-funded program of study entered employment in the quarter after the quarter of program exit (3 months after program completion)?
7) How many participants who completed a grant-funded program of study entered employment (in the quarter following the quarter of program exit) retained employment (into the second and third quarters after program exit) (six and nine months after program completion)?
8) What are the average earnings for participants attaining employment?
9) How many participants who completed a grant-funded program of study continued onto one of the participating consortium four-year institutions with articulation agreements?

Using a mixed methods evaluation design, the evaluation team drew from the following kinds of evidence: (1) student tracking data from each participating co-grantee institution, (2) student baseline and completion surveys, (3) extant program documents and other secondary data, (4) meeting summaries, (5) interviews with key RxTN stakeholders (leadership, staff, students, faculty, and employers), and (6) data from comparison students who were enrolled in healthcare training programs prior to the implementation of RxTN. Through analyses of these data, the program evaluation provided pertinent descriptions and indicators about RxTN's implementation (i.e., the extent to which Student Support Services and Training Prescriptions have been implemented as intended by the program design) as well as the program's effects on outcomes for enrolled participants and those who have completed their program of study.

Implementation Findings

Program Planning and Start-Up

Although program components were delivered at local campuses, RxTN operated as a unified, statewide program with oversight from the RxTN leadership team at Roane State.

- *Conceptualization and projections*. Roane State facilitated planning with partner institutions to establish RxTN program goals and targets. Although institutions had varying levels of representation in this process (i.e., a mix of administrative leadership, staff, and faculty participated), the process resulted in articulation of staff roles, employment needs, training demand, projections of total enrollment, and measurable project goals for each co-grantee institution.
- *Variation in target-setting method*. Co-grantee institutions used a range of methods to anticipate target enrollment numbers and other program targets (i.e., some institutions consulted local employers or workforce investment boards, some used current enrollment in similar programs, and some seemed to have arbitrarily set

enrollment projections). The accuracy of the methods may have later affected the extent to which each college's projections were obtainable.

- *Hiring of the RxTN leadership team*. In January 2013, the RxTN Project Director and Assistant Director (the RxTN leadership team) began managing RxTN's implementation from Roane State as the lead institution. The Project Director was responsible for overall project management, and for coordination with co-grantee institutions and leading reporting efforts. The RxTN Assistant Director's responsibilities revolved around the grant's Student Support Service program marketing and outreach, in addition to supporting the Project Director. During startup, the RxTN leadership team worked with the grant writers to clarify program elements and establish management procedures. The RxTN leadership team used the grant proposal as a program map to offer support, leadership, and continuous improvement throughout the program's implementation.

Implementation Support, Leadership, and Continuous Improvement

Throughout the grant's implementation, the RxTN leadership team developed, delivered, and refined coordinated program supports while also striving to build and maintain relationships with multiple stakeholders at co-grantee institutions. All co-grantee institutions participated regularly in these activities.

- *RxTN staff training.* The RxTN leadership team designed and delivered annual training sessions for RxTN staff in 2013, 2014, and 2015. The training events helped familiarize participants with RxTN structures (e.g., Desire2Learn® online learning management system), approaches (e.g., appreciative advising), external supports (e.g., program evaluation), and reporting methods (e.g., budget handling). Materials and topics presented in training were used actively throughout RxTN's delivery.

- *RxTN routine group communication.* The RxTN leadership team used regularly scheduled Adobe Connect meetings as the primary form of communication. The meetings served as a mechanism for discussing and resolving implementation challenges; preparing RxTN staff to execute all of the grant components; providing opportunities to share new ideas; and training staff on student support elements, various software programs, and data collection and management tools.

- *Individualized support.* The RxTN leadership team offered guidance and support by providing individual assistance to co-grantee institution staff. These meetings prepared RxTN staff to execute all components of the program; provided them an opportunity to present best practices and discuss challenges; and equipped them with targeted professional learning in various areas, including Student Support Prescription tools, software programs, and data collection and management tools.

- *Planning and monitoring visits at co-grantee institutions.* The RxTN leadership team led annual planning sessions with stakeholders at co-grantee institutions. The meetings were instrumental in getting all key personnel on the same page, developing institution-specific plans, building a monitoring process, and garnering institutional commitment.

- *Communication with co-grantee college administrators*. The RxTN leadership team created relationships with co-grantee institution leadership. With the attention of administrators, the RxTN leadership team equipped co-grantee RxTN staff with targets and benchmarks, which resulted in both comprehensive plans and tactics for reaching enrollment targets. The RxTN leadership team was also able to influence administrative leadership at several co-grantee institutions to better support RxTN programs and to protect its resources.

- *Efficacy of supports and leadership*. Although the development and rollout of training programs and Student Support Services proceeded according to proposed specification, each curriculum and support service had to be defined prior to design and implementation. This step led to a longer-than-anticipated planning and development period for many of these resources and workshops. In response to delayed development, the RxTN leadership team worked with co-grantee institutions to encourage use of additional institution-based resources and to clarify the intent of the RxTN student supports. With the exception of the Emergency Medical Dispatcher program that was replaced with Intravenous Therapy, all training prescriptions were developed.

