ADVANCE Southwest Program Evaluation Final Report

September 2018

Contents

Executive Summary

1. ADVANCE Southwest Description and Activities

Advance Your Career in Health Care—Southwest Tennessee Community College (ADVANCE Southwest) is focused on serving TAA-impacted and other dislocated workers, as well as nontraditional minority adult students and un- and under-employed workers looking for stable employment. In the Memphis region, careers in Allied Health fields are projected to grow 10% to 25% through 2020. Southwest seeks to meet these industry needs by engaging 450 students throughout the life of the ADVANCE Southwest program to strengthen workers' skills in Allied Health. To that end, the ADVANCE Southwest program, in collaboration with workforce partners, is enhancing Allied Health programs of study to offer certificates for emergency medical technicians (EMTs) and paramedics, AAS degrees in nursing and paramedics, and an AS degree in allied health with a nursing concentration. The ADVANCE Southwest team is implementing this single-institution program consisting of two main, integrated interventions: (1) student supports, which consist of an arrangement of career advising, completion coaching, case management, and other support options for students; and (2) training programs, including nursing and EMT curricula, which provide access to programs of study oriented to address the state's healthcare industry needs.

2. Evaluation Design Summary

Southwest Tennessee Community College (Southwest TN) contracted with ICF and Indikus in April 2017 to serve as the third-party program evaluation team to study the ADVANCE Southwest program. The ADVANCE Southwest program evaluation consists of a formative evaluation component, through which the program's implementation processes and program delivery are evaluated, and a summative component, through which the program's outcomes and impacts are evaluated. The evaluation serves the U.S. Department of Labor (DOL) and Southwest TN by systematically assessing the operation and outcomes of the program and providing evaluation-driven recommendations to continuously improve implementation efforts.

2.1 Implementation Study Design

The implementation evaluation is collecting data from program documentation and site visits, which include interviews and focus groups with key stakeholders such as college faculty, students, and employers. The implementation evaluation is generating findings around three domains related to program implementation—fidelity of implementation, critical components of implementation, and factors affecting implementation. Each domain contains a series of evaluation questions:

Fidelity of Implementation
1. To what extent and in what ways did ADVANCE Southwest use grant funds to purchase equipment and supplies, and enhance facilities as described in the proposal?

2. How did ADVANCE Southwest use grant funds to hire required personnel as described in the proposal?
3. In what ways did ADVANCE Southwest use grant funds to develop or expand curricula as described in the proposal?
4. To what extent and in what ways did relevant stakeholders participate in ADVANCE Southwest professional development as described in the proposal?
5. To what extent did faculty and staff utilize the various ADVANCE Southwest tools (e.g., student assessments) according to plan?

Critical Components of Implementation
1. To what extent and in what ways did ADVANCE Southwest develop or expand partnerships and collaborations as described in the proposal?
2. What contributions did each of the partners and other key stakeholders make toward (1) program design, (2) curriculum development, (3) recruitment, (4) training, (5) placement, (6) program management, (7) leveraging of resources, and (8) commitment to program sustainability? What factors affected partner involvement or lack of involvement? Which contributions from partners were most critical to the success of the grant program? Which contributions from partners had less of an impact?
3. How was the particular curriculum or activity selected, used, or created?
4. How were programs/program designs improved or expanded using grant funds? What delivery methods were offered? What was the program administrative structure? What support or other services were offered?
5. To what extent and in what ways did ADVANCE Southwest courses integrate technology enhancements?
6. Are in-depth assessments of participant abilities, skills, and interests conducted to select or enroll individuals into the program being evaluated? What assessment tools and process were used? Who conducted the assessments? How were the assessment results used? Were the assessment results useful in determining the appropriate program and course sequence for participants? Was career guidance provided? If so, through what methods?
7. To what extent did assessments help students make informed decisions about program enrollment, course selection, and career pathways?
8. To what extent and in what ways did student supports help students?
9. To what extent and in what ways did ADVANCE Southwest identify, attract, and recruit TAA-eligible job seekers, veterans, and other workers for employment and/or continuing education and training in high-needs healthcare fields?

Factors Affecting Implementation
1. What opportunities exist for improving the program's performance?
2. What threats and opportunities hamper or promote program delivery and/or its likelihood of sustainability?
3. What environmental factors affect the program's implementation? (e.g., state policy, local economy, competitor colleges)
4. How satisfied are ADVANCE Southwest's main beneficiaries (employers and students) with the program?
5. What program components are likely to be sustained beyond the grant funding period?

2.2   Outcomes Study Design

The summative evaluation component is analyzing ADVANCE Southwest program outcomes and impacts using longitudinal cohort analysis. Through this analysis, the outcomes evaluation is addressing the following nine required evaluation questions, as well as two supplemental evaluation questions:

1. How many unique participants were served through the grant?
2. How many program participants completed a TAACCCT-funded program of study?
3. How many participants were still retained in their program of study at the end of the grant period? How many participants entered but did not complete a TAACCCT-funded program of study?
4. How many student participants completed credit hours with a passing grade?
5. How many participants earned credentials through the grant-funded program of study or comparison program?
6. How many participants who completed a grant-funded program of study enrolled in further education? How many of these participants enrolled in subsequent grant-funded degree or certificate programs?
7. How many participants who completed a grant-funded program of study were employed after program completion?
8. How many participants who completed a grant-funded program of study were employed after program completion retained that employment for six months and one year after program completion?
9. How many participants were employed at the time of program enrollment? How many participants who were employed at enrollment received a wage increase after program completion?
10. How long did it take participants to complete their program of study?
11. To what extent did participation in enhanced student advising services impact students' program success and employment outcomes?

3.   Implementation Findings

Fidelity of Implementation

Overall, throughout the period of performance, ADVANCE Southwest either adhered to the original program design or made formal modification requests to adjust program structures and components.

- Grant funds were used to purchase improved technology (e.g., simulation mannequins), cover salaries, and purchase study materials, as planned. Lab and enrichment staff worked with faculty to integrate more technology into the curriculum and create new tools (e.g., grading rubrics). The program used grant funds to develop curriculum according to licensure exam content. ADVANCE Southwest also used grant funds to provide material assistance to students, including uniforms, workbooks, and test materials.
- Stakeholders described curricular development as occurring largely according to plan. The design process was described as collaborative (within and across departments, and with the input of employers) and involving the integration of simulations and other technologies into the curricula.

- Stakeholders described student assessments as largely informal and carried out, primarily, by faculty. Across the entire implementation period, this informal, yet strategic approach was described as effective in enhancing student success, improving coursework, preparing students for national licensure exams, and improving retention rates.

- Although several initial implementation challenges were listed (e.g., communication barriers, faculty turnover), these challenges appear to have been resolved in the later stages of program implementation. Interview participants described how, over time, leadership support increased faculty and staff comfort in sharing innovative ideas, and, in turn, supported effective communication and collaboration. In addition, staff and leadership retention improved during the second half of program implementation, which coincided with these stakeholders commenting that they were committed to seeing the program through and working toward sustaining its successful components.

- Stakeholders described using grant funds to hire additional program staff and faculty members. This included a simulation lab coordinator and several faculty members to instruct program courses. In addition, Southwest Tennessee's leadership identified funding sources to sustain key positions beyond the funding period.

- Throughout the implementation process, technology provided by the grant was integrated into all courses of study and was utilized by all students enrolled in pertinent courses. Students assigned great value to the updated technology provided by the grant and stated that using "extremely high-tech" simulation labs and simulation mannequins helped prepare them for both national registries and their future career paths. For example, one student said, "One-on-one time with lab techs during class scenarios helped me improve patient skills in stressful situations." Another student said, "Skills lab is my favorite part of school. I can see myself grow when I do a skill."

Critical Components of Implementation

Throughout its period of performance, ADVANCE Southwest made progress in planning, developing, and implementing all program components.

- Key program structures related to ADVANCE Southwest (program design, curriculum development, recruitment, training, placement, program management, leveraging of resources, and commitment to program sustainability) were managed by internal stakeholders. More specifically, with input from local employers and from faculty who also work in the local Allied Health industry, staff and faculty carried out the following functions directly: (1) program design, (2) curriculum development, and (3) recruitment.

- Stakeholders described several ways in which grant funds were utilized to support ADVANCE Southwest, including the expansion of programs designed to include more registry-based curriculum that integrated technology, such as simulation labs and mannequins. ADVANCE Southwest curriculum and instructional activities were created collaboratively by grant personnel with input from employers and students. Faculty, administrators, and staff involved in the grant selected, further developed, and used curricula that would reflect what students would be tested on in their licensure exams and ensured that students would have sufficient experience through the integration of simulation labs and mannequins.

- Increased retention rates and student satisfaction with programs was perceived as largely attributable to student supports provided by the grant. Student supports provided direct services to students in the form of student advising, counseling, and other kinds of assistance. Internal stakeholders and students articulated how students had utilized these supports to a great extent. The supports deemed particularly valuable were the introduction of tangible resources and advising, a broad approach to student support, and the introduction of tutoring services.

- Stakeholders described student assessments as largely informal and carried out by faculty. The informal approaches used to determine student progress and career prospects were described by students and internal stakeholders as effective. It was decided that Southwest TN would sustain the assessment strategy beyond the initial funding period. However, stakeholders anticipated that the continued assessments would be more heavily advertised than those embedded in ADVANCE Southwest.

- Stakeholders described how ADVANCE Southwest had effective structures in place (e.g., providing material supports, orientation sessions, guidance from program directors) that attracted prospective students to the program. Efforts included conducting orientations, advertising program features (e.g., showcasing equipment), and providing program information to potential students. Additionally, ADVANCE Southwest program directors provided guidance to students prior to their enrollment in courses of study. Although this guidance was primarily informal, students perceived this type of guidance as valuable and as informing their decision to enroll in the program.

- Events, such as regular ADVANCE Southwest Advisory Board meetings, gave partners and employers opportunities to provide feedback and recommendations for programs of study and were perceived as the primary strategy for strengthening partnerships. Anecdotal evidence, gathered during the evaluation's attendance at one advisory board meeting, suggests that these events were well attended. ADVANCE Southwest also involved partners and employers in serving as instructors for program courses, as well as mentoring and testing activities.

Factors Affecting Implementation

ADVANCE Southwest stakeholders strived to understand and make use of factors that affected program implementation. In addition, throughout implementation, internal stakeholders engaged in conversations and used findings from the program evaluation to improve the program and its delivery. Stakeholders also utilized various sources of information, including the evaluation, to plan for the program's long-term sustainability.

- Several opportunities for improving the program's performance were shared with ADVANCE Southwest stakeholders by the evaluation team, including increasing the visibility of ADVANCE Southwest on the college campus, increasing buy-in from departments and offices not directly involved in the program to potentially increase the program's performance, and improving the relationship between the program of study exams and national certification exams. ADVANCE Southwest stakeholders used these findings to improve the program. Later in the implementation process, students who were enrolled in ADVANCE Southwest programs of study suggested that by improving the chain of communication from program leadership to students, the program may be improved.

- ADVANCE Southwest stakeholders and beneficiaries listed both opportunities for and threats to the program. Foremost, all program threats listed during the earlier stages of implementation were resolved by program leadership, chiefly by increasing the frequency and quality of communication and by clarifying staff and faculty responsibilities. Additional threats to the program were described during data collection activities in the final stages of implementation during the spring of 2018; these included a potential over-reliance on using technology (e.g., simulation mannequins) and local competing programs with comparable offerings that may be more attractive to students. Participants also offered opportunities for increasing the likelihood of program sustainability, including increasing recruitment efforts, seeking additional grant initiatives, and incorporating more live patient experience opportunities into the programs of study.
- Throughout program implementation, ADVANCE Southwest's main beneficiaries shared positive impressions of and were overall satisfied with the program. By providing high-quality personnel, modern technology, and career preparation for its students, ADVANCE Southwest was described as an asset to the college, and students indicated that their programs of study were comprehensive and efficient, giving them confidence to successfully enter the career field.
- ADVANCE Southwest internal stakeholders and external partners said that program components are likely to be sustained beyond the funding period. In fact, stakeholders and partners have engaged in planning on sustainability and already secured means to sustain program components, such as retaining additional staff. Deemed particularly likely to be sustained beyond the initial funding period are additional staff, student supports, and technology.

4. Participant Impacts and Outcomes

Grant Participation Aligned With U.S. Department of Labor (DOL) Outcome Measures

- Overall, 545 students were served through the ADVANCE Southwest program, which represented 121% of their original targeted goal (see Table A).
- A total of 269 students completed at least one program of study and earned a total of 318 credentials.
  - A total of 512 students completed credit hours, which well exceeded the program's goal of 320 students.
- A total of 178 students were employed in their first quarter after program completion, and

Table A. DOL TAACCCT Grant Outcome Measures		
DOL Outcome Measures	**Goal**	**Current**
1. Unique students receiving services	450	545
2. Students who have completed a grant-funded program of study	270	269
3. Students retained in grant-funded programs of study	252	96
4. Total number of students completing credit hours	320	512
5. Total number of earned credentials	296	318
6. Total number of students enrolled in further education after completion	50	34
7. Students who become employed one quarter after program completion	243	178
8. Students who remain employed three quarters after exiting the program	228	122
9. Students employed at program enrollment who receive a wage increase	20	116

Source: ADVANCE SW Student Tracking Database, June 2018

69% of these students remained employed three quarters after program completion.
- A total of 116 incumbent workers received a wage increase following program completion, which was more than five times the initial program goal.

Student Participation in Academic Programs and Support Services
- A total of 545 students enrolled in an ADVANCE Southwest program of study; 53% enrolled in one or more EMT programs and 47% enrolled in nursing.
    o Out of the 545 enrolled students, 37% enrolled in Basic EMT, 17% enrolled in Advanced EMT, and 12% enrolled in Paramedics. In addition, 10% of all enrolled students enrolled in two or more EMT programs.
- Students enrolled in the Nursing program had a slightly higher average cumulative GPA of 2.87 compared with students enrolled in any EMT program, who averaged a cumulative GPA of 2.52.
    o Looking at individual programs, students enrolled in the advanced EMT program had the highest average cumulative GPA at 2.97.
- Close to two-thirds of students (61%) who completed the survey reported engaging with at least one student support activity, with one-third (35%) of students utilizing multiple support services.
- A majority of students surveyed (53%) reported meeting with a Learning Enhancement Coordinator, while one-third reported participating in tutoring (38%) and one-fourth attended a Learning Support Lab (26%).
- Students surveyed reported that the Kuder Career Assessment/Career Aptitude Assessment contributed the most to their success, at 2.33 out of 3.
    o Tutoring and the Learning Support Lab followed at 2.31 and 2.30 out of 3, respectively.
- Students surveyed reported benefiting personally from support staff, with 51% reporting that they met with a college staff member to talk about balancing their commitments and 45% indicating they had met with an advisor or coach to create a plan to achieve academic goals.

Successful Program Completion and Post-Completion Outcomes
- Throughout the length of the program, half (49%) of all unique participants completed at least one program of study.
    o Sixty-one percent of EMT students completed at least one EMT program and 36% of nursing students completed their program, reflective of the shorter nature of the EMT program and the longer nature of the Nursing program.
- A total of 154 students also successfully passed their relevant licensure exam.
- Seventy-five percent of students surveyed reported that they were satisfied with their program of study, and 73% indicated that they would recommend their program to others.
- A total of 269 students had graduated and moved into the workforce by June 2018.
    o Among these students, 66% (178 students) were working one quarter (three months) after program completion (see Table A).
    o Approximately half of those who found employment by one quarter after program completion were working two (58%) and three quarters (45%) after program completion.

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- Among incumbent workers, 116 (or 59%) reported a wage increase while continuing their workforce participation and among non-incumbent workers, 21% reported finding employment in the first quarter after program completion.
- In addition, 13% of program completers reported that they were enrolled in continuing education in the first quarter after completion.

Completion and Employment Impacts

- EMT students were more likely to be employed after completion (p=0.349**), while nursing students were more likely to be enrolled in further education (p=-0.403**).
- There were no significant correlations between completion or employment outcomes and cohort, indicating that any improvements made to the program over time did not have a measurable impact on student performance. However, this may be reflective of the shorter nature of both ADVANCE Southwest program implementation and the programs of study.
- Students who had completed their program of study and passed their licensure exam were more likely to be employed and to receive a wage increase than those without a relevant licensure (p=0.398** and p=0.413**).

5. Conclusions

Overall from an implementation standpoint, in terms of program structures and components, ADVANCE Southwest either adhered to the program's original design or made formal modification requests throughout the implementation period. Grant funds were used to purchase improved technology, cover salaries, and purchase study materials and material assistance for students, as planned. ADVANCE Southwest used grant funds to develop curriculum according to licensure exam content, and curricular development occurred largely according to plan. Students utilized learning and material supports provided by the grant and saw these supports as contributing to a positive experience with their program of study.

Furthermore, ADVANCE Southwest curricula and activities were created collaboratively by grant personnel, with significant input from employers and students. One of the major enhancements to curricula was the integration of simulations and enhanced technology. Key program structures related to ADVANCE Southwest (program design, curriculum development, recruitment, training, placement, program management, leveraging of resources, and commitment to program sustainability) were managed by internal stakeholders. Key stakeholders collaborated to design programs that prepared students for licensure exams and reflected registry-based material. Students perceived the updated material as preparing them to be successful on their licensure exams and in securing employment in the allied health field. Recruitment efforts were planned and carried out by ADVANCE Southwest staff. External partnerships were maintained and strengthened through ADVANCE Southwest by involving partners in both advisory and student instructor capacities.

