

STAR EMT Scholarship program: Program Evaluation

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ABSTRACT

Background: King County Emergency Medical Services Division (KCEMS) has sponsored the enrollment of candidates into its EMT Training Program via a scholarship. The purpose of this process evaluation is to understand and describe how the program is meeting its objective to remove three barriers that could dissuade someone from pursuing enrollment in an EMT training program and a career in EMS: 1) Awareness of EMT training programs and the field of EMS; 2) the financial costs associated with enrolling in a training program; and 3) the perception that EMS is exclusive to firefighters and others affiliated with an EMS-related agency. The program goals are to 1) increase the “cultural diversity” of the EMS workforce and 2) “provide training opportunities for traditionally underrepresented diverse students.” This report also provides recommendations for a structured evaluation into the future and changes to improve the program.

Methods and Data Analysis: The researcher contacted and interviewed Scholarship Program staff members, training instructors, and scholarship recipients. They provided their consent to participate and respond to open-ended questions. Three layers of coding were performed to identify themes and patterns across the survey responses to describe how the program is meeting its objectives and goals.

Results: Overall, the survey respondents were in favor of the intent of the program, and in particular, the scholarship recipients reported they greatly benefited from the scholarship. The majority of scholarship participants completed the training program (13 of 15); however only 53.4% are currently working in an EMS-related job. All five of the men attained employment in EMS after completing the EMT training program while 30% of the women did. Most (73.3%) heard of the Scholarship program through personal contacts associated with KCEMS, not through the program’s recruitment activities.

Conclusion: The researcher recommended that program staff clarify the goals of the program, improve data collection activities, and provide additional support to scholarship recipients.

BACKGROUND

Overview of the King County Emergency Medical Services Division

The King County Emergency Medical Services (KCEMS) Division manages the Medic One/EMS system, a regional system that provides emergency medical care to roughly 1.9 million residents of Seattle and King County. KCEMS manages the system in partnership with five EMS dispatch centers, six paramedic providers, 30 fire departments, local hospital emergency departments, private ambulance companies and other related organizations (KCEMS and Chatalas, 2014).

The Medic One/EMS system consists of five tiers through which care is delivered: universal access, dispatcher triage, Basic Life Support Services (BLS), Advanced Life Support Services (ALS), and transport to hospitals. Patients and bystanders have universal access to the Medic One/EMS system when they call 9-1-1. Dispatchers triage all 9-1-1 calls to determine the level of care needed, provide

first aid instructions to the caller or bystander, and forward critical information to BLS and ALS personnel responding to the call.

The personnel providing BLS include firefighters trained as emergency medical technicians (EMT), EMTs employed by private ambulance companies, and those associated with search and rescue agencies. They receive 120-150 hours of training to perform patient assessment, first aid and CPR/AED within minutes of receiving a call to stabilize patients. In contrast, Paramedics receive over 2,500 hours of advanced training to provide ALS before joining the Medic One system. In Seattle and King County, six agencies employ Paramedics to deliver ALS care: Seattle Fire Department (Seattle Medic One), Public Health-Seattle and King County (King County Medic One), Shoreline Fire Department (Shoreline Medic One), Bellevue Fire Department (Bellevue Medic One), Redmond Fire Department (Redmond Medic One), and Vashon Island Fire and Rescue (Vashon Medic One).

EMT Certification Process in Seattle and King County

Seattle and King County residents seeking EMT-Basic (EMT-B or EMT) certification to become a firefighter with one of the regional fire departments, an EMT with a private ambulance company, or a related position with a search and rescue agency must first complete a training course certified by the Washington State Department of Health (DOH). King County EMS and a number of regional community colleges offer EMT training courses consisting of classroom and hands-on instruction. The training classes are typically held two to three times per week across roughly a three-month period. Depending on the program, the enrollment fees and cost of course materials can, in total, exceed more than \$2,000 for the student. Upon completion of the training course, the student is eligible to take the National Registry of Emergency Medical Technician (NREMT) exam.

All EMS employers in Seattle and King County require that the job applicant possess NREMT certification, which allows the applicant to work in other U.S. states. The majority of regional employers also require that the applicant have their Washington State EMT certification. However, to be eligible to take the exam for state certification, the DOH requires that the candidate be affiliated with one of the following: a DOH-licensed EMS agency; a law enforcement agency; a business with an organized industrial safety team; or Senior EMS Instructors or coordinators teaching at DOH-approved EMS training programs who are unable to be associated with an approved agency (WA DOH, 2016). As far as the few employers that will hire applicants without state certification, the employer will 'sponsor' the applicant by hiring them, thereby granting the new hire the 'affiliated' status necessary to take the Washington State EMT exam.

The KCEMS EMT Scholarship Program

In 2012, in recognition that King County's emergency medical services workforce did not reflect the cultural diversity of the communities it serves, KCEMS program manager Jim Duren led the development of the division's EMT Scholarship Program. Since fall 2012, KCEMS has sponsored the cost-free enrollment of up to five candidates into its EMT Training Program via a scholarship. KCEMS provides the training course in the fall and spring for those seeking EMT-Basic certification. Aside from scholarship recipients, the training course typically consists of 30 trainees who are largely paid or volunteer firefighters pursuing EMT certification for their fire service career. Regional fire departments sponsor the enrollment of the firefighters, and as such, the fire department-affiliated trainees do not pay an enrollment fee.

The Objectives and Goals of the EMT Scholarship Program

The objectives of the EMT Scholarship Program are to remove three barriers that could dissuade someone from pursuing enrollment in an EMT training program and a career in EMS: 1) Awareness of EMT training programs and the field of EMS; 2) the financial costs associated with enrolling in a training program; and 3) the perception that EMS is exclusive to firefighters and others affiliated with an EMS-related agency. King County EMS sought to raise the public's awareness of the EMT training program by distributing an informational flyer for wide distribution to service and community partners. KCEMS removed the financial barrier to enter the EMT training program by providing scholarships, thereby allowing recipients to enroll at no cost. With respect to strengthening the scholarship recipients' perception that they belong in the training and are affiliated with an EMS agency, the Scholarship program provided each recipient with a blue 'KCEMS' T-shirt, and the T-shirt is modeled after fire department-issued shirts worn by affiliated students.

The vision of the EMT Scholarship Program is in alignment with King County's Equity and Social Justice (ESJ) initiative, in that the program's goals are to 1) increase the "cultural diversity" of the EMS workforce and 2) "provide training opportunities for traditionally underrepresented diverse students" by addressing three determinants of equity: family wage jobs and job training, equity in county practices, and community and public safety (2013 EMS Annual Report and 2013 ESJ Annual Report).

The Population Served by the Medic One/EMS System

According to a 2015 U.S. Census estimate, 50% of King County's population is female (US Census, 2010). The county has experienced population growth and increasing diversity in the previous decades due to those immigrating from Asia, the Horn of Africa, Central America and the former Soviet Union (King County Community Health Needs Assessment, 2015). In 1980, 87% of the 1.27 million residents were White/non-Hispanic, 5% Asian, 4% Black/African American, 2% Hispanic/Latino, 1% American Indian/Alaska Native, and 1% some other race. In contrast, in 2010, 65% of the 1.9 million residents were White/Non-Hispanic, 14% Asian, 9% Hispanic/Latino, 6% Black/African American, 4% Multiple race, 1% American Indian/Alaska Native, and 1% Native Hawaiian/Pacific Islander (King County Community Health Needs Assessment, 2015). Along with the increasing diversity, King County now has a population that speaks roughly 170 different languages and 25% of the population speaks a language other than English in the home.

The figures regarding the changing demographics of King County are important in light of the large body of research concerning the health of minority populations. For example, in 2003, the Institute of Medicine (IOM) concluded that racial and ethnic disparities in healthcare often result in worse health outcomes (Smedley, et al., 2003). Similarly, a health equity survey conducted by the Commonwealth Fund determined that "13% of African-Americans and 14% of Hispanics rely on emergency rooms compared with 6% of whites and 8% of Asian-Americans" (Collins, et al., 2002).

Demographic Breakdown of the EMT Workforce in Seattle and King County

Presently, data describing the racial, ethnic, gender and linguistic breakdown of the EMT workforce in Seattle and King County do not exist. However, in 2008, the NREMT concluded that EMS is "heavily male-dominated," with an estimated 71% of NREMT-certified EMTs in the nation being male and 29% being female (NREMT 2008 Report). One can safely assume that a similar gender imbalance exists among EMTs in Seattle and King County, whose population is evenly distributed along gender lines. A

disparity also likely exists in the county with respect to race and ethnicity. The NREMT suggests that non-Hispanic whites are “overrepresented” in the EMT workforce nationwide, with an estimated 75% of EMTs being non-Hispanic white and other groups at registering at 5% or less. No data exist with respect to proportion of EMTs who speak a language other than English.

PURPOSE

To date, the EMT Scholarship Program has not evaluated whether the program’s objectives and goals have been met, or identified the areas in which the program has been successful and deficient. The purpose of this process evaluation is to understand and describe how the program is meeting its objectives and goals, and give an account of the experiences and observations shared by scholarship program staff and recipients, and training instructors. In addition, this report provides recommendations for a structured evaluation into the future and proposes changes to improve the program.

METHODS

Given that the EMT Scholarship Program is ongoing, the researcher used a process evaluation to describe how the program is meeting its stated objectives and goals. The researcher interviewed EMT Scholarship program staff, training instructors and scholarship recipients with the use of open-ended questionnaires to allow for unfettered answers, and questions that required participants to rank their responses on a five-point Likert scale. All participants provided their verbal consent to participate.

