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# PERCEPTIONS AS A BARRIER TO EMERGENCY MEDICAL SERVICES UTILIZATION AMONG SYRIAN REFUGEES IN JORDAN

Elizabeth Shan Wang  
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PERCEPTIONS AS A BARRIER TO EMERGENCY MEDICAL SERVICES  
UTILIZATION AMONG SYRIAN REFUGEES IN JORDAN

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Submitted in partial fulfillment of the requirements for Refugees, Health and Humanitarian  
Action program/SIT Study Abroad, Spring 2018



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## Table of Contents

Title and Cover Page.....	1
Copyright Permission.....	2
Acknowledgements .....	4
Abstract .....	5
Terminology .....	6
Introduction .....	7
<i>General Parameters</i> .....	9
Literature Review .....	10
Methodology .....	14
<i>Research obstacles</i> .....	16
Findings and Results.....	17
<i>Past experiences with EMS</i> .....	18
<i>Perceptions and attitudes towards EMS</i> .....	19
<i>Awareness of available services</i> .....	23
<i>Contributing factors in deciding to use EMS</i> .....	25
Discussion and Conclusions .....	29
<i>Study Limitations</i> .....	31
<i>Further studies</i> .....	32
References .....	34
Appendix.....	36
<i>Survey in English</i> .....	36
<i>Survey in Arabic</i> .....	40
<i>Interview Guide</i> .....	44
<i>English Informed Consent Form</i> .....	45
<i>Arabic Informed Consent Form</i> .....	47

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## Abstract

The purpose of this study is to evaluate perceptions of emergency medical services (EMS) among Syrian refugees living in urban host communities in Jordan. The research questions are as follows: To what extent do public perceptions of emergency medical services affect the utilization of ambulances? How does awareness about available emergency medical services shape refugees' attitudes towards it? Because this topic is qualitative and exploratory in the case of Jordan, there was no clear hypothesis. The assumption, however, is that positive perceptions and awareness about EMS can encourage refugees to call an ambulance for transportation to the hospital during a medical emergency. This study is significant because under-usage of EMS can increase preventable morbidity and mortality caused by acute, life-threatening emergencies in an already vulnerable population. By looking at the factors that influence underserved communities' likeliness to appropriately use ambulances during health emergencies, the research may be able to pinpoint areas of improvement for pre-hospital care. 29 surveys were collected from adult Syrian refugees in non-camp settings using convenience sampling. The survey included questions about previous experiences with EMS as well as opinions and awareness of available services. 5 in-depth interviews were also conducted with refugees who had previously utilized an ambulance to better understand contributing factors in the decision to utilize EMS. The research concluded that although Syrian refugees in Jordan have mostly positive perceptions and awareness of emergency medical services, they are not necessarily more likely to utilize them. The findings contribute to advancing science by applying existing theories to the context of Jordan. Furthermore, the findings can be used to understand what additional factors influence how vulnerable populations such as refugees utilize emergency services.

Keywords: public health, medicine and surgery, Middle East.

### **Terminology to be used in this paper**

In this paper, a health or medical emergency will be defined as “a medical condition of recent onset and severity, including severe pain, that would lead a prudent layperson, possessing an average knowledge of medicine and health, to believe that urgent and/or unscheduled care is required” (ACEP 2017). This definition was chosen due to the inclusion of the term “prudent layperson.” This term acknowledges the fact that an individual with average health literacy may not always be able to determine what conditions actually constitute a medical emergency, according to medical standards. This definition was originally included in United States federal law to prevent health insurance companies from refusing to pay for emergency room visits that were not completely necessary in retrospect. The prudent layperson standard requires insurers to pay for emergency care based on symptoms that the patient believed to be emergent rather than the resulting diagnosis. In the context of this study, the prudent layperson standard will allow the researcher to focus on the likeliness of refugees to use ambulances during an unforeseen situation that is *perceived* by the individual to be a medical emergency, regardless of whether or not it should be considered so.

Emergency medical services (EMS) refer to “a comprehensive system which provides the arrangements of personnel, facilities and equipment for the effective, coordinated and timely delivery of health and safety services to victims of sudden illness or injury” (Al-Shaqsi, 2010). This study will focus on the services under the Civil Defense Directorate, because the free services are more relevant and accessible to the refugees in comparison to the private EMS system. Lastly, pre-hospital will be defined as all emergency care provided from the onset of the medical emergency to arrival at the hospital for definitive care. Pre-hospital settings will therefore refer to the uncontrolled environment outside of the receiving health care facility.

## **Introduction**

Due to its geopolitical position in the Middle East, Jordan has undergone rapid and overwhelming population growth as a result of various ongoing refugee crises. Since the beginning of the Syrian civil war in 2011, the influx of Syrian refugees in Jordan has created overcrowding in host communities. The heavy use of the Jordanian health care system by Syrian refugees has placed a strain on public healthcare services in these areas, including ambulances. Like many other middle-income countries, Jordan is also in the process of an epidemiological transition towards a greater prevalence of non-communicable diseases such as cardiovascular diseases, cancer, diabetes, and chronic respiratory conditions (WHO EMRO, 2010). The current health system in Jordan is struggling to keep up with these changes, especially in the area of ensuring access to affordable healthcare for chronic disease management for refugees (Doocy, et al., 2015). The lack of adequate treatment and management exacerbates chronic conditions and often results in acute health emergencies. Prevalent conditions in Jordan and among Syrian refugees, such as hypertension, COPD, diabetes, and traumatic injury often present as life-threatening episodes (WHO, 2006). In these situations, the presence of emergency medical personnel and the prompt administration of medication and life support techniques can greatly improve outcomes before arrival at the hospital. Furthermore, facilitating connections between refugees and government services, such as ambulance services in Jordan, is recognized as a key piece in successful integration into host communities (Ager & Strang, 2008). Inadequacies of emergency services and lack of basic first-aid training may make those in host communities more likely to experience worse health outcomes than those in wealthier areas. Thus, it is important to minimize any hesitancy to utilize emergency services in vulnerable populations such as refugees and host communities.



Emergency medical services (EMS) consist of the first responders during a medical emergency and can be crucial to triaging and providing care well before the patient reaches the hospital. Longstanding concepts such as the “golden hour,” or the hour following traumatic injury during which medical intervention is most effective to prevent irreversible damage and mortality, encourage the fastest approach to patient care (JEMS, 2012). Although ambulances typically cannot provide definitive care, they are crucial for quick recognition of time-sensitive health conditions, such as stroke or cardiac arrest. Having trained medics on scene to recognize serious symptoms and immediately initiate life-saving interventions such as oxygen-therapy or CPR can significantly minimize damage to the body and increase chance of survival (Al-Shaqsi, 2010). In less severe cases, such as childbirth, the attendance of EMS can allow unexpected complications that may arise en route to the hospital to be addressed early.

Additionally, increasing evidence suggests that EMS can be instrumental in pre-hospital triage, or the systematic prioritizing of patients’ treatment according to how urgently they need care (Lidal, et. al., 2013). The result of this triage can determine the priority and order of treatments, transport, and transport destination. For example, in specialized cases like burns or trauma, EMS providers may assess the patient and decide to transport him or her to a facility that is farther away but better equipped to handle the patient’s condition. Pre-hospital triage can also alleviate the burden on emergency departments by beginning triage earlier and allowing the hospital to provide more focused care upon patient arrival. Although EMS in Jordan is among the highest quality in the Middle East, self-transport of patients to the ER occurs frequently (Abbadi, et. al., 1997). When an individual chooses another mode of transportation when an ambulance may be more appropriate, he or she forgoes the various benefits of pre-hospital care. This can be very detrimental to already vulnerable populations such as Syrian refugees.

In Jordan, private and public ambulances operate independently of one another. Public ambulances are overseen by the Civil Defense Directorate (CDD). The CDD provides its services free of charge, making it more accessible to refugees in urban communities, 93% of whom are living under the poverty line (UNHCR, 2017). Each ambulance is staffed by two paramedics who can provide care at the scene and transportation to the nearest public hospital or, in the case of a life-threatening situation, to the nearest private or public hospital (Abbadi, et. al., 1997). Paramedic education consists of a 2-year standardized national training course, which is roughly equivalent to the extensive training that U.S. medics receive. In 2017, the Jordanian Civil Defense received 140 new paramedic ambulances from Switzerland through a partnership with the Swiss Secretariat of Economy. These ambulances included European state-of-the-art equipment, such as advanced medical devices, stretchers, and defibrillators. Despite these developments, the research is based on the assumptions that not all communities are served by ambulances/providers of the same quality, and that communities with a higher refugee population are experiencing a greater shortage of resources. This implies that there are still gaps in emergency medical infrastructure that create disparities between different areas in Jordan. Furthermore, there may be a disconnect between the actual quality of EMS in Jordan and public knowledge and perception of it.