Throughout implementation, ADVANCE Southwest stakeholders strived to understand factors that affected program implementation and used findings from the evaluation and other sources of information to continuously improve the program's delivery and structures. ADVANCE Southwest stakeholders opted to sustain most elements of the program and has worked to secure funding to support those program elements.

Although ADVANCE Southwest had a delayed program start, at the end of program implementation, the program had met or exceeded five of its nine outcomes. In particular, 545 students were served through the ADVANCE Southwest program, including 512 who completed credit hours and 269 who completed at least one program of study. In addition, two-thirds of program completers were working one quarter after program completion, and 116 incumbent workers received a wage increase, which was more than five times the initial program goal.

Students who had completed an EMT program were more likely to be employed following program completion, while nursing students were more likely to be enrolled in further education. This may suggest that something in this coursework encourages students to pursue more advanced degrees, or it may be reflective of the job market in southwest Tennessee—students pursuing work in the nursing field may feel that they need more advanced degrees to remain competitive. In addition, students in both EMT and nursing programs who had completed their program of study and passed their relevant licensure exam were more likely to be employed following completion and more likely to receive a wage increase than those without that licensure. This may be an indication of the importance of licensure for local employers and an area for continued emphasis in sustainability efforts.

I. Introduction

1. Program Overview

In September 2014, Southwest Tennessee Community College (Southwest TN) received a Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant that was funded through the U.S. Department of Labor (DOL). This program, called "Advance Your Career in Health Care—Southwest TN," or ADVANCE Southwest, focused on serving Trade Adjustment Assistance (TAA)-impacted and other dislocated workers, as well as nontraditional minority adult students and un- and under-employed workers looking for stable employment. To that end, the ADVANCE Southwest program, in collaboration with workforce partners, enhanced allied health programs of study to offer certificates for emergency medical technicians (EMTs) and paramedics, AAS degrees in nursing and paramedics, and an AS degree in allied health with a nursing concentration. Within the Memphis region, careers in these fields are projected to grow 10% to 25% through 2020. Through the ADVANCE Southwest program, Southwest sought to meet these industry needs by engaging 450 students throughout the life of the ADVANCE Southwest program to strengthen workers' skills in allied health. Courses in these programs also benefited from the addition of simulation technology and labs, which were used to deliver interactive learning modules to accelerate learning and improve student retention.

Designed to strengthen pathways into high needs healthcare employment, ADVANCE Southwest has completed program implementation. This single-institution TAACCCT program consisted of two main, integrated interventions designed to improve student readiness and support students in program completion and job placement: (1) student supports, which consist of an arrangement of career advising, completion coaching, case management, and other support options for students; and (2) training programs, including nursing and EMT curricula, which provide access to programs of study that are oriented to address the state's healthcare industry needs.

The ADVANCE Southwest grant proposal identified program goals aligned with each of the nine DOL outcome measures (see Table 1). Through the grant, the College planned to ultimately serve 450 unique students, about 71% of whom were expected to complete credit hours (320 students) and 60% of whom were expected to complete one of the programs of study being implemented through the ADVANCE Southwest TAACCCT program (270 students).

Table 1. DOL TAACCCT Grant Outcome Measures for ADVANCE Southwest Program	
DOL Outcome Measures	**Goal**
1. Unique students receiving services	450
2. Students who have completed a grant-funded program of study	270
3. Students retained in grant-funded programs of study	252
4. Total number of students completing credit hours	320
5. Total number of earned credentials	296
6. Total number of students enrolled in further education after completion	50
7. Students who become employed one quarter after program completion	243
8. Students who remain employed three quarters after exiting the program	228
9. Students employed at program enrollment who receive a wage increase	20

2. Evaluation Overview

Southwest TN contracted with ICF and Indikus in April 2017 to serve as the third-party program evaluation team to study the ADVANCE Southwest program. The evaluation team addressed both formative and summative evaluation questions by conducting a longitudinal study of implementation and outcome data. Through these analyses, the evaluation team is providing pertinent descriptions and indicators about the ADVANCE Southwest program implementation, as well as the program's interim and final effect on outcomes for enrolled participants and those who have completed their program of study. The evaluation serves DOL and Southwest TN by systematically assessing the operation and outcomes of the program and providing evaluation-driven recommendations to continuously improve implementation efforts.

This program evaluation was organized around a mixed methods evaluation design. With the understanding that by drawing upon multiple methods, evaluation findings would be more robust and more accurate, the evaluation team drew from the multiple data sources that make up the evaluation database to write this report. Data sources include site visits, telephone interviews, student tracking data, periodic surveys, and program documents.

- *Site Visits and Telephone Interviews:* The evaluation team conducted three site visits to Southwest TN. The first visit, which entailed one-on-one interviews with ADVANCE Southwest program staff and faculty, occurred in July 2017. The visit was preceded and followed by telephone interviews. The second visit occurred on September 2017 and emphasized focus groups with a sample of students participating in each program of study. The third visit occurred on March 2018 and entailed an observation of an advisory board meeting, focus groups with students, and interviews with faculty and staff. This visit was preceded by telephone interviews. Qualitative data from the site visits were categorized and used to conduct descriptive analysis; these data will serve as the basis for thematic analysis.
- *Program Documentation:* The evaluation team conducted a review of pertinent program documents to monitor key program developments and program implementation, summarized from ADVANCE Southwest quarterly and annual reports and individual program documents. These documents, including the original project narrative, update reports, and marketing materials, were reviewed to assess the extent to which the project was implemented in relation to the original proposed project plan. The documents were used in conjunction with key stakeholder input to develop interview guides.
- *Student Tracking Data:* Student academic and demographic information was collected by the data specialist at Southwest TN and compiled into one student tracking data spreadsheet. This data was updated each semester and used to create a master database that includes cumulative information on students enrolled in the ADVANCE Southwest program.
- *Stakeholder Surveys:* The evaluation team collected data through a final completion survey of students. This survey was administered at the end of each program during the fall 2017 semester. These surveys were then linked to the student tracking database to better assess students' beliefs and perceptions of the ADVANCE Southwest program, as well as next steps after program completion from this limited sample.

The implementation evaluation generated findings around three domains related to program implementation—fidelity of implementation, critical components of implementation, and factors

affecting implementation. Specifically, this evaluation addressed the following three sets of evaluation questions:

Fidelity of Implementation

1. To what extent and in what ways did ADVANCE Southwest use grant funds to purchase equipment and supplies, and enhance facilities as described in the proposal?
2. How did ADVANCE Southwest use grant funds to hire required personnel as described in the proposal?
3. In what ways did ADVANCE Southwest use grant funds to develop or expand curricula as described in the proposal?
4. To what extent and in what ways did relevant stakeholders participate in ADVANCE Southwest professional development as described in the proposal?
5. To what extent did faculty and staff utilize the various ADVANCE Southwest tools (e.g., student assessments) according to plan?

Critical Components of Implementation

1. To what extent and in what ways did ADVANCE Southwest develop or expand partnerships and collaborations as described in the proposal?
2. What contributions did each of the partners and other key stakeholders make toward: (1) program design, (2) curriculum development, (3) recruitment, (4) training, (5) placement, (6) program management, (7) leveraging of resources, and (8) commitment to program sustainability? What factors affected partner involvement or lack of involvement? Which contributions from partners were most critical to the success of the grant program? Which contributions from partners had less of an impact?
3. How was the particular curriculum or activity selected, used, or created?
4. How were programs/program designs improved or expanded using grant funds? What delivery methods were offered? What was the program administrative structure? What support or other services were offered?
5. To what extent and in what ways did ADVANCE Southwest courses integrate technology enhancements?
6. Are in-depth assessments of participant abilities, skills, and interests conducted to select or enroll individuals into the program being evaluated? What assessment tools and process were used? Who conducted the assessments? How were the assessment results used? Were the assessment results useful in determining the appropriate program and course sequence for participants? Was career guidance provided? If so, through what methods?
7. To what extent did assessments help students make informed decisions about program enrollment, course selection, and career pathways?
8. To what extent and in what ways did student supports help students?
9. To what extent and in what ways did ADVANCE Southwest identify, attract, and recruit TAA-eligible job seekers, veterans, and other workers for employment and/or continuing education and training in high-needs healthcare fields?

Factors Affecting Implementation

1. What opportunities exist for improving the program's performance?
2. What threats and opportunities hamper or promote program delivery and/or its likelihood of sustainability?

3. What environmental factors affect the program's implementation? (e.g., state policy, local economy, competitor colleges)
4. How satisfied are ADVANCE Southwest's main beneficiaries (employers and students) with the program?
5. What program components are likely to be sustained beyond the grant funding period?

The summative evaluation component analyzed ADVANCE Southwest program outcomes and impacts using longitudinal cohort analysis. Through this analysis, the outcomes evaluation addressed the following nine required evaluation questions, as well as two supplemental evaluation questions:

Summative Evaluation Questions

1. How many unique participants were served through the grant?
2. How many program participants completed a TAACCCT-funded program of study?
3. How many participants were still retained in their program of study at the end of the grant period? How many participants entered but did not complete a TAACCCT-funded program of study?
4. How many student participants completed credit hours with a passing grade?
5. How many participants earned credentials through the grant-funded program of study or comparison program?
6. How many participants who completed a grant-funded program of study enrolled in further education? How many of these participants enrolled in subsequent grant-funded degree or certificate programs?
7. How many participants who completed a grant-funded program of study were employed after program completion?
8. How many participants who completed a grant-funded program of study were employed after program completion retained that employment for six months, and one year after program completion?
9. How many participants were employed at the time of program enrollment? How many participants who were employed at enrollment received a wage increase after program completion?
10. How long did it take participants to complete their program of study?
11. To what extent did participation in enhanced student advising services impact students' program success and employment outcomes?

2.1   Report Purpose

The purpose of this report is to inform DOL and ADVANCE Southwest program leaders and stakeholders of the progress made pertaining to program implementation and outcomes between April 2017 and June 2018. This report describes key findings related to the ADVANCE Southwest program's formative evaluation component, through which the program's implementation processes and program delivery were evaluated; as well as its summative component, through which program outcomes and impacts were evaluated.

2.2   Report Organization

To provide a context for the two sections that offer analyses of ADVANCE Southwest's implementation and outcomes following the introduction, the first section provides a description of the program as it was planned and implemented. This section begins with an overview of the implementation study, and then describes Southwest TN's capacity to implement ADVANCE Southwest and the implementation of various program structures before concluding with a discussion of implementation trends, organized by evaluation question. The next section then reports on cumulative findings from the outcomes evaluation, providing analysis on program data related to academic and employment outcomes. The report concludes with program recommendations, which are based on feedback from ADVANCE Southwest faculty and staff members, students surveyed, and from the evaluation team.

3.   Implementation Study Overview

The ADVANCE Southwest evaluation's implementation study was designed to provide useful feedback to key program stakeholders throughout the grant's implementation and to help interpret outcome study results. The evaluation team compared qualitative and document data collected during three major time points to address ADVANCE Southwest's implementation study questions. The findings are presented in four main sections: (1) capacity to implement ADVANCE Southwest, (2) ADVANCE Southwest program structures and implementation, (3) ADVANCE Southwest partnerships and collaboration, and (4) ADVANCE Southwest program sustainability. These findings are presented with the practical orientation that few programs are implemented exactly as planned. The findings are followed by a discussion that addresses findings vis-à-vis the evaluation question domains (fidelity of implementation, critical components of implementation, factors affecting implementation, and sustainability).

3.1   Approach and Process

The ADVANCE Southwest evaluation team collected implementation data through three formal events. First, between May and July 2017, the team conducted interviews with the program's key internal stakeholders, including the program coordinator, the outcomes and data specialist, the recruitment and completion coach, two learning enrichment coordinators, three instructors, and two simulator technicians, for a total of 10 interviews. These interviews were guided by semi-structured questions regarding grant planning, formal program processes (e.g., student recruitment) and outputs (e.g., curricula), early implementation experiences with ADVANCE Southwest, and suggestions for improving program implementation. The second formal data collection event, which occurred on September 17–18, 2017, involved focus groups with a sample of students representing each of the TAACCCT grant-funded programs of study (nursing, EMT, and paramedics) for a total of three focus groups (and 14 total participants). These focus groups gauged students' perceptions of the value of various aspects of the program, including student recruitment, classroom experience, use of technology, student supports and coaching, and prospects for continuing education or employment. The focus groups also gathered students' suggestions for improving the program.

In February through April 2018, the evaluation team collected qualitative information to gauge implementation. Data collection was guided by semi-structured questions that asked participants

about ADVANCE Southwest's fidelity of implementation, critical components of implementation, factors affecting implementation, and program component sustainability. In March and April, the team conducted telephone interviews with the program coordinator, the Dean of Allied Health, two instructors, three employers of ADVANCE Southwest students, and three students currently enrolled in an ADVANCE Southwest program of study, for a total of 10 interviews. In March 2018, the evaluation team conducted a site visit at the college that included two focus groups with students (n=16) enrolled in ADVANCE Southwest programs of study, follow-up discussions with faculty and administrators, and an observation of an ADVANCE Southwest Advisory Board meeting, whose participants included staff, faculty, administrators, a sample of employers, and a sample of students enrolled in one or more ADVANCE Southwest courses of study.

All interview, focus group, and observation recordings and notes were converted to text and compiled into ATLAS.ti, a qualitative analysis software program, where they were indexed and categorized, which enabled the evaluation team to conduct a descriptive analysis and lay the foundation for a thematic analysis of the data. The resulting descriptive categories serve as the body of the implementation findings presented in this report.

3.2   Limitations

A few limitations of the implementation analyses should be noted. First, qualitative methods offer insights, but are always partial because a verifiable set of findings is not a function of exploratory and interpretive analysis. To attempt to address this limitation, the evaluation team used triangulation of analyses (Brewer & Hunter, 2006). In addition, it should be recognized that the evaluation team selected interview and focus group participants based on primary stakeholder suggestions, which may introduce a selection bias. However, because evaluators conducted interviews with almost all ADVANCE Southwest staff, conducted focus groups with students representing each of the TAACCCT grant-funded programs of study, and used interviewing techniques to field verify responses, the effects of selection bias were mitigated. Moreover, the high degree of consistency across all participants indicates that selection bias did not pose a significant threat to the credibility of findings.

4.   Capacity to Implement ADVANCE Southwest

This section of the report is concerned with organizational capacity, which is an organization's ability to orchestrate structures, human resources, and processes to fulfill the program's objectives (Howley & Sturges, 2016; Bolman & Deal, 1997). Organizations that are well-equipped in the domain of organizational capacity tend to be more successful in program implementation and experience successful sustainability of program features after the funding period. Including findings from early interviews and comparing them to those of later interviews with staff, faculty employers, students, and administrators, this section explores four overlapping indicators of capacity to fully implement a complex grant: (1) internal stakeholders' familiarity with the grant, (2) internal stakeholders' understanding of their roles and responsibilities, (3) communication and coordination across the program team, and (4) institutional leadership support for the program.

4.1   Internal Stakeholder Familiarity with ADVANCE Southwest

The extent to which stakeholders, especially those who actually implement a program's activities, are familiar with the program's purpose, function, and process may affect adherence to the program's plan and, hence, the uniformity of its implementation (Patton, 2012). The existence of a consistent internal understanding of the program is an indicator of capacity (Century, Rudnick, & Freeman, 2010). During evaluators' early interviews with staff and faculty in the summer of 2016, most ADVANCE Southwest staff and faculty had been hired within the three-month period prior to program implementation. Because most ADVANCE Southwest staff and faculty were new to the project, and the institution and the grant's previous leadership—at the administrative and grants management levels—turned over without any continuity planning, the team's institutional memory was limited to just a few months. Nonetheless, as described below, earlier interview participants' responses were consistently aligned with ADVANCE Southwest's plans. As program implementation continued, staff and faculty members familiarized themselves with ADVANCE Southwest and its purposes, which was largely attributed to new leadership taking place and more structured channels of communication being implemented, as well as a lack of program staff and faculty.

Familiarity with ADVANCE Southwest's Purposes. In initial implementation study interviews, almost all staff and faculty had a basic understanding of the purposes and goals of ADVANCE Southwest and described student recruitment, retention, and employability as the grant's aims. One staff member stated, "I know that it's a Department of Labor grant with the goal of retention and recruitment… Its ultimate goals are to have students graduate and get them employed immediately after graduation." Notably, even staff and faculty members who offered relatively low self-assessments of their familiarity with the grant were able to accurately describe the grant's main goals. However, some staff and faculty said that expectations for the program were unclear and indicated that they felt that they were not fully integrated into the implementation process. One staff member stated, for instance:

> There are expectations to fulfill but little reason behind them. Having more clarification would be good. For example, we are using grant money to hire people on, but we (faculty) are not really an integral part of deciding what is best for our department.

Throughout the program's implementation, staff and faculty members became more familiar with the program and committed to its goals. Increased understanding of the program was, in large part, attributed to enhanced communication between the program team and program leadership. One program leader said, for instance, "Once we got started with the hiring process and got staff in place, we moved quickly. We had quarterly meetings that helped them understand the grant's goals and the purpose of the grant."