EMT Scholarship Program Staff – Three of four (75%) EMT Scholarship Program staff members were interviewed in-person or by telephone to describe how they developed and implemented the program, recruited and evaluated scholarship applicants, and measured the success of scholarship recipients in the training program. The remaining staff member expressed interest in participating in the survey, but was unavailable to participate during the data collection phase. Examples of some of the questions posed to the program staff are found in Appendix A.

EMT Scholarship Recipients – The researcher contacted each of the 30 scholarship recipients by email and phone to invite them to participate in a telephone-based survey. Among the 30 scholarship recipients, 15 (50%) agreed to participate in the survey, with 14 participating by telephone and 1 submitting her responses by email. The 15 scholarship recipients surveyed included 5 male and 10 female respondents. The researcher surveyed the scholarship recipients to understand how they heard of the EMT Scholarship Program, why they applied for a scholarship, and their experience in competing for a scholarship, completing the training program, and attaining employment as an EMT. All participants understood their responses would remain anonymous and confidential. Each interview lasted between 25 and 90 minutes. Examples of some of the questions asked of scholarship recipients are found in Appendix B.

EMT Training Instructors – The researcher interviewed four EMT training instructors by phone or in-person. The interviews ranged between 30-60 minutes in length. The aim of the survey was to elicit the instructors’ understanding of the purpose of the EMT Scholarship Program, assessment of the program’s effectiveness in meeting its objectives and goals, and evaluation

of the scholarship recipients' performance in the training program. Examples of some of the questions asked of training instructors are found in Appendix C.

Lastly, the researcher evaluated the program's recruitment materials and practices to describe how the program is raising the public's awareness of the program and attracting "traditionally underrepresented diverse students." A review of the program's data collection practices allowed the researcher to understand how the program is tracking scholarship recipients' success in and after the training program. When appropriate, rates of training program completion, EMT employment, and other quantitative data were collected and presented in this paper. Furthermore, the process evaluation accounted for pertinent information contained in KCEMS' Annual Reports and other related publications.

DATA ANALYSIS

Upon completion of the interviews, the researcher read all of the typed and handwritten notes collected during the surveys at least twice to grasp the entire range and nature of responses obtained. All handwritten notes were transcribed into Microsoft word documents to enhance the retention and accessibility of the raw data in the future. In reading all of the survey responses, the researcher noted for future reference any reflections offered by the respondents, patterns across the responses, and concepts that could be of scientific interest in the analysis. The researcher organized all of the data with the use of file folders, computer files, spreadsheets and diagrams.

Second, the researcher reviewed KCEMS' previous Annual Reports, the Scholarship Program's recruitment materials and data records, King County publications on county-wide initiatives, and the field notes collected during the surveys to identify keywords and phrases frequently reflected across the sources of data. Some of the keywords and phrases served as the following structural codes around which the data were organized with respect to the research questions: Awareness, Recruitment, Financial Cost, Sponsorship, Training, Diversity, Inclusiveness, Equity, Resources, and Employment.

Next, a second level of coding was conducted to group the structurally-coded data into themes and patterns: Access, Support, and Success. However, the pattern codes were not exclusive, as the underlying structural codes and data were often interrelated and overlapped with each other. For example, Access referred to the nature in which the individual could obtain a scholarship, master the training course material and obtain a job, and Access encompassed all of the structural codes. Support was composed of training, resources and employment, which were among the key determinants of training program completion. Meanwhile, Success encompassed recruitment, diversity and employment, and surrounded the questions of how successful the program and scholarship recipients were in reaching their desired outcomes.

The researcher performed the final layer of analysis by reviewing the data holistically. Specifically, the researcher used the identified patterns and themes across the sources of data to describe how the EMT Scholarship Program was meeting its objectives and goals, and the relationship between the degree of success and the program's structure and activities. In this final phase of analysis, the researcher re-read the survey responses to explore any levels of understanding that were not initially captured.

RESULTS

In alignment with the EMT Scholarship Program's objectives and goals, the summary of the data collected for the process evaluation was grouped into the following categories: raising awareness of the scholarship program and EMS, applicant evaluation and selection, support provided to scholarship recipients, and post-training employment.

Raising Awareness of the EMT Scholarship Program and EMS

Program Staff Survey Responses on Recruitment Practices – The EMT Scholarship Program staff consists of the program manager; a paramedic and Medical Services Officer assigned to EMS; a training officer who is also designated as 'the primary mentor' for the scholarship recipients; and an administrative support staff member. The program staff generally recruit for scholarship applicants by distributing a one-page informational flyer through listserv emails and partners of KCEMS; participating in regional job fairs and 'career days' held by high schools; and conducting short presentations in the classrooms of high school students, typically at schools located in underserved, low-income, racial/ethnic minority neighborhoods. The topics covered in the presentations include an overview of the scholarship and training programs, and the kind of work performed by firefighters, EMTs and other EMS personnel. The Scholarship Program staff received over 300 applications for the five spots in the fall 2012 training class. Since then, they received fewer applications for scholarships in each of the seven subsequent training classes.

The program manager attributes the higher numbers of applications to the program's "aggressiveness at promoting the scholarship." He finds face-to-face contact with community leaders and organizations familiar with the population to be the most effective recruitment method because the community leaders and groups can distribute the program's informational flyer and use "word of mouth" to inform others of the scholarship opportunity. In contrast, a lack of recruitment efforts resulted in fewer applicants. The program manager oversees 14 other major programs and recruits for potential scholarship applicants when time permits.

Review of Program Recruitment Materials and Data – The EMT Scholarship Program is advertised in public informational flyers as a program that provides "training opportunities for traditionally underrepresented diverse students" and is "available for diverse students." The flyer does not specify what characteristics one must possess to meet the criteria. The Scholarship Program has not collected any information with respect to the race, ethnicity, language proficiency, gender or other demographic traits of scholarship applicants and recipients.

EMT Training Instructor Survey Responses – All four of the instructors who participated in the survey are in favor of the intent of the EMT Scholarship Program. They understand the purpose of the program is to provide a training and employment opportunity for those who cannot afford the training or cannot gain access to it for some other reason. One of the training instructors (25%) reported being aware that the program is also seeking to diversify the EMS workforce by recruiting "diverse students."

EMT Scholarship Recipient Survey Responses on Program Recruitment Practices – Among the 15 scholarship recipients surveyed, 11 (73.3%) heard of the EMT Scholarship Program not through the program's recruitment activities, but through relatives, friends and other personal contacts associated with KCEMS, a regional fire department, or another partner of EMS. Meanwhile, among the four

whose awareness of the program resulted from KCEMS' recruitment activities, they heard of the program from an organization providing emergency housing assistance and other services to end poverty, an informational flyer posted to a bulletin board in a local Veteran's Administration office, an Internet search for EMT training programs, and a local college professor that received the informational flyer from EMS.

The majority of scholarship recipients (73.3%) had no prior exposure to EMS-related work. The remainder of those who did have such experience served as a fire explorer (one female), a volunteer firefighter (one male and one female), or military service member with combat lifesaving training (one female). Several respondents mentioned they were unable to find any information about the Scholarship Program on the Internet. One respondent felt the lack of information meant he had fewer competitors for a scholarship while other respondents felt a website would be informative for those unfamiliar with the EMS field.

The scholarship recipients offered a variety of reasons why the scholarship appealed to them. More than half (five men and four women) identified the enrollment fees of EMT training programs and the cost of the course materials as barriers to pursuing a career as an EMT, and they appreciated that King County EMS offered scholarships for this reason. Three female respondents felt KCEMS should continue outreach to women and racial/ethnic minority populations, and valued that KCEMS recognized the importance of women and minorities being a part of the EMT training program and EMS workforce. Similarly, two female respondents felt the goals of the Scholarship program meshed with their desire to serve their low-income and underrepresented communities. Additionally, one female respondent, who identified herself as African-American, recommended that KCEMS increase the visibility of the Scholarship Program with a website or other means to attract more female and racial/ethnic minority applicants.

Applicant Evaluation and Selection

Program Staff Survey Responses on Application Process – All applicants for the scholarship must complete a one-page application, wherein they provide their name, contact information, and written responses describing why they wish to be an EMT and the contribution they will make in the role. The program manager typically collaborates with another program staff member to review the scholarship applications and conduct 15-minute interviews of the most competitive applicants. They determine the applicant has met the following minimum requirements: high school graduate or G.E.D, 18 years of age before the start of class, King County resident, possesses a valid Washington State Driver's License, access to reliable transportation to and from the training sites, and the ability to pass a criminal background investigation. The applicant must also be CPR/AED certified and achieve a passing score on a first aid test typically given in the week prior to the start of the EMT training program. In the days leading up to the first training class, the primary mentor provides scholarship recipients with the training necessary to pass the first aid exam and certifies them in CPR/AED.

Program Staff Survey Responses on Criteria for Evaluating Applications – According to the program manager, the primary criteria the program uses to evaluate the applications is the strength of the applicant's written explanations. Drawing from his own personal experience in EMS, he determines which applicants are "speaking from the heart" and have the motivation and most "compelling story" for working in EMS. Second, during the applicant's interview, he and another staff member seek to

understand why the applicant applied for the scholarship and identify barriers the applicant may have in completing the training program, such as inadequate access to transportation to the training location.