- *Evaluation use*. The RxTN leadership team made regular improvements to the program's implementation and products. The RxTN leadership team was regularly actively engaged in the program evaluation—providing feedback on instrumentation, procedures, and reports; and helping evaluators gain access to data (e.g., survey responses). The RxTN leadership team also participated in debriefings of evaluation reports, using many of the formative findings to augment or adjust existing implementation supports and structures. The RxTN leadership

team also created bidirectional avenues for evaluators to share directly with co-grantee stakeholders at training sessions, through stakeholder briefs, and via data collection visits.

Variation in Program Implementation

Differences existed in co-grantee institutions' capacity to develop and implement RxTN. Although the RxTN program plan anticipated institutional variation, initial levels of involvement in the program varied more substantially across co-grantee institutions than expected. The RxTN leadership team employed the supports and mechanisms described above to increase co-grantee institution participation in the RxTN program to great avail. The structures resulted in normalized communication pathways and facilitated the development of a virtual learning community. Periodic site visits, compliance checks, and monitoring audits enhanced the quality and thoroughness of fiscal documentation and student records. Institutional factors, such as co-grantee institution leadership changes and RxTN staff turnover, also contributed to the level of individual and collective success of the grant.

- *Student support delivery*. Overall, completion coaches greatly exceeded the anticipated number of students served, with variation across co-grantee institutions. Considerable variation also occurred in each co-grantee institution's selection and use of student supports, which may be explained in part by each college's and each program's specific needs. In addition, although some co-grantee institutions targeted RxTN students, others targeted either non-RxTN students or both of these subgroups for Student Support Services.
- *Support service delivery*. Staff turnover among completion coaches affected service receipt among students. For example, Columbia State experienced turnover in its completion coach role and ultimately failed to reach its service goal. And, although completion coaches at Roane State far exceeded their projected totals, the institution served just 19 percent of enrolled RxTN students in contrast to the initial program design, potentially indicating a miscommunication about this role.
- *Curriculum delivery*. Curriculum delivery also varied across co-grantee institutions. For instance, instructors, available technology, and local infrastructure appeared to have largely determined whether hybrid course delivery was adopted.

Program Impacts and Outcomes

Overall, the RxTN program enrolled 2,399 students into nine degree and certificate programs across 13 co-grantee institutions and served a total 7,458 students with Student Support Services for a total of 8,183 students impacted by this program. The institutions met 189 percent of the program's goal for Student Support Services and 117 percent of the program's enrollment target (see Table A). Program impacts and outcomes are organized by key theme. Relevant research questions described above are labeled where appropriate:

- **Mastery of training programs**. Students enrolled in credit programs earned an average grade point average (GPA) of 2.91, with students in the Occupational Therapy Assistant and Surgical Technology programs earning the highest GPAs, with average GPAs at 3.41 and 3.42, respectively.
- **Program completion and graduation**. A total of 1,562 students completed a noncredit certification program or earned a degree in an RxTN program, or 104 percent of the program's target (see Table A). Among students enrolled in noncredit certification programs, 934 (72 percent) had earned at least industry-recognized certification, with all students earning a total of 1,385 industry-recognized certifications. The result was a total of 2,014 earned credentials across all RxTN students. In addition, 13 percent of students were retained in their programs upon the completion of grant funding, and 22 percent of students had not completed their program of study. These groups included 199 students who successfully completed their noncredit course but did not take or failed to pass their certification exam.
- **Impact of program structure on program completion**. Students enrolled in "stacked" or "bundled" noncredit certification programs and those enrolled in hybrid noncredit courses were both statistically more likely to complete their program of study and pass their certification exam, compared with students enrolled at institutions with stand-alone noncredit programs or offering only traditional classroom courses.
- **Impact of Student Support Services on academic outcomes**. Six in 10 RxTN students (61 percent) accessed at least one of the Student Support Services provided through this grant, with the greater numbers of students meeting with a completion coach and participating in the creation of an academic plan. Relatively few students

took advantage of the diagnostic skills assessment, limiting the potential correlation between that service and COMPASS® test scores. However, participating in the diagnostic skills assessment was positively correlated with both student retention and graduation. In addition, digital literacy training was positively correlated with program completion among all students. Among credit students only, participating in the academic plan preparation, the boot camp, or the prior learning assessment positively correlated with either retention or graduation outcomes.

▪ **Student satisfaction and engagement.** Upon program completion, 82 percent of students surveyed reported they were satisfied with their overall program of study, and 95 percent reported they would recommend their program of study to others. In addition, 78 percent of students believed that their classes prepared them for what they want to do in life, with 81 percent reporting that what they learned in their classes was relevant to their future career success. Students also reported a high level of engagement with staff and faculty. More than three-fourths of students indicated that they had been able to meet with a staff member, academic advisor, or completion coach to figure out their course schedule, create a plan for achieving their academic goals, and/or receive information about financial assistance.