Familiarity with the Grant. During the stages of early implementation, most staff and faculty said that although they were still "in the learning curve," their level of familiarity with ADVANCE Southwest was good. Some participants said they were still asking questions related to the grant and continuing to understand its processes. One staff member stated, for instance, "I am still learning, but am able to navigate through." Another said, "I am still very new and still have a lot of questions. But, because of the staff that is here, I know everything I need to know." A few, however, said that they had a limited understanding of the grant. For example, one of these staff

members said, "I don't feel familiar with the grant at all … I know what my work does and that the grant funds my position, but that's about it." Another participant commented:

> *I think there can sometimes be requirements that are unclear and have unclear reasoning behind them. There are expectations to fulfill but little reason behind them, and having more clarification would be good.*

Impression of ADVANCE Southwest. Overall, staff and faculty had a positive impression of the ADVANCE Southwest program throughout the entire period of implementation. Most described the program as an asset to the departments and students involved. During early implementation, looking toward the future, some speculated that the program would continue to gain momentum as they continued to "get it going." As expected, subsequent data collection in the spring of 2018 revealed that the program gained momentum toward latter implementation. Participants described continuous improvements that were made to the ADVANCE Southwest program's components and structures. According to all participants, the ADVANCE Southwest program leadership was responsive to feedback from both students enrolled in the program and external partners. Participants said that because of the responsiveness, continuous improvements were made to the program throughout the implementation process. In turn, the program provided the most effective learning tools and career preparation for students. One staff member commented, for instance:

> *I think it's been a fantastic process so far. Overall, the spirit of the program is right on. I think this not only as an educator, but as a taxpayer. Memphis has a predominately high poverty and unemployment rate, and ADVANCE Southwest is a great program to educate folks and let them know that they're not dependent on the system.*

An employer added:

> *For me, being an employer that sends personnel there for an education, I've seen a lot of the materials and mannequins that were heavily used. It's important to have good technology, so we can get good feedback on making emergent calls. My employees now have access to mannequins and nicer equipment. And, they have tutoring and counseling made available.*

4.2   Internal Stakeholders' Understanding of their Roles

Just as important as understanding the purposes and processes involved in a program is the extent to which stakeholders understand how their own roles and responsibilities may influence program implementation (Patton, 2012). This subsection describes how ADVANCE Southwest faculty and staff members perceived and carried out their job responsibilities, and explores their beliefs about how their work was likely to and, in the later stages of implementation, did help ADVANCE Southwest achieve its goals. While the relative newness to the grant limited earlier interview participants' descriptions to just a few months, responses in interviews during the spring of 2018 revealed that participants' understanding of their roles had improved throughout the implementation process.

Understanding Roles and Responsibilities. Despite being new to the college and ADVANCE Southwest during interviews conducted in the summer of 2017, all staff indicated that they

understood their role on the project. Specifically, staff were aware of how their roles related to the goals of the grant, especially with regard to student retention and recruitment. Newly hired staff (those hired within the three months of the program's launch) received orientations. One staff member, for instance, stated, "I did receive some onboarding from the EMT department, and met with grant administrators to discuss what ADVANCE Southwest was and what it entailed… This helped to orient me to the grant and what needed to be accomplished." Stakeholders also described their motivations for working on ADVANCE Southwest; nearly all described having a strong desire to help students become employed in professional fields. One staff member, for instance, explained:

> *I worked in a place where former students who had graduated came in with patients, and I saw struggles, and I reached out because I wanted to teach students more and be a part of this improvement (ADVANCE Southwest) that was taking place.*

Responses from interview participants in the spring of 2018 suggest that roles and responsibilities became more defined over time and that internal stakeholders have partaken in meaningful discussions about various positions' roles and responsibilities. One program leader stated:

> *It's* [ADVANCE Southwest] *revealing that we have an established way of how positions are determined, and we are taking looks at faculty positions and changing names and issues in the current systems. So, overall, we've started talking about who we are trying to serve and different paradigms about how we serve through looking at internal staffing and budgeting.*

Despite clarification of roles and responsibilities throughout the grant, program leadership described this initial challenge as a "lesson learned." Reflecting on this, one participant said, "We should have clarified positions and incorporated them more with the institution upfront." Leaders stated that, in future grant initiatives, program positions will be clearly planned and defined early in the implementation process.

Overlapping Student Support Responsibilities. During the stages of early implementation, participants described little division of labor for student supports and recruitment activities. More specifically, while participants had distinct titles (e.g., faculty, outcomes and data specialist, recruitment and completion coach), descriptions of their main functions or duties were similar across most role groups (e.g., informally assessing students, participating in recruitment activities, providing resources to students). Almost all participants said they were actively involved in student case management. This work was largely described as hands-on, which often involved identifying learning obstacles for students, tutoring students, and providing students with study materials. As one staff member commented, "Since I have been here, I have adopted a hands-on approach… I go to classes, orientations, and so on." Another participant stated:

> *We work to provide those (supplies) to students, and we give them a lot of support ourselves. Our schedules fluctuate; we don't really maintain an 8:00–5:00 job. We are here when the students need us.*

Staff described student case management as typically involving ongoing communication between instructors and other staff members, with the intention of addressing learning problems or personal barriers. One participant, for example, stated:

> *Sometimes students come to me when they don't understand what the instructor said in class or what the instructor wants for an assignment, and I go and talk with the instructor to discuss the assignment and then help that student.*

Most staff also said they were actively involved in student recruitment and retention. Many conveyed the belief that the purpose of the ADVANCE Southwest program was to improve recruitment and retention rates and that, as an extension of that purpose, their positions were "tools to improve in these areas." One participant, for example, stated, "My job is to help with retention, making sure the students complete and graduate… My emphasis is on meeting each student with where they are." Some participants further elaborated that their role was to increase student employability after graduation by emphasizing professional and soft skills. One of these participants stated:

> *They (students) are not in a managerial position, but we tell them as soon as they put on a uniform, they are leaders…We help them learn what makes them a success after they get their license.*

Throughout implementation, most staff and faculty members continued to play an active role in providing student support. However, each staff and faculty member appeared to have further developed their own style of providing support to students, which limited overlap. One student described how she has received support from program staff and faculty members:

> *I had one advisor that set me up with classes. But, I have had support from certain individuals, staff and instructors, in the program since I have enrolled. Our program director has been my teacher, and she has been pretty helpful in class. Other staff members have helped provide support in advising me throughout the program. Others just help take some of the stress off of me. They're all a big help.*

Changes in Roles and Responsibilities. Early in the program's implementation, a few staff members—those who had been involved in the grant for more than six months—indicated that the only change in roles over time had been in transitioning from part-time to full-time. Staff members commented that this change was, in part, influenced by an enhanced view of the potential value of ADVANCE Southwest to Southwest TN. One staff member commented, for instance, "We didn't realize the full potential of this program until we got started and the amount of time and resources that need to be dedicated to it." While responsibilities remained relatively consistent throughout the implementation process, in later stages, staff members described how they had greater clarity regarding their specific roles and responsibilities. One program leader stated that, throughout the program's implementation, they focused on the "awareness of" how positions relate to providing supports for students. An employer instructor said, "The additional staff serve to improve the ratio of students to faculty and interaction between students and faculty. As a skills instructor, I know it's important to be able to keep my eye on people who need more attention." Greater clarity regarding roles and responsibilities was perceived as a positive influence on the program's ability to serve students effectively.

4.3 Communication and Coordination across the Program Team

This subsection describes interview participants' reflections on the quality and completeness of communication for ADVANCE Southwest. Although the program team faced initial barriers to effective communication during the early stages of implementation, as new leadership entered

the program and formal structures for communication were put in place, members of the program team felt that communication had become more inclusive of all internal stakeholders and, overall, more efficient.

Formal Communication. As the program implementation process was initiated, staff and faculty described formal communication as taking place in program team meetings. At the time of these interviews, the grant team had met twice within two months. Staff and faculty indicated that the meetings were valuable, occurred frequently enough, and amply invited participation from all attendees. The grant team also described how these meetings gave them opportunities to "talk about challenges" and "speak with program staff and voice opinions on improvement." One staff member stated that these meetings had helped create new strategies that were put in place, such as cost-reducing strategies. Several participants pointed out that prior to the initiation of the formal program meetings, they were focused on their own jobs and knew little about ADVANCE Southwest overall. These participants indicated that the meetings helped them see how their work fits into the bigger picture. One staff member, for instance, stated, "At first, in February and most of March, I [was] immersed in learning my job, but didn't have the bigger picture of the grant."

In March 2018, evaluators observed an advisory board meeting that included a wide variety of stakeholders (Dean of Allied Health, department chairpersons, representatives of the local county and city fire departments and hospitals, program staff, current faculty members, retired faculty, and current and recently graduated students). The meeting consisted of constructive discussions and allowed for stakeholders to disseminate program updates, feedback, and suggestions for improvement. Interviews with program staff, faculty, students, and external partners suggest that advisory board meetings like this took place regularly throughout program implementation. Overall, observations of the meeting suggest that program leadership had strived to improve formal communication throughout the program's implementation and that structures to communicate updates and information regarding the program were in place.

Informal Communication. In addition to the meetings, ADVANCE Southwest staff and faculty said that they communicated with one another through email, in-person "stop ins," and telephone. Most described communication outside of the formal meetings as informal and unplanned. For example, one staff member stated, "The communication is pretty open when we need it—it can be a phone call, text, or email." Staff and faculty described the informal communication channels as helpful for discussing and addressing student needs easily and as they arise. Participants stated that communication primarily centered on student needs and academics. Most commented that they believed there was good coordination between staff for such activities as recruitment and provision of student services. This trend continued throughout the implementation process, and program staff and faculty members described informal communication as adequate and purposeful. Employers also described informal communication as sufficient. One, for instance, commented, "Everything was very participatory. I felt very involved and was engaged each week."

Communication Quality. During early implementation, some staff and faculty described internal communication for the grant as limited because of their location on the campus. They indicated that communication was often limited to only other faculty and staff who were in the same building. One staff member commented, for instance, "Communication has been pretty limited to within our faculty; we are pretty secluded." Another staff member indicated that the lack of coordination with the bigger ADVANCE Southwest team was, at times, "confusing" and stifled the understanding of

the grant. This was tempered by many comments regarding the adequacy of community. For example, one staff member commented:

> *The ADVANCE Southwest faculty and coaches have all been working on this together. Overall, there are really no barriers to communication at all. It is just not needed as much at this point in time.*

However, in later interviews conducted in the spring of 2018, internal stakeholders reported that ADVANCE Southwest leaders had responded to initial concerns regarding communication and their effect on program delivery. By the late stages of implementation, the program's director had conducted more formal meetings and strived to increase the frequency of communication between program staff and faculty members. When asked to describe practices that aided program delivery, most participants stated that this improvement in interdepartmental communication at the college helped solidify ADVANCE Southwest delivery. A faculty member commented that the improved communication and coordination "has helped identify barriers to students' success and help us work together to meet their needs as they arise." A staff member said, "It allowed for staff to voice where there was room for improvement. The different departments coming together helped make the process somewhat easier."

4.4 Institutional Leadership Support for ADVANCE Southwest

Institutional leadership support for a grant-funded program may have a tremendous influence on whether the program's structures and activities are enacted. Moreover, programs that are integrated into an institution's overarching strategic direction are much more likely to be given full attention (Migdal, 1997). Thus, leadership support may affect implementation and the extent to which the program's components are continued beyond the funding period. This subsection explores staff and faculty perceptions of the extent to which institutional leadership supported the ADVANCE Southwest program.

Level of Institutional Leadership Support. At the start of program implementation, some participants commented that while they believed there was usually adequate support from their respective academic departments, the level of support from senior administration varied. One staff member noted, "I've given suggestions and asked for things from this program… The support has been encouraging, but there is often little follow through." Another said, "I assume that there is support at a higher level, but I also see no actionable items… I assume there is support, but I don't have anyone calling me to verbalize that support." Several participants, however, said that senior-level leadership awareness of and support for ADVANCE Southwest improved over time. However, new administrative leadership was described as very supportive. During the spring of 2018, interview participants stated that the new Dean of Allied Health had taken an array of steps to understand, provide support for, and sustain the program. Several participants described how the new leadership had voiced his support for the program, and how this was, in part, responsible for the continuation of grant-funded faculty and staff member positions beyond the initial funding period, which is further described below.

Contributors to Increased Leadership Support. Participants said that institutional leadership support improved as ADVANCE Southwest's value was demonstrated to those leaders. One participant commented, "Advancements have been showcased in demonstrations." Several participants mentioned, in particular, a demonstration of simulation mannequins that seemed to

enhance leadership support for the program. Other participants said that an increase in student academic scores and retention rates helped gain visibility for the grant and support from leadership. One staff member stated, "I think our retention rate between the second and third semester was a huge breakthrough for gaining this support…we did not lose a single student—100% retention." Finally, staff and faculty members conveyed a belief that these indicators of improvement would continue to garner support from leadership, both at the senior level of the college and among departmental leadership across campus. Notably, during the March 2018 advisory board meeting, the program's director announced that all program faculty and staff positions funded by the grant would be retained in large part because of the success of the grant and ADVANCE Southwest's current and prospective value to the college and community. Retaining grant-funded positions is likely to aid in program sustainability and ultimately continue the success of the program.

Benefits of Leadership Support. In interviews conducted during early implementation, some staff members indicated that the support from departmental leadership helped them to feel supported professionally and had contributed to clarity about roles. Program staff who had been with the institution and ADVANCE Southwest longer than three months said that leadership support for the grant improved over time. As one staff member stated:

> [Now] the departments in the college are working hand-in-hand to make sure that the grant meets its goals. This is much different than when I first came on; the grant was not being used. People were reluctant to totally jump in… The support and our abilities became more open over time.

In addition, faculty and staff members said they felt comfortable sharing ideas for new practices and policies related to ADVANCE Southwest with departmental leadership and felt supported in carrying out plans that are approved. Specifically, staff and faculty members stated that leadership support was "open" and "receptive to new ideas." One staff member explained, "My leadership has an open-door policy, and I feel comfortable asking questions." During spring 2018 interviews, the ability to share ideas for new practices and policies was described as one of the best new practices resulting from the ADVANCE Southwest program. Interview participants described how leadership support had continued to increase comfort in sharing ideas, and, in turn, contributed to a more effective program. One ADVANCE Southwest staff member commented, "It [the grant] got us thinking outside of the box. It's about looking at things in different ways. It shows proof it was worth going after."

Increased Support from Institutional Leadership. In the early stages of implementation, new leadership took place in the department of Allied Health. Although support from institutional leadership was perceived as relatively absent during these early stages, participants described a tremendous change in support as new leadership was implemented. Furthermore, the evaluation team also observed the effects of leadership on the program. For example, during the site visit in the spring of 2018, the new Dean of Allied Health described how he had advocated for all grant-funded positions to be sustained beyond the initial funding period. This leadership was perceived as bearing a great influence over the initial success and continuation of ADVANCE Southwest.

5.   ADVANCE Southwest Structures and Implementation

Because the extent to which a program improves and expands its various components to become more aligned with a new generation of learners may influence its success, it is essential for programs to continuously adapt to the needs of new learners (Millett, 2017). This section is concerned with stakeholders' descriptions of the development and deployment of ADVANCE Southwest's main program components, programs of study in nursing, paramedics, and EMT, and student support services. The section describes the main features of curricular design and rollout, the integration of technology into curricula, student recruitment, activities designed to help ensure that students are able to complete programs of study, and the main implementation challenges that have been experienced. In addition, this section also describes students' impressions of ADVANCE Southwest student supports, curricula, and the integration of technology into programs of study.

5.1   Curricula Design and Implementation

During interviews in the summer of 2017, most staff and faculty members were relatively new to ADVANCE Southwest, which affected their ability to describe curricula before implementation of the grant. However, they were able to describe several recent curricular refinements that were made over the first few months of implementation. Most of the curricular advances and enhancements participants described were designed shortly after staff were hired in February of 2017. Overall, while participants said that the program was on track to meet its goals, most also expressed concern about the program's late start and likely implications for launching the curricular components. One staff member explained, "We are at a place we should have been much earlier. We are doing the right work, though, and making progress—students are coming in now, and I want to see it all the way through." Another stated, "Before I came on, it seemed overwhelming. There were a lot of great ideas with little implementation."

Registry-Based Changes. In interviews conducted during July 2017, ADVANCE Southwest staff and faculty members commented that most changes in curricula were made to reflect what students would be tested on in their licensure exams. These curriculum enhancements focused on the use of simulation mannequins and were scenario-based. Most staff and faculty members indicated that implementing these changes in curriculum had helped to better prepare students for the licensure exam and propel the departments involved in the grant. One instructor stated, for instance:

> As the registry transitions into scenario-based events, so does our program. We are moving in a more positive direction and use of equipment. A lot of things that were ineffective have been phased out, and we are moving forward as a whole.