The program manager seeks to “add diversity” to the training program by awarding scholarships to applicants whose compelling story showed they could likely serve as models for their communities and establish connections between the populations and EMS. Some of these applicants who met the criteria and enrolled in the training program with a scholarship included a man who spent 17 years in a Nepalese refugee camp, single mothers seeking employment opportunities, and young men with prior criminal conviction histories.

The program manager advises all potential applicants that a criminal conviction history may prevent them from obtaining WA DOH EMT certification, but they are free to apply for a scholarship. He is aware that some EMS personnel have varying opinions on the EMT Scholarship Program’s structure, but he feels that the program itself has merit, so that even those who do not complete the training program can benefit from the experience, achieve success in non-EMS related careers, and possibly break down barriers between a community and EMS personnel. The program manager also believes that as long as one scholarship recipient is successful after completing the program, then that shows that the Scholarship program overall is successful. He stated, “You never know whether someone was successful here, but was successful elsewhere.”

EMT Training Instructor Survey Responses – None of the training instructors surveyed participated in the development of the Scholarship Program or the assessment of scholarship applicants. Three (75%) were concerned they have invested time and energy into a program they felt is not sufficiently structured to support the scholarship recipients. Most (75%) reported being concerned that some scholarship recipients did not appear motivated to overcome challenges they faced in learning the course material. Furthermore, in conversations two instructors (50%) had with scholarship recipients, they learned that some were pursuing EMT certification only to become a nurse or medical assistant. Meanwhile, other scholarship recipients did not know whether they truly desired to work in EMS and the scholarship was appealing because it granted them free enrollment into the training program.

For these reasons, half of the instructors surveyed expressed concern that such individuals had “taken away a spot” from others more committed to a career in EMS. From all of the training instructors’ perspective, it is important that students in the training program be motivated and committed to working in EMS because the course material is difficult to master and the scholarship should ideally be a pathway into the field. Two instructors noted that other training instructors shared similar concerns and wished they had been consulted in the development of the EMT Scholarship Program and evaluation of the applications. All four of the training instructors surveyed defined a student’s success in the training program to mean that the student was ultimately able to obtain a job as an EMT or firefighter.

All of the training instructors proposed changing how the EMT Scholarship Program evaluates applicants. Three of the four instructors (75%) recommend that interview questions posed to a candidate applying for a scholarship be revised to better evaluate the candidate’s motivation for seeking EMT certification and commitment to working in an EMS-related profession. Additionally, they suggest that the interviewer(s) fully apprise the candidate of the rigor of the training program. Two instructors (50%) recommend that the interviewer(s) evaluate the candidate’s ability to communicate clearly and effectively because EMTs must do so in their jobs; one instructor noted that his fire department assesses whether job applicants possess strong communication skills and have the

“internal drive” to overcome communication barriers. Similarly, one instructor noted that while multilingual EMTs benefit EMS tremendously, training instructors and classmates had trouble communicating with some of the scholarship recipients with limited English proficiency. Lastly, one training instructor suggested that EMS should be willing to only award scholarships to high-quality candidates, even if that means there are not enough suitable candidates to fill all five spots available for scholarship recipients in a training class.

Scholarship Recipient Survey Responses – Just over half of the scholarship recipients (8 of 15) reported they applied for a scholarship because they were interested in working as an EMT (Figure 1). Among the 5 male respondents, 40% sought their EMT certification to support their application for the fire service, while 30% of the 10 female respondents did so. Meanwhile, two female respondents intended to work as an EMT for a short period of time to gain direct patient care experience for their applications to nursing school and physician assistant training programs.

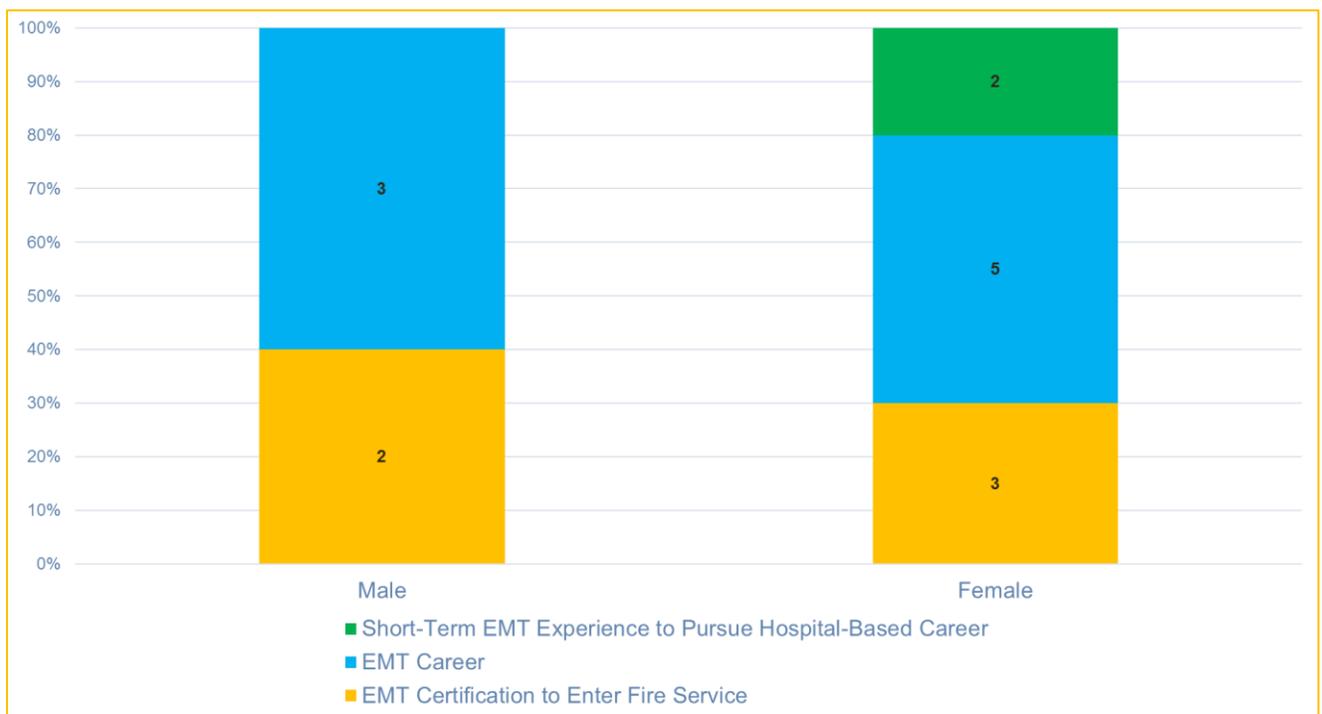


Figure 1. Scholarship Recipients’ State Purpose for Pursuing EMT Certification

**One female respondent intends to use her current EMT job to determine whether she prefers to continue working as an EMT or apply to a fire academy.*

All of the respondents felt it was easy to navigate the application process, which consisted of a one-page application and a panel interview. Additionally, all were accepted into the training program with a scholarship within 1-3 weeks of submitting their application, and many said they did not know they had been awarded a scholarship until several days before the first training class.

Support Provided to Scholarship Recipients

Program Staff Survey Responses on Mentorship – Since the inception of the EMT Scholarship Program, the primary mentor and training instructors provide support to the scholarship recipients as

they progress through the training program. Similar to a training officer in a fire department, the primary mentor assists the scholarship recipients with acquiring and maintaining skills and competencies taught in the training program, especially for those struggling with the curriculum.

In many cases, the primary mentor first meets the new group of scholarship recipients during the week before the new training course begins; sometimes this meeting occurs in the evening before the first class. He often uses the initial meeting to train and certify the scholarship recipients in CPR/AED, airway constriction, and other basic lifesaving skills, a requirement of all students prior to starting the training program. Volunteer firefighters enter the EMT training program with prior exposure to EMT-related equipment, terminology and basic lifesaving practices, and since they are sponsored by fire departments, have regular access to equipment and EMS personnel at fire stations to practice skills and procedures, and study groups hosted by personnel at the stations.

To provide the scholarship recipients with periodic access to training and equipment outside of the training program, the primary mentor hosted weekly study groups in training rooms at fire stations throughout the county, and when necessary, at spaces in public libraries. The weekly study groups were also aimed to foster greater cohesion among the scholarship recipients. At the beginning of the training program, the primary mentor often worked overtime to host the study groups, which were held at times and locations preferred by the scholarship recipients. He brought the equipment they needed to practice during the study group session and loaned any equipment they requested to borrow; the equipment had to be returned by the next class. In some cases, the scholarship recipients were unable to transport large equipment to practice at home.

Since 2014, the primary mentor has been less available to scholarship recipients because KCEMS reduced his overtime and required that he work a flexible schedule to support the Scholarship program. He is now available from 12 - 6 p.m. to provide additional training to scholarship recipients before the weeknight class, but they are not always able meet with him during that timeframe. Furthermore, he is not always able to meet their requests for one-on-one instruction due to his flexible schedule. To provide them with opportunities for additional training, the primary mentor arranged study groups hosted by fire departments, but some of the scholarship recipients could not attend due to their lack of transportation and the locations of the fire stations.

EMT Training Instructor Survey Responses – All of the training instructors surveyed believe the previous scholarship recipients did not get the overall support and resources they needed to be successful in the training program and start their EMS career. One instructor noted that training instructors and staff invest a lot of time in the scholarship recipients so they succeed, and it can be “frustrating” when they do not complete the program, have a legal conviction that prevents them from obtaining EMT certification, or do not get hired as an EMT.