This particular study will not include an evaluation of the services themselves, only a qualitative and quantitative assessment of how perceptions may operate as a barrier to utilization among refugees. The scope is therefore narrowed to the patient/recipient level. The research questions are therefore as follows: To what extent do public perceptions of emergency medical services affect the utilization of ambulances? How does awareness about available emergency medical services shape refugees' attitudes towards it? Due to the lack of existing literature

focusing solely on refugees' perceptions and usage of ambulances in a host country, the research is largely exploratory and has no clear hypothesis for the research questions. Some hypothesized perceptions are that ambulances are too expensive and do not respond quick enough. The expected outcome is to understand whether or not the high prevalence of self-transport to the hospital in Jordan is significantly influenced by preexisting beliefs and awareness about available services. This topic was chosen based on personal interest as an EMT, as well as the identification of ambulance services as a weakness in the 2015-2019 Jordan High Health Council National Strategy for Health Sector.

### **Literature Review**

Various studies within the existing literature identify the development of EMS to match the changing health demands of a country as a priority. An assessment of pre-hospital care in 13 low- and middle-income countries revealed that the growth of injuries and non-communicable diseases as a significant contributor to overall mortality and morbidity requires more effective formal EMS systems (Nielsen, et. al., 2012). Most deaths resulting from these conditions are occur outside of hospitals, which could be prevented by better pre-hospital care. In nearly all surveyed countries, however, a substantial number of patients were transported by commercial and private vehicles. Main areas for improvement include increasing access in underserved and rural areas. These characteristics can be applied to Jordan because although Jordan is now an upper middle-income country according to the World Bank, this reclassification came recently in 2016. Emergency medical services may not have been developing to keep up with the population and economic growth of the country, and likely requires reevaluation.

The entrance of over 657,628 registered Syrian refugees into the public health sector in Jordan has overwhelmed many services, to the point where many government services are

serving more Syrians than Jordanians at a given time (Murshidi, et. al., 2013). It is therefore important to examine the EMS utilization patterns of Syrian refugees to pinpoint areas of improvement and build capacity. Although this data does not yet exist for Jordan, research of EMS utilization was conducted in Ankara, Turkey, another large host country for Syrian refugees. The study found that the usage of ambulance services by Syrians rose between 2013 and 2015 as more Syrians resettled in Turkey (Altiner & Yesil, 2018). Reasons for calls made by Syrians were mostly medical, followed by health precaution and traffic accidents. 96.3% of transported Syrians were received by public hospitals. This is likely the case in Jordan as well, where Syrian refugees are required to pay the same fees as uninsured Jordanians at public health care facilities (Doocy et. al., 2015). Because Syrian refugees often cite cost as the primary barrier to seeking care, there may be a possible correlation between the anticipation of having to pay for health services and reluctance to call an ambulance. The study also identifies language and cultural barriers for providing care for refugees in Turkey, which do not exist as much between Syria and Jordan. This study also does not mention barriers to accessing Syrian refugees. The independent study project will therefore build upon this study by researching underlying factors in utilization, rather than just the patterns.

A policy brief on strengthening emergency medical services in Lebanon provides relevant insight into how community awareness can impact the efficiency of a Middle Eastern EMS system that serves Syrian refugees. According to the Knowledge to Policy Center, the frequency of EMS usage in the Middle East is very low, with 74.3% of patients presenting with a heart attack using non-EMS transportation to the hospital (El-Jardali, et. al., 2017). Beyond quality issues with the services themselves, the study found that many patients were not aware of how to activate the EMS system in case of emergency. Lack of knowledge of how to call for

help and access an ambulance can be a large barrier, especially in countries where taxis are much more convenient and accessible, as they are in Lebanon and Jordan. Moreover, poor health literacy among patients was also concerning—the inability to recognize life-threatening symptoms can greatly delay the delivery of care and increase the risk of a poor health outcome.

A study of barriers to EMS access was conducted in Accra, Ghana and demonstrates how misinformation about emergency medical services can affect usage. In a survey of 468 people, 75% reported experiencing a medical traumatic emergency, but only 5% had used an ambulance (Mould-Millman, et. al., 2015). Most respondents believed EMTs provided high quality care, but an even larger majority believed that taxis were faster. Only 3% were aware that the services were free, which has a large influence on ambulance utilization in various low- to high-income countries. Incorrect ideas about emergency transport included beliefs that ambulances should be used to transport dead bodies, or that women in labor should go in taxis to arrive faster. These beliefs can be harmful to the EMS system and result in inappropriate and under-usage of ambulances. The study concludes that “perceptions of public ambulance services in Accra, Ghana are generally favorable, although use is low.” The study does not offer any qualitative analysis of the underlying reasons for this ironic conclusion, but proves that positive perceptions of EMS may not necessarily translate into increased utilization.

Two studies on ambulance usage in Karachi, Pakistan both support the previous research and explore the deeper determinants that affect decisions during an emergency. The first presented a unique perspective—many respondents believed that ambulance drivers abuse the siren, causing many drivers to disregard it and not yield to ambulances on the road (Chandran, et. al., 2014). Through personal observation, this cause-and-effect can be seen in Jordan as well. Many respondents also feared for their safety in an ambulance due to reckless driving or robbery

by ambulance drivers. A large proportion of people also stated that ambulances don't often come when you call them. These perceptions cause deeply rooted mistrust within the community despite the existence of well-equipped ambulances that meet international standards of care. The second study conducted interviews to reveal cultural determinants for these negative perceptions. 40% of participants stated that they would only call an ambulance if they are unable to walk and needed a stretcher, or were near death. Many interviewed patients did not believe they were sick enough for an ambulance, despite experiencing an unstable condition that would have warranted an ambulance in most Western countries. The study offers the following explanation:

“Sick enough” for many of these patients means “unable to walk or stand on their feet and a need to be carried by others.” This originates from the strong cultural emphasis on being able to stand on your feet and walk until death. Since the only significant difference between an ambulance and a car is a stretcher, ambulance transport is equated with being carried by others because you can't walk (Razzak, et. al., 2009).

The cultural significance of being able to stand is tightly intertwined with the perception of ambulances as only meant for the most critical conditions. Although the exact same cultural belief may not exist in Syria or Jordan, the negative connotation of having to use an ambulance may cause Syrian refugees to hesitate to call EMS when symptoms are less severe. This raises the idea that being conscious and able to walk are important criteria when considering the need for EMS in these communities. This also provides a potential reasoning for why ambulance usage can be low even when EMS quality is high.

This independent study project will contribute to existing literature by applying previous research to the context of Jordan. The perceptions of EMS from the perspectives of vulnerable refugees has not been researched, making this topic original and exploratory. The focus on vulnerable populations will examine added barriers to access and utilization of EMS that may not have been previously considered.

## Methodology

Syrian refugees were chosen as the population of interest due to the various physical, economic, and cultural barriers that they face in Jordan. Their status as a vulnerable population requires special consideration when researching access and utilization of public healthcare services such as ambulances. This study was conducted using mixed methods; quantitative data was collected through the form of surveys while a qualitative assessment was made using in-person interviews (see appendix). In both cases, participants were asked about their perceptions of EMS and if applicable, their past experiences with EMS. The written survey format was chosen for refugees in order to collect data on knowledge of available services as well as gauge opinions/perceptions about EMS. This was more easily done through yes/no questions and rating scales (strongly agree, agree, neutral, disagree, strongly disagree) rather than trying to draw conclusions from open-ended responses. The Likert scale was utilized to measure individuals' attitudes toward EMS in their communities by asking people the extent to which they agree with various statements about the topic. Some questions asked for an open-ended, brief justification of the previous selected answer. The surveys were translated from English to Modern Standard Arabic and the translation was reviewed by the project advisor. Common themes were identified after all surveys were returned to the researcher.

Several survey questions were selected and expanded upon for inclusion on the interview guide. Interviewees were chosen based on previous medical emergencies that required a visit to the hospital, regardless of transportation method. Interview questions required more explanation to supplement the quantitative data and get a better sense of underlying motivators for ambulance usage or lack thereof. A translator was present during all interviews to translate participant

answers and allow the English-speaking researcher to guide the interview based on these answers. The researcher took notes during the interview for qualitative analysis at a later time.

Prior to data collection, the project proposal was reviewed and approved by a local review board to ensure that all ethical considerations were met when working with vulnerable populations. An informed consent form was drafted and translated to Arabic which outlined the purpose of the research and stated that participation was voluntary and could be discontinued at any time. Before each survey/interview, participants were made aware of the purpose of the informed consent form and signatures were obtained. Those that could not read or write had the consent form and survey dictated to them by Arabic speakers. To protect participant confidentiality, no identifiers were used; the participant's name, contact information, etc. were not requested. Only age, gender, and city were included in the survey for demographic purposes. For interviewees, confidentiality was maintained by conducting the interviews in private rooms with no one else present other than the interviewer, translator, and participant.