In addition, instructors described strategies they used to implement these changes. One instructor said that she used a "skill checkoff" as students work through different scenarios. Another described creating new materials and packets for students to use. It may be important to note that the enhancements were viewed as optional and, at the time of the interviews during fall 2017, had not been fully integrated into curricula. Throughout the program's implementation, staff members said that scenario-based segments had begun to and would continue to be integrated into the programs of study, and during interviews in spring 2018, participants were able to describe the

preliminary results of incorporating registry-based information into the curricula. One program leader commented:

> *One of the best things has been working with the preceptors at the clinical sites for EMS. It helps them with their national registry test…It's been very positive for the accreditation process. We're having positive rates on the national registry, and I think that's in part because of the work at clinical sites.*

Collaborative Curriculum Design. From a curriculum standpoint, participants commented that during spring semester 2017, several curriculum changes were implemented. Simulations and technology were integrated into all ADVANCE Southwest classes, although doing so—because the effort was initiated during the middle of the semester—required lab and enrichment staff to work one-on-one with faculty. Because of the intensity of the work to build instructor capacity to use the technology, most staff and faculty described curriculum changes as collaborative. One staff member commented, for example, "We're working on creating better grading rubrics. Overall, when we do things, we take ownership of them, but we also work as a team." Another said, "I have been working closely with the main professors (full time regular), and we have been working to make sure we are meeting the standards for students." While collaboration was composed of various staff and faculty positions, ADVANCE Southwest team members described it as student-centered.

Integrating Simulation Mannequins. In early 2017, the college utilized ADVANCE Southwest to purchase simulation mannequins. As noted above, some instructors described the integration of the simulation mannequins into the courses as a major advance and the biggest curriculum change. Throughout the program's implementation, simulation mannequins became an integral part of the curriculum and were perceived as increasingly valuable to student learning. Prior to purchasing simulation mannequins, staff and faculty said they were "doing the best with what they had." One staff member commented:

> *The equipment [we had before] was outdated, and we had little to work with. For example, the cardiac monitors we used were at least 10 years old and not used in the field anymore.*

This shortcoming in equipment, in turn, was described as shortchanging the students. All faculty and some staff members indicated that using simulation mannequins in their courses helped students apply what they were learning by responding to real-life scenarios. One staff member stated:

> *Using the mannequins, it's made the courses more real. There's always a debriefing for each scenario, and we have the students write up their experiences like they would at a hospital. It's really about how the instructor wants to use the mannequins, but the courses have been refined by the use of them.*

While staff and faculty indicated that simulation mannequins benefited students, they also said that for simulation mannequins to be used to their full potential, all staff and faculty should have been trained in operating them. During fall 2017, some faculty suggested that they had begun taking these steps and planned to attend trainings in operating the simulation mannequins. Staff and faculty further suggested that because of the benefits of simulation mannequins, they wanted to make them mandatory in the curriculum. One staff member stated, "I am working now to make simulations a mandatory part of the curriculum. Currently, it is seen as optional, and when they

do use simulations, they vary in how they do it." Another said, "I am technology averse, so it will be a learning curve for me."

Use of Technology. As they entered their programs of study in fall 2017, students in the EMT programs said that they had not yet used technology in their courses, but that they had an orientation and were expecting to begin using the mannequins and simulations labs soon. Students in paramedics and nursing programs described the lab, in particular, as a key element of their training. One said, "I love it. It is out of sight and could not be better." Another commented, "The mannequins alert us if we use the wrong medication or dosage or if we are not doing CPR correctly. That feedback has helped me a lot in just a short time." A student in the paramedics program said, "Yes, the Sim lab is awesome, but what makes it work is having an instructor there to guide us as a class if we are doing something incorrectly, helping us get the anatomy or physiology of it."

During the final stages of implementation in spring 2018, the use of simulation mannequins appeared to be consistent throughout all ADVANCE Southwest programs of study. Both faculty and students in focus groups during spring 2018 described using simulation mannequins in their courses. Specifically, all students who participated in interviews or focus groups said that they had utilized technology (e.g., computer lab, simulation mannequins) provided by the ADVANCE Southwest grant. Several of these students stated that using this technology was their favorite aspect of the program. Students said that using "extremely high-tech" simulation labs and simulation mannequins prepared them for both national registries and their future career paths. One student said, "One-on-one time with lab techs during class scenarios helped me improve patient skills in stressful situations." Another student said, "Skills lab is my favorite part of school. I can see myself grow when I do a skill." However, students participating in focus groups in the later stages of implementation also commented that faculty are not able to perform all functions of the simulation mannequins, which hampered the extent to which students were able to use the mannequins. One student said, "Faculty cannot use the full range of functions of some of the simulations and need a lab tech to be there to help, but a lot of times the tech isn't there, so we can't use all the functions." Another said, "The simulations are awesome, but there is one we have not used at all." Thus, while simulation mannequins were being used in all courses of study at the close of program implementation, student responses suggest that faculty members are still learning how to fully operate the mannequins.

Student Impression of Program of Study. During focus groups with students in the stages of early implementation, students in all three focus groups described their programs of study as "fast-paced, which is good," "comprehensive and efficient," "fun," and a "confident way to enter the profession." One Basic EMT student said, "When I look back, I cannot believe how much I have learned over the last few weeks." To help gauge satisfaction, participants were asked to rate their program of study on a scale of 1–10. All ratings were high, with more than half of students providing a rating of 10. Three students offered a rating of 8 (one each in EMT Basic, Nursing, and Paramedics programs of study), while the remaining students gave their program a rating of 9. Similarly, during student focus groups and interviews in spring 2018, students in ADVANCE Southwest programs were asked to rate their program on a scale of 1–10 (with 1 being not all satisfied and 10 being satisfied to a great extent). Students again rated their satisfaction as relatively high (ranging between 7 and 10), with satisfaction ratings slightly higher across all three ADVANCE Southwest programs of study.

Like Most about the Program of Study. During interviews and focus groups with students enrolled in ADVANCE Southwest programs of study in both fall 2017 and spring 2018, students were asked to describe what they liked most about their courses of study. The following program components were mentioned by students during both points of data collection.

- *Quality of Instruction and Support from Instructors*—Across all data collection activities, the most common response to this question was the quality of instruction. Students in the first three focus groups conducted praised their instructors. A Nursing student commented, "To have dedicated instructors who care and want me to succeed makes me look forward to coming to class." Similarly, an EMT student commented, "We feel a lot of support from instructors." A Paramedics student noted, "The assistance I receive from my teachers is effective and efficient; they know their stuff and make sure I know mine." Students described faculty as "caring," "enthusiastic," "eager to help whenever I need it," "motivating," "highly-knowledgeable," and "professional." Finally, several students said that they felt they could contact their instructors at any time. Similarly, almost all students who participated in focus groups or interviews during the later stages of program implementation in spring 2018 said that program directors, instructors, and simulation technicians enhanced their satisfaction with the program. Most said that personnel in ADVANCE Southwest programs were knowledgeable, challenged them, and made themselves available for meetings. One student, for example, said, "They feel like mentors. They connect with us, and they didn't dumb down the program to get more of us graduated. The personnel has really made all the difference." Similarly, employers commented about the high quality of personnel associated with allied health.

- *Hands on Experience and Equipment Quality*. The second most common response from students in all three programs of study was that they were offered ample opportunity to apply new skills using high-quality equipment and supplies. This trend was recurring throughout all student focus groups and interviews. One Paramedics student said, for instance:

    A few years ago, a lot of our equipment was broken or was not the right piece of equipment for what we were studying, and only one person at a time could use it. Now, what we have is what is being used in the field, professionally. It is excellent gear.

    Many students said that they especially appreciated the simulation labs. One noted, "The models are really lifelike; you feel the real-life stress." Another commented, "All the high-tech equipment makes me feel special, professional. It's like we are getting training that is as good as or better than the big colleges." As simulation labs and mannequins were further implemented in spring 2018, students added that using "extremely high-tech" simulation labs and simulation mannequins prepared them for both upcoming national registries and their future career paths. One student said, "One-on-one time with lab techs during class scenarios helped me improve patient skills in stressful situations." Another student said, "Skills lab is my favorite part of school. I can see myself grow when I do a skill."

- *Program of Study Structure*. During focus groups conducted early in the program's implementation, several students said that what they liked most was the fast pace of the course of study and the small class sizes. One student commented, "It is really fast-paced,

which means it is hard to coordinate with work, but there is no wasted time, and everything matters." Another said, "I love that we are on the fast track." While students mentioned other favored program components aside from the program structure during the later stages of implementation, several employers commented that the program of study structure resembled the structure of careers in the allied health field, especially EMT, and perceived this as beneficial to student learning and experience.

As the program was implemented, students began to utilize various services and supports provided by the program more often, and, during spring 2018, students described how they appreciated having these available supports and services. Specifically, alongside the aforementioned program aspects, students listed two additional aspects that they liked most about their program of study:

- *Tutoring Services.* Students commented that tutoring services provided by ADVANCE Southwest had been invaluable to their learning. Staff and faculty members also agreed that tutoring services provided by the ADVANCE Southwest grant greatly contributed to student learning in program courses and passing national licensure exams. One student participating in a focus group said, "We can get online tutoring if we need it. I really like that." Other student responses echoed this sentiment. It should be noted that one staff member stated that plans are already in place to sustain tutoring services and provide "an academic support center that will be in place online and updated by different departments."

- *Supplies for Students.* Almost all student participants stated that providing students with supplies free of cost helped attract students to the program and improve retention, and almost all student participants said that they were utilizing this support provided by the grant. One student said, "We got pocket field guides and outside resources. Those were very helpful." Another said:

  > *I've gotten supplies and extra materials that have helped me through the program. I wouldn't be able to afford them otherwise. Things like that are beneficial and help a lot with the stress in these kinds of programs.*

  A staff member stated that the college plans to sustain this student support through a different channel. Specifically, they indicated that program leadership will notify students and increase awareness of programs that provide supplies and materials to students enrolled in allied health programs (e.g., the Workforce Investment Network).

Like Least about the Program of Study. Similarly, students participating in interviews and focus groups during fall 2017 and spring 2018 were asked to describe what they liked least about their programs throughout the program's implementation. In the first three focus groups during fall 2017, students said they struggled to identify weaknesses. One commented, "Anything I can think of is nitpicking." That noted, students described two opportunities for enhancing ADVANCE Southwest programs of study, which were mentioned both in earlier and later stages of program implementation:

- *Course Assessment Issues.* Throughout both earlier and latter data collection, students participating in focus groups and interviews, particularly those who were returning students, said they were concerned with the extent to which there were discrepancies between National Registry certification exams and what they were being taught. One Advanced EMT student, for instance, commented, "There is a lot of difference in the

terminology, and some of the questions were not covered. They need to make sure the two are actually aligned." Another said that there were "multiple people from different departments or services that teach based on their protocols instead of from the textbooks; they have different protocols." Nursing students said they were concerned by the absence of formative assessments throughout the program of study. One commented, "We have the big exit test that covers everything from foundations to the end and that one test is not enough. We need practice tests or tests in between to really help make it stick."

- *Adjusting to College Life.* During focus groups in fall 2017, many students said that the adjustment to study time was a challenge. Some, for instance, commented that the compressed program schedule made for "a very long day that is hard to get used to." Some Advanced EMT students speculated that classmates from previous years did not complete the program because of its intensity. These students said they did not believe the college was responsible for this issue. However, during the later stages of implementation and as students progressed through the program, no students mentioned the adjustment to college life as a challenge. This may be indicative of an initial challenge that was resolved as students became acquainted with their program of study.

During data collection activities in the later stages of implementation, students listed two additional, least favorite aspects of their program of study. Interestingly, both items were related to using technology provided by ADVANCE Southwest, which may be due to the increase in students who had utilized technology at the time of data collection.

- *Scheduling Conflicts with Simulation Lab.* While many students in the EMT program stated that they had not yet used simulation technology in their courses when asked during focus groups conducted earlier in the implementation process, all students stated that they had used technology during interviews in spring 2018. However, many said they faced scheduling conflicts in trying to access the simulation lab. One student said that his least favorite part of the program was "not being able to work on the technology as much as I'd like to. The labs are hard to get into." Another stated that there was "miscommunication between different lab techs during lab scenarios that affected scheduling."

- *Technological Issues.* Students said they experienced issues with the computer lab they used for assignments and testing. According to students, the root issues were twofold: they shared the lab with different programs and the Internet connection was unreliable. For instance, a Nursing student said, "We have one lab that we have ended up sharing with the whole school, like students taking radiology and other subjects . . . we don't much care for that." Another said, "Program-wise, the computer lab might need to be updated a little bit more to fit the needs of students; it goes down a lot and always at the worst possible time."

Value of Program. At each data collection opportunity for the implementation study, students were asked whether, knowing what they know now, if they could go back to the day they enrolled, they would enroll in the program. All students said they would. Students said that the programs were affordable and "of a similar quality to what we would get at a four-year college," that it is "well-organized," and that "it is a great program; you get a lot out of it and know you will have a job." One student who previously attended a four-year university said, "Without a doubt. I would have enrolled in this program. I would have even come to Southwest first." Another student commented, "It's been a great experience."

5.2   Implementation of Student Supports

A great emphasis of the program was placed on supporting students with tangible resources and one-on-one services such as tutoring. Staff and faculty said that stressing student supports helped increase student success (e.g., test scores) and retention rates. Notably, some staff members commented that they believed that changes in student supports were driven by low previous retention rates. The two student supports that were emphasized in ADVANCE Southwest were student counseling and student advising.

Main Features of ADVANCE Southwest Student Supports. As students worked through the ADVANCE Southwest program, they began to familiarize themselves with and utilize the full range of student supports. During fall 2017, students listed and then described the supports they knew to be available during focus groups. Across all groups, these included, from most to least used, study groups, OneDrive document sharing, one-on-one meetings with instructors, study guides or packets, online tutoring, and in-person tutoring. Most students said study groups were still being formed at the time of earlier focus groups, but that they anticipated participating in them fully. When asked to describe any barriers to using the learning supports, several students said that because each of the forms of tutoring did not fit work and class schedules, they were unable to use them. Two students said they felt uncomfortable using the online tutoring support because they preferred to work with someone in person. However, by spring 2018, student responses suggest that they had utilized the full scope of available student supports more often, including tutoring services. This may be explained by students adjusting to the "college life" and becoming more familiar with the supports available. One student stated, "We can get online tutoring if we need it. I really like that." Another said, "The practice quizzes with manuals are great."

Student Learning Supports. As the program reached the final stages of implementation in spring 2018, students stated that supports provided by the ADVANCE Southwest grant helped them throughout their course of study and helped prepare them for certification testing (e.g., national registry, NCLEX). Students said that they were provided with online tutoring resources, in-person tutoring, and practice tests to gauge their progress. Students also commented that "practice quizzes from staff with manuals are great" and "one of the best supports we have received." Notably, while students who participated in interviews and focus groups earlier in the grant's evaluation expressed concern about the scheduling of tutoring (e.g., not fitting into work and class schedules), during the recent interviews, students described tutoring events as meeting their needs as a nontraditional student (e.g., working full time, single parent). However, they described inconsistent access to simulation labs. Students perceived the value of additional supports while enrolled in the program and after completion of the program. For example, one student commented, "We were invited to visit another school that was getting ready to take its national test. We could observe to get familiar with what was expected."

- *Student Counseling*—Remaining consistent throughout the implementation process, staff and faculty described partaking in one-on-one student counseling both inside and outside of the classroom. This approach to counseling was described as building professional relationships with students and responding to their individual needs. Specifically, instructors mentioned speaking with students individually when they see students struggling. One instructor explained, for instance:

> *I work with each student and try to build professional relationships with them. When I see a red flag (e.g., students falling asleep), I try to figure out what is going on. I ask them if they are working nights or having trouble studying.*

Some staff and faculty also said that they developed their own method of counseling students, such as providing their personal phone number to students. For example, an instructor said, "I have my own little assessment tool that I use. It tells me how they learn, what they prefer to do in class, and stuff like that. A lot of what I do is a back to basics—helping them with time management and reading."

- *Student Advising*—As the program began the implementation process, almost all staff and faculty described how they had taken on an active role in advising students. Student advising included "meeting each student where they are" by mapping out and discussing progress throughout completion of the program. As one staff member said, "We have three groups of students: those who aren't sure, those who are midway through, and the ones who are about to graduate. They all have needs." Most staff and faculty also said that advising generally took place at periodic intervals throughout the semester, and that there were advising checkpoints throughout the semester. As one staff member commented, "For advising, we give advising from semester to semester. We talk with them about what is expected of them, and we lay out a very clear course for each person to succeed." According to interview participants, throughout ADVANCE Southwest's implementation, provision of student advising services increased. Relatedly, during focus groups, students were asked to describe coaching and advising services they received as they expressed interest and enrolled in their programs of study. Most of the EMT and Paramedics students said that they received guidance from the program director (mostly via email) and from the departmental website. When asked about specific kinds of guidance they received, these students described help with paperwork. The Nursing students said that the coaching and other supports they received were from a new student orientation and from discussions with the ADVANCE project manager.