All four instructors surveyed noted that scholarship recipients are at a particular disadvantage and have struggled in the EMT training program because they do not have a background in EMS and are not familiar with the related terminology and equipment, all of which requires time and repetitive exposure to master. They found the scholarship recipients’ mastery of the terminology, equipment and skills covered in the training program was hindered because they only received instruction twice a week and had to schedule a time to meet with the primary mentor if they needed more training. Meanwhile, the fire department-affiliated students received additional training and exposure to EMT equipment throughout the week at scheduled study groups at fire stations and ad-hoc sessions provided by fire

service personnel. Half of the instructors (50%) said the scholarship recipients were quickly overwhelmed with learning the course material and lifesaving procedures early in the training program.

Half of the training instructors strongly recommended the scholarship recipients be given at least two weeks of training in advance of the first day of class for the EMT training program to begin exposing them to the terminology, equipment, and course materials they would use. One instructor coined this pre-training period as a 'Bridge Academy.' The Bridge Academy would introduce the scholarship recipients to subjects such as study habits, critical thinking, techniques for multiple choice quizzes and tests, medical terminology, study habits, lifesaving skills, EMT equipment, the 1,400-page EMT manual, 'ride-alongs' with EMT crews, and strategies for finding an EMT job.

All four training instructors (100%) recommend that scholarship recipients' attendance at fire department-hosted weekly study groups be built into the structure of the Scholarship program so they have a regular place to practice and receive training outside of class. Half of the training instructors suggested the scholarship recipients continue to be assigned to a mentor, and that mentor be available for one-on-one instruction several times of the week outside of class. Lastly, all four training instructors consider it essential that scholarship recipients continue to be able to borrow equipment so they have as much hands-on practice outside of class as possible.

EMT Scholarship Recipients on their Experience in the Training Program – Overall, the survey respondents (86.6%) were greatly satisfied with the EMT Scholarship and training programs, and that sentiment largely held true even among those who either did not pass the NREMT exam or did not ultimately obtain an EMS-related job (Figure 2). The vast majority (86.6%) felt they "learned a lot." A similar percentage of the respondents attributed their success in the training program to the accessibility of the EMT equipment provided by the Scholarship program. Over half of the respondents (53.3%) felt they benefited from the training the program's primary mentor gave them prior to beginning of the training program (CPR/AED) and in between training classes (Figure 2). Meanwhile, others valued their exposure to training instructors with extensive experience as an EMT/Paramedic and recognized that the training program was "at another level" compared to other programs. Generally, the respondents appreciated the peer-to-peer support from other Scholarship recipients, and some took advantage of invitations from affiliated students to attend study groups at fire stations.

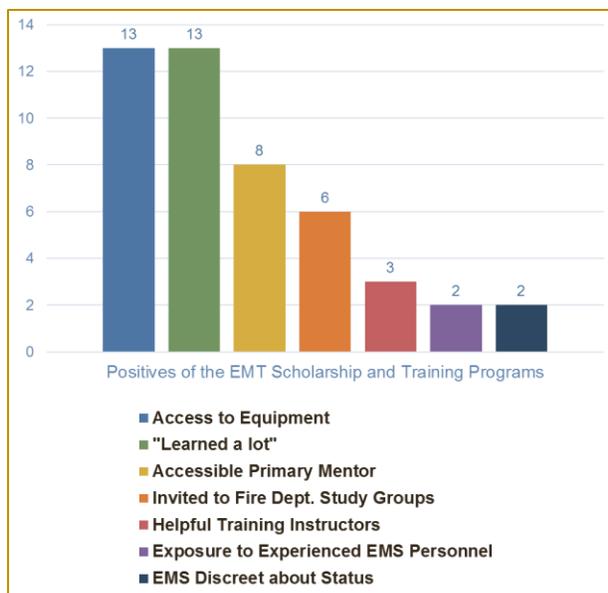


Figure 2. Positives

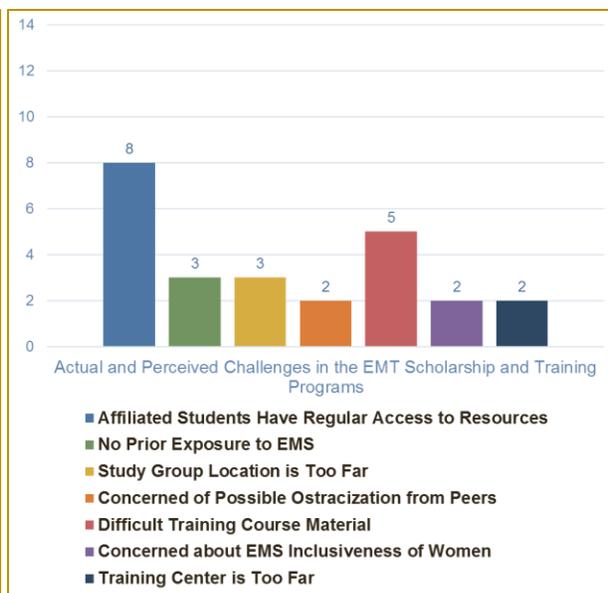


Figure 3. Challenges

A common concern (53.3%) among respondents was that they were not affiliated with a fire department or other EMS-related agency, which meant they did not have regular access to equipment or a training instructor outside of class (Figure 3). The same percentage of respondents recognized that affiliated students were able to freely use equipment at their fire stations and ask for guidance in performing a procedure. Most respondents (86.6%) reported they loaned equipment through their primary mentor, but the equipment typically had to be returned at the following class. A smaller percentage (40%) recalled receiving invitations from affiliated students to attend study groups at fire stations, but some of them attended few or none of the study groups because the station was "too far" away or in rural areas (Figure 3).

Several respondents (20%) stated they and their peers in the EMT Scholarship program were at a disadvantage compared to the affiliated students because they did not have prior exposure to EMT-related terminology, "medical terms," and experience (Figure 3). A small number of respondents (13.3%) were concerned that affiliated students would ostracize them upon learning they had received a scholarship, thereby "taking away a spot from a volunteer firefighter who deserved it," but none reported they were in fact ostracized. Among the other challenges reported, two respondents felt the location of the training class was far outside of the City of Seattle, and one considered herself "lucky" to own a car during the period when she was enrolled in the training program (Figure 3).

One self-identified African-American respondent highlighted several factors that are important to note. She saw herself as an "outsider" in her training class because almost all of her classmates were "white males" and who are "sponsored and have that pathway" to a job. She does not believe minority students should be given "special treatment." Instead, she desires that EMS "be honest" and "up front" with non-white candidates so they understand they may be in the minority in the training program and EMS. She suggests that KCEMS "be honest about what you are trying to achieve so we are part of the change." Lastly, she recommends that KCEMS consider offering EMT training in locations closer to the neighborhoods of populations from which it hopes to attract applicants.

Post-Training Employment

Program Staff Survey Response – According to the EMT Scholarship Program manager, the desired outcomes of the program is to “get people employed.” He views the scholarship recipients who complete the training program as potential “models of success” within their community. In this role, they can bridge any divides between EMS and low-income, underserved racial/ethnic minority communities, and serve as “mentors” for members of their communities. Based on anecdotal evidence, the program manager estimated that roughly 40% of the scholarship recipients are hired as EMTs after completing the program and the remainder achieved varying degrees of success. For instance, a Nepalese man awarded a scholarship continued in the training program until his limited English proficiency prevented him from completing training scenarios without translation assistance from classmates and instructors. Meanwhile, one young man who spent a portion of his life in a halfway house was allowed to remain in the training program despite his low grades so he could gain experience; he has been successful in a job outside of EMS where he is the shift manager at a restaurant.

The EMT Scholarship Program manager is generally aware when a scholarship recipient has been hired as an EMT because EMS is a “small community” and he hears about the hires through “word of mouth” or directly from the former student. More often than not, the primary mentor stays in contact with the scholarship recipients during and after training program; he follows up with the scholarship recipients to remind them to take the NREMT exam, refer them to EMT job vacancies, and check on their employment status. Additionally, the program’s administrative support staff member periodically updates a spreadsheet to track if they passed the training program, applied to take and passed the NREMT exam and obtained their Washington State EMT certification.

Scholarship Recipients on the Status of their NREMT Examination and Current Employment – Most of the survey respondents completed the training program (13 of 15) (Figure 4). All five of the male respondents completed the training program and passed the NREMT exam. Meanwhile, 80% of the female respondents (8 of 10) completed the training program. Among the eight female respondents who completed the training program, five (62.5%) took the exam and three passed (37.5%). At the time of their interviews for this evaluation, 2 of the 8 female respondents reported they were scheduled to take the exam for the first time.