TABLE A: DOL TAACCCT GRANT OUTCOME MEASURES FOR RXTN PROGRAM

DOL Outcome Measures	Goal	Current Through June 2016[‡]	Percentage of Goal Achieved
1. Unique students receiving services under the *Student Support Prescription* or *Training Prescription*	3,939	8,183	207%
1a. Students served by *Student Support Services*	3,939	7,458	189%
1b. Students enrolled in a *Training Prescription*	2,039	2,399	117%
2. Students who have completed a grant-funded program of study	1,500	1,562	104%
3. Students retained in grant-funded programs of study	458	305	67%
4. Total number of students completing credit hours	1,019*	1,028	101%
5. Total number of earned credentials	2,296	2,014	89%
6. Total number of students enrolled in further education after completion	100	144	144%
7. Students who become employed one quarter after program completion	1,300	197	15%
8. Students who remain employed three quarters after exiting the program	1,170	120	10%
9. Students employed at program enrollment who receive a wage increase	49	424	865%

Source: Student Tracking Data—Program Coordinators and Completion Coaches, through Spring 2016. [‡] Outcome measure 1a was assessed in March 2016 and outcome measures 6-9 were assessed in August 2016. *NOTE: Initial projections reported that the goal for outcome measure 4 was 1,835. However, this total included noncredit students. The number has been changed to reflect credit students only.

▪ **Students' employment outcomes.** By August 2016, 65 percent of all program completers reported being employed three months (one quarter) after program completion. The majority of those who reported employment were incumbent workers—51 percent of RxTN program completers were employed at program enrollment and retained that employment one quarter after program completion. However, the majority (52 percent) of these incumbent workers reported receiving a wage increase following program completion, which was more than eight times greater than the program's target (see Table A). Just 12 percent of RxTN graduates reported finding new work in the first quarter after graduation. However, these students remained in these positions in high percentages—95 percent retained that employment two quarters after graduation, and 87 percent retained that employment three quarters after graduation.

▪ **Impact of program type and structure on employment outcomes.** Students enrolled in credit programs were statistically more likely to both retain existing employment and to find work three months after program graduation and keep that new work six and nine months after graduation. Noncredit students who had participated in "bundled" or "stacked" certificate programs were statistically more likely to report finding new work after program completion and to report receiving a wage increase if they were already employed. In addition, noncredit students as a whole were more likely than credit students to report enrolling in further education following program completion. Students enrolled in noncredit hybrid programs were more likely to receive a wage increase following program completion, compared with those in traditional noncredit programs. However, between those enrolled in hybrid and traditional noncredit programs, no differences were noted in obtaining new employment or continuing in current employment.

- **Students' continuing education outcomes.** Nine percent of program completers reported enrolling in continuing education after program completion between those enrolled in hybrid and traditional noncredit programs—144 percent of the program's target (see Table A). This figure does not include the 317 students who completed one certification program and subsequently enrolled in another certification program within the grant period.
- **Impact of Student Support Services on employment outcomes.** Four support services were significantly positively correlated with retaining employment: Prior Learning Assessment, Boot Camp, Supplemental Instruction/Tutoring, and Coaching or Retention Services provided by a completion coach. In addition, five Student Support Services were positively correlated with a wage increase. These were Diagnostic Skills Assessment, Prior Learning Assessment, Boot Camp, Instructional Learning Supports, and Supplemental Instruction/Tutoring. Only Digital Literacy Training was negatively correlated with receiving a wage increase.

Conclusion

The RxTN program was delivered according to its original plan and has yielded indications of positive impact. The RxTN leadership team's development of program supports such as routine staff training, formalized group communication, a facilitated virtual learning community, and individualized support promoted consistent program implementation across the 13 co-grantee institutions. Institutional factors, such as co-grantee institution leadership changes and RxTN staff turnover, also contributed to the level of individual and collective success of the grant. By the end of the grant period, more than 1,500 students completed a noncredit certification program or earned a degree in an RxTN program, resulting in 2,104 earned credentials. Altogether, the RxTN program met its enrollment goals and contributed to student academic and employment success. Students completing the program agreed: Upon program completion, 95 percent of students surveyed reported that they would recommend their program of study to others. This evaluation of the RxTN program found that specific programmatic features including "stacked" or "bundled" certification programs and hybrid delivery contributed to student success among students enrolled in noncredit programs. And although only a limited number of Student Support Services had a positive impact on students' program completion, six support services were positively correlated with employment outcomes, suggesting that Student Support Services may impact student employment more so than program completion. Future workforce and education research should continue to examine the impact of program design and program implementation on student outcomes as well as to build evaluation designs that measure delayed program benefits among participants entering the workforce.