Student Material Supports. In interviews conducted during summer 2017, staff and faculty said that budget modifications helped purchase items for students. At this time, interviews and focus groups with students revealed that students perceived value in offering materials, including uniforms, text books, and study materials. Students stated that receiving certain materials free of cost removed some of their financial burden, and in turn, they stated that they were better able to concentrate on their course of study and preparing for their transition into the workforce. This supports findings presented in earlier interviews with staff and faculty members, suggesting that material assistance for students had helped improve retention rates. Despite the perceived benefits of material assistance, several students described what they believed to be "hiccups" in the ways in which materials were distributed. Some shared concern about the discontinuation of resources through the entirety of their program. One student said:

> *Unfortunately, that grant ran out in January, and we had to return [the textbooks] with a whole two months of the semester left. I could have saved money. It was turning them in and then renting them for a two-week interval.*

Other students said that material assistance could have been advertised more effectively. For example, one student stated:

It's a good thing we [students] talk because we share a lot through word of mouth. I wouldn't have even known about the resources available if it weren't for some students telling me about them. When they discussed resources with us before entering the program, there were some presented. I don't know if it would be possible to list every little thing, but a lot of people weren't knowledgeable about the resources available.

Recruitment Activity. In fall 2017, participants said that recruitment efforts for ADVANCE Southwest were well underway. Several staff members commented that the ADVANCE Southwest program helped them see the importance of recruitment and encouraged them to place greater emphasis on recruitment activities. Recruitment events for prospective students, including high school students, students in other programs of study, and prospects in the workforce, focused on equipping students with information on the programs of study through orientations, boot camps, and "an aggressive word-of-mouth campaign." One staff member commented:

We do recruiting sessions for students who are undecided on where they want to go department-wise. These are short, informational recruiting sessions. They last about an hour and allow students without a background in EMS to ask questions about the field.

Other staff and faculty members described an optional Nursing Boot Camp that helped give prospective students an overview of the program. While the boot camps for Nursing students were held in high regard, staff said that because only 50% of students enrolled participated, they will make the boot camp mandatory in the future. Overall, staff and faculty members said that there was an increased focus on recruitment across departments, but that recruitment activities were department specific. One staff member explained, "Our current focus is on recruitment. We have various department-specific (EMT and Nursing) activities that allow prospective students to come in and interact with faculty and see simulations."

During all focus groups, students were asked to describe how they found out about their selected program of study. In both fall 2017 and spring 2018, participants described three means:

- *Employer or Coworker*—The most common response (15 students) was that they found out about their program of study at their current jobs, either through supervisors or coworkers. This response was especially prevalent among Paramedics and EMT students who worked as firefighters.
- *Internet Search*—Eleven students said they identified their programs of study through internet searches. Most of these students were in Nursing, Basic EMT, and Advanced EMT.
- *Other Methods*—In addition to the two, more common means of finding out about the programs of study, one student each said they discovered their program through a new student orientation, by talking with a college adviser, or hearing a radio advertisement.

Several trends regarding recruitment activity during the early stages of implementation were followed throughout the duration of the implementation process. Specifically, during later data collection activities, the evaluation team asked interview and focus group participants to describe how ADVANCE Southwest leaders had attracted potential students to ADVANCE Southwest programs of study. Responses suggest that program leadership increased recruitment efforts

throughout program implementation. ADVANCE Southwest staff, faculty, and students further described the program's recruitment efforts:

- *Providing Material Supports*—Several budget modifications were made to fit with changes in institutional needs, and almost all staff and faculty members described how these modifications were used to purchase items for students. Across all faculty, staff, employers, and students participating in interviews or focus groups in spring 2018, there was agreement that providing students with supplies (e.g., uniforms, textbooks) helped attract TAA-eligible job seekers, veterans, and other workers. Several students described themselves as low-income, nontraditional students. These students stated that receiving supplies free of cost attracted them to ADVANCE Southwest programs of study. Regarding program costs and receiving material assistance, one student said, "I didn't have much help financially, so this was overall the best option for me." In addition, a faculty member added, "Having resources to support students has really helped . . . Students can leave school with a tool box of sorts." One staff member commented:

  Our retention rate was terrible, and a lot of voluntary dropouts were purely financial. We can't put our grant towards tuition costs, but we could put it towards these different fees (books and test materials) that can often exceed $1,000 or $1,500. Our students are seeking this degree because they need to be employed and to make an income, but the costs are so high that they can't afford to complete the program.

  Another staff member said:

  You might think that they (students) know what they need before starting the program, but these students often think there will be financial aid where there is none… By providing a free uniform, workbook, and lab space, we are giving them resources to ensure their success.

- *Orientation Sessions*—In focus groups and interviews, several students said they attended an orientation session prior to enrolling in a program of study. They stated that orientation provided information on program costs, courses, and showcased the simulation mannequins. One student said, "I got information I needed for everything, like licensing, certifications, fields, job and the salary ranges. I got to see a demonstration of the sim man. It was great." Another said, "[Orientation] was a day long and went over the facts and FYI sort of material." Overall, students perceived orientation sessions as both attracting them to and preparing them for their course of study. Several stated that the information received in the orientation session they attended motivated them to apply to the program. Despite relatively high satisfaction with orientation sessions, students offered suggestions for improving orientation sessions. Most recommended that program costs be laid out more clearly during these sessions. For example, one student said, "They give you an estimate of costs that includes what they call mandatory costs. But you find that what they call optional you need to really be successful." Another commented, "A list of all the costs [should be provided]. I was surprised how much more it cost than I was told up front."

- *Guidance from Program Directors*-—As described previously (as informal advising), almost all students said that program leadership had provided guidance to them prior to

their entry into their program of study. Specifically, students commented that they discussed the program "in detail" with program directors prior to enrolling. One student said, for instance, "[The program director] clearly laid out and described everything in email and on the website." Another said, "Our program director was excited about getting me in, and that excitement made me excited about the program." When prompted, none said they needed additional forms guidance.

5.3   Implementation Challenges

All programs that involve the development and use of new practices face challenges (Patton, 2012). It is important to check, periodically, throughout the program's implementation on the nature and magnitude of the challenges. This subsection explores ADVANCE Southwest faculty and staff members' identification of challenges that may have hampered implementation. As described below, participants described three main challenges. It should be noted that these challenges are not unique to ADVANCE Southwest, but are common in large grants during early implementation. It should be noted that these challenges were presented to the program's key stakeholders early in the implementation process; those stakeholders subsequently implemented measures to address each of these challenges.

Turnover of Key Staff and Leadership. During interviews conducted in summer 2017, several faculty and staff members said that it was difficult for the team to fully implement ADVANCE Southwest because of staff turnover. Staff turnover was described as putting the grant in a place of transition that delayed its implementation. As one staff member said, "Turnover of the grant's manager and executive director was like starting over with ADVANCE when they left... We are implementing program components that should have started years ago." However, during the final stages of program implementation in spring 2018, no further staff or leadership turnover had occurred. The key staff and leadership in place were not only retained, but they were also committed to ADVANCE Southwest and sustaining the program. Notably, even temporary positions provided by the grant were set to be sustained beyond the initial funding period, preventing turnover or elimination of positions. One employer commented, "The goal of retaining them is spot-on because they are such a great value." A program leader said, "The staff themselves are a support service. They speak for the needs of students."

Student Dropout and Recruitment. During interviews in summer 2017, staff and faculty members said that high levels of student drop-outs complicated program implementation. However, student drop-outs were described as stemming from a lack of academic readiness and expectations about the program and, thus, seen as a recruitment issue. One staff member stated, for instance, "There's not very much emphasis put on what it takes to get into the program, and this really sets them up for failure. They need to have a basic understanding before they come into the program." Another staff member referred to the boot camp recruiting and preparatory event: "The only challenge was with the Nursing Boot Camp. We did not make it mandatory and only about half (around 15 students) showed up for it." Staff and faculty suggested that by recruiting committed staff and better prepared students, these challenges were more easily dissolved. Throughout the program's implementation, program staff and faculty members described how retention rates had increased because of internal stakeholders' commitment to the program and providing student support. During interviews conducted in spring 2018, one participant stated, "We have systems in place to carry information on to each other. We've created

positions in the grant for students to have that level of monitoring and those supports. It's helped with tracking and touching each student."

Visibility of ADVANCE Southwest to the Campus Community. During summer 2017, staff and faculty members described a lack of understanding of the ADVANCE Southwest program from the college as a whole. These interview participants commented that departments and offices not directly involved in the program had a tendency to view ADVANCE Southwest as a burden because of the additional work the grant requires. One staff member explained:

> *We are seen by some departments as another extra layer, more work for them…We have worked hard and continue doing so to explain over and over, reiterate to people the importance of ADVANCE.*

The lack of detailed knowledge among many staff members and faculty about ADVANCE Southwest may have, as some participants suggested, hampered their ability to describe the program to colleagues in other work units and departments throughout the college. However, as ADVANCE Southwest gained momentum, internal stakeholders began to seize opportunities to showcase the program's updated technology and demonstrated successes. This both increased the program's visibility on the college's campus and garnered support from institutional leadership. Notably, interim evaluation findings demonstrating the program's initial successes were used to advocate for sustaining grant-funded staff and faculty positions to institutional leadership.

6.   ADVANCE Southwest Partnerships and Collaborations

Institutions of higher education and employer partners have long worked together to improve both the quality of student learning and the relevance of learning to employer needs (Maurrasse, 2001). Drawing on interviews with internal stakeholders and external partners during spring 2018, this section describes participants' reflections on how ADVANCE Southwest was used to develop partnerships and collaborations with employers. Reflecting on the program during the final stages of implementation, internal stakeholders said that the grant helped to maintain partnerships that had previously been at risk of being discontinued and strengthened existing partnerships. In addition, interview participants described two primary channels through which partners and employers were involved in ADVANCE Southwest: through advisory boards and through instructing ADVANCE Southwest program courses.

6.1   Expanding Partnerships and Collaborations

This subsection describes how ADVANCE Southwest was used to both maintain and strengthen current partnerships. Using data from interviews with program staff, faculty, and local employers, the following trends emerged.

Maintaining Current Partnerships. Staff, administrator, faculty, and employer interview participants said that the grant was used as a tool for maintaining partnerships with local employers. Specifically, according to these stakeholders, ADVANCE Southwest helped "preserve" existing partnerships with local hospital and clinic employers. For example, a program administrator described how the grant was used to help maintain a relationship with a local emergency room:

> *There's an emergency room that we had a contract with, and they [the ER decision-makers] were looking to shut that connection down. The grant person was there throughout the process and told them about our new program [the ADVANCE Southwest grant]. It turns out they were rushed in their decision making, and that conversation put the pieces in line. We are still with them and still going strong.*

Strengthening Current Partnerships. Staff and faculty interview participants said that rather than focus on developing new partnerships, they focused their efforts on strengthening existing employer partnerships. Consistent with findings from interviews early in the implementation process regarding program and curricula implementation, faculty and staff members said that employers were involved in program design and planning curricula throughout the implementation grant. For example, one faculty member stated that employers have "provided feedback for the program throughout the past 2–3 semesters." Overall, staff and faculty said that the ADVANCE Southwest grant strengthened existing partnerships with employers by, as one participant described, "involving employers and partners through both advisory and instructional standpoints."

6.2   Strategies for Expanding Partnerships and Collaborations

Participants not only described the benefits of ADVANCE Southwest in regard to partnerships, but they also detailed strategies that had been undertaken to best utilize the grant to maintain and strengthen partnerships.

Advisory Board Meetings. Interview participants said that external partners and employers were regularly involved in ADVANCE Southwest Advisory Board meetings. Several participants described attendance at board meetings as the most common form of external involvement in the grant. Program administrators stated that they attempted to involve as many local employers and partners as possible. One administrator, for instance, commented, "For EMTs, there's not an employer within the county that doesn't sit on the advisory board." Attendees of the meetings included, but were not limited to, representatives of local county and city fire departments, representatives from local hospitals (e.g., physicians, nurses, and hiring staff), and retired faculty who also worked for local fire departments, as well as current faculty and students. Employers and partners said that these meetings kept them abreast of updates and progress in the programs of study. In addition, during spring 2018, the evaluator observed an advisory board meeting, noting that attendees—regardless of position or rank—shared freely and collaboratively. For instance, students, faculty, and an emergency room physician openly discussed the pros and cons of simulated rescue events. In interviews, employers described the Advisory Board meetings as a "collective process" and "a way to ensure future employees were coming to us ready to work."

One-on-One Meetings. Staff, faculty, and employers explained that Advisory Board meetings were held in addition to more informal "one-on-ones with chairs and program coordinators." Between these two activities, staff, faculty, and employers perceived employer and partner involvement as efficient. One employer said:

> *We see a lot of graduates where I work, so I sit on their board. . .I'm very satisfied with it. I feel like I have everything I need and get all the information I need between the meetings and the Program Director.*

Continuous Feedback. Consistent with findings from interviews in the early stages of implementation with staff and faculty members regarding the involvement of partners and employers, employers said they felt welcome to provide substantive feedback and recommendations for ADVANCE Southwest programs of study. Specifically, all employers interviewed said that they sit on the aforementioned Advisory Board and said they provided feedback on various program elements, including design, curriculum, and possible opportunities for growth, that was addressed by program directors. All said that program directors were responsive to their concerns regarding program equipment and utilized grant funds to provide equipment (e.g., simulation mannequins, simulation ambulance) that was most effective for student learning, test preparation, and career preparation. Some responses echoed concerns articulated by internal stakeholders during interviews early in the program's implementation, especially that outdated, worn equipment was shortchanging students. A fundamental difference was that employers during the most recent interviews described remedial action. For instance, one said, "When the program director took over, I told her the equipment was antiquated . . . They addressed it and made sure to get the funds and the new equipment." Another commented:

> We suggested a simulation for paramedics and now the new simulation van and lab benefits paramedic students. This is as live as they can get without real people . . . Graduates can run codes much more effectively. Before this, they had to break it into pieces, and now they have to do it all at one time.

Another employer said, "With adding the simulations and their skills labs, it's helped improve the pass rates on the national registry and improve the quality of education they're receiving overall." A staff member added, "It [feedback] makes sure that students are receiving quality training to work at different places and that they are prepared."

Employer Instructors. Interviews conducted in the spring of 2018 revealed that several Allied Health instructors and mentors worked, primarily, for other local employers. These employers taught ADVANCE Southwest courses as adjust faculty, visited classes to speak with students about career paths available, and provided tutoring. One employer said he "performs testing and teaching with students." Consistent with interviews conducted in the fall of 2017, internal stakeholders said they had a strong desire to help students become employed in professional fields. For example, one employer said that he had previously attended the college and was excited to be a part of an effort that was both bettering the college and its students. He stated:

> I started as an adjunct faculty member around 2016. I wasn't a part of the grant staff, but I worked alongside the additional staff that it provided and saw the wonderful benefits of the equipment it provided.

Employers also commented that they felt they were able to play an active role in their employee's education as Allied Health instructors. One employer, for instance, said:

> I'm a fire science instructor at another school. So, myself and the EMT/paramedic program director work together a lot because our students go to Southwest to finish their degree. We recruit employees from the program when we don't have anyone here.

Overall, employers said that because of their direct involvement in the grant, they felt they had a voice in the training and education that their future employees were receiving.

6.3   Employer Satisfaction

Especially those who were active members in the Advisory Board, employer interview participants stated that their feedback was both acknowledged and addressed by program leadership. In turn, they said that they felt confident hiring employees with an education from ADVANCE Southwest programs of study.

Improved Student Learning. In interviews, employers said that ADVANCE Southwest provided students with opportunities to learn material that they would be tested on during national licensure exams. They stated that being involved in an instructional capacity helped them understand the value of the ADVANCE Southwest as both a teaching tool for instructors and a learning tool for students. Specifically, they perceived the value of tutoring, additional staff members, and equipment (e.g., simulation mannequins) made available through the grant. One employer who also served as an adjunct faculty member at the college said, "I worked alongside the additional staff that it provided and saw the benefits of the equipment it provided." Another employer, who serves in an instructional role in Allied Health said, "[ADVANCE Southwest] makes testing go easier for the candidate and the evaluator because they can see how everything functions in the real world." Interestingly, several employers said that program components funded by the grant (e.g., tutoring, simulation mannequins) provided different avenues for students to learn. Another employer commented, **"**Our field is so hands-on, so simulations and computerization of courses allows for them to absorb the material and gives them several avenues for learning."

Well-Prepared Employees. All employers said that they are more confident in employees that they receive from the college because of ADVANCE Southwest. They stated that they were more confident that the currently-enrolled students would have the skills necessary to perform essential job duties. All stated that they had already begun to see the effects of the ADVANCE Southwest grant on students, including improved patient care and a better understanding of pathophysiology. One employer said, for example, "[These students] are going to be able to be put into more realistic situations before they work with live patients. They aren't hurting anyone, and they're thinking on their feet." Another stated:

> *For me, being an employer that sends personnel there for an education, I've seen a lot of the materials and mannequins that were heavily used. It's important to have good technology so we can get good feedback on making emergent calls. My employees now have access to mannequins and nicer equipment and will be more prepared.*

7. ADVANCE Southwest Program Sustainability

The final domain covered in the Implementation Study presents a summary of key findings on program sustainability, determined by a host of factors. Although stakeholders do not have control over some of the factors that may influence sustainability, literature suggests that successful, sustainable programs share an underlying commitment to sustainability that often permeates the program activities and discussions (Bragg, Giani, Fox, Bishop & Bridges, 2015). This section provides a summary of perceptions of the likelihood that ADVANCE Southwest and its components will be sustained beyond the funding period. It draws on interview and focus group participants' perspectives regarding which program components are most likely to be continued

beyond the funding period, factors that may affect program sustainability, and opportunities for and potential threats to program sustainability.