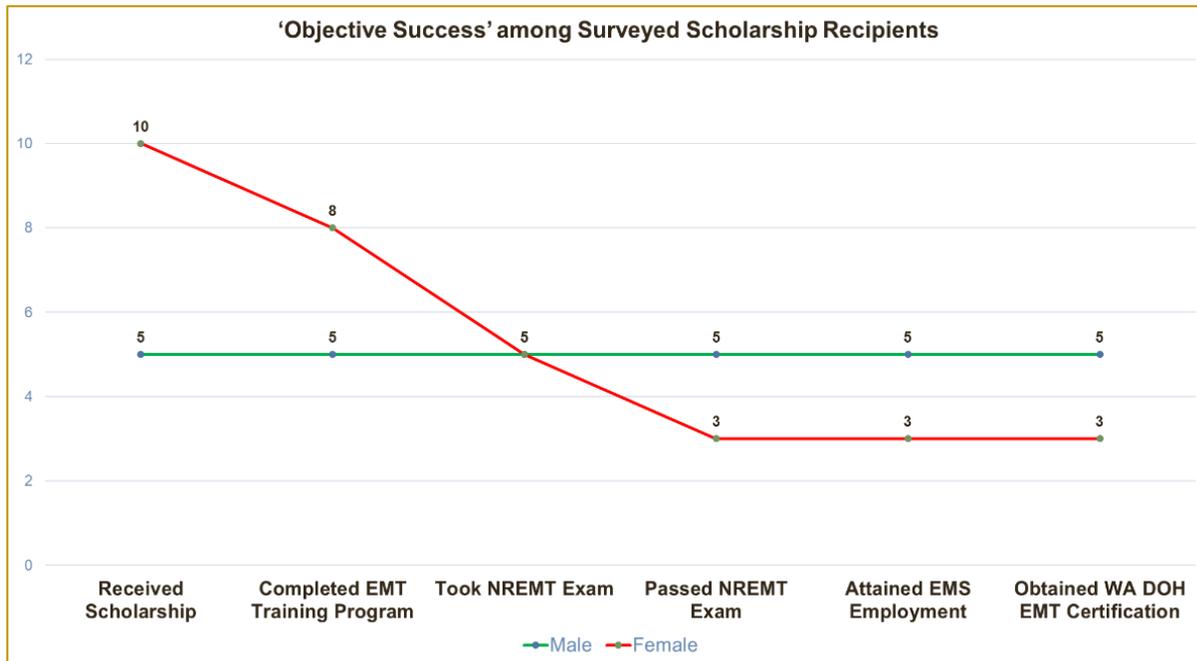


Figure 4. EMT Certification and Employment Outcomes by Gender

As far as the two female respondents who did not complete the training program, one did not continue in the program after failing the midterm exam twice, and the other quit the program because she received a promotion in her non-EMS job. With respect to the three women who completed the training program but did not obtain NREMT certification, one did not take the NREMT exam because she enrolled in nursing school and another failed the exam twice as she simultaneously completed a medical assistant program and was hired as a medical assistant. The remaining female/minority student failed the exam and was interested in retaking it. She knew there was a deadline to retake the exam or she would have to take a 'refresher' course. She contacted EMT Scholarship Program staff to confirm the deadline, but no one returned her call. More than two years have passed and she currently has a non-EMS job, but still remains interested in becoming an EMT and is open to retaking the entire training course.

Most respondents felt knowledgeable of the steps for obtaining EMT certification after the training program, but one female respondent reported that upon completion of the training program, "nobody tells you at all what to do next," and she was unaware that most employers required the state certification. She suggested that EMS "follow up" with scholarship recipients after they complete the training program. Meanwhile, another female respondent considers herself "grateful" because the Scholarship Program helped her become a registered nurse. However, she believes EMS could have made her "feel more successful" after she completed the training program if it had found her a sponsor.

Presently, almost all of the male (80%) and 30% of the female respondents are employed as an EMT by a private ambulance company, and the remaining male respondent is employed as a firefighter (Figure 5). Among all of the respondents, just under half (46.6%) are not working in an EMS-related job. However, during the period in which the survey was conducted, two female respondents said they plan to take the NREMT exam this summer.

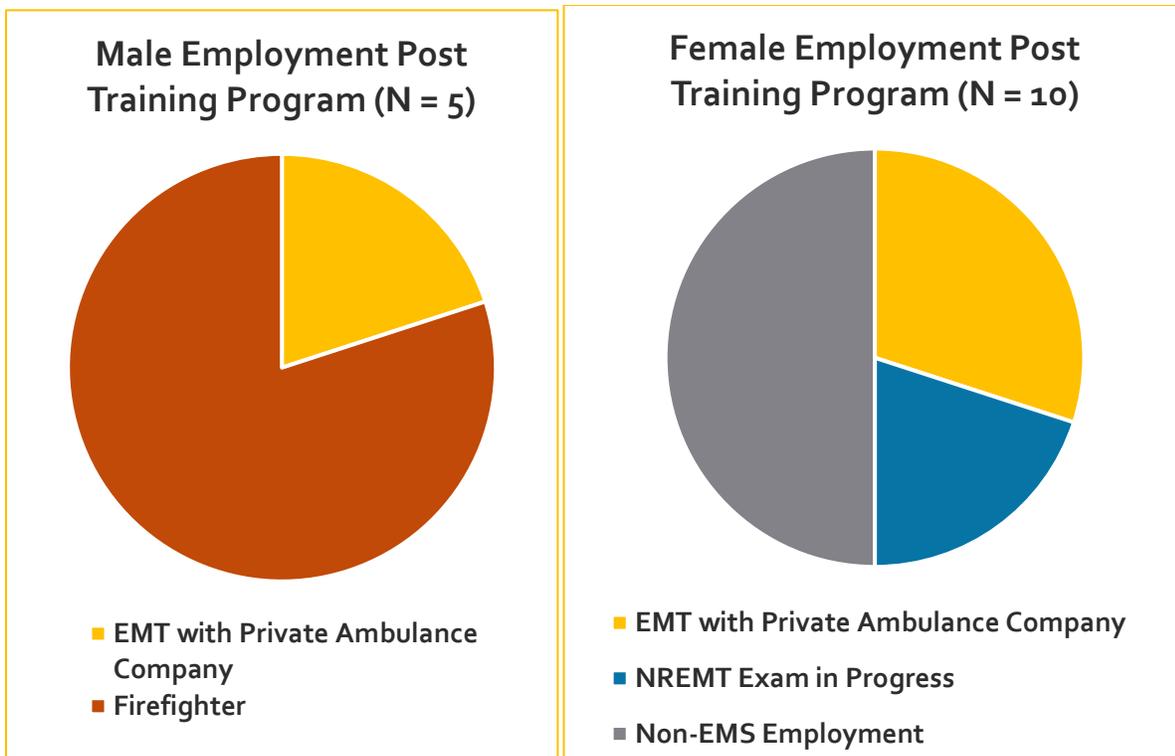


Figure 5. Post-Training Employment by Gender

Among the four scholarship recipients who were frustrated when they saw no EMT job openings for several months after they completed the training program, two waited as long as six months for job openings to appear, and one of the two gave up looking for this reason and because she was simultaneously enrolled in a medical assistant training program. While they all remain thankful for the scholarship and appreciated when the primary mentor referred them to EMT job vacancies, some felt they needed more support from KCEMS in getting an EMT job. Specifically, they wished KCEMS had used its “resources and connections” to connect them with a ‘sponsor’ so they could apply for WA DOH EMT certification. A male respondent considered himself fortunate when a private ambulance company hired him without his state certification because most other employers required the license. He described the Scholarship Program as being potentially “pointless” if there is “no pathway” to getting a sponsor and a job.

One female respondent reflected on interactions she had with male classmates in the training program and male firefighters during her current EMT career. Prior to entering the training program, she considered pursuing a career in the fire service and her father warned her of the sexism he observed in his own career as a firefighter. During the EMT training program, she experienced sexist remarks from a male classmate. In her current EMT job with a private ambulance company, male firefighters from several stations often make jokes at the expense of her and her female crewmember. On the occasion that she is partnered with a male crewmember and responding to a call, some male firefighters only interact with her male crewmember when exchanging information. Due to these kinds of experiences, she has decided not to pursue a career in the fire service. Her female peers have had similar experiences and are now considering whether to apply for physician assistant or nursing programs rather than stay in the EMS field.

Raising Awareness of the EMT Scholarship Program and EMS

The survey responses indicate that most of the scholarship recipients heard of the program through personal contacts associated with EMS agencies, not through the program's recruitment activities. Some were unable to find any information about the program on the Internet, and the researcher had the same experience. In addition, the program received fewer applications in each of the previous training classes as the program dedicated less time to recruitment activities. Altogether, these findings are important to note because the program intends to raise the awareness of the program among those not familiar with EMS and diversify the EMS workforce, but instead appears to be awarding scholarships to those already connected to the workforce.

The data collected suggest there is a lack of clarity surrounding the two goals of the EMT Scholarship Program: 1) increase the cultural diversity of the EMS workforce and 2) "provide training opportunities for traditionally underrepresented diverse students." Both goals are directly related to the objective to raise the public's awareness of the program and the field of EMS. KCEMS' 2013 Annual Report and King County's 2013 Equity and Social Justice Annual Report described the program as seeking to foster "cultural diversity" in the EMS workforce. However, the Scholarship program does not clearly define how someone is culturally diverse, whether the priority is based on gender, race, ethnicity, socioeconomic background, or languages spoken. -The program's goals are also vague in the informational flyer that serves as the primary tool for advertising the program; the recruitment flyer used since the inception of the program does not specify how one is a "traditionally underrepresented diverse" candidate.

The lack of clarity surrounding the goals of the program is also evident in the survey responses. Only one of the training instructors reported they are aware the program aims to diversify the EMS workforce. Meanwhile, few of the scholarship recipients recognized that fact, and those who did are either female and/or identified themselves as members of a racial/ethnic minority or low-income community. Another important finding to note is that the EMT Scholarship Program did not collect any data to track the cultural diversity of scholarship applicants. Similarly, no data exist on the demographic makeup of the EMS workforce in Seattle and King County. As a result, there are no tools available to evaluate if the program is in fact diversifying the EMS workforce.