Data collection took place over 3 days at 3 different sites in order to guarantee that the sample pool included participants from differing areas of residency. Surveys were distributed to two sites in the Madaba and Balqa governorates. The first was the Jordan Hashemite Fund for Human Development (JOHUD), and the second was a housing complex/shelter for Syrian refugees in Safut. 29 surveys were obtained from these locations, and the open-ended questions were translated back to English for analysis. Five in-depth interviews were conducted in Northern Amman, at another housing complex for Syrian refugees. An effort was made to collect data at the refugees' residences to alleviate the burden of traveling to another location to participate in the study. Participation in both surveys and interviews was limited to approximately 5-10 minutes of the participants' time.



Several obstacles arose during data collection. Participants were recruited through convenience sampling, which did not yield a very broad sample pool. The proposed sample population included the entire host community; consisting of both refugees as well as underprivileged Jordanians. In theory, the researcher anticipated that it would be easier to assess public perceptions by not limiting the sample pool to just refugees, which would have been difficult to reach. In practice, however, the researcher had much better access to Syrian refugees than to the Jordanians in the community, due to the location of data collection. The researcher recruited participants through NGOs such as JOHUD as well as housing complexes, which resulted in an all-refugee sample pool. This is likely because Syrians with legal refugee status are receiving various forms of aid that their native Jordanian counterparts may not have as much access to. This limited the study because underserved Jordanians are facing several of the same challenges as refugees in their community, but may not be going to these NGOs for aid and were therefore harder to reach. Another obstacle was finding men to participate in the study. At both JOHUD and the housing complex in Northern Amman, the refugees were all women. In Safut, the few men that were present were willing to fill out surveys, but the general theme was that men were less likely to be heavily involved with these aid organizations. Consequently, the majority of the sample pool was female. It was also difficult to confirm that each participant completed the entire survey—several surveys were returned incomplete or with skipped questions. The open-ended questions (such as suggestions for EMS improvement) were mostly left blank. The corresponding data analysis attempted to acknowledge these inconsistencies and gaps in data.

The original research proposal outlined plans to assess the quality of EMS in addition to perceptions of it to get a comprehensive assessment of barriers to emergency medical services from two perspectives. The researcher would have interviewed paramedics to identify logistical

efficiency issues encountered in the field when serving underserved communities, such as inadequate equipment or transport delays. Due to the researcher's position as an American undergraduate student, it was difficult to contact the Civil Defense Directorate for interviews with its employees. Furthermore, during preparation for data collection, the researcher realized that collecting quantitative and qualitative data from both populations would have been too much for a study of this magnitude and time frame. Therefore, the convenience of narrowing the scope to refugees' perceptions and experiences made for a more appropriate independent study project for the time allotted.

### **Findings/Results**

29 surveys were collected in total and consisted of the following demographics. All participants were Syrian refugees living in Jordan. The age range was 18 to 74. 21 respondents were from Madaba and 8 were from Safut. 26 were women and 3 were men. Therefore, the conveniently sampled pool largely consisted of women from Madaba. Four surveys were incomplete—the respondents had only filled out demographic information, whether or not they had experienced a medical emergency, and whether or not they had called an ambulance. These surveys were only taken into account for analysis of the questions that were fully answered. They were excluded from analysis of perceptions and awareness of EMS. For the rest of the surveys, questions that had been skipped or left blank were recorded as “did not answer.”

Of the 29 respondents, 12 answered “yes” to having experienced a medical emergency either themselves or through a family member. In this survey, the answer to this question was based on what the participant perceived as an emergency, regardless of whether or not it would be considered so from a medical perspective. Of these 12, only 3 had called an ambulance for the aforementioned emergency (25%). In this sample pool, acute abdominal pain and “other” were

the most common issues that were considered emergencies. The following graph depicts the breakdown of what emergencies the sampled population had experienced (see figure 1). The three that called for an ambulance reported cardiovascular and neurological emergencies, acute

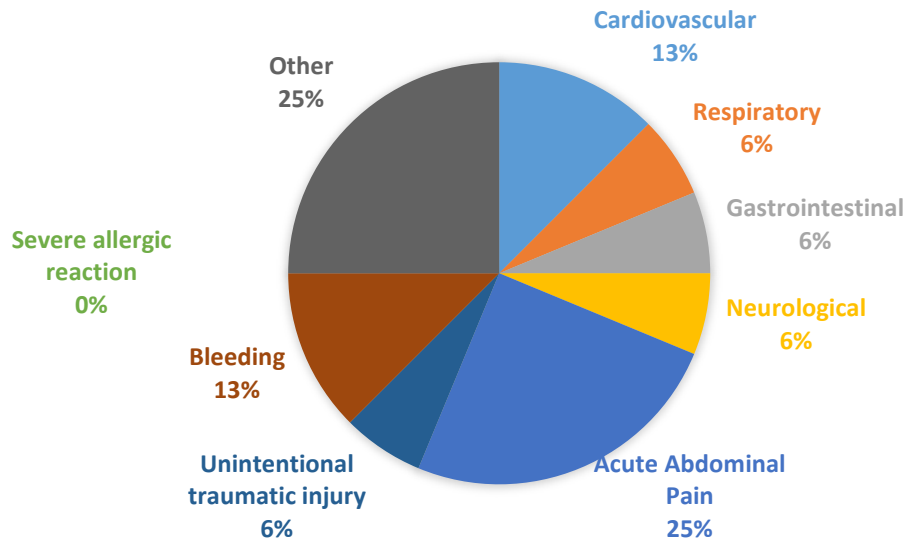


Figure 1. Medical emergencies experienced by 12 respondents by percentage.

abdominal pain, and bleeding (some respondents selected more than one answer that applied).

The other 17 respondents reported never having experienced a medical emergency, and therefore had never used an ambulance.

### Past experiences with EMS

The survey asked those who had called an ambulance in the past to continue on to the next section to rate their experiences. Thus, only 3 participants filled out this section. All 3 either strongly agreed or agreed that EMS/paramedics arrive quickly, acted and made decisions efficiently, acted professionally. They also either strongly agreed or agreed that the ambulance and equipment were in good condition, and that transport to the hospital was completed in a timely manner. 2 of the 3 respondents strongly agreed that the situation would have been worse if EMS were not called, while the third chose not to answer. 2 of the 3 respondents also strongly agreed that they felt safe the entire time they were under the care of the paramedics, while the

third chose not to answer again. The first two respondents responded that they were very satisfied with their experience with EMS, and that they would definitely use EMS again in the future. The third respondent was neutral with regards to both of these statements, but did not give any reasons why he/she chose these answers. Although 3 surveys are not statistically significant, in the context of this study, those that had previous exposure to EMS all had positive perceptions of the service they received. Despite believing that EMS were good, one respondent still remained indifferent about whether or not their services had been completely necessary and whether or not they would be used again. Additionally, all 3 respondents said that they were aware that the Civil Defense provides 911 services for free, services are available 24/7, and that they could call to be assessed by a paramedic but refuse treatments and transport. This suggests that those who have interacted with EMS in the past are better aware of the services that are available to them due to experience.

### **Perceptions and attitudes toward EMS**

Those who had never called an ambulance were asked to skip to the section about their perceptions of the accessibility and quality of EMS. Those who had also filled out this section. Excluding four incomplete surveys, 25 participants responded to this section. For almost all of the statements that they were asked to agree or disagree with, “agree” was chosen much more frequently over “strongly agree.” Neutral was also a common answer. Out of 25, 19 respondents, or 76%, either strongly agreed or agreed that if they or a family member experienced a health emergency in the future, they would call for an ambulance (see figure 2). Only one person strongly disagreed, and specified on their survey that they would be “too nervous” to wait for an ambulance. Regardless of whether or not they would call, 88% strongly agreed or agreed that

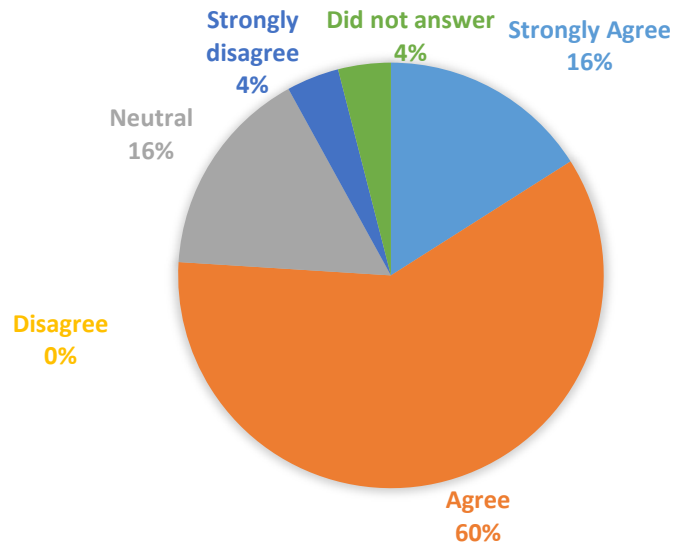


Figure 2. Responses to the statement “If I or a family member experience a health emergency in the future, I would call for an ambulance” by percentage.

they felt free to call an ambulance for any health emergency they might have. The other 12% were neutral. Likewise, 68% of respondents strongly agreed or agreed that they felt like emergency medical services are readily accessible to them (see figure 3). The combination of from these three questions suggests that Syrian refugees do not necessarily feel as though they have barriers to accessing ambulances in their area. However, perceived access to emergency services does not guarantee their utilization, as demonstrated by the 75% of respondents who did not call an ambulance during their medical emergency.