7.1   Program Component Sustainability

When asked to describe program components that are likely to be sustained beyond the funding period, there was little variation in staff and faculty member and employer responses. Deemed particularly likely to be sustained beyond the initial funding period are technology, additional staff, and student supports provided by the grant. These program components were viewed as important aspects of the TAACCCT grant and as influencing a greater focus on student preparation for national licensure exams and future career paths.

Technology. Program stakeholders described technology as the most likely program component to be sustained beyond the initial funding period. Specifically, technology included simulation mannequins, simulation ambulances, and simulation labs. They noted the various benefits of technology provided by the grant, including increased retention rates, employer satisfaction, and better preparation for national licensure exams. One employer commented, "With adding the simulations and their skills labs, it's helped improve the pass rates on the national registry and improve the quality of education they're receiving overall." A program staff member added, "The grant has given us access to some equipment that would otherwise not be available. We're making sure they have the actual experience on the inside and the outside." However, program stakeholders were also aware that maintaining technology and equipment will require intentional planning and carefully monitoring changes in Allied Health fields, which is discussed in more depth in the following subsection.

Additional Staff. Interview participants said that the college would most likely continue to fund simulation technicians, lab technicians, and instructors provided by the grant. While additional faculty members were perceived as allowing for more one-on-one student interactions, additional staff members were perceived as helping to integrate more technology into the curriculum and provide students with more opportunities to use technology. One administrator stated, "The staff themselves provide tutoring and are a support service. They speak for the needs of students." Additionally, during the observed Advisory Board meeting, program administration announced that all staff and faculty positions would be retained largely due to the success of ADVANCE Southwest.

Student Supports. ADVANCE Southwest provided student supports that program stakeholders believed would be continued beyond the initial funding period. Specifically, they stated that tutoring services and providing student supplies were particularly valuable and likely to be sustained. One faculty member described how student supports have positively influenced how staff and faculty members are able to provide individualization of meeting student needs. Student responses during focus groups echoed this sentiment, and several stated that student supports not only be sustained beyond the initial funding period but advertised on a wider scale. Notably, it appears that efforts are currently underway to locate how student supports will be continued, as well as how to best disseminate this information to students. For example, one staff member stated that student supplies will continue to be provided through different avenues, including the Workforce Investment Network (WIN).

Programs of Study. Program staff and faculty members, and employers of ADVANCE Southwest students were asked to rate the likelihood that each of the ADVANCE Southwest programs would continue beyond the initial funding period on a scale of 1-10 (with 1 being highly unlikely and 10 being highly likely). Across program staff members, faculty members, and employers of ADVANCE Southwest students, there were relatively high ratings (8-10) that all ADVANCE Southwest programs of study would continue. When asked to elaborate on their ratings, participants described how the grant funds have been used to bolster existing programs, especially by providing updated, quality technology and additional personnel. One staff member said:

> *The training was being offered to students in both areas prior to the grant. They were already in place (and). . .students are just more prepared now for continuing education and workforce.*

Students who participated in the survey reported similar experiences, noting that "the program is getting better each year," provides "practical knowledge," and allows students to "walk into a job." Employers also stated that the programs of study under ADVANCE Southwest have been enhanced by the grant. With the addition of more up-to-date technology and access to student supports, employers were confident that students would be well-prepared to both pass national licensure exams and for careers in the Allied Health field. One employer said, for instance:

> *One of the things it* [ADVANCE Southwest] *has helped with is preparing them for the national registry. . . The simulations in the grant make* [testing] *a whole lot more realistic. Without it, there would be a whole lot of role playing and imagining that groups of chairs would be the front of the ambulance and the back and so on, so it makes testing go easier for the candidate and the evaluator because they can see how everything functions in the real world.*

Overall, programs of study were viewed as initially strong prior to ADVANCE Southwest; however, with its addition, programs of study were described as modernized, more aligned to student needs, and likely to be sustained.

7.2   Factors That May Hamper or Promote Sustainability

Program staff, faculty, and employers were asked to describe factors that are likely to or have already hampered or increased program sustainability. Using findings from interviews with these participant groups, three factors that may hamper program sustainability were noted, and two factors that may promote sustainability were noted.

Maintaining Equipment. Across all groups, participants described how technology provided by ADVANCE Southwest (e.g., simulation mannequins, simulation labs) had allowed for better scenario-based skills and patient care. Because of this added value, participants agreed that the technology is likely to be sustained beyond the initial funding period. However, participants cautioned that program stakeholders should be aware of and plan for costs to maintain and continuously improve equipment. For instance, one employer said, "Maintaining the technology is important. It's good now, but it's always important to keep it updated and make improvements to it." Other participants stated that rapid changes inherent in Allied Health fields add to the importance of maintaining and updating equipment. One employer said, "EMS is just like any other medicine which is constantly changing. Our practice in pre-hospital environment is

evidence-based." This concern was also voiced by different participants in an Advisory Board meeting, in which employers asked program leaders how the high quality of equipment and standards provided by the grant would be maintained over time. However, program stakeholders stated that the grant had allowed for an improved program and built capacity that would help sustain grant components, including technology. One administrator commented:

> Yes, the capacity is enhanced and the college will do its best to retain the standards. I am not saying it will be easy or that we don't have hurdles still, but after seeing the value this program has, the college is ready to help.

Potential Competitors. Several participants stated that to sustain ADVANCE Southwest and its components, program leaders should acknowledge and plan for potential competitors in the area (e.g., four-year universities, local fire departments). Employers stated that the ADVANCE Southwest should be aware of external programs and program features that may potentially be more attractive to students. One employer said, "The local fire department does its own EMT and paramedic school. Southwest has to remain competitive." Another described how the program may not be as attractive as a "four-year university." Despite potential competition in the area, both employers and students noted that ADVANCE Southwest program features were attracting students and should be retained. These participants described how low program costs, seamless advising processes, and the college's strong reputation had attracted students to ADVANCE Southwest programs of study among other options. One student stated, "I was actually at a nursing program at UT, but it wasn't conducive to my lifestyle as a mother and wife. This program was a better fit. I had heard some incredible things about graduates, like hospitals like Southwest graduates better than other universities." An employer stated, "Counseling used to be worse. It used to be a lot more difficult to get the process going, but now it's easier. People like easy and will take the path of least resistance." Overall, participants agreed that, although ADVANCE Southwest currently stands out among its competitors, program stakeholders must remain aware of potential competition in the area.

Communication with Students. While students participating in focus groups and interviews reported positive experiences with ADVANCE Southwest programs of study, there was a shared concern that communication with students regarding available student supports and program costs should be improved. Students agreed that the supports they had received (e.g., uniforms, field guides, textbooks) has been invaluable to their learning. However, several of these participants stated that, if not for word of mouth, they would not have been aware of all of the supports available to them. One student participant said:

> Communicating what is available to students is something that could be improved on. It's a good thing we [students] talk because we share a lot through word of mouth. . .When they discussed resources with us before entering the program, there were some of them presented. I don't know if it would be possible to list every little thing, but a lot of people weren't knowledgeable about all of the resources available.

In addition, several students participating in focus groups stated that the total cost of each program should be clearly shared with students. When asked what they wish they had known before starting the program, one student said, and all others agreed, "The total cost. They give you an estimate of costs that includes what they call mandatory costs. But you find that what they

call optional you need to really be successful." To resolve this, one participant suggested, "It needs to start from the top with administration and go down to the school. The college needs to be better enabled to communicate with students and keep them prepared." Student survey respondents also reported that improved communication with students would improve their overall experience in the program, and allow them to more positively recommend their program of study to others.

Overall, students emphasized the importance of clearly articulating student supports available and program costs to student preparation and ultimate success. Because of this importance, improved communication with students may increase the likelihood that the program is able to recruit and retain students, maintain its reputation through students sharing positive experiences with the program, and, in turn, increase the likelihood of sustainability.

Building Capacity. When asked to describe the sustainability of ADVANCE Southwest, several participants mentioned that the need for paramedics and nurses in the area will continue past the initial funding period and beyond. Participants stated that ADVANCE Southwest's ability to build capacity in these fields is likely to sustain it. One staff member said, "The need for nurses and EMTs and capacity built within the departments since the beginning of the grant will help sustainability." One employer stated, "Capacity is important, so the college just needs to keep getting people trained and not give them a reason to look elsewhere." Moreover, participants stated that the program's ability to provide these fields with high-quality students will likely enable the program to be sustained beyond the initial funding period. One faculty member said:

> We have been able to build/increase professionalism for our students during and after school years – having uniforms was helpful because students could show up for work dressed in professional nursing uniform when we send them out for field work and later when they started working.

Relatedly, the college's reputation among local employers was also perceived as contributing to sustaining ADVANCE Southwest. Altogether, these findings suggest that the need for employees in the Allied Health field helps strengthen the likelihood of sustainability, which is amplified by the ability of ADVANCE Southwest to provide well-prepared candidates for these positions.

Responsiveness to Feedback. Throughout the early stages of program implementation, all participants described external factors that had hampered the implementation process. However, during the later stages of implementation near the close of the 2017-2018 academic year, participants reported that ADVANCE Southwest stakeholders had responded to these findings to limit preexisting threats and improve the program. Specifically, ADVANCE Southwest staff, faculty, and employers stated that the program team has reacted to ongoing evaluation findings to improve the program's structure and delivery. For example, the ADVANCE Southwest director utilized findings to clarify and help program faculty and staff understand their responsibilities. In addition, some ADVANCE Southwest personnel said they felt that they were physically isolated on the college campus, which, they said, could hamper the program's delivery. The program's director has since conducted formal meetings and increased the frequency of communication. The ADVANCE Southwest program team's responsiveness to feedback was perceived as positively affecting the program's sustainability.

7.3   Opportunities to Increase the Likelihood of Sustainability

Looking towards the future, staff, faculty, and employers were asked to describe any opportunities that exist that may help secure the sustainability of ADVANCE Southwest and its components. All participants offered opportunities that may increase the likelihood of ADVANCE Southwest sustainability. The following subsection lists these opportunities, which centered on both continuously improving and expanding the ADVANCE Southwest program and its components. It also describes how to best address information blind spots.

Increase Recruitment Efforts. As the program reached its final stages of implementation in the spring of 2018, program leaders facilitated discussions about increasing recruitment efforts and had a designated recruitment team member visiting local high schools and businesses speaking to pre-nursing students about the ADVANCE Southwest program. These actions appear to be aligned with potential opportunities described during interviews. All employers stated that increasing recruitment efforts for ADVANCE Southwest programs of study may help secure the sustainability of program components. Specifically, employers said that program directors and personnel should begin recruiting students earlier in their academic careers. Several employers stated that the college could use other program models as a template for recruitment, including a recruitment effort at local high schools which seeks to fulfill the shortage of police officers in the area. One employer stated, "They could start in high school and be prepped to go into EMT Advanced when they graduate. It put students in the pipeline." Another said:

> Recruitment is critical. We have to get into high schools and get kids headed on the right career path. High schools need introduction to EMS classes. We need to find a way to identify them [students] and get them enrolled early.

Pursue Additional Grant Initiatives. Staff and faculty agreed that the ADVANCE Southwest grant should be used as a catalyst in exploring additional grant initiatives, especially because the ADVANCE Southwest grant has allowed experience and improved capacity to implement similar work. Reflecting on the program's implementation, program staff members articulated what would have been differently and what worked well. One program staff member said:

> We would want more feedback from the administration- the VPs of colleges. It would have been nice to have an outside eye to look in and provide guidance from the beginning and on. We have that now, but it would have been really nice to have in the first year and a half.

Another staff member added that the grant has influenced "thinking outside of the box and looking at things in different ways," which was perceived as a skill that would help promote undertaking future grant work. Because of this enhanced capacity to implement similar grant work, actively seeking out grants was described as a main opportunity for ADVANCE Southwest leaders. In fact, one staff member described how this opportunity is already being acted on:

> The grant writer on campus is helping us find grants that may save some services. A lot of the program components are already here to stay, but it's just a matter of reintroducing students to them. They might not be mirrored exactly but are being continued.

Increase Live Patient Experience. Interestingly, while there was agreement among staff and faculty members, students, and employers that technology made available through ADVANCE

Southwest (e.g., simulation mannequins) was invaluable to student learning, they also agreed that the emphasis on technology may override experience with live patients. In turn, students may not develop skills and knowledge needed in their career path. Participants from all groups stated that this may be a threat to the sustainability of program components. For example, one staff member said, "They are able to use the equipment, but they may need more support at the clinical-level and onsite face-to-face potential patients." A student enrolled in an ADVANCE Southwest program of study stated, "With mannequins, it is easy to forego interaction. You just forget to pretend that this is supposed to be a person. The social skills are an important skill that has to be learned." Another student said, "The simulators are still not humans. We need more clinical availability and time with actual patients." Participants in focus groups and interviews stated that rather than focusing on either the use of simulators or live patients, programs should strive to incorporate both to ensure students have the most effective training.

8.   Summary of ADVANCE Southwest Implementation Study

Using findings from interviews and focus groups collected during the fall of 2017 and spring of 2018, as well as an Advisory Board observation during the spring of 2018, this section summarizes findings from across all stages of program implementation by evaluation question domain.

8.1   Fidelity of Implementation

Overall, throughout implementation, in terms of program structures and components, ADVANCE Southwest either adhered to the program's design or made formal modification requests.

Use of Grant Funds. Grant funds were used to purchase improved technology, cover salaries, and purchase study materials, as planned. While much of the funding was used to purchase simulation mannequins for classroom use (simulation mannequins were purchased in early 2017 and integrated into courses thereafter), the program used funds to hire personnel as planned in the proposal or as outlined in formal budget modifications. Specifically, lab and enrichment staff work with faculty to integrate more technology into the curriculum and create new tools (e.g., grading rubrics).

- *Assistance to Students.* ADVANCE Southwest used grant funds to provide material assistance to students. Interview participants stated that grant funds were used to purchase materials including, but not limited to, uniforms, workbooks, and test materials.
- *Development and Expansion of Curricula.* ADVANCE Southwest used grant funds to develop curriculum according to licensure exam content. Developing a registry-based curriculum included integrating more technology and simulation mannequins, which were purchased with ADVANCE Southwest grant funds.

Curricular Enhancements. ADVANCE Southwest stakeholders described curricular development as occurring largely according to plan. The design process was described as collaborative and involving the integration of simulations and other technologies into the curricula. Throughout the implementation process, program staff, faculty, and employers of ADVANCE Southwest students described how incorporating simulation equipment and other technologies into the curriculum had resulted in more alignment to students' National Registry exams. This, in turn, was perceived as greatly enhancing program curriculum.

Assessment and Tool Use. ADVANCE Southwest stakeholders described student assessments as largely informal and carried out, primarily, by faculty. That noted, the informal approaches used to determine student progress and career prospects, were described by students and internal stakeholders as effective. During the later stages of program implementation in the spring of 2018, ADVANCE Southwest utilized assessments and program tools. The flexible, informal approaches to assessments and program tools were modified throughout the implementation process to meet student needs. Stakeholders described using a strategic approach to providing guidance and coaching to students enrolled in programs of study. Consistent with earlier findings, this approach was perceived as improving student success, in terms of coursework, preparation for national licensure exams, and retention rates. The informal, yet strategic, approach to assessments and student guidance and coaching was perceived as effective.

8.2   Critical Components of Implementation

ADVANCE Southwest continued to plan for, develop, and improve the program's main components throughout implementation.

Curricula Selection and Development. ADVANCE Southwest curricula and activities were created collaboratively by grant personnel. Grant faculty and staff selected and used curricula that would reflect what students would be tested on in their licensure exams. A critical element in the curricula was the use of scenario-based, lifelike simulations using mannequins. ADVANCE Southwest showcased the integration of simulation labs and mannequins into curricula.

Stakeholder Contributions to the Program. Key program structures related to ADVANCE Southwest (program design, curriculum development, recruitment, training, placement, program management, leveraging of resources, and commitment to program sustainability) were managed by internal stakeholders. More specifically, with input from local employers and from faculty who also work in the local Allied Health industry, staff and faculty carried out the following functions directly.

- *Program Design*. Key stakeholders collaborated to design programs that prepared students for licensure exams and reflected registry-based material.
- *Curriculum Development*. Curricula were developed by faculty and staff to include simulations and enhanced technology. Most of the curricular advances and enhancements were described as designed shortly after staff were hired in February of 2017.
- *Recruitment*. Recruitment efforts have been planned and carried out by ADVANCE Southwest staff. These efforts have focused on equipping students with information on the programs of study through orientations, Boot Camps, and "an aggressive word-of-mouth campaign." Key stakeholders described recruiting prospective students including high school students and prospective students in the workforce.

Curricula Improvement Using Grant Funds. Stakeholders described several ways in which grant funds were utilized to support ADVANCE Southwest.

- *Integration of Registry-Based Components*. Grant funds were used to expand programs designs to include more registry-based curriculum. This included incorporating reality-based scenarios, which often utilized simulations labs and mannequins purchased by grant funds.

- *Technology Integration.* ADVANCE Southwest courses integrated technology enhancements, including simulation labs and simulation mannequins, into the curriculum. At the time of the final round of interviews, ADVANCE Southwest personnel were attempting to make simulation mannequins mandatory in program curricula.