Recommendations – Create More Awareness of the EMT Scholarship Program

Given the EMT Scholarship Program's objective with respect to raising awareness, KCEMS should provide resources to strengthen the program's recruitment activities. Possible changes to the recruitment methods can include:

1. Develop a program website outlining the steps scholarship recipients must follow, from application for a scholarship, completion of the training program, EMT certification to employment as an EMT.
2. Measure the effectiveness of the recruitment activities by tracking how many attendees at recruitment events request information on the Scholarship program, determining the rate of

conversion from 'interested candidate' to 'applicant,' and asking applicants how they heard of the scholarship.

If the goal of the EMT Scholarship Program is to recruit a higher number of female and racial/ethnic minorities to diversify the EMS workforce, the program would benefit from clearly defining in its informational flyer and other messaging what it means to be a 'diverse' applicant. For example, although employers are not to base their hiring decisions on an applicant's protected class, many do state on their job announcements that members of such groups are "encouraged to apply." Messaging that specifies who the program is targeting would be in alignment with the feedback offered by one female African-American scholarship recipient who felt EMS should be "up front" with female and minority students so they understand EMS is seeking their participation. Furthermore, the program can take the following actions, some of which that were recommended by several of the individuals surveyed:

1. Make public on the program website, informational flyers and recruitment messaging information on goals of the program.
2. Identify community based organizations, neighborhood associations, educational institutions, job fairs, churches, community leaders, and other venues and partners connected to the communities in which EMS seeks to raise awareness of the program and conduct recruitment activities.
3. Ask scholarship applicants to voluntarily identify their race, ethnicity and gender for the purposes of evaluating whether there are inequities in how the program is performing its outreach.

One EMS agency that uses some of these strategies is the Denver Health Paramedic Division. Denver Health's website (www.denverhealthparamedics.org) makes available to the public information about its 'EMS Diversity Scholarship.' The scholarship program requires that applicants demonstrate their "commitment to serve a diverse community and advance diversity within the field of EMS." Moreover, the three-page scholarship application asks applicants to voluntarily identify their race/ethnicity, gender, and languages spoken, and language proficiency.

Applicant Evaluation and Selection

The survey responses suggest that some disagreement exists between program staff and training instructors with respect to whom a scholarship should be awarded. Their observations mirror the data collected from the surveyed scholarship recipients, some of whom reported they sought the scholarship to support their hospital-based career goals or abandoned their EMS career plans when they were faced with other opportunities. In light of the survey responses, the Scholarship Program's primary tool for evaluating scholarship applicants, the applicant's "compelling story," may not be a sufficiently adequate tool for evaluating applicants when not paired with other less-subjective criteria. No rating scale exists by which to score a candidate's responses and the program did not retain notes taken by the interviewers, tools the researcher could have used to better understand how the program assessed and compared the scholarship applicants.

Recommendations – Clarify the Goal and Desired Outcomes of the EMT Training Program

Given the different ideas over whom the EMT Scholarship Program is to serve and the structure of the program, KCEMS should first consider several questions prior to moving forward with any changes to the program. First, KCEMS should clearly define the goal of the program, whether its purpose is to provide a pathway to EMT training and employment to diversify a largely white male EMS workforce, or an avenue for anyone who cannot afford to enroll in an EMT training program and/or obtain sponsorship from an EMS agency. Similarly, KCEMS should define whether success in the EMT Scholarship Program is only equated with post-training employment in an EMS-related profession, and whether non-EMS employment or enrollment in non-EMS educational programs (i.e. nursing and physician assistant) truly serves EMS' goal. Regardless of the goal of the program, the information obtained from training instructors and scholarship recipients suggests that the interview questions posed to scholarship applicants should be strengthened to better measure the applicant's motivation and ability to succeed in the training program, and commitment to working in EMS. Furthermore, the criteria used to evaluate applications should be clearly established to score the strength of the responses given by applicants.

Next, EMS should keep in mind the clearly-defined goal and desired outcomes as it changes its approaches to removing the following barriers that could prevent individuals from seeking employment as an EMT: 1) awareness of EMT training programs and the field of EMS; 2) the financial costs associated with enrolling in a training program; and 3) the perception that EMS is exclusive to firefighters and others affiliated with an EMS-related agency.

Why is a Diverse EMT Workforce Important?

Research has shown a healthcare workforce that reflects the racial, ethnic and gender makeup of the population it serves not only yields better health outcomes but also builds trust between the patient and provider. The IOM found that a healthcare provider's medical assessments and decisions are influenced by the race and ethnicity of the patient, and the provider is the "more powerful actor" (Smedley, et al., 2003). For example, well-regarded studies cited by the IOM showed that African-American patients with congestive heart failure and pneumonia did not receive care similar to that afforded to white patients, and African-American and Hispanic patients were less likely to receive analgesia (Todd, et al. 2000) It is during these interactions between the provider and patient that their beliefs about each other and attitudes can "influence each other reciprocally," "breed mistrust" and "confirm stereotypes(Smedley, et al., 2003)." It is reasonable to assume that EMS personnel are not immune to the challenges facing hospital-based providers.

If a patient has a positive encounter with EMS personnel, s/he is more likely to have a favorable attitude toward hospital staff (Hunter, 2003). EMTs and Paramedics in King County are uniquely challenged during their interactions with patients because they must quickly assess and stabilize patients that speak a wide range of languages and are of different racial, ethnic and gender backgrounds than their own. A proven approach for addressing these challenges is to diversify the EMS workforce. For example, racial concordance, where the patient and provider are of the same race, "is associated with greater patient participation in care processes, higher patient satisfaction and greater adherence to treatment," which are all critically important during time-sensitive interactions between EMS personnel and patients (Smedly, et al. and Cooper-Patrick, 1999).

In addition to racial concordance, the gender composition of an EMT and Paramedic crew can also influence patient satisfaction and their health outcome. In a 2010 study on the effect of gender on

prehospital care in the New York City EMS system, Waldron et al. reported that “male/male EMT teams were almost five times more likely to generate a RMA (Refusal of Medical Aid) than EMT teams with at least one female” (Waldron, et al., 2011). Similarly, there was a “significantly higher representation of all-male EMT teams” among the cases resulting in a RMA. Waldron et al. suggested that the results may be due to the nature of interactions between female healthcare providers and their patients. For example, Bylund and Makoul found that female physicians “tended to communicate higher degrees of empathy in response to the empathic opportunities created by patients” than their male peers (Bylund, et al., 2002). Moreover, Roter and Hall reported that “patients disclosed more information and made more positive statements to female physicians than they did to male physicians” (Roter, et al., 1999 and 2004).

EMT and Paramedic crews whose members speak languages other than English can strengthen patient care for several reasons. Language concordance between EMS personnel and patients eliminates communication barriers when time is at a premium. Patients whose culture places them in a hierarchical position may suffer “shame and embarrassment” when they must rely on younger relatives to communicate with EMS personnel (Hunter, 2003). Additionally, a multi-lingual workforce will enable EMS to better communicate its services to non-English speaking communities and create a stronger sense of trust and inclusiveness amongst all King County residents. Finally, by creating an inclusive culture with multi-lingual and multi-cultural communities, EMS will have the ability to effectively evaluate how it provides services to diverse communities.

Recommendations – Improve the Data Collection of Scholarship Applicants

To effectively evaluate the EMT Scholarship Program in the future, program staff should ask each scholarship applicant to identify their career goals, reason for requesting a scholarship, and definition of success in the training program and career. Additionally, program staff should ask applicants to voluntarily identify their gender, race and ethnicity, and state how they heard of the scholarship. Stronger data collection will help in the future to identify trends, successes, areas for improvement and other outcomes. For example, gaps in the program’s data on whether scholarship recipients completed the training program and passed the NREMT prevented the researcher from fully measuring the program’s success rates across each training class. Moreover, limited information exists on the demographic breakdown of King County’s EMS workforce, which is necessary for assessing for changes in the characteristics of the workforce population as the Scholarship program continues. Lastly, program staff should begin collecting data on the affiliated students’ rates of training completion, EMT certification and employment to determine if there are differences in the outcomes for affiliated and scholarship students.

Support Provided to Scholarship Recipients

The EMT Scholarship Program supplied scholarship recipients with a uniform to establish their sense they belong in the training program and EMS. In addition, it assigned a training instructor to function as the primary mentor so the scholarship recipients had a designated person from which to obtain assistance when other training instructors were unavailable. Survey responses from the scholarship recipients reflect that the support provided by the program was essential to their success, and almost universally, they appreciated the Scholarship Program’s efforts. However, the dominant theme across their responses and those of the training instructors and program staff is that the program does not go far enough in this respect. For instance, scholarship recipients have to share equipment they loan from

EMS and schedule appointments with the primary mentor for additional training while affiliated students can freely seek help from fire personnel and use equipment stored in fire stations. Since 2014, the scholarship recipients' access to assistance outside of class has been further reduced because the program modified the primary mentor's hours of availability, and some students experienced difficulty meeting with him for this reason. Moreover, scholarship recipients are not adequately prepared to enter the training program, whereas affiliated students are already exposed to medical terminology, EMT equipment or basic lifesaving practices that serve as the foundation for the topics covered in the training program. As a result, it is highly likely the scholarship recipients' sense of being "overwhelmed" at the very outset of the training program, as observed by training instructors, is partly related to the design of the EMT Scholarship Program.