Statements regarding the quality and capabilities of EMS were slightly more divisive in their responses. 72% of respondents strongly agreed or agreed that EMS can provide life-saving interventions before arrival at the hospital, which is the intended role of emergency medical services. For this

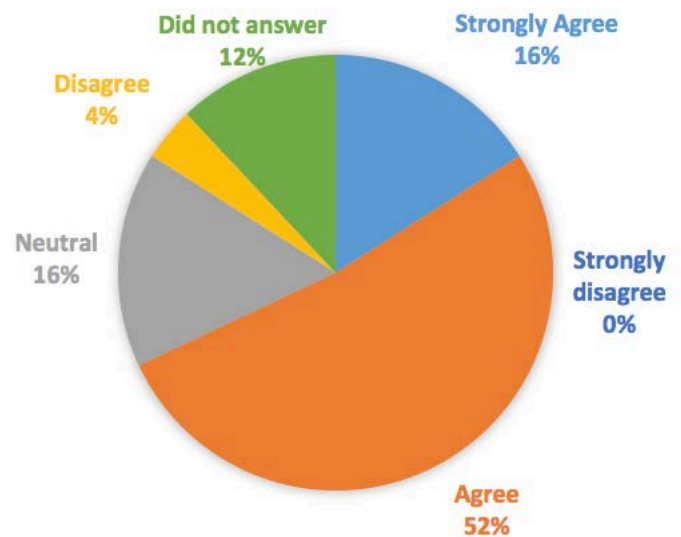
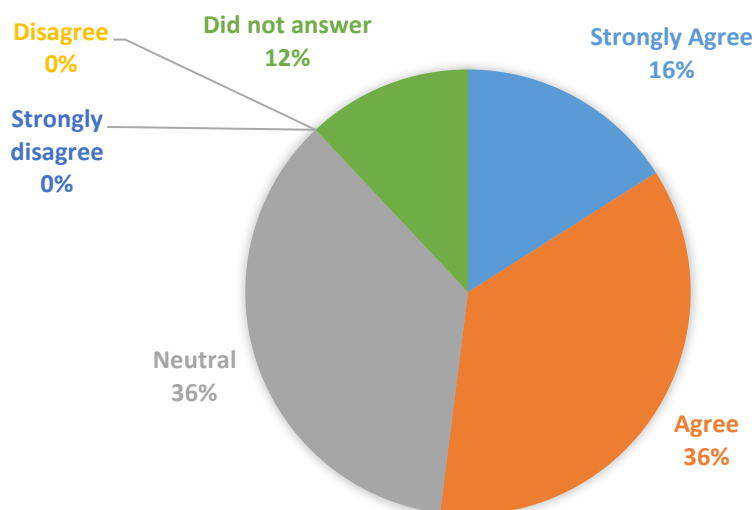


Figure 3. Responses to “Emergency medical services are readily accessible to me” by percentage.

question, 24% were neutral or did not answer, implying that they did not have significant opinions on the capabilities of pre-hospital care. 4%, or 1 respondent, strongly disagreed—which raised a question about what the perceived purpose of EMS is in the community. It is possible that a small percentage of people view ambulances merely as a mode of transportation rather than a health care service. This point is further developed in the later interviews. Even fewer respondents, or 60%, strongly agreed or agreed that EMTs/paramedics in their area are well-trained. Again, one respondent disagreed, supporting the idea that distrust in personnel and the overall quality of EMS can discourage individuals from calling an ambulance for help. One respondent also commented that while private sector ambulances are of high quality, public sector ambulances are not at the same standard. This highlights a unique barrier for refugees because low-income Syrian refugees primarily receive services from the public sector in Jordan. As discussed in the literature review, the belief that ambulances do not respond quick enough or may not even come is a common deterrent for using EMS. The survey therefore included a question about whether or not EMS is fast and reliable, receiving mixed responses (see figure 4).



*Figure 4.* Responses to “Emergency medical services in my area are fast and reliable” by percentage.

Although

approximately half of respondents either strongly agreed or agreed that EMS is fast and reliable,

the other half was neutral or did not answer. The same number of people answered “agree” and “neutral” (9 respondents). This question received the most “neutral” responses, indicating that speed and reliability may be a perceived issue in the host communities. This is further corroborated the substantial traffic in Amman and other urban areas and the noticeable disregard of ambulance sirens—in heavy traffic, cars often do not or cannot pull over for ambulances, forcing the ambulance to wait in traffic as well. It is possible that those who observe ambulances waiting in traffic may be less likely to perceive ambulances as the fastest and most reliable form of transportation.

Overall, the majority of Syrian refugee participants had positive perceptions of EMS. Nevertheless, 56% of respondents still either strongly agreed or agreed that independently

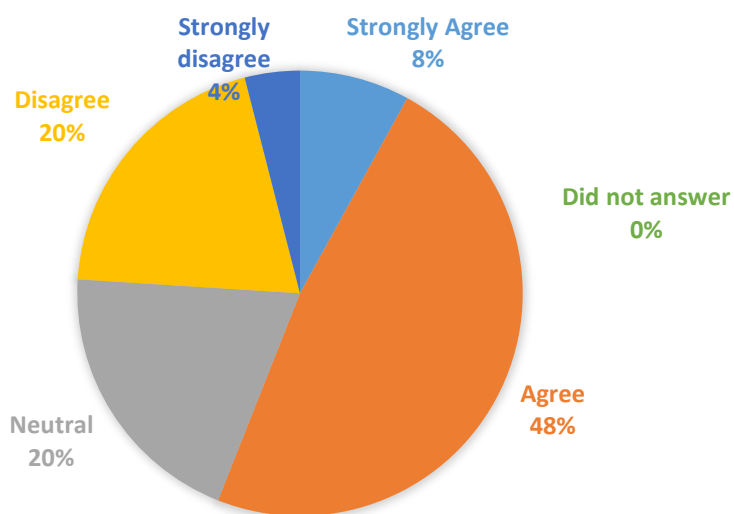


Figure 5. Responses to “Arranging my own transportation to the hospital is better than taking an ambulance” by percentage.

arranging transportation to the hospital is better than taking an ambulance (see figure 5).

Comparatively, only 24% strongly disagreed or disagreed, stating that an ambulance would be preferable.

This is interesting because the respondents did not emphasize any

large issues with the accessibility and

quality of EMS, yet over half would still rather transport themselves to the hospital during an emergency. An underlying reason for this may be a cultural norm of negatively associating ambulances with near-death experiences and death itself. As a study in Pakistan noted, a cultural emphasis of “being able to stand on your feet and walk until death” prevented an ambulance

from being called during emergencies that likely would have warranted one according to Western standards (Razzak, et. al., 2009). The data in this study raises the possibility that Syrian refugees may hesitate to use EMS when they do not believe they are sick enough due to the negative implications of needing EMS. Although there is no hard data to confirm this hypothesis, it is a potential explanation for why positive perceptions may not translate into utilization.

Most of those who answered the open-ended question about areas of improvement discussed the importance of well-trained personnel and advanced equipment. 6 out of 8 respondents mentioned one or both of these aspects, suggesting ongoing and continuous training of existing medics to increase trustworthiness of services.