Student Supports. Student supports provide direct services to students in the form of student advising, counseling, and other kinds of assistance. Both students and faculty and staff described student supports as helping to increase student success in terms of exam scores and retention rates for ADVANCE Southwest courses of study. Deemed particularly valuable were:

- *Introduction of Resources.* Student supports provided tangible resources and one-on-one services, such as student advising and student counseling, to students.
- *Broad-based Approach.* Grant funds were used to provide students with student counseling and advising both informally and through formal checkpoints. Almost all ADVANCE Southwest personnel described taking an active role in student counseling and advising throughout the program's implementation.
- *Introduction of Tutoring Services.* Grant funds were also used to expand programs to include multiple tutoring options. Students were able to choose tutoring delivered either online or in-person.

Use of Student Supports. Early in the implementation process, internal stakeholders described several ways in which grant funds were developed to support students in ADVANCE Southwest programs. In the later stages of implementation, internal stakeholders and students articulated how students had utilized these supports and the subsequent results. Students stated these supports largely helped them prepare for licensure exams and their future career paths. ADVANCE Southwest also provided students with specific course materials free of cost that were perceived as alleviating students' financial burden and improve retention rates by helping students better concentrate of courses of study rather than how to finance certain materials. Increased retention rates and student satisfaction with programs was perceived as largely attributable to student supports provided by the grant.

Use of Student Assessments. Consistent with findings from earlier data collection activities, program stakeholders described student assessments as largely informal and carried out by faculty. The informal approaches used to determine student progress and career prospects, were described by students and internal stakeholders as effective. Notably, program administrators stated that assessments would be sustained beyond the initial funding period and more heavily advertised.

Recruitment Activities. ADVANCE Southwest used several methods to attract and recruit target students. Among these were orientations, advertising program features (e.g., showcasing equipment), and providing program information to potential students. Additionally, ADVANCE Southwest program directors provided guidance to students prior to enrolling in courses of study. Although this was primarily informal, students perceived this type of guidance as valuable and as informing their decision to enroll in the program. However, few interview and focus group commented specifically described TAA-eligible job seekers or veterans; most activities targeted a broader, but lower-income, pool of prospective students. Nonetheless, responses from focus groups and interviews with students in the spring of 2018 suggest that ADVANCE Southwest had

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effective structures in place (e.g., providing material supports, orientation sessions, guidance from program directors) that attracted prospective students to the program.

Expanding Partnerships. Events, such as regular ADVANCE Southwest Advisory Board meetings, gave partners and employers opportunities to provide feedback and recommendations for programs of study and were perceived as the primary strategy for strengthening partnerships. ADVANCE Southwest also involved partners and employers in serving as instructors for program courses, as well as mentoring and testing activities.

8.3   Factors Affecting Implementation

ADVANCE Southwest stakeholders strived to understand factors that affected program implementation and engaged in conversations and used findings from the program evaluation. Stakeholders appear to have been aware of factors that affected program implementation, and, of equal importance, used that information to plan for long-term program sustainability.

Opportunities for Improving Performance. Several opportunities for improving the program's performance were shared with ADVANCE Southwest stakeholders. These included increasing the visibility of ADVANCE Southwest on the college campus, increasing college buy-in from departments and offices not directly involved in the program may subsequently increase the program's performance, and improving the relationship between the program of study exams and national certification exams. ADVANCE Southwest stakeholders subsequently used these findings to improve the program. Later in the implementation process, students enrolled in ADVANCE Southwest programs of study suggested that by improving the chain of communication from program leadership to students, the program may be overall improved.

Opportunities for and Threats to Program Sustainability. Throughout ADVANCE Southwest's implementation, ADVANCE Southwest stakeholders and beneficiaries listed both opportunities for and threats to the program. All program threats listed during the earlier stages of implementation were resolved by program leadership, including increasing the frequency of communication and clarifying staff and faculty responsibilities. However, additional threats to the program were described during data collection activities in the final stages of implementation (spring of 2018). These included a potential over-reliance on technology (e.g., simulation mannequins) and the existence of competing local programs. Participants also offered opportunities for increasing the likelihood of program sustainability. Among these were increasing recruitment efforts, seeking additional grant initiatives, and incorporating additional live patient experience opportunities into the programs of study.

Satisfaction with Program Components. Throughout early and later stages of program implementation, ADVANCE Southwest main beneficiaries had positive impressions of and were overall satisfied with the program. By providing high quality personnel, modernized technology, and career preparation for its students, ADVANCE Southwest was described as an asset to the college. ADVANCE Southwest students indicated that their programs of study were comprehensive and efficient and gave them confidence in entering the career field.

Likelihood of Program Component Sustainability. During interviews conducted near the close of program implementation in the spring of 2018, ADVANCE Southwest internal stakeholders and external partners stated that not only are program components likely to be sustained beyond the initial funding period, but that they have engaged in planning on sustainability and already secured

means to sustain program components such as retaining additional staff. Deemed particularly likely to be sustained beyond the initial funding period are additional staff, student supports, and technology.

II. Outcome Findings from Student Data

1. Outcomes Study Overview

The ADVANCE Southwest evaluation's summative, outcomes study was designed to evaluate the program's outcomes and impacts. Guided by the eleven summative evaluation questions, the evaluation team collected data on students' enrollment, academic participation and performance, and post-completion outcomes to examine the success of the ADVANCE Southwest program in meeting their DOL Performance Measures and improving students' outcomes.

1.1 Approach and Process

The ADVANCE Southwest evaluation team worked with ADVANCE Southwest staff to collect seven rounds of cumulative student demographic, academic, and employment data through June 2018. These data were initially collected by ADVANCE Southwest staff in an Access database, and then transferred to the evaluation team via secure file transfer protocol. The student data were then extracted and merged into SPSS to create an ongoing longitudinal database of all student data. The final longitudinal database was comprised of data from 545 unique students.

In addition to the cumulative student demographic, academic, and employment data collected by ADVANCE Southwest staff and given to the evaluation team, ADVANCE Southwest staff also administered a limited number of paper student completion surveys in Fall 2017 (referred to as January 2018 data in table notes), which were mailed to ICF's headquarters in Fairfax, Virginia. Of the 65 student surveys received, 56 included valid data, while the others were blank. Data from the paper surveys were manually entered into the online survey program and exported into a separate SPSS file. Both the ongoing student longitudinal database and the student completion survey database were merged together using the student ID as the unique identifier.

Both data sources were analyzed using basic descriptive statistics (such as means and frequencies) and cross-tabulations were run to determine trends by program of study. All student outcome data presented here are preliminary, as the program is still underway and many students have yet to complete their program of study. These findings are presented in four sections: (a) student demographic and enrollment characteristics; (b) student participation in programs of study and trends in program completion; (c) student employment trends both at enrollment and for up to three quarters following program completion; and (d) outcomes aligned to DOL targets for ADVANCE Southwest.

1.2 Limitations

One limitation of the student administrative data should be noted; these preliminary findings on student outcomes were limited by the availability of data, particularly the lack of data on students participating in student support services.

2. Student Characteristics

ADVANCE Southwest began enrolling students in Spring 2016, continued tracking program enrollment through March 2018 and monitored academic, completion, and employment information for those students through June 2018. Throughout that time, 545 students enrolled in ADVANCE Southwest programs of study, exceeding the program's overall enrollment goals. Students ranged in age from 18 to 68, with a mean age of 30. Most students were female (59%) and most were either white (49%) or black (43%). No students reported being impacted by the trade adjustment assistance (TAA) program and just 3% of enrolled students were veterans (see Table 2).

Table 2. Demographic Characteristics of Students Enrolled in ADVANCE Southwest			
Age Range (*n*=545)		Gender (*n*=545)	
20 years old or younger	6%	Male	42%
21–25 years old	28%	Female	59%
26–30 years old	25%	Race (*n*=541)	
31–35 years old	16%	White	49%
36–40 years old	9%	Black	43%
41–50 years old	10%	Asian	3%
51 years old or older	1%	American Indian	0%
ADVANCE SW Program (*n*=545)		Native Hawaiian/Pacific Islander	0%
EMT Program*	53%	Hispanic	2%
Basic EMT	37%	Multiple races	2%
Advanced EMT	17%	TAA-Impacted (*n*=545)	0%
Paramedics	12%	Veteran (*n*=545)	3%
Nursing	47%		

Source: ADVANCE SW Student Tracking Database, June 2018. NOTE: Due to rounding, totals may equal more than 100%. * Students can enroll in multiple EMT programs

Students who responded to the survey varied slightly in their demographics from those in the broader study; both groups of students had a mean age of 30 and were predominately white or black in race. High percentages of both groups of students reported working for pay while enrolled as a student (79% of survey respondents vs. 73% of all students enrolled in ADVANCE Southwest programs of study). However, students in the survey group were more likely to be male (61% vs. 42%) and greater percentages of survey completers had enrolled in an EMT program than in the full group of students participating in ADVANCE Southwest (66% vs. 53%). In addition, students who completed the survey had a significantly higher average GPA of 3.7 compared to the full group of students participating in ADVANCE Southwest who had an average GPA of 2.7 (see Table 1). Students who completed the survey may represent a more conscientious group of individuals, and results from the survey group should not be broadly generalized to the full population.

3. Program Participation and Completion

3.1   Student Participation in Academic Programs and Support Services

Students in the EMT Program enrolled in at least one of three, stackable programs: Basic EMT, Advanced EMT, and Paramedics. Slightly more students enrolled in at least one of these EMT programs (53%) than in the Nursing program (47%, see Table 2). In addition, 19% of all EMT students were enrolled in two or more EMT programs (results not shown).

Overall, students enrolled in the Nursing program had the highest average cumulative GPA, at 2.93, compared with students in the any EMT program, with an average GPA of 2.53. Within the EMT program, students in the Advanced EMT and the Paramedics programs had the highest average cumulative GPA, at 2.97 and 2.70, respectively (see Table 3). Across the whole ADVANCE Southwest program, students earned an average GPA of 2.71.

Table 3. Percentage of Students by Program and GPA Range						
Program of Study	Percentage of Students by GPA Range					Mean GPA
	4.0	3.0-3.9	2.0-2.9	1.0-1.9	0.0-0.9	
EMT Program* (*n*=285)	6%	32%	40%	12%	11%	2.53
Basic EMT (*n*=201)	7%	31%	38%	13%	12%	2.45
Advanced EMT (*n*=94)	11%	43%	38%	5%	3%	2.97
Paramedics (*n*=61)	3%	31%	54%	7%	5%	2.70
Nursing (*n*=249)	1%	45%	51%	2%	0%	2.93
Total (*n*=543)	**4%**	**39%**	**45%**	**7%**	**6%**	**2.71**

Source: ADVANCE SW Student Tracking Database, June 2018 NOTE: Due to rounding, totals may equal more than 100%. Some enrolled students did not yet have valid GPA data. * Students can enroll in multiple EMT programs.

Students were asked about their participation in student support services they received during their enrollment in ADVANCE Southwest programs. Overall, slightly less than two-thirds of students (61%) reported engaging with at least one student support activity, with one-third (35%) of students utilizing multiple support services (see Table 4). A majority of students (53%) reported meeting with a Learning Enhancement Coordinator, followed by participation in tutoring (38%), and attending a Learning Support Lab (26%).

Table 4: Participation and Average Helpfulness of Student Support Services		
Student Support Activity	Percentage of Respondents Who Participated	Overall Student Respondents' Rating of Helpfulness
Participated in at least <u>one</u> student support services (*n*=57)	61%	2.31
Participated in at least <u>two</u> student support services (*n*=57)	35%	2.31
Participated in at least <u>three</u> student support services (*n*=57)	14%	2.27
Met with a Learning Enhancement Coordinator (*n*=49)	53%	2.18
Participated in Tutoring (*n*=50)	38%	2.31
Attended the Learning Support Lab (*n*=47)	26%	2.30
Met with a Retention Coach (*n*=45)	22%	2.28
Kuder Career Assessment/Career Aptitude Assessment (*n*=44)	9%	2.33
Attended a Pre-Program Workshop (Pre-Nursing) (*n*=44)	5%	2.00

Source: ADVANCE Southwest Student Completion Survey, January 2018. NOTE: The n's in this table reflect the total number of students who indicated whether they participated or did not participate in each support service.

Students were also asked to indicate how much each service that they utilized contributed to their success in their program using a scale of 0–3, where 0 = *Not at all,* 1 = *A little bit,* 2 = *Somewhat,* and 3 = *A lot* (labeled as "helpfulness" in Table 4). Student respondents reported that the Kuder Career Assessment/Career Aptitude Assessment contributed the most to their success, at 2.33 out of 3, although only 9% of student respondents participated in that service. Tutoring and the Learning Support Lab followed at 2.31 and 2.30 out of 3, respectively (see Table 4). Of all the student respondents who participated in at least one student support service, most felt that these services were at least *somewhat* helpful (2.00 out of 3.00) to their program success.

In addition to these formalized support services, student survey respondents also reported personally benefitting from support staff. For example, about half of student survey respondents (51%) reported meeting with a college staff member to talk about commitments outside of their program of study to help figure out their course schedule and balance competing demands. Similarly, 45% of survey respondents indicated that they had met with an academic advisor or retention coach to help create and meet a plan to achieve academic goals, and the majority of student survey respondents (62%) reported that they were able to meet with their academic advisor or retention coach at times convenient to them (results not shown).

Student participants in both interviews and focus groups during the spring of 2018 also reported receiving this type of guidance from Program Directors and program staff members. This included help with paperwork prior to enrollment and discussing career paths following graduation. One student described how various staff and faculty members have met with her to "provide guidance" and "take some of the stress off" of her. Student participants also commented that this type of support from faculty and staff members outside of the classroom greatly contributed to their satisfaction with their program of study. One student said, "The teachers also feel like mentors. They connect with us, they challenge us, they didn't dumb down the program to get more of us graduated. The personnel has really made all the difference."

Table 5. Percentage of Students Graduating and Retained by program			
Degree Program	Percentage of Students Graduated	Percentage of Students Retained	Percentage of Students Dropped[β]
EMT Program* (n=291)	61%	7%	32%
Basic EMT (n=201)	61%	1%	38%
Advanced EMT (n=94)	94%	0%	6%
Paramedics (n=63)	54%	29%	17%
Nursing (n=254)	36%	30%	34%
Total (*n*=545)	**49%**	**18%**	**33%**

Source: ADVANCE SW Student Tracking Database, June 2018 NOTE**:** Due to rounding, totals may equal more than 100%
[β] Dropped students include those who failed their program and those who withdrew *Students enrolled in multiple EMT programs

Through June 2018, 49% of all enrolled ADVANCE Southwest participants had completed at least one program of study (see Table 5). These trends varied by program, with 61% of EMT students completing at least one EMT program and 36% of Nursing students completing their program, reflective of the shorter nature of the EMT program and the longer nature of the Nursing program. Completion rates also varied within the EMT program with 94% of those enrolled in Advanced EMT completing their program by June 2018, compared with 61% of those enrolled in the Basic EMT program and 54% of those enrolled in the Paramedics program (see Table 5). In addition,

56 students, or 19% of those enrolled in any EMT program, had completed at least two programs within the EMT program (results not shown). After program completion, 63% of graduated EMT students had taken and passed their licensure exam; 47% of graduated Nursing students had done the same (results not shown).

Overall, students' rates of leaving ADVANCE Southwest were broadly consistent across program, with 32% of those enrolled in the EMT program withdrawing or failing their program compared with 34% of those enrolled in the Nursing program (see Table 5). A slightly higher proportion of Nursing students failed out of that program compared with EMT students (23% vs. 19%), which is compatible with the differing demands of each of those programs (results not shown). Within the EMT program, student withdrawals or drop-outs ranged from 6% in the Advanced EMT program to 38% in the Basic EMT program. The Basic EMT program had the highest rate of failure within all EMT programs with 23% of students failing out of this program. In contrast, students were more likely to withdraw from the Paramedics program; 10% of students withdrew from the program compared to 8% who failed out of this program (results not shown).

Upon program completion, three-quarters of students surveyed (75%) indicated that they were satisfied with the program of study they had completed and 73% reported that they would recommend their program of study to prospective students (results not shown). Similarly, qualitative data from focus groups conducted with students enrolled in ADVANCE Southwest programs in both the fall of 2017 and spring of 2018 suggests that students were satisfied with their program of study. Throughout the program's implementation, on a scale of 1-10 (with 1 being not at all and 10 being very satisfied), students in the focus groups rated their satisfaction as relatively high. Over half of all students participating in focus groups rated their satisfaction with the program as a 10. One student said, "I'd give it about an 8. Program-wise, it's very effective." Another stated, "It has enabled me to complete coursework and hopefully pass my boards to become a RN." Another student described how she hopes to return to the college to teach later on in her career and said, "I love the program. The main reason I have changed some plans I have for myself is because I want to be a part of Southwest continuously."

3.2   Longitudinal Trends

Students began enrolling in the ADVANCE Southwest programs of study in Spring 2016 and enrollment continued through Fall 2017. Based on their semester of enrollment, students were grouped into six cohorts to assess the extent to which ongoing changes to the program may have contributed to improved student outcomes. This analysis indicates that time, rather than program improvements, is the bigger contributor to student outcomes. Students from earlier cohorts were more likely to have a higher cumulative GPA (p=-0.143**), to have ever passed a program of study (p=-0.137**), more likely to have earned at least one credential (p=-0.136*), and to have earned a higher number of credit hours (p=-0.190**); all likely a product of time. However, the relatively shorter period of program implementation combined with the shorter nature of the majority of programs of study included in ADVANCE Southwest may have also reduced the likelihood of seeing measurable impacts related to changes in program structure or supports.