Recommendations – Continue to Provide Cost-Free Enrollment

More than half of the scholarship recipients noted that the EMT Scholarship Program appealed to them because it granted them cost-free enrollment into the training program and supplied them with the equipment they needed for the course. The program staff and instructors recognized that the cost of EMT training is a barrier to many students and the scholarship made the training program accessible. Accordingly, KCEMS should continue to make the scholarship available for interested candidates.

Recommendations – Strengthen and Foster Inclusiveness in the EMT Training Program

KCEMS should focus on strengthening the scholarship recipients' subjective and objective sense that they belong in the training program. Subjectively, the EMT Scholarship Program should continue to provide T-shirts so they are dressed in similar fashion to 'teams' of students from fire departments. Scholarship recipients will also have a stronger sense they are part of the EMS community if they are permitted to attend regularly-scheduled study groups at fire stations along with their affiliated peers. Through the study groups, they will have greater exposure to the bulk of the workforce that functions as EMTs and an understanding of the environments in which EMS personnel operate. Additionally, as the EMS workforce becomes more diverse, the scholarship recipients will begin to see colleagues who look like them and better reflect the population of Seattle and King County. For all these reasons, scholarship recipients will likely view the EMS field as more inclusive of all and a rewarding career avenue.

The majority of the individuals surveyed equated objective success in the EMT Scholarship Program with post-training employment as an EMT or firefighter. Based on the feedback obtained from program staff, training instructors and scholarship recipients, there is consensus that scholarship recipients would greatly benefit from a multi-week training period prior to the EMT Training Program for the purposes of building their knowledge base, exposing them to the equipment and terminology they will use, preparing them for the format and rigor of the training curriculum, and strengthening their understanding of the process for obtaining EMT certifications and employment.

If scholarship recipients are sufficiently prepared to enter the training program through a 'Bridge Academy' or similar path, they are more likely to grasp the material and pass the quizzes earlier in the course. Moreover, objective forms of success early in the training program, such as mastering the curriculum and passing quizzes, can strengthen their sense that they are capable of succeeding in the remainder of the course and certification exams. This concept rests on renowned-psychologist Albert Bandura's notion of self-efficacy, which is defined as the individual's evaluation of how capable they are in producing a desired result when faced with a specific challenge. Those with high self-efficacy are

able to motivate themselves and “approach challenges as tasks to be mastered rather than threats to be avoided” (Bandura, 1994). Meanwhile, those with low self-efficacy “have low aspirations and weak commitment to the goals they choose to pursue” and “slacken their efforts and give up quickly in the face of difficulties.” A significant body of research supports Bandura’s theory that an individual’s success in mastering a task boosts their self-efficacy while failure makes them feel less capable of taking on a challenge.

In addition to providing scholarship recipients with the foundation to succeed in the training program prior to the first day of class, the EMT Scholarship Program should renew its efforts to provide ongoing mentorship to the students throughout the training program, including on a one-on-one basis as suggested by several training instructors and scholarship recipients. Regularly-scheduled study groups hosted by a mentor and fire departments will provide scholarship recipients with additional opportunities to receive training and attain mastery of the material and equipment, which will reinforce their self-efficacy in the training program. Ideally, mentorship should be extended to include support before scholarship recipients take the EMT certification exams and while they search for jobs so they obtain objective success. Program staff, training instructors and scholarship recipients strongly emphasized the need for more mentorship and support as this level of support is currently inconsistent.

Post-Training Employment

It is important to note the EMT Scholarship Program seems to appeal to women because 75% of the scholarship recipients surveyed are female (10 of 15). When they first applied, 80% of the women indicated they entered the training program to be an EMT or a firefighter. Yet, only 30% ultimately attained employment in an EMS-related job while 100% of their male counterparts (5 of 5) are now employed in the field. The data collected offer two possible explanations for why there is a difference between the outcomes across the genders. First, one pattern in the responses from program staff and scholarship recipients indicate that the program did not provide sustained support to scholarship recipients while they pursued EMT certifications and jobs, a key finding given the program seeks to remove barriers to employment for those previously unfamiliar with EMS. Second, the program may not be effectively screening applicants to select those fully committed to an EMS career; one female scholarship recipient quit the training program to accept a non-EMS promotion and two others later decided not to obtain EMT certification because they were simultaneously pursuing enrollment into training programs for hospital-based careers.

It is possible the EMT Scholarship Program may have been more successful in removing barriers to EMS employment for women than reflected in this evaluation for two reasons. First, two female scholarship recipients informed the researcher during their interview they were scheduled to take the NREMT exam. Second, since half of the scholarship recipients did not participate in the program evaluation, it is likely additional women obtained their EMT certification and entered the EMS workforce. The researcher reviewed the EMT Scholarship Program’s records to understand the frequency of EMT certification and employment across the demographic characteristics of all scholarship recipients, such as their gender and race/ethnicity. However, large gaps in the program’s data prevented the researcher from doing so.

Recommendations – Improve Data Tracking, Create Exit Interviews and Follow-Up for Scholarship Recipients

The Scholarship Program should actively track when scholarship recipients take and pass the EMT certification exams and find a job to support future program evaluations. At the conclusion of the training program, Scholarship Program staff can evaluate the effectiveness of the program by conducting an exit interview of each scholarship recipient to understand their experience in the training program, identify any barriers to be removed for the next training class, and elicit any other thoughts and recommendations they wish to share. The exit interview could also be an opportunity to ask scholarship recipients to reflect on how successful they felt in reaching the goals they identified at the start of the training program. Finally, the program should have a more robust support system to navigate scholarship recipients through the pathways to obtaining their EMT certification and jobs, particularly given one of the program's objective to raise awareness of EMS among those unfamiliar with the field. The survey responses reflect that the program has fallen short in staying in touch with scholarship recipient after they complete the program, apprising them of the steps necessary to retake certification exams, and strategies for finding EMT employment since they are not affiliated with an EMS agency.

Limitations of the Evaluation

There are six key limitations of the EMT Scholarship Program evaluation that should be accounted for when considering the results described in the following sections. First, only half of the 30 scholarship recipients responded and agreed to participate in the survey, and the researcher only surveyed three of the four program staff and four training instructors. As a result, the responses provided are not 100% representative of the thoughts and feedback of the remaining individuals who were not interviewed. Second, the EMT Scholarship Program used a spreadsheet to track some of the scholarship recipients' objective successes, such as whether they completed the training program, took and passed the NREMT exam, and obtained their WA DOH EMT certification, but there are gaps in the data. Third, the EMT Scholarship Program did not identify the gender and race/ethnicity of the scholarship recipients, and whether they were hired as an EMT after completing the training program.

Next, it does not appear that any research exists with regard to the effectiveness of scholarship programs aimed at diversifying EMS workforces. While there are comparable EMT/Paramedic scholarship programs in other regions and states in the nation, such as Tennessee's Rural Metro EMT/Paramedic Scholarship for minority high school seniors and Denver Health Paramedic School's partial scholarship for minorities, it is often the case that little to no information pertaining to the outcomes of such programs is available. Consequently, this evaluation of an EMS-related scholarship program is likely the first of its kind.

In addition to the limitations stated so far, the researcher did not contact any individuals who unsuccessfully applied for a scholarship or review applications to obtain information that could have aided in the evaluation of how program staff appraised the applicants. Lastly, while it is unlikely that those who were not awarded a scholarship would have agreed to participate, those that did could have provided information on how they became aware of the program, whether by the program's recruitment activities or otherwise.

A structured evaluation to measure the impact of the program is warranted. Information gained from a future evaluation would be useful in further improving the program, marketing the program and securing future funding.

CONCLUSION

Universally, the individuals surveyed felt the program had merit and objectives and goals that were meaningful for KCEMS. Scholarship recipients were greatly satisfied with the program, and that sentiment remained largely true even among those who did not ultimately attain EMT employment. However, a common theme across all of the stakeholders is that the program needs to be strengthened to effectively support scholarship recipients as they seek to navigate the challenges they encounter in the training program and efforts to obtain EMT certifications and employment. It should be noted that KCEMS recognizes the program needed to be evaluated, and that recognition demonstrates the division's commitment to meeting the objectives and goals it set forth at the inception of the program.

REFERENCES

1. About the ems division. Retrieved from <http://www.kingcounty.gov/depts/health/emergency-medical-services/about-us.aspx>
2. Chatalas, H. (2014). *Overview of the Medic One/EMS System for the EMS Advisory Task Force 2014-2019 Medic One/EMS Levy Reauthorization*. Retrieved from <http://www.kingcounty.gov/depts/health/emergency-medical-services/~media/depts/health/emergency-medical-services/documents/EMSAdvisoryTaskForceOverview.ashx>
3. Emergency medical technician certification requirements. Retrieved from <http://www.doh.wa.gov/LicensesPermitsandCertificates/ProfessionsNewReneworUpdate/EmergencyMedicalServicesEMSPProvider/LicenseRequirements/EmergencyMedicalTechnician>
4. Us census. Retrieved from <https://www.census.gov/quickfacts/table/RH1105210/5363000>
5. Albetta, G., Carter, L., Kay, M., Kern, E. Kinne, S., Markee, A., McNees, M., Munn, M., Smyser, M., Song, L., Solet, D., Ro, M., & Wong, E. (2015). *King county community health needs assessment*. Retrieved from <http://www.kingcounty.gov/depts/health/data/community-health-indicators/~media/depts/health/data/documents/2015-2016-Joint-CHNA-Report.ashx>
6. Smedley, B. D., Stith, A. Y., & Nelson, A. R. (Eds.). (2003). *Unequal treatment: confronting racial and ethnic disparities in health care*, Washington, D.C.: The National Academies Press.
7. Collins, K. S., Hughes, D. L., Doty, M. M., Ives, B. L., Edwards, J. N., & Tenney, K. (2002, March). *Diverse communities, common concerns: assessing health care quality for minority americans*. Retrieved from http://www.commonwealthfund.org/usr_doc/collins_diversecommun_523.pdf
8. Todd K.H., Deaton C., D'Adamo, A.P., Goe, L. (2000). Ethnicity and analgesic practice. *Annals of Emergency Medicine*. 35(1), 11–16.
9. Hunter, S. L. (2003). Defining and valuing diversity in ems. *Emergency Medical Services*, 32(11), 88-89.