### **Awareness of available services**

The statement about the affordability of emergency services was controversial. This was the only question in which “neutral” was the most frequent response. 36% of respondents were neutral with regards to the statement that emergency medical services in their area are affordable (see figure 6). 12% either disagreed or strongly disagreed. This was perhaps the most negative perception of EMS from this survey among the Syrian refugees. It is also contradicted by the fact that the Civil Defense Directorate provides its services to the public for free. The researcher predicts that a few respondents may have referring to the entire process of an unforeseen medical emergency as unaffordable—although transport may be free, refugees often have difficulty

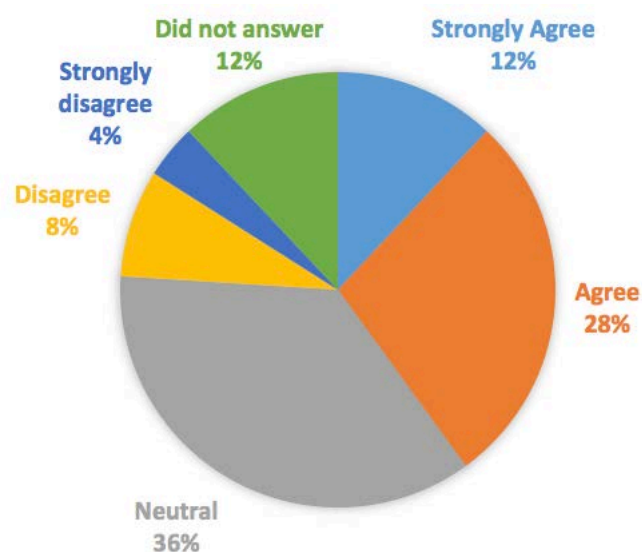


Figure 6. Responses to “Emergency medical services in my area are affordable” by percentage.



paying for services once in the emergency department itself. Others may have also been referring to ambulances from private hospitals/companies, which are not free. Further understanding of this common perception requires analysis of the refugees' knowledge and awareness of the services that are available to them. All participants were asked whether or not they were aware that Civil Defense 911 services are 1) free, 2) available 24/7, and that 3) they can call an ambulance and be assessed by a paramedic, but refuse certain treatments and transport to the hospital. Of the three questions, the sample population was least aware that the Civil Defense Directorate provides ambulance services for free in Jordan, with 41% answering no. The lack of awareness of free services from the public sector can deter vulnerable Syrian refugees who pay for health services without insurance/out of pocket from calling an ambulance. 26% were also unaware that calling an ambulance does not always have to end in transport to the hospital. The ability to be assessed for a concerning symptom but avoid the ER if they are deemed non-urgent may encourage those who are apprehensive of emergency room fees to still utilize pre-hospital care. Nearly all participants were aware that ambulances may be called at any time. Overall, the

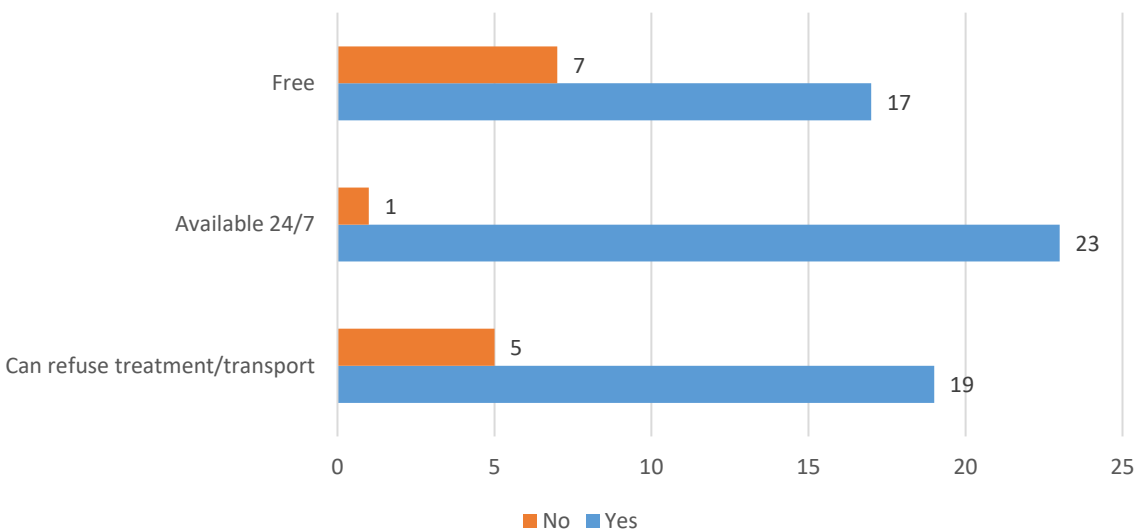
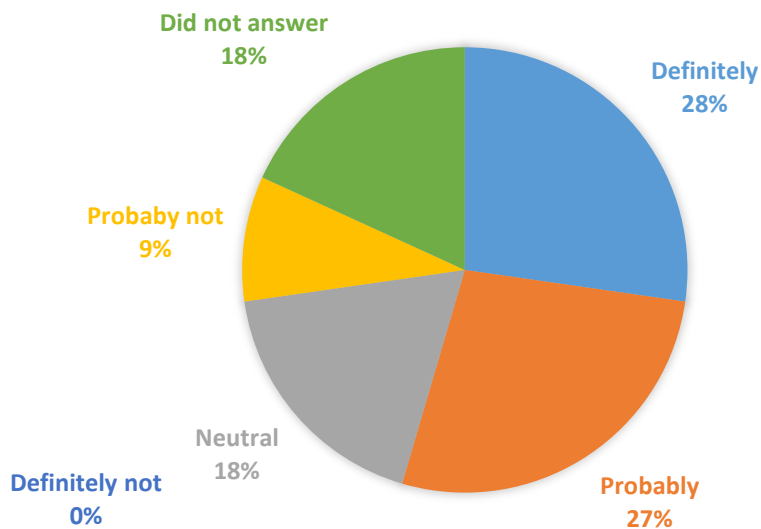


Figure 7. Number of respondents who answered yes or no to being aware of available services.

sampled Syrian refugees were mostly aware of the services that are available to them. Those who were previously unaware of any of the three facts were then asked if the new information made them more likely to use EMS in the future. 28% responded that they were definitely more likely to use EMS in the future upon learning this new information. Another 27% answered probably. However, the remaining 45% answered neutral, probably not, or did not answer at all (see figure 8). Thus, this data is inconclusive and does not strongly suggest that solely increasing



*Figure 8.* Responses to “If you answered no to any of these questions, does this new information make you more likely to use EMS in the future?” by percentage.

community knowledge of EMS and correcting misinformation is sufficient to promote the usage of EMS among vulnerable populations. Other factors, such as personal experiences with EMS, must be also be taken into consideration.

### **Contributing factors in deciding to use EMS**

In order to better understand the specific factors that influence the decision to call for an ambulance, five in-depth interviews were conducted with Syrian refugee women who had experienced a condition while in Jordan that, in most Western countries, would necessitate emergency medical attention. Three interviewees described their experience with childbirth, while the other two described acute emergencies relating to chronic conditions such as cancer

and diabetes. Regardless of whether or not an ambulance was called, interviewees were asked to describe the entire situation to evaluate the refugees' pre-hospital care-seeking behavior and how it is influenced by perceptions. Reoccurring themes were then extracted across the five interviews.

#### Interview #1

A woman who delivered her child in Jordan called an ambulance for transportation to the hospital, where she had planned to undergo a cesarean section. She felt as though the ambulance did not respond quickly, and pointed out that when they did arrive, nobody came up to her apartment to help her down to the ambulance. This, she believed, was because her case was not necessarily critical. Her sole reason for calling EMS was that it was free, though she repeatedly emphasized that she knew that this was “not what an ambulance is for.” She explained that she had to call an ambulance because she did not have money to pay for a taxi. She stated that “next time” she would take a taxi, and that ambulances could improve by arriving faster.

#### Interview #2

A woman who was in active labor and experiencing strong contractions took an ambulance to the hospital at 3 a.m., where she delivered 15 minutes after arrival. She was generally satisfied with the services provided and was glad she took an ambulance, but stated that she would have rather taken a taxi at the time. She explained that she called for an ambulance only because there were no taxis out at 3 a.m., and that ambulances are just for transportation. Her preference for a taxi came from a previous delivery experience; she stated that she had called for an ambulance for her first child but it did not come. She stated that it did not come because it was in the middle of the night and she was not in active labor, but that this

gave her the perception that ambulances do not always come when you call. This is one example of how negative perceptions of EMS can discourage future use.

#### Interview #3

The third woman who delivered in Jordan was driven to the hospital in a friend's car, and joked that she walked on foot right into the delivery room. She explained that she felt as though she had time and that she did not believe anything would go wrong during the journey to the hospital. She also stated that she went in the friend's car simply because it was offered. Like the first interviewee, she stressed that ambulances are for critical cases only, and that this criterion did not apply to her. If this were to occur again, she said she would make the same decision.

#### Interview #4

The fourth woman had undergone a thyroidectomy for her cancer and experienced difficulty breathing as a complication from the surgery. She stated that she went to a clinic because she could not breathe and that they told her she was an urgent case, but did not arrange transportation to the hospital for her. She took a taxi to the hospital, but clarified that she definitely would have taken an ambulance if she had a phone. Because she did not own a cell phone, she did not know how to call 911 and got in a taxi instead.