3.3   Program Impacts

The ADVANCE Southwest academic programs and student support services were designed to support students' academic achievement and program retention all the way through program completion or graduation. The evaluation team conducted correlational analysis to assess the extent to which key demographic factors were correlated with students' ongoing academic achievement (measured by their final cumulative GPA) and program completion. The correlation statistic explains the relationship between the two variables, with a positive significant correlation indicating that the two variables rise or increase together; as students' GPA increases, so do graduation/completion rates.

Table 6. Impact of Student and Academic Characteristics on Students' GPA and Program Completion				
	Final Cumulative GPA		Completed Program	
Characteristic	Significantly Correlated	Correlation	Significantly Correlated	Correlation
Age	+	0.123**	ns	
Gender	+	0.149**	ns	
Race	+	0.118**	+	0.129**
Veteran	ns		ns	
Employed at enrollment	ns		ns	
Program of Study (EMT vs. Nursing)	-	0.215**	+	0.125**
Final Cumulative GPA	N/A		+	0.444**
Any student supports	ns		N/A	

Source: ADVANCE SW Student Tracking Database, June 2018. NOTE: 'ns' indicates a non-significant correlation. N/A indicates that the variable is not relevant for that correlation. * Correlation is significant at the .05 level. ** Correlation is significant at the .01 level. Highlighted cells indicate a significant correlation.

Several demographic factors were positively correlated with a higher GPA; students who were older, female, and white were more likely to have higher GPAs (see Table 6). Other demographic characteristics including being a veteran and working while in school were not significantly correlated with GPA. Among academic characteristics, students enrolled in the nursing program were more likely to have higher GPAs (p=-0.215**). In examining completion trends by students' demographic and academic characteristics, analysis showed several meaningful correlations. Although age, gender, and race were all significantly correlated with having a higher GPA, only race was also correlated with program completion; white students were more likely to complete their program (p=0.129**). Looking at academic characteristics, final cumulative GPA was understandably correlated with program completion (p=0.444**), and EMT students were more likely to complete their program than Nursing students (p=0.125**), even though as a group, Nursing students were more likely to have higher GPAs.

4.   Student Employment Outcomes and Impacts

4.1   Students' Current and Planned Workforce Participation

Most ADVANCE Southwest students were employed at the time of enrollment (73%) with just under one-third of students reporting that they were underemployed (32%, see Table 7). However, this represented 42% those who were employed. The majority of these students reported that they were working part-time, while a few students indicated that their

underemployment was due to working below their education level or below their skill level (see Table 7). In addition, less than 1% of enrolled students reported that they were a dislocated worker, having been recently laid-off from their job. Among the 79% of student survey respondents who reported working at a job for pay during the six months prior to completing the survey, 63% reported already working in the healthcare field (results not shown), indicating that for most of these student, their training

Table 7. Student Employment at Enrollment (n=545)	
Unemployed	**27%**
Employed	**73%**
Underemployed	**32%**
Working part-time	22%
Working below education	<1%
Working below skill level	4%
Working below skill & education level	5%
Dislocated worker	**<1%**

Source: ADVANCE SW Student Tracking Database, June 2018

would help to advance them further in the career path they had already begun. This information can help to contextualize students' employment outcomes following program completion.

The vast majority of student survey respondents (89%) reported that their classes had prepared them for what they wanted to do professionally. Similarly, 89% of student survey respondents indicated that what they learned in classes would be relevant to their future career success (results not shown). Qualitative findings support those from the student survey; during focus groups and interviews in the spring of 2018, students indicated that their program of study was likely to help them reach their career goals. In regards to the reaching their career goals, all students in all focus groups said, "very likely," "extremely likely," or, "I am 100% sure I will have a job." One student commented, "They [faculty] are doing a great job with book smarts and, in that way, we are ahead of the game. The theory here is so much better than what my coworkers received. It is much better than Memphis FD." Students in both focus groups and interviews during the later stages of implementation added that their chosen program of study was preparing them for their future career plans by providing relevant experience and challenging, hands-on coursework. One student said, "Southwest is preparing me and introducing me to nursing . . . it's doing a great job of exposing me to information that will be on the boards." Another stated, "If I was (admitted) into a hospital, I would want my nurse to be knowledgeable. They have trained me to be that." These are encouraging findings, suggesting that course content is well-aligned with students' perceived employability and success in their chosen career.

Table 8. Students' Future Plans	
Future Plans (*n*=57)	Percentage of Student Respondents
Work full-time	83%
Work part-time	12%
Continue undergraduate or graduate education (full-time)	19%
Continue undergraduate or graduate education (part-time)	25%
Military service	0%
Volunteer Activity (e.g. Peace Corps, AmeriCorps)	2%
Other	2%

Source: ADVANCE Southwest Student Completion Survey, January 2018.

These survey respondents were also asked about their current employment status and future employment plans. Nearly one-third (29%) of respondents indicated they had a *new* job lined up after completing their program; many of these respondents reported that they would be working as EMTs, for a fire department, or in various hospital roles. Reflecting on their broad plans post-graduation, 83% of student respondents reported that they planned to work full time, while a

quarter (25%) of students planned to continue their undergraduate or graduate education part time (see Table 8).

Across all programs of study, 269 students had graduated and moved into the workforce by June 2018. Among these students, two-thirds (66%) were working one quarter (three months) after program completion and approximately half of these students were working two (58%) and three quarters (45%) after program completion (see Table 9). Students who completed their programs in spring 2018 had not yet reported on their workforce participation in their first quarter after graduation and many students who had entered the workforce had only been in the workforce for one or two quarters, limiting the data available on students.

Table 9. Workforce Participation among Program Completers for Three Quarters after Completion	
Workforce Participation	Percentage of Completers
Employment among all graduates and completers (*n*=269)	
Employed Q1	**66%**
Employed Q2	**58%**
Employed Q3	**45%**
Incumbent workers (employed at enrollment) (*n*=196)	
Employed at enrollment, still employed	83%
Any Wage Increase (Q1-Q3)	59%
Unemployed at enrollment (*n*=73)	
Employed Q1	21%
Still Employed Q2	16%
Still Employed Q3	8%
Any continuing education (*n*=269)	**13%**

Source: ADVANCE Southwest Student Tracking Database, June 2018

Through the end of the program in June 2018, the majority of students with valid employment data reported that they were incumbent workers and 83% of these students indicated that they were still employed one quarter after program completion. Furthermore, more than 59% of these students reported getting a wage increase while continuing their workforce participation, demonstrating a clear benefit of program participation (see Table 9).

Among non-incumbent workers, 21% reported finding a new position in the first quarter after program completion (see Table 9). Two and three quarters after program completion, 16% and 8% of students had continued in their employment, respectively. These percentages are also likely a reflective of the time that passed since program completion; 14% of these students had only recently entered the workforce.

In addition, 13% of program completers reported that they were enrolled in continuing education in the first quarter after completion. This does not include those students that completed one program within ADVANCE Southwest and went on to enroll in a subsequent ADVANCE Southwest program. Rather, these students all reported enrollment in 4-year colleges and universities.

4.2 Employment Impacts

The ADVANCE Southwest program was designed to support students' academic achievement and program completion to strengthen students' employability as they moved into the workforce. The evaluation team conducted correlational analysis to assess the extent to which key

demographic and academic factors were correlated with workforce participation following program completion. The correlation statistic explains the relationship between the two variables, with a positive significant correlation indicating that the two variables rise or increase together.

Correlations were assessed between key characteristics and employment for three quarters after completion. Although the strength of the associations varied slightly, the significance did not vary from quarter to quarter. As such, Table 10 presents a composite variable of any employment across all three quarters after completion. Among demographic characteristics, only race was significantly correlated with employment following program completion; white students were more likely to find employment following program completion (p=0.179**, see Table 10). EMT students were more likely to be employed after completion (p=0.349**) and students who had completed their program of study and passed their licensure exam were more likely to be employed than those without a relevant licensure (p=0.398**). Each of these correlations were consistent for both incumbent and non-incumbent workers, but for non-incumbent workers only, younger students were more likely to be employed following program completion (p=-0.276*, results not shown).

Table 10. Impact of Student and Academic Characteristics on Employment and Education Following Program Completion						
	Any Employment (Q1 through Q3)		**Any Wage Increase** (incumbent workers only)		**Enrolled in Further Education**	
Characteristic	Significantly Correlated	Correlation	Significantly Correlated	Correlation	Significantly Correlated	Correlation
Age	ns		ns		ns	
Gender	ns		ns		ns	
Race	+	0.179**	ns		-	0.213**
Veteran	ns		ns		ns	
Cohort	ns		ns		ns	
Program of Study (EMT vs. Nursing)	+	0.349**	ns		-	0.403**
Total EMT Passed	ns		ns		ns	
Final Cumulative GPA	ns		ns		ns	
Licensure	+	0.398**	+	.413**	-	0.425**

Source: ADVANCE SW Student Tracking Database, June 2018. NOTE: 'ns' indicates a non-significant correlation. * Correlation is significant at the .05 level. ** Correlation is significant at the .01 level. Highlighted cells indicate a significant correlation.

Among students who had completed a program of study who were employed when they started their program of study, the only demographic or academic characteristic related to receiving a wage increase was passing a licensure exam (p=0.413**). Neither students' GPAs nor passing multiple stackable EMT programs were significantly correlated with increased earnings; however, completing the Paramedics program was significantly positively correlated with receiving a wage increase (p=0.152*, results not shown). Taken together, this may be an indication that of the importance of licensure for local employers and an area for continued emphasis in sustainability efforts.

Each of the characteristics related to employment was also related to enrolling in subsequent education following program completion, however the relationship moved in the opposite direction. So while white students were more likely to be employed following program completion, they were less likely to enroll in further education (p=-0.213**). Similarly, EMT students and those

with relevant licensures were more likely to be employed after program completion while Nursing students and those who did not pass or did not take their licensure exam were more likely to enroll in subsequent education (p=-0.403** and -0.425**, respectively). This may suggest that something in this coursework encourages students to pursue more advanced degrees, or may be reflective of the job market in southwest Tennessee – students pursing work in the Nursing field may feel that they need more advanced degrees to remain competitive.

5. Program Outcomes for DOL

USDOL requires all TAACCCT grantees to set targets for specific student outcomes. The targets set by ADVANCE Southwest are included in Table 11 along with the progress made toward achieving each of those outcomes. In particular, Southwest TN has exceeded several of their goals, included enrolling more than 120% of the number of targeted students and having more than 160% of their targeted number of students complete credit hours. Although ADVANCE Southwest did not reach the majority of its post-completion outcome goals, the program did achieved at least two-thirds of each of their goals despite significantly delayed program implementation. Based on the program's trajectory, had the program begun implementation on schedule, it is likely that each of the program goals could have been achieved. As is, the program team exceeded four of their program goals, including seeing five times the projected number of incumbent workers receiving a wage increase following program completion (see Table 11).

Table 11. USDOL TAACCCT Outcome Measures for the ADVANCE Southwest Program			
DOL Outcome Measures	Goal	Final	Percentage of Goal Achieved
1. Unique students receiving services	450	545	121%
2. Students who have completed a grant-funded program of study	270	269	99%
3. Students retained in grant-funded programs of study	252	96	70%
4. Total number of students completing credit hours	320	512	160%
5. Total number of earned credentials	296	318	107%
6. Total number of students enrolled in further education after completion	50	34	68%
7. Students who become employed one quarter after program completion	243	178	73%
8. Students who remain employed three quarters after exiting the program	228	122	54%
9. Students employed at program enrollment who receive a wage increase	20	116	580%

Source: ADVANCE SW Student Tracking Database, June 2018

III. Recommendations

This final section of this report lists the recommendations that the evaluation team generated and shared with Southwest Tennessee. The recommendations, based on feedback from ADVANCE Southwest faculty and staff members, student survey respondents, and the evaluation team, were

previously shared with the grantee in quarterly evaluation reports and discussions following submission of those reports.

1. Recommendations From Implementation Participants

Interviews conducted with faculty, administrators, staff, employers, and students encouraged participants to provide suggestions for improving the ADVANCE Southwest program.

- **Strive to Retain High-Quality Program Faculty.** Student and employer participants stated that ADVANCE Southwest faculty provided not only high-quality instruction but also provided guidance to students prior to their enrollment in their course of study and as they worked through it. For example, students agreed that they enrolled in their program of study because of information and guidance provided by department leadership. Because of this, students and employers perceived the retention of high-quality program faculty as crucial to the program's continued success. ADVANCE Southwest leaders and stakeholders may want to continue to focus on retaining high-quality program faculty in order to continuously recruit students and help sustain ADVANCE Southwest programs of study. In addition, leaders may want to consider continuing to encourage program faculty to make themselves available to student concerns and questions before enrollment and during the program.

- **Disseminate Information on Student Supports.** When students were asked what they wish they had known prior to enrolling in the program, most said they wished they had known more about the costs associated with the program, the availability of material supports, and prerequisites. In focus groups, most students said they were provided cost estimates, but that actual costs exceeded the estimates. In addition, students said that they were not fully aware of the availability of material supports and tutoring opportunities. Overall, students emphasized the importance of clearly articulating the available supports and program costs to student preparation and ultimate success. Improved communication with students may increase the likelihood that the program is able to recruit and retain students, and maintain its reputation through students sharing positive experiences with the program. The ADVANCE Southwest leadership team might consider striving to widely disseminate information on student supports across all ADVANCE Southwest programs of study.

- **Strive for Consistent Curriculum and Scheduling.** Students described inconsistent course content and scheduling conflicts with simulation labs, which made it difficult to learn material and prepare for licensure exams. For example, one student said that there were "multiple people from different departments or services that teach based on their protocols instead of from the textbooks; they have different protocols." In focus groups during the final stages of program implementation in the spring of 2018, students also said they were concerned with the alignment and consistency between course material and National Registry certification exams. To help ensure that ADVANCE Southwest builds capacity in allied health fields, program leaders and stakeholders may want to consider encouraging and supporting regular communication between program faculty and instructors to discuss and plan curriculum and simulation lab scheduling.

2.   Recommendations from Student Survey Respondents

Student completion surveys asked students to provide comments indicating their recommendations on improving the ADVANCE Southwest program. Common recommendations are summarized below.

- **Establish stronger communication**. Several student respondents recommended establishing a better line of communication between instructors and students, both in the classroom and outside of class hours. For example, one student stated that there needs to be "more cohesiveness and uniformity in communication between instructors and students." Data from the qualitative implementation interviews and focus groups also supported this recommendation.

- **Provide more robust resources.** Several student respondents recommended that their instructors provide them with more "scenarios run by paramedics, teachers, or professionals," more "useful resources," and "more clinicals." Related to this recommendation was a comment by one student to have an "academic advisor present and available for students and tutoring that is available for nursing students."

- **Stronger preparation for exams.** A few respondents indicated that they would have benefited from greater test preparation. Once student recommended that the faculty "offer more live reviews and test taking strategy seminars."

- Other recommendations included broadening the locations of clinicals, having a higher level of organization among teachers in implementing curriculum, reducing the amount of homework, and extending class time for more instruction.

3.   Recommendations from ADVANCE Program Evaluators

Program evaluators offer these additional recommendations for consideration as program components continue to be sustained.

- **Improve visibility of student supports.** Although data on student supports were only available from a limited number of student survey respondents, these findings indicate that it would benefit the ADVANCE Southwest program if college and program staff made students aware of the available student supports to assist in increasing GPA and classroom performance. Although nearly two-thirds (65%) of student respondents participated in at least one support service, just over one-third (35%) participated in at least two, and only 14% participated in three or more services.

- **Continue long-term planning.** During interviews in the final stages of program implementation in the spring of 2018, participants described how they had begun the planning process for sustaining ADVANCE Southwest and its components. Interview responses and observations from an Advisory Board meeting suggest that ADVANCE Southwest stakeholders have a clear picture of how to best adjust program components to ensure sustainability. First, program leaders have used the program's demonstrated success to articulate a case for the retention of program staff and faculty. Secondly, staff members described how the program team had engaged in meaningful conversations about how to best allocate funds to sustain student support services. These participants also stated that this planning had helped bring different stakeholder voices and foster a sense of community. The ADVANCE Southwest leaders may wish to continue promoting

this type of long-term planning. In addition, leaders may benefit from balancing a long-term mindset with a focus on reaching short-term and intermediate goals during the planning process. See section 7.3 of this report for more information on sustainability recommendations that include increasing the live patient experience, pursuance of additional grant initiatives, and increasing recruitment efforts.

- **Continue to involve external partners.** Drawing on interview and focus group findings, almost all participants perceived the value of involving partners in program implementation as the program was carried out. Specifically, they described the value of developing partnerships and involving existing partners in advisory boards and as instructors in ADVANCE Southwest program courses. The ADVANCE Southwest leadership team may consider maintaining the involvement of external partners beyond the initial funding period. Moreover, employers described appreciating program leaders' responsiveness to their concerns and suggestions. Thus, it may be particularly beneficial to continue involving employers and external partners in an advisory capacity.

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