10. Chatalas, H., & Plorde, M., (2013, September). *Emergency medical services division 2013 annual report to the king county council*. Retrieved from <http://www.kingcounty.gov/depts/health/emergency-medical-services/-/media/depts/health/emergency-medical-services/documents/reports/2013AnnualReport.ashx>
11. Wong, E., Felt, C., Mengistu, A., Higgins, D., West, J., Colling, S., Canzoneri, D., Clowers, G., Rousseau, G., Tate, M., Loftis, C., Johnson, B., Phillips, J., & Larson, G. (2013, October). *Equity and social justice annual report*. Retrieved from <http://www.kingcounty.gov/elected/executive/equity-social-justice/-/media/EoD9739975F94194931D11D8D161F58E.ashx?la=en>
12. Cooper-Patrick, L., Gallo, J.J., Gonzales, J.J., Vu, H.T., Powe, N.R., Nelson, C., Ford, D.E. (1999). Race, gender, and partnership in the patient-physician relationship. *Journal of the American Medical Association*. 282(6), 583-9.
13. Waldron, R., Finalle, C., Tsang, J., Lesser, M., & Mogelof, D. (2011). Effect on gender of prehospital refusal of medical aid. *The Journal of Emergency Medicine*, 43(2), 283-290.
14. Bylund, C., & Makoul, G. (2002). Emphatic communication and gender in the physician-patient encounter. *Patient Education and Counseling*, 48, 207-216.
15. Roter, D. L., Geller, G., Bernhardt, B., Larson, S., & Doksum, T. (1999). Effects of obstetrician gender on communication and patient satisfaction. *Obstetrics & Gynecology*, 93(5), 635-641.
16. Roter, D. L., & Hall, J. A. (2004). Physician gender and patient-centered communication: a critical review of empirical research. *Annual Review of Public Health*, 25, 497-519.
17. Chapman, S. A., Lindler, V., Kaiser, J., Nielsen, C., Bates, T., & Hailer-O'Keefe, L. (2008, June). *Ems workforce for the 21st century: a national assessment*. Retrieved from http://www.ems.gov/pdf/EMSWorkforceReport_June2008.pdf
18. Wong, E., Felt, C., Mengistu, A., Higgins, D., West, J., Colling, S., Canzoneri, D., Clowers, G., Rousseau, G., Tate, M., Loftis, C., Johnson, B., Phillips, J., & Larson, G. (2013, October). *Equity and social justice annual report*. Retrieved from <http://www.kingcounty.gov/elected/executive/equity-social-justice/-/media/EoD9739975F94194931D11D8D161F58E.ashx?la=en>
19. Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81).
20. Jonker, J., De Jong, C., de Weert-Van Oene, G., & Gijs, L. (2000). Gender-role stereotypes and interpersonal behavior: how addicted inpatients view their ideal male and female therapist. *Journal of Substance Abuse Treatment*, 19, 307-312.
21. Bullock, K. (1997). Shades of the rainbow: ems providers come in all colors-so do patients – how the differences can affect treatment. *Emergency Medical Services*, 26(10), 28-33.
22. Hunter, S. L. (2003). Defining and valuing diversity in ems. *Emergency Medical Services*, 32(11), 88-89.

23. Nordberg, M. (1995). Color blind: some providers believe EMS and the fire service are still a "white man's club". *Emergency Medical Services*, 24(10), 35-40 and 71-73.
24. Cox, T. H., & Blake, S. (1991). Managing cultural diversity: implications for organizational competitiveness. *Academy of Management*, 5(3), 45-56.

Interview Guide – EMT Scholarship Program Staff

Respondent's Background

- Please describe your background in EMS
- What led you to enter EMS?
- Please describe your role and responsibilities at KCEMS

Background on EMT Scholarship Program

- When was the EMT Scholarship Program implemented?
- What led to its development?
- Who was involved with the development of the program?
- When and how did you come to be involved with the program?
- What is your understanding of the purpose of the program?
- What are the objectives and goals of the program?
- What is your role as it relates to the program?
- What were your initial thoughts about the program?

Applicant Recruitment

- What kind of applicants is the program seeking?
- How did the program recruit for those applicants?
- What recruitment methods were effective and which less so?

Application Evaluation and Selection

- Please describe the application
- Who reviews the applications?

- How are the applications evaluated?
 - What criteria is used?
 - How are the applications scored?
- Who makes the final selections to award the scholarships?

Training Program

- How do scholarship recipients prepare for starting the training program?
- What support does the Scholarship program provide to them during and after the training program?
- How successful have the students been in the training program?
- What barriers have they faced in the training program?
 - How has the Scholarship program removed those barriers?

Post-Training Program

- How proportion of the scholarship recipients have taken/passed the EMT certification exams and obtained EMS employment?
- What barriers do they face to getting their certification and finding employment?
- To what extent does the Scholarship program support them after they complete the training program?

Interview Guide – EMT Training Instructors

Respondent's Background

- Please describe your background in EMS
- What led you to enter EMS?
- When did you become a training instructor?
- What are your responsibilities as an instructor?

EMT Scholarship Program

- When and how did you hear about the scholarship program?
- What is your understanding of the purpose of the program?
- What were your initial thoughts about the program?
- How did you become aware that scholarship recipients were in the classes you taught?
- To what extent did you interact with the scholarship recipients?
- How was their performance in the training program compared to the affiliated students?
- How prepared were scholarship recipients when they entered the training program?
- What kind of support did you or other training instructors provide to them?
- What are your current thoughts on the program?
- How is the program succeeding and/or falling short?
- Do any changes need to be made to the program? If so, what changes would you like to see?

Interview Guide – EMT Scholarship Recipients

Prior Knowledge of EMT and Other Emergency Medical Services Careers

- When did you apply to the EMT Scholarship Program?
- What did you know about the emergency medical services field prior to applying for a scholarship?
- How did you learn about the kinds of jobs available in emergency medical services?
- What did you know about the EMT Training Program prior to applying for a scholarship?
- How did you learn about the EMT Training Program?
- What aspect of the scholarship program appealed to you?

Application Process for the EMT Scholarship Program

- What kind of work and volunteer experience did you have prior to applying for a scholarship?
- Please describe the application process.
- What made you interested in the scholarship and training programs?
- How long did the application process take?
- What are some difficulties you had with the application process?
- What made the application process easy for you?

Enrollment in the EMT Training Program

- Where were your training classes located?
 - What modes of transportation did you use to attend the training classes?
 - How long did it take you to travel to the sessions?
- Did you complete the EMT training program?

- If not, what would you say are the reasons why you were not able to complete the training program?
- Did you miss any of the training classes?
 - If so how many and which (classroom or hands-on)?
 - What would you say are the reasons you missed a class?
- What are some difficulties you had with the training program?
 - How did you deal with those challenges?
- Did you receive any support from anyone in the EMT Training Program?
 - What kind of support?
 - How did having that support help you in the program?
- How did you study each week?
 - Did you study with anyone from your class?
 - If so, how did you go about doing that?
- What did you hope to achieve in the program?
 - On a scale of 1 to 5, with a 'five' being 'most successful' and a 'one' being 'least successful,' how successful do you think you were in reaching your goal?
 - What led you to give yourself that rating?
- On a scale of 1 to 5, with a 'five' being 'very satisfied' and a 'one' being 'most satisfied,' how satisfied were you with the training materials and content?
 - What led you to give that rating?
- Did you pass the final exam for the training program?
 - What areas did feel adequately prepared for on the exam?
 - What difficulties did you have with the exam?
 - What would have made you feel more prepared for the exam?

- On a scale of 1 to 5, with a ‘five’ being ‘very prepared’ and a ‘one’ being ‘most prepared,’ how prepared did you feel to take the national registry exam after completing the program?
 - What led you to give yourself that rating?
- What do you wish you had known before enrolling in the program?

Post-Completion the EMT Training Program

- Did you take the national registry exam?
 - If not, what would you say are some reasons why you did not take the exam?
 - If so, how soon after?
 - How did you prepare for the exam?
- After having taken the exam, on a scale of 1 to 5, with a ‘five’ being ‘most prepared’ and a ‘one’ being ‘least prepared,’ how prepared did you feel to take the national registry exam?
 - What led you to give yourself that rating?
- Have you found a job?
 - If so, what job?
 - When were you hired?
 - How did you go about searching for jobs?
 - What about the job search was easy for you?
 -
 - What difficulties did you have in your job search?
 - What would have helped you in the job search?