#### Interview #5

The fifth woman explained that she frequently used an ambulance due to her diabetes. She described one episode of ketoacidosis, during which she fainted in her home. Her daughter called an ambulance each time she fainted. Her daughter spoke on the quality of services because she was unconscious during each transport. Her daughter felt that the medics did not "check what was going on with her mother" but trusted that they would intervene if her mother needed something. As a result, they agreed that the ambulance is mostly just a form of transportation

since the mother could not move on her own. The interviewee also explained that the heightened frequency of her diabetic emergencies was due to stress. She revealed that her husband suffers from a psychiatric disorder and had been threatening to stab her and her daughter. Because psychiatric medication is not covered by health insurance, they could not treat his condition. She felt a great deal of stress and fear about this, which made it much harder to control her blood sugar and caused her to faint often. She also has to pay for insulin to manage her diabetes, but admitted to giving herself less than the recommended dosage in order to save medication and money. The combination of these stressors and the inadequate management of her chronic condition resulted in a heavy reliance on emergency medical services. She and her daughter both agreed that they would continue to call for an ambulance for transportation as needed. This interview captured the many layers of challenges that make Syrian refugees especially vulnerable in Jordan. The constant fear for her safety and financial instability greatly exacerbated her diabetes, one of the five most common chronic conditions among Syrian refugees in Jordan (Doocy, et. al., 2015). For this woman and refugees in similar situations, optimizing ambulance accessibility and usage is a tertiary but crucial intervention.

Across the five interviews, several reoccurring themes emerged. Most interviewees viewed ambulances as just a form of transportation and are therefore generally interchangeable with taxis or private vehicles. Those that believed ambulances were faster preferred ambulances, and those that took taxis/cars generally did so out of convenience. Most interviewees were satisfied with their choice. Those who utilized ambulances commonly cited the free service as an important factor in their decision, with one interviewee stating that was the only way she could get to the hospital. Many interviewees emphasized that ambulances are only for critical cases, and did not believe that their personal emergency was critical enough for one. Those who were

not critical but took an ambulance felt that they would not do so again if the same situation were to occur. None of the interviewees had specific suggestions for the improvement of ambulances. Although only five interviews could be conducted for this particular study, the interview content provides significant insight into perceptions of the purpose of ambulances among refugees and how that factors into utilization.

## **Discussion and Conclusions**

After analysis of the collected data, this study found many of the same findings as previous research on the topic of public perception of emergency medical services. The majority of survey respondents agreed to some degree that emergency medical services were readily accessible and that they felt free to call an ambulance for any health emergency they may have. The majority of respondents stated that they would call for an ambulance for a future health emergency. Perceived issues with EMS were therefore not with the accessibility of ambulances but rather with the more logistical elements of calling an ambulance. The statements that received the most mixed responses were about the speed and reliability of emergency medical response, as well as the affordability of EMS. These results were aligned with the hypothesized negative perceptions. However, the research concluded that the overall positive perceptions of the quality and accessibility of services do not necessarily translate into willingness to utilize EMS. This disproved the research assumption, but the reasons are unclear. Despite having minimal issues with available services, 56% of respondents still believed that arranging their own transportation to the hospital is better than taking ambulance. The researcher attributes this discrepancy to cultural norms of negatively associating ambulances with near-death conditions as discussed in studies from Pakistan. This is further supported by the common theme of interviewees perceiving themselves as not sick enough for an ambulance.

The interviewees' repeated emphasis that ambulances are only meant for the critically ill or injured raises an interesting question about the perceived purpose of EMS. While the benefits of pre-hospital care are well established in higher-income countries, many of the participants seemed to solely view an ambulance as a mode of transportation rather than a health care service. The sampled population seemed to clearly differentiate between health emergencies that were critical versus urgent—conditions that are critical require an ambulance, while those that are urgent do not. Ambulances were described more as a last resort for patients that are already critical and less as a preventative measure for urgent cases that could *become* critical. This interpretation makes ambulances comparable to any other form of transportation for non-critical emergencies. Because many survey respondents did not strongly believe that EMS is fast and reliable, it is understandable that a significant number of refugees would rather choose transportation that they are more comfortable or familiar with. Furthermore, the interviews suggested that those that took a private car or taxi to the hospital during an emergency did so mostly out of convenience. The researcher did not necessarily anticipate that the perceived role of EMS would play such a large role in influencing utilization decisions in addition to attitudes towards the services themselves.

The combination of the quantitative and qualitative data demonstrated a solid awareness of available services among Syrian refugees. The least known aspect of EMS was that services are free when provided by the Civil Defense Directorate. Knowledge that the ambulance transport would be free was a large contributing factor in decision to use EMS among interviewees. However, the data about whether or not participants were more likely to use EMS upon learning new information was inconclusive, due to the relatively even distribution of respondents between all the answers. Therefore, the study differs from existing research and

concludes that awareness of available services does not always influence attitudes towards EMS, especially when there are pre-existing beliefs about the services. Therefore, the findings in the study suggest that the optimal way to decrease hesitancy within this population are to advertise that the services are free as well as change harmful perceptions of EMS. As the Lebanon policy brief recommends, focused education campaigns can improve awareness of services as well as increase health literacy. Educating the community about the symptoms that require immediate medical attention can increase appropriate utilization of EMS for non-critical but urgent conditions, which can alleviate the burden on emergency rooms through pre-hospital triage. Shifting the perception of ambulances as a mode of transportation to a pre-hospital health care service can be done through community outreach. Recreational events where families can physically see and touch the components of an ambulance as well as interact with professional paramedics can greatly improve the image of ambulances among underserved communities. Relying on real exposure and familiarity with EMS rather than perceptions and assumptions can also promote trust between the community and the providers. Both interviewees and survey respondents mentioned trustworthiness as an important aspect of their experience with EMS personnel. Feelings of trust and safety can also combat the negative association of ambulances with critical patients. Overall, the research finds that it is very difficult to change perceptions and remove them as a barrier to utilization, but there are specific influencing factors within the host communities that can be addressed.

### **Study Limitations**

Although general conclusions could be made from the data, none of the data was strongly convincing. The reliance on convenience sampling produced a sample population that consisted heavily of Syrian women from Madaba. The lack of male participation prevented the study from



providing a comprehensive picture of the refugee population. Furthermore, the study was skewed towards refugees who are receiving continued aid assistance. Collecting data solely at NGOs and housing complexes excluded refugees who are less connected to aid organizations and more dispersed within the urban host community. Refugees that are unregistered or living in informal settlements are likely less aware of and have less access to available governmental services. Due to circumstance, these refugees might be more vulnerable than those sampled, which would have produced more need-based findings and recommendations. Lastly, the number of participants is not statistically significant compared to other studies within the existing literature, and can therefore only be used for insight and not definitive conclusions on the topic.

### **Recommendations for further studies**

Further studies should be conducted with a larger and more diverse sample pool. A more in-depth study of the cultural determinants of ambulance usage could be done. The original proposal idea should be returned to and the entire host community should be studied. This should include underserved Jordanians in addition to the Syrian refugees, because low-income Jordanians face many of the same barriers as the refugees do but receive less support. Another study could examine barriers to emergency medical services from the providers' perspective, to determine to what degree perceptions of EMS are true. This could also inform the Civil Defense on ways to improve its services and ensure that it can handle the increased caseload due to the influx of Syrian refugees. A related topic could be assessing the prevalence of first-aid training and knowledge among refugees in Jordan. Due to reduced usage of ambulance usage during emergencies, it is important to know if bystanders and taxi drivers can perform basic life-support skills to improve outcomes. Increasing civilian knowledge of life-saving interventions such as

CPR can decrease preventable morbidity and mortality in vulnerable populations when there is hesitancy or delay in calling for help.

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**Appendix**

**SURVEY ON AWARENESS AND PERCEPTIONS OF EMERGENCY MEDICAL SERVICES**

**SECTION I: PARTICIPANT INFORMATION**

1. What is your age? \_\_\_\_\_ years
2. Gender:  
 Male  Female
3. What is your nationality?  
 Jordanian  Other Please specify: \_\_\_\_\_
4. What neighborhood of Amman do you currently live in?  
\_\_\_\_\_

**SECTION II: HEALTH EMERGENCIES**

5. Have you or a family member ever experienced a health emergency?  
 Yes  No

**If yes, please continue to the next question. If no, please skip to section IV.**

6. If yes, what was the nature of the emergency? Choose all that apply.  
 Cardiovascular  
 Respiratory  
 Gastrointestinal  
 Neurological  
 Acute Abdominal Pain  
 Severe allergic reaction  
 Unintentional traumatic injury  
 Bleeding  
 Other

Please explain:

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7. Was an ambulance called?

- Yes    No

**If yes, please continue to section III. If no, please skip to section IV.**

### **SECTION III: PERCEPTION OF SERVICES**

Please rate how much you agree with the following statements.

8. EMS responded and arrived quickly to the emergency.

- Strongly disagree    Disagree    Neutral    Agree    Strongly Agree

9. The EMTs/paramedics acted and made decisions efficiently.

- Strongly disagree    Disagree    Neutral    Agree    Strongly Agree

10. The EMTs/paramedics were professional.

- Strongly disagree    Disagree    Neutral    Agree    Strongly Agree

11. The ambulance and equipment were in good condition.

- Strongly disagree    Disagree    Neutral    Agree    Strongly Agree

12. Transport to the hospital was completed in a timely manner.

- Strongly disagree    Disagree    Neutral    Agree    Strongly Agree

13. The situation would have been worse if EMS were not called.

- Strongly disagree    Disagree    Neutral    Agree    Strongly Agree

14. I felt safe the entire time I was under the care of the EMTs/paramedics.

- Strongly disagree    Disagree    Neutral    Agree    Strongly Agree

Please choose the answer that best represents your ideas.

15. How satisfied are you with your experience with EMS?

Very dissatisfied    Dissatisfied    Neutral    Satisfied    Very Satisfied

16. Would you use EMS again in the future?

Definitely not    Probably not    Neutral    Probably    Definitely

Please state your main reasons for your answer to the previous question.

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#### **SECTION IV: ATTITUDES TOWARDS EMS**

Please rate how much you agree with the following statements.

17. If I or a family member experience a health emergency in the future, I would call for an ambulance.

Strongly disagree    Disagree    Neutral    Agree    Strongly Agree

18. Arranging my own transportation to the hospital is better than taking an ambulance.

Strongly disagree    Disagree    Neutral    Agree    Strongly Agree

19. EMS can provide life-saving interventions before arrival at the hospital.

Strongly disagree    Disagree    Neutral    Agree    Strongly Agree

20. Emergency medical services in my area are fast and reliable.

Strongly disagree    Disagree    Neutral    Agree    Strongly Agree

21. Emergency medical services are readily accessible to me.

Strongly disagree    Disagree    Neutral    Agree    Strongly Agree

22. I feel free to call an ambulance for any health emergency I may have.

Strongly disagree    Disagree    Neutral    Agree    Strongly Agree

23. Emergency medical services in my area are affordable.

- Strongly disagree    Disagree    Neutral    Agree    Strongly Agree

24. EMTs and paramedics are well-trained in my area.

- Strongly disagree    Disagree    Neutral    Agree    Strongly Agree

25. In your opinion, how could EMS be improved?

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**SECTION V: AWARENESS OF SERVICES**

26. Are you aware that the Civil Defense Directorate ambulances provide 911 services for free in Jordan?

- Yes    No

27. Are you aware that ambulances are available 24/7?

- Yes    No

28. Are you aware that you can call an ambulance and be assessed by a paramedic, but refuse certain treatments and transport to the hospital?

- Yes    No

29. If you answered no to any of these questions, does this new information make you more likely to use EMS in the future?

- Definitely not    Probably not    Neutral    Probably    Definitely

If there is anything you would like to add about your experiences with EMS, stories you have heard from others, etc., please include it in the space below.



دراسة حول التوعية والتصورات عن خدمات الطوارئ الطبية:

## القسم الأول: معلومات المشاركين

1. كم عمرك؟ \_\_\_\_\_ سنة

2. ما جنسك؟

 ذكر  أنثى

3. ما جنسيتك؟

 أردني  غير ذلك الرجاء التحديد: \_\_\_\_\_

4. في اي منطقة في عمان تسكن حالياً؟

## القسم الثاني: حالات الطوارئ الصحية

5. هل تعرضت أنت أو أحد أفراد عائلتك لحالة طوارئ صحية؟

 نعم  لا

إذا كانت الإجابة نعم ، يرجى المتابعة إلى السؤال التالي. إذا كانت الإجابة لا ، يرجى الانتقال إلى القسم الرابع.

6. إذا كانت الإجابة نعم ، ما هي طبيعة حالة الطوارئ؟ اختر ما ينطبق على حالتك.

 في القلب والأوعية الدموية تنفسية في الجهاز الهضمي عصبية ألم بطن حاد حساسية شديدة إصابات برضات بغير قصد نزيف حالة أخرى

الرجاء التوضيح:

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7. هل تم استدعاء سيارة إسعاف؟

 نعم  لا

إذا كانت الإجابة نعم ، يرجى المتابعة إلى القسم الثالث. إذا كانت الإجابة لا ، الرجاء الانتقال إلى القسم الرابع.

## القسم الثالث: التصورات عن الخدمات

يرجى تقييم مدى موافقتك مع العبارات التالية.

8. استجابت خدمة الطوارئ الطبية وصلت بسرعة إلى حالة الطوارئ.  
 لا أوافق بشدة  لا أوافق  محايد  أوافق  أوافق بشدة
9. قام فريق خدمة الطوارئ الطبية / المسعفين باتخاذ القرارات بكفاءة.  
 لا أوافق بشدة  لا أوافق  محايد  أوافق  أوافق بشدة
10. كانت خدمة الطوارئ الطبية / المسعفين محترفين.  
 لا أوافق بشدة  لا أوافق  محايد  أوافق  أوافق بشدة
11. كانت سيارة الإسعاف والمعدات في حالة جيدة.  
 لا أوافق بشدة  لا أوافق  محايد  أوافق  أوافق بشدة
12. تم الوصول إلى المستشفى في وقت مناسب.  
 لا أوافق بشدة  لا أوافق  محايد  أوافق  أوافق بشدة
13. كان يمكن أن يكون الوضع أسوأ إذا لم يتم استدعاء خدمة الطوارئ الطبية.  
 لا أوافق بشدة  لا أوافق  محايد  أوافق  أوافق بشدة
14. شعرت بالأمان كل الوقت الذي كنت فيه في رعاية خدمة الطوارئ الطبية / المسعفين.  
 لا أوافق بشدة  لا أوافق  محايد  أوافق  أوافق بشدة
- يرجى اختيار الإجابة الأكثر توافقاً مع أفكارك.
15. ما مدى رضاك عن تجربتك مع خدمة الطوارئ الطبية ؟  
 غير راض أبداً  غير راض  محايد  راض  راض جداً
16. هل ستستخدم خدمة الطوارئ الطبية في المستقبل؟  
 بالتأكيد لا  ربما لا  محايد  ربما  بالتأكيد
- يرجى ذكر الأسباب الرئيسية لإجابتك على السؤال السابق.

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### القسم الرابع: ردود الفعل حول خدمة الطوارئ الطبية

يرجى تقييم مدى موافقتك مع العبارات التالية.

17. إذا تعرضت أنا أو أحد أفراد عائلتي لمشكلة صحية طارئة في المستقبل، فأسألك عن سيارة الإسعاف.

لا أوافق بشدة  لا أوافق  محايد  أوافق  أوافق بشدة

18. ذهابي إلى المستشفى بنفسى أفضل من الذهاب بسيارة الإسعاف.

لا أوافق بشدة  لا أوافق  محايد  أوافق  أوافق بشدة

19. تقوم خدمة الطوارئ الطبية بتدخلات منقذة للحياة قبل الوصول إلى المستشفى.

لا أوافق بشدة  لا أوافق  محايد  أوافق  أوافق بشدة

20. خدمات الطوارئ الطبية في منطقتى سريعة وموثوقة.

لا أوافق بشدة  لا أوافق  محايد  أوافق  أوافق بشدة

21. خدمات الطوارئ الطبية متاحة لي.

لا أوافق بشدة  لا أوافق  محايد  أوافق  أوافق بشدة

22. أستطيع الاتصال بسيارة إسعاف في أي حالة طوارئ صحية قد أتعرض لها.

لا أوافق بشدة  لا أوافق  محايد  أوافق  أوافق بشدة

23. أسعار خدمات الطوارئ الطبية في منطقتى مقبولة.

لا أوافق بشدة  لا أوافق  محايد  أوافق  أوافق بشدة

24. فريق خدمة الطوارئ الطبية والمسعفون مدربون جيدا في منطقتى.

لا أوافق بشدة  لا أوافق  محايد  أوافق  أوافق بشدة

25. برأيك ، كيف يمكن تطوير خدمة الطوارئ الطبية؟

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### القسم الخامس: الوعي بالخدمات

26. هل تعلم أن سيارات الإسعاف التابعة للدفاع المدني تقدم خدمات مجانية في الأردن؟

نعم  لا

27. هل تعلم أن سيارات الإسعاف متوفرة على مدار الساعة كل أيام الأسبوع؟

نعم  لا

28. هل تعلم أنه يمكنك الاتصال بسيارة الإسعاف لفحصك من قبل خدمة الطوارئ الطبية أو المسعف، ورفض بعض

العلاجات والنقل إلى المستشفى؟

نعم  لا

29. إذا كانت إجابتك لا على أي من هذه الأسئلة ، هل تزيد هذه المعلومات الجديدة من احتمال استخدامك لخدمة الطوارئ

الطبية في المستقبل؟

بالتأكيد لا  ربما لا  محايدة  ربما  بالتأكيد

إذا كان هناك أي شيء تود إضافته أو أي قصة سمعتها من الآخرين بخصوص التجارب مع خدمة الطوارئ الطبية ... إلخ ،

فالرجاء ذكرها في الفراغ التالي.

INTERVIEW GUIDE FOR THOSE WHO RECEIVED  
UNSCHEDULED EMERGENCY CARE

1. Have you ever been to the emergency room, either for yourself or a family member?
2. How did you get there?
3. Why did you choose this form of transportation?

**If an ambulance was not called,**

4. Did you consider calling an ambulance?
  - a. Why did you ultimately decide against it?
5. If this happened again, would you call for an ambulance?

**If an ambulance was called,**

6. Can you tell us about your experience with emergency medical services? (You may tell it like a story).
7. Were you satisfied with the services you received?
  - a. What did you like about your experience?
  - b. What did you dislike about your experience?
8. Did you feel safe in the ambulance and under the care of the paramedics?
9. If you could change one thing about your experience, what would you change?

**Additional Questions**

10. In an emergency, would you rather take yourself to the hospital? Why or why not?
11. What do you think are the biggest problems with ambulance services?
  - a. What can be improved?
12. Do you view ambulances just as a form of transportation? Or do you also view it as a way to get assessed and treated before arrival at the hospital?



## **PARTICIPANT INFORMED CONSENT FORM**

**INDEPENDENT STUDY PROJECT TOPIC:**  
**STUDENT NAME:**

Thank you for taking the time to participate in this project.

My name is Elizabeth Wang. I am a student with SIT Study Abroad: Refugees, Health and Humanitarian Action program. I would like to invite you to participate in a study I am conducting. However, before you agree to participate in this study, it is important you know enough about it to make an informed decision. If you have any questions, at any time, please ask me. You should be satisfied with the answers before you agree to be in the study.

### **Brief description of the purpose of this study**

The purpose of this study is to identify barriers to access and utilization of emergency medical services (EMS) in refugee host communities in Amman, Jordan. The research will consist of an evaluation of the quality of ambulance services and their ability to perform efficiently and effectively. It will also examine host communities' attitudes towards EMS and their reasons for choosing to use EMS or not during a health emergency. By looking at the likeliness of the community to use pre-hospital care, it may be able to pinpoint areas of improvement in these areas.

Your participation will consist of a survey or interview and will require approximately 30 minutes to an hour of your time.

There are minimal foreseeable risks in participating in this study and no penalties should you choose not to participate; participation is voluntary. During the interview you have the right to not answer any questions or discontinue participation at any time.

### **Rights Notice**

In an endeavor to uphold the ethical standards of all SIT ISP proposals, this study has been reviewed and approved by a Local Review Board or SIT Institutional Review Board. If at any time, you feel that you are at risk or exposed to unreasonable harm, you may terminate and stop participation. Please take some time to carefully read the statements provided below.

- a. *Privacy* - all information you present in this interview may be recorded and safeguarded. If you do not want the information recorded, you need to let the interviewer know.
- b. *Confidentiality* - all confidential information will be protected.

- c. *Withdraw* – you are free to withdraw your participation in the project at any time and may refuse to respond to any part of the research. Participants who desire to withdraw shall be allowed to do so promptly and without prejudice to their interests

If you have any questions about your rights as a participant, you may visit the World Learning website and check its policies on Human Subjects Research at: <http://studyabroad.sit.edu/documents/studyabroad/human-subjects-policy.pdf> or contact the Academic Director at [bayan.abdulhaq@sit.edu](mailto:bayan.abdulhaq@sit.edu).

If you have any questions or want to get more information about this study, please contact me at phone: +962 7 9870 6233 or email at: [ewang@gwu.edu](mailto:ewang@gwu.edu)

Please sign below if you agree to participate in this research study and acknowledge that you are 18 years of age or older.

Participant's signature \_\_\_\_\_ Date \_\_\_\_\_

Researcher's signature \_\_\_\_\_ Date \_\_\_\_\_

Interviewer's signature \_\_\_\_\_ Date \_\_\_\_\_

## نموذج موافقة على المشاركة في بحث

### هدف البحث:

الهدف من هذه الدراسة هو دراسة الأسباب المتعلقة بزواج الأطفال عند اللاجئين السوريين في الأردن. وهي تبحث أيضا في النتائج المتعلقة بزواج الأطفال. بالإضافة إلى ذلك ، تقارن هذه الدراسة التصورات المختلفة بين اللاجئين وغير اللاجئين، الأولاد والبنات، وتقوم بتقديم الحلول المقترحة لقضية زواج. يعتبر هذا البحث احدى متطلبات مؤسسة التعلم الامريكية في الأردن: دراسات عامه حول الصحة وتنمية المجتمع. نتائج هذا البحث ستكون متوفرة على شبكة التواصل العنكبوتية ( الانترنت), و من الممكن أن تستخدم هذه النتائج في المستقبل لأغراض بحثية أخرى.

### الخصوصية والسريه:

كل المعلومات التي سيتم جمعها ستعامل بسرية تامة من قبل الباحثه ولن يطلع على البيانات إلا الباحثه نفسها. بالاضافه الى ذلك سيتم اتلاف البيانات فور الانتهاء من الدراسه وتحليل النتائج.

### حقوق المشاركين:

المشاركة في البحث طوعية وبمحض اختيارك. لا يتطلب الاشتراك في البحث ذكر الاسم او ما يدل عليه ومهما كانت اجابتك او رأيك فان هذه الاجابات والآراء لن تؤثر بأي شكل كان على وضعك. كما انه لديك الحق بعدم المشاركة في البحث ان شئت، واذما ما غيرت رأيك وقررت الانسحاب بعد المشاركة فيمكنك الانسحاب كذلك. ومن حقك رفض السماح للباحثه باستخدام بيانات الدراسه في اي دراسات أخرى ستقوم بها الباحثه الرئيسييه.

### المعايير الاخلاقيه لمؤسسة التعلم الامريكية:

أ. الخصوصية - كل المعلومات سيتم تسجيلها وحمايتها كما ستعامل بسرية تامه, من حقك رفض تسجيل المقابله وذلك من خلال الباحث الرئيسي.

ب. عدم الكشف عن الهوية - لا يتطلب الاشتراك في البحث ذكر الاسم او ما يدل عليه إلا إذا اختار المشارك خلاف ذلك.

ج. السرية - إن جميع الأسماء ستبقى سرية تماما ومحمية بالكامل من قبل الباحثه.



من خلال التوقيع أدناه، فإنك تعطي الباحثه المسؤولية الكاملة لحفظ هذا العقد ومحتوياته. كما سيتم توقيع نسخة من هذا العقد واعطائها للمشارك.

من سيتطلع على المعلومات التي تم جمعها عنك؟

عند الانتهاء من هذه الدراسة ، سأكتب تقريراً عن ما تعلمته. ولن يتضمن هذا التقرير اسمك أو مشاركتك في هذه الدراسة. سأعطيك اسماً مزيفاً ولن أحتفظ بأي المواد التي سجلتها. إذا كان لديك أي أسئلة متعلقة بهذه الدراسة ، فلا تتردد في الاتصال بي على رقم الهاتف +962798706280 أو عبر البريد الإلكتروني على Aab1016@wildcats.unh.edu . يمكنك أيضاً التواصل مع المدير الأكاديمي لبرنامجي على bayan.aabdulhaq@sit.edu.

5. أقرار موافقه:

من خلال التوقيع أدناه، فإنك توافق على استخدام ردودك على أسئلة الاستطلاع في دراسة بحثية بعنوان (أسباب ونتائج زواج الأطفال عند اللاجئين السوريين في الأردن، دراسة حول التصورات). كما أن توقيعك يعني أنك لا تمنع باستخدام ردودك على أسئلة الاستطلاع خلال هذه الدراسة في دراسات مستقبلية على مواضيع مماثلة . وعلاوة على ذلك ، توقيعك يعني فهمك الكامل لحقوقك أثناء المشاركة في هذه الدراسة.

---نعم لا--- اوافق على تسجيل المقابلة علماً بان المقابلة سيتم اتلافها خلال شهر عند الانتهاء من تحليل المعلومات.

توقيع المشارك \_\_\_\_\_ التاريخ: \_\_\_\_\_

6. أقرار سرية:

من خلال التوقيع أدناه فإنك ملتزم بحفظ المعلومات المقدمة من قبل المشاركين في الدراسة بسرية في جميع الأحوال. وهذا يشمل هوياتهم، اجوبتهم على الأسئلة، أو أي معلومات أخرى.  
توقيع الباحث \_\_\_\_\_ التاريخ: \_\_\_\_\_

توقيع المترجم \_\_\_\_\_

التاريخ \_\_\_\_\_